B808: An Annotated Bibliography of the Maine Agricultural Experiment Station

David C. Smith

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An Annotated Bibliography of
The Maine Agricultural Experiment Station

by
David C. Smith

MAINE AGRICULTURAL EXPERIMENT STATION
UNIVERSITY OF MAINE AT ORONO
ORONO, MAINE 04469

EXPERIMENT STATION BULLETIN 808
APRIL 1985
AN ANNOTATED BIBLIOGRAPHY

OF

THE MAINE AGRICULTURAL EXPERIMENT STATION

David C. Smith

MAINE AGRICULTURAL EXPERIMENT STATION
University of Maine at Orono
Orono, Maine 04469

Experiment Station Bulletin 808
April 1985
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This Bulletin

is

Dedicated

to

the Memory of

Robert B. Thomson

(the epitome of teacher and scholar)
FOREWORD

We cannot measure in tons or dollars the accomplishments of the nearly one hundred years of the Maine Agricultural Experiment Station, for the achievement is not alone in numbers or amounts but in challenges met and responsibilities laid upon us.

We can say that the Maine Agricultural Experiment Station is part of a system that has helped the American farmer produce many times more than the American farmer of a hundred years ago. We can also say that the technological revolution in agriculture we are now in is far beyond the Industrial Revolution in scope and possibilities.

Agriculture is America's success story. The American farmer today, through advances in technology, is producing enough to feed himself and 78 others. This is in sharp contrast to the early history of this country when a farmer was barely able to feed himself and his family. As the nation's largest industry, agriculture generates an estimated 23 million jobs, more than 22 percent of the workforce in the United States. The impact of our efficient agricultural production is important not only to us but to the world as well.

Those who have been associated with the Maine Agricultural Experiment Station are proud of the part they have played. Not only have they contributed to our nation's agriculture but they have provided special assistance to the citizens of Maine as well. Professor Smith has done an outstanding job of organizing, categorizing and interpreting the wide variety of station publications as well as some special papers of particular interest prepared by the scientists of the Maine Agricultural Experiment Station over its long and illustrious history.

We are very grateful for Professor Smith's contribution. I hope that you will take time to become aware of its contents and keep this handy reference close at hand.

Wallace C. Dunham
Director, Maine Agricultural Experiment Station
PREFACE

As a scholar I have used a great many tools to shorten and maximize research time. Finding aids in libraries, indices to books, and computer searches of key words are all invaluable to workers. Nearly all of these depend ultimately on someone else’s work in a bibliography. For that reason, it seemed useful to provide an annotated bibliography of some literature that I know well, and which has lain relatively unused by other scholars. Some years ago I was asked to write a history of the Maine Agricultural Experiment Station. When that book was published in 1980, it soon became clear that many readers had no idea of the extent of publication, and the quality of the research conducted either at the station, or in its neighbor and supporter, the College of Life Sciences and Agriculture at the University of Maine at Orono.

In fact it soon became clear that unless I provided a better close finding guide than the text of that book, I was going to be swamped with requests for bibliographic information. So, partially in self defense, and also as an aid to the general researcher, this bulletin was born. It is one person’s attempt to provide an annotated bibliography to all of the major publications of the Maine Agricultural Experiment Station. In addition, in order to make the record complete, or nearly complete, I have included similar listings for all publications in agricultural science before the station became a supporter of research and subsequent publication. Finally, because of the importance of the research to the historian, especially of biology and genetics, I have included a listing (mostly without annotation) of all the titles in the numbered series "Publications From the Biological Laboratory." This series forms a descriptive history of the early days of genetic study after the Mendellian rediscovery, and is valuable from that point alone. It extends in time from 1908 to 1946 when the last number was assigned. A companion series, "Papers from the Entomology Laboratory", tended to have more of its numbers in the regular bulletins. Where these papers were published elsewhere I have included a listing of these items as well. In addition I have summarized in general form the early bulletins of the predecessor state station which flourished from 1885 to 1888, and the annual reports of both stations, which frequently carry reports of work in progress.

As I have said in another place, this work is not that of a trained scientist. Instead it is the work of an amateur (in the Latin sense) and of a camp follower. Where I have had queries about proper explanation I have attempted to allow the original researcher to describe the work. Annotations are relatively brief, but will let those interested go to the original document if needed. I have included data on photos, plates, graphs, indices, bibliography and other scholarly apparatus.

The annotations are presented in the chronological fashion in which they were published. There is an effort in the indices to provide ready cross reference. The index is organized by subject matter, crops and by discipline where that is useful. The various
sections of the work include the regular bulletin series begun in 1889 and still continuing; the technical bulletin series begun in 1962 and also still running; the publications of the original station 1885-1889; agricultural science before the station and from allied members of the station running from the mid-1860s, and essentially ending in 1920, although since 1920 a substantial number of papers have been published, and I indicate the general subjects of publications each year in the annual reports annotation; a listing of the important miscellaneous publications (many of these are simply newspaper notices of other publications I have noted them only); a listing of miscellaneous reports running from 1948 to present, as well as the various items of Maine Farm Research, whether in quarterly form, or the more recent annual volumes. I have attempted to list a few other significant publications which have appeared in such form as Update, a sometime publication of the station, or the "Director's Newsletter" written by Charles D. Woods from 1908 to 1920. Most of these last items appeared in more scholarly form, and where they do I have not noted their first appearances.

All in all this is a record of a distinguished and active group of scientists, and the catholicity of their interests still amazes me after reading these items. The quality, insofar as I am a decent judge, is also remarkably high, and one can only hope that this work helps to tell the story to persons still in the dark as to what the station does or did. In addition I hope that researchers, whether other historians, or agricultural scientists, will also find the work valuable in determining background information for their current work.

No person works alone. In this venture, as with much else, I am indebted to many people. Those who deserve particular mention, and in no particular order, are Kay MacEacharn, Carole Gardner, Jean Day, Ruth Ann Farrell, R.B. Thomson, W.R. Baron, E.O. Schriver, A.M. Johnson, Anne E. Bridges, Geddes W. Simpson, Kenneth E. Wing, Ed Piper, David Leonard, Harold Young, Bruce Poulton, Fred Hutchinson, Ken Allen, H.W. Borns, Jr., Arline Thomson, Terry Kelly, Sylvia W. Smith, W.C. Dunham, Robin LeDee, Susan Spaulding and Pamela Rideout. I alone am responsible for errors. These persons help me diminish the number of such errors. Again I wish to pay public tribute to the Maine Agricultural Experiment Station for the quality of its personnel, and to its dedication to using science to enhance the live of Maine and other persons. Justin Morrill and William Hatch could not have been more pleased, I am sure.

David C. Smith
Bangor and Orono  March 1, 1985
INTRODUCTION

The Maine Agricultural Experiment Station is a venerable organization soon to celebrate its centennial year. As a research organization--its staff was early on called the Faculty of Investigation--members of the station staff have always presented the results of their efforts in a variety of publications both in-house and otherwise.

Only a dedicated agricultural historian would be willing to pull the musty early volumes of bound material from the library shelves and read or reread all of the communications that have been released over the years with the intent to note and comment on each contribution. The Maine Agricultural Experiment Station is extremely fortunate to have as a colleague and friend such a person in Professor David C. Smith of the History Department of the University of Maine at Orono. It is also most fortunate that this manuscript can be published at this juncture in the ongoing history of the Experiment Station.

Professor Smith has provided an annotated list of all station publications as well as some special papers of interest. Through the index to this bulletin, any interested person can readily locate material of particular interest and can easily determine whether or not it is worthwhile to go to the original publications for details.

The index is a key to some 110 technical bulletins; 800 bulletins; 679 miscellaneous publications; 295 miscellaneous reports; many annual reports of the station, the college, and the State Board of Agriculture; the file of Maine Farm Research and its successor, Research in the Life Sciences; Update; the more recent reports from the College of Forest Resources (CFRU and FRRAC); a series of publicity letters dating from the early years of the station; certain publications from the Biology Laboratory and the Entomology Department; and the Proceedings of the State Pomological Society.

The index is broken down into 152 main headings, making it easy for the reader to quickly learn of sources of information about any subject covered--from acid rain, through aphids, bald eagles, blueberries, butterflies, cattle, clams, corn, forestry, genetics, insects, lobsters, orchards, plant diseases, potatoes, poultry, seaweeds, shrimp, soils, sugar beets, tomatoes--wildlife. The list clearly indicates the relation between the station staff and those who are associated with agricultural pursuits.

This bulletin will be useful to many persons as a key to the past and as a record of the accomplishments of the staff of the Maine Agricultural Experiment Station over a period rapidly approaching one hundred years of services to Maine agriculture.

Geddes W. Simpson
Professor of Entomology, Emeritus
Department of Entomology
Maine Agricultural Experiment Station
Although the primary purpose of this bibliography is to annotate the general publications of the Experiment Station since 1885, in order to set this in context some other items need listing with a brief description. To begin with, the University from the first days provided an opportunity for research for its faculty, and it also provided an opportunity for excellent well-known scholars to present the results of their own research. Xerxes A. Willard, the well-known researcher on dairy farming, presented a short course to faculty and students in 1870. His lectures were reprinted in The Maine Farmer, July 9, 16, 23, 1870, and with a brief correction from Willard on July 30, 1870. Later in the same year other lectures were given on market farming and gardening, and the Farmer again reprinted the text on November 12, 19, 26, and December 3, 1870. A. S. Packard, a well-known entomologist of his time, also gave a series of lectures in 1872. These were reprinted on April 20, May 18, July 20, 1872. James Low, Professor at Cornell, gave a series of lectures on animal diseases and they too were reprinted on November 14, 28, 1874.

These lectures were well-attended and led in the early 1870s to the establishment of the Scientific Society which met regularly and heard papers from both students and faculty on their research. Although most of the original materials from the Society have disappeared, several of the more important meetings were at least summarized in The Maine Farmer. Those who wish to see what agricultural science was like in the earliest days at Orono can read about this society in The Maine Farmer, April 26, 1873, May 3, 1873, April 11, 1874, October 17, 1874 (with abstracts of all the papers heard), as is the case in April 10, 1875. Other articles report other meetings, as December 25, 1875, May 18, 1878, and July 21, 1881 which featured a paper by F. A. Mansfield, "Notes on the Starfishes of Maine".

Scientists at the station also provided translations of important work for farmers and others in the state. W. H. Jordan, later to be director of the station, did these translations. All appeared in The Maine Farmer.

August 10, 1878. "Effect of Nitrogen in the Form of Ammonia and Nitric Acid Upon the Production of Crops." This reported German experiments.

August 17, 1878. "Experiments Concerning the Influence of the Food Upon the Milk Production of Cows." More German experiments reported.

August 31, 1878. Part Two of the previous article. It is interesting to note that these articles mirror scientific research which will remain a concern of station scientists for some time to come.
Farm experiments were begun on a regular and scientific basis even before the students arrived at the university. Reporting of results was slightly less regular, but they do indicate a strong interest in scientific research and experimentation. The following items are examples of reporting at the time. Modern researchers may wish to consult these early reports and it is for that reason that they are listed.

   He reports fertilizer experiments, swine feeding experiments, varietal tests on potatoes (61 in all), and provides a description of the farm and its implements.

2. Nineteenth Annual Report, Maine Board of Agriculture, 1874 (Augusta, 1875).
   J.R. Farrington, the Farm Superintendent, reported informally on Farm Experiments at the Maine State College, on pp. 359-368, which was followed by some questions and answers, also printed here. A version of this appeared in The Maine Farmer, July 31, 1875.


4. Twenty-Second Annual Report, Secretary of the Maine Board of Agriculture, August, 1877.
   Students Exercises Reported from Convention at Alfred, Maine, October 18, 1877, pp. 236-256.
   P. Keyes, Jr., "Stockbridges Experiments on Corn."
   S.P. Merrill, "Top Dressing for Grass Land."
   W.E. Ferguson, "Different Methods of Cutting and Planting Potatoes."
   G.W. Lufkin, "Experiments with Fertilizers on Potatoes, Beans, and Rutabagas."
   D.S. Jones, "The Sugar Beet."
   The Maine Farmer, October 20, 1877, "Some Experiments With Fertilizers" also reported on M.S.C. Experiments.

   Describes experiments in progress on sugar beets, cutting grass for hay both early and late, and the impact of fertilizers on corn, with special reference to nitrogen. This last also describes the fields and the layout of the experiments under discussion.
6. The Maine Farmer, February 10, 1881, "State College Experiments." This issue also has an editorial, "Wanted: An Experiment Station," and these comments were answered by Walter Balentine, on May 5, 1881 analyzing the experiments at M.S.C.


   No. 1 - Pig Feeding; No. 2 - Field Experiments with Artificial Manures; No. 3 - Field Experiments Adjoining with Phosphoric Acid Types; No. 5 - Comparison of Feeding Values of Early and Late Cut Hay; No. 6 - Practical Comparison of the Feeding Values of Corn Meal, Cottonseed Meal, and Wheat Bran
   The experiment on early and late cut hay was also reported in The Maine Farmer, July 12, 1883.

9. G.M. Gowell and Walter Balentine, "Farm Experiments at State College," Twenty-Seventh Annual Report, Maine State Board of Agriculture, 1883 (Augusta, 1884), pp. 430-441
   No. 7 - Manuring with Different Forms of Phosphoric Acid; No. 8 - Comparison of Feeding Values of Early and Late Cut Hay; No. 9 - Practical Comparison of Feeding Values of Corn Meal, Cottonseed Meal and Wheat Bran; No. 10 - On Feeding Full Rations and Reduced Rations; No. 11 - On Feeding Full Rations and Reduced Rations (A repeat of the earlier one.); No. 12 - Cream Tests
   Nos. 14 and 15 were also reported in The Maine Farmer, June 18, 1885.

    No. 13 - Commercial Fertilizers and Profitable Crops?; No. 14 - Feeding Values of Purple Hulless Barley; No. 15 - Difference Between Live and Dressed Weight of Pigs
    Nos. 14 and 15 were also reported in The Maine Farmer, June 18, 1885.

11. The Maine Farmer, November 26, 1885
   G.M. Gowell, "College Farm Experiment No. 16 "

12. The Maine Farmer, December 9, 1886
   "Manuring Fields - College Farming "

13. The Maine Farmer, January 27, 1887, H.L. Leland, "College Farming Reviewed - Cost of Fertilizing Worn Out Land." This article was responded to by G.M. Gowell on February 24, 1887, "College Farming "

14. The Maine Farmer, March 28, 1889
   "State College Farming "
   It is entirely possible that other reports may exist, but these are ones noticed in the two major reporting organs of the time.
Farm experiments were conducted at the College Farm, by both students and faculty; usually under the guidance of the Farm Superintendent, and later the Professor of Agriculture. These citations are of material presented, occasionally mentioned elsewhere, but presented in a more-or-less scientific form in the Annual Reports of the Board of Trustees of the Maine State College. It is worth summarizing them here as they often prefigure other experiments conducted in more controlled circumstances by the faculty, and eventually by the station personnel.

1. Annual Reports of the Trustees and Treasurer of the College of Agriculture and of The State of Maine, 1869 (Augusta, 1870). This is the second report, but the first to report any significant activity under consideration here. "Farm Superintendent's Report," pp. 13-19. The experiments are reported from 17-9. They include experiments on fertilizers, methods of planting potatoes, food for swine, and water losses in the curing of hay. Meteorology, 39-40

2. Annual Reports, as above for complete title, 1870 (Augusta, 1871), pp. 15-9
   Fertilizers, swine feeding, and varietal tests on potatoes (61 varieties), these last are reported at 17-8. Meteorology, 33-4

3. Annual Reports, 1871 (Augusta, 1872), pp. 10-3
   Varietal tests of potatoes (62), pp. 11-2; potato cultivation, and swine feeding; meteorology, 43-4

4. Annual Reports, 1872 (Augusta, 1873), pp. 13-26
   Swine feeding, esp. results at 14; fertilizers and sugar beets, 15; fertilizers and potatoes, 16-7 (W.H. Jordan was the experimenter, his first appearance.); potato variety tests (67) 17-8; potato culture; grass fertilization (top dressing), 19-21; meteorology, 60-1

5. Annual Reports, 1873 (Augusta, 1874), pp. 17-34
   Swine feeding with comparison of earlier results, 17-9; sugar beet fertilizers, 19-20; potato fertilization, 20-2; potato varietal tests (122) 60 were repetition from previous tests, pp. 22-4; potato cultivation; hay fertilization 25-7; meteorology, 67-8

6. Annual Reports, 1874 (Augusta, 1875), pp. 26-37
   Swine feeding, 27-30; sugar beets and fertilizers, 30-1; potato fertilizers, 31-3; potato cultivation, 33-5; top dressing; grain drilled as versus broadcast sowing; meteorology, 59-60
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7. Annual Reports, 1875 (Augusta, 1876), pp. 21-33.
   Swine feeding, 21-3; sugar beets, 23-5; potato fertilizers, 25-7;
   potato cultivation, 27-8; top dressing, 29; wheat sowing methods,
   29-31; meteorology, 75-6

8. Annual Reports, 1876 (Augusta, 1877), pp. 36-45
   Swine feeding, 36-40; potato cultivation, 41-2; top dressing,
   42-3; wheat sowing methods, 43-4; Stockbridge Fertilizer trials,
   44-5 (in conjunction with Conn. Agricultural Experiment Station,
   and W.O. Atwater); meteorology, 83-4

9. Annual Reports, 1877 (Augusta, 1878), pp. 30-53
   Swine feeding, 30-4; potato cultivation, 34-8; top dressing, 39-40;
   Stockbridge fertilizers, 40-4; cooperative experiments with Atwater
   on soil nutrients, 45-50; sugar beet cultivation, 50-3; meteorology,
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    Swine feeding, 39-43; top dressing, 43-4; hay cut at different
    times, 45-7; sugar beet cultivation, 47-8; potato cultivation,
    48-51; soil nutrients (cooperating with Atwater), 51-9; meteorology,
    99-103

11. Annual Reports, 1879 (Augusta, 1880), pp. 39-54
    Best time to cut grass, 39-46; potato fertilization, 46-9; corn
    fertilization, 49-52 (a continuation of the Connecticut coopera-
    tive work.); production from contiguous plots; potato cultivation,
    53-4, W.H. Jordan signed the entire report from the Farm Superin-
    tendent; meteorology, 99-103

12. Annual Reports, 1880 (Augusta, 1881), pp. 41-53 - W.H. Jordan signed
    this report also
    Corn and different fertilizers, 42-7; corn and different forms
    of phosphoric acid, 47-52; best time to cut grass, 52-3; potato
    planting techniques, 53; meteorology, 95-9

13. Annual Reports, 1881 (Augusta, 1882), pp. 40-1
    W. Balentine's first report. Frost prevented most experiments,
    and others still underway. Meteorology, 139-143

14. Annual Reports, 1882 (Augusta, 1883), pp. 68-78
    Seed trials 68-9 on wheat, oats, and barley; swine feeding, 69-71;
    artificial manures 71-4 - both conducted on beans as cold, wet
    weather prevented other crops from being tested. This report
    signed by W. Balentine, and G.M. Gowell. C.C. Garland, "Fish
    Scrap as a Food for Domestic Animals," Abstract of thesis
    research, pp 75-8. Meteorology, 99-102
15. **Annual Reports, 1883** (Augusta, 1884), pp. 36-46.

- Field seed trials, wheat, oats, barley, peas.
- Exp. No. 3 (first two are the experiments noted in 1882) - Manuring with Different Forms of Phosphoric Acid, pp. 38-9.
- Exp. No. 4 - Early and Late Cut Hay, 40-2.
- Exp. No. 5 - Hungarian and Mixed Hay Compared in Feeding Trials, 42-4.
- Exp. No. 6 - Food Values, Corn Meal, Cotton Seed Meal, and Wheat Bran, 44-6.
- Meteorology, 117-120.

16. **Annual Reports, 1884** (Augusta, 1885), pp. 45-60.

- Seed trials, 45-6, mostly barley.
- Exp. No. 8 - Early and Late Cut Hay, 48-51.
- Exp. No. 9 - Feeding Values (replication of No. 6), 51-3.
- Exp. No. 10 - Full and Reduced Rations and Feeding, 53-6.
- Exp. No. 13 - Commercial Fertilizers for Growth without Natural Manures, 58-60.
- Meteorology, 41-4.

17. **Annual Reports, 1885** (Augusta, 1886).

- Exp. No. 16 - Oat Seeding Practices, 30-1.

18. **Annual Reports, 1886** (Augusta, 1887)

- Exp. No. 13 - continued, 52-4; Meteorology, 37-40.

Miscellaneous items which appear in the Annual Reports of the College during this period include:

1. **Annual Report, 1880** (Augusta, 1881).


   Under Natural History
   "Natural History of the Army Worm," 46-50 (4 plates)
   "Natural History of the Spruce Tortrix," 50-3.
   "Clothes Moths," 53-6. These are standard life histories of the time by C.H. Fernald.


5. Annual Report, 1884 (Augusta, 1885).

   See also 29th Annual Report, Maine Board of Agriculture, 1885 (Augusta, 1886).

For a brief period of time in the 1880's students were obliged to research and write a graduation essay. Although these requirements lasted varying lengths of time in different disciplines, and were revived from time to time in some new ones (most notably Forestry in the period 1904-1910), they do give an indication of what was being taught and researched at M.S.C. in these earliest days. Following are the available printed versions that I have noted of student research in agriculture.

5. G.M. Gay, "Farm Life in New England", Maine Farmer, August 30, 1888. This was the Libby prize essay and it evoked a response on November 1, 1888.


Some other scientific works from faculty and students at the Maine campus also deserve mention as they were written in a scientific manner and reported work completed for a critical audience.

   Nomenclature and plates. This is the work of a student who became famous in the USDA for the quality of his work.

   More nomenclature, life histories, and some plates from this brilliant worker.

3. Alfred B. Aubert, "Notes Upon the Culture and Manipulation of the Sugar Beet", Twenty-First Annual Report, Maine Board of Agriculture, 1876 (Augusta, 1876), pp. 166-178 and the results of experiments at M.S.C. pp. 177-8.


   Fairly detailed results of what happens if you do or don't.
   Types of manures, making the most of your land and soil types.

   What happens with what when it is fed to cattle. The state of the art.

   First scientific work on the budworm.

   This is an important summary of the state of knowledge, and marks the beginning of many years of research. Plates. Original address was given at the Farmers Institute, Waterville, January 30, 1883.
   Paper given at Farmers Institute, Exeter, November 7, 1884. Significant early paper.


   Appears as an appendix to Twenty-Ninth Annual Report, Maine Board of Agriculture, 1885 (Augusta, 1886).
   The standard work to this date.


THE FIRST STATION - BEFORE THE HATCH ACT

The story of this station, its founding and supporters, may be found in my History but a few items need listing in this bibliography. The Maine Farmer kept up a slow but steady cry for a station, however defined. Some significant articles that focus on science occur at December 16, 1876, "How Science Helps Farming", January 27, 1877, "The Farm at the State College, Orono", and December 1, 1881, "Analysis of Soils", which summarizes a circular sent out by Professor Bartlett. Also important are R.F. Burleigh, April 22, 1886, "The Cattle at the State College", on bovine tuberculosis and Lyndon Oak, July 12, 1888, "State College Farm" in which he summarizes the history of agricultural science to that date.

The State station was actually born from a desire to control fertilizer sales, from the point of view of quality, as well as the desire to promote agricultural science. The earliest reports which need to be mentioned are reports filed by the Inspector of Fertilizers, Z.A. Gilbert, who provided a service which became part of station activities.


Again, mostly done at his home farm. This report is summarized in The Maine Farmer, August 14, 1884.

This seems a good place to summarize the annual reports of the first station prior to annotating the series of bulletins produced by those scientists.

1. Annual Report, Maine Fertilizer Control and Agricultural Experiment Station, 1885 (Orono, 1885).

Comprises reports of analyses of fertilizers for April, May, June, 1885. In addition to the analyses a brief statement of the field experiments which were being laid out was included. Reported in Maine Farmer, July 23, 1885. Further comments appeared in Maine Farmer, August 27, 1885, "A Word of Comment" by Francis Barnes of Houlton. A response was provided stating the point of view of the experimenters, W.H. Jordan, "The Experiment Station and Its Work", Maine Farmer, October 15, 1885.

2. Annual Report, Maine Fertilizer Control and Agricultural Experiment Station, 1885-6, (Augusta, 1886).

This 87 page report describes laying out the fields for experimentation, the types of analyses undertaken, feeding experiments (for both milk and beef production), digestion experiments. Index. The report is summarized in The Maine Farmer, August 26, 1886.

3. Annual Report, Maine Fertilizer Control and Agricultural Experiment Station, 1886-7 (Augusta, 1887).

This report is 145 pages long with an index. It describes the work of fertilizer inspection, analyses, fertilizer field experiments (both at the station and on cooperating farms), analyses of cattle feeds, digestion experiments, and feeding experiments. It reports varietal tests on potatoes, oats, and barley. Experiments in cream raising are mentioned. Molasses adulteration is noticed, and insecticide tests are reported. The experimental methods in use on the station are described. The report stirred a number of useful comments. Maine Farmer, July 14, 1887, "Work at the Experiment Station", July 19, 1888, "State College Experiment Station", November 28, December 6, 1888, W.H. Jordan, "Maine Experiment Station".

4. Annual Report, Maine State College of Agriculture and Mechanic Arts, Part II. Agricultural Experiment Station, 1888 (Augusta, 1889).

This is the final report of the first station. It contains 223 pages and is indexed. The report contains a history of the former station and organization of the new Hatch act station, including floor plans of the new building and discusses the experimental responsibilities. Summaries of reported experiments (p. 29), as
well as those underway (pp. 29-42) are reported. W. Balentine reports fertilizer analyses and fertilizer experiments underway (pp. 63-81). Feed analyses and experiments are reported. Digestion experiments are also reported. Varietal tests on potatoes, oats, barley and peas are provided. Seed selection work is mentioned. The Botanist and Entomologist, F.L. Harvey, reports (pp. 136-195) on germination trials, and insect life histories (with plates). Digestion experiments are summarized exactly like the original article in Agricultural Science, November, 1888. The Chemists reported as well, Bartlett (pp. 204-9, mostly on techniques), and Merrill (pp. 210-3 on results). In addition the laws governing the station are summarized. This report, and a general survey of hopes for the station are also discussed in W.H. Jordan, "Work of the Maine Agricultural Experiment Station", in Maine Farmer, October 10, 1889

The following are summaries of the 26 bulletins produced by the first station. They appeared in many newspapers, especially the Bangor Daily Whig and Courier. Most also appeared in The Maine Farmer and I have also given that citation where it occurred.

1. Bulletin No. 1 (Old Series)
   Analyses and Valuation of Commercial Fertilizers, by Walter Balentine, May 18, 1885, Maine Farmer, May 21, 1885

2. Bulletin No. 2 (Old Series)
   Remarks on Valuation of Commercial Fertilizers, further statements of purpose about why valuation of fertilizers taking place, and responding to remarks after publication, by W.H. Jordan, August 13, 1885, Maine Farmer, August 20, 1885

3. Bulletin No. 3 (Old Series)
   Analyses of Wood Ashes From Various Sources (as fertilizer, by analysis of available potash); unsigned, undated, Maine Farmer, November 19, 1885

4. Bulletin No. 4 (Old Series)
   Analyses of Harbor Mud and Wood Ashes, W.H. Jordan, December 31, 1885; for use as fertilizer; Maine Farmer, January 7, 1886

5. Bulletin No. 5 (Old Series)
   Three foods analyzed as to quality, and nutrition possibilities. None very good, and certainly not up to advertisers' claims, Maine Farmer, January 21, 1886

6. Bulletin No. 6 (Old Series)
   Valuation of Fertilizers, W.H. Jordan, April 9, 1886, Maine Farmer, April 15, 1886

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7. Bulletin No. 7 (Old Series)  
W.H. Jordan, April 23, 1886. A single sample of nearly every brand of fertilizer sold in the state was analyzed and results presented, Maine Farmer, May 7, 1886.

8. Bulletin No. 8 (Old Series)  
Valuation of Fertilizers, W.H. Jordan, May 7, 1886, a continuation of No. 7, with reference to No. 6, Maine Farmer, May 13, 1886.

9. Bulletin No. 9 (Old Series)  
W.H. Jordan, July 16, 1886, Valuation of Fertilizers. Results here are presented of average composition of all 1886 samples.

10. Bulletin No. 10 (Old Series)  
W.H. Jordan, Analysis of Three Samples of Molasses, October, 1886, Maine Farmer, October 28, 1886.

11. Bulletin No. 11 (Old Series)  
W.H. Jordan, Field Experiments (Part 1), Methodology, October, 1886, Maine Farmer, November 4, 1886.

12. Bulletin No. 12 (Old Series)  
W.H. Jordan, The Comparative Production from Different Forms of Phosphoric Acid (Field Experiments, Part II). Oats were the crop, October, 1886, Maine Farmer, November 11, 1886.

13. Bulletin No. 13 (Old Series)  
Field Experiments (Part III)  
The second section of 18 plots reported as to results, W.H. Jordan, October, 1886, Maine Farmer, November 18, 1886.

W.H. Jordan, Analyses of Three Insecticides (Paris Green, London Purple, Hammond's Slug Shot), October, 1887, Maine Farmer, January 20, 1887.

15. Bulletin No. 15 (Old Series)  
W.H. Jordan, Analyses of Poultry Rations, a variety of foods fed under scientific conditions to 24 Plymouth Rock purebred cockerels and results reported, February, 1887, Maine Farmer, February 10, 1887.

16. Bulletin No. 16 (Old Series)  
W.H. Jordan, Comparative Analysis of Cottonseed Meal and Linseed Meal (as Cattle feed, and later manure), February, 1887, Maine Farmer, February 24, 1887.

17. Bulletin No. 17 (Old Series)  
W.H. Jordan, Fertilizer Analysis of Clam Shells (4 batches, whole and ground to different finenesses), March, 1887, Maine Farmer, March 24, 1887.
18. Bulletin No. 18 (Old Series)
Varietal Trials for 1886, 40 varieties of potatoes; 20 oats; 6 barley reported, W.H. Jordan, April 15, 1887, Maine Farmer, April 21, 1887

Fertilizer Analyses (17 types sold in state analyzed), W.H. Jordan, April 22, 1887, Maine Farmer, May 5, 1887

20. Bulletin No. 20 (Old Series)
Fertilizer Analyses (Part II), (8 further reports), W.H. Jordan, May 13, 1887

21. Bulletin No. 21 (Old Series)
A History of the Station (January 1888)

22. Bulletin No. 22 (Old Series)

23. Bulletin No. 23 (Old Series)
Fertilizers: Inspection of Fertilizers, April, 1888

24. Bulletin No. 24 (Old Series)
May, 1888, Tests of Varieties, 1887 Tests, 47 potatoes, 22 oats, 7 barley, 50 peas, also part II - Seeds and Injurious Insects by F.L. Harvey, On how to send specimens to the station for analysis

25. Bulletin No. 25 (Old Series)

26. Bulletin No. 26 (Old Series)
October, 1888, The Composition and Digestibility of Certain Cattle Food; Analyses hays cut 1884, 1885, 1886, 1887 reported and compared. 1887 results are new and substantially greater in amount of work done

BULLETINS

The central work of the Maine Agricultural Experiment Station is to do agricultural and scientific research. Although researchers are encouraged to publish their technical results in the appropriate journals, they are also encouraged to produce materials for the working and intelligent farmer as well as others. These publications, traditionally called Bulletins, appear on an irregular basis as they are made available, and size varies with the topic to be discussed. In addition the station has sometimes chosen to produce bulletins which summarize much research of varying kinds, as well as from 1932 to 1969, an annual report which
bore a bulletin number. Some are very large, and others quite small. The first of these was produced in 1889, and others are in press as I write. The total number in the regular series is now over 800. I have annotated them so that readers and users of this guide will be able to go to the document in question without difficulty. I have also indicated the special character of each if that is appropriate, and I have attempted a cross reference comment within the annotation, as appropriate. Most of these Bulletins from No. 6 through No. 150 or so may be found reprinted in the Annual Reports of the Secretary of the Maine Board of Agriculture.

Bulletin No. 1 - May 1, 1889, W.H. Jordan
Partial Statement of Analysis of Commercial Fertilizers for 1889

Bulletin No. 2 - 1889, F.L. Harvey
The Apple Maggot (4 pps) Life History and Preventative Measures
Part II The Potato Rot by F.L. Harvey
(Phytophthora infestans, DeBary)
Some on life history, as well as preventative methods (4 pps)

Bulletin No. 3 - J.M. Bartlett
The Babcock Milk Test Adapted to Testing Cream (September 1, 1891)
Bartlett's modification of Babcock's standard tests to be used in creamery work in Maine, described and location of apparatus reported

Bulletin No. 4 - 1893, J.M. Bartlett
Testing Cream and Milk Fat Test and Lactometer
More on use of methods, to determine more accurately the fat content of cream presented to creameries for payment

Bulletin No. 5 - January 2, 1894, W.H. Jordan
Waste of Fat in Skimmed Milk by the Deep-Setting Process
Reports comparative results of deep-setting process and cream separation by machine in two creameries.

Bulletin No. 6 - January 8, 1894, W.M. Munson
Fruit Culture - Varieties
Proper varieties suggested for various geographical areas in state

Inspection of Fertilizers
Conducted under the new law of 1894.

Bulletin No. 8 - March 1, 1894, W.M. Munson
Spraying Experiments, various sprays for apple scab
3 years of experiments - first photos in bulletins

Bulletin No. 9 - March 15, 1894, W.M. Munson
Tomatoes
Results of experiments on early setting, potting, and beginning work on crosses
Bulletin No. 10 - April 1, 1894, W.M. Munson
Cauliflowers
Results of experiments as to methods of cultivation and some results on early varieties

Bulletin No. 11 - April 2, 1894, W.H. Jordan
Corn as a Silage Crop
Summarizes comparative yields of experiments of various types since 1888 (See Annual Report, 1891, pp 41-6 for earlier reports). Some work on digestibility of end products

Bulletin No. 12 - May 1, 1894, W.M. Munson
Potatoes: A Comparison of the Trench System with Ordinary Culture
Extra work probably not worth results in trench (or Rural New Yorker method) culture

Bulletin No. 13 - June 1, 1894, F.L. Russell
The Suppression of Bovine Tuberculosis and Glanders
Describes methods of diagnosis available, and offers MAES help in the work

Inspection of Fertilizers
Most detailed analysis yet provided (18 pps) and includes analysis of manufacturers' guarantees. First one to not use price information, as a factor.

Bulletin No. 15 - J.M. Bartlett
A Scheme for Paying for Cream by the Babcock Test in Butter Factories
Redefines methods (see Bulletin No. 4) as some managers of creameries are not manipulating the test properly, 1 photograph

Bulletin No. 16 - November 1, 1894, Walter Balentine
Investigation of the Foraging Powers of Some Agricultural Plants for Phosphoric Acid
(An extract from Balentine's report in Station Annual Report in 1893) Reports investigations begun in 1892 to determine the ability of obtaining phosphoric acid from insoluble phosphates with different plants. A follow-up of Balentine's earlier work with nitrogen in Connecticut

Bulletin No. 17 - March 1, 1895, W.H. Jordan
Important Facts About Corn
Follow-up to Bulletin No. 11 - here dealing with maturity and food values of the comparative varieties

Inspection of Fertilizers, 1895
MAINE AGRICULTURAL EXPERIMENT STATION BULLETIN 808

Bulletin No. 19 - March 15, 1895, W.H. Jordan
A Discussion of Certain Commercial Articles
1. Fertilizers
Claims unfounded by manufacturers, and why

Bulletin No. 20 - March 25, 1895, W.H. Jordan
A Discussion of Certain Commercial Articles
2. Foods
Reports results found at MAES and elsewhere in the world on fallacy of "condimental foods" claims and their fallacies

Bulletin No. 21 - April 15, 1895, W.M. Munson
Notes on Small Fruits
First of a series - culture of the strawberry with description of varieties

Inspection of Fertilizers
Second of 1895, follow-up to Bulletin No. 18

Bulletin No. 23 - February 24, 1896, F.L. Russell
Preservation of Cream for Market
On pasteurization techniques and announcing the beginning of MAES experimentation

Bulletin No. 24 - March 1, 1896, H.P. Gould
Cabbages
Results of growing experiments in 1895

Inspection of Fertilizers, 1896

Bulletin No. 26 - March 25, 1896, J.M. Bartlett
Inspection of Glassware Used by Creameries and Butter Factories to Determine the Value of Cream and Milk
Results of an 1895 law setting standards for testing and a list of creameries whose glassware had been sent for testing

Bulletin No. 27 - March 18, 1896, H.P. Gould
Peas - Sweet Corn
Describes 8 new pea varieties and summarizes results of 25 sweet corn variety results for previous year

Bulletin No. 28 - March 31, 1896, H.P. Gould
Potato Rot - Bordeaux Mixture and Fungiroid as Preventatives.
Early efforts at control of "late blight"

Bulletin No. 29 - April 10, 1896, W.M. Munson
Notes on Spraying
Orchard spraying techniques (several sketches) some of this is duplicatory of Report, Maine Pomological Society, 1894, 56 (speech given January, 1895)

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Bulletin No. 30 - October, 1896, Chas. D. Woods, J.M. Bartlett, L.H. Merrill
Fertilizer Inspection, 32 pps.

Bulletin No. 31 - November, 1896, J.M. Bartlett
A Modification of the Babcock Method and Apparatus for Testing Milk and Cream
Minor changes in techniques - results compared

Bulletin No. 32 - January, 1897, F.L. Harvey
Three Troublesome Weeds: Orange Hawkweed, Wild Carrot, Buffalo Bur
Description, habits, precautions (sketches of plants accompany the bulletin)

Bulletin No. 33 - 1897, Chas. D. Woods and J.M. Bartlett
Fertilizer Inspection
1897 results (a modification of the law involved also)

Bulletin No. 34 - April, 1897, L.H. Merrill
Box Experiments with Phosphoric Acid from Different Sources
A cover photo of experiment. Another photo also
Results reported of this experiment on potatoes, rutabagas, barley, corn

Bulletin No. 35 - May, 1897, F.L. Harvey
The Current Fly Gooseberry Fruit Fly
Epochra canadensis, Loew.
Life history, distribution, remedies, plates

Bulletin No. 36 - August, 1897, Chas. D. Woods
Testing Seeds
Reprints new state mandated seed inspection, and gives MAES methods to be used

Bulletin No. 37 - August, 1897, Chas. D. Woods
Feeding Stuff Inspection
Reprints new law on this matter and lays out station plans

Bulletin No. 38 - October, 1897, Chas. D. Woods, J.M. Bartlett
Fertilizer Inspection
Results of station samples and analyses (2nd report)

Bulletin No. 39 - November, 1897, J.M. Bartlett
Stock Feeding Suggestions
Lays out appropriate tables for standard rations

Bulletin No. 40 - December, 1897, W.M. Munson
Celery
Soils, fertilizers, results, enemies, diseases
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Bulletin No. 41 - January, 1898, G.M. Gowell and F.L. Russell
DeHorning Cows
Why, how, and results at MAES

Bulletin No. 42 - February, 1898, W.M. Munson
Ornamental Home Grounds
The aesthetics of the home farm, and how to raise the standards (part of campaign on Keeping the Boys on the Farm)

Bulletin No. 43 - March, 1898, J.M. Bartlett, O.W. Knight, A.J. Patten
Fertilizer Inspection
Results of all analyses licensed before February 25, 1898

Bulletin No. 44 - May, 1898
Feeding Stuff Inspection
First results of the new law - emphasis on the various cotton seed and other meals

Bulletin No. 45 - October, 1898, J.M. Bartlett, O.W. Knight, A.J. Patten
Fertilizer Inspection
Results of Station samples - 1898

Bulletin No. 46 - November, 1898, W.M. Munson
Some Ornamental Plants for Maine
Trees, plants, herbaceous perennials which fill the demand suggested in Bulletin No. 42 are listed and described

Bulletin No. 47 - December, 1898, J.M. Bartlett, O.W. Knight, and A.J. Patten, Chas. D. Woods
Station samples analyzed for wheat brans, middlings, mixed feeds, and other similar refuse milling products. Woods offered a page of description on these products with some view to increasing standards of the law

Bulletin No. 48 - January, 1899, J.M. Bartlett, O.W. Knight, A.J. Patten
Feeding Stuff Inspection
Analyses of samples drawn under the state law. Impact of the law in driving out poor quality feeds especially cottonseed meal, is analyzed, as well as other poorer quality feeds, by Chas. D. Woods, pp. 12-16

Bulletin No. 49 - February, 1899, W.M. Munson
Care of Orchards
Renovation of older orchards discussed. Grafting, fertilizing, culture, spraying, as well as work under way at the station (some on hardier varieties), plates

Bulletin No. 50 - March, 1899
Fertilizer Inspection
Analyses of Manufacturers samples licensed before March 8, 1899; summary of the law, by Woods, p. 8
MAINE AGRICULTURAL EXPERIMENT STATION BULLETIN 808

Bulletin No. 51 - April, 1899, Chas. D. Woods
Feeding Stuff Inspection
Analyses of samples collected under state law. Related to No. 48.
Some low grade meals reported. Free inspection for consumers
offered in such suspected cases

Bulletin No. 52 - May, 1899, W.M. Munson
The Spraying of Plants
Spraying described, as well as results obtained.
Equipment, apparatus, suppliers listed

Bulletin No. 53 - September, 1899, Chas. D. Woods, J.M. Bartlett
Fertilizer Inspection
Analyses of open market collection samples. Some focus on those
testing less than the law mandated

Bulletin No. 54 - October, 1899, Chas. D. Woods and L.H. Merrill
Nuts as Food
Results of all American analyses of nuts available, and discussion
of food values for man. Comparison to wheat flour discussed as
is digestibility. An important bulletin

Bulletin No. 55 - November, 1899, Chas. D. Woods and L.H. Merrill
Cereal Breakfast Foods
Analyses of all cereal breakfast foods located in Bangor market, with
a discussion of nutrition and cost. Another important early bulletin
in nutrition-of-man work

Bulletin No. 56 - December, 1899, F.L. Harvey and W.M. Munson
Apple Insects of Maine
Descriptions, life histories, and remedies for more common insect
pests of the apple. Plates and index

Bulletin No. 57 - December, 1899, Chas. D. Woods and J.M. Bartlett
Experiments with Potatoes
Analysis provided for experiments on sprayed and unsprayed fields with
reference to starch content, ash analysis, and a discussion of
fertilizers. From cooperative growers in Aroostook County. The
spray used was Bordeaux Mixture

Bulletin No. 58 - 1899
Finances, Meteorology, Index
Acknowledgements of gifts, report of treasurer, meteorology summarized,
index for 1899 bulletins (Bulletins 48-58 are fifteenth Annual Report)

Bulletin No. 59 - February, 1900, Chas. D. Woods and J.M. Bartlett
Feeding Stuff Inspection
Analysis of manufacturer's samples - some discussion of law violations

Bulletin No. 60 - March, 1900
Fertilizer Inspection
Manufacturer's samples collected and licensed before March 7, 1900
Bulletin No. 61 - 1900, F.L. Harvey
Notes on Insects and Plants
Materials on specimens sent to the station in 1899. A full account (first) of the brown tail moth, just establishing itself in Kittery area. Harvey's last bulletin. The brown tail moth material appears from 36-9; 42. First reports are in 1897, but not actually observed. See Annual Report 1897, 175, and 1898, 126

Bulletin No. 62 - April, 1900, Chas. D. Woods
The Maine Agricultural Experiment Station
Brief history, discussion of status, and summary of more important experiments and their results, and an index, including brief index to annual reports

Bulletin No. 63 - April, 1900, Chas. D. Woods, J.M. Bartlett
Feeding Stuff Inspection
Analyses of samples collected early in 1900. Major violations listed

Bulletin No. 64 - June, 1900, G.M. Gowell
Poultry Experiments in 1899
Experiments on fattening chickens for market, coops versus yards, age, food, all analyzed. First egg records from the long range breeding experiments reported. See trap nest invention, reported in Annual Report, 1898

Bulletin No. 65 - June, 1900, Chas. D. Woods and L.H. Merrill
Coffee Substitutes, Nut Oils, Testing Seeds, Potato Pomace
Results of testing of 8 coffee substitutes, physical constants of 13 nut oils, analyses of 102 grass seeds, 2 samples of potato pomace

Bulletin No. 66 - August, 1900, Chas. D. Woods, J.M. Bartlett
Fertilizer Inspection
Analyses of samples collected in 1900

Bulletin No. 67 - 1900, J.M. Bartlett
Digestion Experiments with Sheep
L.H. Merrill - A Comparison of Determined and Calculated Heats of Combustion - September, 1900
Detailed reports of digestion experiments since 1898. Experiments began in 1885. See Annual Reports 1886-1891; 1893-1898. Methods are reported in 1891. Materials used were clover hay and ensilage, oat and pea hay and ensilage, oat and vetch hay, timothy, oats, germ meal, oat feed, adulterated wheat bran. Experiments 71-85 are discussed here. Laboratory results as opposed to usual calculations also presented (pp. 169-170)
Experiments with Insecticides upon Potatoes
Field experiments in Houlton, Maine spraying on 25 plots. Part of a series of field experiments undertaken - Green Mountain potatoes. Some greenhouse experiments, especially with Bug Death, greatly over-rated insecticide

Experiments with Fungicides Upon Potatoes in 1900. How to Fight Potato Enemies. More reporting of the experiments conducted in conjunction with Bulletin 68. Spraying for potato blight and potato rot with various Bordeaux, both commercial and freshly prepared. Field notes, yields monitored, diseases described, as well as remedies in use (formulae) and times of application. (State of the art)

The Manurial Value of Ashes, "Mucks", Sea Weeds, and Bone Analyses given. Sea weeds are those eaten by sheep on Roque Island

Analyses of Miscellaneous Food Materials
Items submitted to laboratory for analysis - domestic fowl eggs, prepared flours, pea flour, gluten foods, condensed foods, cereals, acorns, chestnuts, and tropical fruits (avocado most well known)
MAINE AGRICULTURAL EXPERIMENT STATION BULLETIN 808

Bulletin No. 76 - August 1901, W.M. Munson
The Horticultural Status of the Genus Vaccinium
History, uses, propagation, blueberry industry and the Maine barrens, plates, detailed botany, bibliography (p. 156-8) index, pp. 159-161; long and important bulletin. For early materials see Annual Report, 1898, pp. 164-172

Bulletin No. 77 - 1901, Chas. D. Woods and J.M. Bartlett
Fertilizer Inspection
Analyses of samples collected in 1901

Bulletin No. 78 - 1901, Chas. D. Woods
Finances, Meteorology, Index
In addition to usual year end bulletin of this era, also contains copies of newspaper bulletins issued in 1901 (Colorado Potato Beetle, Feeding Stuffs Inspection law and impact in Maine, The Chinch Bug). Bulletins 70-8 are 17th Annual Report of the Station

Bulletin No. 79 - January, 1902, G.M. Gowell
Poultry Experiments in 1900 and 1901
Continuation of work in Bulletin 64. Also reported are work on incubation of eggs under different conditions, relationship of mating to egg fertility, recorded egg production in station studied species 1899-1901. This is the developmental foundation stock for the station work forthcoming (200 egg hens)

Bulletin No. 80 - 1902, Chas. D. Woods and J.M. Bartlett
Feeding Stuff Inspection (9)
Analyses of samples collected by inspectors and received from correspondents fall and winter 1901-2. Food nutrients, uses, and frauds, as well as impact of the law discussed, pp. 55-64

Bulletin No. 81 - 1902, Chas. D. Woods and J.M. Bartlett
Fertilizer Inspection (25)
Analysis of manufacturer's samples licensed before March 1, 1902. Some discussion of relationships of soils and fertilizer constituents

Bulletin No. 82 - April, 1902, W.M. Munson
Orchard Notes
Reports of observations on Russian and other hardy varieties of apples underway since 1890. Failures in Aroostook, better success elsewhere. Best varieties described. Keeping qualities of apples described

Bulletin No. 83 - June, 1902, Lewis R. Cary
The Grass Thrips
Anatomy, histology, development and habits of grass thrips (Anaphothrips striata, Osborn) detailed plates

Bulletin No. 84 - July, 1902, L.H. Merrill and E.R. Mansfield
Cereal Breakfast Foods
Analyses of cereal breakfast foods found in Maine market, with discussion of nutritive values and cost
MAINE AGRICULTURAL EXPERIMENT STATION BULLETIN 808

Bulletin No. 85 - October, 1902, Chas. D. Woods and J.M. Bartlett
Fertilizer Inspection (26)
Analyses of brands licensed in 1902

Bulletin No. 86 - 1902, H.W. Britcher
Variation in Trillium grandiflorum
185 plants analyzed especially for the characteristic of flowering parts returning to leaves. Many plates and photos

Bulletin No. 87 - 1902, Chas. D. Woods
Potato Insecticides and Fungicides in 1902. Oat Smut and Its Prevention. Notes on common insecticides sold in 1902; bordeaux mixture in 1902, further on field experiments with potatoes, especially Paris Green, Bug Death, and arsenate of lead, also a description of oat smut and recommended treatment. In addition to field experiments at Houlton, others at Brunswick were begun

Bulletin No. 88 - December, 1902, Chas. D. Woods
Finances, Meteorology, Index
In addition to usual items in year end bulletins, reprints newspaper bulletins for 1902. See Misc. Reports for listing. Bulletins 79-88 are the 18th Annual Report of the station

Bulletin No. 89 - February, 1903, W.M. Munson
Experiments in Orchard Culture
Reports cooperative experiments on orchard culture undertaken in Manchester, Maine for past several years. Mulching, impact of potash on apple scab, renovation, and top-grafting are discussed. 15 photos and plates, as well as description and history of the orchard

Bulletin No. 90 - March, 1903, Chas. D. Woods and J.M. Bartlett
Fertilizer Inspection (27)
Analyses of manufacturer's samples

Bulletin No. 91 - April, 1903, H.W. Britcher
The Chinch Bug in Maine: With Some Observations and Experiments. Description, habits, enemies. Growth in Maine over past 35 years. Detailed observations, especially of ability to withstand severe weather (25 experiments). Diagrams

Bulletin No. 92 - May, 1903, Chas. D. Woods and J.M. Bartlett
Feeding Stuff Inspection (10)
Analyses of samples collected and sent in; results of a feeding test with one new commercial product and some attempts at circumventing the new law which was reprinted (ch. 230, P.L. of 1903)

Bulletin No. 93 - July, 1903, G.M. Gowell
Breeding for Egg Production (Poultry Experiments in 1902)
A continuation of the reports in Bulletins 64 and 79. Experiments begun in 1898. Egg records for 1902. The relationship of space and housing to production. Experiments in incubation. Photographs
Bulletin No. 94 - August, 1903, Chas. D. Woods and J.M. Bartlett
Fertilizer Inspection (28)
Analyses of samples collected in 1903, copy of law regarding Babcock testing (ch. 169, P.L. 1895); results of experiments on top dressing with Nitrate of Soda, and Muriate of Potash for grasslands reported

Bulletin No. 95 - September, 1903, W.M. Munson
Dandelions, Hawkweeds, Ginseng, and Canker Worms
Bulletin prepared in response to many questions. Descriptions, plates and remedies for first two. Some analysis of ginseng for profit. Description and remedies for canker worms. Photos and plates

Bulletin No. 96 - October, 1903, Lewis R. Cary
Plant-house Aleyrodes (Aleyrodes vaporariorum West.)
Anatomy, histology, habits of this animal and suggested remedies. Diagrammatic plates.
A related paper is Gilman A. Drew, "A Modification of Patten's method of imbedding small objects for sectioning in definite planes," Zoologischen Anzeiger, Bd. XXIII, no. 611, 1900. (The methods used for sectioning in the histological part of the work.)

Bulletin No. 97 - 1903, Chas. D. Woods and L.H. Merrill
Notes and Experiments Upon the Wheats and Flours of Aroostook County
Chemical Analyses of Maine wheats and their flours; experiments of effect of climate on wheat; milling experiments comparing Maine wheats with northwestern wheats and baking tests, and a general comparison on Maine to northwestern wheats. These cooperative experiments, both growing and milling, were conducted in Houlton, photo. This is a significant publication

Bulletin No. 98 - December, 1903, Chas. D. Woods
Potatoes - varietal tests for blight resistance, insecticides, effect on vine health, methods of preparing Paris Green, early/late harvesting and rot, storage methods. First four reported
Angora goats described with 4 plates of habitat. Hen Manure (with J.M. Bartlett) - composition and analyses

Bulletin No. 99 - December, 1903, Chas. D. Woods
Finances, Meteorology, Index
In addition to usual end of year materials, also contains newspaper bulletins for 1903. See Misc. Reports for listing. Bulletins 89-99 are the nineteenth Annual Report of the station

Bulletin No. 100 - February, 1904, G.M. Gowell
Poultry Management at the Maine Agricultural Experiment Station
Accounts of methods of poultry management at MAES, incubation, treatment, housing of chicks, different types of houses, trap nests, methods of feeding laying hens. Excellent photos (A foundation bulletin for further work)
Bulletin No. 101 - March, 1904, Chas. D. Woods and J.M. Bartlett
Fertilizer Inspection (29)
Manufacturers' samples analyzed

Bulletin No. 102 - April, 1904, Chas. D. Woods and J.M. Bartlett
Feeding Stuff Inspection (11)
Analyses of samples, fall and winter 1903-4. Some discussion of results by type of feed

Bulletin No. 103 - May, 1904, Chas. D. Woods and L.H. Merrill
Entire Wheat Flour
Studies on milling, chemical composition of flours and grain, digestibility and nutrition of entire wheat flour and compared to ordinary bread and graham flours. Also reports results of a milling experiment, plate

Bulletin No. 104 - June, 1904, M.B. Cummings
Fertilization Problems: A Study of Reciprocal Crosses
Results of cross-fertilization of certain tomato and squash varieties. Work begun by Munson on pollination in 1892. Some earlier reports (brief) of progress were in 1898 annual report, p. 219 ff. primarily, based on queries raised by C. Darwin, as well as Munson, in Annual Report, 1892. Bibliography. An important early paper on genetics. (Good photographic plates.)

Bulletin No. 105 - July, 1905, Chas. D. Woods and J.M. Bartlett
Fertilizer Inspection (30)
Analyses of those collected in 1904

Bulletin No. 106 - 1904, Chas. D. Woods and J.M. Bartlett
Soybeans, Feeding Experiments, Alfalfa
A pot-pourri. First part is a description of this plant recently imported from Japan, including growing methods. Part II. Feeding experiments with cows comparing soy bean silage and corn silage. Part III is two brief pages on alfalfa

Bulletin No. 107 - October, 1904, Chas. D. Woods
Home Mixed Fertilizers (31)
Reports results of cooperative experiments on home mixed fertilizers for the most common crops in Maine (Cumberland and Aroostook Counties). Fifteen formulas suggested

Bulletin No. 108 - November, 1904, Edith M. Patch
Brown-tail Moth and Other Orchard Moths
History (cp. Bull. 61) description, remedial measures also Gypsy Moths (cp. Bull. 56) tent caterpillars, web worm, tussock moths, Promethea, Cecropia, role of birds discussed. Photo plates. Her first bulletin

Bulletin No. 109 - 1904, Edith M. Patch and W.M. Munson
The Apple Maggot and Other Insects. Life history, photo plates, descriptors. Insect Notes for 1904 (by Edith M. Patch). Those reported, received for identification. Photo plates
MAINE AGRICULTURAL EXPERIMENT STATION BULLETIN 808

Bulletin No. 110 - December, 1904, J.M. Bartlett
Digestion Experiments with Sheep and Steers
Reports experiments conducted from 1901-4. Same kinds of food described with coefficients, and results in reports of earlier work in 1897 and 1900 compared as well. Experiments 86-129 in this series. Related work on income and outgo of nitrogen also reported as ancillary to the main work. Bulletin 67 was the latest summary of the work

Bulletin No. 111 - December, 1904, Chas. D. Woods
Finances, Meteorology, Index
Also includes newspaper bulletins. Bulletins 100-111 make up Annual Report No. 20 of MAES. As finally published also contained photos of station buildings, a historical sketch of the station and floor plans for Holmes Hall, dedicated May 25, 1904

Bulletin No. 112 - January, 1905, Chas. D. Woods
Potato Experiments in 1904
Several experiments are reported. "Notes on the Rotting of Potatoes due to the Late Blight Fungus," (storage experiments); "Experiments with Dry Bordeaux," results; "Soluble Bordeaux for Potato Blight," results; "Experiments with Potatoes on Home Mixed Fertilizers," results and suggested formulae based on cooperative experiments

Bulletin No. 113 - February, 1905, W.M. Munson
"Practical Horticulture: Red Clover"
Experiments reported in practical horticulture for tomato, cabbage, cauliflower, eggplant, radish, celery, winter gardening, ornamental gardening, fruit growing, spraying, blueberries, plant breeding (all in brief summary form.) "Red Clover from Various Sources," reports of cooperative tests undertaken in 1902-1903 for USDA - seed from 29 world regions tested for germination and yield

Fertilizer Inspection (32)
Analyses of manufacturers' samples collected before March 1, 1905

Bulletin No. 115 - April, 1905, Chas. D. Woods and J.M. Bartlett
Feeding Stuff Inspection; Cottonseed Meal (12)
Analyses of materials collected by inspectors and from correspondents, discussion of the results (of various kinds p. 59-70), and experiments comparing low grade and high grade cottonseed meal reported

Bulletin No. 116 - May, 1905, Chas. D. Woods and L.H. Merrill
Food Inspection (1)
Text of pure food law enacted in 1905 (ch. 68, P.L. of 1905) and definitions adopted for enforcement - animal products, vegetable products, sugars and related substances, condiments (except vinegar), beverages and vinegar are spelled out in detail in this bulletin

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Bulletin No. 117 - July, 1905, G.M. Gowell
Poultry Experiments
After a grant from USDA, breeding experiments were expanded, and this bulletin reports results, as well as providing an update on methods of selection and handling breeding stock at Maine along with detailed accounts of methods of feeding. (See bulletins 64, 79, 93, 100, and annual report, 1898 for earlier work.) Pedigree charts are displayed in the bulletin. This is an important bulletin

Bulletin No. 118 - July, 1905, L.H. Merrill
Cereal Foods
General summary of the ten years of work conducted in conjunction with Minnesota A.E.S., for Office of Experiment Stations on Foods of Man. (Technical results in O.E. Stations' Technical Bulletins.) This bulletin discusses the new patent foods from the point of view of composition, nutrition, and reports the results of digestion experiments

Bulletin No. 119 - October, 1905, Chas. D. Woods and L.H. Merrill
Food Inspection (2)
Reports on baking powders and vinegars in 1905

Bulletin No. 120 - December, 1905, Chas. D. Woods and J.M. Bartlett
Fertilizer Inspections (33)
Analyses of samples collected during 1905

Bulletin No. 121 - December, 1905, Edith M. Patch
The Cottony Grass Scale (Eriopeltus festucae (Fonsc.).)
Description, life history, natural enemies, remedial measures and bibliography (pp. 178-9) photographic plates

Bulletin No. 122 - December, 1905, W.M. Munson
Experiments in Orchard Culture (Second Report)
A follow-up to Bulletin No. 89. Reports progress on special cooperative experiments underway in Kennebec County, culture and fertilization, renovation of orchards, top-grafting, keeping quality as affected by culture and cover crops. Photographs. Detailed results

Bulletin No. 123 - December, 1905, Edith M. Patch
Strawberry Crown Girdler (Otiorhynchus ovatus, Linn.)
Notes, with preventative and remedial measures offered. Insect Notes for 1905 appear at pp. 213-228, with good photographic plates. Also included are some concerns about need for identification, and a statement of how to send specimens

Bulletin No. 124 - December, 1905
Finances, Meteorology, Index.
Contains tables of meteorological observations, report of treasurer, index for 1905 bulletins, and an index for years 1901-1905. Bulletins 112-124 are 21st Annual Report of the station.
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Bulletin No. 125 - February, 1906, Chas. D. Woods and Bessie G. Tower
Seed Inspection (2)
Text of the laws regulating sale of seeds, analyses of samples collected in 1905, as well as those received by correspondents from 1902-5

Bulletin No. 126 - February, 1906, Chas. D. Woods and J.M. Bartlett
Field Experiments in 1905; Effect of Ration on Value of Manure
40 acres of cooperative field experiments reported. Clark method of intense cultivation for hay production, soil inoculation for legumes from artificial cultures by the help of bacteria, fertilizer in field culture of garden peas, (3 sites), sal bordeaux for potato blight, (as predecessor see Bull. 112), various alfalfa experiments, home mixed fertilizers for potatoes analyzed. Part II, by Bartlett a continuation of his long interest in steer feeding.

Fertilizer Inspection (34)
Analyses of manufacturers' samples

Bulletin No. 128 - March, 1906, W.M. Munson
Orchard Notes
Notes on spraying for caterpillars, scale insects, apple scab, and pink rot. Results of an experiment in unbalanced rations as far as fruits are concerned, winter injury from freezing and mice, and suggestions in fruit handling and pruning are offered. Plates. Follow-up to Bulletins 8, 52, 56, and Annual Reports, 1891, 1892, 1893, 1894. Plates. Part of this resulted from serious winters of 1903-4, 1904-5

Bulletin No. 129 - April, 1906, Chas. D. Woods and J.M. Bartlett
Feeding Stuff Inspection (13)
Analyses from collectors and correspondents, and some discussion of results, as to types of feed

Bulletin No. 130 - June, 1906, G.M. Gowell
Poultry Experiments 1905-06.
Follow up to earlier bulletins, and replacing Bulletin 100 and 117. Describes new additions to station's poultry plant, as well as a farm nearby in use at this time. Selection of breeding stock discussed, and detailed accounts of feeding chickens and hens reported as well as experiments on egg fertility. Good photos. This is an important interim report. Further bulletins of a deeper technical nature were being produced by the Bureau of Animal Industry, USDA, a co-supporter of the work

Bulletin No. 131 - October, 1906, L.H. Merrill
Indian Corn as Food For Man
Digestion Experiments with Chestnuts
Analyses of Maize products, account of digestion experiments with maize as a major diet component, with results, and two chestnut digestion experiments reported
Bulletin No. 132 - November, 1906, W.H. Munson
Plant Breeding in Relation to American Pomology
Brief history of plant breeding and American fruits with emphasis on
systematic breeding, development of an American pomological science,
results of the work, and problems left unsolved
Strawberry, grape, pear, plum, blackberry and apples are all discussed
Good survey of state of the art at time of highly developing interest
in what would soon be called genetics

Bulletin No. 133 - November, 1906, Chas. D. Woods and J.M. Bartlett
Fertilizer Inspection (35)
Analyses of those collected in 1906

Bulletin No. 134 - December, 1906, Edith M. Patch
Insect Notes for 1906
Brown-tail moth and gypsy moths (infesting Maine since 1903); Legislation
passed summarized. (Patch was working with state entomologist at this
time); Aroostook potato insects discussed, larch case bearer, and brief
notes on other chief insects of 1906. Photos. Flea beetles and aphids
discussed briefly (aphid attacks began severely in North America in
1903, but as yet impact on potatoes not yet known, see p. 215-6 of
this bulletin

Bulletin No. 135 - December, 1906, Chas. D. Woods
Food Inspection (3)
Texts of 1905 law and revised standards of purity adopted for Maine by
M.A.E.S.

Bulletin No. 136 - December, 1906, Chas. D. Woods and J.M. Bartlett
Food Inspection (4)
Reports on baking powder, spices and vinegars

Bulletin No. 137 - December, 1906, Chas. D. Woods
Circulars, Finances, Meteorology, Index
Newspaper bulletins included Potato Scab, White Grubs and June Beetles,
Red-Humped Caterpillar, (Oedemasis concinna), The Yellow-Edge or
Mourning Cloak Butterfly, Elm Leaf-Curl, Yellow-Necked Caterpillar
(Datana ministra), Cecropia Moth, Tent Caterpillar, Tussock Moths,
nearly all of these are illustrated here with photos. Other parts
as typical year-end bulletin. Bulletins 125-137 comprise the 22nd
Annual Report of the Station

Bulletin No. 138 - February, 1907, Chas. D. Woods and Royden L. Hammond
Seed Inspection (3)
1906 Analyses

Bulletin No. 139 - March, 1907, W.M. Munson
Orchard Notes: 1906
Continuing report of the experiments in Kennebec County, culture,
fertilization, renovation, top-grafting, cover crops, and pruning
notes are all covered. Photos. Continuation of Bulletins No. 89,
122, 128. (Note: 1906 was a year of extremes of weather.)
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Bulletin No. 140 - March, 1907, Chas. D. Woods and J.M. Bartlett
Fertilizer Inspection (36)
Manufacturers' samples analyzed

Bulletin No. 141 - March, 1907, W.J. Morse
The Prevention of Potato Scab
Causes, how soil may be infected, and how infections may be spreading. Morse's first bulletin, and cites and uses his experience at Vermont, see Reports No. 15 (1902); 16 (1903); 17 (1904); 18 (1905). Earlier Maine bulletins were 1888, 1890, 1893, 1894 (Annual Reports) and 1905 Newspaper Bulletin, and Special Bulletin in 1906. This is an important early bulletin

Bulletin No. 142 - April, 1907, Chas. D. Woods and J.M. Bartlett
Feeding Stuff Inspections (14)
Analyses of those collected and sent in fall and winter 1906-07. Discussion of results

Bulletin No. 143 - May, 1907, W.M. Munson
Preliminary Notes on the Seedling Apples of Maine
History and description of the more important of such apples originating in Maine. Photos. A very useful historical bulletin

Bulletin No. 144 - June, 1907, G.M. Gowell
Poultry Experiments 1906-1907
Describes brooder houses, hen houses, and feeding methods at MAES. The trap nest described. A feeding experiment whole vs. cracked corn is reported. Many photos. An important publication. Previous bulletins 64, 79, 93, 100, 117, 130, and Annual Report 1898

Bulletin No. 145 - September, 1907, Chas. D. Woods and J.M. Bartlett
Food Inspection (8)
Maple sugar and maple syrup analyses from spring 1907

Bulletin No. 146 - October, 1907, Chas. D. Woods and J.M. Bartlett
Fertilizer Inspection (37)
Samples collected in 1907 analyzed

Bulletin No. 147 - November, 1907, Edith M. Patch
The Potato Plant Louse (Nectarophora solanifolii Ashmead)
Description and life history. Plates, and photos. Four years' collection after great outbreaks of 1904-06. Foundation publication to her life's work

Bulletin No. 148 - November, 1907, Edith M. Patch
Insect Notes for 1907
Orchard insects, grasshoppers, gypsy and brown tail moths, "Prominent" attack on hard woods, tent caterpillars, potato insects and others described - listing of sightings. Plates

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Bulletin No. 149 - 1907, W.J. Morse
Potato Diseases in 1907
Various topics: spraying experiments, attempts at control of scab brown spot, surface spotting, blackleg, and insecticide efforts all reported. Photos. (See Bulletin 112, 126)

Bulletin No. 150 - December, 1907
Finances, Meteorology, Index
Bulls. 138-150 are Annual Report

Bulletin No. 151 - January, 1908, Chas. D. Woods and James M. Bartlett
Food and Drug Inspection No. 12
In addition to reiteration of the law, and the work of the inspector, this bulletin reports on inspections conducted on dyes, chemicals and preservatives; salt fish, clams, oysters, and scallops; sausages; honey; molasses; vinegar; and cream of tartar

Bulletin No. 152 - February, 1908, Chas. D. Woods and Royden L. Hammond
Seed Inspection No. 4
Routine analysis, although a table of frequency of weed seeds is of some interest

Bulletin No. 153 - March, 1908, Chas. D. Woods and J.M. Bartlett
Fertilizer Inspection No. 38
Routine analyses, although some interest may pertain to fertilizers specifically sold for use in Aroostook County, pp. 102-8 for this. The company improved some aspects of its product after the first analysis which showed some major deficiencies

Bulletin No. 154 - April, 1908, Chas. D. Woods and H.H. Hanson
Paris Green, Bordeaux Mixture
Reports various analyses and descriptions of commercial products, as well as minor comments on use

Bulletin No. 155 - March, 1908, W.M. Munson
Orchard Notes, 1907 (no. 21)
(Previous bulletins useful in this series were nos. 89, 122, 139, and this bulletin is a continuation.) Reports results of disastrous winter of 1906-07 and ends Munson's work on the station pomology. Bulletin summarizes the decade of work he put in in this area on renovation of orchards, top-grafting, spraying experiments, the work (cooperative) at New Gloucester, as well as a history of the orchard at Orono. Woods supplied an addendum, p. 154-6, on "the Maine Station and Pomology"

Bulletin No. 156 - 1908, Chas. D. Woods and J.M. Bartlett
Feeding Stuff Inspection No. 15
Results of testing from April, 1907-April, 1908. Over 500 samples tested. A problem emerging was weed seeds intermixed, and the problem was extensively discussed from pps. 189-202, including an important decision of the U.S. Board of Food and Drug Inspection designed to control the problem (Decision No. 90)
Bulletin No. 157 - May, 1908, Chas. D. Woods
Poultry Work at the Maine Station
Contains a general history and conclusions, especially of the breeding experiments to 1907. Discusses the new projects just beginning as Pearl replaced Gowell. This work (the first indication of Pearl's contribution) is discussed pp. 215-8

Bulletin No. 158 - June, 1908, L.H. Merrill
Food of Maine Studies
Bulletin combines a miscellany of work, mostly in response to requests for information on tropical fruits and vegetables, the chemical composition of popped corn, studies on the digestibility of hulled corn, and an examination of graham flours

Bulletin No. 159 - July, 1908, Raymond Pearl and Frank M. Surface
Appliances and Methods for Pedigree Poultry Breeding
(Paper No. 6, from Biol. Lab)
Discusses trap nests (photos p. 245, 7); egg distribution and turning tables (photos 251, 3); pedigree incubator baskets (photo p. 259), chick leg band bender, (photo p. 261) and outlines the various record keeping devices being put in place at MAES. The first source for Pearl's new techniques and materials

Bulletin No. 160 - October, 1908, Chas. D. Woods
Fertilizer Inspections No. 39
Samples and analyses as usual, along with more on the Aroostook Fertilizer discussed before. A three year summary from the same companies appears at pp. 297-310

Bulletin No. 161 - November, 1908, Edith M. Patch
The Saddled Prominent (Heterocampa guttivitta (Walker))
This is Entomology Paper No. 31
Paper totally devoted to a major caterpillar outbreak in 1907-08. Good discussion of nomenclature, history of other outbreaks, life history, food plants, seasonal history, enemies of the caterpillar, combative measures. Excellent plates and photos. An extremely interesting and useful bulletin

Bulletin No. 162 - December, 1908, Edith M. Patch
Insect Notes for 1908 (Entomology Paper No. 32)
Describes Gypsy and Brown-tail moths; Saddled Prominent; Rosy-striped Oakworm; Green-striped Maple Moth; A new Spruce Tortrix; various new caterpillars; various moths; some beetles; aphids, sawflys, fungous diseases related to insects; 14 plates. An annual contribution mostly obtained from donations by those interested in the state

Bulletin No. 163 - December, 1908
Finances, Meteorology, Index
The standard year end bulletin
Bulletin 151-163 constitute the Annual Report for 1908
Bulletin No. 164 - January, 1909, W.J. Morse
Notes on Plant Diseases in 1908
Includes discussions of potato diseases of the year, orchard diseases of the year; the development of scab on limed potato soils (following Bull. No. 149); Self-Boiled Lime-Sulphur as a Substitute for Bordeaux Mixture for Apple Scab; and Weather Records in Relation to Winter Injury of Fruit Trees (refers to Bull. No. 128; Crotch Injury of Apple Trees Caused by Weather Conditions; Winter Injury of White Pine in 1908. Two photo plates. An important early paper dealing with the impact of climate. Other parts of the bulletin discuss research results

Bulletin No. 165 - February, 1909, Raymond Pearl and Frank M. Surface
Poultry Notes - 1908
Summarizes the technical publications in biological journals; discusses the new equipment and buildings; discusses some changes in methodology of handling the animals; discusses the results of seasons on egg-laying with the data from several high laying hens. (2 plates)

Bulletin No. 166 - March, 1909, Raymond Pearl and Frank M. Surface
Data on the Inheritance of Fecundity Obtained from the Records of Egg Production of the Daughters of "200-egg" Hens (Biol. Lab. Paper No. 10)
Describes experiment and results. An important early paper in developing the statistical background to modern genetics. Pointed out the importance of environmental influences on quantitative traits

Bulletin No. 167 - 1909, Chas. D. Woods and J.M. Bartlett
Field Experiments in 1906-08.
Reports cooperative experiments conducted in these years, centered on potatoes. Includes work done on different fertilizers, high ridge as opposed to modified ridge culture, blight resistant varietal tests; as well as tests on a brand of fungicide, and other experiments on alfalfa, wild mustard, and the use of lime in seeding down areas

Bulletin No. 168 - September, 1909, Raymond Pearl and Frank M. Surface
Data on Certain Factors Influencing the Fertility and Hatching of Eggs (Biol. Lab. No. 14)
Reports results of experimentation in the early days of genetics on comparison of fertility and hatching qualities of eggs. Deals to some degree with environment of the animals. Includes bibliography annotated from p. 157-164

Bulletin No. 169 - November, 1909, W.J. Morse
Two Recent Epidemics of Late Blight and Rot of Potatoes in Aroostook County.
Discusses 1907, 1909 epidemics observed while conducting spraying experiments. Some good materials on weather conditions and deals with Bordeaux mixture and its application, when and how. Also deals with storage problems. Earlier Maine bulletins of historic importance here are 73, 87, 98, 112. (2 plates)
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Bulletin No. 170 - November, 1909, Charles E. Lewis
Apple Diseases Caused by Coruneum foliicolum Fckl. and Phoma mali Sculz et Sacc.
Discusses cultural characters of these two fungi along with results of inoculation experiments to determine the extent of the parasitism. (13 plates, 42 figs), bibliography

Bulletin No. 171 - November, 1909, Edith M. Patch
The Pine-Leaf Chermes and the Green-Winged Chermes, brief life histories, 2 plates

Bulletin No. 172 - December, 1909, O.A. Johannsen
The Mycetophilidae of North America - Part I.
Gives descriptions of these fungus gnats, and life histories where possible (3 large plates). At its time a standard work summarizing work to date in the world

Bulletin No. 173 - December, 1909, Edith M. Patch
Chermes of Maine Conifers
Seven different Chermes discussed with references to description, life histories, and evidence as to other classifications (some confusion had resulted in nomenclature of these insects in the previous decade.) 14 plates, bibliography

Bulletin No. 174 - December, 1909, W.J. Morse
Blackleg: A Bacterial Disease of the Stem and Tuber of the Irish Potato. Bulletins 149, 164, as well as two miscellaneous publications of the station had reported previous work.
Discusses the disease, its appearance, means of distribution, geographical distribution, and means of prevention and eradication. This disease had had a grave impact, especially in seed potatoes from 1906-9

Bulletin No. 175 - December, 1909
Finances, Meteorology, Index
Bulletins 164-175 are the Annual Report of the station for 1909

Bulletin No. 176 - January, 1910, Maynie R. Curtis
The Ligaments of the Oviduct of the Domestic Fowl (Biol. Lab No. 16).
Biological and histological description of this part of the animal (4 plates)

Bulletin No. 177 - February, 1910, Oscar A. Johannsen
Insect Notes for 1909
Brief accounts of more important insects observed in this year. Gypsy and Brown-tailed moths, San Jose Scale. More extended descriptions of spindle worm moth, birch leaf Bucculatrix, Apple leaf sewer, a fungus gnat, two crane flies, a potato maggot and a fruit feeding beetle. (3 plates)
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Bulletin No. 178 - April, 1910, Charles E. Lewis
A New Species of Endomyces from Decaying Apple
A newly discovered fungus described. Bibliography and plates (7)

Bulletin No. 179 - May, 1910, Raymond Pearl and Frank M. Surface
Poultry Notes - 1909.
Reports progress on experiments at station during year. Bulletins 157, 159, 166 precede this. Plates. The beginnings of the crosses of Barred Plymouth Rocks and Cornish Indian Game hen so prominent in MAES work is discussed.
This part is Biol. Lab. No. 21 and is an important work in their early genetic studies. The results, however, led Pearl to the erroneous conclusion that high fecundity was a sex-linked trait

Bulletin No. 180 - June, 1910, O.A. Johannsen
The Mycetophilidae of North America - Part II
(Bulletin No. 172 is Part I)
More details of species of these gnats. Plates

Bulletin No. 181 - May, 1910, Edith M. Patch
Gall Aphids of the Elm
Seven of this group discussed in the usual Patch style and completeness.
A substantial bibliography for each is included along with 13 plates

Bulletin No. 182 - June, 1910, Edith M. Patch
Four Rare Aphid Genera from Maine
Four European aphids identified in Maine and offered under their traditional names. Sipha glyceriae; Mindarus abietinus; Symdobius oblongus and Mastopoda pteridus Oestlund. Bibliographies - 6 plates

Bulletin No. 183 - September, 1910, Raymond Pearl and Frank M. Surface
Experiments in Breeding Sweet Corn (Biol. Lab. No. 18)
Cooperative Experiments all over southern and western Maine for 1907-1909. Many plates. Field, hill, propagation, and technical results for packing and storage are all reported

Bulletin No. 184 - October, 1910, J.M. Bartlett
Digestion Experiments with Poultry
Described, analyzed, conclusions. Plates. Follow-up to his earlier work on ruminants

Bulletin No. 185 - December, 1910, W.J. Morse and C.E. Lewis
Maine Apple Diseases
Extensive descriptions of work in Maine to date. 16 plates. Results from Highmoor Farm purchase. Bulletin No. 164 is predecessor. An important early bulletin

Bulletin No. 186 - December, 1910
Finances, Meteorology, Index
Bulletins No. 176-186 are the Annual Report for 1910. This Bulletin includes from pp. 404-435, an accumulative index for years 1906-1910
Bulletin No. 187 - January, 1911, O.A. Johannsen
Insect Notes for 1910
Miscellaneous notes of new sightings, localities and so on for the year as in previous listings. E.M. Patch wrote the section on Aphidae and Psyllidae. 8 plates

Bulletin No. 188 - February, 1911, Chas. D. Woods
Field Experiments
Two are reported. Thirty-one varietal tests of oats, and an experiment comparing high ridge versus modified ridge culture of potatoes in Aroostook County. (This latter covered work done from 1907-1910)

Bulletin No. 189 - April, 1911, W.W. Bonns
Orchard Spraying Problems and Experiments: A Review of and a Contribution to Previous Data
Maine Bulletins 164, 185 are predecessors. Bibliography in footnotes as citations. Bordeaux Mixture, Sulphur as a Fungicide, Lime-Sulphur experiments, (including directions for making, as well as spraying), and a survey of work at Highmoor in 1910 are included. Several photos and 12 plates

Bulletin No. 190 - June 1911, Edith M. Patch
Macrosiphum destructor and Macrosiphum solanifolii (Two species of Macrosiphum). Descriptions, life histories, bibliography, 1 figure

Bulletin No. 191 - July, 1911, Maynie R. Curtis
An Accurate Method for Determining the Weight and the Parts of the Eggs of Birds (Biol. Lab #27)
Methods devised at Maine to control weight loss until dissection, and methods of dissection of parts of eggs in determining biometrical work. Figures and data included demonstrating results

Bulletin No. 192 - November, 1911, Raymond Pearl
Breeding Poultry for Egg Production (Biol. Lab #32)
Summarizes earlier work, and various interpretations. (1898-1907) Part III discusses the new plan instituted at MAES in 1908 and its results. Part IV reprints Biol. lab #25 (read at American Society of Naturalists, Ithaca, American Naturalist, XLV, June, 1911 321-345.) "Inheritance of Fecundity in the Domestic Fowl." A significant article confirming the concept of genotypes and of inheritance of fecundity

Bulletin No. 193 - November, 1911, Raymond Pearl
Poultry Notes - 1910
Describes a new fresh air brooder (photos); and abandonment of a roosting closet. Discusses accuracy of trap nest records. Summarizes the technical studies published elsewhere (pps. 193-200)

Bulletin No. 194 - November, 1911 - W.J. Morse
Control of Blackleg Disease of the Potato
Discusses setting out experimental work, especially cooperative experiments, and the results of this work. Discusses methods of infection as known, and use of formaldehyde as a method of eliminating disease. Bulls. No. 149, 174 are predecessors
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Bulletin No. 195 - December, 1911, O.A. Johannsen and Edith M. Patch
Insect Notes for 1911
Spruce Budworm, apple maggot, a parasite of the brown-tail moth, and
more extended discussion of elm-leaf beetle, wire worms and
Pemphigus tesellata are included. 2 plates

Bulletin No. 196 - December, 1911, O.A. Johannsen
The Fungus Gnats of North America (Mycetophilidae) Part III (I-II
are Bulletins 172, 180)
Continuation of detailed specimen descriptions (5 plates)

Bulletin No. 197 - December, 1911
Finances, Meteorology, Index
Bulls. No. 187-197 are Annual Report, 1911

Bulletin No. 198 - March, 1912, W.W. Banns
Orchard Spraying Experiments
Lays out results of spraying experiments at Highmoor for 1910, 1911.
(See Bulletin 189 for discussion) 5 plates. Also discusses
Cooperative experiments at Greene in 1911. Interesting as it
was a very hot dry summer. Also includes materials on spray
make-up

Bulletin No. 199 - April, 1912, W.W. Banns
Orchard Notes
Discusses the Highmoor Orchard, its state upon purchase and the
renovation work performed to date. 8 pps photos. Discusses
experimentation proposed for orchard

Bulletin No. 200 - June, 1912, O.A. Johannsen
The Fungus Gnats of North America Part IV
Conclusion (see Bulletins 172, 180, 196)
The last part of the long work on the Mycetophilidae of North America.
Contains 7 plates and index to all four parts

Bulletin No. 201 - June, 1912, H.H. Hanson and A.K. Burke
The Deterioration and Assay of Spirit of Nitrous Ether
Lays out methods of analysis and prospective deterioration for this
product used in medicine

Bulletin No. 202 - July, 1912, Edith M. Patch
Aphid Pests of Maine
Food Plants of the Aphids
Psyllid Notes
Descriptions, lists of observations, of her life's work to date.
Several new species noticed here. 9 plates of photos

Bulletin No. 203 - August, 1912, Edith M. Patch
Elm Leaf Curl and Wooly Apple Aphid
(See Bulletins No. 173, 195) Life histories, and general summary of
information provided in depth in several scientific publications.
Bibliography and plates
A Case of Triplet Calves: With Some General Considerations Regarding Multiple Gestation in Normally Uniparous Animals. (Biol. Lab. #39)

Bulletin No. 205 - November, 1912, Raymond Pearl
The Mode of Inheritance of Fecundity in the Domestic Fowl. (Biol. Lab. #37)

Bulletin No. 206 - November, 1912, Frank M. Surface
The Histology of the Oviduct of the Hen (Biol. Lab. #40)

Bulletin No. 207 - December, 1912, O.A. Johannsen
Insect Notes for 1912

Bulletin No. 208 - December, 1912
Finances, Meteorology, Index

Bulletin No. 209 - January, 1913, Chas. D. Woods
New Mineral Fertilizer

Bulletin No. 210 - February, 1913, O.A. Johannsen
Spruce Budworm and Spruce Leaf Miners

Bulletin No. 211 - March, 1913, O.A. Johannsen
Potato Flea-Beetle (Epitrix cucumeris)
Bulletin No. 212 - March, 1913, W.J. Morse and G.A. Yeaton
Orchard Spraying Experiments in 1912
1912 fungicide experiments as well as several different arsenic sprays are described and reported.

Bulletin No. 213 - June, 1913, Edith M. Patch
Aphid Pests of Maine, II., Willow Family
Descriptive accounts of Maine Aphids infesting various willows. Three new species noted. World wide sightings on willows are listed as well. Some remedial measures described. 4 plates.
Part II of the Bulletin is a continuation of Bulletin No. 202. Food Plant Catalogue of the Aphidae of the Willow (Willow family)

Bulletin No. 214 - July, 1913, Raymond Pearl
The Biology of Poultry Keeping
Lecture originally given at Columbia University on January 13, 1912 (Biol. Lab. #49) 2 plates.
A significant statement by Pearl on his views on biology, animals, and research. Especially important for his views on individuality. "Poultry management is a biological problem and to be successful must have due regard to fundamental biological principles."

Bulletin No. 215 - August, 1913, Raymond Pearl
The Measurement of the Intensity of Inbreeding
Summary of a long paper published in American Naturalist Vol. XLVII (1913). A bit of new material on Jersey cows is also included. Another useful paper in his work

Bulletin No. 216 - September, 1913, Raymond Pearl
Poultry Notes 1911-1913
Describes new methods on station, and new methods of management of the birds. Deals with manure, storage of manure, crematories, an improved range feed trough, the natural enemies of poultry, and the use of green food. Notes on the formation of the egg white are included. 7 photos

Bulletin No. 217 - October, 1913, Edith M. Patch
Woolly Aphid of the Apple
Habits, discussions, life cycle, structure, habitats and remedies are discussed. 6 plates

Bulletin No. 218 - October, 1913, Raymond Pearl and John Rice Miner
Tables for Calculating Coefficients of Breeding
The mathematical background for Bulletin No. 215, and provides opportunity for farmers and others to analyze pedigrees with only simple addition. (Biol. lab. #51)

Bulletin No. 219, October, 1913, Charles F. Lewis
Comparative Studies of Certain Disease Producing Species of Fusarium
Impact of an apple fungus (Corn and Potatoes are also included). Culture tests, and tests of pathogenicity are discussed. 15 plates. An appendix reports in summary form the results from another independent researcher.
Bulletin No. 220 - November, 1913, Edith M. Patch
Woolly Aphid of the Elm
Discusses this insect in the eastern U.S., as part of her longer
life's work. 6 plates. Her food plant catalogue is continued
in this work. Bibliography

Bulletin No. 221 - December, 1913, Raymond Pearl
Constants for Normal Variation in the Fat Content of Mixed Milk

Frank M. Surface
A Pedigree System for Use in Breeding Guinea-Pigs and Rabbits

Maynie R. Curtis
On the Ability of Chickens to Digest Small Pieces of Aluminum.
Bits and pieces of biological laboratory work. The third paper
reports unfortunate results of a banding experiment and it
stirred some controversy. 5 photos

Bulletin No. 222 - December, 1913
Finances, Meteorology, Index
Bulletins No. 209-222 are 1913 Annual Report

Bulletin No. 223 - January, 1914, W.J. Morse
Spraying Experiments and Apple Diseases in 1913
Data on experimental results, both on foliage, and fruit apple scab
and apple canker also discussed. 4 plates

Bulletin No. 224 - February, 1914, Chas. D. Woods
Field Experiments
Mostly at Highmoor Farm, 1910-1913. Top-dressing, potato ridge
culture, soybeans, iron sulphate and wild mustard, iron sulphate
and potato vines, and results of summer spraying of apples and
poison are reported. Soybean work at Orono; potatoes in Aroostook
Cooperative experiments

Bulletin No. 225 - February, 1914, Edith M. Patch
Currant and Gooseberry Aphids in Maine.
More on her work, including more on her food plant catalogue. 4
plates

Bulletin No. 226 - March, 1914, Clarence W. Barber
Notes on the Accuracy of Bushel Weight Determinations (Biol. Lab. #61)
Notes on the Influence of Shape and Size of Plots in Tests of Varieties
of Grain (Biol. Lab. #62)

Raymond Pearl and John Rice Miner
A Table for Estimating the Probable Significance of Statistical
Constants (Biol. Lab. #63)
Bits and pieces from the biological laboratory work. Notice new
emphasis on grains

Bulletin No. 227 - March, 1914, W.J. Morse
Powdery Scab of Potatoes
History, distribution, prevention, and disinfection of this important
disease. A major work from Morse. 4 plates. Led to his going on
nation-wide tour for USDA
Bulletin No. 228 - June, 1914, Maynie R. Curtis
Factors Influencing the Size, Shape and Physical Constitution of the Egg of the Domestic Fowl
This is a summary statement of the fourth of their important papers in genetic work. This one appeared originally in Archiv fuer Entwicklungsmechanik der Organism (Roux) in 1914

Bulletin No. 229 - July, 1914, Frank M. Surface and Clarence M. Barber
Studies on Oat Breeding I, Variety Tests 1910-1913
Methods laid out, and experiments described for first three years of this work. Leads eventually to Maine 340 oat, 2 photos. A follow-up to Bull. No. 226 (Biol. Lab. #67)

Bulletin No. 230 - August, 1914, W.J. Morse and M. Shapovalov
The Rhizoctonia Disease of Potatoes
Summarized other work, as well as work at Maine, including work in field as well as greenhouse. Discusses prevention. An important study. 11 plates, bibliography

Bulletin No. 231 - September, 1914, Raymond Pearl
Improving Egg Production by Breeding
Paper given at American Poultry Association at Atlantic City, August 13, 1913. Printed widely in press. Popular discussion of Bull. No. 205 and the end results of their genetic work with chickens. Significant for the industry in the country

Bulletin No. 232 - September, 1914, H.R. Barrows
Histological Basis of Shank Colors in Domestic Fowl (Biol. Lab. #72)
Reporting further in their studies of hereditary characteristics. 6 plates. Bibliography

Bulletin No. 233 - November, 1914, Edith M. Patch
Maine Aphids of the Rose Family
More of her work. 6 drawings, 4 plates, bibliography

Bulletin No. 234 - December, 1914
Finances, Meteorology, Index
Also includes abstracts of other papers published by the station, but not in Bulletins. Ten of them bear numbers of Biol. Lab. publications, three are from Entomological Laboratory. Annual Report is Bulletins 223-234

Bulletin No. 235 - 1915, Frank M. Surface and Raymond Pearl
Studies on Oat Breeding, II. Selection Within Pure Lines. Biol. Lab. #79. More of the genetic studies reported leading to Maine 340 variety. A logical follow-up of their other work

Bulletin No. 236 - 1915, Chas. D. Woods
Field Experiments
Reports work at outlying farms in 1915 and before. Oat results, potato fertilizers, iron sulphate and topkilling, apple fertilizers, turnips as stock food, profitability of sheep in Maine, dynamite as a land preparer, and rotation of crops are all discussed
Bulletin No. 237 - 1915, Raymond Pearl and Frank M. Surface
Sex Studies, VII, On the Assumption of Male Secondary Characteristics by a Cow with Cystic Degeneration of the Ovaries. No. 7 in their continuing genetic series. Numbers are assigned to earlier papers in the series with this number, all of which deal with sex characteristics and genetic inheritance. Biol. Lab. # 82. 3 plates

Bulletin No. 238 - 1915, Herbert Osborn
Leafhoppers of Maine
Detailed life histories, specimen analyses of this important group of insects. One of a number of significant studies in nomenclature and description

Bulletin No. 239 - 1915, Raymond Pearl and Frank M. Surface
Studies on Bean Breeding, I. Standard Types of Yellow Eye Beans (Biol. Lab. #84). 16 pps. plates (1 in color). Describes the standard bean as determined by a number of years of experimentation

Bulletin No. 240 - 1915, W.J. Morse and M. Shapovalov
Apple Spraying Experiments in 1914
Highmoor Farm experiments described and reported

Bulletin No. 241 - 1915, Edith M. Patch
Woolly Aphid of Elm and Juneberry
More of her work - 2 plates

Bulletin No. 242 - 1915, Edith M. Patch
Pink and Green Aphid of Potato
More of her work. This one very important, 3 plates. Bibliography, life histories

Bulletin No. 243 - 1915, Raymond Pearl
Further Data on the Measurement of Inbreeding
A follow-up to Bulletin No. 215. Part of his continuing series laying out the results of his genetic research. See Papers from the Biological Laboratory, this volume, and his Modes of Research in Genetics, MacMillan, New York, 1915. 3 photos in this bulletin

Bulletin No. 244 - 1915, William Colcord Woods
Blueberry Insects in Maine
Woods spent summers of 1913-1915 in the blueberry barrens of Washington County studying the entomology related to the blueberry. This early paper summarizes the work. 2 photo plates

Bulletin No. 245 - December, 1915
Finances, Meteorology, Index
(A separate index for 1911-15 - Bulletins 235-245 are included.) Also includes abstracts of papers published elsewhere: 11 are in Biol. papers, 2 are on aphids (noticed elsewhere). 1 (by Michael Shapovalov) is on potato-scab, "Effect of Temperature on Germination and Growth of the Common Potato-Scab Organism", Journal of Agricultural Research, Vol. IV, No. 2, May 15, 1915, pp. 129-134
MAINE AGRICULTURAL EXPERIMENT STATION BULLETIN 808

Bulletin No. 246 - 1916, Chas. D. Woods
Field Experiments
Reports general results from work on fertilizer on apples, oats. Variety trials on oats, as well as trials on new oat varieties. Analysis of Aroostook soils, and results of no potash (WWI shortage) reported as were methods of culture, and efforts to increase nitrogen. Apple tree planting and sheep growing were discussed

Bulletin No. 247 - 1916, Raymond Pearl
Report of the First Jersey Sires' Futurity Test of the Aroostook Jersey Breeders Association. Describes 1915 tests, and winners along with results of their progeny in milk yields, butterfat and other matters

Bulletin No. 248 - 1916, Herbert Osborn
Studies of Life Histories of Leafhoppers of Maine State of knowledge of this insect which infests hay crops, 6 plates

Bulletin No. 249 - 1916, W.J. Morse
Six Years of Experimental Apple Spraying at Highmoor Farm Results of first six years' work in the newly acquired facility

Bulletin No. 250 - 1916, Frank M. Surface and Jacob Zinn
Studies on Oat Breeding, IV, Pure Line Varieties. Biol. Lab. # 96. Follow-up report to Bull. No. 229, 235. Summarizes and analyzes work conducted from 1910-1915. 5 plates. Work led to development of Maine 340, the leading oat in the state for a number of years

Bulletin No. 251, 1916, Henry H.P. Severin
Soluble Poisons in the Poisoned Bait Sprays to Control the Adult of the Apple Maggot (Rhagoletis pomonella Walsh). A number of efforts to control this insect are described. A map is included

Bulletin No. 252 - 1916, W.J. Morse
Apple Spraying Experiments in 1915. A follow-up to Bulletins No. 189, 198, 212, 223, 240, summarized in 249. Lays out methods, experiments, and results. Part II. Winter injury of Young Apple Trees Following Setting in Dynamited Holes - no consequence. Part III. Two Apple-Leaf Troubles New to Maine - reports incidence of chlorosis and silver-leaf in Maine. 2 plates. IV, further Observations Relative to the Ability of the Apple Scab Fungus to Live Over Winter on Young Twigs - mostly McIntosh and near coast

Bulletin No. 253 - 1916, C.L. Metcalf
Syrphidae of Maine Total description, and life history of these flower-flies, a natural enemy (in larval form) of the aphid. 10 species described. Bibliography. 9 plates

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Bulletin No. 254 - 1916, Herbert Osborn
Studies of Life Histories of Froghoppers of Maine, 6 plates.
Description of this insect noted for its spittle found in hay fields

Bulletin No. 255 - 1916, Raymond Pearl and Maynie R. Curtis
Dwarf Eggs of the Domestic Fowl
An abstract of an earlier paper in Journal of Agricultural Research,
Vol. VI, 1916, pp. 977-1042. Biol. Lab. #98. 3 photos

Bulletin No. 256 - 1916, Edith M. Patch
Elm Leaf Rosette and Woolly Aphid of the Apple
A revised edition of Bulletin No. 217. 5 plates. Discusses some
new observations

Bulletin No. 257 - December, 1916
Finances, Meteorology, Index
Also includes abstracts of other papers not published as Bulletins.
Seven biological papers, 2 in entomology. Bulletin 246-257 form
Annual Report for 1916

Bulletin No. 258 - 1917, Raymond Pearl
Some Commonly Neglected Factors Underlying the Stock Breeding Industry,
Biol. Lab. #107. Much of this was presented as a speech before
Maine Livestock Breeders' Association, Augusta, December, 5, 1916,
pp. 23-30. A statement of what is wanted in breeding and how the
new rules of genetics are helping to obtain results. (livestock
the issue)

Bulletin No. 259 - 1917, Edna Mosher
Pupae of Some Maine Species of Notodontoidea
Detailed description (morphology) of these forms of these lepidopterans.
6 figures

Bulletin No. 260 - 1917, Chas. D. Woods
Barn and Field Experiments in 1916.
Profitability of sheep, swine, handling of winter manure, manure
worth to practical farmer; fertilizer experiments at Highmoor;
oat growing, seeding practices, growth without potash (impact of
WWI); other fertilizers and potatoes, are all discussed

Bulletin No. 261 - 1917, Raymond Pearl
Report of progress on Animal Husbandry investigations in 1916,
Biol. Lab. #111. Deals in particular with cooperative breeding
experiments. Results were presented to Dairyman's convention on
December 7, 1916. Summary statements of the year's work

Bulletin No. 262 - 1917, Raymond Pearl and S.W. Patterson
The Change of Milk Flow with Age, as Determined from Seven Day Records
of Jersey Cows, Biol. Lab. #117. Provided data from experiments and
develops a logarithmic curve of these results
Bulletin No. 263 - 1917, C.L. Metcalf

Bulletin No. 264 - 1917, Henry H.P. Severin
Life History, Habits, Natural Enemies and Methods of Control of the Currant Fruit Fly (Epochra canadensis Loew). Another in the series of papers from the summer staff of the station. Bibliography, Index, 5 plates

Bulletin No. 265 - 1917, William Colcord Woods
The Biology of the Alder Flea-Beetle (Altica bimarginata Say). Life histories, bibliography, 2 plates, 2 figures

Bulletin No. 266 - 1917, J.M. Bartlett
The Chemical Composition of Green Sprouted Oats
Used in poultry feeding, and reports station experiences and results of analysis. Part II. Fish Wastes for Feeding Animals. Analysis of this product

Bulletin No. 267 - 1917, Edith M. Patch
The Aphid of Choke Cherry and Grain
New specimens located in Orono in 1917 reported and discussed. 1 figure

Bulletin No. 268 - 1917
Finances, Meteorology, Index
Abstracts as well include: Biology 14, Entomology 2, Phytopathology 2.
Bulletins 258-268 form Annual Report for 1917

Bulletin No. 269 - 1918, Chas. D. Woods, reporter
Barn and Field Experiments in 1917.
Are Swine Profitable in Winter?
Are Sheep Profitable in Maine (3 year results)?
Fertilizer Experiments on Apple Trees at Highmoor Farm.
Commercial Varieties of Oats Grown at Highmoor Farm in Soil Test.
Experiment at Aroostook Farm (useful 1917 diagrams of this early test).
Effect of Omitting Potash Fertilization Upon the Oat Crop.
Effect of Omitting Potash on the Potato Crop.
The Potato Crop in its Relation to Soil and Fertilizer.
Potatoes Grown at Aroostook Farm on Fertilizers Containing Ammonia (Nitrogen) in Different Forms.
Plant Breeding at Aroostook Farm in 1917 (discusses experiments on oats, wheat, timothy, strawberries)

Bulletin No. 270 - 1918, Edith M. Patch
Eastern Aphids: A Few Species of Prociphilus
More of her Food Plant Catalogue of the Aphids of the World (see previous bulletins). 2 figures
Bulletin No. 271 - 1918, W.J. Morse
Apple Spraying Experiments in 1916 and 1917
The 7th and 8th Annual Reports of the long time work.
See Bulletins 249, 252 for previous reports

Bulletin No. 272 - 1918, John W. Gowen
Inheritance Studies of Certain Color and Horn Characteristics in
First Generation Crosses of Dairy and Beef Breeds, Biol. Lab. #122,
and it is an abstract of #120. The paper is the preliminary report
on the cross-bred herd then being assembled to study genetics in
dairy cattle. The experiment is discussed in detail in my History
of the Maine Agricultural Experiment Station (1980). 4 photos,
bibliography. An important bulletin. See Misc. Doc. 519 (1915)

Bulletin No. 273 - 1918, William Colcord Woods
The Biology of Maine Species of Altica
Life histories, etc. of four of the six known species of flea beetle
is offered. The fifth is in Bull. 265 and the sixth was a marginal
and disputed identification at the time of publication. 2 figures,
2 plates. Written while author was on military service

Bulletin No. 274 - 1918, John W. Gowen
Report of Progress on Animal Husbandry Investigations in 1917
3rd Annual Report (first, Misc. Doc. 519 (1915); 2nd, Annual Report,
1916, pp. 121-144), Biol. Lab. #124. Milk records, transmission
of qualities, breeding work, multiple births, times of heat, effect
of times of service, are the items under experimentation and
discussed briefly here

Bulletin No. 275 - 1918
Abstracts of papers published elsewhere, meteorology, treasurer's
report, index. Papers include two on animal husbandry in Journal
of Agricultural Research, and one entomology from the same location.
Bulletins 269-275 form Annual Report for 1918

Bulletin No. 276 - 1919, Herbert Osborn
The Meadow Plant Bug. Entomology Paper No. 101. Life history of this
insect, imported in timothy grass 1800-1825 and a pest of cultivated
grasses in general. 5 figures, 2 plates

Bulletin No. 277 - 1919, Chas. D. Woods
Potato Studies. Consists of several reports on food value of Maine
potatoes, as compared to others; mineral matter in Maine grown
potatoes; potato pomace; methods of cultivation (continuation of
Bull. 188); Nitrogen impact on Aroostook Farm crops; loss of
potash on same crops as result of World War I (final report of
this wartime forced measure)

Bulletin No. 278 - 1919, Chas. D. Woods
Soil Test Experiment at Aroostook Farm. Second report covering work
on oats, potatoes, clover for 1917 and 1918; proposed continuation
in 1919. See Bulletin 269 for earlier results
MAINE AGRICULTURAL EXPERIMENT STATION BULLETIN 808

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Bulletin No. 275 - 1918
Abstracts of papers published elsewhere, meteorology, treasurer's report, index. Papers include two on animal husbandry in Journal of Agricultural Research, and one entomology from the same location. Bulletins 269-275 form Annual Report for 1918

Bulletin No. 276 - 1919, Herbert Osborn
The Meadow Plant Bug. Entomology Paper No. 101. Life history of this insect, imported in timothy grass 1800-1825 and a pest of cultivated grasses in general. 5 figures, 2 plates

Bulletin No. 277 - 1919, Chas. D. Woods
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Bulletin No. 278 - 1919, Chas. D. Woods
Soil Test Experiment at Aroostook Farm. Second report covering work on oats, potatoes, clover for 1917 and 1918; proposed continuation in 1919. See Bulletin 269 for earlier results

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Bulletin No. 279 - Raymond Pearl and John Rice Miner
The Variation of Ayrshire Cows in the Quantity and Fat Content of Their Milk. An abstract summary of a longer paper, same title, in Journal of Agricultural Research. Biometrical study of milk records kept in Scotland. A very large number of multiple coefficients were analyzed. (See Bull. 262 for the development of the basic logarithms used in this study)

Bulletin No. 280 - John W. Gowen
Appliances and Methods for Pedigree Poultry Breeding at the Maine Station. Reprint and compilation of Bulletins 159 and 165, out of print, along with some new practices introduced since the earlier bulletins. Pedigree records, egg records, trap nests, distribution tables, incubator baskets, banding methods, are all discussed, 9 photos

Bulletin No. 281 - Raymond Pearl, John W. Gowen, and John Rice Miner
Studies in Milk Secretion, VII. Transmitting Qualities of Jersey Sires for Milk Yield, Butter-Fat Percentage, and Butter-Fat. Biol. Lab. #128. Mathematical discussion of genetics in dairy breeding. An important bulletin from early animal husbandry work. Bibliography. Appendices discussing specific animals in Jersey breeding

Bulletin No. 282 - Edith M. Patch
Three Pink and Green Aphids of the Rose
Entomology Paper No. 102. Paper outlining life history and food plant habits of among the most important carriers of potato diseases. See E.S. Schultz, Donald Folsom, F. Merrill Hilderbrandt and Lon A. Hawkins, "Investigations of the Mosaic Disease of the Irish Potato", Journal of Agricultural Research, XVII, No. 6, September 15, 1919, pp. 247-274 for the first important paper. This part of the bulletin is significant contribution. Part II, is Part VI of her ongoing food plant catalogue (Ent. #103)

Bulletin No. 283 - John W. Gowen
Report of Progress on Animal Husbandry Investigations in 1919. Biol. Lab. #130. 4th Report, continuing ongoing experimental work being reported in progress. Especially genetic studies on transmittal qualities in milk production, as well as concomitant breeding experiments

Bulletin No. 284
Abstracts, Meteorology, Finances, Index
6 Biological papers are abstracted; 2 entomological papers (one on spruce budworm); 2 phytopathology papers. Bulletins 276-284 are Annual Report for 1919
MAINE AGRICULTURAL EXPERIMENT STATION BULLETIN 808

Bulletin No. 285 - 1920, Jacob Zinn
Wheat Investigations. I. Pure Lines. Biol. Lab. #132. Reports in detail efforts to isolate and develop a number of pure lines of wheat. The environment of Northern Maine, and its effect on wheat is also studied incidentally. Experiment ran 1915-1920. Baking tests resulted in much on gluten contents of these strains. Bulls 97, 250 are predecessors. 11 plates photo

Bulletin No. 286 - John W. Gowen
The Variation of Milk Secretion with Age in Jersey Cattle. Abstract of another paper in Genetics. Apparently no Biol. Lab. #. Determines that milk yield varies with age logarithmically. From cow to cow the change is parabolic. Suggests the growth of mammary gland is the chief variable

Bulletin No. 287 - John W. Gowen
Self Sterility and Cross Sterility in the Apple. Biol. Lab. #133. Presents a large amount of data about apple varieties and their tendencies to self-pollinate. Sterility was also noted in the work. 119 varieties were studied

Bulletin No. 288 - W.J. Morse
Some Observations Upon the Effect of Borax in Fertilizers. Results of 1919 fertilization upon potatoes with high concentrations of borax in commercial substances. Pot and greenhouse experiments were attempted after this was noticed with the same or similar results. 14 photos

Bulletin No. 289 - John W. Gowen
The Correlation Between Milk Yield of One Lactation and That of Succeeding Lactations. Abstract of another Genetics paper from Studies on Milk Secretion VI. Apparently no Biol. Lab. # assigned. Studies of Jersey purebreds and whether one lactation is a good predictor of subsequent ones. Correlations ran +.7 to +.2. 5 lactations were studied

Bulletin No. 290 - John W. Gowen
The Variation of Butterfat Percentage with Age in Jersey Cattle. Another abstract from VI, Milk Secretion Studies. No Biol. Lab. # apparently. More statistics from the genetics research. Here still on purebred Jerseys

Bulletin No. 291 - John W. Gowen
The Correlation Between the Butterfat Percentage of One Lactation and the Butterfat Percentage of Succeeding Lactations in Jersey Cattle. More from the Genetics papers (see previous 2 or 3 bulletins)
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Bulletin No. 292 - Donald Folsom

Potato Mosaic. This is the first available report for ordinary citizens and to the general public of the work which reported the exact nature of the potato mosaic and its methods of transmission, especially through the acts of aphids. Methods of cultivation, other potential distribution agents are discussed. This is a very important bulletin. See Schultz, et al., "Investigations on the mosaic disease of the Irish potato", Journal of Agricultural Research, 17, 1919, 247-274 and Schultz and Folsom, Ibid, 19, 315-337 (1920). 3 plates, good bibliography in footnotes. First footnote (p. 157, by C.D. Woods, also is important in outlining the relationship of work to MAES and USDA on Aroostook Farm.)

Bulletin No. 293 - John W. Gowen

Studies in Milk Secretion, VIII. On the Influence of Age on Milk Yield and Butterfat Percentage, as Determined from the 365 day records of Holstein-Frisian Cattle. Biol. Lab. #134. 2,586 year long tests analyzed. Displays curve of milk amounts by age and describes a normal curve of distribution as age takes over. Butterfat percentages decline slightly as age progresses. Variability from the mean is higher here

Bulletin No. 294 - Jacob Zinn

Normal and Abnormal Germination of Grass-Fruits. Abstract of a paper published in Vienna in 1914, and dealing with the processes in grasses at the time of the radicle emerging from the surrounding tissues. 4 plates

Bulletin No. 295

Abstracts, Meteorology, Finances, Index. Abstracts include 3 papers by Gowen on Genetics; 1 by Patch on life cycles of aphids; 1 by Folsom on potato mosaics (all of these q.v.). The index extends from 1916-1920 as well as a separate index for the bulletins of this year. Bulletins 285-295 are Annual Report, 1920

Bulletin No. 296 - 1921, Albert P. Morse

Orthoptera of Maine. Life histories, sightings, descriptions, plates

Bulletin No. 297 - Donald Folsom

Potato Leafroll. Easily available results presented for general audience. Original in Journal of Agricultural Research, 21, 1. Related to Bulletin No. 169. Disease described, as well as role of aphids in infection of other plants. Some methods of control described. Other bulletins related to this one are 141, 149, 173, 194, 227, 230, 292. 10 photos, one of which is in author's MAES history

Bulletin No. 298 - Karl Sax

Studies in Orchard Management, II., Factors Influencing Fruit Development of the Apple. Food supply and seed content are the main factors. Baldwins and Ben Davis are the chief varieties reported. Biol. Lab. #138. Highmoor Farm experiments. Good schematics of orchard at this state. Bull. 287 is related

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Bulletin No. 299 - John W. Gowen
Biol. Lab. #139. Continuation of annual series. Work in progress reported

Bulletin No. 300 - John W. Gowen and Mildred R. Covell
Studies in Milk Secretion, IX., on the Performance of the Progeny of Holstein-Freisian Sires. Biol. Lab. #143. Preliminary paper on improving cow performance by "progeny testing" dairy sires. Early results do not indicate results predictable from famous male forebear in some cases. An important early report of results (152 pps.)

Bulletin No. 301 - John W. Gowen and Mildred R. Covell

Bulletin No. 302 - Edith M. Patch
A Meadow Caterpillar "The Adventurer" (Ctenucha virginica.) Life history and description. Two plates, one in color. Entomology #108

Bulletin No. 303 - Edith M. Patch
Rose Bushes in Relation to Potato Culture. Entomological Paper #109. Detailed study of life history of the Pink and Green Aphid especially determined its relationship to potato disease and the rose as a host plant. A very important paper. Plates. Aphid flight is discussed here as well. Bibliography. See Bulls. 134, 242, 292, 297 for related work

Bulletin No. 304
Abstracts, Meteorology, Finances, Index
11 genetics or genetics related papers. 1 on potato phytopathology, 1 on fertilization experiments. Annual Report includes Bulletins 296-304, 1921

Bulletin No. 305 - 1922, Karl Sax and John W. Gowen
The Relation of Tree Type to Productivity in the Apple. Biol. Lab. #151. A more technical analysis appeared in The Journal of Heredity. Nearly 1,000 Ben Davis trees were analyzed for this characteristic. Useful for new orchard planning. 4 photos, bibliography

Bulletin No. 306 - Marie S. Gowen and John W. Gowen
Studies in Milk Secretion, XVII, Relation Between Milk Yields and Butterfat Percentages of the 7-day and 365-day tests, of Holstein-Freisian Advanced Registry Cattle. Biol. Lab. #149. An effort to prove the validity of the shorter test, then in common use. More of their regular work, now being funded by Rockefeller Foundation
Bulletin No. 307 - Karl Sax
Sterility relationships of major Maine varieties at the time of
publication discussed. Important work for modern orchardists.
Bibliography. See Bulletin No. 287

Bulletin No. 308 - Edith M. Patch and William Colcord Woods
The Blueberry Maggot in Washington County. Entomology Paper No. 110.
Update of Bulletin 244. Excellent life history studies

Bulletin No. 309 - 1922
Abstracts, Meteorology, Finances, Index
Genetics papers - 2; Entomology - 1. Bulletins 305-309 are Annual
Report for 1922

Bulletin No. 310 - 1923, Karl Sax and John W. Gowen
The Cause and Difference of Size Differences in Apple Trees. Biol.
Lab. #159. Early size differences persist. Only other factor
other than early size is variability of seedling root systems. 1
plate

Bulletin No. 311 - John W. Gowen
Studies in Milk Secretion, XIV. The Effect of Age on the Milk Yields
and Butterfat Percentages of Guernsey Advanced Registry Cattle.
Biol. Lab. #160. 365 day tests reported. 10,644 records analyzed
in this paper. Yield rises at a decreasing rate until age 8.77.
Butterfat percentage slight but significant decline from age 2-12

Bulletin No. 312 - Donald Folsom
Potato Spindle-Tuber. Describes disease, transmission (thought, in
error, to be aphids), and suggests some methods of control. See
E.S. Schultz and D. Folsom, "A 'Spindling-tuber disease' of Irish
Potatoes," Science, n.s., 57, 149 (1923) and idem, "Transmission,
variation, and control of certain degenerative diseases of Irish
(July, 1923) 4 pps plates

Bulletin No. 313 - Edith M. Patch
The Summer Food Plants of the Green Apple Aphid (Aphis pomi). New
food plants other than apples. 8 pps. figures. An addition to this
information and to the life cycle knowledge of aphids

Bulletin No. 314 - John W. Gowen
Studies on Conformation in Relation to Milk Producing Capacity in
Cattle, III. Conformation and Milk Yield in the Light of the
Study of 19 judges in light of best qualities as indicated by
a 1903 study. Useful for those wishing to improve the conformation
of their dairy cattle.
Bulletin No. 315
Abstracts, Meteorology, Finances, Index
7 genetics, biological papers abstracted; 3 papers in phytopathology

Bulletin No. 316 - 1924, Donald Folsom and E.S. Schultz
The Importance and Natural Spread of Potato Degeneration Diseases. Discussion of mosaic, leafroll, spindle-tuber; aphids and a seed selection process are discussed. This is an important bulletin; results from much joint work, MAES and USDA. See Bulletins 292, 297, 312. 5 photos

Bulletin No. 317 - Edith M. Patch
The Buckthorn Aphid, (Aphis abbreviata Patch). Entomological Paper #114. Life cycles, food plants, more in her life's work. 3 figures

Bulletin No. 318 - John W. Gowen
Interpretation of Dairy Pedigrees. Biol. Lab. #163. Important bulletin in long term research on genetics. 1 plate, bibliography

Bulletin No. 319 - H.C. Fall
The Blueberry Leaf-Beetle and Some of its Relatives I., Systematic. The New England Species of Galerucella. Entomological Paper #115. Life-histories, systematic descriptions, 2 figures, 1 plate

Bulletin No. 320 - J.M. Murray and C.C. Little (with cooperation of W.T. Bovie)
The Influence of Ultra-Violet Light on Nutrition in Poultry. 10 photos. Work leading eventually to vitamin studies. Paper by later Dean of Arts College and the then President of the University of Maine

Bulletin No. 321
Abstracts, Meteorology, Finances, Index
9 genetics/biology papers are abstracted

Bulletin No. 322 - 1925, Karl Sax
Fertilization of Apple Orchards in Maine. Biol. Lab. #167. Reports results of work done in a Ben Davis orchard at Highmoor since 1913. Fertilizer was applied from 1914-1918, and then the trees were simply maintained. By 1922 they were in poor condition, so in 1923, 1924 further applications of fertilizer were made. 1 plate

Bulletin No. 323 - Edith M. Patch
Potato Aphids. 4 plates, bibliography. Life histories of the most important aphids spreading degenerative diseases of the potato. An important work

Bulletin No. 324 - John W. Gowen
Studies in Milk Secretion, XV. Guernsey Sires' progeny performance for milk yield, butterfat percentage, and butterfat. Biol. Lab. #169. Paper presents foundational material for further studies mostly relating to in-breeding and milk productions. 2 plates
MAINE AGRICULTURAL EXPERIMENT STATION BULLETIN 808

Bulletin No. 325 - W.J. Morse and Donald Folsom
Apple Spraying and Dusting Experiments 1918 to 1924. A follow-up to Bulletins 189, 198, 212, 223, 240, 252, (249 a summary), and 271. Experiments over the years since the last summary are described and analyzed in brief format. A good bibliography appears in the footnotes.

Bulletin No. 326 - Edith M. Patch
The Melon Aphid. 3 plates, life history, food plants similar to other papers from this author.

Bulletin No. 327 - John W. Gowen

Bulletin No. 328
Finances, Meteorology, Index
Abstracts of other papers produced in 1925 by staff of station. Biol. Lab - 4; Entomology - 1; Phytopathology - 4. Also includes an index for years 1921-5, and bulletins 322-8 inclusive.

Bulletin No. 329 - 1926, John W. Gowen

Bulletin No. 330 - Karl Sax and Iva M. Burgess
Varieties of Ensilage Corn for Maine. Reports results of tests at Highmoor Farm begun in 1922 with recommendations. Other station tests were conducted in the 1890's. Biol. Lab. #175.

Bulletin No. 331 - Donald Folsom, E. Schultz, and Reiner Bonde
Potato Degeneration Diseases; Natural Spread and Effect Upon Yield. Follow-up work 1923-5 on these diseases reported and discussed in earlier bulletins, and especially 316. Marks first joint bulletin of these three significant researchers. Also discusses seed plots and roguing efforts at Aroostook Farm 1921-5.

Bulletin No. 332 - Karl Sax

Bulletin No. 333 - Donald Folsom
Apple Spraying and Dusting Experiments in 1925. Relates to earlier bulletins 189, 198, 212, 223, 240, 249, 250 (summary of previous six), 271, 325. Reviews long running spraying experiments at Highmoor Farm and recent results. Bibliography, 8 plates. Also includes comparative work done at Orono and with cooperating farmers in the state.
MAINE AGRICULTURAL EXPERIMENT STATION BULLETIN 808

Bulletin No. 334 - Donald Folsom and Reiner Bonde
Potato Spraying and Dusting Experiments 1921 to 1925. Summarizes station work 1892 to 1921 on Bordeaux Mixture and replicates work and adds others through the next four years in light of new information on transfer of disease via insects. Results of 9 season's digging on unsprayed plots was reported as compared to sprayed plots. Many cooperative experiments were involved. A detailed literature survey is included. Analysis of climate factors is also included. 9 photos

Bulletin No. 335
Finances, Abstracts, Index, Meteorology. 2 papers in genetics; 1 in entomology; 4 in plant pathology/agronomy

Bulletin No. 336 - 1927, Edith M. Patch
Two Currant Aphids that Migrate to Willow-Herbs. Entomology Paper No. 120 - Treats Variable Currant Aphid and Green Gooseberry Aphid. 1 plate

Bulletin No. 337 - Edith M. Patch
The Pea Aphid in Maine. Entomology Paper #121. Life history, etc., of this insect, which arrived in very large numbers in 1926. Bibliography. 1 figure

Bulletin No. 338 - Charles H. Merchant

Bulletin No. 339 - Charles H. Merchant
An Economic Survey of the Apple Industry in Maine. Analyzes 966 apple farms in 13 counties of state from point of view of variety, size, sales, marketing routes, and price. An important study of this facet of Maine’s agriculture at its broadest and widest point historically. Useful today for historians. Detailed maps, charts, graphs, tables

Bulletin No. 340 - C.R. Phipps

Bulletin No. 341 - John W. Gowen
Productivity of Guernsey Cows of American or Island Origin. Biol. Lab. #181. Provides comparisons of imported cattle with native Guernseys, as well as their daughters. Proves place of origin of little or no use in this breeding planning. Deals ultimately with heredity versus training question, at least in part by implication
Bulletin No. 342
Abstracts, Finance, Meteorology, Index. 3 papers in genetics/biology; 1 in agricultural marketing; 9 in one form of plant pathology or another

Bulletin No. 343 - 1928, J.H. Hawkins
Wireworms Affecting Maine Agriculture (A Preliminary Report)
Entomology #123. 3 plates. Types described, with some suggestions on control. Bibliography

Bulletin No. 344 - Karl Sax
Bud and Root Selection in the Apple. Last of his major papers for the station. Bud selection not a major factor on improving varieties. Progeny tests the only real measure. Summarizes a decade of work tangential to other work. Biol. Lab. #187

Bulletin No. 345 - C.R. Phipps
The Chain-Dotted Measuring Worm: A Blueberry Pest. Entomology #124. Recorded in this form for the first time, although species history dated to 1770. Life histories and insect parasites are described. 2 plates, bibliography

Bulletin No. 346 - Edith M. Patch
The Foxglove Aphid on Potato and Other Plants. Life histories and sighting, and includes some work performed by author at Rothamstead while on sabbatical leave. 2 plates

Bulletin No. 347 - Charles H. Merchant
An Economic Study of 93 Apple Farms in Oxford County, Maine 1924-7. Detailed study of center of Maine industry. Extensive study, which, in another form earned author the Ph.D. at Cornell. Extensive tables. A significant publication more important today to historians

Bulletin No. 348 - Donald Folsom and Theodore T. Ayers

Bulletin No. 349
Abstracts, Finance, Meteorology, Index. 4 papers in biology/genetics; 2 papers in plant pathology abstracted

Bulletin No. 350 - 1929, B.E. Brown and F.V. Owen
Concentrated Fertilizers for Potatoes in Aroostook County. Joint contribution of USDA and MAES. Reports experiments since 1925 on new concentrated fertilizers. 9 photos. Includes materials relating fertilizers to soils in this area. An important bulletin
MAINE AGRICULTURAL EXPERIMENT STATION BULLETIN 808

Bulletin No. 351 - Charles H. Merchant
An Economic Study of 239 Blueberry Farms in Washington and Hancock Counties, Maine. Detailed study of the farms engaged in blueberry culture, from all points of view. Many tables, charts, graphs, and 3 photos. An important bulletin, now more useful for historians

Bulletin No. 352 - Reiner Bonde, Donald Folsom, and E.R. Tobey
Potato Spraying and Dusting Experiments 1926-1928. Follow-up to Bulletin 334 where earlier experiments are reported and analyzed. Important continuing data, with a bibliography

Bulletin No. 353
Abstracts, Finances, Meteorology, Index. 1 agricultural economics; 2 in entomology; 7 in plant pathology/agronomy

Sources of Nitrogen for Potato Fertilizers in Aroostook County. Joint publication, USDA, MAES. Reports 16 years of experiments in Aroostook on variety of sources of nitrogen, some synthetic sources as well as others. The impact of seasonal conditions is also assessed. Many other factors are also discussed. An important bulletin. Graphs, tables, bibliography, 7 photos

Bulletin No. 355 - Charles H. Merchant and Byron T. Smith
Local Market Requirements of Agricultural Products in Aroostook County, Maine. Reports survey of purchases for 198 establishments in 1925-6. Includes detailed data on products which could be raised or produced in Aroostook as well as other materials. Tables, 3 photos. A useful publication study of this area at a time of transition in mechanization and population

Bulletin No. 356 - C.R. Phipps
Blueberry and Huckleberry Insects. Phipps' dissertation at Cornell. An important publication still a standard reference. Bibliography, index, 8 photos, 2 color plates

Bulletin No. 357
Abstracts, Finances, Meteorology, Index. 2 papers in entomology; 1 in home economics; 4 in plant pathology. Also includes index for years 1926-1930

Bulletin No. 358 - 1931, Donald Folsom, F.V. Owen, and Hugh B. Smith
Comparisons of Apparently Healthy Strains and Tuber Lines of Potatoes. Reports work since 1923 in efforts to introduce "healthy" strains into commercial production in Aroostook County. 6 photos, tables, charts, and lengthy bibliography. First effort to provide controls on these aphid disseminated diseases

Bulletin No. 359 - Merton S. Parsons
Some Economic Phases of the Marketing of Maine Apples. A master's thesis at UM in 1931. 8 photo plates. Tables, and other data collected for a useful thesis. Separation of data by varieties as well as by grade
MAINE AGRICULTURAL EXPERIMENT STATION BULLETIN 808

Bulletin No. 360
A Summary of the Year's Work in all Departments, and Prospects for the Future. Essentially the first of the annual reports now familiar. 9 photos. Also includes Abstracts, Finances, Meteorology, Index. Abstracts included 1 Agricultural Economics; 2 in Biology; 4 in Home Economics; 3 in Plant Pathology

Bulletin No. 361 - 1932, George F. Dow
Costs and Returns in Producing Milk, Raising Heifers, and Keeping Herd Bulls in Maine. A major study of the dairy industry in Maine from this point of view. First major publication of a later director. Maps, charts, graphs, tables, 174 pages still very useful

Bulletin No. 362 - Reiner Bonde
Potato Spraying and Dusting Experiments 1929 to 1931. A continuation and amplification of work reported in bulletins 334 and 352. 7 photos, bibliography

Bulletin No. 363
Abstracts, Finances, Meteorology, Index. Annual Reports of Departments. 15 photos, tables, graphs. A very useful way to view work in progress throughout the rest of this decade and most of the next two. 3 Abstracts in Entomology (first by G.W. Simpson); 1 in Home Economics; 3 in Plant Pathology

Bulletin No. 364 - 1933, Charles H. Merchant
Prices of Farm Products in Maine. Charts, graphs, tables in first years of depression, but deals with historic movement of prices in U.S. and Maine since 1800 in some cases; also deals with wages, taxes, freight rates, bankruptcies. Potatoes, apples, grains, corn, hay, dry beans, milk cows, dairy products, dairy cattle, beef cattle, poultry, eggs, horses, sheep, wool, hogs, are all discussed in terms of available data in historic series. A very important bulletin

Bulletin No. 365 - William E. Schrumpf
The Effect of Handling Methods on the Quality of Maine Potatoes. Five stages of handling are studied with impact on quality. The Maine Development Commission supported the study. 12 photos. The first of many publications in this difficult area

Bulletin No. 366 - Charles H. Merchant and Merton S. Parsons
Farm-Property Taxation in Maine. 2 photos. An important study of Maine Agriculture as changes threatened and became more imminent under the impact of the depression. Tables, graphs, charts, maps. Misc. Pub. 549 has related data

Bulletin No. 367 - George F. Dow
An Economic Study of the Production and Utilization of Milk in Maine. A foundation work which eventually produced the Maine Milk Commission in an effort to rationalize the industry. Tables, graphs, charts
MAINE AGRICULTURAL EXPERIMENT STATION BULLETIN 808

Bulletin No. 368 - Donald Folsom
Apple Spraying and Dusting Experiments 1928 to 1932 in Relation to Scab, Yield, and Tree Growth. A follow-up and extension of Bulletins 189, 198, 212, 223, 240, 249 (summary), 252, 271, 325, 333, 348. Also follows other tests conducted elsewhere. Significant for importance of McIntosh as a variety in the testing sequences. Bibliography, 4 photos

Bulletin No. 369
Yearly Report of Progress. 21 photos. Abstracts, Finances, Meteorology, Index. 1 in Biology; 1 in Home Economics; 3 in Plant Pathology

Bulletin No. 370 - 1934, E.S. Schultz, Reiner Bonde, and W.P. Raleigh
Isolated Tuber-Unit Seed Plots for the Control of Potato Virus Diseases and Blackleg in Northern Maine. Cooperative publication of USDA and MAES. Reports work done on Aroostook Farm, primarily on Green Mountain strain, to control viral diseases through seed plot isolation. An important bulletin. Roguing as a method also discussed. 12 photos, bibliography

Bulletin No. 371 - Lolie Smith
A Study of Factors of Economy in Electrical Cooking of a Typical Day's Meals in Maine. First major bulletin from this discipline recently founded. Analyzes costs of electricity beginning to find its way into kitchens. Different utensils, and equipment were compared. 2 photos, tables, bibliography

Bulletin No. 372 - Merna Myrtha Monroe
A Survey of the Cooking Practices in Maine Rural and Village Households. Reports work begun by Gail Redfield in initial stage. Analyzes methods as electricity began to replace earlier methods. A useful bulletin

Bulletin No. 373 - George F. Dow
An Economic Study of the Collection of Milk and Cream in Maine. Analyzes this growing industry at a time when the milk shed was growing. Data from 1929 to 1932 were used. A follow-up to bulletin 367. Photograph, tables, graphs, and charts

Bulletin No. 374 - George F. Dow
Costs and Return in Operating Milk and Cream Collection Routes in Maine. Follow-up to bulletins 367 and 373. Important source as it reflects the impact of the motor truck in rural areas. 1 photo, charts, graphs

Bulletin No. 375 - W.F. Dove (although his name does not appear on title page)
A Study of the Causes of Nutritional Deficiency Diseases in the Livestock and Inhabitants of Maine With Possible Corrective Methods Secured from the Utilization of Maine Fishery Products and the Production of Superior Foods. Reports work in progress and partially complete since 1927. Vitamin D, calcium, phosphorus
are all treated. A remarkable production for its time as it also includes work on climate, mineral contents of natural drainage and a variety of other causations. Extensive bibliography. Still a very useful publication. 2 plates

Bulletin No. 376 - Merna Myrtha Monroe
A Primer of Electricity and Heat. Electricity in the household, as well as heat transference in the household are discussed in some detail. 8 figures. A useful publication at this time of technical change

Bulletin No. 377
Summary Report of Progress, 1934. Financial Statement, Meteorology, Index. Detailed Annual Report - Potatoes, 323-360. Work in progress, tables, charts, 2 photos. Dairying, 360-367; Animal Breeding and Nutrition, 367-74; 1 photo; Apples, 374-84, 2 photos; small fruits, 384-91, 4 photos, reports some variety tests; canning crops, 391-7, 4 photos, also some varietal tests; garden crops, 397-401, photos; Entomology, 401-5; Nutrition of Children in Maine, 405-7; Other Home Economics, 407-9; Market Area Studies, 409-10; Farm Credit, 410-1; Chemistry, 411-3. Annual Report covers Bulletins 370-7; Inspections, 151-4. Abstracts include: 1 in Home Economics; 7 in Plant Pathology; 1 in Biology; 1 in Soils

Bulletin No. 378 - 1935, William E. Schrumpf
A Study of the Organization and Management of Potato Farms in Aroostook County, Maine. 165 farms discussed - Years 1928-1931. Maps, graphs, charts, 8 photos. An important publication

Bulletin No. 379 - William E. Schrumpf
A Study of the Organization and Management of Potato Farms in Central Maine. Further study in this work. 38 farms - 1929-1931. Maps, graphs, charts, tables, 5 photos

Bulletin No. 380
Summary Report of Research for Year 1935. Potatoes, 139-178, field trials, fertilizer, good study of comparative tractor costs; dairying 178-185, early results, economics, grassland management; animal breeding and nutrition 187-204, 6 photos; Dove's follow-up to Bulletin 375; apples 207-214, diseases, varieties, 3 photos; small fruits 214-224, 4 photos, blueberries, canning crops, garden crops, variety trials, 2 photos; land utilization; farm credit; farm adjustments; children's nutrition; electrical cooking; chemistry; inspection covered. Abstracts: Human Biology - W.F. Dove "A Study of Individuality in the Nutritive Instincts and of the Causes and Effects of Variations in the Selection of Foods," American Naturalist, Vol. 69: 469-544 (1935). Biology - 1; Plant Pathology - 2; Entomology - 1; Meteorology; Finances; Index; 5 year index, 1931-1935 Bulletins 358-380
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Bulletin No. 381 - 1936, John H. Hawkins
The Bionomics and Control of Wireworms in Maine. A Ph.D. dissertation at Cornell, 1935. Life histories, descriptions, maps, tables, charts, 18 figures, bibliography, 13 plates

Bulletin No. 382 - Charles H. Merchant
Maine Agriculture in 1935: A Statistical Presentation. A significant, useful, standard work using the materials from the 1935 census to analyze Maine agriculture. Maps, graphs, tables

Bulletin No. 383 - Marion Devoe Sweetman
Factors Affecting the Cooking Quality of Potatoes. An important bulletin. 1 photo plate, good bibliography. What makes the tuber good when cooked, and what inhibits that factor

Bulletin No. 384
Report of Progress for the Year Ending June 30, 1936. Aphids, apples, canning crops, grassland management, inspection, land use, kerosene cook stoves, potatoes, (409-428), small fruits, all are reported as work in progress. 2 papers in plant pathology are abstracted. Also includes Meteorology, Finances, Index

 Bulletin No. 385 - 1937, George F. Dow
An Economic Study of Milk Production Costs in Herds of Producer-Distributors in Maine. Follow-up to 361, 367, and taken together a very good look at Maine dairying in the mid-1930s. Foundation work for the Maine Milk Commission

Bulletin No. 386 - Merna M. Monroe
Evaluation of Certain Factors Affecting the Cost of Using Utensils on Electric Heating Units. Detailed analysis of utensils available for electric cooking. Interesting to read in terms of today's cooking ideas

 Bulletin No. 387
Report of Progress for the Year Ending June 30, 1937. These annual reports are very useful for following work as it progressed. Aphids, Apples, (161-178), Canning Crops, Chemistry, Dairying, Farm Credit, Foods and Nutrition, Garden Crops, Grassland Studies, Household Equipment, Land Use, Potatoes (214-243), Small Fruits, were all conducting research projects. Abstracts included 8 in some form of plant pathology. Meteorology, Finances, and Index also included

Bulletin No. 388 - 1938, F.H. Steinmetz and M.T. Hilborn
A Histological Evaluation of Low Temperature Injury to Apple Trees. A major research project necessitated by the severe winter and strong freeze of 1933-4. 7 photo plates, bibliography

Bulletin No. 389 - Charles O. Dirks
Biological Studies of Maine Moths by Light Trap Methods. Reports 4 years of study in Maine, and is a major contribution to moth life histories. Cornell Ph.D., 1935. Graphs, tables, bibliography

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Bulletin No. 390 - William E. Schrumpf
Costs and Returns in Producing Potatoes in Aroostook County, Maine.
A significant publication analyzing materials gathered over several years. 165 farms are treated with emphasis on data from 1928-1930. Many tables and graphs are provided

Bulletin No. 391
Report of Progress for Year Ending June 30, 1938. The most detailed annual summary thus far. Aphids (234-8), 2 photos; Apples (238-248) 1 photo; Canning and Garden Crops, (248-257, 1 photo, variety trials; Chemistry, Dairying, Farm Credit, Foods and Nutrition, Forage Crops (267-277); Household Equipment, Inspection, Land Utilization, Potatoes (282-306), Small Fruits (306-313, 1 photo). Abstracts include Foods (1), plant pathology (7). Finances, Meteorology, Index

Bulletin No. 392 - 1939, William E. Schrumpf
Costs and Returns of Producing Potatoes in Central Maine. A follow-up to Bulletin 390. Taken together they give an excellent picture of this phase of Maine agriculture just at its point of take off growth. 38 farms are covered, and the years 1929 and 1930 are the major data points. Maps, tables, graphs

Bulletin No. 393 - Edith M. Patch
Food-Plant Catalogue of the Aphids of the World Including the Phylloxeridae. A life work published here. One of the major publications of the station in its history. 55 page bibliography, major indices to plant families, aphids. Nearly 400 pages long, this publication became the world guide to these matters. See follow-up Bulletin No. 393-s, index and errata (1945)

Bulletin No. 394 - Merna M. Monroe
Performance Analysis of Selected Types of Kerosene Stoves. Detailed analysis of this popular method of food preparation again significant as techniques in the home shifted from a more traditional and usually longer regimen. 18 photos, bibliography

Bulletin No. 395 - George F. Dow

Bulletin No. 396 - Reiner Bonde
Bacterial Wilt and Soft Rot of the Potato in Maine. A new potato disease (since 1932) discussed, and analyzed. 4 photos, bibliography

Bulletin No. 397
Report of Progress for Year Ending June 30, 1939. Apples (p. 695-706), 1 photo, much on breeding and insect pests); Canning and Garden Crops (706-715, 1 photo, much of these data in misc. pubs. this year); Chemistry, Dairying (p. 718-720), Farm Credit, Field Crops, Foods
and Nutrition (p. 722-773, reports in detail work by Dove on deficiency and his work on agridiscendance, graphs, 2 color maps, important contribution); Forage Crops, Forestry, Home Economics, Inspection, Land Utilization, Soil Testing, Potatoes (784-824, much on Florida trials, disease control, seed plots); Small Fruits (824-8, mostly on blueberries) and Miscellaneous 828-9, mosquitoes collected in Maine-identified species (See bulletins 134, 177, 195 for earlier.)

Abstracts of Papers 1938-9 - Foods and Nutrition - 1; Biology - 3; Plant Biology/Pathology - 7; Home Economics - 1

Bulletin No. 398 - 1940, Andrew E. Watson and Emil Rauchenstein

Bulletin No. 399 - George F. Dow
Receipts, Utilization and Prices of Milk and Cream in Maine Milk Control Areas. Analyzes Maine Milk Commission impact from May, 1935 (first month of state control) through December, 1937. 29 areas are discussed. Also provides a comparative history of both federal and other state milk controls. Charts, graphs and tables

Bulletin No. 400
Summary Report for the Year Ending June 30, 1940. Apples (p. 185-194, 1 photo, some on diseases); Canning and Garden Crops (195-213, much on breeding and impact of fertilizer, esp. nitrogen); Chemistry, Dairying, Family Economics, Farm Credit, Field Crops (Variety Tests); Food and Nutrition (229-248, much on Vitamin C, and more of Dove's work on relationship of man to environment, 235-248, much again on vitamin deficiency); Forage Crops, Inspection, Land Utilization; Potatoes (p. 254-274, seed plots, fertilizer experiments, disease, the Florida test, and use of insecticides are discussed); Small Fruit Crops (nearly all on blueberries, p. 274-7). Abstracts - Plant Pathology - 5; Agricultural Economics - 1; Blueberries - 3; Entomology - 2. An important one is F.H. Lathrop, "Ten Years of Warfare Against the Blueberry Maggot," Journal Econ. Ent., 32:510-3, 1939. Also, Meteorology, Finances, Index, and Index 1935-1939-40 (or Bulletins 381-400)

Bulletin No. 401 - 1941, Mary M. Clayton
The Food Habits and Physical Condition of Children in Selected Communities in Maine. Reports results of a major study on children in Mars Hill, Jonesport, and Monmouth from 1934-6. Included complete physical examinations. Before and after along with discussion of foods, and general life histories. An important work, 2 photos, bibliography

Bulletin No. 402 - Frederick B. Chandler
Boron Deficiency Symptoms in Some Plants of the Cabbage Family. Maryland Ph.D., 1941. Deals with effect of this trace mineral deficiency in many vegetables. 34 photos. Relates findings to Maine in specific. Bibliography
Bulletin No. 403 - Geddes W. Simpson
Aphids and Their Relation to the Field Transmission of Potato Virus Diseases in Northeastern Maine. Some of this was a Cornell Ph.D., 1935. The foundation work and first major station publication of this distinguished researcher. Follows on earlier work done at the station as to cause of these diseases, but methods are discovered here. Many seed plots in other areas were used. 1933-7 was the time period covered. Roguing methods were employed as a result of this work. Bibliography, charts, tables

Bulletin No. 404 - F.B. Chandler
Mineral Nutrition of the Genus Brassica with Particular Reference to Boron. Follow-up to Bulletin No. 402, and also part of Maryland Ph.D., 1941. 54 photos. Bibliography. Reports many observations of these plants and the trace mineral boron. Maps, graphs, charts, tables. Shows impact on Maine as well

Bulletin No. 405
Summary Results of Research in Year Ending June 30, 1941. Apples 401-412, much on spraying; Canning and Garden Crops, 412-424, mostly breeding; Chemistry; Dairying; Family Economics; Field Crops; Farm Credit; Foods and Nutrition, 431-458; preliminary results in summary of Clayton's work; and more on Dove's work as well; Forage Crops (variety trials, and impact of ensilage, 458-462); Inspection; Land Utilization; Potatoes (p. 470-509, reports fertilizer and variety trials, as well as efforts at Disease control, including Florida tests); Small Fruit Crops, 509-513; mostly on blueberry diseases. Abstracts - Plant Biology - 3; Human Biology - relates to Bull. 401 - E.F. Murphy, "Study of Vitamin C Deficiency in a Group of School Children", Journal of Nutrition, 21:527-539, 1941, as well as M.M. Crane, P.W. Woods, "A Study of Vitamin C Nutrition, Clinical and Laboratory Studies", New England Journal of Medicine, 224: 503-9, 1941. Agronomy papers - 2. Finances, Meteorology, Index

Bulletin No. 406 - 1942, William E. Schrumpf
Farm Organization and Costs and Returns in Producing Potatoes on Farms in the St. John River Area of Aroostook County, Maine, 1937. 241 farms are discussed in this bulletin which is part of a series analyzing Maine agriculture in the 1930s. Tables, charts, graphs, map

Bulletin No. 407 - Donald E. Folsom
Results of Testing Some Laboratory Methods for Possible Use in the Detection of Virus Diseases in Potato Tubers. Early efforts at developing detection methods. Bibliography, tables

Bulletin No. 408 - Emil Rauchenstein and Andrew E. Watson
Farm Management on Central Maine Farms with Dairy Enterprises. USDA and MAES publication. Related Bulletins are 338 and 382. 214 farms are treated in massive detail. Many tables. An important bulletin analyzing agriculture in Maine at time of major change
Bulletin No. 409 - M.T. Hilborn
The Biology of Fomes fomentarius. Yale Ph.D. A detailed study of this hardwood fungus, especially deleterious to birch. Life history, growth patterns discussed. Tables, graphs, bibliography, 17 photos

Bulletin No. 410 - Donald Folsom
Potato Virus Disease Studies with Tuber-line Seed Plots and Insects in Maine 1927 to 1938. Related bulletins are 316, 331, and 403. Earlier work at Highmoor 1924-1927 also summarized. Work at Highmoor, on cooperating farms, and different types of planting techniques are discussed. An important bulletin. 4 photos, bibliography

Bulletin No. 411
Annual Summary of Research for Year Ending June 30, 1942. Apples (7 photos) pp. 251-60; Small Fruits (blueberries, 260-7, 3 photos). Part A. Part B - Canning and Garden Crops 269-280, 4 photos, variety trials. Part C - Potatoes, 281-343, 7 photos, Diseases, Florida test, insecticides, fertilizers, varietal tests and seed spacing, by-products, economics, and marketing are covered. A listing of available publications was appended. Part D - Dairying Research, 346-356, Economics, Feed, and the Regional Pasture Facility were discussed, 3 photos. Part E - Poultry Research, 357-371, Economics, Feed and the regional laboratory are discussed. Part F - Foods and Nutrition, 373-383. Early results of Clayton's work, and breeding of FNC tomatoes reported. Part G - Farm Credit. Part H - Field Crops, 385-7, Variety trial grains, 1932-41 are reported. Forestry, Land Utilization, Inspection, and Family Economics are also treated briefly. Abstracts - Chemistry - 1 (also plant pathology); Blueberries - 2; Apples - 1; Human Nutrition - 2; Potatoes - 1. Meteorology, Finances, Index

Bulletin No. 412 - 1943, George F. Dow
Egg Production in Maine. Studies of 86 poultrymen in central and southwestern Maine were analyzed, during the summer of 1941. Tables, maps, graphs, and a fair bibliography in footnotes

Bulletin No. 413 - Andrew E. Watson
A Study of Land Use in Thirty-One Towns in Aroostook County, Maine. Purpose was to provide fundamental data for a useful land use plan in this area. Maps, charts, graphs, 5 photos, a large pull out map of land use. Includes data and analysis of such items as roads, electricity, soil, and relationship to other towns. A useful publication

Bulletin No. 414 - Joseph Chucka, Arthur Hawkins, and Bailey E. Brown
Potato Fertilizer-Rotation Studies on Aroostook Farm, 1927-1941. Experiments began in 1917, and after 1927 differential fertilizer treatments were begun and are here reported in detail. Includes graphs, charts, tables, 16 photos. An important publication which laid out for readers all aspects of climate, fertilizer components, rotations, and green crop manures
Bulletin No. 415 - D.S. Fink
Grassland Experiments. Reports in detail results of 7 years of experimental work on grasslands in Maine. 6 photos, tables, and other data. Important for results led to major introduction of Ladino clover as an ensilage crop

Bulletin No. 416 - Reiner Bonde and E.S. Schultz
Potato Refuse Piles as a Factor in the Dissemination of Late Blight. Role of these piles of culls in helping to disseminate the disease are detailed. 8 photos, bibliography. An important publication in bringing these diseases under control. Bulletin 434 is related

Bulletin No. 417 - Andrew E. Watson
Land Classification in Waldo County, Maine. A major study of the interaction of Homo sapiens and land use in this area of Maine. Map, a large pull-out map, tables, and charts

Bulletin No. 418 - Charles H. Merchant
Farm Credit in Aroostook County, Maine. Aroostook County was an area of high agricultural change in the first half of the 20th century, and these changes cost much. The study analyzes these costs and the availability of funds to conduct the change. Charts, graphs, maps. An important publication then, and for historians today

Bulletin No. 419 - No author listed, although Florence L. Markin did much of the Maine work and she is listed in a footnote.
Blueberry Diseases in Maine. Diseases are described, and ten years of effort with fungicides are reported. Tables, 16 photos, and bibliography. An important bulletin

Bulletin No. 420
Summary Report of Research for Year Ending June 30, 1943. Potatoes, pp. 420-482. Diseases, breeding, Florida tests, trace elements, fertilizers, side products, and the economics of the industry are discussed. 2 photos. 5 abstracts are reprinted. Tables showing net necrosis impact included. Dairying Research - 483-495; Feed Production - 495-499; Poultry Research - 505-516 - Economics and Breeding; Foods and Nutrition - 517-528, emphasis on vitamin content in foods diminished by wartime needs, 3 abstracts; Canning and Garden Crops - 535-551 - Sweet corn, beans, peas, tomatoes, cucumbers field trials were reported; Fruits Research 553-562 - 2 abstracts, mostly apples and blueberries; Field Crops - 563-5 - variety trials reported; Land Utilization - 567-572, soil surveys underway; Agricultural Prices - 572-514 - Comparison to WWI useful; Inspection Service - 575-7 detailed; 1 abstract in plant pathology/forestry; Meteorology, Finances, Index
Bulletins 421-426 of the Maine Agricultural Experiment Station Bulletin 808 are as follows:

**Bulletin No. 421 - 1944**, Reiner Bonde, E.S. Schultz, and W.P. Raleigh
Rate of Spread and Effect on Yield of Potato Virus Diseases. Reports results of observation since 1924 of the various potato virus diseases. Material on yield reduction is presented by variety, and the extent of the infection. Implications for certification of seed stock are discussed, 9 tables, bibliography. Bulletins 331, 370, 391 are related to this topic. Ultimate goal is to end the diseases.

**Bulletin No. 422 - William E. Schrumpf**
Incomes, Costs, and Practices on Three Types of Farms Producing Potatoes in Central Maine, 1938. Analysis of 146 farms in Central Maine for this year. Potato farms, livestock farms, and general farms were the three categories. 51 tables, map. Useful breakdown of farms in Central Maine on eve of WWII.

**Bulletin No. 423 - F.B. Chandler**
Lowbush Blueberries. General summary of information for growers gleaned from a wide variety of technical sources and produced in usable form. 10 photos, 2 maps, graphs, bibliography. Gives a general month by month work plan. Good bulletin.

**Bulletin No. 424 - William E. Schrumpf**
Costs and Practices in Producing Potatoes in Central Aroostook County Maine, 1940. 178 farms in last pre-war year supplied the data for another in his useful series of bulletins. 32 tables, 1 map. The center of the industry in the U.S. at the time.

**Bulletin No. 425 - George F. Dow**
Consumption and Marketing of Dairy Products in Portland, Maine. 966 consumers and 348 store managers in Portland area interviewed in 1942 for this study. Gives picture of the industry and area just on eve of price fixing in WWII. 17 tables. Much important historical data in this bulletin now.

**Bulletin No. 426**
Report of Progress for Year Ending June 30, 1944. Potatoes 211-245, largest year production to date, much on disease control under difficult wartime conditions. Soil Fertility 245-251; Seed Stock Practices 251-3; Potato Products 253-8; Economics of Potato Industry 258-64, 2 abstracts on potatoes and 44 tables of research results (pp. 266-297); Food and Nutrition 300-11 (much on wartime nutrients), 2 abstracts, 2 tables of data; Fruits 315-335, 2 abstracts, 7 tables of data; Canning and Garden Crops 337-355, 5 tables; Dairying 357-376 (much in Misc. Pub. #583), 5 tables; Poultry 377-389, 1 table; Forestry 391-4, first work since inclusion in 1943 as MAES concern, first work was survey of industry, see 11 Misc. Reps., where work is summarized; Field Crops 395-7, mostly trials continuing; Inspection 399-402. Annual Report also contains Meteorology, Finances, and an Index. Because of the large amount of material contained in the statistical summaries, and the relationship to the high production, wartime year, this is an important annual report, especially on potatoes, and foods and nutrition.

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Bulletin No. 427 - 1945, E.S. Schultz, Reiner Bonde, and W.P. Raleigh
Early Harvesting of Healthy Seed Potatoes for the Control of Potato Diseases in Maine. MAES and USDA joint work reported. More of the effort to control diseases, especially net necrosis and ring rot. Summarizes earlier work since 1925, with intensive work since great epidemic of 1937. 6 tables. Some cooperating experiments involved. Bibliography. Good treatment of this palliative idea

Bulletin No. 428 - F.B. Chandler
Composition and Uses of Blueberries. Good history of use over time. Detailed analysis of composition in four tables. Discussion of storage, a fruit press, a recipe for blueberry jelly, (commercial amounts), as well as dehydrating processes discussed in appendices. Bibliography appears 37-9

Bulletin No. 429 - George F. Dow
Use of Machinery and Horses on Maine Farms Keeping Dairy Cows. 500 Maine farmers surveyed in summer of 1943, in part because of WWII priority demands, but information treated for use in other ways, especially economic and cost analysis. Central Maine the area. 26 tables, 2 photos. Useful now for historical picture provided

Bulletin No. 430 - Mary M. Clayton
A Four-Year Study of the Food Habits and Physical Condition of Grade-School Children in Newport, Maine. (3 other Maine towns are compared inter alia.) The work was begun in 1934 as a result of concern in Depression and late twenties of state of childhood nutrition (Presidential White House Conference of 1929). 43 tables. Detailed bibliography. Much on nutrients, vitamins, etc. An extremely important result of long range work. This writer remembers the work with interest as a youth

Bulletin No. 431 - John H. Hawkins
The Mexican Bean Beetle in Maine. The insect was first reported in the U.S. in 1864, and in Maine since 1930. Its presence provided problems in a major Maine food crop, especially during wartime. 14 photos, several figures. Life history, methods of control. Brief bibliography (p. 231)

Bulletin No. 432 - William E. Schrumpf
Costs and Practices in Producing Potatoes in Southern Aroostook Country, Maine, 1941. 172 farms surveyed in 17 southern Aroostook County towns. 29 tables, 1 map. A useful companion to his earlier bulletins on similar subjects and other Maine locations. Most valuable today to the historian

Bulletin No. 433 - Merna M. Monroe
Kerosene Burners in a Good Cookstove. First indication of the coming of petroleum derivative fuels to the Maine farm. The life cycle of this phenomenon is only about 40-50 years, but it made a substantial impact in its time. 4 figures, 1 photo. Discussed installation and results, and is a summary of an unpublished scientific analysis
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Bulletin No. 434 - G.P. Steinbauer
Treatment of Potato Refuse Piles to Prevent Spread of Late Blight
Calls for community and other action to destroy potato cull and refuse piles, shown to be a major vector in this debilitating disease. 2 figures. Bulletin 416 is predecessor work

Bulletin No. 435 - Charles H. Merchant
Maine Farm Prices During World War Periods. Comparative and analytical look at farm prices in Maine and elsewhere, 1910 to 1945 with special emphasis on the two wartime periods. 62 graphs, 34 tables. Analysis was extended to nearly all possible crops, as well as costs to farmers. Indices were developed. A major bulletin then, still extremely useful to those looking for long term trend analysis

Bulletin No. 436 - George F. Dow
Use of Labor on Maine Farms with Dairy Cows. 500 Maine farmers surveyed in summer of 1943. A useful document measuring changes in machinery and its impact. 42 tables, graphs, charts. Extremely descriptive. Provides a close insight into Maine farming in mid WWII period

Bulletin No. 437 - George F. Dow
Size of Loads and Delivery Costs for Labor in Milk Distribution in Boston and Portland. All major distributors in the area were analyzed from their records. Results showed impact of WWII, but also, indirectly a changing nature in the Boston milk shed, both in terms of source, but also in types of consumption. 15 tables, and a good bibliography scattered in the text of the bulletin as footnotes

Bulletin No. 438
Report of Progress for Year Ending June 30, 1945. Poultry 491-503 (important for first major recognition of oncoming broiler industry). Potatoes 505-565 - 65 tables - diseases are dealt with from 505-547; 3 articles abstracted (all on disease). Foods and Nutrition 603-615; Dairying 617-640, 7 tables, 2 photos; Fruits 641-655 (Entomological impact throughout), 1 abstract; Canning, Field and Garden Crops 657-680, 8 tables, some variety trials reported here; Forestry 681-6; Inspection 687-690; Also contains financial statement, meteorology, index

Size of Whole and Cut Seed and Spacing in Relation to Potato Yields. Reports results of experiments at Aroostook Farm 1944-5. The experiment was designed to test perceptions and analyze long term results in light of new cultivation practices. 14 tables, 11 graphs, 3 photos. Brief bibliography. Useful and important to the grower
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Bulletin No. 440 - Charles H. Merchant
Changes in the Apple Industry in Maine. Reports results of interviews with apple growers conducted in 1940, 1943, and 1944. 7 maps, 15 tables, 4 photos. A volatile industry undergoing major changes caught in the process. Very good and useful bulletin

Bulletin No. 441 - Alvah H. Perry and George F. Dow
Costs and Returns in Broiler Production. Study of this beginning-to-be important industry in Maine, conducted in 1944 of 170 producers who raised 308 lots during the study period. Detailed analysis. First bulletin to provide a detailed abstract summary of results. 1 map, 30 tables, 3 graphs

Bulletin No. 442

Bulletin No. 443 - 1947, F.B. Chandler and Irvin C. Mason
Blueberry Weeds in Maine and Their Control. Reports results of a variety of long term experiments to control different weeds present in blueberry fields. 18 photos, 3 graphs, 8 tables, 1 figure. Photos are of major weeds. Literature cited

Bulletin No. 444 - William E. Schrumpf
Recent Changes in Production Methods on Maine Potato Farms. The wartime crop was up nearly 30% over the norm, and it had a profound impact on crop rotations, soil erosion, varietal choice, labor, seed potatoes, amounts of fertilizer used, and cost of production, and the new equipment used. This bulletin analyzes these changes, in comparison to data presented in earlier bulletins. See Nos. 378, 379, 390. 23 tables

Small Grain Variety Trials 1932-1945. Tests had continued, even though production was down substantially, as new varieties which were more disease resistant, and in barley (awnless types) had become the norm. Data from the tests are provided here. 11 tables. Good useful data from continuing experiment
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Bulletin No. 446 - Donald Folsom
Potato Yellowtop and Unmottled Curly-Dwarf in Maine. Two new diseases, not vectored by aphids, located in 1923 are studied and reported in this bulletin. Good bibliography. Disease spread slowly but surely in central Maine. 15 photographs

Bulletin No. 447 - A. Frank Ross, Joseph A. Chucka, and Arthur Hawkins
The Effect of Fertilizer Practices Including the Use of Minor Elements on Stem-end Browning, Net Necrosis, and Spread of Leafroll Virus in the Green Mountain Variety of Potato. Reports joint work of USDA and MAES. Cropping came on a set series of plots at Aroostook Farm from 1919 to present, with different sorts of fertilizer and used in different amounts and with different methods. 31 tables, 8 graphs, 3 photos. Elements most discussed are N, P, K, and Boron. Other combinations were discussed, however, as they entered the picture. An important bulletin. Bibliography

Bulletin No. 448

Bulletin No. 449

Bulletin No. 450 - 1948, William E. Schrumpf
Grade Quality of Maine Potatoes. Results from detailed (about 50% of all) inspection of carload lots shipped 1942-4. 8 photos, 7 graphs, 10 tables. Includes description of grades, 40-6

Bulletin No. 451 - Alvah H. Perry
Costs of Distributing Milk in Maine Markets. M.S. thesis, University of Maine. 128 distributors in the 11 Maine districts under the Milk Control Board. Year, spring 1946. Data to be used in price-fixing efforts. 1 map, 41 tables, 1 graph. Useful bulletin in that effort

Bulletin No. 452 - Andrew E. Watson
Poultry Products Used by the Summer Trade in Maine. An effort to obtain information designed to help Maine farmers and wholesalers deal with the substantial summer demand for their products. 12 sporting camps, 38 summer hotels, 27 children's camps, and 5 seasonal restaurants were the source of the data. Numbers included 7,155 summer persons. 29 tables, 5 graphs

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Bulletin No. 453 - George F. Dow
Labor Efficiency in Harvesting Hay. 1945, 1946 haying seasons surveyed. Equipments, costs, man hours and other items in the economic mix analyzed in detail. 19 tables, 13 photos, 1 schematic flow chart

Fertility Status of Potato Soils of Aroostook County, Maine, and Relation to Fertilizer and Rotation Practices. A product of joint research (6 other stations and Beltsville scientists). Reports work begun in 1944 and carried forward. Description of methods, as well as standard practices in the area. 4 photos, 1 map, 14 tables, 11 graphs. Bibliography. Much discussion of nutrient use in actual practice. Good bulletin

Bulletin No. 455 - Merna M. Monroe
Concerning Pressure Saucepans. 7 photos of types. Responds to standard queries heard as this utensil began to make its way from commercial use to home standard

Bulletin No. 456 - Alvah L. Perry and George F. Dow
Costs and Returns in Milk Production for Local Maine Markets. Another cooperative project of MAES and Maine Milk Control Board designed to get data to aid in price fixing. Year ending April 30, 1946 surveyed. 291 dairymen. 1 map, 28 tables, 1 graph

Bulletin No. 457 - F.H. Lathrop and M.T. Hilborn
Recent Advances in Spray Practices for Maine Apple Orchards. Brings technical data from a number of sources to the working farmer. Equipment, fungicides, types of sprays, 2 pages plates, 5 graphs, 1 figure

Bulletin No. 458 - M.T. Hilborn, F.H. Lathrop, F.J. MacDonald, C. Crocker, and D. Tripp
Two Homemade Spray Booms for Maine Apple Orchards. 6 photos, 3 figures. Cutting cost of the delivery system

Bulletin No. 459
Report of the Sub-Committee I (George F. Dow, Chair). Involving cooperation of State Agricultural Experiment Station and Bureau of Agricultural Economics, USDA. Factors Affecting Seasonal Milk Production and Their Effect on Producers Costs and Returns. A committee attempting to anticipate demands to be made by the Research and Marketing Act of 1946 reports. 11 tables, 6 graphs. Cites knowledge, and need for further research projected

Bulletin No. 460
Science Serves Maine Agriculture - Sixty-Fourth Annual Report. New Format. Apples 4-9; bean, 9-10; beef, 10; blueberries, 10-16; corn, 18-21; cucumbers, 22; dairy, 22-7; forestry, 28-31; grain, 32 (trials); hogs, 32; Home Economics, 33-4; lettuce, 35; peas, 35-6; potatoes, 37-58; poultry, 59-62; prices, 62-3; sheep, 63; soil testing, 63;
strawberries, 64; tomatoes, 64-6; inspection 66-9; meteorology, 69; financial report, 73. Shorter and more succinct report of work in progress. 12 articles referenced with abstracts

Bulletin No. 461 - H.W. Hall, H.C. Dickey, and A.O. Shaw

Bulletin No. 462 - Andrew E. Watson
Market Egg Production in Maine. 115 poultrymen interviewed on their production during year ending July 31, 1947. Egg collection methods, varietal types, flock sizes, impact of feed shortages, prices, and data relating to chicken meat uses provided. 19 tables, 4 graphs

Bulletin No. 463 - G.L. Terman, F.H. Steinmetz, and Arthur Hawkins
Effects of Certain Soil Conditions and Treatments Upon Potato Yields and the Development and Control of Potato Scab. Aroostook Farm Experiments 1935-1947 reported here. Results most graphic in impact of lime on both pH, and eventually to impact on scab. Other minerals discussed as well. Recommendations as to proper fertilizers given. Joint USDA/MAES research. 7 photos, 9 tables, 1 figure. Bibliography

Bulletin No. 464 - Donald Folsom
Comparative Effects of Certain Sulphur Fungicides on Mcintosh Apple Trees. Reports results with lime sulphur, elemental sulphur, and lead arsenate on 335 trees in 45 ten tree plots from 1928 to 1943. Scab control resulted and other results dealt with phenological change in the fruit, especially during the flowering period. Bibliography. 7 graphs, 12 tables

Bulletin No. 465 - Charles H. Merchant
Consumers' Acceptance of Sized Potatoes. Ten major stores in Portland utilized in 1948 and consumer preference for bagged sized potatoes measured. 4 photos

Bulletin No. 466 - February 1949, Charles H. Merchant and Homer C. Woodward
Quality of Potatoes in Retail Stores in Boston, Massachusetts and Maine Markets, 1948. Cooperative project of northeast marketing work. 457 stores in Boston and 278 in Maine surveyed from January to March, 1948. Reports selection processes, defects, varietal choice, price, grade and cleanliness. 6 photos and 39 plates

Bulletin No. 467 - C.W. Hitz
Increasing Plant Stand in Blueberry Fields. Analyzes results of propagation via rhizomes, and transplantation, as well as some new cultivation ideas (disking primarily). 9 photos, 8 tables, bibliography. First bulletin from a major technical change in station work after World War II
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Bulletin No. 468 - John H. Hawkins
European Corn Borer Control. Life history, control methods, 8 photos, 1 figure. This pest began to be very troublesome at about this period

Bulletin No. 469 - Donald Folsom, G.W. Simpson, and Reiner Bonde
Maine Potato Diseases, Insects and Injuries. Terms; standard control methods defined; how disease and injuries are caused, as well as those disorders still unknown as to provenance. References. 25 photo plates. Identification tables. Other related bulletins are 416, 421, 446, 447, 450, 463, and Misc. Pub. #602. A very important handy guide for growers. Revised and Reissued (same number) in 1955

Bulletin No. 470 - G.W. Simpson and W.A. Shands
Progress on Some Important Insect and Disease Problems of Irish Potato Production in Maine. Brief history, general production difficulties in Maine, Aphidology, biology of the aphid, aphid control, and progress in such techniques as Seed Inspection, Foundation Seed Program, the Florida Test, and Certification. Use of DDT in moderation discussed. A very substantial publication. State of the art

Bulletin No. 471 - Reiner Bonde and E.S. Schultz
Control of Late-Blight Tuber Rot. Spraying, dusting, herbicides for vine top killing, development of resistant varieties, literature cited. 5 photos, 5 tables. A joint work of MAES/USDA

Bulletin No. 472 - William E. Schrumpf
Practices, Costs, and Tuber Bruising in Digging Potatoes in Aroostook County, Maine. Crews; digging techniques; and impact of various factors on the harvest period; bruising, stones, the pick up methods; new potato digger/pickers tried beginning in 1947 to present. Study surveys work done from 1946-8. 7 photos, 37 tables

Bulletin No. 473
Research for Maine Farmers (Sixty-Fifth Annual Report). Apples 7-16; beans; blueberries, 17-22; corn, dairy, 26-30; forage crops, forestry, grain, hogs, home economics, peas; potatoes, 42-64; poultry prices, sheep, soil testing, strawberries, sugar beets (71-2); sunflowers, tomatoes, vegetable crops, inspection, meteorology, 77, finances. 12 articles cited w/o abstracts

Bulletin No. 474 - 1949, G.L. Terman
Green Manure Crops and Rotations for Maine Potato Soils. Reports experiments conducted 1931-1948 in Central Maine and at Presque Isle. Describes results from various green manures (most non-legumes need added nitrogen). Straw and stable manure may be as much use to heavily cropped lands. 15 tables, 4 photos, 1 graph. An important bulletin summarizing much work. Bibliography. Bulletins 414, 454, 463 are related

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Bulletin No. 475 - Mary M. Clayton and Dorothy E. Ullman
Remodeling the School Lunch for the Teen-Ager. Reports results of studies conducted at Bangor, Maine junior high schools in Spring, 1948. Part of a cooperative project in nutrition in the northeast. 7 tables, 5 charts, 1 photo. Glossary of terms. Recipes used printed as well. Comparisons with box lunches derived much information at a time when teen-age diets were undergoing rapid change.

Bulletin No. 476 - Roland A.J. Bouchard
Grade Quality of Maine Potatoes Inspected at Shipping Points for Three Years, 1945-7. M.S. thesis, UMO, 1949. 10% of all potatoes shipped were sampled in the three year trial. 10,876 lots were inspected or analyzed by this method for accuracy of inspection. 7 tables, 7 graphs, 1 map.

Consumer Use of Dairy Products in Portland, Maine. 700 households in Portland area selected, and members interviewed as to consumption habits. A follow-up to Bulletin No. 425 and ascertained change in postwar population. 26 tables, 4 graphs showing results of survey.

Bulletin No. 478 - Homer C. Woodward
Quality of Maine McIntosh Apples from Orchards to Consumers. Detailed analysis of amount of bruising and how inflicted on apples for the retail market. Led to substantial other research on packaging and marketing. An early product of the Research and Marketing Act of 1946. 6 photos, 23 tables.

Bulletin No. 479 - March, 1950
(Nearly all members of station contributed)

Bulletin No. 480 - W.A. Shands, G.W. Simpson, P.M. Lombard, R.M. Cobb, and P.H. Lung
Control of Aphids on Potatoes with DDT When Used With Fungicides. Joint work of MAES and USDA. Reports four major experiments to analyze impact of DDT on Maine potato crop. 10 tables, 9 graphs, 4 photos. 5 pages of tables. DDT of relatively little use as aphicide.
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Bulletin No. 481 - G.L. Terman
Effect of Rate and Source of Potash on Yield and Starch Content of Potatoes: Results Over a Twenty Year Period. Work begun in 1930 by J.A. Chucka, and carried on by others, with Terman supervising only the last four years. A joint USDA/MAES project. 83 field experiments, and 32 experiments involving potash source comparison in potatoes. Demonstrated clearly that returns are confined to first 60-80 lbs increments of K₂O. After this results are very minimal. 2 photos, 4 tables, literature (relates to much past work) 10 tables in appendix. Important work

Bulletin No. 482 - Reiner Bonde
Factors Affecting Potato Blackleg and Seed-Piece Delay. Factors important include long time storage of cut pieces, climate and other factors, especially two maggots. Roguing has not proved very successful. Also reports work from seed trials in south as well as Maine. 8 photos, 6 tables, bibliography

Bulletin No. 483
Agricultural Research in Maine: Sixty-Sixth Annual Report of Progress, Year Ending June 30, 1950. Apples, 7-13; Beans, Blueberries, 15-21; Broccoli, Cherries, Corn, Dairy, Forage Crops, Forestry, Grain, Hogs, Home Economics, Melons, Peas, Potatoes, 41-61. (Mostly variety tests, diseases, and some marketing), Poultry, Sheep, Soil Testing, Strawberries, Sunflowers, Tomatoes, Vegetable Crops, Inspection Service report. Most of this work actually involved variety trials of one kind or another as diets began to change. Meteorology, index, 9 articles are cited in bibliography

Bulletin No. 484 - Alvah L. Perry and Charles H. Merchant
Development of Defects in Potatoes Between Shipping Points in Aroostook County, Maine and Wholesale and Retail Markets in Boston, Massachusetts. A substantial number of packages of potatoes from 30 different shipments were examined in Aroostook County, and later at Boston sales outlets to determine the sorts of defects that occurred. Recommendations as to shipping practices and washing and packaging were made as a result. 14 tables, 5 photos

Bulletin No. 485 - William E. Schrumpf
Effect of Potato Acreage Adjustments on Farm Practices in Aroostook County, Maine, 1948 and 1949. Allotments under federal subsidy were cut, and the study offered suggestion on farm management and cost adjustments to deal with the lowered acreages allowed. Grain and green manures were used to meet the challenge. Bulletin analyzes all costs and is useful from that point of view. 28 tables, 2 photos, 6 graphs

Bulletin No. 486 - Roland A.J. Bouchard and A.L. Perry
The Development of External Defects in Maine Potatoes at Retail Stores in Boston, Massachusetts, February and March, 1950. Regional study under marketing act of 1946. (See Bulletins 466, 484 for related data.) Final stage of study of these potatoes to determine amount and source of damage in transit. Recommendation to cut down rough handling and provide more washing. 11 tables, 1 photo, 2 graphs
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Bulletin No. 487 - February, 1951, Reiner Bonde and Donald Merriam
Potato Spindle Tuber Control. Discussion of a viral disease of potatoes, transmitted by Aphids, flea beetles, and mechanical contamination in handling, storage and planting. Methods of control are specified clearly. Table, 5 photos. List of available publications on potatoes

Bulletin No. 488 - C.H. Moran
Pasture Improvement. Reports results of various plants (especially bluegrass/white clover and ladino clover/grass plots) as well as fertilization recommendations to maximize pasturage. 6 tables, graph, bibliography (reports results of Highmoor work from 1936 to 1950)

Bulletin No. 489 - Elizabeth F. Murphy and Mildred R. Covell
Tomatoes in Maine. Reports results of long range work in Maine on tomatoes. Varietal tests, nutrition tests, especially substantial work on Vitamin C content and carotene, as well as work leading to the breeding of the FNC (Far Northern C) variety for northern and colder climates. 41 tables, 7 graphs. Bibliography. Some of this work was originally planned by Dove and Chucka. A long and extremely valuable contribution which also has the virtue of being very well written.

Bulletin No. 490 - G.L. Terman, Arthur Hawkins, C.E. Cunningham, and R.A. Struchtemeyer
Rate, Placement and Source of Nitrogen for Potatoes in Maine. USDA/MAES joint work. Summarizes more than 100 experiments conducted on nitrogen rate, placement and source on potatoes. New experimentation since 1946 (earlier report, bulletins 354 and 414) modifies earlier suggestions as result of DDT, green manure and other factors affecting rate of growth. Total years of experiments 1929-1950. 8 tables, 1 photo, 1 graph. Bibliography. Detailed explanation of plan of experiment in Appendix

Bulletin No. 491
Research on Maine Farm Problems - Sixty-Seventh Annual Report of Progress Year Ending June 30, 1951. Apples, 9-15; Beans, Beef Cattle, Blueberries, 17-25; Broccoli, Cherries, Corn (varietal trials), Cucumbers and Melons, Dairy, Forage Crops, Forestry, Grain (trials), Hogs, Home Economics (mostly nutrition), Irrigation, Peas, Potatoes, 45-66; (disease, aphids, fertilizers, trials, harvesting, storage, methods of processing). Poultry, raspberries, sheep, soil and plant testing, strawberries, tomatoes, vegetable crops, inspection, meteorology, finances, 12 articles cited, 10 photos, 2 graphs

Bulletin No. 492 - Willard E. Savage
Quality and Marketing of Eggs in Maine Retail Stores. M.S. Thesis, UMO, May, 1951. 594 stores surveyed in late summer, 1949 to determine what eggs are sold and to whom. Area covered throughout Maine. 26 plates, 4 photos, 4 graphs

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Bulletin No. 493 - Alvah H. Perry and Charles H. Merchant
Consumer Acceptance of Washing Maine Potatoes. Washed potatoes trial in stores for both 1949 and 1950 crop years. Portland and Boston markets tested. Costs of washing analyzed as a price factor. 4 tables, 3 photos

Bulletin No. 494 - Merna M. Monroe
Ideas to Consider When You Buy a Kitchen Sink. Analysis of comfortability, convenience, and types of sinks available on market. Stainless steel analyzed versus enameled sinks. 103 homemakers surveyed for preferences. 9 plates of photos, 2 tables

Bulletin No. 495 - Mary M. Clayton
Breakfasts of Maine Teen-Agers. A multi-area study (in its totality) under Research and Marketing Act of 1946. 7 tables, 3 graphs. Analyzes diets, especially breakfasts, snacking and relation to national recommendations. Bibliography

Bulletin No. 496 - March, 1952, Hugh J. Murphy and G.L. Terman
Fertilizer, Liming and Seeding Practices for Processing Peas in Maine. Peas became a useful crop in potato rotation in 1950s. This bulletin discusses fertilizers, impact of soil pH and seeding practices on yields and qualities. Experiments took place from 1947-1951. 7 tables, literature cited

Bulletin No. 497 - Reiner Bonde and Elizabeth F. Murphy
Resistance of Certain Tomato Varieties and Crosses to Late Blight. Greenhouse, field tests and experiments for foliage and fruit resistances 1949-1951. 3 tables, photo, literature

Bulletin No. 498 - C.H. Moran and S.C. Junkins
Small Grain Variety Trials 1946-1950. Oats, barley, spring wheat and winter wheat. Although these grains were little grown, trials continued as new varieties and cultural practices were introduced. New oat varieties in particular were tested. 10 tables, 4 photos. 38 oats, 3 barley, 16 spring wheat, 8 winter wheat. This last test suffered from the severe climatic conditions in 1946, 1947 and 1950. Earlier bulletin is 445

Bulletin No. 499 - M.F. Trevett
Control of Woody Weeds in Low Bush Blueberry Fields. Describes methods of chemical weed control, a classification of weeds, and description of weed killers. An appendix lists amounts and delivery systems. This bulletin is a follow-up to No. 443. 10 photos, 4 tables

Bulletin No. 500 - F.H. Lathrop
Fighting the Blueberry Fruit Fly in Maine. Discusses blueberry production, the fruit fly, life history, methods of control, and deals with arsenic injury to plants with over use. Some data on costs. 6 figures, 3 photos, 8 tables. Work on this insect dated to the late 1890s
Some Effects of Arsenical Vine Killers on Potatoes and Oats.
Arsenical herbicides had come into common use as an aid to harvest of potatoes. Experiments were conducted from 1947-51 of varying kinds on impact on yields, and on the tubers themselves. Reported here. 3 tables, 2 photos.

Procedure in Field Testing Potato Seedlings for Leafroll Resistance.
Lays out a preferred method to control best results. 5 photos.

Milk Supply Areas and Producer Price Relationships in Maine Markets.
Five local Maine markets and the Boston market were studied for milk supply and market relationships. Markets in 1947 and 1949 were analyzed. This was period of fairly sharp change both in the market areas, as well as such matters as blend prices. 37 dealers of 214 were surveyed. 24 figures, 12 maps, 50 tables. These publications were the basic research for the price determinations of the Maine Milk Commission.

A Vertical Potato Elevator. An agricultural engineering project to deal with bulk handling of potatoes, and one of a series of such mechanical efforts to ease farmers' lives. 2 years' work with the elevator proved very useful at Presque Isle. 3 photos, 1 table, 3 schematics.

Rate of Planting and Thiourea Treatment for Seed Potatoes in Maine - Aroostook Farm Experiments 1949-51. Deals with rate and spacing of seedpieces, as well as N, P, K, fertilizer compounds. Dipping in Thiourea decreased yields, especially in the larger sizes. Kennebec, Green Mountain and Katahdin varieties tested. 8 tables, 4 graphs, literature. Relates to Bulletins 438, 439, 490. An appendix lays out methodology well. 9 Appendix tables.

Rate, Placement, and Source of Phosphorus Fertilizers in Maine. Reports field experiments in phosphorus from 1927 to 1951. Tests suggest that 160-200 lbs of P₂O₅ in side bands still the best for high yields. 14 tables, 3 photos, 1 graph. This is an important contribution which described long scientific work. Bibliography. Bulletins 414, 454, 463, 481, 490 are predecessors.
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Bulletin No. 507 - Donald Folsom, Harry Q. Roach, James S. Wiant, and J. Kaufman
Effect of Storage and Railroad Transit on Potato Diseases, Injuries, and Shrinkage. A Northeast marketing paper, and USDA/MAES Coop project. Study was of railroad transshipment of potatoes from 1947-9 to New York from Aroostook County. 42 carloads were tested. A variety of diseases were tested for, along with other changes in the shipment period. 16 tables, chart. Bulletins 226 (statistical analysis), 469, 484 are related

Bulletin No. 508 - January, 1953, Elizabeth F. Murphy
Vitamin C Content of Maine Rutabagas. Relatively low consumption of a vitamin rich, easily available food led to this research. 9 tables, 1 graph. Good laboratory analysis in this bulletin. Some tests, especially varietal and cooking were in 1941. The other tests of fertilizers and use were conducted from 1943-5. A bibliography was appended. Bulletins 401, 405, 426, 475, 489 are related

Bulletin No. 509 - Alvah H. Perry
Commercial Washing of Maine Potatoes. A direct result of grower interest in Bulletin 493 on washing preferences led to this follow-up study of costs, fuel, storage, sales, and eventual response to washed potatoes. 1 photo, 5 tables

Bulletin No. 510 - Eastman F. Haywood
Harvesting and Marketing Maine Lettuce. M.S. Thesis, June, 1952. An important truck crop in Portland area assessed for production, harvesting, marketing, equipment, materials, and retail sales. 26 of 52 growers, and 100 stores were dealt with in the survey. 1 map, 23 tables

Bulletin No. 511 - Reiner Bonde and E.S. Schultz
Purple-Top Wilt and Similar Diseases of the Potato. Diseases assessed as to impact, methods of transmission and control. A joint USDA/MAES project. 8 photos, 12 tables. Bulletins 400, 411, 420, 446 have earlier related information on outbreaks and earlier treatment ideas

Bulletin No. 512 - Alvah H. Perry
Tests of Various Types of Containers for Potatoes. Several tests of various types of containers included bruise tests both in large and small amounts. 6 tables, 8 photos. Part of ongoing sales/packaging work on this important Maine crop

Bulletin No. 513 - Bernie E. Plummer, Jr.
Chemical Compositions of Grasses and Legumes in Maine. These plants were tested in the laboratory for carotene, thiamine, riboflavin, protein, fat, carbohydrates, and various minerals. 11 tables, 7 figures. Bulletin 473, and many of the annual reports before 1895 deal with this subject. A very good and important result of many years' work
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Bulletin No. 514 - Alvah H. Perry
Plastic Bags for Potatoes. More packaging studies as result of modern technological change. 2 photos, 2 tables. Mostly Bangor market surveys

Bulletin No. 515 - Homer B. Metzger
Cost of Obtaining Pasteurized Milk: A Comparison for Subdealers and Other Processor-Distributors. 69 operations of various size throughout southern, central and eastern Maine formed the analysis group. 34 tables, 1 graph. An important bulletin at a time of economic pressures on milk processors

Bulletin No. 516 - Mary M. Clayton, M.J. Babcock, W.D. Foster, S. Streegevsky, Ruth E. Tucker, Anne W. Wertz, H.H. Williams. A cooperative study of five stations, and published for them with regional funds. Northeast Regional Publication No. 14. Cooperative Nutritional Status Studies in the Northeast Region, V. Blood Findings. Persons from all walks of life were analyzed at the various study centers. In Maine this was the junior high school group under nutritional study generally. Results from a five year project begun in 1947. 15 charts, detailed references, 9 tables

Bulletin No. 517 - Alvah H. Perry
Sponge Rubber Roll Drying of Washed Maine Potatoes. Dealing with washing potatoes, and keeping qualities when they are dried. Appearance, the packages, and the methods of drying are all discussed. 4 carloads in fall, 1952 were dealt with by various methods. They were examined in the Boston/New York markets for results. 4 tables, 1 photo

Bulletin No. 518 - William E. Schrumpf
Effect of Potato Acreage Reductions on Aroostook County Farm Economics, 1948-1951. Lowered efficiency was the general result of the governmental reduction in supported potato acreage. Grain, hay, narrower row spacing, livestock production were increased. Acreage decreased substantially, as did storage. Interest charges were up. 6 figures, 14 tables

Bulletin No. 519
Research on Maine Farm Problems. Sixty-Eighth Annual Report of Progress Year Ending June 30, 1952. Obituary notice of Fred Griffee. Marketing and Farm Management, pp. 5-7; Agricultural Engineering, 7-8; Farm Crops, 9-11; Agricultural Chemistry and Inspection, 11-12; Dairy and Livestock, 13-15; Entomology, 15-17; forestry, home economics, fruits and vegetables, 20-1; plant pathology, 22-3; poultry, 23-4; meteorology, publications, 65 articles by staff members cited, financial statement

Bulletin No. 520 - Matthew E. Highlands and John S. Getchell
Blueberry Pie Filling: Formulas for Commercial Processing. An effort begun during WWII, and eventually formulas were developed using fresh, frozen and dried blueberries in commercial quantities. Printed here
Bulletin No. 521 - Homer C. Woodward
Containers for Shipping Apples. 2 years of tests on shipped Mcintosh apples resulted in development of several new packaging methods, of which layer and tray packs were the most successful. Costs were dealt with to some degree in the mix. 4 photos, 5 tables, 2 graphs

Bulletin No. 522 - John H. Hawkins and Joseph J. Devitt
The European Corn Borer in Maine: Its Biology and Life History. First appearing in U.S. in 1917, and in Maine in 1922, this pest had increased its range and depredations. This bulletin has a good straightforward life history, 13 good photos, 13 tables, graphs. Focussed on crop years 1947-9. Literature cited

High Efficiency Rations for Poultry. High efficiency rations were tested on broilers, capons, roosters, and pullets with excellent results, especially for starter rations. 6 experiments in 1948-9 reported. Bibliography. 13 tables

Bulletin No. 524 - Edmond J. LeBrun
Consumer Purchase and Use of Poultry Meat, Portland, Maine, 1950. Nearly 600 families interviewed for this study. Methods of cooking and preparation were analyzed as were population characteristics. A time when methods of packaging were undergoing a revolution. 2 photos, 15 tables, 4 graphs. Useful result of effort in marketing and packaging research

Bulletin No. 525 - Rodney O. Martin
A Side Delivery Stone Picker. 6 photos and schematics. A machine developed for fall use in potato fields.

Bulletin No. 526 - Howard D. Bartlett
Potato Dirt Remover. A machine developed for removal of dirt from the tuber both at farm and railroad track side. 7 photos and schematics

Bulletin No. 527 - Frank W. Peikert and Reiner Bonde
Potato Disease and Insect Control with Low-Gallongage Sprayers. Tests on spraying with new techniques from 1949-1953 resulted in good efforts especially on late blight. Aphid control slightly better, and the device was suitable for DDT and Parathion delivery. 2 photos, 7 tables, literature cited

Bulletin No. 528 - Homer B. Metzger
Selling Milk by Automatic Vender. 4 locations tested over a year in Maine. Amounts, times of day and other factors analyzed included comparison with soft drinks. 2 photos, 9 tables, 2 graphs
Bulletin No. 529 - E. Neil Pelletier and M.T. Hilborn

Blossom and Twig Blight of Low-Bush Blueberries. Damage caused by the organism Botrytis cinerea was isolated through greenhouse and laboratory conditions and the results tested in fertilizer/fungicide/antibiotic experiments. Some suggestions were forthcoming from the 1952-3 detailed work. 1 graph, 12 tables, and literature cited.

Bulletin No. 530 - H.W. Hall and H.C. Dickey

Predicting the Transmitting Ability of Young Dairy Sires - Five Methods. As a result of artificial breeding associations, older work was retested to develop predictions. Holstein cattle were involved. Ayrshires also were used. Tables, graphs, and mathematical results included.

Bulletin No. 531 - W.E. Pullen and W.E. Savage

Sources of Maine Poultry Meat and Market Outlets. Bulletin resulted from major change in food source, and food types in U.S. northeastern population. In fifteen years Maine grew in this area 50 times in dollar value. 6 maps, 8 tables, 4 graphs. A good historical bulletin today as the markets have changed again.

Bulletin No. 532 - F.H. Lathrop

The Bean Weevil and Its Control. Life histories and controls offered for this insect known in Maine since the 19th century. 4 photos, 21 graphs showing results with control methods. Literature list.

Bulletin No. 533 - G.W. Simpson and W.A. Shands

Fewer Applications of DDT with Proper Timing Produce Equal Yield of Potatoes at Less Cost. A joint product of MAES/USDA. Four years of research produced results dramatically cutting the amounts of DDT in August and September. Earlier and weekly treatments more useful. 2 photos, 3 tables, 13 graphs showing aphid populations primarily.

Bulletin No. 534 - Charles H. Merchant, John Underwood, and Frank MacDonald

Increasing Maine McIntosh Apple Sales in Retail Stores. Differing sales displays tried over time period in Portland stores to develop sales effectiveness and to test some containers. 3 photos, 4 tables.

Bulletin No. 535 - Richard W. Gerry

The Value of Dehydrated Potatoes and Dried Potato Pulp as Poultry Feed. Resulted from efforts to utilize potato crop more efficiently. Good results up to 20% of feed. 12 tables, bibliography.

Bulletin No. 536 - January, 1955, Richard F. Saunders, Compiler

Bulletin No. 537 - Richard Saunders
Supermarket Sales of Poultry Meat. Further in studies of poultry purchasers in Portland, Maine. Related to Bulletins 524, 531, and 536. These studies reflect changes in consumption, production, and increased federal interest in marketing. 14 tables and 2 photos

Bulletin No. 538 - Reiner Bonde
The Effect of Powdery Scab on the Resistance of Potato Tubers to Late Blight Rot. Apparently powdery scab is a precursor of late blight, and the relationships are probed in this paper. 3 photos, 3 tables, literature

Bulletin No. 539 - Howard C. Dickey
Dried Potato Pulp for Dairy Cattle. Related to Bulletin 535, and is part of the effort to utilize the potato crop more efficiently. 4 years of work involved. 5 tables

Bulletin No. 540 - Frank H. Lathrop
Apple Insects of Maine. This is a modern version of papers published in the period before 1920, with a host of new knowledge. 23 figures, 25 tables (summarizing emergence dates over long periods, methods of control and results and other similar matters). An extensive bibliography. 88 pps. A major publication, still useful. Earlier titles are Misc. Pubs. # 183, 276, and especially 383 and 525

Bulletin No. 541 - William E. Schrumpf
The Potato Farm Business in Aroostook County, Maine 1949-1950. 323 Aroostook County farms surveyed primarily for farm management practices, and results in terms of income and profits. At a period when industry was beginning varietal changes due to consumption differences. 37 tables, 17 graphs. A very useful publication

Bulletin No. 542 - H.B. Metzger
Profitable Dairy Farming in Maine: Its Organization, Costs and Returns. 152 farms in central Maine surveyed in 1953. Results focussed on business methods and relative success. Standards of efficiency (goals) were stated. 2 photos, 1 map, 29 tables, 8 graphs

Bulletin No. 543 - Peter Hamilton, Bernie E. Plummer, Jr., Howard C. Dickey
Measures of Digestion in the Ruminant. Again research on a subject dealt with in a more primitive form in the 1890's. 5 tables, 4 graphs. Animals were studied by means of a rumen fistula

Bulletin No. 544 - January, 1956, Richard Saunders
What Homemakers and Retailers Think About Egg Shell Color. Brown egg/white egg preferences dealt with by observation, after introduction of white egged laying types. 7 tables. The traditional New England position not as strong as supposed before the study
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Bulletin No. 545 - Alvah H. Perry
Potential Profits from Packing Maine Potatoes to the U.S. Fancy Grade. An effort to improve profits through better grading methods, traditionally opposed by Maine shippers. Results fairly good, although transfer of knowledge apparently difficult. MAES/USDA joint work. 5 photos, 20 tables

Bulletin No. 546 - H.W. Hall and H.C. Dickey
Dairy Cattle Selection, Type Classification and Production Records. More on the role of the sire in high production qualities. Herefords used in study. Related to Bulletin 530, and a result of artificial insemination use growth. 5 tables. Other breeds also discussed to some degree

Bulletin No. 547 - Richard Saunders
Transparent Plastic Cartons Boost Egg Sales. Merchandising research conducted in Portland and reported here. Photo, 9 tables

Bulletin No. 548 - Winston E. Pullen
Marketing Maine Canned Sweet Corn. A study of consumer preferences because of a decline in Maine sales as opposed to other areas of the U.S. Locations, types, and costs of production were considered. Thirteen graphs, 1 map, 16 tables

Bulletin No. 549 - H.D. Bartlett and D.H. Huntington
Mechanical Potato Harvesting: A Summary of Work in Maine. A paper summarizing the work developing these machines, and the general acceptance by 1955 in much of the area. 9 photos, 5 tables. A state of the art work

Bulletin No. 550 - W.E. Schrumpf and W.E. Pullen
Costs and Returns in Sweet Corn Production - Central Maine, 1955. 73 farmers surveyed as to farm management practices, costs, and profits for the group. Suggestions as to better methods were provided. 5 graphs, 10 tables

Cooperation of Farm and Laboratory Can Control Bovine Mastitis. This serious disease of the mammary gland of cows was analyzed for a five year period (1950-5). Various treatments were analyzed as well as prophylactic measures with advice derived for use by veterinarians in conjunction with laboratories. 5 photos, literature, tables. An important bulletin

Bulletin No. 552 - R.W. Gerry and J.R. Smyth
White Leghorn - Rhode Island Red Cross Compared with Various Breeds and Crosses. Summarizes breeding studies conducted since 1951 at MAES. 4 tables
Bulletin No. 553 - Charles H. Merchant, Earle E. Gavett, John W. Underwood, Frank J. MacDonald
Consumer Packaging for Maine McIntosh Apples. Two years of work in developing good sales and strong use packages for these fairly tender apples. Portland area was the source for the study. 5 photos, 9 tables

Bulletin No. 554 - Gregory Baker and Frank K. Beyer
Marketing Forest Products from Small Woodland Areas in Maine. 498 small woodlots were analyzed through a survey method for many different sorts of results. See Forestry Technical Publication 85 (Spring, 1982) for another related publication. 14 tables

Bulletin No. 555 - May, 1957, Charles H. Merchant
Livestock Dealers' Operations in the Northeastern United States. Northeast Regional Publication No. 30. Dealers in 11 northeastern states studied. Age, profits, source of animals, types, amounts of work were among items studied and reported in tabular form. 14 tables, 1 map, 5 appendices

Bulletin No. 556 - Alvah H. Perry
Developing the Fall Market for Maine Potatoes. Another in the effort to get high quality sizing, and packing to maximize the fall profits. Washed, well packed potatoes preferred by consumers in Boston. 4 tables, 1 graph

Bulletin No. 557 - W.E. Schrumpf and W.E. Pullen
Costs and Returns in Growing Green Peas for Processing in Central Maine - 1955. Another money crop analyzed in depth. Costs and returns on 63 farms dealt with in 1955. Detailed useful economic summary. 5 graphs, 17 tables, 1 map

Bulletin No. 558 - John S. Getchell and Matthew E. Highlands
Processing Lobster and Lobster Meat for Freezing and Storage. A market study to help stabilize the market flow of the famous Maine product. Storage, temperature, and packing methods were all surveyed. 2 tables, bibliography

Bulletin No. 559 - Charles H. Merchant and Earle E. Gavett
Consumer Acceptance of Specific Gravity Separated Potatoes. More in the effort to control profits in a declining and changing industry. Specific Gravity tests were conducted from 1951 to 1956 for other reasons and the results were extrapolated in this study. Some new work was also undertaken. 2 graphs, 4 photos, 8 tables

Bulletin No. 560 - Earl K. Bowman and Edward F. Johnston
Methods of Receiving Potatoes in Barrels in Maine Trackside Storages. MAES/USDA joint project and publication. Crews receiving potatoes were analyzed for efficiency, work effort, and impact on the potatoes under different conditions. A product of the new Potato Handling Center. 14 tables, 10 schematics, 8 photos
Bulletin No. 561 - H.B. Metzger
Costs of Forage Production and Utilization on Central Maine Dairy Farms. 167 farms studied in 1953 and 30 restudied in 1954, 1955 to determine forage patterns, as well as costs involved in this activity. Analysis of feed costs, as well as chemical analysis of forage, was applied in the study. 22 tables, 2 graphs, 5 photos

Bulletin No. 562 - Paul N. Carpenter
Mineral Accumulation in Potato Plants. N, P, K, Ca, Mg analyzed. 11 graphs, 5 tables, literature in this effort to learn more about potato growth and nutrient analysis. Good paper

Bulletin No. 563 - Mario N. Sereno, Matthew E. Highlands, Charles E. Cunningham, John S. Getchell
The Effects of Irradiation and Subsequent Controlled Storage Upon the Composition of Maine Katahdin Potatoes. Gamma irradiated potatoes were stored under controlled temperature to analyze development of rots, amount of sprouting, loss of weight, starch content, and ascorbic acid. No apparent change in specific gravity. 6 photos, 11 graphs, literature cited, 8 tables

Bulletin No. 564 - H.B. Metzger
Supply and Disposition of Milk in Local Maine Markets. Thirty fluid milk plants studied in detail in 1954. Some modifications of pricing proposed as part of his long range efforts to stabilize the dairy industry. 13 graphs, 6 tables

Bulletin No. 565 - W.E. Schrumpf and W.E. Pullen
Costs and Returns in Growing Snap Beans for Processing, Central Maine, 1955. 63 farms studied in detail for 1952-4. Production rose while U.S. declined. Costs, farm management all studied. 12 tables, 5 graphs

Bulletin No. 566 - Charles H. Merchant and Allen G. Waller
Shifts and Trends in the Potato Industry in the Northeastern United States. Northeastern regional marketing study of an industry undergoing revolutionary change in location, size, varieties, transport as well as a shift away from government price support. 13 graphs, 7 maps, 24 tables. A very important historical work, still of great value

Bulletin No. 567 - Charles H. Merchant
Uses Maine Potato Growers Make of the New York Mercantile Exchange. More on how the change is impacting the farm, as loans, credits, and forward commodity marketing began to play a strong role. Northeast regional study. Every 20th farm in Aroostook County sampled. 191 in all studied. 1 map, 10 tables

Bulletin No. 568 - H.W. Hall and H.C. Dickey
Systems of Breeding Dairy Cattle. No one method of prediction works for all times, and detailed reports must be kept and analyzed. More of their work reported earlier as artificial insemination became more and more popular. Many charts and graphs appended showing examples
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Bulletin No. 569 - A.C. Johnson, Jr. and H.B. Metzger
Costs and Margins in Handling Excess Milk in Fluid Milk Plants. Study dealt with 10 plants in 1956. Detailed costs and profits analyzed. Part of this was M.S. thesis, June, 1957. 2 graphs, 14 tables

Bulletin No. 570 - January, 1958, Leo W. Boulanger
The Effect of European Red Mite Feeding Injury on Certain Metabolic Activities of Red Delicious Apple Leaves. Greenhouse study, time of infestation proved to be of most importance in the damage. Some indications of appropriate controls given. 18 tables, 2 figures, and literature cited

Bulletin No. 571 - Richard F. Saunders
Contract Broiler Growing in Maine. The extraordinary growth of this industry is analyzed here as it was at perhaps the height of profitability. 300 flocks were studied over a year's time to derive the data and results. 40 tables, 2 graphs, map. An important study

Bulletin No. 572 - Charles H. Merchant
Trading in Potatoes on the New York Mercantile Exchange. Northeast regional marketing study. 1951-7 years studied in detail for this aspect of the industry, with detailed analysis of prices, both forward and real. 1 photo, 16 graphs, 10 tables

Bulletin No. 573 - Elizabeth F. Murphy
Palatability and Vitamin C Content of Maine-Grown Broccoli. 5 varieties tested for taste under quick freeze processing. Date of harvest very significant, in both areas investigated. 7 tables

Bulletin No. 574 - W.E. Schrumpf
Cost Requirements in Growing Potatoes in Central and Southern Aroostook County, Maine, 1955. 224 farms analyzed in a farm management study. 28 tables, 4 graphs. A changing industry photographed in mid-change

Bulletin No. 575 - Reiner Bonde and Robert Mullany
Studies on Precutting Maine Seed Potatoes for Shipment to Farmers in the Eastern United States. Several varieties analyzed. Results quite good, as disease and rot were limited in the trials. 3 tables

Bulletin No. 576 - Clinton R. Blackmon and R.A. Struchtemeyer
Small Grain Variety Trials 1954-1957. 5 oats, 2 spring wheats, 3 winter wheats, and 3 barley varieties reported on with recommendations. Many others tried with less success. One of a long series of such reports

Bulletin No. 577 - W.E. Schrumpf and W.E. Pullen
Growing Dry Beans in Central Maine, 1956. 80 bean growers surveyed as crop declined in Maine, but rose elsewhere. All varieties grown appeared in the study of farm management. 1 photo, 5 graphs, 18 tables

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Bulletin No. 578 - John H. Hawkins, Ivan N. McDaniell and Elizabeth Murphy
Wireworms Affecting the Agricultural Crops in Maine. The young of the elaterid beetle analyzed along with chemical controls proposed, which are dangerous to man and animals. Good research on this aspect as well. 24 photos, 11 tables, map, good food plant study, and bibliography

Bulletin No. 579 - February, 1959, C.E. Cunningham, H.J. Murphy, M.J. Goven and R.V. Akeley
Date of Planting, Length of Growing Season, Vine Killing, Date of Harvesting and How They Affect Yields, Specific Gravity and Maturity of Potatoes. USDA/MAES joint work. A major publication reporting a number of parameters on potato growing from 1952-6. Conducted as the industry changed drastically as consumer tastes become different. Katahdins and Kennebecs analyzed. 6 graphs, 15 tables, 4 figures. Relates to Bulletins 414, 471

Bulletin No. 580 - H.C. Dickey and C.G.M. Edgerly
Feeding Antibiotics to Dairy Calves. Antibiotics fed to determine gains. Although they consumed more feed, the costs were high enough, that even increased weights were not cost efficient. 6 tables, bibliography

Bulletin No. 581 - M.F. Trevett
Growth Studies of the Lowbush Blueberry 1946-1957. Reports twelve years of detailed experimental work at Blueberry Hill Farm, and is a major summary of a post-World War II development of the MAES. 35 tables, 10 graphs

Bulletin No. 582 - Elwood R. Littlefield and Charles H. Merchant
Competition Among Areas in Supplying Broilers to the New York Market. More in the history of this rapidly expanding industry, this time comparing costs of the three major producing areas. 1 map, 4 graphs, 17 tables. A useful study, now more valuable for historians of agriculture

Bulletin No. 583 - Hugh J. Murphy and Michael J. Goven
Factors Affecting the Specific Gravity of the White Potato in Maine. Cultural practices, as well as environmental factors assayed, as well as storage. 17 tables, 6 photos. Resulted from major change in consumer wishes

Bulletin No. 584 - Harold L. Chute, David C. O'Meara, and J. Franklin Witter
Controlling Infectious Bronchitis in Maine Chickens. Reports results of a crash program begun in Maine in 1945 which had major results in control and virtual elimination of this disease. 10 tables, 1 photo, 3 graphs

Bulletin No. 585 - Edward F. Johnston and Earl K. Bowman
Mechanized Methods of Receiving Potatoes at Maine Trackside Storages. Relates strongly to and follows Bulletin 560. Various methods tried, analyzed, and suggestions made. 9 schemata, 12 photos, 12 tables as well as major appendices made this a very useful bulletin
Bulletin No. 586 - H.B. Metzger
Milk Pricing Under Seasonal Quota Plans - Attitudes Toward the Plans and Their Effect on Income. 6 plants studied. More of the effort to stabilize this industry under a state wide price control system. 137 producers were studied for 3 years. 14 tables, 9 graphs

Bulletin No. 587 - Charles Milne and Richard Rowe
Field Handling of Baled Hay. 6 photos, studies of work methods used on 269 farms in 1956

Tray Packing Fresh Fryers at the Store and Plant Levels. An effort to analyze costs, times and other factors in this rapidly changing industry. 36 tables, 2 photos

Bulletin No. 589 - Frederick A. Perkins
Organization and Management of 42 Maine Commercial Apple Farms. Management practices, costs, returns assessed for a sample covering all types of farms through 1956-7. About 1/3 of crop producers were covered by study. Consolidation, and more machinery seemed inevitable to remain competitive. 5 photos, 6 graphs, 29 tables

Bulletin No. 590 - Charles M. Milne
Mechanical Hay Conditioning. An effort to analyze methods of drying hay faster. Some of these methods were beginning to be used on more efficient small farms. 5 graphs, flow chart

Bulletin No. 591 - Frederick W. Perkins and John W. Underwood
Improved Consumer Packages for Maine McIntosh Apples. The McIntosh bruises easily, and the MAES continued with this study to provide better packaging than the polyethylene bags which created problems. 10 photos, 7 tables, 1 graph. Photos illustrate other ways

Bulletin No. 592 - Lloyd E. Jewett
Handling and Processing Broilers in Maine, Part I, Costs and Efficiencies in Assembling Live Broilers for Processing. Analysis of cost operating statements of three major producers along with time and cost studies of farm pickups. Part of the effort to cut down costs in the industry already highly competitive with other areas. An M.S. thesis, May, 1959. 5 photos, 1 map, 12 tables, and 1 graph

Bulletin No. 593 - Lloyd E. Jewett and Richard F. Saunders
Handling and Processing Broilers in Maine, Part II, Quality Losses in Live Broilers, and Methods of Handling to Reduce Bruising and to Improve Efficiency. Part I is Bulletin 592. This is an effort to cut down handling bruising when transferring to packaging plants. 4 photos, 13 tables. Various methods were attempted against standard controls in 11 lots over time
Bulletin No. 594 - Homer B. Metzger
Improving Milk Consumption in Maine Schools. Milk consumption data for 268 Maine schools were analyzed for the period 1955-6 to 1957-8. Follow-up was conducted on federal school lunch programs the next year. Changes were modified including such innovations as chocolate milk and vending machines. 13 tables, 4 graphs. A useful study for nutrition history

Apple Virus Diseases: An Illustrated Review. Part of this was a N.H. Ph.D. 31 photos, a major work. Bibliography is extensive and provides a historical introduction to the development and etiology of these long observed, but recently analyzed diseases. 201 citations provided

Bulletin No. 596 - Louis A. Ploch
Social and Family Characteristics of Maine Contract Broiler Growers. A strong sociological effort to determine who is in contract farming in broilers in Maine and why. Initial findings were that this had strengthened the agricultural economic picture in Central Maine.

Bulletin No. 597 - January, 1961, Homer B. Metzger
Loose Versus Conventional Housing of Milk Cows - An Economic Analysis. Methods of housing of dairy cattle have been a problem since medieval times. Loose housing began to be popular at about this time and the study compares 13 such operations with 13 stall barn farms. This study which dealt with all possible parameters in the year 1959 came to the conclusion that some gains were possible in labor and investment as opposed to no difference in the two types on other matters. 1 map, 15 graphs, 29 tables

Bulletin No. 598 - Dean F. Tuthill and Enoch H. Tompkins
Analysis of Livestock Dealers' Operations in Maine and Vermont. A Northeast Regional Publication. A product of a regional effort begun in 1954. This study analyzed a random sample of dealers in Vermont and Maine including 97 persons. As is often the case, size was the major determinant in profit success. 2 graphs, 15 tables

Bulletin No. 599 - H.H. Brugman and H.C. Dickey
Potato Pulp as a Feed for Livestock. Analysis of potential food for livestock derived from potato processing residue. Various types of the pulp were tried with various animals. Rations were suggested. 14 tables. Literature cited

Bulletin No. 600 - M.F. Trevett
Controlling Lambkill in Lowbush Blueberries. A persistent plant problem on farms, this paper offers a method of selective control without damage to the blueberry. 2 photos, 15 tables, 4 graphs
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Bulletin No. 601 - April, 1962, Robert I. Ashman
Forest Plantations in Maine. A summary of forest plantation history in Maine, along with an effort to upgrade seed stock. Most species grown in Maine discussed. A map, 7 photos, 12 tables. A useful, interesting and personal view of a number of years of work.

Bulletin No. 602 - G.W. Simpson and W.A. Shands
Progress on Insect and Disease Problems on Potatoes in Maine: Biology and Control of Aphids. A good brief history of the industry in Maine is followed by analysis of potato diseases, especially those transmitted by aphids. A good summary of aphidology is given. Control programs are analyzed, suggested, and given demonstration credence in this very important paper. A joint MAES/USDA research effort. 9 graphs/histograms are provided.

Bulletin No. 603 - Winston E. Pullen and William E. Schrumpf
The Economics of Irrigating Potatoes in Maine, 1956-9. 21 farms surveyed throughout Maine and rainfall analyzed to determine extent of irrigation needed or used. Yields, profits, and time were also evaluated. 3 graphs, 3 photos, 36 tables. An effort to use climate information to maximize success in an industry undergoing change and external pressures.

The Relationships of Various Hereditary and Environmental Factors to the Incidence of Milk Fever (Parturient Paresis) in Dairy Cows. An effort to provide data to sustain evidence of the etiology of the disease through hereditary factors. Efforts at control and cure are discussed. 11 tables, bibliography.

Bulletin No. 605 - M.F. Trevett
Nutrition and Growth of the Lowbush Blueberry. A major publication of monograph size. All aspects of nutrition and growth discussed based on research begun and substantially funded since 1946. 88 tables, extensive bibliography, 3 photos, 9 graphs.

Bulletin No. 606 - Dean F. Tuthill and John A. Graffam
An Economic Study of the Beef Cattle Industry in Maine. A study of about 1/3 of the herds in Maine selected randomly for about a year. All aspects covered, and all areas of the state. More efficient feeding and marketing was suggested. Historic studies by the current author and his students deal with this industry in depth in the period prior to 1880. Much of this was an M.S. thesis at University of Maine. 18 tables, graph, photo.

Bulletin No. 607 - H.J. Murphy and M.J. Goven
The Effect of Simulated Hail Damage on Yield and Quality of Potatoes in Maine. A study to determine effect of hail damage at various times in the plant life history. Simulated effects under controlled conditions. 11 graphs, 18 tables, 2 photos. Climate increasingly a factor in modern competitive farming, and this paper attempts to assess this factor.
Bulletin No. 608 - R.W. Gerry
Effect of Growing Treatments on Laying House Performance of Pullets. Methods of caging and feeding assessed as to impact on laying. 5 tables

Bulletin No. 609 - Frederick H. Hutchinson and Hugh J. Murphy
Ten Years of Snap Bean Studies in Maine. Reports long experimentation in growth patterns dependent on agronomical factors. Spacing, fertilizers, and other factors discussed. 12 tables, 1 photo. Bibliography. A good and useful report of long term work

Bulletin No. 610 - January, 1963, Paul N. Carpenter
Mineral Accumulation in Potato Plants as Affected by Fertilizer Application and Potato Variety. A follow-up to Bulletin 562 and summarized similar data for the years since that time up to 1960. 37 tables. An important publication

Bulletin No. 611 - R.W. Gerry
The Supplemental Value of Greases, Tallow, and Oils in Rations for Chickens. An effort to ascertain the impact of high energy potential increments in feeds. 10 tables, good bibliography, strong science

Bulletin No. 612 - H.B. Metzger
Twice-Weekly Delivery on Retail Milk Routes: Possible Economies: Consumer and Dealer Attitudes Toward Adoption. A strong sampling of Maine milk routes provided the data with an indication of some substantial saving, but with high consumer resistance. The industry under persistent economic pressure was trying to adjust. 16 tables and 1 graph

Bulletin No. 613 - H.L. Chute and D.C. O'Meara
The Development of Chickens Free of Common Poultry Diseases. Bulletin reprinted once in 1964. 5 tables, 3 major field experiments in an effort to produce PPLO free poultry very successful. References, and other matter, but the bulk of this pamphlet was devoted to demonstrating the success of the venture, and with the hope of getting strong farm cooperation. Very good and useful work

A Plan for Recreational Development of the Machias Lake Region in Washington County, Maine. A major plan for some 90,000 acres of operating woodland developed in an effort to maximize all uses and potential profits. A long term land use plan was developed in this work. 11 tables, 5 maps

Bulletin No. 615 - Samuel M. Brock
Marketing Maine Lumber to the Northeastern Building Construction Industry. A Small Business Management Research Project under a federal grant. 84 firms surveyed and followed by extensive personal interviews. Architects were also surveyed and interviewed. 35 graphs and maps. Comparisons were made between Maine and metropolitan uses
 Bulletin No. 616 - Robert Greenleaf
The Integration of Year Round Recreation and Timberland Management on the Passadumkeag Mountain Region of Eastern Maine. An M.S. thesis, June, 1963. A second in this group of detailed land management plans developed in the School of Forestry. 5 maps, 28 tables. A substantial bibliography is also provided.

 Bulletin No. 617 - February, 1964, F.E. Hutchinson, H.J. Murphy and D.T. Lewis
The Effect of Liming on Yield, Quality and Chemical Composition of Crops in Dairy and Potato Rotations for Seven Years on Plaisted Soils in Maine. A long term effort to evaluate efforts to raise pH levels to 5.5, 6.0 and 6.5 assessed here. Detailed analysis of rotational effect is provided. Conducted on the Huff Farm. 1 schematic, 14 tables, 5 graphs. Climate factors considered. Bibliography. A useful publication.

 Bulletin No. 618 - R.W. Gerry
Use of Poultry By-Products in Poultry Feed. Substantial experiments reported in this effort to maximize profits and cut down margins of loss. 25 tables, bibliography.

 Bulletin No. 619 - Dean F. Tuthill
An Economic Study of Sheep Production in Maine. A study of 60 sheep producers, economics, and farm management for the year 1961. A very useful addition to the general series of farm economics, management, and tangentially rural sociological pictures of Maine agriculture. 6 photos, 30 tables. An appendix deals with coastal sheep husbandry on islands.

 Bulletin No. 620 - Richard A. Kennedy
The Relation of Maximum Peat Depths to Some Environmental Factors in Bogs and Swamps in Maine. M.S. in Forestry thesis, UMO, 1963. Discusses results found from 12 cores from peat bogs and their radioactive isotope analysis to provide data on supposed deglaciation in Central Maine. Time period was fairly rapid. Other matters are considered in the judgements. A precursor study to much work in Geology, Botany, and Quaternary Studies since that date. See below for some of these. 1 map, 10 figures and graphs, 12 tables. Excellent bibliography.

 Bulletin No. 621 - Samuel M. Brock
The Market for Lumber in Maine Manufacturing Industries. More of the Northeastern Regional Study. See Vt. AES Bulletin 635 and Misc. Publication 651. All potential Maine users were surveyed and interviewed for the work. 4 tables, 21 graphs. A previous related bulletin is no. 615.

 Bulletin No. 622 - Edward F. Johnston and Robert A. Ries
Supplying the Packing Line with Potatoes in Maine from Storages at Rates of 200 Hundredweight Per Hour and Below. A follow-up to Bulletins 560 and 585, all parts of an effort to improve packing times and costs. Several methods were assayed at different rates of delivery to determine cost effectiveness. 14 tables, 21 photos, 1 graph, 5 schematics.
Bulletin No. 623 - Walter F. Carpenter
Vapor Barriers for Buildings Having High Atmospheric Moisture Conditions. 2 schematics, 8 photos, 2 tables, 2 graphs. A variety of efforts to insure protection for buildings needing these effects. 
Bibliography

Bulletin No. 624 - R.C. Pelletier, J.S. Getchell, M.E. Highlands and D.R. Clark
A Comparison of Several Peeling Methods as Applied to Maine Potatoes for Processing. A strong two year research effort to determine the most cost and waste effective method to peel large amounts of white potatoes used in processing plants. 5 tables, 17 photos, bibliography. Results showed the major savings to be in trimming after the peeling rather than in the peeling methods chosen

Bulletin No. 625 - Charles O. Dirks
The White Pine Weevil in Maine: Its Biology and Dispersal and the Effect of Prompt Clipping of Infested Leaders on Trunk Form. Life History, habits, methods of infestation, dispersal studies (1951-5 for this portion), results of clipping, 5 graphs, 11 tables, 3 photos, bibliography

Bulletin No. 626 - David L. Sirois and G.R. Cooper
The Influence of Light Intensity, Temperature and Atmospheric Carbon Dioxide Concentration on the Rate of Apparent Photosynthesis of a Mature Apple Tree. Multi-regression analysis of different factors in apparent photosynthesis found light intensity to be the major one. The curve developed is logarithmic in nature, however. 7 graphs, 12 tables, 1 photo

Bulletin No. 627 - A. Temple Bowen, Jr.
The Relation of Tree and Stand Characteristics to Basal Area Growth of Red Spruce Trees in Partially Cut Stands in Eastern Maine. A M.S. thesis in forestry. Work conducted at Indian Township, Maine in 1960 and multi-regression analysis applied through computer simulation to determine the results. 8 graphs, 7 tables, bibliography

Bulletin No. 628 - Edward I. Heath
Comparison of Recreational Development Plans for a Northern Maine Wilderness Tract. The area under consideration was Baxter State Park, and its surrounding townships, and the study dealt with alternative plans for the area in recreation. Four plans were analyzed. Among the factors were aesthetic damage through further automobile roads, which were not recommended as a result. 12 maps, 17 tables, and bibliography. A useful study for an area under considerable recreational pressures

Bulletin No. 629 - D.L. Sirois, G.R. Cooper, M.T. Hilborn
Influence of Certain Fungicides on Apparent Photosynthesis of an Entire Apple Tree. A tree was enclosed within an inflated plastic house and fungicides were used. The CO₂ assimilation rate was measured along with light intensity and atmospheric CO₂. A regression equation provided predicted values for the assimilation rate.
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Some diminution was discovered, and a series of projections as to future yield assembled, photo, 4 graphs, bibliography

Distribution Patterns of Trucked Pulpwood. 7700 truckloads were examined in the calendar year 1963 to determine information as to when, the intensity of delivery times, average volumes and other similar matters. 8 tables, 5 maps, 5 graphs, bibliography, 9 tables. The information provided useful data both to companies, and other potential impact persons, (rental truck companies)

Bulletin No. 631 - Alvah H. Perry
Attitudes of Aroostook Potato Growers Toward Marketing and Processing In a period of rapid and substantial change in the industry, both from production, marketing, and consumption points of view, 230 growers were surveyed (1963). Every 11th farmer was chosen and interviews were held. The resulting information is still of major significance. 27 tables

Bulletin No. 632 - John M. Lane and Ralph H. Griffin
The Effect of Selected Herbicides on Young Balsam Fir. Several herbicides were applied to young stands in an effort to understand the needs of different times of years, concentration of mixture, as possible use in thinning in this fast growing shade tolerant species recently being used widely for pulpwood. 1962-4 was the period of observation. 10 photos, 15 tables, 7 graphs, bibliography

Bulletin No. 633 - H.L. Chute, D.R. Stauffer and D.R. O'Meara
The Production of Specific Pathogen Free Broilers in Maine. Methods used and results obtained in an effort to produce chickens free of the common poultry diseases. Reports remarkable result of a very long time program with nearly uniformly good results. 15 tables, 5 photos, 1 graph

Bulletin No. 634 - April, 1965, Paul N. Carpenter and Hugh J. Murphy
Effects of Accumulated Fertilizer Nutrients in a Maine Soil Upon the Yield, Quality and Nutrient Content of Potato Plants. A field experiment from 1951-7 reporting results of eliminating P and K as well as adding them on yield, and quality. Other effects were noted, and it was felt that a longer range study would be even more useful. 4 graphs, 22 tables, literature. Bulletins 454, 474, 562 are predecessors

Bulletin No. 635 - Winston E. Pullen and Dean F. Tuthill
Cost of Producing Potatoes in Central Aroostook County, Maine. 1959 and 1960 study. 170 farms studied by means of field surveys and results were widely read and used in other parts of the state. A very useful bulletin. 1 map, 10 photos, 29 tables, 5 graphs
Bulletin No. 636 - Edward F. Johnston, Harvey V. Toko and Jack B. Wilson
Pallet Boxes vs Deep Bins: A Comparison of Potato Quality Control.
Joint research USDA/MAES and a product of the potato handling center.
Storage in Maine traditionally in deep bins began to change to smaller
crate boxes about 1955. This study compared the two, much to the
avantage of the crate boxes. 11 tables, 1 graph, 3 schematics,
and 5 photos

Bulletin No. 637 - Homer B. Metzger and James H. Clarke
Reducing the Frequency of Home Delivery of Milk. A northeast region
publication. Information used was obtained in Maine, Kentucky
and West Virginia from 1960-3. The difficulty in significantly
diminishing the service was found in all cases to be social and
cultural rather than from other causes. 31 tables. Misc. Reports
101, 105, 111 and Bulletin 612 are predecessor studies in Maine

Saunders
Expanding the Market for Maine Blueberries, Part I, An Analysis of the
Consumer Market. Increased competition outside Maine prompted this
work. 873 interviews in urban centers were conducted, outside Maine,
to determine factors which play a role in selection of products of
this sort. Several approaches to maximizing sales were offered.
31 tables

Bulletin No. 639 - Homer B. Metzger and Dean F. Tuthill
Alternative Systems for Feeding Maine Dairy Cows. 39 dairymen
observed for 13 months on a day a month basis to determine amount
of time involved. Resulted in some recommendations as to better
use of time and machinery. 11 photos, 17 tables

Bulletin No. 640 - Thomas J. Corcoran, Daniel I. Schroeder and David B.
Thompson
An Evaluation of the Distribution of Trucked Pulpwood in East-Central
Maine. An effort to provide data to allow truckers of pulpwood to
cut their costs and maximize use, as well as cost efficiency. Map

Bulletin No. 641 - Allan W. MacKinnon, Bonnie G. Marsh, John C. Dean
and Richard E. Vizard
A Comparison of Food Prices in Boston, Massachusetts and Bangor, Maine.
4 students from a College of Business Administration Economic
Research Seminar are the authors. Paper explores these comparisons
in detail and to good value. 4 tables, graph

Bulletin No. 642 - Frank D. Reed and Lloyd J. Jewett
Economic Characteristics of Maine's Contract and Independent Table
Egg Farms. About half the eggs in Maine produced by contract.
1963-4 data for 18 months and 229 producers utilized in study.
Part II of a study. Part I is Misc. Pub. 670. 10 tables
Bulletin No. 643 - David B. Thompson and Thomas J. Corcoran
Organizational and Operational Characteristics of Independent Pulpwood Trucking Firms in Maine. 248 firms (of 550) responded to questionnaire. Difference so great as to be not typified. 22 tables, map, 7 graphs. Bibliography. Extensive appendices. Despite the initial findings this is a very useful publication.

Bulletin No. 644 - Hugh J. Murphy, M.J. Gaven, et al.
Maine-New Hampshire-Vermont Potato Variety Trials for 1966. 40 pps., 47 tables as these authors continue and expand their long series

Bulletin No. 645 - January, 1967, Hugh H. Murphy, P.N. Carpenter and M.J. Gaven
Potato Fertilization-Rotation Studies on Aroostook Farm. Permanent Fertility Plots 1951-1965. Summary of 15 years of significant work. The work, part of very long experimentation, dealt with and reports here analysis of amounts, within rotations, of N, P, K, Mg. Specific Gravity of tubers was another factor of increasing importance within varietal change. 17 graphs, 24 tables, bibliography. Appendix with 25 tables. Predecessor bulletins include 414, 481, 490, 506, 593, 610, 634. A major publication

Bulletin No. 646 - Franklin E. Manzer and George R. Cooper
Aerial Photographic Methods of Potato Disease Detection. Infra-red detection of late blight and other problems of potato growers. Vine damage detected by film long before visual detection. Differing types of film more useful with some diseases than others. 13 photographs

Bulletin No. 647 - M.E. Highlands, S. Al-Hakim and J.M. Hogan
Water Conservation in Potato Processing. An effort to deal with the perennial problem in food processing plants. 4 tables, 3 schematics

Bulletin No. 648 - Vijay K. Joshua, Richard F. Saunders and Wallace Dunham
Expanding the Market for Maine Blueberries, Part II. Blueberry Product Analysis in New England Retail Food Stores. Part I appears in Research in the Life Sciences (1967) and Bulletin 638. 162 stores studied in early summer, 1964 in an effort to increase sales and determine the actual extent of available market. Competition was found to be severe. 15 tables, 2 graphs

Bulletin No. 649 - Douglas B. Monteith and Thomas J. Corcoran
Some Aspects of Recreational Usage and Policy on Municipal Water Supply Areas in Maine. Increasing recreational demands coupled with potential water shortages led to this study. 138 responses to questionnaires were analyzed. 13 tables, 5 graphs. Good bibliography

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Bulletin No. 650 - Frederick B. Burnett, Thomas J. Corcoran and James E. Shottafer
Technical Education Needs and Employment Potential in Forestry-Based Occupations in Maine. An effort to determine the actual extent of a perceived problem in Maine. Sampling technique derived because of large amounts of data. Questionnaire, and interviews used. Final data used all firms in state to some extent (of any size). 9 tables, 9 graphs, extensive appendices. Some shortage of technicians of a short run nature was noted. Occupational descriptions derived

Bulletin No. 651 - H.J. Murphy and M.J. Gaven
Factors Affecting Chip Color of the White Potato in Maine. Reports data on this problem from experiment begun as early as 1956 by P.N. Carpenter. 28 tables. Time of planting, rotation, varieties, amounts of fertilizers, and trace elements all considered. An important paper. Bulletin 449 and numerous articles in RLS are related

Bulletin No. 652 - H.J. Murphy, P.N. Carpenter and M.J. Gaven
Effect of Differential Rates of Phosphorus, Potassium, and Lime on Yield, Specific Gravity, and Nutrient Uptake of the Katahdin and Russet Burbank. Reports results of a field experiment at Presque Isle from 1954 to 1959. Amounts of fertilizers needed were clearly explicated here. 3 graphs, 18 tables, predecessor work is Bulletins 414, 463, 481, 506, 562, 610, 617, 634. Appendices of value as well

Bulletin No. 653 - Orlando E. Delogu and David D. Gregory
Planning and Law in Maine, Part I., Private Property and Public Regulation in Maine. First part of an important effort to delineate the role of law in continuing public planning in Maine. This portion lays out the proper precedents

Bulletin No. 654 - Orlando E. Delogu and David D. Gregory
Planning and Law in Maine, Part II., Powers and Devices for Controlling Land Use. Description of the principal tools available in Maine to accomplish public planning. Part II of this significant work

Bulletin No. 655 - Chung-Jeh Yeh
Maine Egg Marketing. A Northeast Regional Project publication. A surplus of eggs in Maine stimulated the study in an effort to locate other markets. 29 representative firms studied. 5 graphs, 11 tables, 1 map

Maine, New Hampshire, Vermont Potato Variety. Trials for 1967. 70 pps., 40 tables in their continuing study. Cooperative field trials noticed in this work
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Bulletin No. 657 - H.L. Chute and R.S. Reese
Mycoplasma Problems in Integrated Poultry Companies. A case study of how diseases spread, with reference to integrated broiler operations in Maine. A schematic flow chart is included. Bulletin 633 is related. 8 tables

Bulletin No. 658 - John B. Dimond and Robert H. Bishop
Susceptibility and Vulnerability of Forests to the Pine Leaf Aphid (Pineus pinefoliae (Fitch) Adelginae). Biology and life history of the pest of Maine forests is delineated. 3 tables, map, graph. Those areas of the forests especially vulnerable are laid out in the work. Bibliography. A Maine Farm Research article, April, 1966 is predecessor work

Bulletin No. 659 - Alva H. Perry
Possible Changes in Procurement Practices of Retailers and Wholesalers of Maine Potatoes. Buyers surveyed throughout summer of 1965 as to their views as to what might occur, as well as possible anticipated changes in procurement. 12 tables

Bulletin No. 660 - Orlando E. Delogu and David D. Gregory
Planning and Law in Maine, Part III., Suggested Revisions in Maine Planning and Land Use Control Enabling Legislation (by O.E. Delogu) and Administration of Zoning in Maine (D.D. Gregory). Reprinted from Vol. 20, no. 2, Maine Law Review where it appeared as pps. 175-236. Part I-II were Bulletins 653, 654. Part IV is below. An important series for land use planners and at a time when the state law was being revised to accord with new land usages

Five Years' Research with a Hatchery Sanitation Program in Maine. Recounts establishing and monitoring, with results, of a hatchery sanitation program based on aerosol microbial evaluation of actual bacterial counts. 10 tables in appendix. Other appendices, a plan for effectively sterilizing large hatcheries based on this work

Bulletin No. 662 - Kenneth E. Wing and Frank D. Reed
Costs and Returns on Maine Broiler Farms. Broilers had become big business in Maine. This work provides data on average costs and returns on these farms in 1966. 180 of 900 were surveyed in 1967 on the previous year's work. A mail survey was taken in the next year to provide some comparisons. 22 tables. A very useful paper, now a historic artifact

Bulletin No. 663 - Edward F. Johnston and J.B. Wilson
Bruising of Potatoes Removed from Storage by Different Systems. MAES/USDA joint work, and a product of the Potato Handling Research Center. Four methods surveyed and compared: pallet box, fluming, bulk scoop, and a barrel system. 4 figures, 2 tables, 12 photos. Results showed that the personnel employed are still the key. Bulletin 365 was an earlier effort to study this problem
Bulletin No. 664 - M.F. Trevett, P.N. Carpenter and R.E. Durgin

A Discussion of the Effects of Mineral Nutrient Interaction on Foliar Diagnosis in Lowbush Blueberries. This is a summary, for the general reader, of the technical materials provided in Bulletin 665. Bibliography, 1 table

Bulletin No. 665 - M.F. Trevett, P.N. Carpenter and R.E. Durgin

Seasonal Trend and Interrelation of Mineral Nutrients in Lowbush Blueberry Leaves. N,P,K and all the trace elements discussed as they were changed in the plant from early June through early September. The first three decreased; most of the others increased. Ratios do not change. Plant nutrition is laid out in this research. 22 tables, 3 graphs, extensive bibliography. Bulletins 581, 605, are related are Misc. Pubs. 666, 676 and Misc. Report 118, and Maine Farm Research 6 (2), 12 (2), 14 (2). 17 tables in appendix

Bulletin No. 666 - Homer B. Metzger

Organizing Maine Dairy Farms for Optimum Returns. 8 representative farms studied and a linear programming concept set forth to maximize profits. Materials reflect late 50's-early 60's for which data were best available. 27 tables, 1 graph


Maine-New Hampshire-Vermont Potato Variety Trials for 1968. The annual volume of this long running series. 72 pps., 56 tables. More on cooking qualities each year now as new varieties for commercial potato products became increasingly important

Bulletin No. 668 - Gregory J. Baker

Influence of Tree Spacing in a Red Pine Plantation on Certain Wood and Tree Qualities. Trees planted under controlled conditions in 1941-2 now analyzed for these factors. 3 figures, 3 tables

Bulletin No. 669 - Allen M. Brackley and James E. Shottafer

Estimating Veneer Requirements in Plywood Manufacture. Computer programming used to better this necessary act in manufacture. 2 photos, 2 figures, 1 table. Some of this was Brackley's M.S. in Forestry

Bulletin No. 670 - J.H. Hunter and J.B. Wilson

Use of Forced Air Ventilation to Control Wet Breakdown of Field-Frosted Potatoes in Storage. MAES/USDA joint work, a publication of the Potato Handling Center. Three year experiment, with different rates of ventilation. Sugar buildup no real problem. Dry stock in paper bags with higher ventilation survived quite well. 8 photos, 4 tables, 2 graphs

Bulletin No. 671 - Donald A. Wilson and Wallace C. Robbins

Formulas for Tables for Point Sampling in Forest Inventory, Part I., English System. All tables and a tool for the forester
Bulletin No. 672 - D.D. King and H.L. Chute
Correlation and Gross and Microscopic Pathology of Skin and Nerve Lesions from Condemned Broilers. Joint USDA/MAES publication. "Skin Leukosis" condemnations had risen to high levels at processing plants. Study is an effort to locate reasons for detailed research to follow. 3 tables, bibliography

Bulletin No. 673 - James E. Shottafer and Gregory J. Baker
Relationship Between Modules of Elasticity, Modulus of Rupture, and Selected Physical Characteristics of Eastern Spruce Structural Lumber. Part I, Analysis of Stress Grading Systems for Eastern Spruce Structural Lumber. Effort directed toward better day to day work in lumber yards. 8 tables, 2 photos, 2 dot graphs

Bulletin No. 674 - D.W. Taber and J.E. Shottafer
The Market Potential for Eastern Spruce Plywood. Extensive rise in the use of plywood nationwide created need for this research to determine a place for Maine products. 4 photos, a number of tables showing response of various potential users. Bibliography

Bulletin No. 675 - Orlando E. Delogu
Planning and Law in Maine, Part IV., Suggested Revisions in Maine's Planning and Land Use Control Enabling Legislation. Originally appeared in Maine Law Review, 21, no. 2, pps. 151-174. This section deals more precisely with threats to the environment and the enabling legislation to close these off is suggested. An excellent series which had considerable impact in Maine and elsewhere

Bulletin No. 676 - Cecil S. Brown, Paul N. Carpenter and Paul R. Belyea
Fertilization Responses of Hayland Grasses in Maine. A four year study 1956-1960 on two adjacent plots in central Maine. Pure stands of mixed perennial grasses were given differential fertilizer treatments followed by a year of residual harvesting. Results were tabulated, predominantly in terms of N, P, and K. 4 photos (including an excellent cover photograph clearly showing the differences, 18 tables, 2 graphs, bibliography. Appendices deal with soil, climate parameters

Bulletin No. 677 - Allen M. Brackley and James E. Shottafer
Veneer and Plywood Yields from Eastern Spruce. 13 tables, 6 photos, further in the effort to upgrade profits in the Maine woods. Related to Bulletin 669.

Bulletin No. 678 - H.L. Chute, Roscoe F. Cuozzo and D.D. King
Infectious Synovitis in Maine Chickens. An intensive study of this disease begun in fall, 1967 reported here. 13 tables, 1 graph. Stems from premises in Bulletin 633 on pathogen free boilers
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Bulletin No. 679 - G.R. Cooper and R.E. Lautzenheiser
Freezes in Maine: Probability of Late Spring and Early Fall Low Temperatures. The first of the modern research in climatology in Maine, see Bulletins 715 and 771 for further. Growing season lengths increasingly important as climate began to be more variable in Maine. 4 maps, 4 tables

Bulletin No. 680 - Donald A. Wilson and Wallace C. Robbins
Formulas and Tables for Point-Sampling in Forest Inventory, Part II., Metric System. This forester's tool, here in the metric version. See Bulletin 671 for earlier English version

Economic Impacts of a Changing Labor Force in Aroostook County, Maine, Phase I., Effects on Potato Farm Organization. The state's largest single agricultural product was always under view, and this set of studies, begun here, was designed to measure the impact of new labor-saving machinery. 16 tables, 8 graphs. Important work

Bulletin No. 682 - Jeffrey L. Hengsbach
A Recreational Study of the Upper St. John River Watershed. The seventh in a series of efforts to plan and program the recreational pressures increasing rapidly on Maine woodlands. Others are Misc. Pubs. 658, 659, 663, and Bulletins 614, 616, 628. 5 graphs, 18 tables, bibliography. This study was computer assisted in the simulation areas. Work of considerable importance to Maine in general and to the areas in particular. 30 tables, 8 maps

Maine-New Hampshire-Vermont Potato Variety Trials for 1969. Still further in this work. 68 pps., 42 tables

Bulletin No. 684 - Ivan N. McDaniel
Effective Control of Mosquitoes Through Community Action. Life history and habits to some degree. An organized plan for suppression and control is offered

Bulletin No. 685 - Gregory Baker and James E. Shottafer
The Effect of Tree Spacing in a Red Pine Plantation on Tree Growth and Wood Quality. Part I., Tree Growth by Baker, and Part II, by Shottafer. These studies continue analysis of trees planted in 1941 and 1942 in the University Forest, and continue to provide data to aid in maximizing profit and use in northern Maine forests. 10 tables, 13 graphs all told. Bulletin 668 is related research

Bulletin No. 686 - J. Grueter
The Private Camping-Oriented Outdoor Recreation Industry in Southern Maine: A Business Analysis. Part I-II of this study, Economic Analysis of Camping-oriented Recreation Firms are Technical Bulletins 36-37 which are a flow chart, computer program, and a manual for simulation for such programs. 18 firms operating a substantial number of campsites were studied in this total picture. 9 tables
Bulletin No. 687 - Stanley F. Buxton and Johannes Delphendahl
Campers at Lily Bay State Park - Socio-Economic Characteristics and Economic Impact. Detailed interviews in the summer of 1967 provided the data for this interesting study. Higher incomes and education were the norms, with a fair expenditure of money in the local economy. Map, 14 tables

Studies of the Storing of Washed Potatoes in Maine. Joint MAES/USDA work. Publication of the Potato Handling Center. More of the effect of differing types of storage here with the added element of washing, and degree of drying analyzed to determine spoilage and damage over time of storage. 5 tables, 1 photo. Bulletins 509, 517 are predecessor work

Bulletin No. 689 - Richard A. Hale and Allen M. Brackley
Working Stresses for Eastern Spruce Structural Lumber as Predicted by and Electro-Mechanical Stress Rating System - A Pilot Study. Part II of Analysis of Stress Grading Systems for Eastern Spruce Structural Lumber. More on their work on attempting to improve judgments in the work place. 10 tables, 4 graphs. Part I is Bulletin 673

Bulletin No. 690 - James H. Hunter and Earl C. Yaeger
Use of a Float Roll Table in Potato Grading Operations. Joint USDA/MAES work, with publication from the Potato Research Handling Center. An effort to improve working conditions for the grader of potatoes. 2 photos, 5 graphs, 6 tables

Bulletin No. 691 - January, 1971, Kenneth E. Potter and Norman Smith
Sizing Long White Potatoes. Joint USDA/MAES publication. As varieties changed, new methods were needed. This one was a newly constructed potato sizer to deal with the newer varieties. 6 tables, 1 photo, 8 graphs and schemata

Bulletin No. 692 - Hugh J. Murphy, M.J. Gaven, et al.
Maine-New Hampshire-Vermont Potato Variety Trials for 1970. 42 tables, 64 pps., as this series continues in its yearly round

Bulletin No. 693 - Paul R. Hepler
Sugar Beet Varieties for Maine 1965 to 1970. Sugar beets have been tried in Maine several times mostly without success. The most recent attempt was in the late 60's and was conducted more scientifically. This bulletin reports six years of varietal testing. 8 tables. The pH level is crucial as these tests showed

Bulletin No. 694 - Kenneth E. Wing and Wilbert C. Geiss, Jr.
Estimated Cash Flows and Profitability of Maine Broiler Farms. Maine continued to increase its share of this food. The paper uses several budgetary models as the need for capital grew more rapidly than did profits, and smaller operations began to decline fairly rapidly. 18 tables, bibliography. Bulletin 662 is related. Part of this was Geiss's master's thesis
Bulletins:

Maine-New Hampshire-Vermont Potato Variety Trials for 1971. Further in their long continuing study. 35 tables, 56 pages

**Bulletin No. 696** - Dwight B. Demeritt
Background and History of the University of Maine Forest. 4 large areas in the forest, now named for the author of this paper. Good description of founding and ideas behind the forest's place in UMO research. 5 maps

**Bulletin No. 697** - F. Richard King, Winston W. Grant and Edward S. Micka
Optimum Number, Size, and Location of Tablestock Potato Packing Plants in Maine. One of several studies in an effort to maximize profits and utility at a time when the industry began to be troubled with competition, and from a perhaps too rapid shift to processed potato varieties. 13 tables, 2 figures. A theoretical experiment based on real data

**Bulletin No. 698** - James F. Connors and James C. Whittaker
Maine's Sebago-Long Lakes Campgrounds: A Market Structure Analysis. 26 firms studied in detail. 7 tables, but most of the data appear in written form as it is analytical in nature

**Bulletin No. 699** - M.F. Trevett
The Integrated Management of Lowbush Blueberry Fields: A Review and Forecast. A developmental plan based on five directed courses of action to maximize use, profits, and continued yields on blueberry lands. A production of nearly 30 years of work and thought by this productive author and scientist. Major bibliography, 36 tables. A very significant work

**Bulletin No. 700** - D.M. Tobey
Seasonal Home Residents in Five Maine Communities: Socio-Economic Characteristics, Use Patterns, and Environmental Attitudes. Seasonal second homes, always in use in Maine, had grown rapidly in recent years. This is a strong effort to ascertain facts for use by local people, planners, and others to deal with this new force. All Maine covered by the choice of the towns. 18 tables. Attitude assessments particularly strong through survey

**Bulletin No. 701** - June, 1973, Reginald K. Harlan
Costs, Returns, and Efficiency of Potato Production in Maine. A close study of 120 Aroostook County potato farmers. An effort to determine success or failure reasons, as well as to indicate best methods. 30 tables, mostly focusing on 1968 crop year but put in the context of 1949-1970 in other work. Related earlier bulletins are: 378, 379, 390, 541, 574, 635 and 681. A later bulletin is 730
Bulletin No. 702 - H.J. Murphy, M.J. Goven et al.
Maine-New Hampshire-Vermont Potato Variety Trials for 1972. The yearly compendium in this series. Items tested for include disease resistance, yield, specific gravity, size of tuber distribution, storage characteristics, preparation loss, after-cooking darkening, appearance, defects, and fried product color and texture. In addition the cooperative trials are also reported. 35 tables, 57 pps, report the 39 varieties tested

Bulletin No. 703 - James R. McKenna, Cecil S. Brown and Paul N. Carpenter
Fertility Content of Fluid Manure from Maine Dairy Farms. Three dairy farms studied for a year for the extent of N, P, and K as well as trace elements in their fluid manure amounts. Ranges were high. Photograph, 10 tables, bibliography. Subject under discussion before at MAES in 1880s

Bulletin No. 704 - Wilbert C. Geiss, Jr. and Reginald K. Harlan
Costs and Returns on Maine Apple Farms. Study to determine profitability of Maine apple farms. 172 responded of 205 total in the state. 1970 production was the key. Several (most) of the larger operations were operated in the red in that year which came as a surprise to the authors. To some degree this was due to an adverse climate year, and a heavy U.S. production. 23 tables. None of these papers in this period do much with earlier efforts of the station to ascertain the same matters. See Bulletins 339, 347

Bulletin No. 705 - Wallace C. Dunham and Walter P. Stinson
Market Structure Analysis of the Maine Shrimp Industry. A rapidly growing industry in Maine surveyed for economic analysis. 4 graphs, map, 11 tables, flow chart, bibliography. 2 appendices. This paper set in a historic time frame

Maine-New Hampshire-Vermont Potato Variety Trials for 1973. 41 varieties in their annual series of reports. 54 pages, 33 tables

Bulletin No. 707 - F. Richard King and Forest M. French
Analysis of Waste Disposal Problems Related to Maine Poultry Processing Plants. A major study begun in response to heavy enforcement of pollution laws. Deals primarily with lower Penobsct river valley. Cost implications discussed for total compliance. 8 tables, bibliography, flow chart of poultry processing plant

Bulletin No. 708 - Raymond N. Krofta
Growth and Disappearance of Dairy Farms in Maine. A restudy of the farms discussed in 1961 and 1968. 73 farms treated. The downward change and actual disappearance was great (approximately 50%). Map, 15 tables. Some predictions of future offered. Amounts produced remained relatively the same. Size of farm grew during the period as consolidation was the mode of coping

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Bulletin No. 709 - Wallace C. Dunham and Munden M. Bray
An Evaluation of the Potential for Maine Raised Oysters. A Sea Grant paper. An analysis of foreign market demand, especially for half-shell oysters. Showed considerable potential, but no production yet available to fill it. 13 tables, 10 graphs

Marketing Fresh Vegetables Through Roadside Stands. The long-term operators were studied in detail. All aspects studied, and results were a clear indication of what was needed to establish such businesses. 11 tables, 4 graphs

Bulletin No. 711 - H.C. Dickey, R.W. Gerry and H.H. Brugman
Potato Products for Feeding Purposes. Dried, wet, and dehydrated potato pulps fed to all sorts of animals, along with culled potatoes. Food values, and efficacy of these feeds discussed. 23 tables. Bulletins 535, 539, and Misc. Reports 57, 64 are related work

Maine-New Hampshire-Vermont Potato Variety Trials for 1974. Another in their series. Seed piece spacing also studied in this year. 67 varieties tested. 34 tables, 66 pages

Bulletin No. 713 - Homer B. Metzger
Small Farms in the Lower Penobscot River Area: Their Resources and Income. 24 small farms studied in detail in summer 1973, with personal interviews playing a large role in the study. Alternative incomes and necessary retraining increasingly a solution to problems of low income. 22 tables. Misc. Report 140, 146, and RLS, 21 (10) are earlier reports of this work and ancillary efforts

Bulletin No. 714 - October, 1974, H.J. Murphy, M.J. Goven and H. Plate
Effect of Differential Fertilizer Rates and Supplementary Irrigation on Yield, Quality and Chemical Composition of Katahdin Potatoes in Maine. Field experiment 1959-1971 with irrigation added to normal field experimental work. Yield response was higher, but most of the other areas tested remained relatively the same. No real growth in size. 16 tables, 10 graphs. Climate content of this paper high. Bulletins 490, 562, 583, 634, 645, 651, 702 are related earlier work

Bulletin No. 715 - August, 1975, G.R. Cooper and R.E. Lautzenheizer
Maine Rain. 4 maps, 142 tables presenting tabular data on the previous 30-40 years of Maine precipitation records for 72 stations. Related to Bulletin 771

Utilization of Production and Marketing Information by Maine Potato Producers. Mail survey of information and amount of usage by potato growers. 230 responses (19% of possible). Related to Bulletin 725, 6 tables
The Economy of Aroostook County, Maine. A major production, designed originally to analyze changing labor situation, and introduction of labor saving machinery into the area. Bulletin 681 was an earlier product of the project. 19 tables. Set, as was necessary, in a context of historical change.

Maine's Pleasure Boat Industry: Part I, Marinas in Maine. Questionnaire, follow-up interviews conducted. (Part of a 7 state effort to determine impact of this leisure time activity.) 15 tables. Questionnaire in appendix. A first look and a useful one.


Costs and Efficiencies in Marketing Fresh Lowbush Blueberries in Maine. The second year of an effort to increase sales and profits in Maine. A larger area was utilized than just Bangor and Machias. Map, 9 tables, graph, 2 photos. Low wage return, but sales good. RLS, 21 (11, 13) are the previous publications.

Economic Impacts of a Changing Labor Force in Aroostook County, Maine. Phase 2: Effects on the Area Economy. Bulletin 681 is Part I. This is another in a current series of related publications on Aroostook County as the potato industry underwent massive change, as well as other aspects of the area’s economy and social structure. Map, 14 tables, major bibliography.

An Analysis of the Dealer Processor Sector of the Maine Soft-Shell Clam Industry, 1974. Questionnaires and surveys of 54 (40%) of such persons in Maine. Outstanding characteristic shown was pessimism for the future (reflecting a state of unease nationally and in the state about the economy generally, and marginal areas in particular). 45 tables.

Management Practices and Cash Operating Costs in Lowbush Blueberry Production. 113 growers participated in crop year 1974. All aspects studied and some suggestions were offered as a result. 15 tables, 2 figures. This, and its companions on other crops, make an excellent picture of Maine in the end of the third quarter of the twentieth century.
Bulletin No. 724 - Homer B. Metzger and Wilfred H. Erhardt
Marketing Fresh Fruits and Vegetables Through Roadside Stand and
Pick-Your-Own Operations in Maine, 1974: Firm Characteristics,
Sales Income and Business Trends. Title tells all. 72 operators
studied via questionnaire survey. 2 maps, 17 tables, 4 graphs.
Directly related to Bulletin 710

Bulletin No. 725 - N.H. Pelsue, Jr. and D.A. Smith
Potato Market Information: Sources and Suggestions for Change.
Summarizes information from potato growers and others as to desirable
changes in information so that decisions on growth and marketing
could be made more readily. 230 persons responded. One result was
that many did not know the available information for them and better
dissemination was proposed. Questionnaire is in appendix

Bulletin No. 726 - Dennis A. Watkins, Julia M. Watkins, Betty A. Brown and
Sheila R. Bissonnette
Community Services Planning and the Small Municipality: A Quality of
Life Framework for the Development of Rural Human Services. A
strong effort in the long range goal of making small communities
more viable with planning. Population and demographic changes
were making this work even more important. Regional projects and
state projects were associated in the work. 8 data set matrixes
and flow charts, bibliography. Appendices. An important work

Bulletin No. 727 - Dennis A. Watkins and Julia M. Watkins
Program Review of Services for Children and Youth in Penobscot and
Piscataquis Counties, Maine. More on the Penquis Cap studies. 15
tables, bibliography. Appendices list agencies, budgets and other
data. A strong effort to relate to modern Maine.

Bulletin No. 728 - Dennis A. Watkins, Julia M. Watkins, Betty A. Brown and
Sheila A. Bissonnette
Health Status, Part I: A Community Perspective. Community health
status in 4 eastern Maine counties. Demography, public attitudes,
health care delivery, illness and disability within the population
all treated. Telephone interviews with 1003 persons conducted for
data base. 26 tables, bibliography

Bulletin No. 729 - February, 1977, Louis A. Ploch
Rural Development in the Lower Penobscot River Area: A Summary.
A five year project in this area summarized in this report. Of
substantial importance in the whole, this bulletin provides a
keyhole look at the project over time. 1 table, a major list of
activities, bibliography. Bulletins 710, 713, Misc. Report
168, 140, 238, 139, Bulletins 707, RLS, 21 (6) are directly related

Costs, Returns, and Capital Requirements for Producing Potatoes in
Maine. 120 farms studied in a complete update of a 1968 effort
to determine the same goals. 24 tables, map, 3 graphs. Change was
rapid as machinery, costs, and consumer activities changed drastically
in the period. Bulletin 701 was predecessor
Bulletin No. 731 - Jack Coshtigan, Richard A. Cook, Walter G. McIntire
Nutrition Knowledge of Maine Adolescents. Concern over human nutrition
and food supplies led to this effort to survey the actual state of
knowledge among a large and important group. Nutrition tests,
questionnaires, and teacher questionnaires were used in 12
representative high school sophomore classes. 926 students
participated. Extent of knowledge fairly low. 8 tables, biblio-
graphy. The nutrition test appears in an appendix

Bulletin No. 732 - Edward S. Micka
The Competitive Position of the Maine Poultry Industry. Description
of the industry (focussing on broilers and egg production) and a
cost analysis, along with the impact of rising costs on a changing
and volatile industry are discussed. Map, 17 tables

Bulletin No. 733 - F. Richard King and Dale Nitschke
Maine's Pleasure Boat Industry, Part II., Maine Boaters. 694 boat
owners responded to a questionnaire. 19 tables summarize detailed
results on demography, some attitudes, usages, and so on. Part I
dealt with marinas in Maine in Bulletin 718

Bulletin No. 734 - Craig E. Shuler and Barry J. Kotek
Availability of Wood Residue from Processing Plants in Maine. A
survey of plants to determine feasibility of setting up tertiary
plants, such as particleboard manufacture from these residues. High
responses suggested the residue was mostly being consumed already.
This was, in part, Kotek's thesis, May, 1976. 1 graph appended

Ectomycorrhizae of Maine: A Listing of Boletaceae with the Associated
Hosts. Root fungi in the forest floor found in Maine listed and
described. 49 species located. 37 extraordinary color photographs
accompany the work

Potato Variety Trials for 1976. Includes trials conducted in Maine,
Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania,
Vermont, and West Virginia. 121 varieties in 17 tests in the areas
as this long running experimental project broadened its scope. 67
tables, 110 pages

Bulletin No. 737 - F.M. French, R.A. Becker and B.A. McGlaulfin
Evaluation of the Lower Penobscot River Area Rural Development Project.
1975 and 1976 efforts to analyze the impact of this major long
range project reported here. Questionnaire, personal interview
were the sources. The work sheets for the evaluation are given in
the appendices. Findings suggested that the quality of living was
improved in the area
Bulletin No. 738 - Homer B. Metzger and Amr A. Ismail
Costs and Returns in Lowbush Blueberry Production in Maine, 1974 Crop.
Personal interviews with 27 major producers provided the data. Large producers better off, but the amount of time produced relatively low return in funding, however, most recovered their costs at all levels. 14 tables. A follow-up to Bulletin 638, 648, 720, 723. Bulletin 351 is earlier work

Bulletin No. 739 - Louis W. Pompi and George L. Seel

Bulletin No. 740 - L.O. Safford, H.E. Young and T.W. Knight
Effect of Soil and Urea Fertilization on Foliar Nutrients and Basal Area Growth of Red Spruce. Nitrogen fertilization followed by 5 years of foliage analysis and 9 years of basal growth on 3 sites in Maine. Soil a significant parameter in all tests, as P, K and trace elements were also analyzed. The N introduction was not great nor very long lived. 19 graphs, 3 tables. Tech. Bulletin No. 63 is related

Bulletin No. 741 - Louis W. Pompi and George J. Seel
Structure, Conduct, and Performance of the Commercial Campground Industry in Maine, Part II: Industry Conduct and Performance. Bulletin 739 was Part I. This part of the research dealt with fee structure, costs, returns, advertising and similar matters. 18 tables. Useful work in the "Vacation State"

Bulletin No. 742 - Homer B. Metzger and Nicholas E. Flanders
Improving the Incomes of Small Farm Families in Coastal Maine. 30 small farm operators studied. Four different situations were discussed, and an income-maximizing linear programming model was developed. A model was established for use by other similar farm operations. 7 tables. An effort to upgrade small farmer lives and income. Bulletins 710, 713, 723 and Misc. Report 146 are related to the work. Some of this was Flanders' 1977 M.S. thesis

Bulletin No. 743 - Dennis A. Watkins, Julia M. Watkins, Sheila R. Bissonnette and Betty A. Brown
Primary Health Care and the Developmentally Disabled: An Analysis of the Normalization Principle in the State of Maine. A major paper. 128 pps. Six major areas studied within the state: general attitudes toward those served, the provision of primary care, the health status of the group, and the impact of these persons on their family. An analysis of the health system itself followed. 1179 health care providers produced data. 50 tables, bibliography, results of the open ended questionnaire in appendix
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Bulletin No. 744 - Fay Hyland, Barbara Hoisington, illustrated by Laurel Smith
The Woody Plants of Sphagnous Bogs of Northern New England and Adjacent Canada. A major botanical key with excellent illustrations. 110 pages. Dedicated to the Josselyn Society, this work is in use in many areas throughout the year.

Bulletin No. 745 - Kenneth E. Wing and Nancy E. Melniker
Evaluation of Maine's Improving Rural Homes Project. A significant appraisal of a project dedicated to improving the quality of rural life. Questionnaires, interviews resulted in the creation of a model project to be used whenever these goals were to be implemented. 33 tables. Bibliography

Bulletin No. 746 - Edward F. Johnston
Economies of Size for Maine Potato Packing Plants. Reports results of several studies on different aspects of the problem of how much, where, and cost/benefits possible in this and other industries under pressures. 11 figures, 6 tables, 10 possible models generated by computer analysis. Bulletin 566, 688, 690, 691, and 697 are related as are Misc. Reports 163 and 172

Bulletin No. 747 - William A. Mitchell, A. Frick and R.V. Rourke
Soil Potential Rating for Land Use Planning at a Local Level in the State of Maine. A detailed analysis of LeMoine township to use soil knowledge and potentials for planning bases. 6 major maps in color illustrate the potential, along with some forty tables which demonstrate the differences in potential. A major planning tool

Potato Variety Trials for 1977. Tests extended to include New Brunswick, Delaware, and Connecticut as well as those normally included. 19 locations, 101 varieties. 85 tables, 140 pages

Bulletin No. 749 - Andrew I. Chase and Harold E. Young
Pulping, Biomass, and Nutrient Studies of Woody Shrub and Shrub Sizes of Tree Species. A number of new species, some of the puckerbrush varieties, treated for potential use as pulpwood. Part of the Complete Tree Work of Young and his associates. A good bibliography of their work generally appears at pp. 13-14, many of them discussed in this work. Especially Tech. Bulls. 12, 17, 20, 27, 28, 49, 65, 71, 82, and Misc. Reports 152, RLS, 23 (10). 7 graphs, 19 tables

Bulletin No. 750 - Louis A. Ploch
Community Services in Randolph, Vassalboro and Rome, Maine. Part of Northeast regional project in 9 states. These three towns were the Maine contributions to the entire study. Bibliography

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Bulletin No. 751 - Gregory T. Holman, Fred B. Knight and Roland A. Struchtemeyer
The Effects of Mechanized Harvesting on Soil Conditions in the Spruce-Fir Region of North-Central Maine. Substantial changes in industry methods led to these studies. Adjacent clear cuts were the control areas. 7 graphs. Bibliography

Bulletin No. 752 - Homer B. Metzger
Reserve Milk Supplies of Milk Processors in Maine and Massachusetts. 42 plants studied in 1975 for data. A very large amount of these states were covered by these producers. Reserves (4-10%) varied whether the plant was serviced by producers (low) or others (higher). 14 tables

Bulletin No. 753 - February, 1979, Gurbachan Singh Kaira and Roland A. Struchtemeyer
The Uptake of Nutrients by Katahdin Potatoes as Influenced by Soil Moisture Regimes and Rates of Fertilization. Summer supplemental irrigation led to these greenhouse studies in 1969 and 1970. Moisture stress led to differing amounts in nutrient uptake increasing substantially under some conditions, and rate of fertilization. More so with nitrogen than phosphorus. Bulletin 603 is predecessor. Substantial bibliography. 42 tables

Bulletin No. 754 - Richard A. Cook, Walter G. McIntire and Rose-Marie C. Louten
Adolescent Pregnancies in Maine: A Demographic Analysis. Live births in Maine declined (as did those in the country), but adolescent pregnancies rose. All recorded births to teen-aged mothers 1972-74 analyzed by county, age of mother, birth order, subsequent pregnancies. An interesting document. 4 tables

Bulletin No. 755 - R.W. Gerry
The Effect of Forced Molting (Resting) on the Performance of Chickens Laying Brown Eggs. No real impact, and time length of no real consideration either. 21 tables. More in the general attempt to control the lives of the chickens

Bulletin No. 756 - Homer B. Metzger
Factors Affecting the Unit Costs of Milk Distribution. 21 Maine dealers studied for calendar year 1977. Unit costs vary tremendously by such factors as size of unit, size of product sold, and so on. 8 graphs, 3 tables. Misc. Report 204 related

Potato Variety Trials for 1978. The same ten areas as their most recent report. This one reports experiments (24 locations) on 104 varieties. Varietal herbicide damage reported as well. 166 pages
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Bulletin No. 758 - Harold E. Young, John H. Ribe and Donald C. Hoppe
A Biomass Study of the Thinning Potential and Productivity of Immature Forest Stands in Maine. Another significant complete tree biomass study. 205 plots studied in 1970 and 1971. 8 graphs, 9 tables.
Many related publications

Bulletin No. 759 - T.M. Mingo and J.B. Dimond
Balsam Fir (Abies balsamea (L.) Mill) Phenology in Maine. Spring phenology discussed based on studies in 1978. Multiple regression analysis models based on climate and geography developed. Generalized maps provided. 2 tables, 2 maps, 2 growth curves

Bulletin No. 760 - R. Frederick Faunce, Alan S. Kezis and Gregory K. White
Characteristics of Maine Resident and Non-Resident Hunters. 8000 questionnaires produced a fairly high rate of return. Smaller towns, less experience in hunting, instate, while out of state hunters were older from more urban areas. Locals hunted more widely by species. 20 tables, 1 map

Bulletin No. 761 - Gregory K. White and Joel D. Davis
Institutional Structures Affecting On-Site Waste Disposal in Maine. A study in water quality management, increasingly a problem in Maine and elsewhere. 3 tables, graph, major bibliography. A good analysis of factors which are part of plumbing code development

Bulletin No. 762 - Richard A. Cook, Louise A.L. Taber and Barbara E. Footer
Food Intake Patterns of Maine Adults. A study of 100 adults throughout Maine undertaken to provide a basic data supply for these nutritional studies. Year of study, 1978. Bulletins 731, 754 were related work. Bibliography, 8 tables

Bulletin No. 763 - Elizabeth Ferguson and Wallace C. Dunham
The Perceptions, Attitudes and Reaction of Maine Commercial Fishermen Regarding Extended Jurisdiction and Fishery Management Practices. An effort to determine the social impact of the extension of the 200 mile limit. Institutional changes probable, and study hopes to help mitigate them. Mail questionnaire from 251 respondents (c. 25%). 36 tables

Nitrogen Transformation and Movement in a Marine Sediment Soil Following Treatment with Varying Rates of Poultry Manure. Laboratory conditions simulating poor soils for transfer to determine movement of nitrogen. 13 tables, 4 graphs. Annual use not good from these results. Bibliography

Bulletin No. 765 - Ralph H. Griffin and James E. Johnson
Polymorphic Site Index Curves for Spruce and Balsam Fir Growing in Even-Aged Stands in Northern Maine. 55 sample plots, and height-age graphs for tallest fir and spruce measured at five year increments. Linear regressions applied to formulate site index curves for use elsewhere. Johnson's work was a M.S. thesis, Forestry. 6 tables, 4 graphs, 2 photos. Bibliography. Bulletin 676 was useful in soil analyses

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Bulletin No. 766 - Gregory K. White and Joel D. Davis
Local Implementation of State On-Site Waste Disposal Regulations in Maine. A follow-up to Bulletin 761. Sample survey of plumbing inspections in Maine. About 63% of all persons were interviewed. Plumbing code actually works as a land use device and was found to be working very well. 20 tables. Questionnaire used in appendix

Bulletin No. 767 - Gregory K. White and Marc O. Ribaude
Factors Affecting the Value of Maine's Rural Land. Ribaude's master's thesis, 1979. 95 townships and all persons who were grantees in parcels of over 5 acres were analyzed. In 1974 this was 705 transactions with 659 buyers. 42% responded to the survey. High variation was found in rural land as compared to other studies. Coefficients developed good, but with caution, because of the large number of out-of-state purchasers. 2 tables, bibliography, appendices

Bulletin No. 768 - Wallace C. Dunham and Elizabeth F. McGrath

Potato Variety Trials for 1979. Eleven areas covered with 20 major locations discussing results from 78 varieties in 33 tests. Sprouting characteristics added as a study factor. 105 tables, 156 pages

Bulletin No. 770 - Katherine O. Musgrave
Nutritional Assessment of Elementary School Children. Students in Glenburn, Maine studied in winter of 1975 and 1977. Two and three day records recovered. Group interviews, measurements were undertaken in conjunction with the tests. Nutrition education undertaken in meantime. Results tentatively very good as nutrient intake seemed to improve. Bibliography, 2 graphs, 14 tables. Appendices showing questionnaires and forms. Earlier similar studies undertaken by Mary Clayton. See Bulletin 401 and 420 in particular

Bulletin No. 771 - William R. Baron, David C. Smith, Harold W. Borns, Jr., James Fastook and Anne E. Bridges
Long-Time Series Temperature and Precipitation Records for Maine, 1808-1978. A major effort at establishing what is known about instrumental measures of climate in Maine. Station histories, bibliography, and a statement of the proposed work of climate research group affiliated with the station and the Institute for Quaternary Studies. 255 pps., many tables, many graphs

Bulletin No. 772 - Homer B. Metzger
Supermarket Milk Prices in Maine and Other States. Price analysis for 33 states, one week a month from 1975-1979. 8 graphs, 15 tables. An effort to determine efficacy of continued milk price control, among other matters. A useful work to economists then and historians now

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Bulletin No. 773 - Mark R. David and Roland A. Struchtemeyer
Effects of Spraying Sewage Effluent on Forested Land at Sugarloaf Mountain, Maine. Two year study of impact of this by-product of cleaner living measures. Disposal occurred very well and the amounts of Mg, P, K, were up as was the soil pH and the amounts of N and NaOH did not rise significantly. 9 tables, bibliography

Bulletin No. 774 - January, 1981, Steven P. Skinner
Income Variability Among Representative Egg Farms. 514 farms in Connecticut, Massachusetts and New Hampshire studied by questionnaire, budget analysis, and interview for their operations from 1967-1978. 7 tables, bibliography. 3 appendices provide information on farm budgeting, of considerable use. 8 tables

Bulletin No. 775 - Ivan J. Fernandez and Roland A. Struchtemeyer
The Influence of Potassium Fertilization on Jack Pine. Composition, Exchangeable Soil Cations, and Q/I Relations. A greenhouse experiment on K fertilization on jack pine seedlings. 7 levels of fertilizer utilized over an 8 month period. Soil texture the major force in the movement of the nutrients. Bibliography, 5 tables, 4 graphs

Bulletin No. 776 - S.D. Reiling, F.E. Montville and C.R. Facchina
Baxter State Park: A Profile of Users, Activities, and User Attitudes, 1979. An effort to obtain more detailed information about users to the park. (In 1979 54,000 persons visited the park.) Survey questionnaire prepared to derive general information and given on random days in summer. 974 were returned (about 40%). 9 tables, appendix includes copy of the questionnaire and 5 further tables about in park activities. A useful paper

Performance Evaluations of Potato Clones and Varieties in the Northeastern States, 1980. 13 areas discussed, 20 locations of variety trials, 69 varieties, tested for usual matters, as well as late blight genetics. 116 tables, 164 pages

Bulletin No. 778 - Janice L. Taylor and Stephen D. Reiling
A Comparison of Maine Open Water and Ice Fishing Activities and Participants. A spring 1980 survey of Maine anglers to determine socio-economic characteristics, and attitudes. An effort to determine impact of ice fishing on state's economy was a secondary goal. 22 tables. Useful information from a fairly large number of responses (1700+)

Bulletin No. 779 - Richard L. Homola and Miroslaw Czapowskyj
Ectomycorrhizae of Maine. 2., A Listing of Lactarius with the Associated Hosts (With Additional Information on Edibility). More on his study of forest floor fungi and their likely locations. Bulletin 735 is Part I. 40 rather extraordinary color photographs accompany the work

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Bulletin No. 780 - January, 1982, Eric J. Hansen, Amr A. Ismail and Homer B. Metzger
A Cost Analysis of Pruning Procedures in Lowbush Blueberry Production. A number of methods (straw burning, oil burning, and flail mowing - and with different methods of procedure) were tried for fields of different sizes with the results evaluated. 3 photos, 8 tables, detailed appendices dealing with exact costs. Bulletins 351, 479, 723, and Misc. Pub. 626 are related

Bulletin No. 781 - Homer B. Metzger
Costs of Transporting Packaged Dairy Products by Tractor-Trailer in the Northeast. A product of a regional study. Costs of transport along with raw milk assembly and processing are major inputs into an economic model being developed at Cornell as a result of this and related research. 29 tables, 5 graphs

Performance Evaluations of Potato Clones and Varieties in the Northeastern States, 1981. 13 areas, 33 locations, new features include nitrogen rate studies, 82 varieties, 94 tables, 114 pages

Bulletin No. 783 - Stephen D. Reiling, Cristanna M. Cook and Janice L. Taylor
Economic Impact of Ice Fishing in Maine. Part II of their study offered in Bulletin 778. 7 tables, part of this is Taylor's 1980 thesis. A useful work for planners, and enables those studying Maine to know it better

Bulletin No. 784 - Homer B. Metzger

The Effect of Nitrogen Fertilization and Seedpiece Spacing on Yield and Quality of Allagash Russet, and Potato Seedlings, AF186-5 and AF 205-9. 1980-1 effort to increase tuber size and usable yield of these varieties. Spacing requirements more clearly known and amounts of fertilization found to have stronger effects on these varieties than many others. 13 tables, 9 graphs, Bulletins 439, 490, 505, 583, 714, 769 report earlier work

Bulletin No. 786 - Edward A. Minerowicz, Debra A. Gauvin, Mobez Kagalwala, Marqueta K. Hill and Joseph M. Genco
Pulping of Budworm-Killed Balsam Fir. Test plots in Baxter Park harvested, and the wood tested for time of killing. These properties compared to live balsams for the same area. Kraft pulping experiments carried on both types. Decreased moisture, lower specific gravities and smaller chips resulted from dead trees, and to some degree this was affected by length of death. Map, 11 graphs, 12 tables, bibliography
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Bulletin No. 787 - H.B. Metzger
Impact on Producer Prices From Expanding the New England Marketing Areas Federal Milk Order to Include the State of Maine. Increases order price, but lowers local producer price fairly substantially. Hauling rates lessened, and if plant locations are modified somewhat as suggested, still some decline (56¢ per CWT) would result. 12 tables

Performance Evaluations of Potato Clones and Varieties in the Northeastern States, 1982. Thirteen areas, 24 locations, 90 varieties or clones tested in usual ways. Varietal herbicidal damage also discussed. 101 tables, 171 pages

Bulletin No. 789 - November, 1982, Steven P. Skinner, Brenda S. Bridges, Stephen D. Reiling and Dennis A. Watkins
A Breakeven Analysis of Two Rural Health Maintenance Organizational Models. Individual practice and satellite health clinics compared as to use, economics, and other features. 11 tables, 3 figures. Appendices state assumptions of each plan

Effects of the Symbex System on Yield, Quality, Tuber Size and Distribution of Katahdin Potatoes Maine 1979-81. Application of a microbial soil inoculant in an effort to improve yield and quality of these tubers studied for a three year period in northern Maine. The product, and its attendant system of application did not prove to be of use in northern Maine soils and on this variety. Other possibilities for research are suggested. Bibliography, 19 tables, 32 pages. Bulletin 583 is related

Bulletin No. 791 - T.B. Saviello and R.A. Struchtemeyer
Soil and Topographic Features That Help Predict the Manageability of Sugarloaf Mountain. An effort to analyze soils both above and below the 765 meter contour, crucial for land management. Major soil factors analyzed and reported. 4 tables, bibliography

Bulletin No. 792 - John B. Paton and Barbara A. Barton
The Development of the Ability to Select for Increased Milk Production: The Jersey Cow in Maine, 1900-1984. Originally a History Ph.D. (UMO). Traces the changes in ideas as genetic science improved state of knowledge, especially in this breed. Good statement of current Jersey situation in the state included. 5 plates, 5 tables, 4 maps, select bibliography, 103 pages. Related to Bulletins 267, 281, 306, 461, 530

Bulletin No. 793 - Stephen D. Reiling and Mark W. Anderson
Estimation of the Cost of Providing Publicly-Supported Outdoor Recreational Facilities in Maine. A multi-unit effort to analyze these increasing costs, and possible sources for funding. Jointly administered by the Department of Agricultural and Resource Economics, and the Northeast Forest Experiment Station, Durham, NH. Analysis focussed on a few smaller sites, and major work done on Baxter State
Bulletin No. 794 - Richard A. Cook, Martha Henson Burns, Louise A.L. Taber and Barbara E. Footer
Weight Characteristics of Maine Adults. Develops county tables, weighted means, for local use as obesity becomes more and more of a national problem. 100 individuals, random selection, 50 males, 50 females from each county were the study group. 4 tables. A related bulletin is 762

Bulletin No. 795 - Neil C. Buitenhuys and Alan S. Kezis
Production, Marketing, Socioeconomic Characteristics and the Perceived Needs of Maine's Small Farmers. An inventory of small scale farming was developed and analyzed to produce the results. All aspects of this life analyzed. A valuable tool as Maine farming practices continued to undergo substantial change. 36 tables

A Comparison of Direct Market User and Nonuser Habits, Acceptance, and Preferences for Direct Marketed Small Farms Horticultural Commodities. An effort to assess direct markets as a source for fruit and vegetables. Good and bad qualities of these markets, and retail stores were determined. Bulletins 795, 797 part of the same study. 17 tables

Bulletin No. 797 - Neil C. Buitenhuys, Alan S. Kezis and Howard W. Kerr, Jr.
Consumer Purchasing Habits, Acceptance, and Preferences for Direct Marketed Small Farms Horticultural Commodities in Maine. Distances traveled, use of advertising media, as well as types of produce, along with such other considerations as quality, and price were assessed. Recommendations offered for increasing such direct market sales. 71 tables, 64 pages. Taken together these three publications make a substantial contribution to understanding Maine agriculture

Bulletin No. 798 - Raymond J. Nowak, Edward F. Johnston and Alan S. Kezis
Census of Maine Potato Production and Storage Facilities. The specific data shown in graphic form in M.R. 293

Bulletin No. 799 - Paul R. Hepler, Lauren H. Long and John A. Ferwerda.
Field Appraisal of Resource Management Systems FARMS Crop Yield and Quality Relationships with Soil Erosion, 1980. Cooperative publication with Soil Conservation Service, USDA. 2400 plots sampled and tested for three years for crop management, soils, conservation practices and management, crop yields, soil chemistry, and some sociological data. This report provides data on the 800 plots
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sampled in 1980. Relationships of erosion, especially in Caribou soils, established to actual potato yields. 11 tables, 4 figures, bibliography. Such multi-variate systems of potential significance, especially where row crops are impacted severely by soil erosion

Bulletin No. 800 - Benjamin F. Hoffman, Jr.
Manual Thinning of Northeastern Species Using Conventional Cutting Methods. Early thinning using these methods most cost effective. Time-study research. 5 tables, 4 photos


Bulletin No. 802 - Bret P. Vicary, Thomas B. Brann and Ralph H. Griffin Base-Age Invariant Polymorphic Site Index Curves for Even-Aged Spruce Fir Stands in Maine. Follow-up to Bulletin 765

Bulletin No. 803 - Tom C.S. Yang The Effects of Juice Extraction Methods on the Quality of Low-Calorie Blueberry Jellies. Tests of cold-extraction, hot-extraction, and enzyme-extraction on yields, viscosity, and color when used to manufacture low calorie jellies. 2 tables


Bulletin No. 806 - H.J. Murphy, L.S. Morrow, et al. (fifteen other authors) Performance Evaluations of Potato Clones and Varieties in the Northeastern States 1984. Fifteen sites in the 1984 year. Adverse climatic conditions inhibited some tests which will be replicated in 1985. 87 varieties and clones tested for a dozen characteristics, including storage, at 32 locations. 105 tables, 171 pages

Bulletin No. 807 - 1985, George K. Criner and Russell C. Parker A Study of the Maine Lamb Industry. A new look at this recently refurbished industry in Maine. Primarily deals with economics and feasibility. 3 maps, 18 tables including data on slaughter costs, meat production, as well as other related items. Bibliography

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These bulletins were begun in 1962 to satisfy two needs. The first was to allow very technical scientific material to be made available to those who needed the information, but who might miss or delay seeing it in more formal publications. The second reason came about in an attempt to standardize methodology somewhat. All technical bulletins are written, where appropriate, in the metric system. These bulletins have provided strong science in the more than twenty years the series has been underway. However, it is interesting that they have generally increased in both size and technical usage since their first appearance. An annotation similar to those for regular bulletins follows.

Technical Bulletin No. 1 - May, 1962, Frederick Radke, Mary E. Norburg and Eileen K. Gabrielson
Effect of Dietary Protein and Fat on the Deposition of C\textsubscript{14} from Rhodospirillum rubrum in Rats Conditioned to a Low-Protein-Fat Free Diet. Study to determine fate of radioactive materials on rats deficient in essential fatty acid. 9 tables

Technical Bulletin No. 2 - Walter J. Grant and Eliot Epstein
Physical Properties and Moisture Relationships of Some Representative Maine Soil Types. 51 soil profiles on croplands in Maine studied to determine water holding capacities. Computer analysis produced scatter diagrams (7). Tables of soil analysis appended

Technical Bulletin No. 3 - Harold W. Gausman
Studies Concerning Effects of Chloride and Potassium on the Nutrition of Potato Plants, Solanum tuberosum. 8 tables, 11 figures showing changes in organic chemistry in this plant. Establishes essentiality of chloride in plant nutrition. Important bulletin. Bibliography, 7 tables in appendix as well. See Misc. Report No. 87 for a photo of chloride starved potato plant

Technical Bulletin No. 4 - Charles P. Alexander
The Crane Flies of Maine. A standard distribution bulletin, analyzing work begun in 1913 and associated with work from 1907. Much collection done by A.E. Brower as well in 1930s. Description of these insects definitively done by the leading expert on them

Technical Bulletin No. 5 - February, 1963, Harold W. Gausman and George O. Estes
Effects of Factorially Combined Levels of Sulphur and Magnesium on Potato Plants (Solanum tuberosum). Greenhouse work 1958 to 1962. Reported on growth, quality and chemical composition of white potato where S and Mg added to soils. 27 tables. Literature cited

Technical Bulletin No. 6 - W.A. Shands, Geddes W. Simpson and I.M. Hall
Importance of Entomogenous Fungi in Controlling Aphids on Potatoes in Northeastern Maine. Long term studies, with this part focussing 1951-1962, on epizootics of aphids, noticed as early as 1907 by Patch. 6 tables, 10 graphs and 1 color photo. Diagnosis of diseased aphids led to establishing these important ecological relationships. A significant bulletin. Literature cited

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Technical Bulletin No. 7 - February, 1964, Thomas J. Corcoran
Scheduling of Pallet Trucks in Pulpwood Operations. Using linear
analysis programming, develops programs of schedules to maximize
truck use, and eliminate down time. Significant operational
research contribution. 6 tables, 4 photos. Useful appendix on
methodology.

Technical Bulletin No. 8 - Lois S. McDaniel, Helen A. Dempsey and Harold
L. Chute
Enzyme Levels in Birds. Work begun in 1957 on chickens to determine
effect of blood enzymes in particular on metabolism. 8 tables of

Technical Bulletin No. 9 - H.L. Chute, D.C. O'Meara, D.B. Reardon and
H.T. Wheelwright
Newcastle Disease Virus Activity and Volume of Amniotic Allantoic
Fluid in Chicken Embryo From Flocks with Different Vaccination
Histories. To determine results of vaccination on hens and impact
on their eggs. Detailed analysis undertaken. 4 tables, 2 histograms
of results.

Technical Bulletin No. 10 - Thomas J. Corcoran, Henry A. Plummer and
Roger F. Taylor
A Comparison of Arch-yarding and Ground-Skidding of Pine Sawlogs in
the University of Maine Forest. Two years of study of such factors
as the physical conditions, unloading, time of trip, etc. 3 photos,
1 chart, 3 tables.

Technical Bulletin No. 11 - Harold W. Gausman and David C. Frost
Speculation on Recovery of Rubidum-86 From Clays. Theoretical effort
to deal with ionization changes in solution.

Technical Bulletin No. 12 - Harold E. Young, Lois Strand and Russell
Altenberger
Preliminary Fresh and Dry Weight Tables for Seven Tree Species in
Maine. White birch, red spruce, balsam fir, aspen, hemlock, white
pine, red maple. Complete Tree work, the computation done at Univ.
of Oslo (see Oslo series for further reference).

Technical Bulletin No. 13 - David P. Olson
The Use of Aerial Photography in Studies of Marsh Vegetation.
Developing technology for difficult area to traverse - here
Merrymeeting Bay, Maine. 1 map, 2 photos, 2 graphs, 10 tables,
good literature, bibliography. Detailed appendices on methodology,
16 photos.

Technical Bulletin No. 14 - Stephen S. Hardy and George W. Weiland III
Weight as a Basis for the Purchase of Pulpwood in Maine. Spruce, fir
(1st author); Hardwoods (2nd author). Treated by new computational
methods to maximize use, efficiency. 15 tables, 6 graphs, a superior
bibliography on this subject. Detailed appendices showing variant
factors in this practice.
Technical Bulletin No. 15 - 1965
The Standardization of Symbols in Forest Mensuration. Originally published in 1959 by International Union of Forestry Research organization, (IUFRO) after adoption at Oxford in 1956 at International meeting. Published in English, German, and French. A standard work made available to world users.

Technical Bulletin No. 16 - Frederick H. Radke, Herman DeHaas and Sally C. Jacobs
The Effect of Stress on the Formation of Tissue Lipid from Dietary Protein. A spin-off from desires to learn about effect of space travel. 1 photo, 1 graph, 9 tables.

Technical Bulletin No. 17 - Harold E. Young and Andrew J. Chase
Fibre Weight and Pulping Characteristics of the Logging Residue of Seven Tree Species in Maine. Young did weight and Chase the pulp studies. More of the Complete Tree efforts - interim studies. 1 sketch, 30 tables, literature.

Technical Bulletin No. 18 - Leigh E. Hoar, Jr. and Harold E. Young
Mensuration Methods for Site Classification of Shade Tolerant Tree Species. 3 figures, 7 tables. More leading to Complete Tree concept.

Technical Bulletin No. 19 - W.A. Shands, Geddes W. Simpson, C.F.W. Muesebeck and H.E. Wave
Parasites of Potato - Infesting Aphids in Northeastern Maine. USDA/MAES joint work. Parasites located, reared, and described. Work begun in 1941 with emphasis 1952 to publication. 7 graphs, 15 tables, bibliography - life histories of the parasites. A major publication.

Technical Bulletin No. 20 - Harold E. Young, Paul N. Carpenter and Russell A. Altenberger
Preliminary Tables of Some Chemical Elements in Seven Tree Species in Maine. 12 elements in the 7 species being studied in the Complete Tree work.

Technical Bulletin No. 21 - February, 1966, Frederick H. Radke, Herman DeHaas, Eileen K. Gabrielson and Mary E. Norburg
Relationship of Proteins, Essential Fatty Acids and Cholesterol in the Rat and the Mouse. Further in a series of metabolism studies especially with regard to levels of cholesterol in the blood. 23 tables, literature.

Technical Bulletin No. 22 - Eliot Epstein and Walter J. Grant
Design, Construction, and Calibration of a Laboratory Rainfall Simulator. USDA/MAES cooperative publication. Created to shorten the time on erosion studies, this device also studies soil characteristics related to erodibility. 4 tables, 2 photos, 2 graphs, bibliography.
Technical Bulletin No. 23 - David C. Frost and Harold W. Gausman
Studies Concerning the Retention of Organic Materials by Clays.
Research useful in determining absorption and fixation of plant
nutrients. Rb-86 was the prime element used in determining S-35
and C-14 in bean plants. 3 photos, graph, 16 tables, bibliography.
Tech. Bulletin 11 and RLS 2 are related

Technical Bulletin No. 24 - R.L. Blickle and W.J. Morse
The Caddisflies (Trichoptera) of Maine Excepting the Family
Hydroptilidae. Light trap collections, summer 1959, provided the
means of this distribution study. Bibliography

Technical Bulletin No. 25 - January, 1967, Ernest B. Harvey, III and
Thomas J. Corcoran
The Effect of Stand Factors on the Productivity of Wheeled Skidders
in Eastern Maine. Part of this was Harvey's M.S. Forestry thesis.
An effort to assess the value of the new machines just then making
their way into pulpwood harvesting. 2 maps, 8 graphs, 5 tables,
computer simulations (manual of operations)

Technical Bulletin No. 26 - L.W. Boulanger, G.W. Wood, E.A. Osgood and
C.O. Dirks
Native Bees Associated with the Low-Bush Blueberry in Maine and
Eastern Canada. Joint publication of MAES and CARS, Fredericton.
The acts of cultivation had lowered the numbers of bees, necessary
for pollination. Study, 1961-5, collected 89 species. These are
listed and classified. Some physiological determination of the
bees was noted. Cultural practices to enhance the bee population
were suggested. Bulletin 356 is related

Fresh and Dry Weight, Nutrient Elements and Pulping Characteristics
of Northern White Cedar (Thuja occidentalis). Another of the
complete tree studies. Tech. Bulletins 12, 17, 20 are predecessor
work. 10 tables, 7 graphs

Technical Bulletin No. 28 - Harold E. Young and Paul M. Carpenter
Weight, Nutrient Element and Productivity Studies of Seedlings and
 Saplings of Eight Tree Species in Natural Ecosystems. More
complete tree work. 13 tables, bibliography. TB 14, 12, 17, 20,
27 are predecessor work as is Bulletin 581. Species treated are
red spruce, balsam fir, hemlock, white pine, northern white cedar,
white birch, red maple, and aspen

Technical Bulletin No. 29 - February, 1968, R.V. Rourke and C. Beek
Soil, Water, Chemical and Physical Characteristics of Eight Soil
Series in Maine. 8 soil series, sampled at five locations each,
tested for organic carbon, moisture retention, water movement,
particle size distribution, volume of coarse fragments, bulk
density, soil reaction, exchangeable bases, and exchangeable acidity.
80 pps of appendices give the precise data
Technical Bulletin No. 30 - P.N. Carpenter, Alice Ellis, Harold E. Young and Thomas E. Byther
A Critical Evaluation of Results from Spectrographic Analysis of Plant Tissue. 7 species analyzed to 11 elements in this study. The statistical analysis was to determine the precision that could be expected of such analyses. 3 tables, TB 20 is predecessor work

Technical Bulletin No. 31 - Frederick E. Hutchinson
The Chemical Properties of Seven Agricultural Soil Series and Their Relationship to Soil Fertility. Detailed analyses of 7 series (10 sites each). Trace elements as well as standard agricultural elements analyzed in relationship to general fertility. 1 photo, 11 tables, 9 graphs, list of literature

Technical Bulletin No. 32 - Kenneth G. Stratton and Roland A. Struchtemeyer
Evaluation of Soil Sites for White Pine in Maine. Sites (58) surveyed in 1962 and 1963. Map, 7 tables, Bulletin 625 is of interest. The white pine weevil was one of the reasons for this study, in a hope to locate areas which were not supportive of weevils, but which would grow white pine

Technical Bulletin No. 33 - Herman DeHaas and Ellen H. Morse (21 other contributing authors) Northeast Regional Research Publication
Utilization of Amino Acids from Protein: Manual of Procedures. Specific rigorous plans for examination for work on amino acids with rats, pigs, and tetrahymena, to be compared with work on humans laid out here. 16 tables, appendix deals with human subjects

Technical Bulletin No. 34 - February, 1969, R.V. Rourke and C. Beek
Chemical and Physical Properties of the Charlton, Sutton, Paxton and Woodbridge Soil Series. Each site studied for five locations. All sites in Kennebec County, Maine. 11 graphs, 5 tables, bibliography. TB 2, 29, 31, 32, Misc. Publication, No. 667, 676 are related. Appendices list results in 49 pages of tables

Technical Bulletin No. 35 - J.G. Bockheim and R.A. Struchtemeyer
Alpine Soils on Saddleback Mountain, Maine. Bockheim's part was his M.S. in Agronomy. Field work occurred from July, 1966 to October, 1967 on these high sites. Climate data used in the work. 5 photos, 4 tables. Bibliography. Useful publication

Technical Bulletin No. 36 - J. Grueter
Economic Analysis of Camping-Oriented Recreation Firms, Part I, Simulation of a Recreation Firm, Flow Chart and Computer Program. A very strong computer simulation effort at the beginnings of such work in Agricultural Resource Economics. 232 pps. Bulletin 617 and TB 37 are related
Technical Bulletin No. 37 - J. Grueter
Economic Analysis of Camping-Oriented Firms, Part II, Manual for Maine Outdoor Recreation Firm Simulation. Part III was Bulletin 686. This manual was a form for collecting the appropriate data to be used in TB No. 37's program. The three parts, taken together, illustrated the powerful capabilities of the computer at a time when they were not much used as yet.

Technical Bulletin No. 38 - Frederick H. Radke, Herman DeHaas and Richard A. Cook
Utilization of Amino Acids from Protein by the Growing Rat, Efficiency of Carcass Protein Formation. Three different diets administered to growing rats for nitrogen study research. 5 tables, bibliography. TB 33 is the manual of research.

Technical Bulletin No. 39 - W.A. Shands, Geddes W. Simpson, and H.E. Wave
Canada Plum, Prunus nigra Alton, as A Primary Host of the Green Peach Aphid, Myzus persicae (Sulzer), in Northeastern Maine. USDA/MAEs cooperative publication. This is a well written work covering many years of study of the life history of this aphid, especially related to the phenology and chronology of the plant hosts. 2 photos, 4 graphs, 10 tables. Uses data from 1941 to 1966 to draw its conclusions. Bulletins 323, 391 predecessors.

Technical Bulletin No. 40 - Frederick H. Radke, Herman DeHaas and Eileen K. Gabrielson
Effect of Dietary Changes on the Tissue Composition of Rats. Rats were fed two proteins and two fats at different concentrations. Complete results reported on body parts after the experiment. 13 tables. TBs 1, 16, 21 are related work. Strong science, especially useful in areas such as cholesterol levels.

The Potential of Lignin Research. Essentially a detailed bibliographic and analytical guide to known research on the properties of a lignin. A call for future work is outlined. A strong detailed bibliography. A useful paper.

Technical Bulletin No. 42 - Elizabeth S. Barden, H.L. Chute, D.C. O'Meara and Hilda T. Wheelwright
The Mycotoxic Effects of Fungi Isolated from Poultry Feed Ingredients: The Response of Ducklings and Performance of Commercial Broiler Chickens Fed Experimentally Infected Corn Diets. Ph.D. dissertation for Barden. Ducklings more susceptible than chickens to these toxic diets, although in none of these cases were the pathologies fatal. Useful in understanding of these diets, and their possibilities fed in large amounts. Bibliography, 9 photos, 6 graphs, 2 tables.

Technical Bulletin No. 43 - R.H. Storch
Field Recognition of the Larvae of Native Coccinellidae Common to the Potato Fields of Aroostook County. A formal analysis of ladybug larvae, recognition characteristics, color patterns and other matters. 4 plates. Ladybugs prey on aphids, and thus are very beneficial in potato fields.
Technical Bulletin No. 44 - Louis Van Der Heide
The Fluorescent Antibody Techniques in the Diagnosis of Avian Encephalomyelitis. A continuation of the remarkable work in eradicating and controlling poultry diseases in this Maine industry. The disease under study had been especially recalcitrant and the study reports experiments leading to control. 15 photos, 15 tables, 2 graphs, a major bibliography. A substantial publication. 80 pps

Technical Bulletin No. 45 - Norman P. Kutscha and L.L. Emery
Foreign Woods Utilized in Maine - 1969. 114 firms responded to a questionnaire as to their use, now or future, in specialty foreign woods. Results tabulated and analyzed. 20 species in some substantial use, mostly in boatbuilding. 5 photos, detailed description of woods in use, bibliography. 65 pps. A useful publication

Technical Bulletin No. 46 - April, 1971, R.S. Shumway, N.P. Kutscha and J.E. Shottafer
The Relationship of Fibril Angle to Certain Factors in Plantation-grown Red Spruce. Orientation of the cell structure materially affects strengths. A controlled plantation (since 1920) in the University of Maine forest analyzed under close microscopic control. 4 photos, 5 tables. Latewood growth still significant in determining this feature. Bulletin 668 is related. Part of this is Shumway's M.S. thesis

Technical Bulletin No. 47 - R.V. Rourke and C. Beek
Chemical and Physical Properties of the Allagash, Herman, Howland and Marlow Soil Mapping Units. More detailed studies on such matters as soil percolation, elemental chemistry, particle size and cation exchange capacity for land management and highway engineering persons who need these detailed data. 10 graphs, 45 tables of detail in appendix. TB 2, 29, 31, 32, 34, and Misc. Pub. 667 are related. More in their series of work in this area

Technical Bulletin No. 48 - Stanley E. Malcolm
The Water Beetles of Maine: Including the Families Gyrinidae, Haliplidae, Dytiscidae, Noteridae, and Hydrophilidae. A detailed analysis of species of these families in Maine. The first significant effort to give a listing and field key, and as such a major work. Graduate work in Entomology. 11 plates, substantial bibliography

Technical Bulletin No. 49 - Andrew J. Chase, Fay Hyland and Harold E. Young
Puckerbrush Pulping Studies. Six species of weed trees or shrubs native to Maine analyzed as sources of pulp fiber. Sulphate treatment, and bleaching studies undertaken. More on Biomass, complete tree work, and potentially a major contribution, 33 figures, 13 tables, bibliography. 35 tables in appendix on pulping strengths and related matters
Technical Bulletin No. 50 - Joseph Lerner
Intestinal Absorption of Amino Acids in Vitro With Special Reference to the Chicken: A Review of Recent Findings and Methodological Approaches in Distinguishing Transport Systems. A review of literature and analysis of findings, which led eventually to his major book published by the station. See below. Bibliography

Technical Bulletin No. 51 - W.A. Shands and Geddes W. Simpson
Seasonal History of the Buckthorn Aphid and Suitability of Alder-Leaved Buckthorn as a Primary Host in Northeastern Maine. The buckthorn aphid is a carrier of potato diseases. This study (1942-1969) discusses aspects of the life history of the relationship to the host plants. Essentially a phenology phenomena of this insect. 4 tables, 3 graphs, 1 photo. Related to Bulletins 202, 317, 323, 393, 403, 480, 533, and TB 39, 52

Technical Bulletin No. 52 - January, 1972, W.A. Shands, Geddes W. Simpson, and H.E. Wave
Seasonal Population Trends and Productiveness of the Potato Aphid on Swamp Rose in Northeastern Maine. Another of the aphids infesting potatoes and acting as a vector of potato diseases. Discussed in detail, its life histories and host plant relationships. The research reports work from 1942 to 1969, and with its predecessor bulletin (TB 51) is a major contribution. 5 photos, 5 graphs, 7 tables. Bibliography. Related to Bulletins 233, 242, 282, 292, 303, 323, 393, 403, 480, 533, TB 6, 19

Technical Bulletin No. 53 - Norman P. Kutscha and James R. Gray
The Suitability of Certain Stains for Studying Lignification of Balsam Fir, (Abies balsamea (L.) Mill.). Ten major stains tried in detail to determine which provided the best results for further experimental analysis. Detailed accounts of methodology. 10 color microphotographs. Bibliography. Part of this is Gray's M.S. thesis. Appendices show stain schedules, evaluative criteria, and the suitability charts

Technical Bulletin No. 54 - W.A. Shands, Geddes W. Simpson, H.E. Wave and C.C. Gordon
Importance of Arthropod Predators in Controlling Aphids on Potatoes in Northeastern Maine. Cooperative publication of USDA/MAES. Summarizes studies from 1942-1969 on the biological agents (arthropods in this case) predating on and controlling the aphid population. 10 tables, annual graphs of population. Bibliography. Relates to Bulletins 253, 263, 480, and TBs 6, 19. Excellent summary of extensive work

Technical Bulletin No. 55 - W.L. Vaundell and R.H. Storch
Food Lists of Hippodamia (Coleoptera: Coccinellidae). Part of this is Vaundell's M.S. thesis. The reason for the research is the relationships of lady beetles and aphids. Very extensive bibliography
Technical Bulletin No. 56 - W.A. Shands, Geddes W. Simpson, Barbara A. Seaman, F.S. Roberts and Carl M. Flynn
Effects of Differing Abundance Levels of Aphids and of Certain Virus Diseases Upon Yield and Virus Disease Spread in Potatoes. Cooperative Publications MAES/USDA. An eight year study, 1944-1953, was made of all season levels of aphid infestation and virus reservoirs upon tuber yields, as well as the spread of various diseases and viruses on the main potato varieties in Maine. 8 tables, 10 graphs, bibliography. More of their remarkable summary work. Bulletins 297, 312, 330, 360, 363, 391, 397, 400, 403, 480, 487, 533. TB 16, 19, 39, 51, 52, 58, 60, are related

Technical Bulletin No. 57 - W.A. Shands, Geddes W. Simpson and H.J. Murphy
Effects of Cultural Methods for Controlling Aphids on Potatoes in Northeastern Maine. Control of aphids had become an integral part of good cultural management. This paper summarizes work from 1954-8 which attempted to delay plant emergence and thus control spring migrations of aphids. Planting dates very important for table stock, but may not be applicable for seed stock. 4 tables, 5 graphs, bibliography. Bulletins 292, 297, 363, 397, 400, 403, 421, 480, 533, Tech. Bulls. 51, 52, 56 are related work

Further Evaluation of Entomogenous Fungi as a Biological Agent of Aphid Control in Northeastern Maine. Epizootics on aphids, and their causes treated in more detail than earlier work. Work since 1962 through 1969 explicated here. 9 tables, 5 graphs. Taken all together, these bulletins summarizing work as senior authors retired, are of major scientific importance. TB 6, 19, 52, 54, 56. Also see Shands and Simpson's 1959, 1962 articles in Journal Econ. Entomology

Soil Characteristics of Nesting Sites of Solitary Bees Associated with the Low-Bush Blueberry in Maine. Follow-up work to that of Phipps and Boulanger of these pollinating agents and their ecology. 2 tables. An important publication. Bulletin 356, and TB 26 are predecessor work

Technical Bulletin No. 60 - W.A. Shands, Geddes W. Simpson, and Corinne C. Gordon
Survey of Internal Parasites of Potato-Infesting Aphids in Northeastern Maine, 1963 Through 1969. Results of the annual surveys, and weekly counts by species 1963-1969. Parasites listed by aphid host species. 5 tables, 1 graph. Bulletins 480, TBs 6, 19, 54 associated work

Technical Bulletin No. 61 - James C. Shottafer, Norman Kutscha and Richard Hale
Properties of Plantation Grown Red Pine Related to its Utilization. A follow-up to Gregory Baker work of the early forties. Middle aged trees were analyzed for such matters as radial position of wood, location in plantation, and height, as compared to other sites. A pulping study was conducted in tandem, as was a dry kiln study on
this species. 33 tables, 2 photos, 9 graphs, substantial bibliography. A significant publication. Bulletin 685, and TB 47 are related. 72 pages

Technical Bulletin No. 62 - Norman Kutscha and Raymond R. McOrmond
The Suitability of Using Fluorescence Microscopy for Studying Lignification in Balsam Fir. Primary fluorescence and secondary fluorescence attempted as use in this study. Advantages and disadvantages of each method assessed. 5 microphotographs, bibliography

Variations in Foliar Nutrient Concentrations in Red Spruce. N, P, K, Ca, Mg and other nutrients analyzed for variability in foliar concentrations for four Maine sites. Results useful for determining fertilization levels necessary for plantations. Map, 7 tables. TB 28 and RLS, April, 1968 report earlier work

Technical Bulletin No. 64 - M.T. Hilborn and W.C. Stiles
Low Temperature Injury to Apple Trees in Maine. Summarizes historical evidence for winter kill especially 1933-4 in Maine. Reports hardy stock planting efforts, especially the Patten (Maine) efforts post 1933-4. Artificial freezing studies undertaken and also reported as to effect on various stocks, and their development. 7 photos, 8 tables, bibliography. Bulletins 89, 388, 405, predecessor work. Good climate content, especially bibliography

Technical Bulletin No. 65 - Andrew J. Chase, Fay Hyland and Harold E. Young
The Commercial Use of Puckerbrush Pulp. Pulp and paper studies on these weed species. Various mixtures and types of pulp tried and reported in this work. 17 tables. Complete Tree Work. TB 17, 49, and Misc. Report 132 are related

A List of the Lepidoptera of Maine - Part I, The Macrolepidoptera. A result of fifty years of work in Maine, and filling an enormous need for scientists and others interested in the state's ecological status. Lists citations, sightings, and other descriptions as well as earlier lists. TB 109 is first section of Part II. Map, index, bibliography. Bulletins 356, 380 related earlier work. An important work.

Technical Bulletin No. 67 - Craig E. Shuler
Pilot Study of the Use of Pulpwood Chipping Residue for Producing Particleboard in Maine. Need for more complete utilization of a much used resource led to this and its related studies. Photo, 2 tables, schematic, 4 graphs. Other studies cited in bibliography
Technical Bulletin No. 68 - John B. Dimond
Sequential Surveys for the Pine Leaf Chermid, Pineus pinifolii. A procedure is described for classifying damage to white pine by this insect, and field procedures for measurement are described. Some methods of prediction are outlined. 5 tables. Bulletins 173, 658 related

Technical Bulletin No. 69 - Eliot Epstein
Variability of Drought in the Northeast. USDA/MAES joint work. 8 graphs, 4 photos, 4 maps, 1 schematic. An effort to analyze regional drought patterns, and some effort to analyze their impact on plants, especially potato varieties. Climate impact, which led eventually to establishing a major northeast research group. Bulletin 771 and TB 107 are closely related work. An important publication

Technical Bulletin No. 70 - Amr A. Ismail and Walter J. Kender
Physical and Chemical Changes Associated with the Development of the Lowbush Blueberry Fruit Vaccinium angustifolium (Ait.) Growth curves, changes in structure, especially acidity and pH over time. Three major phases were isolated. 3 graphs, 3 tables, bibliography

Technical Bulletin No. 71 - Fay Hyland
Fiber Analysis and Distribution in the Leaves, Juvenile Stems and Roots of Ten Maine Trees and Shrubs. Substantial contribution to complete tree work. All parts of the plant studied with microscope to provide these data presented in 10 figures, 10 tables in text, as well as in discussion. 6 plates of microphotographs of cell structure in appendix. TB 49, 65 related work

Technical Bulletin No. 72 - Howard C. Dickey
Selection for Type and Milk Production in Dairy Cattle. Modern analysis of genetic experimentation in dairy breeds. Follow-up to his work, as well as that of Gowen and Pearl explicated earlier. Various breeds studied. 11 tables, 1 graph. Useful modern bibliography

Technical Bulletin No. 73 - James E. Shottafer and Craig E. Shuler
Estimating Heat Consumption in Kiln Drying Lumber. Costs of artificial drying assessed as energy costs began to rise. An element in a short course offered at UMO. 4 graphs. One method of achieving results laid out nicely

Eastern Spruce Flakeboard Resin Distribution and Decorative Panel Design. The development of a resin spray to determine strength efficacy as well as esthetic results. 7 color photographs, 2 tables, part of this was Kelly's M.S. thesis
Technical Bulletin No. 75 - R.V. Rourke and R. Bangs
Chemical and Physical Properties of the Bangor, Dixmont, Caribou, Conant, Perham and Daigle Soil Mapping Units. Specific information for these six soils (5 analyses each) provided to soils engineers, urban developers, watershed managers, and other soil users. One of a series. 102 pages of detailed tabular information provided.

Production of Entomophthora Resting Spores for Biological Control of Aphids. Although attempted many times before, this paper provides a method whereby these spores can be utilized when needed for aphid control, 8 photos (many of them microphotographs) 1 table, bibliography. Potentially very useful publication.

Technical Bulletin No. 77
Paths Out of Poverty: Research in the Northeast. A compendium publication reported a major regional research effort. 10 major articles. The Maine article, and the general summary by Louis A. Ploch. An important 132 page publication. Appendix lists working papers, and theses relating to the project.

Technical Bulletin No. 78 - Sanford D. Schenmmitz
Food Habits and Body Measurements of Mourning Doves in Southwestern Maine. Reports results of crops analyzed at Fryeburg site with this species. Heavy use of conifer seeds reported. Sex ratio distorted to males, and birds reported longer than southern specimens. 3 graphs, table.

Technical Bulletin No. 79 - May, 1976, Homer Metzger and Fred Webster
The Economic Impact of the Federal Milk Order into Northern New England. Changes in blend prices predicted, but not enough to counter added transport costs. Part of a regional study. Basically a negative impact expected. 49 plants, and nearly 1000 shippers analyzed responded to questionnaires. Map, graph, 41 tables.

Technical Bulletin No. 80 - G.P. Hosking, N.P. Kutscha, and F.B. Knight
Scanning Electron Microscopy of Insects: Techniques for the Novice. As electron microscopy became more prevalent, a need to provide instruction for related sciences was met by this paper. Part of TB 81 which reported other results. 7 microphotographs.

Technical Bulletin No. 81 - G.P. Hosking and F.B. Knight
Investigations of the Life History and Habits of Pityokteines sparsus (Coleoptera: Scolytidae). This insect inhabits dead and dying balsam firs. The study reports mating, overwintering, flight, and feeding habits. Microclimate effects on development and flight depend on temperature. Food related to nitrogen quantity present. A 2½ year study by a New Zealand visitor. 6 photos, 6 graphs, 6 tables, bibliography.
Technical Bulletin No. 82 - Andrew J. Chase and Harold E. Young
The Potential of Softwood Thinnings and Standing Dead Softwoods as a Source of Wood Pulp. A complete tree project reported. Kraft process used with fairly good results. 9 tables, 10 graphs, 11 pages of appendices in tables. TB 17, 49, 65 earlier related work

Insecticidal Control of Potato Infesting Aphids in Northeastern Maine. A number of insecticides tried and reported on the variable aphid populations of 1970-2. Results reported in this useful work. 6 tables, 27 graphs

Technical Bulletin No. 84 - J.P. Linnane and E.A. Osgood
Controlling the Saratoga Spittlebug in Young Red Pine Plantations by Removal of Alternate Hosts. A significant pest controlled by the methods examined, outlined, and reported here. 6 tables, 1 graph

A New Potato Scab Problem in Maine. Scab, thought to be related to nonacid soils, found, after 1970, to be occurring in acidic soils in Maine. History of this development is summarized with experiments in control as well. 5 photos. 8 tables. Bibliography. Seed treatments suggested

Technical Bulletin No. 86 - Stewart I. Fefer
Waterfowl Populations as Related to Habitat Changes in Bog Wetlands of the Moosehorn National Wildlife Refuge. Marsh management study on federal wetlands reported for population, relationship to censuses for past thirty years, and analyzes vegetative and other changes in that time. Map, 6 graphs

Technical Bulletin No. 87 - Nicholas A. Flanders and Homer B. Metzger
Delivery Costs Per Package on Wholesale Milk Routes: A Comparison of Two Methods of Cost Allocation. Labor units, and case units studied. 14 time studies, and financial data from 14 processor distributors utilized. Regression analysis using computer. 13 tables. 6 tables in appendix as well. Misc. Report 190 related

Descriptive and Comparative Studies of Maine Lakes. Seventeen lakes studied for thermal, seasonal, and other factors. Chemistry of lakes, their phytoplankton, and chlorophyll amounts, as well as zooplankton and benthos assessed. Bacteria, and pollution also summarized. A substantial publication. 68 figures, 33 tables, bibliography. Appendices give materials on each lake studied. 338 pages

Technical Bulletin No. 90 – E.R. Milczky and E.A. Osgood
The Effects of Spraying with Sevin-4-Oil on Insect Pollinators and Pollination in a Spruce-Fir Forest. Spruce budworm spray tested for its impact on hymenoptera and pollination. 1976-8 years measured. 4 photos, 8 tables, a table of bees collected during study in appendix

Technical Bulletin No. 91 – D.N. Brown and F.E. Hutchinson
The Effect of Acidity, Organic Matter, and Sesquioxide Polymers on the Permanent Charge and pH-Dependent Cation Exchange Capacity of the Caribou Loam Soil. A very variable and significant process measured somewhat more clearly. Impact of lime on these acid soils substantial, 6 tables, 6 graphs

Technical Bulletin No. 92 – Terry M. Mingo, David L. Courtemarch and K. Elizabeth Gibbs
The Aquatic Insects of the St. John River Drainage, Aroostook County, Maine. Study of insect fauna in proposed flooding area. Taken September, 1977. A significant addition to knowledge as previous surveys very limited. Map, graph, schemata, 9 tables of findings. Good bibliography. TB 4, 24, 48 related work

Technical Bulletin No. 93 – Daniel Taylor, Gregory White, Homer Metzger and Alan Kezis
The Impact of Price Deregulation and Changes in Assembly and Processing Costs on the Marketing of Milk in Maine. A simulation of market conditions as some persons wished to decontrol the Maine Milk Commission, an event which did not finally take place. Taylor's thesis in part. Proposed change expected to be difficult for industry. 3 maps, 15 tables. TB 79 and Misc. Reports 137, 190 related work

Technical Bulletin No. 94 – R.V. Rourke and K.A. Schmidt
Chemical and Physical Properties of the Boothbay, Brayton, Croghan, Monarda, Plaisted, Scantic, and Swanville Soil Mapping Units. Another in the series of publications providing detailed information for use of planners, land use regulation and other governmental agencies. 7 sites, 5 locations in each. TBs 2, 29, 31, 34, 46, 75, as well as TB 32 are others in series. Bulletin 747 related. 88 pages of tabular data

Technical Bulletin No. 95 – L.S. Bauer and J. Granett
The Black Flies of Maine. A survey over the entire state from 1976 to 1978 provides much information on little studied but much discussed insect. Part is Bauer's thesis. Table (43 species). Another table relating to humans, and 3 graphs showing seasonal succession in collecting areas
Technical Bulletin No. 96 - Alan S. Kezis, Michael Hammig and Marc Ribaudo
A Prediction Model for Maine's Potato Production. First step in developing a comprehensive model for use by producers and others in this highly volatile industry. 1 graph

Technical Bulletin No. 97 - June, 1980, Stewart M. Goltz
Evapotranspiration from Vegetative Surfaces in Maine. Daily measures of evapotranspiration taken under the leaf canopy in blueberries and potatoes in 1977, 1978 to determine actual energy budgets, and need for soil moisture. Substantial climate impact. 7 tables, 14 graphs, bibliography. 40 pages of detailed appendices of data as well

Oxygen Diffusion Rate Relationships Under Three Soil Conditions. To analyze and control soil drainage better. 1 table, 6 graphs

Technical Bulletin No. 99 - Christopher S. Campbell and Leslie M. Eastman
Flora of Oxford County, Maine. An annotated catalog with habitat descriptions and citation of herbarium specimens of the vascular plants of this area. The introduction offers an ecological description of the area and the major plant associations. It is a very useful handbook. 244 pages

Technical Bulletin No. 100 - Terry M. Mingo and K. Elizabeth Gibbs
The Aquatic Insects of the Narraguagus River, Hancock and Washington Counties, Maine. 10 sites on the river sampled at monthly intervals in 1973 and 1974 to determine populations. 333 species representing 193 genera, 75 families, and 10 orders collected. 5 new species. Major bibliography. A substantial contribution. 63 pages

Technical Bulletin No. 101 - Stephen D. Reiling and Mark W. Anderson
The Relevance of Option Value in Benefit-Cost Analysis. A concept introduced into economic decision making recently reviewed with a literature analysis offering suggestions as to worth. Bibliography


Technical Bulletin No. 103 - Therese M. Work, Alan S. Kezis and Ruth H. True
Factors Determining Potato Chipping Quality. Work's M.S. thesis in part. An effort to improve quality through chemical analysis of this aspect of the Maine industry. 7 tables, 4 graphs, bibliography. Bulletins 651 and 757 are earlier and related work
Technical Bulletin No. 104 - April, 1983, James E. Shottafer and Allen M. Brackley
An Analysis of Moisture Content Variation in Eastern Spruce and Balsam Fir in Maine. An effort to develop characteristic moisture levels to aid in compliance with a recently passed Maine law (1977). Map, 3 tables, related work is TB 14, 17, CFRU report 2 (Misc. Report 227)

The Composition of Equilibrium Soil Solutions From Forest Soil B Horizons. 22 sample forest plots in four counties provided the necessary data for the analysis. 5 tables, 4 graphs. Useful for soil and plant forestation analysis. Extensive bibliography

Technical Bulletin No. 106 - Stuart McLean, Alan S. Kezis, James Fitzpatrick and Homer B. Metzger
A Transshipment Model of the Maine Milk Industry. An effort to further rationalize the price control mechanism of the Maine Milk Commission under fairly heavy attack at the time. More highly theoretical than some, although based on strong actual data. 23 tables

Effects of Some Naturally Occurring Chemicals and Extracts of Non-Host Plants on Feeding by Spruce Budworm Larvae, (Choristoneura fumiferana). A large number of chemicals assayed in laboratory for potential impact on spruce budworm in the field. 1 long table, 18 chemical diagrams. Bibliography. Useful work

Technical Bulletin No. 108 - R.V. Rourke and D.C. Bull
Chemical and Physical Properties of the Becket, Colton, Finch, Lyman, Masardis, Naumberg, and Skerry Soil Mapping Units. Another in Rourke's publications offering detailed soil analyses for potential planning and land use groups. Together the series is very important. 78 pages of data in appendices. See TB 94 for list of related items

The Lepidoptera of Maine, Part II, The Microlepidoptera, Limacodidae through Cossidae. Second of three parts comprising a major contribution from a distinguished entomologist. Result of 50 years of work. Part one is TB 66. Section 2 of Part II is in preparation. Joint publication of Maine Department of Conservation. 11 families discussed. Index

Technical Bulletin No. 110 - G.S. Patterson, R.A. Tracy and E.A. Osgood
The Biology and Ecology of Diorctria resinosella Mutuura (Lepidoptera: Pyralidae) on Young Red Pine in Maine. Insect beginning to be of importance in Maine since 1974 studied for life cycle, behavior, mortality, and the impact on red pine. Laboratory rearing also undertaken. Township 30, and 40 Washington and Hancock Counties were the selected sites. Map, 4 tables, 2 figures, 10 photographs, Bibliography

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Technical Bulletin No. 111 - Raymond J. Nowak and Alan S. Kezis
An Examination of Alternative Investment Strategies for Potato Market Improvement Funds. At a time of confusion and problems in Maine potato industry, study analyzes a chief source of problem, marketing. A linear programming model, using wide sources of data, produced recommendations as to where and how much new investment should be applied. Central packing given high priority, but time not widely used as a parameter given uncertainty of funding. Substantial public policy impact possible. 12 tables, map, scatter diagram, and bibliography. Relates to Bulletin 746 and 798.

Chemical Control of Spruce Budmoth, Zeiraphera canadensis Mut. and Free. (Lepidoptera: Olethreutidae) on White Spruce in Maine. Reports further studies in chemical control efforts with spruce budmoth. Several insecticides studied with regard to time and methods of application. 6 photos, map, graph, 3 tables. Misc. Report 236 a related publication. Weather and climate significant to results.

A Field Test of Mating-Suppression Using the Spruce Budworm Sex Pheromone. Reports side studies of effect of this sex pheromone on behavior of spruce budworm population in 1980. Although male disorientation is reported, female reproduction and fertility apparently not effected, although further study needed. 3 tables, map, 5 graphs.

Technical Bulletin No. 114 - Auburn E. Brower
The Lepidoptera of Maine, Part II, Section 2. Technical Bulletin 66, 109 earlier sections of this work.


Maine Farm Research was a quarterly journal publishing work from 1953 to late 1968 when its name was changed to Research in the Life Sciences. That publication comes to an end in 1985 with the last item listed in this chronicle of articles. Maine Farm Research was published quarterly and was described in a sub-title as "A Quarterly Report of Agricultural Progress Through Research." During its time it actually is the Annual Report of the Station. Although a subjective judgement of this author is that the quality and/or quantity of the science increases over time, much good science was published throughout its history. Much of the work published, however, was of work in progress, later published in final form in Bulletins or elsewhere. For this reason, I have been
quite rigorous in my selection of items to be noticed. Those articles which add to previously published work, report work that does not appear elsewhere, or report variety trials of various crops are listed below. Others are passed over because of their temporary or early nature in relation to more mature work. The choices are those of this author, and another might select somewhat differently. One hopes the differences would be slight.

April, 1953 (Vol. 1, no. 1) - Geddes W. Simpson
"Green Peach Aphids and Leafroll Spread," 15-17. Reports ten years of aphid collections and implications for disease vectoring

July, 1953 (Vol. 1, no. 2) - Donald Folsom
"Verticillium Wilt in Potatoes," 9-12. A disease of earlier times making a return, and reports 1952 research on its inroads

October, 1953 (Vol. 1, no. 3)
Annual Report, 1952-3. Finances, 16 articles in scholarly periodicals from staff cited. Much of this is similar to the material in Bulletin 519

January, 1954 (Vol. 1, no. 4)

April, 1954 (Vol. 2, no. 1) - Kenneth Neilson, Robert Akeley and Charles Cunningham
"Potato Variety Trials, 1953," 21 varieties tested, 14-6

July, 1954 (Vol. 2, no. 2)

October, 1954 (Vol. 2, no. 3)
Annual Report, 1953-4. Finances. New Staff Appointments, Obituary of Edith Patch. 22 scholarly articles

January, 1955 (Vol. 2, no. 4)

April, 1955 (Vol. 3, no. 1) - W.A. Shands, G.W. Simpson and H.E. Wave
"Nature Aids Aphid Control," 21-23. Announces beginning of work on fungus diseases of aphids, leading to major work of later

July, 1955 (Vol. 3, no. 2) - R.A. Hyre and Reiner Bonde
"Forecasting Potato Late Blight in Aroostook County," 22-4. Announces first forecasting service based on recent knowledge of the fungus

October, 1955 (Vol. 3, no. 3)
Annual Report, 1954-5. Finances, 32 scholarly articles cited

January, 1956 (Vol. 3, no. 4) - Thomas P. Fickus
"The Sawyer Beetles in Maine," 15-21, life histories, controls, photos

April, 1956 (Vol. 4, no. 1) - Richard Saunders
"Ten Years of Progress on Maine Broiler Farms," 13-17, good summary of this history with several histograms indicating the change
July, 1956 (Vol. 4, no. 2)

October, 1956 (Vol. 4, no. 3)

Annual Reports, 1955-6. Finances, Reports of Publishing Activity including 37 articles by staff cited

January, 1957 (Vol. 4, no. 4) - Mary M. Clayton
"Choose More Nutritious Diets for Better Health," 19-22. Reports 9 years of work associated with a northeast group study. Histograms showing results of tests conducted on Maine youths during the period

April, 1957 (Vol. 5, no. 1)

July, 1957 (Vol. 5, no. 2)

October, 1957 (Vol. 5, no. 3)

Annual Report, 1956-7. Financial Statement. Report of construction changes, and staff publication, including citations of 34 articles in scholarly publications

January, 1958 (Vol. 5, no. 4)

April, 1958 (Vol. 6, no. 1) - E.S. Plissey, C.D. Richards and M.T. Hilborn
"A Survey for Plant Parasitic Nematodes in Maine." 5-9. Shows by tables, graphs, and other ways the results of a test to determine nematode levels

F.E. Hutchinson and H.J. Murphy

July, 1958 (Vol. 6, no. 2) - Clinton R. Blackmon
"Better Alfalfa and Red Clover Varieties for Maine," 25-28 reports results of varietal tests conducted in 1956 and 1957 in Presque Isle and Orono

October, 1958 (Vol. 6, no. 3)


January, 1959 (Vol. 6, no. 4)

April, 1959 (Vol. 7, no. 1) - H.J. Murphy and M.J. Goven
"Potash and Processing Potatoes," 3-8. Reports studies underway since 1950 on potash levels needed to produce potatoes better suited for processing as opposed to table consumption
Clinton R. Blackmon
"Soybeans for Maine: New Varieties Can 'take it'," 11-13. Varietal testings of Swedish and Japanese hardy strains 1951-8 with selective breeding to produce a Maine useful strain

H.J. Murphy and M.J. Goven
"Nitrogen, Spuds and Specific Gravity," 21-3. Changes for processing types indicated as a result of research since 1955 here, and since 1921 overall. Graphs

July, 1959 (Vol. 7, no. 2)

October, 1959 (Vol. 7, no. 3)
Annual Report, 1958-9. Financial Data. (Substantial new construction, Hitchner, renovations of Rogers Halls) citation of scholarly articles includes 50 such (15 by Reiner Bonde and his associates)

January, 1960 (Vol. 7, no. 4)

April, 1960 (Vol. 8, no. 1)

July, 1960 (Vol. 8, no. 2) - Frank J. MacDonald
"Fifty Years of Service to Maine Agriculture," 3-7. Summarizes work at Highmoor

M.T. Hilborn
"Fifty Years of Fungicide Research at Highmoor Farm." Summarizes work on apple scab and other related programs (longest continuous work of the station), 12-15

R.M. Bailey
"Plant Breeding at Highmoor Farm has Contributed to Economy of Maine and of the Nation," 21-3. Summary of the half century work in this area

October, 1960 (Vol. 8, no. 3)

H.H. Brugman and H.C. Dickey
"High Protein Diet of Dried Potato Pulp and Urea Packs Weight on Maine Hereford Bulls," 7-9. Reports results of feeding trials on Maine animals

January, 1961 (Vol. 8, no. 4)

April, 1961 (Vol. 9, no. 1)

July, 1961 (Vol. 9, no. 2) - G.R. Cooper, M.T. Hilborn and D. Sirois
"Research on Possible Side Effects of Fungicides." Reports on Increased Yields on McIntosh from Fungicidal Use 1955-1960, 3-7. Due to increased apparent photosynthesis stimulated by fungicides
Clinton R. Blackmun

October, 1961 (Vol. 9, no. 3)
Annual Report 1960-1. Finances and publications including 47 articles. 75th year of MAES

January, 1962 (Vol. 9, no. 4)

April, 1962 (Vol. 10, no. 1)

July and October, 1962 (Vol. 10, nos. 2-3)
Annual Report, 1961-2. Finances, other similar matters. Announces acquisition of Huff Farm

January, 1963 (Vol. 10, no. 4)

April, 1963 (Vol. 11, no. 1) - F.E. Hutchinson
"Responses of Sweet Corn to Rate and Ratio of Applied Fertilizer," 13-15. Two years of tests at Fryeburg indicate need of increased phosphorus on low fertility soils as opposed to values in Bulletin 550

H.J. Murphy and M.J. Gaven
"Sugar Beets Can Be Grown Profitably in Aroostook," 24-6. A famous article that predicts possibilities by increasing soil pH substantially

July, 1963 (Vol. 11, no. 2) - Eliot Epstein and Roland Struchtemeyer
"Runoff and Erosion Losses in Northern Maine," 8-10. Reports work underway since 1958 to determine how and why of erosion

Harold E. Young
"Periodic Inventory as a Basis for Woodlot Management," 22-5. Reports recommendations based on 1940-1952 study on University forest

Ivan McDaniel
"Control of the Cyclamen Mite on Strawberries," 25-8. Life histories, control methods on this new pest on a Maine truck garden crop recently introduced

October, 1963 (Vol. 11, no. 3)

January, 1964 (Vol. 11, no. 4) - John B. Dimond
"On the Hazards of Using DDT in the Forest," 32-6. A timely warning spelled out with care
MAINE AGRICULTURAL EXPERIMENT STATION BULLETIN 808

April, 1964 (Vol. 12, no. 1) - R.A. Kennedy, H.E. Young and E.G. Stoeckeler
"The Relationship of Maximum Peat Depth to Some Environmental Factors in Swamps and Bogs in Maine," B-10. Beginnings of work on peat bogs still in progress and carried on by others. Dating of bottom layers as well as analysis of supposed impact of depths

R.M. Bailey and P.R. Hepler

July, 1964 (Vol. 12, no. 2)

October, 1964 (Vol. 12, no. 3) - L.W. Boulanger
"Blueberry Pollination and Solitary Bees," 5-11. Useful article analyzing pollination from other than rented colonies. Good on herbicide impacts as well

Annual Report, 1963-4. Indicates major research reemphasis with passage of McIntire-Stennis act, as well as regional specialization. Finances, Publications include 51 journal citations

January, 1965 (Vol. 12, no. 4) - J.B. Wilson, J.H. Hunter and M.E. Gallegly

Edward F. Johnston
"Labor Input in Packing Potatoes," 22-5. Determines costs of packing. Much higher for smaller packages

H.J. Murphy and M.J. Goven
"Effect of Rate of Potash and Method of Application on Yield, Specific Gravity and Chip Color of the Katahdin Variety in Maine, 1969-1961," 42-4. Results indicate need to know ultimate use of potatoes when fertilizing

April, 1965 (Vol. 13, no. 1) - H.J. Murphy and M.J. Goven
"Nitrogen Fertilization," 5-8. Continuation of work, reported 1959-1961 results

H.J. Murphy and M.J. Goven
"Fertilizer Ratios for Kennebec Potatoes," 24-5. More of efforts to deal with changes in potato use and impact of fertilizers on needed characteristics. Experiments 1959-1961

"An Evaluation of Hopper-Type and Dump-Type Truck Bodies for Potatoes," 18-25. No real differences, although dump-types have wider farm applicability

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October, 1965 (Vol. 13, no. 3) - Lloyd J. Jewett

Annual Report, 1964-5. Financial statement, and listing of publications, includes 43 refereed articles

January, 1966 (Vol. 13, no. 4) - H.J. Murphy and M.J. Goven
"Effect of Source of Potash and Magnesium on Yield and Quality of Potatoes in Maine," 5-6. 1961-3 continuing experiments

H.J. Murphy and M.J. Goven
"Spring Oat Variety Trials - 1965," 7-8. 8 varieties at Presque Isle

H.J. Murphy and M.J. Goven
"Spring Barley Variety Trials - 1965," 7-8. 7 varieties tried to meet northern Maine conditions. Associated with tests at N. Brunswick Station

Homer B. Metzger and Raymond I. Taylor

H.J. Murphy, M.J. Goven and R.V. Rourke
"Fertilization of Potatoes Grown on Caribou and Allagash Soils," 30-3. Comparative experiments undertaken from 1961-3

April, 1966 (Vol. 14, no. 1) - H.J. Murphy and M.J. Goven
"Effect of Source of Nitrogen Yield and Specific Gravity on Two Maine Potato Varieties," 5-7. Trials and experiments from 1960-5 to assess impact as potato uses changed rapidly at this time

Homer B. Metzger and Raymond I. Taylor
"Impact on the Farm Business of a Quota System for Marketing Milk," 17-21. Part II of the linear programming analysis of this business

Homer B. Metzger and Raymond I. Taylor

H.J. Murphy and M.J. Goven
"A Comparison of Rate and Source of Phosphorus for Potato Fertilizers," 29-30. Update of long-range experiments begun in 1931. These new efforts were undertaken in 1963-5

July, 1966 (Vol. 14, no. 2) - Paul R. Hepler, R.A. Struchtemeyer and F.E. Hutchinson
"Effect of Lime and pH on Yield and Quality of Sugar Beets," 14-16. Explicates the pH needs (higher than potatoes) clearly
October, 1966 (Vol. 14, no. 3) - H.J. Murphy and M.J. Goven

F.E. Hutchinson
"Accumulation of Road Salt Ions in Soils Along Maine Highways," 13-6. Residues of winter snow and ice clearance analyzed. Project reports occur later in this series

Peggy K. Schomaker
"Consumer Expenditures in the Northeast," 35-40. Good breakdown on research into family finance

Annual Report, 1965-6. Finances, statement of personnel, research goals (world hunger), publications (40 articles)

January, 1967 (Vol. 14, no. 4) - Gregory Baker
"Relative Durability of Some Maine Woods When Used for Fence Posts," 5-9. Reports results of experiments conducted since 1945

H.J. Murphy and M.J. Goven
"Spring Oat and Barley Trials," 13-5. 6 oats, 6 barley, results of lime applied also

April, 1967 (Vol. 15, no. 1) - F.E. Manzer
"Aerial Application of Potato Insecticides in Maine," 26-30. Helicopter and fixed wing aircraft used. Test results 1965-6

July, 1967 (Vol. 15, no. 2) - Wallace C. Dunham and Dennis A. Abdalla
"Maine Blueberries and the Industrial Market," 12-6. Results of interviews with 31 large users as to their desires and prospects of the industry to adjust to them

October, 1967 (Vol. 15, no. 3) - Gleason L. Gray
"Drying Horticultural Peat," 5-11. An early attempt to utilize a source readily available in much of Maine

Lawrence N. Shaw and Paul R. Hepler
"Sugar Beet Plot Planter," 24-8. An effort by the station to provide machinery to use sugar beets as a crop in Maine. Work began in 1961

Harold E. Young and Wallace C. Robbins
"The Questionable Accuracy of Calculated Cubic Foot Volume of Primary Forest Products," 32-6. A further effort in the work to get best possible forest utilization

Annual Report, 1966-7. Finances, staff, and other usual year-end data. Publications include 53 periodical pieces
January, 1968 (Vol. 15, no. 4) - F.E. Hutchinson
"Concentration of Nine Inorganic Ions in Maine Rivers," 9-11. Effort to establish sources of minerals in Maine rivers

F.E. Hutchinson
"Effect of Highway Salting on the Concentration of Sodium and Chloride in Rivers," 12-4. Not as great as feared

H.J. Murphy and M.J. Goven
"Boron Fertilization of Potatoes," 17-19. No boron poisoning unless given in great excess

H.J. Murphy and M.J. Goven
"Spring Oat and Barley Trials - 1967," 28-30. Continuation of varietal trials reported previously

Title and Format changes with this issue to Research in the Life Sciences.

Spring, 1968 (Vol. 16, no. 1) - Matthew E. Highlands and Stephen Ridley
"Quality of Fowl Depot Fat Stored Five Weeks at 40°F," 1-2. Unacceptable results

John M. Hogan, Bonnie Fortini, Tatiana Illyn, Ruth H. True and Elizabeth F. Murphy
"Further Results with Shear Force as a Measure of Mealiness of Baked Riced Potatoes," 3-5. Impact of changing specific gravity

H.J. Murphy and M.J. Goven

H.J. Murphy and M.J. Goven

Summer, 1968 (Vol. 16, no. 2) - K.G. Stratton, L.O. Safford and R.A. Struchtemeyer
"Two Fertilizer Studies with White Pine in Maine," 1-5. Reports results in work undertaken from 1958-1965

Ruth I. True, Nellie Gushee, Dennis A. Abdalla and Elizabeth F. Murphy

Edward F. Johnston
"Are Traditional Hours of Harvesting Potatoes Obsolete?", 24-31. Efforts to cut costs and bruising led to tests and results called for alteration of hours depending on temperature and humidity factors as much as possible
H.A. Leonard, B.R. Poulton, and P.S. Young
"Milk Production Capacity of Maine Grains and By-Product Feeds Used in Dairy Cattle Rations," 32-5. Test designed to determine whether Maine grains are good substitutes for grains grown elsewhere and costing more as transport costs rose

C.E. Schomaker
"Comparison of Snow Interception by a Hardwood and a Conifer Forest," 35-43. An important paper in developing hydrology studies in Maine woods. Literature cited, p. 43

Fall, 1968 (Vol. 16, no. 3) - Walter J. Kender, Edward C. Winston and Jorge Valenzuela
"Stimulation of Rhizome and Shoot Development in the Lowbush Blueberry by 2-Chloroethane phosphonic Acid," 1-2. Greenhouse studies to locate a method of controlling lower leaves and hastening rhizome development

Annual Report, 1967-8. Director's comments (mostly of reorganization.) Staff, financial report, grants listed (as have been the case for a decade.) Publications, including 57 journal and other refereed publications

Winter 1968-9 (Vol. 16, no. 4) - H.J. Murphy and M.J. Goven
"Liquid or Dry Fertilizers for Potatoes?", 1-4. Reports research on this subject 1966-8 in Aroostook County, with replicated plots. On Katahdin variety no significant differences were found. 2 tables, 1 graph

M.F. Trevett
"Winter Injury and Fertilizers in Lowbush Blueberries," 4-15. Winter injury apparently worse in unfertilized fields, but fertilizers must not be applied for fall growth, especially nitrogen. Offers fertilization practice suggestions. 6 tables

Robert L. Vadas and Paul D. Ring
"An Evaluation of the Seaweed Resources of Maine," 16-22. Descriptive, with some indication of historic uses. Good bibliography. 2 tables

Robert V. Rourke
"Water Storage in Six Soil Series of Maine," 23-4. One table summarizing results which differ fairly widely

H.J. Murphy and M.J. Goven
"Spring Oat and Barley Trials," 28-30. More of their series of varietal tests at Aroostook Farm. 4 spring oats, 3 spring barleys, and different lime levels reported

James F. Lilley and Norman Smith
"Analysis of Potato Harvesting Operations," 31-7. Evaluates different types of harvester in operation in crop year 1968 by costs, amount of acreage harvested, number of operators as well as other variables. 1 table, 6 graphs
Frederick Hutchinson, William Porter and Darryl Brown
"Soil Acidification as Influenced by Rate and Source of Sulfur," 42-5.
Tests applied to determine whether the sugar beet/potato difference in pH could be controlled without doing damage to soils. Answer: probably not. 1 graph, 2 tables

H.L. Chute, R.F. Cuozzo and D.D. King
A disease, located in 1954, isolated for serum in 1963, now being treated in 1968. First results quite hopeful

M.F. Trevett
"Nitrogen Fertilizers Increase the Stand of Lowbush Blueberry Stems," 48-50. This article modifies some stands taken earlier on preliminary data. See Bulletins 605, Misc. Pub., 626 and some other data cited there. 2 tables

Spring, 1969 (Vol. 17, no. 1) - Warren C. Stiles
"Nutritional Status of Maine Orchards After Six Years of Leaf Analysis Service," 1-5. Reports results of 1963-8 experiments leading to better fertilization

F.E. Manzer and D.C. Merriam
"Seed Treatments and Their Effects on Emergence and Yield of Katahdin Potatoes," 5-7. Efforts to chemically delay sprouting, and whether yields are limited by process

F.E. Manzer, D.C. Merriam and R.C. McCrum
"Recent Developments in Potato Seed Improvement in Maine," 9-14. Reports 1966-8 efforts to enhance seed selection processes developed at station to control various viruses

C.S. Brown and W.P. Apgar
"Effects of Phosphorus Fertilization on the Quality of Timothy Hay," 18-23. Efforts to make nutritional content of hays better. Feeding trials conducted as well, 1963-8

M.J. Morin and N.P. Kutscha
"A Microscopic Study of Paper Made From Plantation-Grown Red Pine," 23-33. Does the location in the tree, as well as cultivation practices allow a stronger paper to be made? Good technical paper, with excellent photos and graph analysis

Summer, 1969 (Vol. 17, no. 2) - C.S. Brown and R.S. Stafford

Gregory Baker
Geddes W. Simpson and W.A. Shands
"Insecticides and the Spread of the Potato Leafroll Virus," 30-3. Continuing studies which emphasize the results of roguing and insecticide application to control aphid populations in seed stocks.

Fall, 1969 (Vol. 17, no. 3) - Frederick H. Radke, Herman DeHaas and Eileen K. Gabrielson

F.E. Hutchinson
"Effect of Highway Salting on the Concentration of Sodium and Chloride in Private Water Supplies," 15-19. Well location important as salting does and has occurred readily.

Annual Report, 1968-9. Detailed study of research effort and funding, financial tables, granting agencies listed. Publications including 106 journal and other refereed publications. Demonstrates new emphasis in biochemistry and forestry as well as traditional areas of strength.

Winter, 1969-70 (Vol. 17, no. 4) - Elizabeth S. Barden, H.L. Chute, D.C. O'Meara and Hilda T. Wheelwright
"Mycotoxic Effects: Response of Ducklings and Chickens Fed Corn Experimentally Infected with Fungi from Poultry Feed Experiments," 1-6. Results from increased interests in food additives and toxins in food.

H.J. Murphy and M.J. Goven
"Spring Oat and Barley Trials - 1969," 7-9. Four oats, three barleys and one soft wheat variety trials at Aroostook Farm.

David R. Wilson and Hugh J. Murphy

Ivan McDaniel
"Can We Control Mosquitoes and Black Flies Without Harming Our Birds and Other Wildlife?", 23-27. Silent Spring impact. Study of death of purple martins which were more vulnerable because of ingested insecticides.

M.F. Trevett and H.M. Soule, Jr.
"Raking Machines, Land-Smoothing and the Future of the Maine Blueberry Industry," 28-34. Economic costs weighed against results in a steadily rising competitive economy for this Maine crop.

H.J. Murphy and M.J. Goven
"Fertilization of Katahdin, Keswick, and Norgold Russet Grown Continuously and in Two Year Rotation," 35-9. Reports more experiments conducted from 1966-8 in their long time work series.

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Spring, 1970 (Vol. 18, no. 1) - David R. Wilson
"The Effect of Seedpiece Spacing on Yield and Size Distribution of Russet Burbank Potatoes in Maine," 1-4. Trials conducted in 1969 growing season for best results in cultivation methods

Gregory Baker
"Thinnings and Their Results in a Red Pine Plantation," 12-20. Thinnings undertaken from 1946-1969 on plantation begun in 1920. Results of growth assessed in closely watched basal plot

H.C. Dickey
"Breeding Dairy Cows for Milk Composition Traits," 24-30. Different pricing mechanisms demand some breeding changes

Summer, 1970 (Vol. 18, no. 2) - Louis Van Der Heide
"The Fluorescent Antibody Technique in the Diagnosis of Avian Encephalomyelitis," 5-15. A disease causing severe lowering of egg production is analyzed here

Nellie Gushee, Ruth H. True, Dennis A. Abdalla and Elizabeth F. Murphy
"Textures of Blueberry Pie Fillings Made with Fresh Maine Lowbush Blueberries," 27-8. More in their series of taste tests designed to refine recipes already published

M. Gershman and Jacqueline Hunter
"Salmonella Serotyping," 28-32. Reports an effort underway since 1966 at Orono to develop knowledge of these organisms

Fall-Winter 1970-1 (Vol. 18, nos. 3-4) - Federico Kocher and Jorge Valenzuela
"The Nitrogen Nutrition of the Lowbush Blueberry," 16-22. When and how does the uptake occur and the impact on the plant

Charles E. Buck and Darrell Pratt
"Bacteriological Quality of Ground Beef from Retail Outlets," 28-9. Studies in local stores as laboratory counts of E. coli had risen in recent years. Results none too pleasant

H.J. Murphy, M.J. Goven, H.A. Leonard and J.A. Lloyd
"Small Grain Variety Trials 1970," 33-7. Two locations tested oats, barley and one wheat variety

Raymond F. Krofta
"Factors Related to Dairy Farm Labor and Management Income," 38-40. An effort to determine the real variables in farming of this sort

M.F. Trevett, P.N. Carpenter and R.E. Durgin
"Soil Acidity and Lowbush Blueberries," 43-57. An important contribution, which suggests control of pH as important as any other factor in successful blueberry farming. Literature cited

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Edward F. Johnston
"A Preliminary Economic Analysis of Additional Costs of Pre-Cut Seed Potatoes," 57-62. Is the effort worth it in increased profits? 1965-9 crop years studied

Spring, 1971 (Vol. 19, no. 1) - James C. Whittaker and James F. Connors
"The 'Maine Sportsman' Revisited," 1-5. Analysis of large number of questionnaires sent to actual 'sportsmen'

R.W. Gerry
"The Value of Corn Gluten Feed in Rations for Chickens," 8-11. Amounts must vary with age, and ultimately costs

Gary McIntyre
"A Method for In Situ Observation of Sporophores of Streptomyces." A new potato disease under observation. Growth over the past decade called for new methods

H.B. Metzger
"Impact of a Level Class I Price on Seasonality of Producer Milk Deliveries," 18-22. Although differential narrows from season to season, little need for change from flat to seasonal pricing needed as amounts do not vary as much. 1966-70 studied

Summer, 1971 (Vol. 19, no. 2) - Paul R. Hepler and F.E. Hutchinson
"Relation of Sugar Beet Yields to Lime and pH on a Strongly Acid Caribou Soil," 1-12. Studies 1965-9 on how to raise soil pH and when to do so

G. Melvin Barclay and Hugh J. Murphy
"The Effect of Seven Plant Growth Regulators on Yield, Tuber Count, Size Class Distribution, and Specific Gravity of the Katahdin Potato Variety," 24-28. As yields had plateaued in normal conditions, artificial growth regulators were utilized in effort to extend yields, without damaging desired qualities, 1970 tests

Garbachan Singh
"Salt Tolerance in Plantago maratime," 29-33. A successful greenhouse effort to use biological means to reclaim saline lands rather than through flooding and leaching

This is the last of the quarterly issues. Henceforth articles are singly published in yearly volumes

October, 1971 (Vol. 19, no. 3) - N.P. Kutscha and J.M. Schwarzmann
"Accidental Styrene Poisoning." Reports a case of poisoning and discusses chemistry of the event

October, 1971 (Vol. 19, no. 4) - R.W. Gerry
"Broiler Breeder Performance on Wire and Wood Slat Floors at Various Housing Densities." Six pens constructed to determine how to cut down on cracked eggs, floor eggs and lowered fertility, table, 2 photos
November, 1971 (Vol. 19, no. 5) - M.F. Trevett and R.E. Durgin
"Regulating Soil Acidity in Lowbush Blueberry Fields." Experiment
in using sulphur to lower soil pH to below 5.0 to 4.3 range as an
aid to growth, 8 tables. Misc. Report 128, Misc. Pub. 626, RLS,
16 (4), 18 (3-4), Bulletin 617 related

November, 1971 (Vol. 19, no. 6) - David R. Carruthers and Herman DeHaas
"The Efficiency of Utilization of Protein From Peanut Butter Sandwiches
and Dried Milk Solids by the Growing Rat." An effort to ascertain
nutritional quality of donated foods in Commodity Distribution
Program of USDA, 4 tables. Tech. Bull. 40 is related

December, 1971 (Vol. 19, no. 7) - H.Y. Forsythe, Jr. and T. Boutilier
"Developmental Time of Stages of the European Red Mite During the
Summer." 1966-9, Highmoor Farm Study. Effort directed to
determining temperature impact on this pest, 3 tables

December, 1971 (Vol. 19, no. 8) - H.J. Murphy and M.J. Gaven
"Small Grain Variety Trials, 1971." 6 oats, 5 barley, 1 wheat trial
reported. Limited impact of residual lime reported. Earlier in
this series, RLS, 17 (4), 18 (3-4)

January, 1972 (Vol. 19, no. 9) - H.H. Brugman and H.C. Dickey
"Utilization of Lamb Rations Containing Hominy, Soybean Oil Meal,
Urea, Potato Meal and Chopped Hay." Performance of weanlings
with balanced rations studied, 2 tables

February, 1972 (Vol. 19, no. 10) - M. Gershman
"Microbes and the Suspect." A discussion of aids to forensics, 2
photos

March, 1972 (Vol. 19, no. 11) - H.J. Murphy and M.J. Gaven
"Response of Katahdin Potatoes to Source and Rate of Applied
Magnesium." More in trace element research begun in 1929 and
carried on sporadically, 2 tables. Bull. 645, and RLS, 9 (2),
and 16 (1) are predecessor studies

February, 1972 (Vol. 19, no. 12) H.C. Dickey and S.D. Musgrave
"The Use of Genetic Markers in Dairy Cattle Breeding." Blood Type
Gene studies, primarily Holsteins reported

March, 1972 (Vol. 19, no. 13) - H.J. Murphy and M.J. Gaven
"Effect of Liquid Fertilizer Suspensions and Dry Fertilizers on
Yield and Quality of Russet Burbank Potatoes." More on new
varieties, 2 tables, graph. Bull. 490, RLS, 16 (4) related work

April, 1972 (Vol. 19, no. 14)- F.V. Muir and R.W. Gerry
"Should an Egg Producer Practice Feed Restriction?" 2 tables.
Answer is probably
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May, 1972 (Vol. 19, no. 15) - M.F. Trevett and R.E. Durgin
"Terbacil: A Promising Herbicide for the Control of Perennial Grass and Sedge in Unplowed Lowbush Blueberry Fields." Highly controlled usage is promising, 5 tables. Another in his long series of such work. Bull. 605, 665 are basic predecessors

Attached to this number is - M.F. Trevett
"A Second Approximation of Leaf Analysis Standards for Lowbush Blueberries." Modifies his Bull. 665 slightly. 2 tables

May, 1972 (Vol. 19, no. 16) - S.S. Leach, J. Thibodeau and R. Thibodeau
"Mechanical Potato Cutters Can Produce High Quality Seed Pieces." New types of cutters under high speed pressures evaluated. 5 photos, table, graph. RLS, 15 (2), 17 (2), 18 (3-4) related

June, 1972 (Vol. 19, no 17) - M.F. Trevett and R.E. Durgin
"A Progress Report on Pruning Lowbush Blueberries with Paraquat, Dinitro Herbicides and Mowing." Attempt at ascertaining best method. RLS, 14 (3), 17 (3), and 19 (2) report earlier related efforts

July, 1972 (Vol. 20, no. 1) - M.D. Ashley and T.W. Beers
"The Random Location of Sampling Units Using a Computer." Computer analysis not really better in a limited sample experiment, 5 tables, 3 figures

July, 1972 (Vol. 20, no. 2) - James C. Whittaker and Ennis S. Wentworth
"Maine Snowmobile Owners." A fairly wide representative sample surveyed in a number of ways, especially with regard to environmental judgments. 3 tables

August, 1972 (Vol. 20, no. 3) - M.F. Trevett, P.N. Carpenter and R.E. Durgin
"EDTA Chelates: Carriers of Trace Elements or Mobilizers of Nutrients in the Unplowed Podzol Lowbush Blueberry Soils of Eastern Maine?" Research presented in opposition to most printed materials on mobilization qualities of trace elements of chelates, especially EDTA. Substantial bibliography

September, 1972 (Vol. 20, no. 4) - F.V. Muir, G.B. Jaeger and H.C. Wheldon, Jr.
"Drinking Water Control in Deep Pit Laying Houses." New housing techniques demand new feeding and watering methods. 3 tables

September, 1972 (Vol. 20, no. 5) - Paul R. Hepler

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September, 1972 (Vol. 20, no. 6) - M.F. Trevett and Fay Hyland
"Red Wart: Lesions of Unknown Origin on Lowbush Blueberry Stems."
Trace element causes eliminated, possible entomological causes presented. 3 tables, 5 photos

October, 1972 (Vol. 20, no. 7) - G.B. Jaeger, H.C. Wheldon, Jr. and F.V. Muir
"Manure Management in Deep Pit Houses." New housing demands new techniques. 1 table, 1 graph. RLS Vol. 20, no 4 is another effort to deal with these related problems

January, 1973 (Vol. 20, no. 8) - F. Kocher and J. Valenzuela
"The Nitrogen Nutrition of the Lowbush Blueberry, Part II." Follow-up to Part I, RLS, Vol. 18. 3 tables, extensive bibliography

In same number is - Frederick Kocher
"The Nitrogen Nutrition of the Lowbush Blueberry, Part III." These studies deal with plant tissues, leaves, and other components of the plant itself. Bull. no 605, 665 are related

February, 1973 (Vol. 20, no 9) - M.F. Trevett and R.E. Durgin
"Leaf Dessicants and the Selective Eradication of the Barren Berry (Pyrus floribunda and Pyrus melanocarpa) in Lowbush Blueberry." More on the chokepear problem. See RLS, 19 (1)

"Is Oxygen Uptake Related to Milk Production in the Bovine?" Body metabolisms as an effort to cull inferior producers early

April, 1973 (Vol. 20, no. 11) - M.F. Trevett and R.E. Durgin

February, 1973 (Vol. 20, no. 12) - Harold E. Young
"Management of Forest Stands on Highway Right-of-Ways." Problems of dieback on four lane highways led to discussions of role of salt and eventually to necessary role of foresters/biologists in future planning. 8 photos, good paper

February, 1973 (Vol. 20, no. 13) - H.J. Murphy and M.J. Gaven
"Small Grain Variety Trials, 1972." Further in their oat, barley, wheat trials, and lime experiments. 3 tables, RLS, 17 (4), 18 (3-4), 19 (4) are predecessor studies

April, 1973 (Vol. 20, no. 14) - Raymond N. Krofta and Richard J. Higby
"Cash Flow Analysis to Determine Debt Repayment Ability of Maine Dairy Farmers." Part of a 1970 UMO thesis. An industry under attack studied for better management. 2 tables
April, 1973 (Vol. 20, no. 15) - H.J. Murphy and M.J. Gaven
"Effect of Fertilization on Yield and Specific Gravity of Katahdin, Lenape and Wauseon Grown Continuously and in Two-Year Rotations."
N, P, K studies on some new varieties. 3 tables. Bulletins 414, 481, 490, 506, 634, 645, and RLS, 17 (4) are earlier work

"Nine-Year Summary of Maine Ram Test Data." Feeding and housing tests 1963-1971 used as an adjunct to better breeding practices reported. 2 tables

"A Comparison of Soybean Oil Meal, Urea and Biuret for Growth in Sheep." How to get necessary non-protein nitrogen into the animals. 2 tables

May, 1973 (Vol. 20, no. 18) - M.F. Trevett and R.E. Durgin
"Further Research on the Big Five for Lowbush Blueberry Fields." Summarizes changes proposed by his recently reported research, mostly in this series. 5 tables, Bull. 699 the significant predecessor work

May, 1973 (Vol. 20, no. 19) - S.C. Nickerson and C.J. Sniffen
"Effects of DDT on Growth and Reproduction in the Rat." Another of the scientific studies following Silent Spring. 3 graphs, 1 photo

May, 1973, (Vol. 20, no. 20) - T.E. Christensen
"Design and Test of a Dehuller for Crownvetch Seed." This ground legume is in wide use for covering in new roadside work, and a rapid dehuller was needed. 3 photos, 2 schematics, 2 tables

June, 1973 (Vol. 20, no 21) - C.E. Schomaker
"Growth and Foliar Nutrient Variation of White Pine From Twenty-Five Sites in Southern Maine." Discovering nutrient uptake. 1 graph, 1 table, 1 map

June, 1973 (Vol. 20, no. 22) - Robert V. Rourke
"Predicting Ranges in Liquid Limit and Plasticity Index from Soils Laboratory Data on New England and New York Soils." Relationship to clay content and percolation. 4 tables

July, 1973 (Vol. 21, no. 1) - F. Richard King
"Adjustments in the Optimum Number, Size and Location of Tablestock Potato Packing Plants in Maine." 7 tables. An effort to make potato industry more economical. Related to Bulletin 697

July, 1973 (Vol. 21, no. 2) - M.T. Hilborn
"Fatty Acids and Blossom Freeze Protection." Reports a 1966-1969 follow-up to earlier investigations to protect apple blossoms from sudden early freezes. 3 tables. RLS, 12 (1), and 14 (3) as well as several articles in Phytopathology precede
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September, 1973 (Vol. 21, no. 3) - C.A. Karper, C.J. Brekke, E.S. Barden and J.M. Hogan
"Effect of Storage on Microbial Growth and Free Fatty Acid Content of Fowl Leaf Fat." Fowl leaf fat is used in processed foods. Study undertaken to determine amounts of bacteria before and after rendering. 4 tables, bibliography, related to RLS, 16(1)

January, 1974 (Vol. 21, no. 4) - Hugh J. Murphy and Michael J. Gaven
"Small Grain Variety Trials, 1973" 5 oats, 7 barley, 2 spring wheat varieties tested. RLS, 17 (4), 18 (3-4), 19 (4), 20 (13) are predecessors in this series

January, 1974 (Vol. 21, no. 5) - Walter G. McIntire and Gilbert D. Nass
"Self-Actualizing Qualities of Low and High Happiness Stable Marriages." Follow-up studies a decade later. Five tables. Literature cited

April, 1974 (Vol. 21, no. 6) - Charles E. Buck
"The Effect of Road Salt on Aerobic Salt Bacteria Adjacent to a Major Highway." Another study of effect of highway salt on adjacent areas. 3 tables. Earlier work by F.E. Hutchinson in this series

April, 1974 (Vol. 21, no. 7) - S.S. Leach and W.H. Tietjen
"Disposable Containers for Shipment of Bulk Potatoes." Is fiberboard usable and cost efficient? 2 tables, six schematics, photo. Answer was yes

April, 1974 (Vol. 21, no. 8) - Arthur G. Randall
"Seed Dispersal Into Two Spruce-Fir Clearcuts in Eastern Maine." How do clear cut areas reseed themselves? 5 tables, 3 graphs, bibliography. Misc. Pub. 675 is related. Appendix shows seed counts in dispersal areas

April, 1974 (Vol. 21, no. 9) - Howard Dickey
"Digestibility of Dried Potato By-Product Meal." Steer feeding trials as follow-up to earlier work. 3 tables

May, 1974 (Vol. 21, no. 10) - Homer B. Metzger
"Attitudes, Future Plans and Interests of Operators of Small, Low-Income Farms in the Lower Penobscot River Area." 24 marginal farmers interviewed in 1974. Interesting results of a group not much studied. 3 tables

May, 1974 (Vol. 21, no. 11) - Homer B. Metzger
"Fresh Marketing of Maine Lowbush Blueberries Through Retail Stores and Roadside Stands, Part I., Market Acceptance of a Commercial Package." Efforts in 1973 to maximize blueberry marketing and profits. 3 photos, 8 tables. Useful study
June, 1974 (Vol. 21, no. 12) - Amr A. Ismail, Sanford D. Schemnitz and Francis J. Gramlich
"Bird Damage to Blueberry Fields in Maine." Growers surveyed as to ideas, then actual study in fields. Much less damage than thought as flocking was post-harvest. 1 photo, 10 tables

June, 1974 (Vol. 21, no. 13) - Homer B. Metzger and Amr A. Ismail
"Fresh Marketing of Maine Lowbush Blueberries Through Retail Stores and Roadside Stands, Part II., Harvesting, Handling, Sales Volume, Costs and Returns." 7 photos, 8 tables, 1 graph. The other side of no. 11 in this vol. 21

July, 1974 (Vol. 22, no. 1) - Frederick W. Todd and D.M. Tobey
"Environmental Concerns and Socio-Economic Characteristics of Seasonal Home Residents in Five Maine Communities." Five widely spaced Maine communities studied to assess extent of these concerns among 'summer people.' 1 table, Bulletin 700 is a related strong study

October, 1974 (Vol. 22, no. 2) - Stephen H. Clark, Howard L. Mendall and William Sarbello
"Use of Artificial Nest Shelters in Eider Management." An effort to improve duck conditions in Penobscot Bay reported. 1 map, 3 photos, 4 tables

November, 1974 (Vol. 22, no. 3) - James H. Hunter
"A Basis for Computer Simulation of the Potato in Storage." New techniques allow new research, here begun. 3 photos, 2 graphs, 1 table

November, 1974 (Vol. 22, no. 4) - Neil H. Pelsue, Jr.
"Potatoes: Planting and Production Estimates." An effort to improve the USDA twice-yearly estimates. 7 tables. Data useful across the industry

December, 1974 (Vol. 22, no. 5) - Edward F. Johnston and Homer B. Metzger
"Labor Replacement in Potato Harvesting in Aroostook County, Maine." Impact of mechanized farming assessed. 3 graphs, 3 tables. Bulletins 549, 681, RLS, 10 (4). To some degree a response to Jim Hightower's Hard Tomatoes: Hard Times (Washington, D.C., 1972)

March, 1975 (Vol. 22, no. 6) - H.J. Murphy, M.J. Goven and J.A. Lloyd
"Small Grain Trials, 1974." Another in this series, oats, spring wheat and buckwheat were grown. 11 tables. Bulletin 576 and RLS, 17 (4), 18 (3-4), 19 (4), 20 (13), 21 (4) are predecessors

March, 1975 (Vol. 22, no. 7) - H.J. Murphy and M.J. Goven
"Effect of Fertilization on Yield and Specific Gravity of Abnaki, Katahdin, and Sioux Grown Continuously and in Two-Year Rotation." Further in their earlier reported research. N, P, K in the long range plots on new varieties. Bulletins 414, 506, 645, RLS, 7 (1), 17 (4), 20 (15) are related. 3 tables
December, 1975 (Vol. 22, no. 8) - Peggy K. Schomaker
"Consumer Buying Practices of Rural Maine Families." Useful study of habits of Maine rural families. 3 tables. Poor and Non-Poor comparisons revealing

July, 1975 (Vol. 23, no. 1) - Walter G. McIntire and Robert J. Drummond
"Field Dependence Independence and School Achievement." A study in cognitive learning theory and practice. 2 tables, bibliography

July, 1975 (Vol. 23, no. 2) - Charles E. Buck, David Montgomery and Darrell B. Pratt
"The Effect of Cooking on the Quantity of Escherichia coli in Ground Beef." Growth of the organism led to research on hamburger cooking. Rare meat increasingly dangerous. 4 graphs. See RLS, 18 also

July, 1975 (Vol. 23, no. 3) - Gleason Gray and S.S. Leach
"Equipment for Chemical Treatment of Potatoes Moving Into Storage." Better machinery developed for applications. 12 photos, 1 schematic

January, 1976 (Vol. 23, no. 4) - Bohdan M. Slabyj and Carolyn Hinkle
"Handling and Storage of Blue Mussels in Shell." An increasingly important Maine seafood analyzed for safe storage times and techniques. 3 tables, 3 graphs, bibliography. A Sea-Grant paper

"Monitoring Infectious Bursal Disease (IBD) and Antibodies by Agar Gel Precipitin (AGP): A Comparative Study." A chicken disease analyzed for impact of some treatments. Best in first few days of life. 4 tables

September, 1976 (Vol. 23, no. 6) - Louis A. Ploch
"Community Action as Community Development - A Case Study." How an eastern Maine community health center was established. A useful study. Misc. Report 238 is associated

November, 1976 (Vol. 23, no. 7) - J.P. Linnane and E.A. Osgood
"Abnormally Hot, Dry Weather Apparently Causes Severe Mortality to Saratoga Spittlebug Nymphs in Maine." A serious pest in young red pine. Reports a 1975 Washington County experiment in which severe hot weather caused a dieback. Bibliography

September, 1976 (Vol. 23, no. 8) - H.J. Murphy, M.J. Goven, J.A. Lloyd and W.H. Erhardt
"Small Grain and Alternative Crop Studies." More in their varietal trials series, extended somewhat. Includes spring oats, spring wheat, winter wheat, buckwheat, rape, mustard, dry beans. 14 tables. The most recent number in the series was RLS, 22 (6)
September, 1976 (Vol. 23, no. 9) - Harold E. Young and John V. Hatton
"Chipping of Tops and Branches: A Comparison of a Drum-and-A Disk-Chipper." Another experiment in Complete Tree Work. 7 tables, 2 photos

September, 1976 (Vol. 23, no. 10) - Andrew J. Chase and Harold E. Young
"Corrugating Pulp From Puckerbrush." Another Complete Tree Work, 13 tables. Chemical Engineering brought into play. Tech. Bulls. 17, 49, 65 strongly related

September, 1976 (Vol. 23, no 11) - Sanford D. Schemnitz
"Characteristics of Maine Ruffed Grouse Drumming Sites." Why do birds drum where they do? 138 sites examined and analyzed. 2 photos, 3 tables, bibliography

September, 1976 (Vol. 23, no 12) - Sanford D. Schemnitz, Amr A. Ismail, and Francis J. Gramlich
"Effectiveness of Methiocarb for Repelling Birds in Central Maine Lowbush Blueberry Fields." No impact at all. 3 tables, photo. RLS, 21 (12), Tech. Bull. 70 are predecessor work

September, 1976 (Vol. 23, no. 13) - Arthur G. Randall
"Natural Regeneration in Two Spruce-Fir Clearcuts in Eastern Maine." More studies on the effect of clear-cutting. 6 tables, 1 graph. Follow-up research to Misc. Pub. 675 and RLS, 21 (8)

September, 1976 (Vol. 23, no 14) - J.N. Sasser, F.E. Manzer, M.T. Hilborn and P.N. Mosher
"Plant Parasitic Nematode Populations in Maine." Follow-up to earlier studies in Maine (1956-8) and (1969). Latter unpublished. Increases noted as alternative crops play a role. New Jersey Bulletin 795 the main predecessor work

February, 1977 (Vol. 24, nos. 1-2) - R.W. Gerry, H.E. Young, W.P. Apgar, and H.C. Dickey
"MUKA Feeding Trials with Maine Farm Livestock." 2 studies of feeding forest foliage (Muka). The first to broilers (3 tables) reports taste tests also. The second study was on sheep. Here digestibility was a factor. 3 tables

January, 1977 (Vol. 24, no 3) - S.D. Schemnitz
"Spectrographic Analysis of Mineral Elements in Deer and Moose Hair from Maine." Al, Cu, and P levels vary widely in deer from different sections of Maine. Deer levels higher than Moose. Content also varies by location on the animal. 3 tables, map, bibliography

March, 1977 (Vol. 24, no. 4) - Marc J. Linit and Fred B. Knight
"Establishment of Hybrid Poplar Cuttings and White Pine Seedlings on Abandoned Agricultural Sites." 2 plots studied in connection with a pine weevil study. 2 tables, bibliography. Soil characteristics important
March, 1977 (Vol. 24, no. 5) - R.W. Gerry, D.C. O'Meara, P.C. Harris, T.A. Bryan, and D.L. Blamberg

"Possible Sources of Marine Protein, scallop viscera fed to broilers and assessed. 2 photos, 4 tables, bibliography. A Sea Grant paper. Misc. Report no. 129 is related

September, 1977 (Vol. 24, no. 6) - Martin R. Bridgham and H.Y. Forsythe, Jr.

"Seasonal Abundance of Stages of Two Species of Blueberry Thrips." More on the life history of this blueberry pest. 4 graphs. Earlier papers appeared in Canadian Entomologist

September, 1977 (Vol. 24, no. 7) - H.J. Murphy, T. Gajewski, J.A. Lloyd and W.H. Erhardt

"Small Grain and Alternate Crop Studies, Maine, 1976." Continuation of earlier studies in this long series. Spring oats, spring wheat, winter wheat, buckwheat, spring rape, yellow mustard and dry beans all studied. 15 tables, RLS, Vol. 23 (8) was the most recent in this series

October, 1977 (Vol. 25, no. 1) - Nicholas E. Flanders and Homer B. Metzger

"Milk Delivery Route Characteristics." Part of a long range study. Route and stop characteristics assessed. 8 tables. The other parts of the research are Misc. Report 190 and Tech. Bull. no. 87

October, 1977 (Vol. 25, no. 2) - Nicholas E. Flanders and Homer B. Metzger

"Small Farms in the Eastern Coastal Area of Maine - Their Resources, Incomes, and Needs." An effort to increase incomes in small Penobscot Valley towns is reported here, and in Flanders' thesis (1977), Bulletins 713, 742, and RLS, 21 (10). 30 small farms studied from 1969 to 1974, along with interviews in 1975. 8 tables

October, 1977 (Vol. 25, no. 3) - G.M. Randall and F.H. Bird

"A Rapid and Semiquantitative Method for Determining Aflatoxin in Grain." Extractive methods associated with chromatographic analysis developed and reported here. Photo, table

December, 1977 (Vol. 25, no. 4) - John W. Malone, Ruth H. True and Elizabeth S. Barden

"Varietal Differences in Potato Mealiness as Related to Composition." Kennebec and Plymouth varieties studied. Relationship of mealiness to total solids at issue. RLS, 16 (1) related

May, 1978 (Vol. 25, no. 5) - Paul R. Hepler, John M. Smagula and Amr A. Ismail

"Frost Injury and Frost Protectants for Lowbush Blueberries." What is critical low temperature, and how can plants be protected when it is neared or reached? 28.6°F critical. No chemical treatment tested useful. 2 photos. 1 table. RLS, 21 (2), Bulletin 699 predecessor work

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April, 1979 (Vol. 26, no. 1) - Alan S. Kezis, Edward F. Johnston, R. Frederick Faunce and Vincent Vieten
"Opinions and Characteristics of Northeastern Consumers Choosing Maine or Idaho Potatoes in the Marketplace." 3500 persons randomly picked in Northeast analyzed for their preferences. 9 tables. Not much difference, but the significant factor was those with no or little preference in the NE region

May, 1979 (Vol. 26, no. 2) - F.R. Holbrook and A.F. Reeves
"Indexing Selections from the Maine Potato Breeding Program for Resistance to the Green Peach Aphid." Electronic method of isolating cultivars best for planting to resist this pest. 1 figure, 1 table

July, 1979 (Vol. 26, no. 3) - Gregory K. White, Alan S. Kezis and J. Watt Bradshaw, IV
"An Economic Analysis of Selected Solar Systems for Residential Use in Maine." 7 systems analyzed under a number of scenarios. 4 tables

August, 1979 (Vol. 26, no. 4) - R.W. Gerry, H.E. Young and R.J. Rowe
"A Second Look at Conifer MUKA in Broiler Rations." Results are not promising on a second look. 5 tables. RLS, 24 (1-2) reported earlier experiment

September, 1979 (Vol. 26, no. 5) - Deborah S. Palman and Voit B. Richens
"Effects of Interstate Highway 95 on Small Mammals in Northern Maine." Highway construction altered habitats for small mammals. This report indicates how much. 6 tables, graph, bibliography. Reports some of Palman's thesis

September, 1979 (Vol. 26, no. 6) - Craig S. Shuler and Barry J. Kotek

September, 1980 (Vol. 27, no. 1) - F.V. Muir, R.W. Gerry and R.D. Hawes
"Effect of Cage Dimension and Feeding Regimes on the Performance of Chickens Laying Brown Eggs." 3 types of cages tried without much difference except for shell damage lessened in reverse cages. 4 tables, 1 graph

September, 1981 (Vol. 28, no. 1) - Peggy K. Schomaker
"Housing Decisions for Retirement Reported by the Elderly in Maine." 230 interviews provided data useful for an increasingly older population often finding it necessary to move. 5 tables. Bibliography

September, 1982 (Vol. 29, no. 1) - Marc D. Baranowski, Gary L. Schilmoeller and Carol L. Davis
"Characteristics of Maine Adolescent Parents and Their Offspring: 1971-1980." Related year by year, by county, and age of mother, as well as Apgar scores. A very interesting and useful paper
October, 1982 (Vol. 30, no. 1) - Leonidas Tsomides, K. Elizabeth Gibbs and Daniel T. Jennings

"Species of Odonata Feeding on Lepidoptera in Spruce-Fir Forests of Maine." 14 sites studied. Species identified and some life history work provided. 1 table, 1 graph. First significant dragonfly studies in Maine since Boror's work of the 40s and 50s

September, 1985 (Vol. 31, no. 1) - Hugh J. Murphy, Leigh S. Morrow and J.A. Lloyd

"Small Grains and Alternate Crop Studies Maine (1977-1984)," 26 tables. Long term research continues

ANNUAL REPORTS

The Maine Agricultural Experiment Station has used a number of different formats to make its Annual Report. From 1889 to 1898 a standard volume report was released, with reports of research underway by the scientists involved. During this period relatively few Bulletins were issued (47 in all) so these volumes often report the equivalent of Bulletins. I have annotated them fairly heavily. From 1899 to 1909, the Annual Report was a bound volume of the Bulletins of each year, along with front matter reporting changes in station personnel, new equipment, a review of publication in the station, and by the personnel, and a history of the station. When a new building was added, or modified, a sketch or photograph of the new addition was also provided. These few pages (4-7 usually), along with the last bulletin of the year, which provided financial summaries, summaries of the meteorological information, and an index was the real Annual Report

From 1910 to 1933 the Annual Report remained the same with the addition that the Official Inspections published that year were also bound in and became part of the Annual Report. From 1933 to 1953 the Annual Report was a formal Bulletin, which I have annotated in that listing. In addition some front matter similar to that of previous years was often bound in the volume of the year's publications. From 1954 to 1969, the Annual Report, in a somewhat truncated version (no meteorology, e.g.) appears in the fall issue of Maine Farm Research, later Research in the Life Sciences. Since 1970 the Station has issued a formal Annual Report, in paper covers, with such things as photographs of the staff personnel, accounts of work underway, grants received, and a bibliography of publications. I have provided a light annotation of these volumes. (The first four reports are of the original Maine State Station. See above.)

Fifth Annual Report 1889 - (Benj. A. Burr, Bangor, 1890)


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[The first dozen or so of these annual reports are reprinted in Agriculture of Maine.]

Sixth Annual Report, 1890 - (B.A. Burr and Co., Bangor, 1891)
Fertilizer inspection, 1-16; Tests of Dairy Cows, 17-42 (with various subcomponents); L.H. Merrill, "Fat Globules of Milk," 58; F.L. Russell, "Report on Tuberculosis," 59-64; Feeding experiments, 65-78; W.L. Balentine, "Fertilizer Experiments," 79-101; Varietal Testings, 102-3; Botanist and Entomologist, 105-139; Germination, Tests of grasses, spraying experiments, potato scab, life histories of various insects; Report of the Meteorologist, 141-157; (Plates accompany many of these items.)

Seventh Annual Report, 1891 - (Chas. H. Glass and Co., Bangor, 1892)
Inspection of Fertilizers, 1-20; Station Equipment, 21-5; Digestion Experiments CXXI-CXXXV, 29-40; Food material by various fodder and root crops, 41-6; Turnips as food for sheep, 47-52; Experiment in promoting growth in lambs, 53-7; Feeding experiments with colts, 58-61; Influence of food upon butter quality, 62-9; Equipment of Horticultural Department, 81; Work outline, 82; Notes on cabbages, tomatoes, 87-93; eggplants, 93; fruit tests, 94; spraying for codling moth, 100-109; apple scab, 110-116; equipment, 119; Fertilizer Experiments, 123-153; Meteorologist, 155-174; Botany and Entomology, 179-187 (Maine weeds mostly); Entomology, 187-207, various moths and beetles (plates accompany these early life histories, etc.); F.L. Russell, "Breeding Statistics," 208-209.

Eighth Annual Report, 1892 - (Chas. H. Glass and Co., Bangor, 1893)
Fertilizer Inspection, 3-21; New Law, (Disc.); Misc. Inspections, Cattle Food, 22-7; W.M. Munson, "Preliminary Notes on the Secondary Effects of Pollen" (an important early paper in plant genetics) 29-58 (Concl., summary 56-8); Report of Horticulturist, 59-99 (cabbages, tomatoes, eggplants primarily); fruit tests, and spraying experiment are also discussed - this is by W.M. Munson also. F.L. Harvey, Report of Botanist and Entomologist, 99-146; M.C. Fernald, Report of Meteorologist, 147-170

Ninth Annual Report, 1893 - (Burleigh and Flynt, Augusta, 1894)

Tenth Annual Report, 1894 (Burleigh and Flynt, Augusta, 1895)

Eleventh Annual Report, 1895 - (Burleigh and Flynt, Augusta, 1896)

Twelfth Annual Report of the Maine Agricultural Experiment Station, 1896
- (Kennebec Journal, Augusta, 1897)

Thirteenth Annual Report of the Maine Agricultural Experiment Station, 1897
- (Kennebec Journal, Augusta, 1898)

Fourteenth Annual Report of the Maine Agricultural Experiment Station, 1898
- (Kennebec Journal, Augusta, 1899)

Fifteenth Annual Report, 1899
Consists of Bulletins 48-58

Sixteenth Annual Report, 1900
Consists of Bulletins 59-69

Seventeenth Annual Report, 1901
Consists of Bulletins 70-78

Eighteenth Annual Report, 1902
Consists of Bulletins 79-88

Nineteenth Annual Report, 1903
Consists of Bulletins, 89-99

Twentieth Annual Report, 1904
Consists of Bulletins 100-111

Twenty-First Annual Report, 1905
Consists of Bulletins 112-124

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Twenty-Second Annual Report, 1906
Consists of Bulletins 125-137

Twenty-Third Annual Report, 1907
Consists of Bulletins 138-150

Twenty-Fourth Annual Report, 1908
Consists of Bulletins 151-163

Twenty-Fifth Annual Report, 1909
Consists of Bulletins 164-175

Twenty-Sixth Annual Report, 1910
Consists of Bulletins 176-186 and Official Inspections 19-28

Twenty-Seventh Annual Report, 1911
Consists of Bulletins 187-197 and Official Inspections 29-35

Twenty-Eighth Annual Report, 1912
Consists of Bulletins 198-208 and Official Inspections 36-45

Twenty-Ninth Annual Report, 1913
Consists of Bulletins 209-222 and Official Inspections 46-55

Thirtieth Annual Report, 1914
Consists of Bulletins 223-234 and Official Inspections 56-66

Thirty-First Annual Report, 1915
Consists of Bulletins 235-245 and Official Inspections 67-74

Thirty-Second Annual Report, 1916
Consists of Bulletins 246-257 and Official Inspections 75-80

Thirty-Third Annual Report, 1917
Consists of Bulletins 258-268 and Official Inspections 81-5

Thirty-Fourth Annual Report, 1918
Consists of Bulletins 269-275 and Official Inspections 86-90

Thirty-Fifth Annual Report, 1919
Consists of Bulletins 276-284 and Official Inspections 91-4

Thirty-Sixth Annual Report, 1920
Consists of Bulletins 285-295 and Official Inspections 95-8

Thirty-Seventh Annual Report, 1921
Consists of Bulletins 296-304 and Official Inspections 99-102

Thirty-Eighth Annual Report, 1922
Consists of Bulletins 305-309 and Official Inspections 103-106
MAINE AGRICULTURAL EXPERIMENT STATION BULLETIN 808

Thirty-Ninth Annual Report, 1923
Consists of Bulletins 310-315 and Official Inspections 107-110

Fortieth Annual Report, 1924
Consists of Bulletins 316-321 and Official Inspections 111-114

Forty-First Annual Report, 1925
Consists of Bulletins 322-8 and Official Inspections 115-8. Also contains obituary for Charles D. Woods

Forty-Second Annual Report, 1926
Consists of Bulletins 329-335 and Official Inspections 119-122

Forty-Third Annual Report, 1927
Consists of Bulletins 336-342 and Official Inspections 123-126

Forty-Fourth Annual Report, 1928
Consists of Bulletins 343-349 and Official Inspections 127-130

Forty-Fifth Annual Report, 1929
Consists of Bulletins 350-3 and Official Inspections 131-4

Forty-Sixth Annual Report, 1930
Consists of Bulletins 354-357 and Official Inspections 135-8

Forty-Seventh Annual Report, 1931
Consists of Bulletins 358-360 and Official Inspections 139-142. Also contains an obituary for Warner J. Morse. Bulletin 360 is the first of year-end Bulletin Ann. Reports.

Forty-Eighth Annual Report, 1932
Consists of Bulletins 361-3 and Official Inspections 143-6. Also contains obituary for Whitman H. Jordan. Bulletin 363 is the Annual Report to all intents and purposes

Forty-Ninth Annual Report, 1933
Consists of Bulletins 364-9 and Official Inspections 147-150. By this time the last bulletin of the year is a summary of year's work and becomes the Annual Report, although the fiction that all bulletins are part of it remains for a time. Bulletin 369 is the Annual Report.

Fiftieth Annual Report, 1934
Bulletin 377; Official Inspections 151-4

Fifty-First Annual Report, 1935
Bulletin 380; Official Inspections 155-8; Obituary of James Monroe Bartlett appears in front of volume

Fifty-Second Annual Report, 1936
Bulletin 384; Official Inspections 159-162

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Fifty-Third Annual Report, 1937
    Bulletin 387; Official Inspections 163-4

Fifty-Fourth Annual Report, 1938
    Bulletin 391; Official Inspections 165-167

Fifty-Fifth Annual Report, 1939
    Bulletin 397; Official Inspections, 168-171

Fifty-Sixth Annual Report, 1940
    Bulletin 400; Official Inspections 172-5

Fifty-Seven Annual Report, 1941
    Bulletin 405; Official Inspections 176-9

Fifty-Eighth Annual Report, 1942
    Bulletin 411; Official Inspections 180-3

Fifty-Ninth Annual Report, 1943
    Bulletin 420; Official Inspections 184-7

Sixtieth Annual Report, 1944
    Bulletin 426; Official Inspections 188-191

Sixty-First Annual Report, 1945
    Bulletin 438; Inspections are now bound separately

Sixty-Second Annual Report, 1946
    Bulletin 442

Sixty-Third Annual Report, 1947
    Bulletin 449

Sixty-Fourth Annual Report, 1948
    Bulletin 460

Sixty-Fifth Annual Report, 1949
    Bulletin 473

Sixty-Sixth Annual Report, 1950
    Bulletin 483

Sixty-Seven Annual Report, 1951
    Bulletin 491

Sixty-Eighth Annual Report
    Consists of Bulletins 492-503 and Miscellaneous Publication 620.
    There is also a summary Bulletin which is listed as the next item.
    Some confusion of numbering occurred here.
Sixty-Eighth Annual Report, 1953  
Bulletin 519

Sixty-Ninth Annual Report, October, 1953  
Maine Farm Research, Vol. 1, no. 3

Seventieth Annual Report, October, 1954  
Maine Farm Research, Vol. 2, no. 3

Seventy-First Annual Report, October, 1955  
Maine Farm Research, Vol. 3, no. 3

Seventy-Second Annual Report, October, 1956  
Maine Farm Research, Vol. 4, no. 3

Seventy-Third Annual Report, October, 1957  
Maine Farm Research, Vol. 5, no. 3

Seventy-Fourth Annual Report, October, 1958  
Maine Farm Research, Vol. 6, no. 3

Seventy-Fifth Annual Report, October, 1959  
Maine Farm Research, Vol. 7, no. 3

Seventh-Sixth Annual Report, October, 1960  
Maine Farm Research, Vol. 8, no. 3

Seventy-Seventh Annual Report, October, 1961  
Maine Farm Research, Vol. 9, no. 3

Seventy-Eighth Annual Report, July-October, 1962  
Maine Farm Research, Vol. 10, no. 2-3

Seventy-Ninth Annual Report, October, 1963  
Maine Farm Research, Vol. 11, no. 3

Eightieth Annual Report, October, 1964  
Maine Farm Research, Vol. 12, no. 3

Eighty-First Annual Report, October, 1965  
Maine Farm Research, Vol. 13, no. 3

Eighty-Second Annual Report, October, 1966  
Maine Farm Research, Vol. 14, no. 3

Eighty-Third Annual Report, October, 1967  
Maine Farm Research, Vol. 15, no. 3

Eighty-Fourth Annual Report, Fall, 1968  
Research in the Life Sciences, Vol. 16, no. 3

Eighty-Fifth Annual Report, Fall, 1969  
Research in the Life Sciences, Vol. 17, no. 3
Eighty-Sixth Annual Report, M.A.E.S., 1970 (77 pps.)
The first of the modern series of Ann. Reports. Projects are summarized by the investigators. Research falls under the general areas of:
1) Conservation, Development and Use of Natural Resources (21 projects);
2) Protection of Man, Plants and Animals from Damage or Discomfort Caused by Insects, Disease, Parasites, Weeds and Other Hazards (25);
3) Efficient Production and Quality Improvement of Food and Forest Commodities (37);
4) Efficient Marketing, Including Pricing and Quality of Food and Forest Commodities (12);
5) Improvement of Human Nutrition and Consumer Satisfaction (5);
6) Development of Human Resources and Economies of Communities, Areas and Nations (6). The staff is listed and their publications included 44 scientific papers and 23 abstracts. Financial information occurs on the last page.

Eighty-Seventh Annual Report, M.A.E.S., 1971 (46 pps.)
Again projects are summarized by the investigators and are broken down into areas within the report itself. 1) Conservation development and use of Natural Resources (16). The Report gives emphasis to Harold Young's work on The Complete Tree. 12 journal articles and abstracts came from this group. 2) Protection of Man, Plants and Animals from Damage or Discomfort Caused by Insects, Disease, Parasites, Weeds or Other Hazards. 20 projects. The featured project analyzed the Impact of DDT on Forest Ecosystems, by J.B. Dimond, R.B. Owen and A.S. Getchell. 15 publications. 3. Efficient Production and Quality Improvement of Food and Forest Commodities. 39 projects are listed and the work of R.V. Akeley on Potato Varieties and Breeding Research is featured. 26 articles are cited. 4. Product Development and Testing. Six projects are mentioned. The featured one is on Maine Wood Properties and Grades for Product Utilization by J.E. Shottafer, T.J. Corcoran and C.E. Shuler. (2 articles). 5. Efficient Marketing, Including Pricing and Quality of Food and Forest Commodities. 8 projects as well as the regional project of W.C. Dunham, Market Structure of the Fishing Industry in Maine and the Northeast. 6. Improvement of Human Nutrition and Consumer Satisfaction. 4 projects and the featured one is Utilization of Amino Acids from Protein with the investigators R.A. Cook, F.A. Radke, and H. DeHaas. (2 publications.). 7. Development of Human Resources and Economies of Communities, Areas and Nations. 3 projects, with L.A. Ploch, Paths Out of Poverty, the central one. In addition the report lists staff, granting agencies, and an addendum of 6 papers presented in the previous year. Financial information also appears.

Eighty-Eighth Annual Report, M.A.E.S., 1972 (43 pps.)
This report is very similar to the two previous with projects listed by groups, featuring one in each group. In addition the report carries lists of staff, granting agencies, financial agencies. An addendum was provided after the first printing correcting an omission. 1. Conservation, Development and Use of Natural Resources. 14 projects. Features R.A. Struchtemeyer's Investigation Into the Physical Properties of Maine Soils. 14 papers are cited. 2. Protection of Man, Plants, and Animals from Damage or Discomfort Caused by Insects, Disease, Parasites, Weeds and Other Hazards. 28 projects, featuring work on.
Green Peach Aphid Control by Various Means from G.W. Simpson, F.R. Holbrook and R.S. Soper. 26 papers, and many by the Simpson, Shands et al. team working on aphids and potato disease. 3. Efficient Production and Quality Improvement of Food and Forest Commodities. 44 projects, and the featured work was that of J. Lerner on Amino Acid Binding Sites in Chicken Intestinal Epithelial Cells. 31 papers. 4. Product Development and Testing. 5 projects, and the featured one is N.P. Kutsha, Anatomy and Fundamental Properties of Maine Woods. (4 papers). 5. Efficient Marketing, Including Pricing and Quality of Food and Forest Commodities. 6 projects, with the featured one being E. Murphy and W.C. Stiles on Post-Harvest Physiology of Apples. 1 paper. 6. Improvement of Human Nutrition and Consumer Satisfaction. 5 projects. The featured one is E.F. Murphy, Effect of Nutritional Levels, Chemical Characteristics and Certain Additives on Maine Foods Quality. (2 papers). 7. Development of Human Resources and Economics of Communities, Areas, and Nations. 6 projects, with J. Delphendahl, Processes of Rural Economic Change in the Northeast being featured. (3 papers).

Eighty-Ninth Annual Report, M.A.E.S., 1973 (31 pps.)

Ninetieth Annual Report, M.A.E.S., 1974 (29 pps.)
This report is back to the smaller format. It lists the staff, research projects (120), papers (123, including abstracts), the financial statement, and a listing of the granting agencies.

Ninety-First Annual Report, M.A.E.S., 1975 (60 pps.)
Back to the larger format, this report is a valuable and unique item in this series. It was issued to celebrate the centenary of experiment stations in the United States, as the first one opened its doors in 1875. It provided photographs of all the directors, many of the more famous scientists, a brief history of the Maine station, samples of published work, and research in progress, a view of the outlying farms as well as the usual listings of research projects (123), staff, finances, granting agencies, and publications (140, including abstracts).

Ninety-Second Annual Report, M.A.E.S., 1976 (49 pps)
Still in the larger size, this report is similar in format to the 89th Report (1973). It lists departments and provides an opportunity for each of them to summarize their work briefly with photographic treatment. 1. Agricultural Engineering; 2. Agricultural and Resource
Economics; 3. Animal and Veterinary Sciences; 4. Biochemistry; 5. Botany and Plant Pathology; 6. Entomology; 7. Food Science; 8. School of Forest Resources; 9. School of Human Development; 10. Microbiology; 11. Plant and Soil Sciences; 12. Experimental farms. These reports are more detailed as to questions being investigated than in some years. Staff is listed, as are research projects (157), and publications (144). Granting agencies and the financial statement complete the report.

Ninety-Third Annual Report, M.A.E.S., 1977 (46 pps.)
The report returned to the smaller format. Photographs of the central administrative staff appeared in the beginning. A summary review of progress of the fiscal year's projects was a central feature, along with brief biographies of retiring staff. The regular staff was listed, as were research projects (by research area). In both this and the previous report the large number of regional projects indicated the changing nature of modern research. 128 projects were listed along with 114 articles, and 21 chapters in books. 71 abstracts were also listed. Granting agencies were listed, along with the usual financial statement.

Ninety-Fourth Annual Report, M.A.E.S., 1978 (45 pps.)
Another return to the larger format. Again the departments were given space to summarize their work, heavily illustrated. 1. Agricultural Engineering; 2. Agricultural and Resource Economics; 3. Animal and Veterinary Sciences; 4. Biochemistry; 5. Botany and Plant Pathology; 6. Entomology; 7. Food Science; 8. School of Forest Resources; 9. School of Human Development; 10. Microbiology; 11. Plant and Soil Sciences. Three retirees received brief biographies. The staff was listed, as were projects (120). Articles (99), a book, 6 portions of books, and 77 abstracts were listed. A list of granting agencies and the financial statement completed the report.

Ninety-Fifth Annual Report, M.A.E.S., 1979 (46 pps.)
Still in the large format, this report falls into the general category of this time. It lists the departments, with a place for each to report its work, again heavily illustrated. The same eleven report their work. Retirements are given space with a brief biography. The staff is listed, along with their work (109 projects, 112 articles, 8 chapters in books, and 53 abstracts). A grant listing, along with the traditional financial summary also appears in the report.

Ninety-Sixth Annual Report, M.A.E.S., 1980 (62 pps.)
Still the large format. The eleven departments are given their usual space and photographs, although this year's reports are more detailed by crops, and subjects under investigation. Retirements are noticed, and the staff is listed. Research projects numbered 113. Published research included the following: 125 articles, 19 portions of books, and 57 abstracts. Grant listing was as usual, along with a summary of the financial statement of the M.A.E.S.
Ninety-Seventh Annual Report, M.A.E.S., 1981 (54 pages)

Ninety-Eighth Annual Report, M.A.E.S., 1982 (68 pages)
Ninety-Ninth Annual Report, M.A.E.S., 1982-83

One Hundredth Annual Report, M.A.E.S., 1983-84
Features short history of station, along with important dates in station history, by this author. Includes as well brief histories of each farm unit, and biographical data on all current staff, as well as all scientists with at least a decade of service since the founding. All Directors are listed with biographical data, and all department heads with their inclusive dates of service. Contains many photographs, along with data on constituent departments, current research, research projects by title, publication data, grant support and a summary of the budget.

MISCELLANEOUS PUBLICATIONS
This series was conceived in the spring of 1897 as a way in which the station could be responsive to queries posed by farmers, the press, or other interested observers. Station scientists knew they had a responsibility to provide the results of their research when it was needed. At the same time, they were aware that in many matters, the returns were not in, so judgements were relative, temporary, and tentative. Over time the series has always had as its basis the desire to impart knowledge, usually in a brief form. And, although brief has been stretched several times to include fairly large publications, the series, still going, has met its goals. No absolutely complete set exists, although I have seen all but a half dozen or so of the items which have a miscellaneous publications number. The best collection of them in existence now is in Government Documents Room, Fogler Library, University of Maine, both in the original, and many are on film as well. I have provided a very light annotation, noting authorship when known, and indicating page numbers when more than one page was used. In the latter part of the series the annotations are somewhat greater as publications were of a slightly different nature at times. Most of them were one page, or at most, two, and were provided for the agricultural press or for use in responding to specific requests for information.
MAINE AGRICULTURAL EXPERIMENT STATION BULLETIN 808

1. Japanese Millett - March 26, 1897
2. Giant Knotweed or Sachaline - April 3, 1897
3. Announcement - The Aim of the Station, 2 pps.
4. Newspaper Notice Bulletin 34 - Box Experiments with Phosphates
6. Special Fertilizer Bulletin, April 12, 1897, 4 pps.
7. Brands of Fertilizer Which Can Be Legally Sold in Maine
8. The Shot-Borer, or Pear Blight Beetle - June 26, 1897
9. A New Weed and A Bad One: The King-Devil Weed - July 2, 1897
11. Cotton Seed Meals - October 29, 1897
12. Newspaper Notice Bulletin 38 - The Inspection of Fertilizers, 1897
15. Newspaper Notice Bulletin 41 - Dehorning Cattle
16. Weather for January, 1898
17. Newspaper Notice Bulletin 42 - Ornamental Home Grounds
18. Weather for February, 1898
20. Gratuitous Analysis of Agricultural Seeds by Maine Agricultural Experiment Station: Field Day at University of Maine and Experiment Station - April 2, 1898
21. Weather for March, 1898
22. Weather for April, 1898
23. Newspaper Notice for Bulletin 44 - Inspection of Feeding Stuffs, 1898
24. Weather for May, 1898

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25. Potato Blight Can Be Prevented - June 29, 1898
26. Weather for June, 1898
27. Weather for July, 1898
28. Directions for Spraying Potatoes for Blight, 4 pps
29. Newspaper Notice for Annual Report, 1897
30. Weather for August, 1898
31. Weather for September, 1898
32. Newspaper Notice for Bulletin 45 - Inspection of Fertilizers
33. Weather for October, 1898
34. Weather for November, 1898
35. Newspaper Notice Bulletin 46 - Ornamental Plants for Maine
36. Weather for December, 1898
37. Newspaper Notice for Bulletins 47 & 48 - Concentrated Feeding Stuffs Sold in Maine, Fertilizer Sold in Maine - January, 1899
38. Weather for January, 1899
39. Poster - Free Analysis of Feeding Stuffs
40. Cotton Seed Meal: Is It Adulterated?
41. Newspaper Notice Bulletin 49 - Care of Orchards
42. Sea Manures - March 4, 1899
43. Weather for February, 1899
44. Newspaper Notice for Bulletin 50 - Inspection of Fertilizers
45. Formalin Once More as a Milk Preservative - March 31, 1899
46. Weather for March, 1899
47. Weather for April, 1899
50. Condensed Directions for Spraying the Apple, 4 pps
51. Field Day Postponed - Scarlet Fever - May 23, 1899
52. Weather for May, 1899
53. Cucumber Blight - June 22, 1899
54. Condensed Directions for Spraying the Potato, 4 pps
55. Poster - Spraying Potatoes for Blight - June, 1899
56. Weather for June, 1899
57. A Newspaper Report Calling Attention to Misc. Pub. #50
58. Weather for July, 1899
59. Weather for August, 1899
60. Newspaper Notice of Annual Report, 1898
61. Weather for September, 1898
63. Weather for October, 1899
64. Weather for November, 1899
65. Newspaper Notice of Bulletin 54 - Nuts for Food
66. Weather for December, 1899
68. Inspection of Feeding Stuffs - A Few Kinds Not Up to Guarantee
69. Newspaper Notice of Bulletin 55 - Cereal Breakfast Foods
70. Weather for January, 1900
71. Newspaper Notice of Bulletin 56 - Apple Insects of Maine
72. Adulterated Beans and Mixed Feeds
73. Newspaper Notice of Bulletin 57 - Experiments with Potatoes
74. Weather for February, 1900
75. Newspaper Notice for Bulletins 59-60 - Commercial Feeding Stuffs; Spring Fertilizer Bulletins
MAINE AGRICULTURAL EXPERIMENT STATION BULLETIN 808

76. Weather for February, 1900
77. Newspaper Notice for Bulletin 61 - Notes on Insects and Plants
78. College and Station Institutes- April 20, 1900
79. Newspaper Notice Bulletins 62-63 - What the Station is and What it Does; Feeding Stuffs Sold in Maine
80. Weather for April, 1900
81. Weather for May, 1900
82. How to Fight Cucumber Enemies, 4 pps
83. Newspaper Notice of Bulletin 64 - Poultry Experiments
84. Newspaper Notice of Bulletin 65 - Coffee Substitutes
85. The Destructive Green Pea Louse - July 2, 1900
86. Weather for June, 1900
87. Weather for July, 1900
88. Newspaper Notice for Bulletin 66 - Inspection of Fertilizers
89. Weather for August, 1900
90. Weather for September, 1900
91. Newspaper Notice Bulletin 68 - Potato Bug - Insecticides
92. Weather for October, 1900
93. Potash as a Sulphate in Potato Fertilizers - November 28, 1900
94. Weather for November, 1900
95. Concentrated Feeding Stuffs - December 29, 1900
96. Weather for December, 1900
97. Newspaper Notice Bulletin 70 - Oats as Grain and Fodder
98. Weather for January, 1901
100. Weather for February, 1901
101. Inspection of Fertilizers (Delay of Spring Bulletin)
102. Weather for March, 1901
103. Newspaper Notice for Bulletin 72 - Spring Fertilizer Bulletin
104. Addenda to Bulletin No. 72 - One Company's Fertilizers Analyzed Late - April 5, 1901
105. Weather for April, 1901
106. Newspaper Notice for Bulletin 73 - Experiments with Fungicides Upon Potatoes in 1900
107. Weather for May, 1901
108. Newspaper Notice Bulletin 74 - Manurial Value of Ashes, Muck, Seaweed, and Bone
109. Weather for June, 1901
110. The Colorado Potato Beetle - July 15, 1901
111. Weather for July, 1901
112. Newspaper Notice Bulletin 75 - Analysis of Miscellaneous Food Materials
113. Weather for August, 1901
114. Weather for September, 1901
115. Feeding Stuffs Inspection Law. Low Grade Cotton Seed Meal - September 24, 1901
116. The Chinch Bug - December 29, 1901
117. Newspaper Notice Bulletin 77 - The Inspection of Fertilizers
118. Weather for October, 1901
119. Weather for November, 1901
120. Weather for December, 1901
121. Newspaper Notice for Bulletin 79 - Poultry Experiments at the Station
122. Weather for January, 1902
123. Weather for February, 1902
124. Newspaper Notice for Bulletins 80-81 - Analyses of Commercial Feeding Stuffs; Spring Fertilizer Bulletin

125. Weather for March, 1902

126. Agricultural Reports - April 2, 1902 (Duplicates from everywhere wanted)

127. Home Nature Study Courses - April 3, 1902 (The availability of a Cornell University program)

128. Weather for April, 1902

129. Newspaper Notice for Bulletin 82 - Apple Orchard Notes

130. Weather for May, 1902

131. Kno-Bug - June 27, 1902 (Another Insecticide Fraud.)

132. Weather for June, 1902

133. Newspaper Notice Bulletin 84 - Cereal Breakfast Foods

134. Weather for July, 1902

135. Weather for August, 1902

136. Fresh Fish as Manure

137. The Angora Goat: Experiences of the MAES - September 15, 1902

138. The Management of Raspberries and Blackberries, by W.M. Munson

139. Weather for September, 1902

140. Apples and Plums for Central Maine

141. Weather for October, 1902

142. Experiments with Insecticides - Average Yield Per Acre of Merchantable Potatoes - November 7, 1902

143. Newspaper Notice Bulletin 85 - The Inspection of Fertilizers

144. Experiments with Clover at Maine Experiment Station - November 22, 1902

145. Weather for November, 1902

146. Low Grade Cotton Seed Meal - December 10, 1902

147. Weather for December, 1902
MAINE AGRICULTURAL EXPERIMENT STATION BULLETIN 808

148. Newspaper Notice Bulletin 87 - Potato Insecticides and Fungicides in 1902: Oat Smut and Its Prevention

149. The Law Regulating the Sale of Feeding Stuffs - Text of Pending Law

150. Newspaper Notice Bulletin 90 - Analyses of Commercial Feeding Stuffs

151. Newspaper Notice Bulletin 89 - Experiments in Orchard Culture

152. Experiments with Poultry at Maine Experiment Station (Next Year's Work)

153. Horticultural Experiments at Maine Experiment Station (Next Year's Work)

154. Feeding Stuffs Law of Maine, 4 pps. - April, 1903

155. How to Fight Potato Enemies, 6 pps

156. Oat Smut and Its Prevention, 4 pps

157. Field Experiments at the Maine Experiment Station (Next Year's Work)

158. Fertilizer for Mangolds - May, 1903 (27 years of experiments at Rothamstead)

159. Newspaper Notice of Bulletin 99 - The Chinch Bug in Maine

160. Experiments with Sheep at the Maine Experiment Station (Next Year's Work)

161. Forage Crops to Supplement Summer Pasture and Winter Hay - June, 1903

162. Newspaper Notice Bulletin 92 - Analyses of Commercial Feeding Stuffs

163. Suggestions Regarding Insecticides - July 3, 1903

164. Poor "Star Brand" Cotton Seed Meal - August 12, 1903

164. Newspaper Notice Bulletin 93 - Poultry Experiments at Maine Agricultural Experiment Station (Two # 164s)

165. Newspaper Notice Bulletin 94 - Inspection of Fertilizers

166. Newspaper Notice Bulletin 95 - Dandelion, Hawkweed, Ginseng, Canker Worm

167. Not Printed

168. Not Printed

169. Not Printed

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MAINE AGRICULTURAL EXPERIMENT STATION BULLETIN 808

170. Laws Regulating Sale of Commercial Fertilizers, Feeding Stuffs and Seeds, 8 pps

171. Special Course in Horticulture and Poultry Management

172. A Potato Fertilizer

173. Re-topping Sweet Apple Trees

174. Mulching for Apple Trees and Gooseberries

175. Has the Station Been of Service to the Agriculture of Maine?, 4 pps

176. House of Representatives Special Appropriation for Experiment Stations Introduced

177. Commercial Feeding Stuffs and Fertilizers


179. The Preservation of Hen Manure - March, 1904


182. List of Bulletins in 1903

183. How to Fight Apple Enemies, by W.M. Munson, 8 pps

184. Letter regarding the Bulletin Forthcoming on Poultry Management. Do You Wish Advance Sheets? The Table of Contents enclosed


186. Testing Vitality of Seeds

187. Newspaper Notice Bulletin 100 - Poultry Management at the Maine Station

188. Dedication Exercises at Holmes Hall

189. Horticultural Experiments at the MAES (For the Coming Year)

190. Entomology at the MAES - Announces appointment of Edith Patch - May, 1904

191. Field Days at MAES

192. Directions for Sampling Fertilizers

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<td>Oat Smut and Its Prevention, 4 pps. A reprint of Misc. Pub. # 156</td>
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<td>The Brown-Tail Moth (8 pps., photo.) by Edith M. Patch - December, 1904</td>
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<td>Why a Brown-Tail Moth Siege Would be More Serious than Past Caterpillar Invasions - January, 1905</td>
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<td>Letter to Grange Master on Brown-Tail Moth Materials</td>
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<td>The Brown-Tail Moth - February 7, 1905 (extension of range)</td>
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<td>The Cottony Grass Scale, by Edith M. Patch, 3 pps. - February, 1905</td>
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216. Newspaper Bulletin 113 - Practical Horticulture at the Experiment Station

217. Alfalfa: Directions for Culture

218. Inspection Laws of Maine (16 pps.)


220. Form for Describing Seed Samples and Directions for Sampling Seeds

221. Newspaper Notice Bulletin 115 - Analysis of Commercial Feeding Stuffs

222. Spraying for the Brown Tail Moth

223. Concerning Insects for Identification

224. Newspaper Notice Bulletin 116 - Inspection of Food

225. Newspaper Notice Bulletin 117 - Poultry Experiments

226. Newspaper Notice Bulletin 118 - Cereal Foods

227. Form for Reporting Alfalfa Experiments

228. Newspaper Notice Bulletin 119 - Food Inspections, Baking Powders and Vinegar

229. Newspaper Notice Bulletin 120 - Inspection of Fertilizer

230. Manufacturers' Certification Form

231. Wire Worms in Potato Fields

232. Newspaper Notice Bulletin 121 - The Cottony Grass Scale

233. Newspaper Notice Bulletin 122 - Experiments in Orchard Culture

234. Newspaper Notice Bulletin 123 - Insect Notes for 1905

235. Newspaper Notice Bulletin 125 - Seed Inspection

236. Newspaper Notice Bulletin 126 - Field Experiments in 1905 (in some detail)

237. List of Bulletins 1903, 1904, 1905

238. Form for Fertilizer Analysis


240. Newspaper Notice Bulletin 128 - Orchard Notes - April, 1906
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242. Modified Hoard Stall for Cows (4 pps.)

243. Potato Scab

244. Newspaper Notice Bulletin 129 - Analysis Commercial Feeding Stuffs

245. Newspaper Notice Bulletin 130 - Poultry Experiments

246. White Grubs and June Beetles, 4 pps. - July, 1906. Most of these papers feature a brief life history, and either a photo or sketches of the animal

247. Red-Humped Caterpillar, 2 pps

248. Sample Descriptive Form for Aphidae

249. The Yellow-Edge or Mourning Cloak Butterfly, 4 pps

250. Elm Leaf Curl, 3 pps

251. Yellow Necked Caterpillar, 3 pps

252. Plant Diseases

253. Cecropia Moth, 3 pps

254. Tent Caterpillar, 4 pps

255. Tussock Moths, 4 pps - October, 1906

256. Newspaper Notice Bulletin 131 - Indian Corn as Food for Man

257. Brown Tail Moth, 4 pps. - November, 1906

258. Letter on Vinegar - November, 1908

259. Food Inspections - Requirements for Vinegars, 2 pps

260. Newspaper Notice Bulletin 132 - Plant Breeding and Pomology

261. Foods, Feeding Stuffs, Seeds and Fertilizers, 2 pps - December, 1906

262. Gypsy Moth, 2 pps

263. Newspaper Notice Bulletin 134 - Fertilizer Inspection


266. Bulletins Published 1903 to 1906
267. Newspaper Notice Bulletin 138 - Seed Inspection
268. Newspaper Notice Bulletin 139 - Orchard Notes
269. Breeding Stock and Eggs - February, 1907
270. Poultry Publications
272. Newspaper Notice Bulletin 141 - Potato Scab
273. Food Inspection No. 5 (12 pps.) - April, 1907
274. Laws Regulating Foods and Drugs, 20 pps
275. The Farmer and the Seed Law
276. Apple Maggot or Railroad Worm, 4 pps
277. The Quality of Grass Seed - May 4, 1907
278. Newspaper Notice Bulletin 142 - Analysis of Commercial Feeding Stuffs
279. Card to Revise Mailing List
280. Newspaper Notice Bulletin 143 - Seedling Apples of Maine
281. Newspaper Notice Bulletin 144 - Poultry Experiments
282. Food Inspection No. 6 - Samples
283. Food Inspection No. 7 - Syrup Analysis
284. To Handler of Cotton Seed Meal in Carload Lots - October, 1907
285. A Written Guarantee to Dealers Safeguard. Maine Food and Drug # 11, 2 pps
286. Free Analysis of Feeding Stuffs
287. Newspaper Notice Bulletin 145 - Food Inspection in Maine
288. Food Inspection in Maine No. 10. Labelling Soda Water, 2 pps
289. Notice to Druggists. Maine Food Inspection No. 11
290. Newspaper Notice Bulletin 146 - Inspection of Fertilizers
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291. Bud Moth, 2 pps
292. Turnus or Swallowtail Butterfly, 3 pps
293. Sphinx Chersis and other Hawk Moths, 4 pps
294. Fall Web Worm, 2 pps - November, 1907
295. Luna Moth, 3 pps
296. Hickory Tiger Moth - Spotted Tiger Moth, 2 pps
297. Plum Curculio, 6 pps - November, 1907
298. Polyphemus
299. Cherry Tree Ugly Nest, 2 pps
300. Io Moth
301. Newspaper Notice Bulletin 147 - The Potato Plant Louse
303. Newspaper Notice Bulletin 149 - Potato Diseases in 1907 - January, 1908
304. List of Publications in 1907
305. To Dealers in Agricultural Seeds in Maine - February, 1908
306. Food and Drug No. 13. Selling Foods That Have Been Removed from Packages
307. Premium Aroostook Complete Fertilizer, 7 pps. Advance sheets. Check this Product Carefully
308. Newspaper Notice Bulletin 151 - Food and Drug Inspection in Maine
309. How to Fight Potato Enemies, 16 pps
310. Notice of USDA Bulletin and Desire to Receive More?
311. Sale of Surplus Stock from the Poultry Plant, 2 pps - March, 1908
312. Newspaper Notice of Bulletin 152 - Analyses of Seeds
These next 21 numbers are the correct titles, but I am not absolutely sure of the proper numbering as some of those I have seen were not numbered. (319, 322, 324, 327, 329, 330, 331, 333 are all correct, however)

315. Food and Drug Inspection no. 14, 4 pps
316. Forest Tent Caterpillar
317. Wild Mustard
318. Damage by the Prominent Caterpillar
319. Official Inspections no. 1, 8 pps. Various foods
320. Two Potato Diseases New to Maine
321. Newspaper Notice of Bulletin no. 155
322. Official Inspection no. 2, 8 pps. Tincture of Iodine
323. Newspaper Notice of Bulletin no. 156
324. Official Inspection no. 3, 8 pps. Various foods
325. Newspaper Notice of Bulletin 157
326. Newspaper Notice of Bulletin 158
327. The New Maine Station Trap Nest
328. Newspaper Notice of Bulletin 159
329. Official Inspection no. 4, 8 pps. Misbranding; Pickles
330. Organization and Work of the Department of Biology
331. Official Inspection no. 5, 8 pps. Labelling and Open Packages
332. Newspaper Notice of Bulletin no. 160
333. Official Inspections, no. 6, 8 pps. Various foods
334. Newspaper Notice of Bulletin 161
335. Newspaper Notice of Bulletin 162
336. Newspaper Notice of Bulletin 163
337. Poster - Potato Scab
338. Fertilizer Manufacturers' Certificate, 1909
MAINE AGRICULTURAL EXPERIMENT STATION BULLETIN 808

339. Official Inspection no. 7, 8 pps. Food and Drug Standards, carbonated beverages

340. Abstract of Bulletin 166

341. Official Inspections no. 8. Labelling, chemicals in foods, extracts, 8 pps

342. Official Inspections no. 9. Fertilizers, 16 pps

343. Notice of Hearings

344. Official Inspections no. 10. Feeding Stuffs, 28 pps

345. Crown Gall of the Apple

346. Newspaper Notice of Bulletin no. 164

347. List of Bulletins

348. Newspaper Notice of Bulletin no. 165

349. Newspaper Notice of Bulletin no. 166

350. Official Inspections no. 11. Soda, cream tartar, sweet corn, others, 12 pps

351. Newspaper Notice of Bulletin no. 167

352. How to Keep Poultry Free of Lice

353. Official Inspections no. 12. Texts of the various laws, 20 pps (printed as # 352)

354. Newspaper Notice of Misc. Pub. # 353

355. Deformed Apples in Maine

356. Not Printed

357. Official Inspections no. 13. Coffee, gelatine, honey, 8 pps

358. Official Inspections no. 14. Full text of Maine Food and Drug Law, recently amended, 40 pps

359. Tiger Moths and Woolly Bear Caterpillars

360. Seed Letter

361. Official Inspections no. 15. Sale of Apples; various rotations described, 12 pps

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362. Poster - Field Day at Highmoor Farm

363. Abstract of Bulletin 168 - Data on Certain Factors Influencing the Fertilization and Hatching of Eggs

364. Not Printed

365. Official Inspections no. 16. Various foods, jam, jellies, etc. 12 pps

366. Form for Dispatching Seed Samples

367. Newspaper Notice of Bulletin no. 169

368. Official Inspections no. 17. Seed inspection, 16 pps

369. Poultry Work of the Station, 12 pps

370. Official Inspections no. 18. Drug analyses, 12 pps

371. Blackleg and Bacterial Disease of Potatoes, 1910

372. Not Printed

373. List of Publications, 1909

374. Official Inspections no. 17. Seed inspection, 16 pps

375. Certain Diseases of Maine Potatoes and Their Relationships to the Seed Trade, 12 pps

376. Seed Potatoes and Late Blight

377. Home-Mixed Fertilizers, 20 pps

378. Oyster-Shell Bark Louse (Two Scale Insects of Maine)

379. Organic Ammoniates and Mixed Fertilizers

380. Insect Notes, 1909

381. Invitation to the Anniversary Exercises

382. Entomological Papers from the M.A.E.S., 16 pps

383. Apple Tree Insects of Maine - June, 1910, by Edith M. Patch and O.A. Johannsen, 76 pps

384. Organization of the Station

385. Exercises at the Twenty-Fifth Anniversary of the Establishment of the Station, 24 pps

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386. Plant Diseases
387. Maine Seed Potatoes
388. Experiments at Highmoor Farm
389. Apple Tree Insects. This is practically identical to "Apple Tree Enemies of Maine," in Agriculture of Maine, 1910, pp. 324-378 plus 55 figures by O.A. Johannsen, W.J. Morse, E.M. Patch, and C.D. Woods
390. Newspaper Notice of Bulletin 179 - Poultry Notes
391. List of Bulletins 1903 to 1908 - September, 1910
392. Sweet Corn Culture and Breeding. Newspaper Notice of Misc. Pub. # 393
393. Practical Suggestions Regarding the Growing of Sweet Corn for Breeding and for Seed, 8 pps. - October, 1910
395. Placard - Visitors to the Poultry Yards. (Rules of Behaviour)
396. Cover Sheet for Papers from the Biological Laboratory - Exchanges
397. Seed Potatoes, Oats and Corn, 4 pps
398. Poultry Diseases, 216 pps
399. Notice of Bulletin No. 185. Maine Apple Diseases - December, 1910. This is reprinted in Agriculture of Maine, 1910, pps. 379-440
400. Exchanges Cover Sheet for Plant Pathology
401. Four Insect Pests, 24 pps. The Typhoid Fly and Its Allies, by O.A. Johannsen; Flea Beetles and Early Blight. Plant Louse of the Apple in Maine, by Edith M. Patch, pps. 14-22; Cut Worm in Maine
402. Suggestions for Woodlot Owners in Maine, 28 pps., by John M. Briscoe
403. Newspaper Notice of Misc. Publ. #402 - January, 1911
404. Seed Testing Blank Form
405. List of Principal Publications in 1910
406. The Typhoid Fly and Its Allies, 8 pps., Part I on Misc. Pub. #401
407. Flea Beetles and Early Blight. Part II of #401

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408. Plant Louse of the Apple in Maine. Part III of #401

409. The Cut Worm in Maine. Part IV of #401

410. Station Publications: How to Receive Them - January, 1911

411. Mailing List Revision

412. A Note Regarding Variation in the Single Comb of Fowls, by Raymond Pearl, 8 pps. This is reply to an attack on him in Vol. 1, no. 1 of the Mendel Journal.

413. Newspaper Notice of Misc. Pub. #398

414. Further Newspaper Notice of #398

415. List of Publications 1899 to 1910

416. Packing Food Under the Maine Pure Food and Drug Law, 4 pps

417. Notice of Misc. Pub. #401

418. Laws Regulating the Sale of Agricultural Seeds, Feeding Stuffs, Fertilizers, Drugs, Fungicides, and Insecticides, Ch. 119, P.L. of 1911, 12 pps

419. Directions for Taking Sample of Fertilizers. Sample Form

420. Requirements Under the Laws Regulating the Sale of Agricultural Seeds, 2 pps

421. Requirements Under the Laws Regulating the Sale of Commercial Feeding Stuffs, 6 pps

422. Requirements Under the Laws Regulating the Sale of Commercial Fertilizers

423. Requirements Under the Laws Regulating the Sale of Fungicides (4 pps.) and Insecticides (4 pps.)

424. Requirements Under the Laws Regulating the Sale of Drugs, 4 pps

425. Requirements Under the Laws Regulating the Sale of Foods, 24 pps

426. Sample Form for the Analysis of Feeding Stuffs

427. Sample Manufacturer's Certification for Sale of Feeding Stuffs

428. Sample Form Manufacturers of Fertilizers

429. Sample Form Manufacturers of Fungicides

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430. Certificate of Registration

431. Newspaper Notice of Bulletin 189 - Orchard Spraying Experiments

432. Experiments at Highmoor Farm (6 pps. plus map)

433. Laws Regulating the Sale of Apples in Maine (4 pps.)

434. Poster: Sanitary Food

435. Proper Growing and Handling of Seed Stock of Potatoes, 16 pps. This is a paper given at American Seed Trade Association meeting. Marblehead, Mass., on June 21, 1911 by W.J. Morse and C.D. Woods

436. Newspaper Notice of #435


438. Newspaper Notice of Bulletin 192 - Breeding Poultry for Egg Production

439. Newspaper Notice of Bulletin 193 - Poultry Notes

440. Another Notice for Bulletin 193

441. Potato Flea Beetle

442. Newspaper Notice of Bulletin 194 - Control of Blackleg Disease of the Potato

443. Station Publications - Methods of Distribution

444. Official Letter Advising of Violation and Setting Hearing Dates

445. List of Publications in 1911

446. Map of Highmoor Farm

447. Raymond Pearl - Methods of Feeding Poultry, 4 pps

448. Blank Form for Keeping Egg Records

449. List of Registered Feeding Stuffs, 1912 - February, 1912

450. Requirements Under the Law Regulating the Sale of Apples, 4 pps. - March, 1912

451. Experiments at Highmoor Farm, 1912, 6 pps. - May, 1912

452. Newspaper Notice of Bulletin No. 198 - Orchard Spraying Experiments
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453. Station Publications (a reprint of Misc. Pub. #443)
454. List of Publications in 1911 (a reprint of Misc. Pub. #445)
455. Newspaper Notice of Bulletin No. 199 - Orchard Notes
456. Another Notice of Bulletin No. 198 - July, 1912
457. Another Notice of Bulletin No. 199 - July, 1912, and a map of Highmoor Farm
458. Hearing Notice and Notice of Violation (reprint of Misc. Pub. #444)
459. Newspaper Notice of Bulletin No. 203 - Elm Leaf Curl and Woolly Apple Aphid
460. Requirements Under the Law Regulating the Sale of Feeding Stuffs, 6 pps
461. Available Bulletins and Publications of the Station - December, 1912, 4 pps
462. Station Publications (reprint of Misc. Pubs. #443, 453)
463. Paint and Paint Materials on Sale in Maine, 4 pps
464. Manufacturers Inspection Certificate, 1913
465. List of Registered Feeding Stuffs, 1913
466. Certificate for Manufacturers of Feeding Stuffs, 1913
467. Abstract of Bulletin 211 - Potato Flea Beetle, 8 pps
468. Preparation and Use of Lime - Sulphur in Orchard Spraying, 10 pps., by W.J. Morse - March, 1913
469. Short Weight Butter
470. Newspaper Notice of Bulletin 207
471. Methods of Poultry Management at the Station, 78 pps
472. Newspaper Notice of Bulletin 210
473. Newspaper Notice of Misc. Pub. #467
474. Newspaper Notice of Misc. Pub. #468
475. An Act to Provide for Scientific Investigations in Agriculture in Aroostook County (the text of the proposed law setting up Aroostook Farm)

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476. Newspaper Notice Bulletin 212

477. Library Card

478. Newspaper Notice of Misc. Pub. #471

479. Map, Highmoor Farm

480. Experiments at Highmoor Farm

481. List of Papers from the Biological Laboratory, Vol. 1, 8 pps

482. Aphid Galls of the Poplar, by Edith M. Patch, 10 pps. - August, 1913

483. Aphids, by Edith M. Patch, 10 pps. - August, 1913

484. Note on Calculating Coefficients of Inbreeding, 1 p.

485. Special Report for the Commissioner of Agriculture 1912, 48 pps

486. Blank Record Sheet

487. Blank Record Sheet

488. Summaries of Station Work, No. 1 - Apples, 20 pps

489. Newspaper Notice Bulletin 216

490. Available Publications and Reports from this Station

491. Station Publications

492. Special Report to the Commissioner of Agriculture, 1913, 48 pps. This may be found in Agriculture of Maine in the year indicated

493. Experiments at Highmoor Farm, 1913

494. Newspaper Notice Bulletin 227

495. Abstract of Bulletin 227

496. Plant Lice of Currant and Gooseberry Bushes, 6 pps., 4 illus. Probably by Edith M. Patch

497. Abstract of Bulletin 228

498. Abstract of Bulletin 230

499. Abstract of Bulletin 232
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500. Record Blank - Dairy Cattle

501. Plum and Cherry Aphid of Maine, by Edith M. Patch - December, 1914. This is a popular version of a paper in Journal of Agricultural Research

502. Practical Suggestions Regarding the Growing of Sweet Corn


504. Abstract of Bulletin 237

505. Special Report of Commissioner of Agriculture for 1914, 39 pps

506. Station Publications

507. List of Available Publications

508. Abstract of Bulletin 238

509. Experiments at Highmoor Farm, 1914

510. Suggestions for Breeding Yellow Eye Beans of Standard Types

511. Abstract of Bulletin 240

512. Cooperative Experiments, 2 pps

513. Leafhoppers. Abstract of Bulletin by H. Osborne

514. Experiments at Aroostook Farm, 1914

515. Poultry Management at the Maine Station, Revised, 98 pps

516. Surplus Stock Seed Oats - Aroostook Farm

517. Surplus Stock Seed Oats - Highmoor Farm

518. Cultural Methods Used with Oats at This Station


520. Growing Crops Without Potash in 1916, 16 pps. by C.D. Woods

521. Poster - Potatoes Without Potash

522. Spraying Potatoes in 1916, 12 pps - February, 1916

523. The Preparation and Use of Lime-Sulphur in Orchard Spraying, 11 pps. (reprint of No. 468, by W.J. Morse)
MAINE AGRICULTURAL EXPERIMENT STATION BULLETIN 808

524. Poisoned Spray as a Bait for the Fly of the Apple Maggot. This is a popular version of Bulletin 251 - April, 1916

525. Apple Tree Insects of Maine (revised), by Edith M. Patch and O.A. Johannsen, 72 pps., 57 plates

526. New Varieties of Oats, 7 pps

527. List of Station Publications


529. Available Bulletins


531. Potato Growing and Potato Disease from Maine to California, by W.J. Morse, 20 pps. appears in Agriculture of Maine as well

532. Official Daughter-Dam Tests, 4 pps

533. Official Daughter-Dam Test, 1 p

534. Official Daughter-Dam Test, 1 p

535. How to Control Potato Enemies, 1918, 16 pps

536. List of Papers from the Biological Laboratory, Vol. II, 1919

537. List of Available Bulletins

538. The Relation of Conformation to Milk Yield in Jersey Cattle, 12 pps., 1920, abstract of papers and a bulletin by J.W. Gowen

539. Improved Strains of Aroostook Grown Wheats, 11 pps

540. List of Available Publications, 1921

541. Grasshoppers and Related Insects. Abstract of Bulletin 296, 6 pps. - June, 1921

542. Available Publications, 4 pps. - April, 1922

543. Available Publications, 4 pps. - July, 1924

544. Available Publications, 4 pps. - November, 1926

545. Available Publications, 4 pps. - November, 1927

546. Available Publications, 4 pps. - September, 1928

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547. Available Publications, 4 pps. - February, 1930

548. Available Publications, 4 pps. - December, 1932

549. Taxes to be Assessed with Various Tax Rates, 1933. Data for Bulletin 366

550. Available Publications, 1934


552. Available Publications, 4 pps. - January, 1937

553. 1935 Vegetable Variety Trials at Highmoor Farm, by I.M. Burgess and R.M. Bailey

554. Maine No. 2 - A Scab Resistant Home Garden Cucumber, by R.M. Bailey

555. The Control of Insect Pests in Maine Apple Orchards, by F.H. Lathrop


557. Vegetable Variety Trials for 1938 by I.M. Burgess and R.M. Bailey

558. Available Publications - April, 1939

559. Rogueing Service for Producers of Foundation Seed, 1940

560. Vegetable Variety Trials, 1939, by I.M. Burgess and R.M. Bailey

561. Consumer Preferences for Potatoes in Boston, by Maynard Hincks, May 1940

562. Manufacture of White Potato Starch in the U.S., by C.A. Brautlecht, July, 1940


564. Rogueing Service for Foundation Seed Potatoes, 1941

565. A Preliminary Report of a Survey of the Apple Industry in Maine, 1941 (This is a mimeographed publication.)

566. Available Publications - November, 1941

567. Rogueing Service for Foundation Seed Potato Growers - February, 1942

568. Potato Harvest Labor - Aroostook County, 1941; March, 1942 (mimeographed)

569. Preliminary Report of Selling and Shipping Maine Potatoes - January, 1942 (mimeographed)

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570. A Preliminary Report on the Country Assembly of Milk in Maine for Shipment to Boston Dealers - January 1943 (mimeographed)

571. Consumer Problems with Every-Other-Day Delivery of Milk in Portland and Westbrook - January, 1943

572. Farmers' Storage and Transportation of Potatoes in Wartime - March, 1943, 39 pps., 19 tables, 1 figure

573. Victory by Insect Control - The Mexican Bean Beetle - November, 1943 (Mimeographed with printed cover)

574. Milk Distribution Through Stores in the Portland Market - July, 1943

575. Available Publications - August, 1943

576. Primary Wood-Using Industries in Aroostook for the Year 1942 (mimeo.)

577. Storage Facilities for the 1943 Maine Potato Crop - September, 1943 (15 pps., 6 tables, 3 figures)

578. Maine Agriculture in 1940 - A Statistical Presentation, 1944

579. Primary Wood-Using Industries in Washington County for the Year 1942 (mimeo.)

580. Primary Wood-Using Industries in Somerset County in 1942 (mimeo.)

581. Primary Wood-Using Industries in Penobscot County in 1942 (mimeo.)

582. Primary Wood-Using Industries in Hancock County in 1942 (mimeo.)

583. Production of Farm Butter in Maine and Possibilities of a Shift to Fluid Milk

584. Rogueing Service for the Producers of Foundation Seed Potatoes

585. Primary Wood-Using Industries for Waldo County in 1942

586. The Farm Truck and Tractor Situation

587. Fighting the Apple Fruit Fly, by F.H. Lathrop. 7 pps, Bibliography

588. Machinery Requirements on Aroostook County Farms, 1943

589. Grain Problems and Feed Conservation Practices of Maine Poultry Producers

590. Primary Wood-Using Industries in Piscataquis County in 1942 (mimeo.)

591. Equipment Needs and Uses of Poultry Equipment and Building on Maine Poultry Farms

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592. The Primary Wood-Using Industries of Franklin County in 1942 (mimeo.)
593. The Primary Wood-Using Industries of Kennebec County in 1942 (mimeo.)
594. The Primary Wood-Using Industries of Androscoggin and Sagadahoc Counties in 1942 (mimeo.)
595. The Primary Wood-Using Industries in Cumberland County in 1942 (mimeo.)
596. The Primary Wood-Using Industries in York County, 1942 (mimeo.)
597. Farm Labor on Maine Poultry Farms
598. The Primary Wood-Using Industries of Oxford County in 1942 (mimeo.)
599. The Primary Wood-Using Industries of Knox and Franklin Counties in 1942 (mimeo.)
600. Marketing of Hatching Eggs and Baby Chicks, 1945
601. List of Available Publications
602. Eradication of Certain Maine Weeds
603. Typical Maine Potato Storage House, 1946
604. Storage of the 1946 Maine Potato Crop, 1947
605. Storage of the 1946 Maine Potato Crop, 1947 (a reprint of #604)
606. Improving Haying Efficiency Through Changes in Work Methods
607. The Effect of Weather Upon the Rate of Air Seasoning of Wood Products in Maine, by Gregory J. Baker
609. 1947 Sweet Corn Trials at Highmoor
610. List of Available Publications
611. 1947 Stringless Bean Trials at Highmoor
612. Solving Your Blueberry Problems, by George F. Dow with Clarence Day, 8 photos, 1 schematic, 14 pps
614. Blueberry Research and Service, 3 photos., 16 pps. Both nos. 612, and 614 are attempts to enlist support for this new research program
615. Adjustments of Maine Agriculture and Farm Prices, by C.H. Merchant and Jeanne H. McKenzie. 31 maps, 40 tables, 70 pps. Adjustments are to World War II, and to national trends. A useful publication

616. Thirty Minutes with the Maine Agricultural Experiment Station, by Clarence Day and George F. Dow. 15 photos, 28 pps. A look at what is being done and why


618. Pest Control Materials, 1950, by D.E.H. Frear and M.T. Hilborn, 150 pps


620. Orland, Monmouth and Maine 55 Strawberries (1952), by Russell M. Bailey, and Elizabeth F. Murphy. 8 pps, 3 tables. Reports variety trials for 1947 through 1950

621. Potato Tax Research (January, 1953). 15 pps, many photos

622. Blueberry Tax Progress Report (March, 1953) 16 pps, many photos


624. January, 1955, Volume Tables for Maine, by Harold Young, compiler, 36 pps

625. February, 1956, Nitrogen Fertilizers for Maine Farms, by Hugh J. Murphy, 6 pps., 2 tables

626. April, 1956, Observations on the Decline and Rehabilitation of Lowbush Blueberry Fields, by M.F. Trevett, 21 pps., 8 tables, 7 figures. (An early report on reviving a Maine industry.)

627. January, 1957, Additional Volume Tables for Maine, Harold E. Young, compiler, 40 pps


629. 1957, A Combination Trucking-Feeding Crate for Broilers, R.F. Saunders, L.J. Jewett and L. Kleihower, 4 pps. (mimeo.)
630. 1957, A Remote Reading Multiple Electronic Thermometer, by G.R. Cooper, 5 pps. (mimeo)

631. October, 1957, A Bibliography of Avian Mycosis, (partially annotated) by Harold L. Chute and David C. O'Meara, 82 pps


633. February, 1958, Maine Potato Variety Trials for 1957

634. March, 1958, Maine Cooperative Beef-Cattle Gain Evaluation Test By-A-Brook Farm. See Misc. Reports Nos. 73a, 73b for more on this

635. February, 1959, Chemical Weed Killers - 1959, by M.F. Trevett and C.E. Cunningham

636. 1959, Maine Potato Variety Trials for 1958, by Hugh J. Murphy, M.J. Gaven, A.E. Schark, 38 pps

637. February, 1959, A Potential Summer Market for Maine Potatoes, by Alvah H. Perry, 14 pps., 2 tables. Potatoes treated to retard sprouting tested in Bangor markets, and consumers interviewed for comment

638. 1960, Maine Potato Variety Trials for 1959 by Hugh J. Murphy, M.J. Goven, A.E. Schark, P.T. Blood, 30 pps

639. 1960, 1960 Chemical Weed Killers by M.F. Trevett and C.E. Cunningham


641. August, 1960, An Improved Work Station for the Manual Sorting, Sizing and Packing of Apples, by Frederick A. Perkins and Stanley W. Burt, 10 pps., 3 photos, 2 schematics, 1 table

642. September, 1960, A Comparison of Bathroom Working Spaces, Predicted and Observed, by Merna M. Monroe, 22 pps., 13 photos, 7 graphic presentations, 2 body schematics. A significant effort to relate space to the human body. Misc. Report #82 is a companion


645. February, 1961, 1961 Chemical Weed Killers, by M.F. Trevett


647. March, 1961, Differences Between High and Low Level Users of Chickens, by Richard F. Saunders, 30 pps., 33 tables. Part of study reported in No. 646


650. August, 1961, Effect of Potassium on the Uptake of Chloride by Potato Plants, by Harold W. Gausman, 8 pps., 1 table, 1 figure


655. December, 1962, A Bibliography of Avian Mycosis (Partially Annotated), by H.L. Chute, D.C. O'Meara and E.S. Barden, 120 pps. revised version of No. 631. (Third edition in print now)


659. January, 1964, A Plan for the Recreational Development of the University of Maine Forest, by Bruce E. Stewart, 26 pps., many maps, and cost statements


666. November, 1964, Spectrograph Analysis of Plant Tissue, by Paul N. Carpenter, 16 pps., 5 tables, bibliography

667. April, 1965, Soil Suitability Guide for Land Use Planning in Maine (in cooperation with the USDA) [Revised, February, 1967]

668. April, 1965, Formula Feed Manufacture and Distribution in Maine, by Frank D. Reed. Analysis of changes as transport costs rise. 2 maps, several tables, 10 pps


674. February, 1966, A Comparison of Mechanical Bruising and Transit Temperatures of Maine Potatoes When Shipped in Carloads of 50,000 and 60,000 pounds, by Edward F. Johnston, Jack B. Wilson and Lawrence N. Shaw. A joint MAES/USDA publication from the Potato Handling Center, 32 pps., 7 photos, schematics, graphs, bibliography. A good short paper
MAINE AGRICULTURAL EXPERIMENT STATION BULLETIN 808

675. February, 1966, A Prescribed Burn Following A Clearcut in the Spruce Type, by A.G. Randall. A research effort to control slash after cutting. 5 photos, 2 tables, 12 pps

676. May, 1966, The Soils of Maine, by R.V. Rourke and S.W. Hardesty, Jr. 22 pps, a brief summary

677. March, 1966, Spruce-Fir, Hemlock and Northern Hardwoods Volume Tables. Compiled by Harold E. Young and Kenneth Y. Hodsdon, 10 pps, 7 tables

678. September, 1982, Some Issues Facing Voters in Answering the Referendum Question: Should Resale Milk Price Controls be Eliminated? By Homer B. Metzger. Addressed to the Voters prior to a recent referendum election. 6 pps

679. John Bissonette, ed., Deer Winter Habitats Managements, October, 1982. Reports papers read at a workshop December, 1981. Biology, deer management, land management, and wildlife in general were discussed in fifteen papers. 3 maps, 5 graphs, bibliography interspersed with papers. 94 pages. An important contribution

MISCELLANEOUS REPORTS

Soon after World War II, as the station began to broaden its research effort again, it became apparent that the standard series of publications (bulletins, and miscellaneous publications) were not sufficient to deal with all the station work. In November, 1948 a third long running series was begun to deal with this gap. Most of these publications are mimeographed, although it was often usual to give them a printed cover. In fact, they are sometimes referred to as Mimeographed Reports with the appropriate number printed up to No. 81 (April 1959). They were produced with a limited circulation. Those researchers who needed the data were provided with copies, but otherwise it was assumed that the miscellaneous reports were to be of limited interest, provide data series that might be analyzed in the more formal bulletins, and offer an avenue for those by-products of research that were of interest, but did not merit the time or effort to pursue them further. Oddly enough as time has gone on, and the original reasons for publication have disappeared, these products are of increasing use to historians, or others who seek to analyze long range trends. Over 300 of these items have appeared at this writing. The following provides an annotation designed to allow those researchers to determine which of these numbers might be of interest to them

1. C.H. Moran, 1948 Small Grain Trials, November, 1948. Reports results of annual variety trials. 5 pps


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3. P.J. Eastman, Chemical Weed Control in Potatoes in Aroostook County, Maine, During Summer of 1948. Herbicide results. 2 pps


6. M.F. Trevett, A Guide for the Use of Chemical Weed Killers, January, 1950. The first of many such guides from this author. 12 pps

7. F.H. Lathrop, Residues of Arsenic and of Copper on Blueberries, January, 1950. A difficult problem, with more implications than are shown here for the food chain. unpaged


11. W.E. Schrumpf, Maine Snap Beans, Sweet Corn and Green Peas for Processing, March, 1950. Always a canning center, this report offers some new and some old crops. Varieties and results reported for Maine. 39 pps

12. M.T. Hilborn, Blueberry Disease Research by the Maine Agriculture Experiment Station, December, 1950. Essentially a report on work for the new Blueberry Advisory Committee and Growers. 6 pps

13. C.H. Moran, Forage Crop Recommendations, January, 1951. The results of the variety trials over time reported and recommended. 9 pps

14. Lyle Littlefield and E.F. Murphy, 1950 Vegetable Variety Trials, January, 1951. These had been conducted before WWII, and now were revived as gardening became important again. 14 pps


18. Reiner Bonde, F.W. Peikert, and R.B. Rhoads, Low Gallonage High Concentration Sprayer for the Control of Potato Diseases and Insects, March, 1951. Spraying techniques changed rapidly not only on potatoes but apples. Reports new methodology. 6 pps

19. H.B. Metzger, Changes in Costs of Milk Distribution in Maine, 1949-1950, April, 1951. The first of what would be many such reports for use by the Maine Milk Commission. 7 pps

20. E.F. Murphy and M.R. Covell, Comparison of Tomato Varieties for Yield, Vitamin Content and Palatability, May, 1951. Essentially more on the WWII work which lead to the FNC tomato variety. 9 pps

21. C.H. Merchant, Jeanne Mayberry, W.E. Schrumpf, Seven-Year Summary of Grade Quality of U.S. No. 1 Maine Potatoes, August, 1951. Results of the work of inspectors over time. Mainly tables, 32 pps

22. H.B. Metzger, The Maine Dairy Farming Costs Index, October, 1951. What costs what and how has it changed. 7 pps


24. Reiner Bonde, F.W. Peikert and Robert Brown, Potato Spraying with Low Gallonage High Concentration Equipment, January, 1952. Results of using equipment reported in No. 18 this series. 9 pps


27. G.F. Dow and George Chick, Supply and Use of Blueberries in Maine, 1924 to 1950. The standard statistical history here collected for the first time. January, 1952, 15 pps


29. Homer C. Woodward, Importance of Apple Bruising and How to Prevent It, October, 1952. One of the first of the new series of packaging and shipping tests. New facilities at Highmoor allowed this work to grow in importance. 14 pps

30. R.C. Martin and T.C. Brooks, A Telescoping Potato Conveyor, October, 1952. Easier storage after use of a labor saver. 6 pps
31. C.H. Merchant, Quality of Cut Seed Potatoes, January 1953. Results of tests of shipping on seed cut before shipping. January, 1953. 13 pps


34. K.F. Neilsen, P.N. Carpenter and Robert V. Akeley, Potato Variety Trial Results, January, 1953. Slightly more data each year. 9 pps

35. M.F. Trevett, Woody Weed Control in Low-Bush Blueberry Fields, March, 1953. The greatest enemy to control and an active competitor for space and nutrients. See his later bulletins for more, especially No. 605. 15 pps

36. Homer Metzger, Changes in Cost of Milk Distribution in Maine, 1951-52, June, 1953. The annual report to the Milk Commission. 5 pps

37. W.E. Pullen, Larger Dairies Bring Higher Net Income in Maine, August, 1953. Size equals economy in many areas, and the dairy industry was no exception. 9 pps

38. William E. Schrumpf, Farm Economic Adjustments in Aroostook County, Maine, 1948-1951. Effects of war, peace, and decline in federal support laid out here. See Bulletin 520 for fuller story. 1953, 63 pps. Mostly tabular information sought through questionnaire and interviews, as well as other sources such as the census. Misc. Report # 48 is part of same work

39. H.H. Brugman, Steer Gains on Roughage Plus Minerals, September, 1953. First in a long term series of such studies, and the first since the first decade of this century at the station in such detail. 5 pps


41. Kenneth Neilsen, Robert Akeley, Charles Cunningham, Potato Variety Trial Results, 1953, Spring, 1954. The annual report. 9 pps

42. H.D. Dickey, B.E. Plummer, Jr., C.G. M. Edgerley and H.A. Leonard, Sodium Bisulphite for Preserving Grass Silage, February, 1954. An effort to improve winter feeds reported. 5 pps

43. L.H. Taylor, Small Grain Variety Trials, April, 1954. Continuation of these trials of crops not much grown, but potentially important, 15 pps
44. H.B. Metzger, Changes in Costs of Milk Distribution in Maine, 1952-1953. 3 tables, detailing costs and changes by items, June, 1954. 5 pps. Fifth in an annual series of such studies


46. Moody F. Trevett, Bayberry Control in Lowbush Blueberry Fields With 2, 4, 5-T, September, 1954. 4 pps., 1 table. How to do it


48. William E. Schrumpf, Farm Practice Adjustments in Aroostook County, Maine 1948-1952, December, 1954. Bulletin 518 and Misc. Report 38 precede it and are part of the same general study. Five year analysis by survey to determine impact of changing federal policies on potato farming. 1948-1952 period covered. 7 graphs, 10 tables. Taken together they provide useful information. 33 pps

49. Homer B. Metzger, Labor Utilization in Small Volume Milk Pasteurization Plants, December, 1954. A time study of 8 such plants in an effort to aid in labor efficiency. 15 tables, 3 graphs. Part of his useful work in this troubled industry. 33 pps


52. Charles E. Cunningham, Robert V. Akeley, Kenneth F. Neilson, 1954 Potato Variety Trials, March, 1955. 7th in this series. 28 varieties. 5 tables, 10 pages. Mostly cooking quality, specific gravity, seed spacing and storage capacities tested

53. Merna M. Monroe, Shirley Wing Randall, Howard D. Bartlett, Methods and Apparatus Used to Determine Bathroom Space Requirements, March, 1955. 10 pps. How Monroe determined what was to be measured. Interesting for its use of WWII research conducted on space requirements

54. H.B. Metzger, Changes in Cost of Milk Distribution in Maine, 1953-1954, July, 1955. Sixth in the annual studies of this series. The most recent was Misc. Report #44. 3 tables, 7 pages

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55. Alvah H. Perry, Paul N. Mosher, Stanley L. Palmer, Russet Burbank Potatoes on Trial in Maine: 1954 Progress Report, August, 1955. This variety became useful after herbicides/fungicides allowed vines to grow longer. Survey of 200 farmers comparing them with Katahdins, which were usually larger. 23 tables, 31 pages. All aspects compared in the study, including yields, prices, and other factors.

56. Homer B. Metzger, An Appraisal of Multiple-Quart Containers: Volume Discounts and Store Differentials in Milk Distribution, September, 1955. Two quart and gallon containers studied, results led eventually to substantial change in marketing. 6 tables, bibliography. Bulletins 451, 477, Misc. Reports Nos. 19, 28, 36, 44, 50 are related. 21 pps.


58. R.M. Bailey, Trials of Field Corn for Grain in 1955, 1955. 12 varieties of flint and dent corn tried in 3 locations. 3 tables, 6 pps. Climate comparison of growing degree days.


60. Charles E. Cunningham, Robert V. Akeley, Roland E. Struchtemeyer, 1955 Potato Variety Trials, March, 1956. 24 varieties. 3 locations, Presque Isle, Madawaska, Exeter, Maine. 7 tables, 11 pps. The most ambitious variety test in this series to date.

61. Hugh J. Murphy, Factors Affecting the Yield of Sweet Corn (Based on 1953, 1954, and 1955 Crop Records), March, 1956. Covers field production factors, and costs, as well as processing costs, methods, and marketing. 221 growers on 1364 acres. Altogether 17 different factors analyzed in a strong and important study. 17 tables, 14 pps.


64. H.C. Dickey and H.H. Brugman, Fattening Steers on Dried Potato Pulp. June, 1956. More on their trials of this by-product, 24 steers in this test. 5 tables, 8 pps.

66. R.M. Bailey, J.S. Getchell, Mario Sereno, H.M. Lopez, Evaluation of Selected Sweet Corn Hybrids for Canning 1950-1956, no date. Yield and processing trials for previous seven years. 6 tables, 6 pps

67. R.M. Bailey, Trials of Hybrid Field Corn in 1956, January, 1957. 12 dent, flint, and flint dents trials in 3 locations. 5 tables, 7 pps. Substantial climate content, especially in table 3, summary of 6 summers and impact on corn

68a. Charles E. Cunningham, Robert V. Akeley, Roland A. Struchtemeyer, 1956 Potato Variety Trials, March, 1957. 23 varieties, 4 locations, 7 tables, 9 pps. With 68b the last of the series in this form. Remainder appear in Bulletins or Miscellaneous Publications of the Station

68b. M.N. Sereno and J.S. Schreiber, Variety Trials of Potatoes for Processing, May, 1957. 13 varieties tested for storage qualities. 2 tables, 6 pps

69. Louis A. Ploch and Louis J. Ducoff, Farm Operators' Knowledge of, Participation in, and Acceptance of the Old Age and Survivors Insurance Program, Franklin and Somerset Counties, 1956, September, 1957. Cooperative research MAES/USDA. 413 farmers provided detailed information on the program recently extended to them. 60 pps., 44 tables

70. H.B. Metzger, Costs of Milk Distribution in 1955 Compared with 1945, and Changes in Costs from 1955 to 1956, July, 1957. His eighth annual report but with some comparative statistics from a decade before. The last previous report was No. 63. 6 pps., 4 tables


72. Alvah H. Perry, Effect of Point-of-Sale Advertising on Retail Sales of Potatoes, December, 1957. 14 Springfield, Massachusetts stores analyzed as to this impact for 7 weeks. Some increase. 4 pps., 1 table


73b. H.H. Brugman, Beef Cattle Gain Progress Test: Second Progress Report, 1957-1958 Test. 29 more animals added. 4 pages, 3 tables

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75. Richard Saunders, The Impact of the Broiler Industry on Maine's Economy, June, 1958. The extraordinary recent development of this industry given an analysis in this paper. 3 pages, 3 tables

76. Paul R. Hepler and R.M. Bailey, Vegetable Varieties for the 1959 Home Garden, December, 15, 1958. 4 pages of lists recommended

77. Alvah L. Perry, Marketing the 1957-58 Maine Potato Crop, no date. Some items as before treated in the 20 tables. unpaged

78. R.M. Bailey, Trials of Hybrid Field Corn in 1958, January, 1959. Hightmoor and some Fryeburg trials. 15 trials, as well as 75 preliminary trials. Poor climate year analyzed in some detail. 7 pages, 3 tables


80. R.M. Bailey, J.S. Getchell, M.E. Highlands, W. Draper and R.C.Pelletier, Sweet Corn for Processing: Performance Trials at Monmouth and Fryeburg, 1958, February, 1959. 15 varieties as well as preliminary trials conducted. Process of analysis described in detail. 6 tables, unpaged


Prior to this time these were called Mimeographed Reports with the Number. Hereafter they are Miscellaneous Reports numbered sequentially in the same series.

82. Merna M. Monroe and Shirley Wing Randall, Bathroom Working Spaces, September, 1959. Monroe and Randall responsible for Part I, while Monroe is responsible for Part II. Part I based on calculations from body measurements and Part II based on observation of persons at work in the space. 16 photos, 29 diagrams, 27 tables, bibliography. A remarkably detailed study of these matters. Of considerable use to architects and building construction personnel. Related to Mimeographed Report #53, and Bulletin 494. 147 pages
83. H.B. Metzger, Milk Consumption in Maine Schools, Part I, Pattern of Milk Use, July, 1959. 268 schools analyzed to determine success of federal milk programs. 7 tables, 16 pages. Eventually this became part of Bulletin 594.

84. Charles E. Merchant, Marketing Maine Canned Vegetables, October, 1959. Fairly detailed analysis of Maine crops, and the new technological changes having an impact on their production, costs, and sales. An effort to determine the impact on freezing of vegetables. 11 tables, 11 graphs. A good historical statistical appendix. (8 tables) 38 pps

85. Alvah H. Perry, "Shrinkage" in Grading Maine Table Stock Potatoes, 1958-1959 Season, September, 1959. Surveys taken to determine amount of loss in crop through culls, bruises, etc. 27.1% loss. 8 tables, 12 pps

86. H.B. Metzger, Milk Consumption in Maine Schools, Part II, Factors Affecting Milk Use, November, 1959. 100 schools selected for both high and low use of milk analyzed for reasons. Most factors not easily changed as e.g., urban schools tend to be low users. 22 tables, 28 pps. An interesting study

87. Harold W. Gausman, Chloride Deficiency Symptoms in White Potato Plants, November, 1959. 1 page color photograph of a plant under this stress

88. H.L. Chute, Carol Reed, Virginia Thomas, D.C. O'Meara, Table of Determination of Proportionate Distances in End-Point Titrations, December, 1959. Used to determine laboratory results on infectious avian diseases. 2 tables, 5 pages

89. Howard H. Hruska, Protecting Maine Potatoes From Freezing, Overheating and Bruising During Rail Transport, December, 1959. Cooperative publication of USDA/MAES. 11 photos, 6 graphs. List of recommended practices, and bibliography. 28 pps


91. Alvah H. Perry, Marketing Maine Potatoes for the 1959-1960 Season: A Tabular Report, unpaged. 20 tables as was usual in this publication

92. Clinton R. Blackmon, Small Grain Variety Trials, 1958-1960, April, 1961. Oats (15 varieties), spring barley (15 varieties) tested with results explicated. 8 tables, 17 pages

93. F.E. Hutchinson and Jean S. Rich, The Quality of Oat Seed Planted in Central and Southern Aroostook County, Maine, 1959, July, 1960. Seed laboratory study of samples from 90% of oats grown in state. 2083 samples. 2 photos, 3 graphs, 9 tables

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94. H.H. Brugman and H.C. Dickey, The Effect of Feeding Dried Potato Pulp at Two Levels of Protein Including Urea to Hereford Bulls, September, 1960. 8 tables, 1 graph. More of their studies in this by-product. Related to Mimeographed Reports 57, 64, 69. 9pps.

95. H.H. Brugman and H.C. Dickey, Feeding Dried Potato Pulp and Concentrate Including Urea to Holstein Steers, November 3, 1960. 3 tables. Part of the same study, 3 pps


98. James H. Hunter, Forced Air Ventilation and Circulation Systems for Potato Storages, May, 1961. 7 photos, 14 schematics, 3 tables, 3 graphs. How to do it and keep the potatoes in good shape. 18 pps


100. H.L. Chute, M. Gershman, Reid M. Sherman and D.C. O'Meara, A Program of Sanitation for Maine Chick Hatcheries, June, 1961. 8 tables. Conclusions offered as how to maximize sanitary quarters. Bibliography. 10 pps. Bulletin 661 is directly related


107. M.E. Highlands and Deane R. Clark, Blueberry Processing Research During 1962, October, 1962. Interim reports on 3 experiments, 5 pps

108. H.B. Metzger, Performance in Harvesting Forage with Flail Choppers, Bale Throwers, and Self-Unloading Wagons, February, 1963. Performance studies on 14 farms in 1962 compared to work on conventional loading and unloading studies of 1954 and 1955. Time studies primarily, although costs were treated somewhat. 11 tables, 2 graphs, 23 pps

109. Charles H. Merchant, Howard S. Watkins, Jr., Merrit Caldwell, Improving the Quality of Field Blueberries for Processing, February, 1963. As mechanical harvesting and processing improved a need for grade changes occurred. This is an effort to aid that analysis. 7 photos, 4 tables, unpaged. See Maine Farm Research, January, 1960

110. Hugh J. Murphy, Roland A. Struchtemeyer, Eliot Epstein, Walter Grant, Bernie Plummer, Jr., Glen Hitchcock, Robert Rourke. Winston E. Pullen wrote Part II. A Report of the Farm Production Feasibility of Sugarbeets in Aroostook County, Maine, November, 1963. Part I treats the Agronomic factors, while Part II focuses on the economic factors. Climate, soils, land availability, cultural and harvesting procedures, yield potential, and sugar analysis treated in Part I. 17 tables. Response is very good, better than results actually proved due to a pH problem not much explicated here. Part II suggests in the high risk potato economy that sugar beets made a reasonable partner. Many tables in appendices, showing daily maximum and minimum temperatures for 1953-1962. 22 tables in the appendix. Detailed soil analyses were also present. Part III of the appendix by Hugh J. Murphy and M.J. Goven, Sugar Beet Research in Maine, 1961, pages 104-111 presented data on fertilizer and the pH problem. This was followed by another yearly summary of research by the same researchers for 1962 on pages 115-120. The growing season length had become another problem for these researchers as well as the pH level. Part IV of the Appendix by Murphy and Goven dealt with the 1963 growth year. (These are Progress Reports 59, 62, 71 of this project.) This report included work in commercial fields, although many of the problems remained. 132 pages. This is a major work of the station, but not much read, studied, or quoted since

111. H.B. Metzger, Delivery Practices on Home Delivery Milk Routes in the Northeast and Distributor Attitudes Toward Reduction in Delivery Frequency, February, 1964. Mail questionnaire to 20% of deliverers in 11 northeastern states reported as to practices in their routes. 264 firms responded. 19 tables, 19 pages

113. Apparently not issued

114. H.B. Metzger, Labor Used and Equipment Costs in Feeding Silage to Cows, July, 1964. The winter feeding phase of a year long study of feed handling on dairy farms reported. 39 dairy farms of all types in the study. 15 tables, 16 pps. See Bulletin 639


116. Steven Hyatt, Poverty in Maine: Where it is, Who are the Poor People, and What Can Be Done, October, 1964. More demography from the 1960 census. 7 tables, 11 pps


118. Walter J. Kender and Dennis A. Abdalla, eds., Proceedings of the North American Blueberry Workers Conference, April 6-7, 1966, Sessions on blueberry research, crop and market situation, insects, culture, diseases, varieties and breeding, physiology of the plant, processing, and lowbush blueberries are reported in abstract form with literature citations. 14 photos, many tables, graphs, 152 pps. A useful look at the industry nationwide from these proceedings

119. Edward F. Johnston and J.B. Wilson, Soil, Air and Tuber Temperatures and Bruise Resistance, September, 1966. A joint USDA/MAES publication and from the Potato Handling Center. 5 graphs, 12 tables. Detailed use of climate and soil temperature data

120. James H. Hunter and J.B. Wilson, Some Aspects of Hydraulic Handling of Potatoes, September, 1966. USDA/MAES joint publication and from the Potato Handling Center. 6 photos, 2 tables. Methods of movement and washing analyzed for damage and disease. Little found

122. Wallace C. Dunham, Meat Shopping Habits and Attitudes of Consumers in Portland, Maine, September, 1957. Meat shopping shown to be different and often taking place at a different store than supermarkets used for other goods. Reasons analyzed as part of regional study in shopping. 300 housewives interviewed. Suggestions offered. 7 tables, 17 pages.

123. Louis A. Ploch and Nelson L. Leary, Social and Economic Consequences of the Dickey-Lincoln School Hydro-Electric Power Development on the Upper St. John Valley, Maine, Phase I., Preconstruction, March, 1968. USDA/MAES joint publication. An effort to provide a snapshot of the area as of summer, 1966. A statistical supplement is provided as an adjunct separate publication with the same title. Extensive household interviews conducted. 38 pages for the written summary, with many tables. A strong piece of research. 61 tables on 40 pages make up the supplement.

124. Charles H. Lobdell, Robert W. Meyer, Malcolm L. Coulter and Thomas J. Corcoran, The Maine Sportsman: Characteristics of Hunters and Fishermen, January, 1969. 1500 sportsmen, with licenses, through mail questionnaire are the source of data. 56 tables of description follow. 5 photos, unpaged.


127. S.E. Shehata, Marketing Shellfish in Maine Retail Food Stores, November, 1969. Part of a northeast regional project conducted by a visiting professor from University of Ain Shams, Cairo. Personal interviews with store personnel in Bangor and Portland. 69 stores treated. 20 tables, 41 pps.


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130. Annual Report of the Veterinary Diagnostic and Research Laboratory, June, 1969 to June, 1970, September, 1970. Summary of testing service for the year. The laboratory was forty years old and well established by this time. 25 pps

131. Ivan N. McDaniel, Research on the Black Fly Problem in Maine: A Report to the 105th Maine Legislature, January, 1971. Rearing chambers provide data as to how they breed, along with work toward an antitoxin. 8 pps., 1 photo


134. Robert V. Rourke, Composite Soil Data Sheets for Several Soil Mapping Units in Maine, May, 1971. The statistical and field data for Technical Bulletins 29 and 34, unpaged, tables

135. Annual Report of Research for the Maine Potato Industry, June, 1971. Brief summaries of work in progress, and some tentative results when available for plant breeding, cultural studies, pest and disease control, harvesting, handling and storage, as well as marketing and organization. A list of the yearly publications in this area appended. 21 pps

136. M.W. MacGown and E.A. Osgood, Jr., A Key to Parasites Associated With Balsam Gall Midge in Maine, August, 1971. 14 verbal descriptive keys, 5 plates, 10 pps


139. Otis J. Sproul, M. Wayne Hall, Mriganka N. Ghosh, Wastewater Control From Rural Housing, April, 1972. Several different kinds of choices offered, as well as ideas on selection. 12 tables, 4 figures, bibliography. Bulletin 667 (rev.) is related. 50 pps
140. Louis A. Ploch, compiler, Lower Penobscot River Area: A Twelve Town Economic and Organizational Inventory, May, 1972. Report has detailed information in tables, derived in great part from interviews. Part 1 for towns west of the river separated by town, and part 2 east of the river. Section 3 is the economic totals for all twelve towns, and four is a series of tables showing what organizations exist in each town. Part 5 summarizes these data for the entire area. 454 tables 272 pps. A remarkable set of data used in a major project. See Bulletins 707, 710, 713, 724, 729, 737, 742

141. A Joint Proposal for the Maine Potato Industry by the Maine State Department of Agriculture and the University of Maine, July, 1972. An industry under severe attack and in the midst of growing change attempting to deal with the change. Proposal is an effort to stabilize effort at quality through implementation of Federal Marketing Order Legislation. 7 tables, 8 graphs. Three questionnaires enclosed. 45 pps

142. Maine Guidelines for Manure and Manure Sludge Disposal on Land, July, 1972. Conditions spelled out for a number of ways of using manures without violating soil and water regulations. 1 very long table showing conditions in Maine soils, a flow chart. 21 pps

143. James C. Whittaker and Dennis S. Wentworth, Snowmobile Compaction and Forage Grass Yields in Maine, September, 1972. As snowmobile use grew rapidly a need was felt to study their effects. A controlled experiment over two years in two alfalfa fields in Maine is reported. 2 tables, 3 pps

144. John B. Dimond, A Demonstration of Bacillus thuringiensis, Plus the Enzyme, Chitinase, Against the Spruce Budworm in Maine, Part I, Efficacy, November, 1972. Helicopter delivery in small plots analyzed for suppression (moderate), foliage preservation (better). The chitinase was the controlling factor here apparently. 6 tables, 8 photos, 3 graphs, map, bibliography, 34 pps. No. 149 is part two of this study


146. H.B. Metzger, Small, Low Income Farms in Maine, February, 1973. More than half of Maine farms in this category, but only 5% of farm product value. Mostly field crops and substantial off-farm activity define them as well. 1969 census of agriculture source of data. 11 tables, map, 36 pages. A useful summary of knowledge

147. Marshall D. Ashley and James Rea, Remote Sensing Research at the University of Maine School of Forest Resources, March, 1973. Beginning work as satellites become prominent in science. 4 pps
148. Ivan N. McDaniel, Recommendations for Chemical Control of Mosquitoes, April, 1973. Standard list of materials plus directions, cautions, 6 pps

149. John B. Dimond, A Demonstration of Bacillus thuringiensis, Plus the Enzyme Chitinase, Against the Spruce Budworm in Maine. Part II, Effects on Developmental Rate, Adult Size, and Parasitism Rates, April, 1973. Some prolongation of larval stages, diminished size, and increased parasitism found, but reasons as yet not fully understood. 4 tables, 13 pps., No. 144 is Part I


151. Gary A. Simmons, Conversion Table for Spruce Budworm Sampling Units, August, 1973. To allow Maine data to be compared with Canadian. 2 tables, 4 pps

152. John H. Ribe, Puckerbrush Weight Tables, December, 1973. 11 species tested against a multi-stage sampling scheme to locate, through regression equations, tables of real values. More work related to Complete Tree Concept. 86 tables, 92 pps

153. J.B. Dimond, Tests of Bacillus thuringiensi s Against the Spruce Budworm in Maine, 1973, February, 1974. Results not very good, except against insects under stress, and chitinase only enhances the activity. Other materials needed. 16 tables, 23 pps., Nos. 144, 149 related work


155. Maine Guidelines for Septic Tank Sludge Disposal on the Land, April, 1974. Flow chart, 3 tables, one of a number of such useful guides

156. Gary M. Simmons, Conversion Tables for Spruce Budworm Egg Mass Surveys, April, 1974. 11 tables, 17 pps. Simplification of work of counting


159. C.W. Chen and G.A. Simmons, Two Indices of Insecticide Effectiveness, I, Derivation of Confidence Intervals, July, 1974. 7 pps. Paper works out proofs for Part I


162. Maine Guidelines for Field Disposal of Waste Potatoes, September, 1974. How to do it properly. 4 pps., 2 tables


164. R.W. Gerry and J.W. Mitchell, Broiler Types vs. Red X Rock Sex-Linked Males as Meat Producers, November, 1974. Tests on birds sacrificed in breeding for egg production under normal conditions. 2 tables, results no. However in small flock may be worth it under some conditions. 5 pps


166. J.B. Dimond, Bacillus thuringiensis and Spruce Budworm: Further Tests in Maine, 1974, January, 1975. Some developmental lags reported, no substantial repression, however. 2 tables, graph, 15 pages, followup to Nos. 144, 149, 153

167. Proceedings of the Conference on Forest Land Use Regulations for Mountain Soils, January 20, 1975, March, 1975. 12 presentations from all points of view as Maine Land Use Recreation Commission began to make a strong impact on land uses in the state. 63 pps. A significant conference and publication

168. H.B. Metzger, R.F. Cuozzo and F.M. French, Characteristics of Domestic Rabbit Production and Marketing in Maine, 1974. May, 1975. 76 enterprises in Maine responded to questionnaires and results are provided here. 23 tables


171. Teresita Kalaw and Neil H. Pelsue, Jr., Potato Statistics, Revised, 1975, December, 1975. Tables showing data on acreage, yields, production, stocks, utilization, consumption, prices, value, shipments, seeds, exports and imports, as well as Canadian production. These are U.S. figures, by state, but some world figures are included. 50 pps.

172. E.F. Johnston and N.H. Pelsue, Jr., Marketing Characteristics in Shipments of Maine Tablestock Potatoes, December, 1975. A follow-up to Misc. Report No. 163, showing shipment by variety, washing, grades, sizes, container types and sizes, area, month, quality, and some comparative analysis as well. Taken together these are very useful documents. 34 pps., 13 tables.

173. Annual Report to the Maine Potato Commission: The Potato Research Program, July 1, 1974 to June 30, 1975, 1975. Projects described and where known preliminary data provided. Climatology enters as a research factor for first time. 36 pps. No bibliography this year, although cooperative research with USDA is discussed.

174. John B. Dimond, Efficacy of Materials Tested for Control of Spruce Budworm Damage in Maine, 1975, I., Chemical Insecticides, II., Biological Insecticides, November, 1975. 5 chemical insecticides tried, with results reported. 6 tables, 1 graph, 19 pages in Part I.; The Biological Insecticides were mostly various methods of using B.t. (see earlier reports 144, 149), 6 tables, 16 pps. Other aspects of this research are reported elsewhere.


176. H.L. Brown and J.B. Dimond, Effects of Aerial Applications of Dimilin on Vertebrate Animals in a Boreal Forest, July, 1976. Further on the work reported in 174, and discussed earlier in 144, 149. Very little damage to animals and fish found after application. 8 tables, unpaged.

178. Eben A. Osgood, George A. LaBonte and John B. Dimond, Insecticide Trials to Control Spruce Budworm Damage on Christmas Trees, March, 1976. Further in the trials reported several times above. 3 tables, 10 pps., some useful effect apparent after these trials.

179. IUFRO, Division Three, Biographical Directory of Scientists (prepared for the Oslo World Congress, Summer, 1976), edited by Thomas J. Corcoran, Carroll McLaughlin and Glenn Perkins, 1976. 45 pps. in total. In this form the computer printout is duplicated.


182. World Directory for Current Research on the Entomopathogenic Fungal Genus Entomophthora, compiled by Richard S. Soper, October, 1976. These persons and their work listed and described. 8 pps.

183. Neil H. Pelsue, Jr. and Wayne B. Persons, COREPL: An Interactive Correlation, Regression, and Plotting Program, October, 1976. Development of a single computer program package with several data manipulations. The parent is the CMS environment series, and Fortran is the language. This is the manual for the program, 34 pps.


186. G.B. Jaeger, F.V. Muir, C.W. Kittridge, J.A. Bryan and C.J. Sniffen, Broiler House Air Quality Observations, December, 1976. 2 trials, one in summer, and the other in winter. Different ventilation units tried. Weekly temperature and humidity values. Air samples analyzed as well. No real impact on broiler feed conversion of body weight as was hypothesized. 3 tables, graph, 9 pps.

187. J. Granett, Insect Growth Regulator Treatments for Spruce Budworm Control in Maine, 1976, November, 1976. Third generation chemicals used in controlling insects in metamorphosis conditions discussed. 9 tables, 19 pps. A need for further research shown. Related to much of Dimond's work reported in these series above.
MAINE AGRICULTURAL EXPERIMENT STATION BULLETIN 808

(unnecessary)

Forest Resources Advisory Committee, Annual Report, 1976, 1977. Much discussion of work of CF RU, now well underway. Student profile also included as in last annual report as well. 14 pps

188. Jeffrey Granett, Black Flies in Maine, Biology, Damage, and Control, April, 1977. Family Simuliidae and several species are involved in this pest which bothers mammals. Humans impacted severely under some conditions. Detailed life history, dangers, controls, 3 figures. 19 pps. Cost of control makes the insect a potential political problem

189. Gary A. Simmons, Harold L. Brown and K. Elizabeth Gibbs, compilers, Environmental Impact and Efficacy of Imidan Used for Spruce Budworm Control in Maine, January, 1977. Some impact on larval feeding, but also apparent in birdlife, however, other animals not affected, except in slow moving or sluggish water. 27 tables, figure, 37 pps. Each researcher reported on own area. Gibbs, aquatic insects, Brown on avian populations, and Simmons on populations of other insects, and generally

190. Homer Metzger and Nicholas Flanders, Costs and Efficiencies in Fluid Milk Processing and Distribution in Maine (Based on the December, 1976 Survey of 26 Processor-Distributors Licensed by the Maine Milk Commission,) May 1, 1977. Further in Metzger's analyses used by Milk Commission to set its rates. 41 detailed tables of all aspects of this industry. 60 pps

191. Ruth H. True, Therese M. Demeule and Diane M. Clausen, Relation of Mertect, Temik and Fusarex to Flavor and Odor of Potatoes, August, 1977. Certain odor changes detected in 1975 and 1976 research was directed at potential causation. Very slight impact here, 2 tables, 8 pps


194. K. Elizabeth Gibbs, compiler, Bibliography of Environmental Monitoring of Chemical Control of Spruce Budworm, in Maine, 1970-1977, December, 1977. Some cross-references. An extremely valuable work as it brings together very obscure reports and other data in a convenient place. 46 items. Table of senior authors, and comparative grid of results
Charles F. Rabeni and K. Elizabeth Gibbs, "Benthic Invertebrates as Water Quality Indicators in the Penobscot River, Maine", December, 1977. This is a completion report to Maine Department of Environmental Protection and Land and Water Resources Institute, UMO, thus accounting for its lack of a series number. Important report, however; 11 sites examined through diver samples, for impact of pollution on these populations. 7 tables, 10 figures, recommended use of results in further classifications after this research. Bibliography, 75 pps

195. Ruth H. True and Therese M. Demeule, Relation of Mertec, Fusarex, and Bentonite Clay to the Flavor and Odor of Potatoes, March, 1978. 1977 further trials, originally reported for 1976 in Report No. 191 in an effort to isolate causation for poor odor and taste. 8 pps. 2 tables. Some slight differences, but not statistically important

196. Annual Reports, Forest Resources Research Advisory Committee and Cooperative Forestry Research Unit, 1977, February, 1978. Progress reports on funded research in progress made, list of publications, committee structure, faculty, student profiles, as with other annual reports from this agency. 26 pps

197. Floyd L. Newby and William D. Lilley, Cross-Country Skiers in Maine - A Preliminary Study, March, 1978. A developing research project using a testing questionnaire to determine characteristics of this growing group. Several tables showing these results, 8 pps

198. J. Granett, editor, Insect Growth Regulators for Eastern Spruce Budworm Control, Workshop...Held 16-18 January, 1978, April, 1978. 5 papers and a summary of discussions following are presented in this useful effort to pool knowledge. Many tables, graphs, and bibliography

199. Homer B. Metzger, Daniel B. Taylor, Lawrence O. Brewerton and Wallace C. Dunham, Costs of Handling Milk in Retail Food Stores in Maine, June, 1978. Another in their series of studies for the Maine Milk Commission. 72 food stores studied for handling practices, and 59 for costs. Results from questionnaires, and interviews. Map, 26 tables, 52 pps, questionnaire used included in appendix

200. Annual Report to the Maine Potato Commission; the Potato Research Program, July 1, 1975 to September 30, 1976, 1977. Projects summarized, as well as results where feasible, in all areas of potato research. Cooperative projects also discussed, 52 pps

201. Edward S. Micka, Agricultural Land Rent Activity in Maine in 1977, May, 1978. Large increases in rented croplands as costs of agriculture grew rapidly caused need for research. Conducted by questionnaire and information on location, crops, acreage, cash rent, value provided by rentor, and value of equipment and building sought, as well as lease data. 199 respondents. Map, 12 tables, 31 pps

203. Robert V. Rourke, John A. Ferwerda and Kenneth J. LaFlamme, The Soils of Maine, June, 1978. This is a substantial revision of Misc. Publication 676. Soil formations, classifications, catens, suitability, and descriptions offered for the 23 major soil series within the state. Verbal descriptions. Results summarized in appendix tables. 37 pps. A much reprinted and valuable tool for classroom and general soils information

204. Homer B. Metzger, Costs and Efficiencies in Fluid Milk Processing and Distribution in Maine Year 1977, July, 1978. Another major effort for the Milk Commission to aid them in their price determinations. The same 23 producer/distributors treated as earlier. A combined balance sheet was produced. 27 tables, 43 pps

205. Floyd L. Newby, editor, Historical perspectives of the School of Forest Resources, 1978. A summary volume in the 75th year of operation of the facility. Articles by Ashman, Knight, Nutting and Wilkins give their views on their various tenures and perspectives. Lists of school faculty and students follow. 75 pps


207. Floyd L. Newby, editor, Seventy-Five Years of Excellence in Education, Research and Extension: Papers from the Distinguished Lecture Series, September, 1978. The third in the volumes produced to mark the 75th anniversary, this one provides 9 papers, the banquet address, and a number of others, mostly reflective and indicative of change, and rapid change in recent years. Predominantly insider information without as much analysis as might be needed in any but celebratory work. Still a very valuable source discussing a very valuable resource

208. J.B. Dimond and T.A. Morrison, Evaluation of Chemicals for Spruce Budworm Control in Maine, 1978 Season, November, 1978. The third in this series with reports on field tests of three chemicals. 8 tables, bibliography. The three chemicals are efficacious, although dosages vary. 17 pps

210. Dennis A. Watkins and Julia M. Watkins, editors, Rural Health Care and The Land Grant Institution: Emerging Roles and Responsibilities for the 1980's, November, 1978. Reports proceedings of a major workshop held at Orono, May 9-11, 1978. All aspects discussed in detail. A very important conference reported well. 28 papers provided. References often provided as well. 238 pps. Does outline the ways in which the land grant college grows, changes, and still meets the objectives of Justin Morrill

211. Edward F. Johnston, Marketing Characteristics in Shipments of Maine Tablestock Potatoes to the Export Market from the 1975 and 1976 Crops, January, 1979. Two very large years in the unusual market analyzed in a variety of ways, especially varieties and location of growth. Substantial defects were noted. A 4% sample analyzed by a computer program. 8 tables, map, 20 pages

212. 1978 Annual Reports of Forest Resources Research Advisory Committee and Cooperative Forestry Research Unit, February, 1979. The fifth year of FFRAC's work reported here. A summary of each project included, especially good on tree infestations by various agents. List of publications, a profile of students, faculty included. 32 pages


214. Arthur G. Randall, Forty Years of Forest Management on Indian Township, May, 1977. A companion piece to his earlier work on the Princeton Forestry Camp, Misc. Report 206. Chatty written summary of work performed here in the 49 years of its life. 113 tables. Bibliographies of published work, including theses. An important detailed analysis of one township, albeit a unique one. 3 useful appendices of cruises, and yields, as well as logging scales. 86 pages

215. J. Granett and L.R. Boobar, Possible Control of the Black Fly Simillium penobscotensis by Temporary Habitat Alteration, May, 1979. A new species recently discovered under research for possible control. 1 table, bibliography, 11 pages

217. Homer B. Metzger, Costs and Efficiency in Fluid Milk Processing and Distribution in Maine - 1978, October, 1979. His useful standard analyses for the Milk Commission. 20 dealers dealt with (93% of production). 43 tables, 67 pages. Reports 192, 204 were the earlier numbers in this series

218. Homer B. Metzger, Minimizing Milk Assembly, Processing, and Retailing Costs Through Plant Eliminations -- A Simulation of Resale Price Deregulation and Increased Milk Assembly Costs in the State of Maine, December, 1979. Simulated studies on effect of price deregulation in milk, especially if number and location of processing plants were cut back. Transportation costs also analyzed. 1975 data was the major source. 11 tables, 2 maps, 28 pages. Technical Bulletins 79, 93 and Miscellaneous Report 191 are related work


220. Malcolm Hunter, Susanne C. Hacker, Daniel T. Jennings, Fred B. Knight, Spruce Budworm Thesaurus, December, 1979. A CANUSA project. Provides a list and usage of keywords used in developing the bibliography cited in No. 213, 42 pages

221. Jonathan Falk, Harvesting Systems for Silvicultural Control of Spruce Budworm, December, 1979. An effort to deal with this difficult problem by extensive and careful harvesting of the fir. A number of possible methods analyzed, and markets studied. Policy recommendations. 5 related tables, 7 photos, 2 graphs, 2 drawings. Bibliography. 60 pages

222. Annual Report to the Maine Potato Commission on the Potato Research Program, October 1, 1978 - September 30, 1979, 1980. Reports on-going work, results where available, and proposed research in the areas of cultural studies, climatology, insect and disease control, varietal breeding, tuber quality and nutrition, harvesting, handling, storage, marketing, including cooperative work. Photos of researchers, 75 pages. A useful annual report

223. 1979 Annual Reports of Forest Resources Research Advisory Committee and Cooperative Forestry Research Unit, March, 1980. Their annual summary of work underway and forthcoming. 34 pages

224. J.B. Dimond and C.J. Spies III, A Comparison of Bt Alone Bt Plus the Additives Chitinase and Orthene in Control of Eastern Spruce Budworm, March, 1980. Several helicopter spray trials replicated reported in this work as the spruce budworm continued to wreak havoc in northern and eastern Maine and the Maritimes. No significant differences, nor very strong results. 5 tables, map, bibliography. 16 pages. Misc. Reports 144, 161, 166 are earlier work

226. J.R. Brushwein, C.D. Madore, J. Granett, Field Trials with the Insect Growth Regulator Bay Sir 8514 Against the Spruce Budworm Choristoneura fumiferana (Lepidoptera: Tortricidae.) April, 1980. Field Tests of a specific possibility in control Summer 1979 reported. Moderate control achieved as spray was none too efficacious. 5 tables, 3 figures, 15 pages. Did not warrant continuation


228. Alan S. Kezis, Edward F. Johnston, Edwin S. Plissey and Peter A. Baldwin, Some Opinions and Attitudes of Licensed Maine Potato Shippers, April, 1980. Results of interviews with 87 shippers in summer, 1979. (64.4% of such persons in Maine.) 10 tables showing results of opinions. RLS, Vol. 26, no. 1 related work. 12 pages

229. Robert K. Lawrence and Mark W. Houseweart, Analysis of the 1979 Check Cruise of the Maine Spruce Budworm Growth Impact Study, July, 1980 CFRU Technical Note 3. 10% of study plots analyzed to determine results and check other researchers. Annual work. 4 tables, 3 scatter diagrams. 12 pages

230. Harold E. Young, John H. Ribe and Kevin Wainwright, Weight Tables For Tree and Shrub Species in Maine, September, 1980. 24 species studied for fifteen years produced these important sources for researchers and cruisers. Complete Tree impact. 84 pages


236. Eben A. Osgood, Richard G. Dearborn and Richard L. Bradbury, Insecticide Trial to Control Spruce Budworm (Choristoneura fumiferana (Clemens)), on Christmas Trees, January, 1981. Suggests that pack treatment of Diazanone quite effective both on insects, and in control of foliage damage. 2 tables, 8 pages, Misc. Report 178 is a predecessor.


238. Forest Resources Research Advisory Committee, 1980 Annual Report, February, 1981. Work underway and forthcoming from this group is reported as usual. 27 pages.

239. CFRU Annual Report, March, 1981. Reports on work ongoing, publications, and proposed research in areas of silviculture, marketing and economics, protection, fertilization, and tree improvement. 24 pages.


243. Katherine K. Carter and David Canavera, Early Results From Containerized Plantings of Several Native and Exotic Birch Species in Maine, April, 1981. CFRU Research Note no. 9. Eight species planted under special conditions to relieve natural seeding difficulties. Results reported in early days. 1 table, 5 pages, bibliography.
244. Dennis A. Watkins and Julia N. Watkins, Rural Elderly and the Continuum of Care: An Analytic Review, May, 1981. A result of a year's grant on the subject of health care, and the rural aged in Maine. A very substantial contribution offering new analytical questions still present as well as surveying literature, and policy developments. 3 figures, 117 pages. (20 pages of bibliography)


246. Robert K. Shepard, Jr., Two Year Results from Fertilized White Pine Stands (Pinus strobus L.), June, 1981. CFRU Progress Report no. 15. Preliminary results of N, P, K, added to soils in two locations. Others projected and begun reported as well. 1 graph, 6 pages

247. Homer B. Metzger and Mark W. Anderson, Costs of Handling Milk in Retail Food Stores in Maine - 1980, June, 1981. More work in effort to establish milk priced by Maine Milk Commission. 56 stores studied for practices, and 47 for costs, December, 1980, by mail and some interviews. 35 tables (counting appendices), questionnaire used in study, 80 pages

248. James Hunter and Charles Smith, Green Sprouting Russet Burbank Seed Potatoes in Maine, June, 1981. Early sprouting efforts to lengthen growing season reported, 3 years' work. RLS, (1970). vol. 7, related. 4 tables, 13 pages

249. James Shottafer, Robert K. Shepard, Jr. and Ross D. Kerr, Effect of Specific Gravity Variation on the Strength Properties of Wood, CF RU Information Report No. 9, July, 1981. A well known phenomenon treated again with more specificity as to reasons why. 5 tables, 9 pages

250. Robert K. Lawrence and Mark W. Houseweart, Impact of the Spruce Budworm in the Maine Spruce-Fir Region 1975-1979, June, 1981. CFRU Research Bulletin no. 3. 400 plus plots surveyed for the time period in the general areas of defoliation, (by species, areas, and in mixed stands), Mortality (both from the insect and related weaknesses), tree growth, insecticides and their impact relatively. Several incidental results also reported in this study utilizing a multiple regression model. 56 tables, including appendices. Bibliography, 106 pages. A very useful summary of a difficult period in Maine north woods

252. Robert K. Shepard Jr. and Roland A. Struchtemeyer, Foliage Nitrogen Concentration and Basal Area Growth of Red Spruce (Picea rubens, Sarg.) Fertilized with Urea, September, 1981. 3 areas, several plots, replicated fertilizer experiments discussed after 7 growing seasons. 2 earlier analyses provided as well. Table, 6 graphs, bibliography. Bulletin 740, RLS, Vol. 16, No. 2, (1968) related work. 12 pages


254. Robert K. Shepard, Early Results From Thinned, Fertilized Red Spruce (Picea rubens Sarg.) Stands Near Rangley, August, 1981. CFRU Progress Report no. 16. The two methods of increasing growth studied in tandem and separately. 2 sets of graphs, 7 pages

255. Daniel T. Jennings, Susanne C. Hacker, Fred B. Knight, Melvin E. McKnight, Spruce Budworms Bibliography, Supplement 1, September, 1981. A Canusa Project. Continuation of No. 213 with items from 1534 to 2232 annotated in bibliography. Author and keyword indices. 139 pages

256. Frank Manzer, Reaction of the Potato Variety BelRus to Bacterial Ring Rot Infection, November, 1981. New variety (since 1978) shows signs of the disease indicated. First results of studies, 2 pages


259. Robert K. Shepard, Jr., Two-Year Results From Fertilized White Pine (Pinus strobus L.) Stands in Western Maine, December, 1981. CFRU Progress Report no. 18. 2 years of results from 4 stands near Bethel reported for N, P, and K. 9 graphs, 9 pages


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261. F. Richard King, Paul Fackler and Alan Kezis, Characteristics of Maine's Potato Farms, January, 1982. 694 respondents from five different sizes of farms analyzed through an SPSS computer routine. 10 tables. A snapshot of the industry 1977-8. 11 pages


264. Thomas Corcoran, and Willem Heij, XVII IUFRO World Congress, Proceedings of the Working Party Planning Control of Forest Operations, April, 1982. Papers from Kyoto meeting of September, 1981. Nineteen scientific papers presented of substantial interest to the major forested areas of the world. Papers have schemata, graphs, tables and many feature substantial bibliographies. An important production. 150 pages

265. 1981 Annual Report of the Cooperative Forestry Research Unit, April, 1982. CFRU Information Report no. 10. Annual reports of work ongoing in the areas of silviculture, forest protection, marketing and economics, fertilization, breeding, growth impact. List of publications and staff, along with cooperators. A useful annual. 25 pages

266. R.W. Hansen and J.B. Dimond, The Feeding Biology of Spruce Budworm on Several Hosts with Reference to Timing of Insecticidal Sprays, June, 1982. Larval feeding of buds observed with suggestions as to proper time and method of sprays. 6 tables, scatter diagram, bibliography, 19 pages

267. F. Richard King, Paul L. Fackler and Alan S. Kezis, Selected Characteristics of Maine's Potato Farmers, July, 1982. Follow-up study in more detail to No. 261 showing education level, age, income levels, and relation to farm size, market outlet, financing, as well as information sources. 12 tables, 11 pages, very useful material

268. Daniel T. Jennings, Suzanne C. Hacker, Fred B. Knight, Melvin E. McKnight, Spruce Budworms Bibliography - Supplement 2, September, 1982. Items 2233 to 2849, again abstracted and indexed by keywords and author names, 75 pages
269. Robert K. Shepard, Some Chemical Properties of Red Spruce (Picea rubens Sarg.) on Three Soils in North-Central Maine, October, 1982. CF RU Research Note No. 5. Analyses of such matters as lignin content and ethanol/benzine amounts as affected by soils. 1 table, bibliography, 5 pages

270. Maurice E. Demeritt, Jr., Abstracts of 1st Region VI Technical Session, October, 1982. S.A.F. regional meeting devoted to "Continuing Education - Practical Information from Research." Tree Genetics, silvicultural forest protection, and measurements are the sessions and 20 abstracts are printed. Useful look at on-going work. 8 pages

271. Robert K. Shepard and Thomas B. Brann, Some Factors Affecting the Response of Red Spruce (Picea rubens Sarg.) to Fertilization, November, 1982. CF RU Research Note no. 7. 3 Maine locations, N.P.K., applications, 7 years of returns summarized in useful work. 2 tables, bibliography, 13 pages

272. Raymond J. Nowak, Alan S. Kezis and Edward F. Johnston, Summary of Selected Characteristics of On-Track Potato Storages in Maine, 1981, October, 1982. 95% of such storage facilities reported on in early spring, 1982, analyzed through an SPSS routine. 7 tables. Part of effort to provide alternative transport as Maine industry remained under severe attack from other sources. 11 pages


274. J.B. Dimond, Effects of Aerial Sprays of Undiluted Bacillus thuringiensis Formulations on Spruce Budworm, November, 1982. Four 400 acre blocks tested for different concentrations, and spray methods with best results to date. "Highly Satisfactory," 4 tables, 9 pages, Fifth in series with this agent


277. Robert K. Shepard, Response to Fertilization of Red Spruce (Picea rubens Sarg.) in Western Maine - Third Year Results, December, 1982. CF RU Progress Report no. 22. 4 graphs as he provides a later report on work explicated in No. 254 this series. 5 pages

279. William D. Ostrofsky and Timothy G. O'Keefe, eds., Proceedings of the Hardwood Forest Management and Utilization Symposium, February, 1983. CFRU Information Report no. 6. Three paper sessions, as well as a keynote address are reprinted along with other materials. Items discussed included the state of the forest today, new products, and new methods of utilization. Many papers carried bibliographies which are useful. 5 tables, 3 graphs, 43 pages

280. Daniel J. Hilburn and J.B. Dimond, The Effects of Aerial Spraying with Carbaryl and Bacillus thuringiensis on Non-Target Terrestrial Arthropods, February, 1983. No real difference observed after extensive tests. 5 figures, 4 tables, extensive bibliography. TB 90, and M. Report 237 are related. 21 pages

281. FFRAC, Annual Report, 1982, April, 1983. First report since the College of Forestry was formed, and a landmark because of that fact. Research underway discussed briefly, and new work listed. Faculty, staff, and members of committee also listed. 18 pages


283. Frank Manzer, Reaction of the Belrus Variety to Bacterial Ring Rot Infection - An Update, April, 1983. Follow-up to Misc. Report 256. A third year of the experiment provided unpleasant results to the growers of this variety. 2 tables, 4 pages. Research is continuing

284. 1982 Annual Report, CFRU April, 1983. CFRU Information Report No. 11. A continuation of the annual with reports in silviculture, forest protection, timber management, fertilization, tree improvement, hardwood research, and other studies. Lists of staff and publications. 8 tables, schematic, 32 pages


295. C. Tattersall Smith, Jr., Intensive Harvesting, Residue Management Alternatives and Nutrient Cycling in the Spruce-Fir (Picea rubens, Sarg. - Abies balsamea (L.) Mill.) Type: The Weymouth Point Study. January, 1984. CFRU Progress Report No. 26. Reports experiments designed to provide information on short term nutrient cycling, long term forest fertility and intensive mechanical harvesting. Stream water quality in the immediate area also a concern. T4R12 is the site of the research begun in 1979. 9 tables, map, diagram, 4 graphs, bibliography, 42 pages. Appendices list various variables which were included in the study matrix. This work is follow-up testing to some of the Complete Tree Conceptual theories.

296. Robert S. Seymour, Rob A. Ebeling and Charles J. Gadzik, Operational Density Control in Spruce-Fir Sapling Stands - Production of a Mechanical Swatch Cutter and Brush-saw Workers, January, 1984. CFRU Research Note no. 14. Several manual and mechanical systems to control undergrowths in recently cut areas (average 17 years) were tested. 4 photos, 6 tables, graph, bibliography. Appendix reproduces machine specifications 26 pps.


299. 1983 Annual Report of FFRAC. Provides data on Forest Biology, FORMULA, and Wildlife Research as well as on faculty. Publications are listed as are oversight committee members. (April, 1984)


304. Annual Report to the Maine Potato Commission: The Potato Research Program. Report is for year October 1, 1983 to September 30, 1984. Includes reports on work in progress in cultural, physiological studies, insect control, diseases, varietal and breeding work, harvesting, handling and storage, as well as marketing. Extension, Seed Potato, and USDA cooperative projects are also described. 46 photos, all of researchers. Table illustrate results in many projects. 87 pages


306. 1984 Annual Report of FFRAC. Data on Forest Biology, FORMULA, Wildlife research as well as material on faculty and oversight committee members. Publications listed for year. (April, 1985)
One of the reasons for creating the Maine Agriculture Experiment Station was to provide a safe, accurate, available method of controlling the quality of farmer seeds, fertilizers, and feeding stuffs for animals. From 1883 some sort of inspection was performed, and after 1885 it became the duty of the station to perform inspections and warn the public of substandard materials. The new station continued this work in 1888, and until 1908 the results of the inspections were published in bulletin form, or in Miscellaneous Publications (after 1898), and were made available to the public in this way. See above for listings and comment. In the decade from 1898 to 1908 the intensity of interest in inspecting purity of foods and drugs increased and the state passed several laws setting standards for pure foods and drugs, as well as other items. The station continued to do the work of policing these laws, and the result of its work makes up these future increases in publications. All of them are noticed in their appropriate places earlier in this work. Beginning in 1908, however, inspections were published in a more regularized form. The first 19 were published in Miscellaneous Publications and are noticed there, although a reprise is offered below. After no. 19, the remainder was published in Official Inspection Bulletins, and the series is still being published with Number 352 appearing in March, 1985. The Food and Drug inspections are extremely varied and miscellaneous in the number of items analyzed. Students of government relations with citizens, or with development of food, drug, and other consumption habits will find the inspections interesting, as will students of animal intake, varietal changes in seeds, and in fertilizer usage. For them, a very brief listing/annotation is provided. For others the list is simply an effort to complete a bibliographical listing. Discussion of the inspection service of the station appears in my History of the Station, (1980), passim
MAINE AGRICULTURAL EXPERIMENT STATION BULLETIN 808

1. Misc. Pubs., no. 319 - Foods
2. No. 322 - Tincture of Iodine
3. No. 324 - A Mixture of Foods and Food Additives
4. No. 329 - Misbranding; Pickles
5. No. 331 - Labelling, Catsup, Maple Syrup
6. No. 333 - Oysters, Rice, Salt Fish, etc
7. No. 339 - Food and Drug Standards, Carbonated Beverages. (1909)
8. No. 341 - Labelling, Chemicals in Foods
9. No. 342 - Fertilizers
10. No. 344 - Feeding Stuffs
11. No. 350 - Soda, Cream of Tartar, Sweet Corn, Flours, Spices, etc
12. No. 352 - Texts of the Various Laws
13. No. 357 - Coffee, Gelatine, Honey
14. No. 358 - The Complete Text of Maine Food and Drug Laws, Recently Amended. (40 pps.)
15. No. 361 - Sale of Apples, Catchup, Cocoa, Violations Described
16. No. 365 - Commercial Ice Cream Thickeners; Jams, Jellies, Chemicals
17. No. 368 - Seeds. (Good Description of the Seed Trade.)
18. No. 370 - Drugs
19. Fertilizers - 1910
20. Feeding Stuffs
21. Various Foods - May, 1910
22. Various Foods - May, 1910
23. Feeding Stuffs - June, 1910
24. Foods, Cleanliness in Businesses - July, 1910
25. New Regulations, Oysters, Yeast, Eggs, Dressed Poultry - September, 1910
26. Headache Remedies - November, 1910
27. Carbonated Beverages, Ice Cream - November, 1910
28. Seed Inspection - December, 1910
29. Fertilizer - January, 1911
30. Oysters, Clams, Sausage, and Imitation Beer - March, 1911
31. Feeding Stuffs - February, 1911
32. Changes in the Inspection Laws - May, 1911
33. Fertilizers - June, 1911
34. Spices, Mustard, Honey, Gluten Flour - November, 1911
35. Food Sanitation - December, 1911
36. Seed Inspection, January 1912
37. Carbonated Beverages, February 1912
38. Feeding Stuffs, March 1912
39. Miscellaneous Foods, Display of Food, March 1912
40. Drugs, May 1912
41. Preserves, Sausage, Vanilla, June, 1912
42. Fertilizer, July, 1912
43. Shellfish, August, 1912
44. Creamery Sanitation, Butter, October 1912
45. Carbonated Beverages and Ice Creams, December 1912
46. Seed Inspection, January 1913
47. Fungicide and Insecticide Inspection, February 1913
48. Drugs, March 1913
49. Protection of Food Offered for Sale, April 1913
50. Feeding Stuff Inspection, May 1913
51. Weight of Butter, June 1913
52. Seed Inspection, July 1913
53. Fertilizer Inspection, September 1913
54. Insecticide and Fungicide Inspection, October 1913
55. Clams, Oysters, Scallops, December 1913
56. Carbonated and Other Beverages, February 1914
MAINE AGRICULTURAL EXPERIMENT STATION BULLETIN 808

57. Ice Cream, February 1914
58. Butter, March 1914
59. Molasses, April 1914
60. Feeding Stuffs Inspection, 1914
61. Drugs, 1914
62. Fertilizer Inspection, October 1914
63. Ice Cream, November 1914
64. Seed Inspection, December 1914
65. Miscellaneous Food Materials, December 1914
66. Opened Shellfish, January 1915
67. Milk and Cream, February 1915
68. Fungicide and Insecticide Inspection, March 1915
69. Cream and Milk, July 1915
70. Vinegar, June 1915
71. Cream and Milk, July 1915
72. Feeding Stuffs Inspection, August 1915
73. Seed Inspection, September 1915
74. Fertilizer Inspection, December 1915
75. Fungicide and Insecticide Inspection, January 1916
76. Ice Cream, Evaporated Milk, February 1916
77. Extracts and Spirits, April 1916
78. Clams, Oysters and Scallops, June 1916
79. Commercial Feeding Stuffs, 1915-6, October 1916
82. Miscellaneous Drug Preparations, February 1917
83. Maine Packed Blueberries, Corn, and Sardines, July 1917
84. Commercial Feeding Stuffs, 1916-7, October, 1917
85. Commercial Fertilizers, 1917, December, 1917
86. Commercial Agricultural Seeds, 1917
   Insecticides and Fungicides, 1916 and 1917
87. Miscellaneous Food Materials, 1918
88. Commercial Agricultural Seeds, 1918
89. Commercial Feeding Stuffs, 1917-18
90. Commercial Fertilizers, 1918
91. Drugs and Foods, 1919
92. Commercial Feeding Stuffs, 1918-9
93. Commercial Fertilizers, 1919
94. Commercial Agricultural Seeds, 1919
   Insecticides and Fungicides, 1918 and 1919
95. Drugs and Foods, 1920
96. Commercial Feeding Stuffs, 1919-20
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98. Commercial Agricultural Seeds, 1920
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100. Commercial Feeding Stuffs, 1920-21
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102. Commercial Agricultural Seeds, 1921; Insecticides and Fungicides, 1920 and 1921
103. Foods and Drugs, 1922
104. Commercial Feeding Stuffs, 1921-22
105. Commercial Fertilizers, 1922
106. Commercial Agricultural Seeds, 1922; Insecticides and Fungicides, 1922
107. Foods and Drugs, 1923
108. Commercial Feeding Stuffs, 1922-1923
109. Commercial Fertilizers, 1923
110. Insecticides and Fungicides, 1923
111. Food and Drugs, 1924
112. Commercial Feeding Stuffs, 1923-1924
113. Commercial Fertilizers, 1924
114. Commercial Agricultural Seeds, 1924; Insecticides and Fungicides, 1924
115. Foods and Drugs, (April, 1925)
117. Commercial Fertilizers, 1924, (October, 1925)
118. Commercial Agricultural Seeds, 1925; Insecticides and Fungicides, 1925, (December, 1925)
119. Foods and Drugs, 1926
120. Commercial Feeding Stuffs, 1925-1926
121. Commercial Fertilizer, 1926
122. Commercial Agricultural Seeds, 1926; Insecticides and Fungicides, 1926
123. Foods and Drugs, 1927
124. Commercial Feeding Stuffs, 1926-1927
125. Commercial Fertilizers, 1927
126. Commercial Agricultural Seeds, 1927; Insecticides and Fungicides, 1927
127. Foods and Drugs, April, 1928
128. Commercial Feeding Stuffs, 1927-1928
129. Commercial Fertilizers, 1928
130. Commercial Agricultural Seeds, 1928; Insecticides and Fungicides, 1928
131. Foods and Drugs, April, 1930
132. Commercial Feeding Stuffs, 1928-1929
133. Commercial Fertilizers, 1929
134. Commercial Agricultural Seeds, 1929; Insecticides and Fungicides, 1929
135. Foods and Drugs, April, 1930
136. Commercial Feeding Stuffs, 1929-1930
137. Commercial Fertilizers, 1930
138. Commercial Agricultural Seeds, 1930; Insecticides and Fungicides, 1930
139. Foods and Drugs, April, 1931
140. Commercial Feeding Stuffs, 1930-1931
141. Commercial Fertilizers, 1931
142. Commercial Agricultural Seeds, 1931; Insecticides and Fungicides, 1931
MAINE AGRICULTURAL EXPERIMENT STATION BULLETIN 808

143. Foods and Drugs, April, 1932
144. Commercial Feeding Stuffs, 1931-32
145. Commercial Fertilizers, 1932
146. Commercial Agricultural Seeds, 1932; Insecticides and Fungicides, 1932
147. Foods and Drugs, April, 1933
148. Commercial Feeding Stuffs, 1932-33
149. Commercial Fertilizers, 1933
150. Commercial Agricultural Seeds, 1933; Insecticides and Fungicides, 1933
151. Foods and Drugs, April, 1934
152. Commercial Feeding Stuffs, 1933-34
153. Commercial Fertilizers, 1934
154. Commercial Agricultural Seeds, 1934; Insecticides and Fungicides, 1934
155. Foods and Drugs, 1935
156. Commercial Feeding Stuffs, 1934-35
157. Commercial Fertilizers, 1935
159. Foods and Drugs, June, 1936
161. Commercial Fertilizers, 1936
162. Commercial Agricultural Seeds, 1936; Insecticides and Fungicides, 1936
163. Foods and Drugs, 1937
165. Commercial Fertilizers, 1937
166. Commercial Agricultural Seeds, 1937; Insecticides and Fungicides, 1937
167. Foods and Drugs, 1938
168. Commercial Feeding Stuffs, 1937-38 (July 1938)
169. Commercial Fertilizers, 1938
170. Commercial Agricultural Seeds, 1938
171. Foods and Drugs, 1938
172. Commercial Feeding Stuffs, 1938; (July, 1939)
173. Commercial Fertilizers, 1939
174. Commercial Agricultural Seeds; 1939; Fungicides and Insecticides, 1939
175. Foods and Drugs, 1940
176. Commercial Feeding Stuffs, 1939-40; (July 1940)
177. Commercial Fertilizers, 1940
178. Commercial Agricultural Seeds; 1940; Fungicides and Insecticides, 1940
179. Foods and Drugs, 1941
180. Commercial Feeding Stuffs, 1940-41; (July, 1941)
181. Commercial Fertilizers, 1941
182. Commercial Agricultural Seeds, 1941; Fungicides and Insecticides, 1941
183. Foods and Drugs, 1942
184. Commercial Feeding Stuffs, 1941-42; (July, 1942)
185. Commercial Fertilizers, 1942
186. Commercial Agricultural Seeds, 1942; Fungicides and Insecticides, 1942
187. Foods and Drugs, 1943
188. Commercial Feeding Stuffs, 1942-43; (September, 1943)
189. Commercial Fertilizers, 1943
190. Commercial Agricultural Seeds, 1943; Fungicides and Insecticides, 1943
191. Foods and Drugs, (June, 1944)
192. Feeding Stuffs, 1943-4
193. Commercial Fertilizers, 1944
194. Commercial Seeds 1944; Fungicides and Insecticides, 1944
195. Food and Drugs, 1945
196. Commercial Feeding Stuffs 1944-45, July, 1945
197. Commercial Fertilizers 1945, October, 1945
198. Commercial Agricultural Seeds, 1945; Fungicides and Insecticides, 1945
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199. Foods, June, 1946
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232. Commercial Feeding Stuffs, 1953-54
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238. Commercial Agricultural and Vegetable Seeds, 1956; Economic Poisons, 1956
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240. Commercial Feeding Stuffs, 1956-57
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252. Commercial Feeding Stuffs, 1958-1959
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254. Commercial Agricultural and Vegetable Seeds, 1959; Pesticides, 1959
255. Foods, 1959-60
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258. Commercial Agricultural and Vegetable Seeds, 1960; Pesticides, 1960
260. Commercial Feeding Stuffs, 1960-61
263. Foods, 1962
264. Commercial Feeding Stuffs, 1962
265. Fertilizers, 1962
266. Seeds and Pesticides, 1962
267. Foods, 1963
268. Commercial Feeding Stuffs, 1963
269. Commercial Fertilizers, 1963
270. Vegetable Seeds and Pesticides, 1963
271. Foods, 1964
272. Feeding Stuffs, 1964
273. Fertilizers, 1965
274. Seeds and Pesticides, 1965
275. Foods, 1965
276. Fertilizers, 1965
277. Seeds and Pesticides, 1966
278. Commercial Feeding Stuffs, 1965
279. Foods, 1966
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281. Seeds and Pesticides, 1967
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286. Commercial Agricultural and Vegetable Seeds, 1967
287. Foods, 1967-68
289. Commercial Agricultural and Vegetable Seeds; Pesticides, 1968
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293. Commercial Agricultural and Vegetable Seeds, 1969
294. Commercial Feeding Stuffs, 1970
295. Foods, 1969-70
296. Commercial Fertilizers, 1970
297. Commercial Agriculture and Vegetable Seeds, 1970; Pesticides, 1970
298. Commercial Feeding Stuffs, 1969-70
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306. Commercial Feeding Stuffs, 1971-72
307. Foods, 1972-73
308. Commercial Fertilizers, 1973
309. Seeds, 1973; Pesticides, 1973
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311. Foods, 1973-74
312. Commercial Fertilizers, 1974
313. Seeds, 1974; Pesticides, 1974
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315. Foods, 1974-75
316. Commercial Fertilizers, 1975
317. Commercial Agricultural and Vegetable Seeds, 1975
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327. Foods, 1977-8
328. Commercial Fertilizers, 1978
330. Commercial Feeding Stuffs, 1977-8
331. Foods 1978-9
332. Commercial Fertilizers, 1979
333. Commercial Agricultural and Vegetable Seeds, 1979
335. Foods 1979-80
337. Commercial Agricultural and Vegetable Seeds, 1980 (December, 1980)
338. Commercial Feeding Stuffs, 1979-80
339. Foods, 1980-81
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344. Commercial Agricultural and Vegetable Seeds, 1982 (December, 1982)
345. Commercial Fertilizers, 1982-83
346. Foods, 1982-83
348. Commercial Agriculture and Vegetable Seeds, 1983 (December, 1983)
352. Commercial Fertilizers, 1984 (March, 1985)
353. Foods, 1984-85 (April, 1985)
354. Feeds, 1983-84 (June, 1985)
This is a weekly series of mimeographed letters written for the agricultural press of New England. Originally begun when some newspapers in the area attacked the station for using Highmoor Farm as an experimental farm, rather than a model or patent farm, they always remained a way for the station to defend itself against the unknowing outside attack. For much of their history (they close with No. 468, explaining the fact that Woods had been fired as Director), however, they also served as a way of providing scientific information on problems of the day, as well as a convenient way to summarize short-term results in longer experiments. I have provided a listing of those with some scientific significance; and have left the political bulletins unnoticed. Those who wish more on this facet may read the pages of my Station history where these sources are much used for their time period

1. January 2, 1912 - Highmoor Farm: To Whom Does It Belong?
9. February 18, 1912 - Insect Parasites of the Brown Tail Moth
14. April 3, 1912 - Wireworms
20. May 15, 1912 - Scale Insects of Maine Apple Trees
24. June 12, 1912 - Wild Mustard - Wild Radish
27. July 3, 1912 - Breeding Better Beans
28. July 10, 1912 - Spruce Bud Moth
35. April 22, 1912 - Variety Tests of Oats at Highmoor Farm
44. November 30, 1912 - Orchards at Highmoor Farm Yields 1909, 1910, 1911, and 1912 compared
45. December 4, 1912 - Plowing and Harrowing by Power: Gasoline Versus Horses at Highmoor Farm
53. January 1, 1913 - Breeding for Milk Production

56. January 22, 1913 - Breeding for High Production - Laws of Inheritance of Egg Production and Relation to Breeding for Milk Production

58. February 5, 1913 - Potato Leafroll

72. May 14, 1913 - Weevils in Peas and Beans.

75. June 4, 1913 - Powdery Scab of Potatoes in the United States

77. June 18, 1913 - Sex Determination in Cattle

82. July 23, 1913 - The Cost of Spraying Orchards

84. August 6, 1913 - Controlling Potato Blackleg

89. September 10, 1913 - International Cooperation in the Study of Poultry

99. November 20, 1913 - Varieties of Oats at Highmoor. Four Years' Work

104. December 24, 1913 - Aphid Investigations

106. January 7, 1914 - New Varieties of Oats Originated at Highmoor

114. March 4, 1914 - Powdery Scab of Potatoes

122. April 29, 1914 - The Blueberry Maggot

132. July 8, 1914 - Oats on Aroostook Farm

136. August 5, 1914 - Potatoes on Aroostook Farm

137. August 12, 1914 - Summer Staff of Entomologists

145. October 7, 1914 - Potash in 1915 Fertilizers

161. January 27, 1915 - Sulphur and Potato Scab

176. May 12, 1915 - Potash in Potato Fertilizers

178. May 20, 1915 - The Potato Scab Organism

190. August 18, 1915 - Plant Breeding Work at Highmoor Farm

198. October 13, 1915 - Seaweed as a Fertilizer


205. December 1, 1915 - Tests of a New Variety of Oats

208. December 22, 1915 - The Blueberry in Maine

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210. January 5, 1916 - The Blueberry Fruit-Worm
216. February 16, 1916 - Wood Ashes as a Fertilizer
217. February 23, 1916 - Blueberry Maggot
233. June 14, 1916 - The Normal Duration of Heat in the Cow
249. October 10, 1916 - Aphid Enemies
252. October 25, 1916 - Potash Experiments with Potatoes
254. November 8, 1916 - Potash Experiments with Oats
266. January 31, 1917 - Net Necrosis and Spindling Sprout of Potatoes
268. February 14, 1917 - Oat Variety Test
278. April 25, 1917 - Sea Weed A Valuable Source of Potash
297. September 5, 1917 - Bordeaux Mixture Effective in Controlling Late Blight of Potatoes
304. October 24, 1917 - No Known Way to Control the Sex Ratio in Cattle
309. November 28, 1917 - The Influence of Temperature and Moisture on Powdery Scab of Potatoes
316. January 16, 1918 - Potatoes Grown With and Without Potash
317. January 23, 1918 - Are There Weevils in your Bean Seeds?
318. January 30, 1918 - Net Necrosis and Spindling Sprout of Potatoes
319. February 6, 1918 - Potatoes Grown With Different Applications of Nitrogen - Four Years' Trials
330. April 24, 1918 - The Potato Crop in Relation to Soil and Fertilizer
332. May 18, 1918 - Oat Breeding at Aroostook Farm
350. September 11, 1918 - Late Blight of Potatoes
359. November 13, 1918 - The Maine 340 Oat
371. February 5, 1919 - Strawberries in Northern Maine
393. July 9, 1919 - The Creation of a New Oat
395. July 23, 1919 - The Pine Weevil
396. July 30, 1919 - More on the Pine Weevil
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416. December 17, 1919 - Breeding for Milk Production
417. December 22, 1919 - Potato Mosaic
418. December 31, 1919 - Plant Lice Carry Potato Disease
420. January 14, 1920 - Borax and Plant Growth
421. January 21, 1920 - Net Necrosis and Leaf Roll of Potatoes
424. February 11, 1920 - Net Necrosis and Leaf Roll of Potatoes
429. March 17, 1920 - Plant Breeding Investigations. The announcement of the hiring of Karl Sax
440. June 2, 1920 - Animal Husbandry at M.A.E.S.
441. June 9, 1920 - Animal Husbandry at M.A.E.S. (more)
443. June 23, 1920 - Animal Husbandry at M.A.E.S. (more)
450. August 11, 1920 - Potato Mosaic
454. September 18, 1920 - Breeding for Milk and Butter-Fat Production
461. October 26, 1920 - Grasshoppers and Their Relatives
463. November 9, 1920 - Breeding Oats for Increased Production
467. December 20, 1920 - Potato Mosaic Hard to Control
UPDATE

Update was an occasional publication of the Station from 1972 until July, 1981. It was a tabloid sized newspaper printed on coated stock, and was designed to produce updated information on previously printed research, and to provide the interested public with news of the Station. In its later years it appeared on a quarterly basis, and there was a higher emphasis on research results. An annotation of its issues follows. All articles noticed except filler information

Vol. 1, no. 1 - February, 1972
"Many UMO People Work Together on the Sea Grant Program" (announcing the purposes of the first grant in this area.)
"Improving the Nutrition of Maine Preschoolers." Reports the work of the Maine part of a regional project interested in preventing malnutrition.
"Styrene: A Hazardous Chemical - Use with Caution." Reports an accident with this compound.
"What Plants Say About Air Pollution." Reports a project dealing with the effect of air pollution on plants.

Vol. 1, no. 2 - June, 1972
"UMO Researchers Developing New Proteins For the Future." Reports work in amino acids
"These Black Flies are Driving Me Buggy." Research on the famous Maine Insects
"The Shrimp Boats are a 'Comin'." A new Maine industry under study

Vol. 1, no. 3 - November, 1972
"UMO Chemistry Lab Works to Protect the Maine Consumer." Analysis of the work of the inspection service.
"Project Aims at Mapping Paths Out of Poverty." Announces the beginning of famous and successful MAES project.

Vol. 2, no. 1 - April, 1973
"UMO Animal Scientists Find Use for Scallop Waste." - Poultry Feed.
"Study Focuses on Maine Seasonal Home Owners." First Results of an ARE study.
"This Little Chicky Went to Market." Production System for Broilers.
Vol. 2, no. 2 - August, 1973

"Study Focuses on Lower Penobscot Business and Social Organizations." Develops relationships and analysis of community work.


Vol. 2, no. 3 - December, 1973

"UMO Biochemist Probes Secrets of Chicken Intestines." Lerner's work on absorption of proteins. Reported in full elsewhere and noted in this work.

"The Green Peach Aphid is a Troublemaker." A vector of potato leafroll. The work focuses on their parasites, entomogenous fungi.

"Forestry Project Focuses on Lignin Formation." The compound responsible for stiffness in wood is analyzed.

"UMO Scientist Studies Apple Harvesting and Quality." A major regional project with much of the study focused at Highmoor Farm.

Vol. 3, no. 1 - April, 1974

"UMO Nutritionists Hope to Reduce Medical Costs." Preventative Medicine in the area of diet control.


"Chokepears Masquerade as Blueberries." A weed bearing berries, and the results of some taste tests.

Vol. 3, no. 2 - October, 1974

"Everything But the Rustle of the Wind Through the Leaves." A good report on the Complete Tree Concept of Harold Young.

"Entomologists and Chemists Attack Mosquitoes." Developing control methods through chemistry.

"Poultry Plants Plan Ahead for Clean Water." Impact of recently passed Federal Water Pollution Control Act.

Vol. 3, no. 3 - December, 1974

"J. Franklin Witter Animal Science Center Dedicated." New buildings and complex dedicated.

"Back to the Backyard Poultry Flock?" Food costs prompted a study of small flock economics.

"Lower Penobscot River Area Improving Rural Homes Project." Use of Rural Development Act of 1972 to enhance life of some Mainers.

Vol. 4, no. 1 - March, 1975

"Experiment Stations Celebrate Centennial." An article looks at the past, of all stations, and MAES in particular.

"UMO Researchers Tour Forest Lands." Reports a major tour of Maine forests to look at new methods of harvest.

Vol. 5, no. 1 - July, 1977


Louis A. Ploch, "The In-Migrants Are Coming." A demographic study of change in the Maine population. (A very significant paper.)

Forest V. Muir, "Broiler Cages." Reporting An Effort to Produce a Better, Cheaper Cage.

Vol. 6, no. 1 - October, 1977
Louis A. Ploch, "The In-Migrants Are Coming, Part II." More, in detail on this important subject.
F. Muir, and R.W. Gerry, "Reverse Cages More Profits." Cages for egg laying poultry being devised.
Richard A. Cook, "Nutrition and the Adolescent." Modern intakes discussed in an area in which the station had pioneered work.

Vol. 6, no. 2 - January, 1978
Darrell B. Pratt, "Methanogens, The Third Line." Reports a possible third line of evolutionary development
Richard S. Soper, "Insect Biological Warfare," joint project on developing Entomophora as control of insect pests.

Vol. 6, no. 3 - April, 1978
J.H. Wolford, "Small Animal Facility." A new work is discussed.
K. Elizabeth Gibbs, "Environment Monitoring." Detailed study in a joint project of impact of insecticides uses in spruce budworm control projects and elsewhere. How it is done and why.

Vol. 6, no. 4 - July, 1978
Wallace C. Dunham, "Management of Maine's Soft Shell Clam Resources." Developing a method to deal with growing demand in a time when the resource is close to full development. A good article.
Fred B. Knight, "The Cooperative Forestry Resource Unit: A University Response to Landowner Needs." Development of this idea over the five years it had been in operation.

Vol. 7, no. 1 - October, 1978
Cheryl L. Achterberg, "What's in a Potato?" Analysis of components.
Ray B. Owen, Jr., "An Endangered Species in Maine - The Bald Eagle." A beginning of a major research and reclamation project.

Vol. 7, no. 2 - January, 1979
John B. Dimond, "Future Insecticides From Plants?" Some plants are hostile to insects. An effort to find out why and use the knowledge.
Louis A. Ploch, "The In-Migrants: Some Are Returning Home." A follow-up to some who found Maine not what they had wanted or expected. Reports detailed research and is an important contribution.

Vol. 7, no. 3 - April, 1979
Eben A. Osgood, "The Effects of Spraying for Spruce Budworm Control on Native Bees and Pollination." All things do connect, and this study reports how much in this area.
Charles Williams, "Forest Fire, The Friend in Your Future." Controlled forest fires as an ecological and natural factor in the woods.
Vol. 7, no. 4 - July, 1979
Homer B. Metzger, "This Milk Pricing Problem." The leading expert in these matters in the northeast analyzes the factors in the Maine milk industry from all points of view.
Alvin F. Reeves and Alan R. Langille, "A Visit to the International Potato Center." The results of a major two week visit to Lima, Peru, a center for potato research. A long detailed and useful article on how research is international in nature.

Vol. 8, no. 1 - October, 1979
Norman Smith, "The Use of Litter for Heating Maine's Poultry Houses." More efficient work in this industry under economic attack studied.

Vol. 8, no. 2 - January, 1980
Louis A. Ploch, "Trends and Changes in Maine's Population: Social and Economic." Extremely interesting article on demography as Maine began to undergo considerable change.
Bibliography.
Michael G. Zuck, "New Spore Trap for Apple Scab Forecasting." One of the oldest continuing research areas in the Maine station still under observation and attempted control.

Vol. 8, no. 3 - April, 1980
Norman Smith, "Solar Heat at UMO - The First Year." Reports results of a year's study on a newly developed solar heating unit at UMO. Provided detailed analysis, graphs, figures. A very good and useful article.

Vol. 8, no. 4 - July, 1980
Ronald B. Davis, "Acidic Precipitation in Maine." A new problem and the research effort to analyze its impact and deal with its control. A useful and important article. Maps.
Bradford Caswell, "Maine's Ground-Water Situation." How is ground water used, where does it come from, and will it be sufficient are questions raised here. Maps, graphs. An important article.

Vol. 9, no. 1 - October, 1980
Forest Muir, "The Competitive Position of the Maine Broiler Industry." The geographic base analyzed for an industry which had risen very rapidly, but by the time of the article was under severe competitive attack.
David Leonard and Lauren Long, "Field Appraisal of Resource Management, (FARMS)." A project to analyze the best methods of crop management to produce food, as well as control erosion, and conserve soils.

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Vol. 9, no. 2 - January, 1981
   Darrell B. Pratt, "Darkness, Brimstone, and Life." A detailed analysis of organisms found at great marine depths which do not need light for growth. Apparently using an oxidation of sulphides as their life force, they may be an indication of new growth patterns. The potential significance for food supplies is considerable. Charts and graphs. A significant publication.

Vol. 9, no. 3 - April, 1981

Vol. 9, no. 4 - July, 1981
   Louis A. Ploch, "Maine - One Hundred and Sixty Years of Growth and Change." A long analytical article on Maine's population through time and especially since the 1970 census. The new results recently in. Bibliography. Maps. Graphs. As usual from this researcher, the work is interesting, provocative and based on excellent analysis.
The Complete Tree Institute

This group was formed in the late 1970's by researchers who were committed to research on utilization of the Complete Tree. The concept of biomass for wood usage has become an international force, fostered in great part by these researchers. Many of their publications occur earlier in this work, as this section only deals with publications appearing under that rubric. The Institute came to an end with the retirement of Harold Young in September, '82.

Bulletin no. 1, 1979

John H. Ribe, A Study of Multi-Stage Sampling and Dimensional Analysis of Puckerbrush Stands. 108 pps., 34 tables, 19 figures, bibliography. This work was a long range effort to determine which of two generally used methods worked the best in assessing actual amounts of available biomass. The first method, multi-stage sampling, worked slightly better when time and travel were not important, and the second method, dimensional analysis, was as useful when accessibility was an issue. The sort of analysis needed to determine actual significances. This work was a useful effort.

Harold E. Young, Principles of Complete Forest Management Applied to the West Half of T4-R16 (Elm Stream Township), Maine. August, 1982. 37 pps., 4 maps, 3 figures, and several tables. This long paper marks the culmination of Young's work. It assesses the complete tree concept on land cut both fairly heavily and in equilibrium. Continued assessment this century is planned and the long term experiment will be of potential major use to land and woods owners and users. Bibliography

Bibliography of Complete Tree Institute, August, 1982, with supplement. 11 pages of the major citations by Complete Tree Researchers from 1962 to 1982. Many are noted in this bibliography and annotated there.

Working Party on the Mensuration of the Forest Biomass, S4.01 of IUFRO. IUFRO BioMass Studies, 1974. This book, 532 pps., represents papers given at Nancy, France and Vancouver, Canada in 1973. H.E. Young, "Growth, Yield, and Inventory in Terms of Biomass," 3-9 with bibliography sets the stage for the work. 14 statistical papers follow in Part 1, one is from Ribe, and is an early version of his Bulletin no. 1, supra., and another is from Young and they report biological significances for this work, and 8 papers deal with the implications for utilization.

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Harold E. Young, editor, Oslo Biomass Studies, 1977. Volume Two in the international work from IUFRO on forest biomass. 302 pps. H.E. Young, "Seven Wooden Poles in a Maginot Fence," 1-10 again sets the tone for this Norwegian meeting of 1976. Papers are given on biomass in new areas of the world, and nutrient studies in relation to this concept (4) with two from MAES workers

Harold E. Young and Stephen A. Norton, "Forest Biomass Utilization and Nutrient Budgets," pps. 55-74. A very good paper dealing with some of the major criticisms offered. The paper is also available as a separate

Harold E. Young, and Paul N. Carpenter, "Sampling Variation of Nutrient Element Content Within and Between Trees of the Same Species," pp. 75-100. Resolving questions of accuracy

Ten other papers follow on specific biomass problems of which two represent work at the Maine Station

Harold E. Young, "A Summary and Analysis of Weight Table Studies," pp. 251-282. In addition to statistical analysis of tables, the paper provides a very complete bibliography of the problem

Harold E. Young, Leigh E. Hoar and Theodore C. Tryon, "A Forest Biomass Inventory of Some Public Land in Maine," 283-302. Studies made of several (65,000 acre approx.) areas to estimate biomass on Maine public lots

Harold E. Young, Kyoto Biomass Studies, 1981. 172 pps. This third volume in this international series represents papers given at the third conference at Kyoto, Japan in September, 1981. Young provides a brief history of the IUFRO working party from pps. 1-2. Six papers given orally to Kyoto are printed. One is from a scientist associated with the Maine Station

Harold E. Young, "The Relationship between Forest Biomass Productivity and SCS drainage Classes in Northern Maine," pps. 59-78. This paper is support of the evidence and work presented in Young's later work on "Principles of Complete Forest Management," discussed earlier

Seven other papers presented in written form and discussed at Kyoto make up the balance of the book
These items all bore the imprint, in one way or another, of the Maine Agricultural Experiment Station. Most of them did not have numbers, although some notices below are of specific series within the station subgroups. There are, I am sure, other items which I have not yet seen, but what follows is a conscious effort to notice, even though briefly, all items which came under the station effort and were published in that form.


Ch. 1 - A Critical Examination of Current Modes of Research in Genetics
2 - Biometric Ideas and Methods of Biology: Their Significance and Limitations
3 - On the Nature of Statistical Knowledge
4 - Certain Logical and Mathematical Aspects of the Problems of Interbreeding
5 - Genetics and Breeding
Index

An important book of its time, with most of the knowledge gained at MAES.


Raymond Pearl, "Biology and War," *Journal of the Washington Academy of Sciences*, Vol. VIII, no. II (June 4, 1918), pps. 341-360. Deals with the question of whether warlike attitudes are inherited

Abstracts of Recent Bulletins, January, 1936. Offers a brief paragraph on Bulletins 378-381, and Official Inspections 154-8, and has a postal card to tear off if you wish to receive them

Abstracts of Recent Bulletins, February, 1937. The same thing for Bulletins 382-51 and Inspections 159-162

Abstracts of Recent Bulletins, April, 1938. For Bulletins 386-390 and Inspections 163-6

Abstracts of Recent Bulletins, April, 1940. For Bulletins 397-9 and Inspections 171-4
Forestry Department - Technical Bulletins.

These are mimeographed short bulletins, although occasional ones are fairly large. The first one appeared in March, 1950, and the most recent, No. 85 was published in 1982. Examples which may still be useful include:

10. Nine Years of Bud Pruning in Red Pine
18, 19, 22, 35, 39, 42, 43, 45. Volume Table of one sort or another
34. Results of Cutting Thirteen Years After.
71. Corcoran, Abbot, Ozellus, Bibliography of Faculty
85. The small woodland owner in Maine, (a symposium)

Most of the materials in this publication appear in later formal bulletins

R.M. Bailey, Trials of Field Corn for Grain in 1954, 9 pps., 1955 (mimeo.)


R.M. Bailey, M.E. Highlands, J.S. Getchell, Walter Grant and Earl Packard, Sweet Corn Field and Quality Trial at Fryeburg, Maine, 1954, 9 pps., '55

Paul Mosher and Alvah Perry, Russet Burbank Production in Maine, 1955, 5 pps., (mimeo.)


Florida Samples 1954-5 With Readings Not Exceeding Certification Tolerances For Maine Foundation Seed Potatoes (0.5% Total Virus), 1957, 12 pps. (mimeo.)

Winston E. Pullen, Marketing Maine Canned Sweet Corn: Preliminary Report, April, 1955, 19 pps. (mimeo.)


James E. Welch and Matthew E. Highlands, Salt and Moisture Study on Maine Sardines, 1954-7, May, 1957, 22 pps. and 142 pps. appendix (mimeo.)

Guidelines for Contributors to Experiment Station Publications, June, 1977, (Revised October, 1982). The original was June, 1973, 16 pps. (mimeo with printed cover). Provides a concise description of all series publications, and gives standard of citation, manuscript preparation, and other necessary data

David C. Smith, A History of the Maine Agricultural Experiment Station, 1980, 292 pps., index, illustrations, many tables. The standard history of the station
MAINE AGRICULTURAL EXPERIMENT STATION BULLETIN 808

Joseph Lerner, A Review of Amino Acid Transport Processes in Animal Cells and Tissues, 1978, index, 234 pps. Major Bibliography. A substantial review of 30 years' research in Amino Acids, and especially their vectors into cellular structure, utilizing the sodium ion primarily

James Stacey Stevens, Meteorological Conditions at Orono, Maine, University of Maine studies, old series no. 7 Orono, 1907. Reprints in tabular form all of the temperature and precipitation data taken on the College Farm, and 1885 by the Station meteorologist. The original data books are from Fogler Library

CFRU Publications

A few publications of the Cooperative Forestry Research Unit have not been assigned numbers in one of the series of the Maine Agricultural Experiment Station. To the end of completeness these publications are listed below (insofar as I have been able to locate them.) A few are listed without number when they were bound in with other series above. They do not appear here

Information Reports
1. Houseweart and Dixon, Update on the Saddled Prominent. c. 1978
4. not issued as yet
8. CFRU, Annual Report, 1980 M.R. #239
12. M.R. #298
13. M.R. #305

Research Notes
1. Dixon and Houseweart, Location and Importance of Feeding by the White Pine Weevil. (c. 1978)
5. M.R. #269
6. M.R. #263
7. M.R. #271
8. M.R. #241
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9. M.R. #243
11. M.R. #287
12. Not yet assigned
13. M.R. #288

Technical Notes
2. Robert K. Shepard, Jr., Volume Growth of Fertilized Red Spruce (Picea rubens Sarg.) at Three Locations in Maine, April, 1979. 11 pages
3. M.R. #229

Research Bulletins
1. David J. Brooks and David B. Field, Potentials of Charcoal Production for Forest Stand Improvement study with bibliography. 52 pages
2. M.R. #227
3. Misc. Report #250

Progress Reports
1. Shepard, Sixth Annual Report on Spruce-Fir Fertilization Project
2. Shepard, Diameter Growth and Specific Gravity of Red Spruce at Two Locations in Maine, 9 pages
4. Shepard, Magnitude and Duration of Response of Red Spruce to Fertilization, January, 1978. 8 pages
5. Houseweart, Spruce Budworm Growth Impact Study
6. Canavera, Fourth Annual Report of the University of Maine Tree Improvement Cooperative
7. Shepard, Selected Wood Properties of Fertilized Red Spruce
8. Shepard, Comparison of Selected Pulping Characteristics of Fertilized and Unfertilized Red Spruce
9. Houseweart, Spruce Budworm Growth Impact Study - Fourth Year
10. Shepard, Physical Characteristics of Pulp from Fertilized Red Spruce
11. M.R. #231
12. M.R. #232
13. M.R. #240
14. M.R. #245
15. M.R. #246
16. M.R. #254
17. M.R. #251
18. M.R. #259
19. M.R. #273
20. M.R. #275
21. M.R. #276
22. M.R. #277
23. M.R. #285
24. M.R. #286
25. M.R. #289
26. M.R. #295

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Other Significant Papers From Station Scientists Before 1920.

Although this may appear to be a catch-all title, it has a significance all of its own. Prior to the coming of radio and television, and before the advent of a formal extension service around 1915, Station scientists were called upon to do many things different from our time. One of these was to report station scientific work in such a way as to make a major impression upon the potential user of the information. The publicity letters, press releases, miscellaneous reports, and other short items were one way to do this, and I have noticed them as their significance warrants. Still another way was for scientists to make presentations of data at the annual conventions of the Maine State Board of Agriculture, and its later off-spring, the Pomologists' Society, the Seed Improvement Group, the Dairymans' Group, or the Cattle breeding Society. Most of these gatherings were quite informal, but they were an important information source for farmers. Where the papers were informal, or repetitive, or reported materials done elsewhere, or were not very well prepared, I have passed over them in silence. The following annotated listing represents the significant such papers published in the annual volumes prepared by the Board of Agriculture. These may be located conveniently in the Public Documents of the State in any good state library. For Station personnel a set of them is available in the Station library, and other sets are available as well. Many other papers were presented by other professors, both at Orono and elsewhere, but I have confined my annotations to those from Station personnel.
Thirty-Eighth Annual Report, Maine Board of Agriculture, 1895 (Augusta, 1896)
A speech at the Annual Meeting of Maine Board describing work and purpose of M.A.E.S.

Thirty-Fourth Annual Report, Maine Board of Agriculture 1890-1 (Augusta), 1891
Walter Balentine, "On the Comparative Agricultural Value of Soluble, Reverted or Citrate Soluble, and Insoluble Phosphoric Acid," 90-5
Reports earlier work in Germany (with which he was associated), and the results at Maine, by the college, and then the Station beginning in 1879. Both field and box and pot experiments conducted at Orono. Raw phosphates at least as good, but those with available stable manure might as well use it

Maine State Pomological Society, Transactions, 1890-1 (Augusta, 1891)
W.H. Jordan
Report on Experiment Station, 113-4 (what it will do)
W.M. Munson
Horticultural Work at the Station, 115-6 (need for cooperation)
D.H. Knowlton
Report of our Member of the Council, 116-8
Discussion by all, 118-122
The beginning of serious pomological interest at the Station dates from this discussion

State Pomological Transactions 1892-3 (Augusta, 1893)
W.M. Munson
"Spraying Experiments in 1892," 67-72
Reports results of cooperating experiments, with special remarks on apple scab

Thirty-Seventh Annual Report, Maine State Board of Agriculture, 1894-5 (Augusta, 1895)
W.M. Munson, "The Orchard," 113-124 - How to run one successfully.
An interesting talk, with discussion, of whether feeding the animal is worth more than similar food intakes for humans. Analyzed animal feeding experiments conducted all over the U.S. General results

State Pomological Society, Transactions, 1894-5
W.M. Munson
"Some Plant Diseases and Their Remedies," 53-62
Actual practical applications for apple scab, pear scab, black-knot and plum-rot (mummified fruits).
State of the art. Much use of Bordeaux mixtures

Thirty-Eighth Annual Report, 1895
W.H. Jordan, "The Relation of the Food of Milch Cows to Quality of Their Product," given at the State Dairy Meeting at Norway, December 5, 6, 1895, 139-161
Detailed analysis of experiments undertaken in Maine, Vermont, Iowa, Germany, and elsewhere on feeding. Comment was by Ex-Gov. Hoard of Wisconsin, the great dairy specialist
Thirty-Ninth Annual Report, Maine Board of Agriculture, 1896 (Augusta, 1897)
Dairy meeting, Skowhegan, December 2, 3, 1896.
G.M. Gowell, "Dairy Form and Breeding," 171-189. How to judge conformation and attempt to control breeding

Thirty-Ninth Annual Report, 1896 at dairy meeting as before
Charles D. Woods, "Experiment Stations and the Dairy Industry," 199-217. A very good statement of research going forward, and to what purpose in this area

Thirty-Ninth Annual Report, 1896 lecture given at Fryeburg (at an Institute)
Charles D. Woods, "The chemistry of Meats and the Chemistry of Their Cooking," 258-271. This is the beginning of his and the station's work on Food of Man. It summarized what was generally known then about the impact of cooking on meats

Fortieth Annual Report, Maine Board of Agriculture, 1897 (Augusta, 1898)
At annual meeting, Charles D. Woods, "Practical working of the New Feed and Seed Laws," 22-37. How the station is interpreting the law in practice. A very good discussion by the members is appended to the short paper

Fortieth Annual Report, 1897 State Dairy Meeting, Bangor, December 2, 3, 1897
Chas. D. Woods, "Dairy Products Compared with Other Food Materials," 216-238. More from his Food of Man work, a good paper

State Pomological Society, Proceedings, in Fortieth Annual Report, Maine Board of Agriculture, 1897.
W.M. Munson, "Experimental Horticulture," 45-52, with comment from floor, this is a discussion of the problems that Munson faced when he began the research program into propagation and other matters

Forty-Second Annual Report, Agriculture of Maine, Maine Board of Agriculture, 1898 (Augusta, 1899)
Lecture at Annual Meeting
Chas. D. Woods, "The Adulteration of Foods," 35-46. The inspection work of the station, especially on spices and condiments is spelled out

Proceedings, State Pomological Society, 1898 in Forty-Second Board of Agriculture, August, 1899
Wm. M. Munson, "Some Ornamental Plants for Maine," an abstract of his Bulletin no. 46, 61-8

State Dairy Meeting, Portland, December 7, 8, 1898 in Forty-Second Annual Report, 1898
Chas. D. Woods, "The Value of Feeding Standards to the Practical Farmer," 162-178 As with much of Woods' materials at this time, a good summary of known research. In these days extension work was a significant part of experiment station work

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Forty-Third Annual Report, Maine Board of Agriculture, 1899
(Augusta, 1900)
Chas. D. Woods, "The Potential Energy of Food"
At dairy meeting, Lewiston, December 12, 13, 1899, 94-108. State of
the knowledge of nutrition. More on his Food of Man materials

Proceedings, State Pomological Society
in Forty-Third Annual Agriculture Report, 1899
was followed by a field demonstration by Munson.
W.M. Munson, "Tilling and Pruning in the Orchard," 125-138. Good state
of the art, with an extended discussion appended to the paper

Forty-Fourth Annual Report, Maine State Board of Agriculture, 1900
(Augusta, 1901)
Dairy Meeting, Augusta, December 6, 7, 1900
Chas. D. Woods, "Some Recent Investigations Upon the Secretion of Milk,"
93-115. An important paper on what was known. Significant research
at M.A.E.S. will modify these understandings in the next twenty years

Third Annual Report, Maine Commissioner of Agriculture, 1904
(Augusta, 1905)
Auburn, December 13-15, 1904. What was known at time of speech

Proceedings, Maine Pomological Society, in Third Annual Report,
Maine Commissioner of Agriculture, 1904
Edith M. Patch, "Brown -Tail and Gypsy Moths," 110-7
Description, life histories, etc. for lay persons, her report of the
first depredations in Maine appears at 119-120 as well

Proceedings, Maine Pomological Society, in Fifth Annual Report, Maine
Commissioner of Agriculture, 1906
Edith M. Patch, "Troublesome Insects," 116-123
Description (plates) of egg masses and life forms of Tussock Moth,
Mourning Cloak Butterfly and others sometimes mistaken for gypsy moth.
See Misc. Pubs. for this period for brief papers on these and others

Sixth Annual Report, Commissioner of Agriculture, 1907
(Augusta, 1908)
Dairymen's conference, Auburn, December 3, 4, 5, 1907.
Chas. D. Woods, "Commercial Feeding Stuffs," 121-135. What we have
learned from inspection thus far

Proceedings, State Pomological Society, Sixth Annual Report,
Commissioner of Agriculture, 1907
W.J. Morse, Non-Parasitic Diseases of Fruit Trees," 36-45. The result
of the difficult and cold winter weather of previous years. Reports
impact on trees, and latent susceptibility of disease through weakness.
A good early paper from Morse
Seventh Annual Report, Commissioner of Agriculture, 1908 (Augusta, 1909)
State Dairy Meetings, December 8, 9, 10, 1908, Dexter
Mostly on various diseases and their causes

Proceedings, State Pomological Society, 1908
in Seventh Annual Report, Commissioner of Agriculture, 1908
Available publications, our work, and her work in beginning nature study to help ecological (my word) understanding. Important early piece by Patch

Eighth Annual Report, Commissioner of Agriculture, Maine, 1909 (Augusta, 1910)
Dairy Meeting, Nov. 30, Dec. 1, 2, 3, 1909, Skowhegan.
Raymond Pearl (read by Chas. D. Woods) "Breeding for Production in Dairy Cattle in the Light of Recent Advances in the Study of Inheritance," 190-198.
An advanced paper calling for work. Woods comments on it and what the station can do from 198-200

State Dairyman's Meeting, 1908 (see supra)
What have we learned since Atwater first spoke on this subject here years ago. What have the stations taught us in some detail. Good summary paper

Agriculture of Maine, Ninth Annual Report, Commissioner of Agriculture, 1910 (Augusta, 1911)
Raymond Pearl, "Opportunities for Corn Breeding in Maine," 256-266.
What might be done if we put our minds to it - presages work by Sax in a few years

Proceedings, State Pomologists Society, in Ninth Annual, Agriculture of Maine, '10
W.W. Bonns, "Some Orchard Spraying Problems and Experiments," 47-63 - summarizes work of Maine station to date, with recommendations as to proper sprays

Tenth Annual Report, Commissioner of Agriculture, Maine, 1911 (Augusta, 1912)
J.M. Bartlett, "Feeds for Dairy Cows," 91-100
Speech given at Dairy Conference, Portland, December 28, 29, 1911. Discussion of what feeds are available and what they will do for dairy animals, based on recent research. Discussed commercial feeds as well. Reflected his work on feeding experiments, as well as being the station chemist

Tenth Annual Report, Commissioner of Agriculture, Seed Improvement Meeting, Waterville, Nov. 1, 2, 3, 1911, 222-3
Raymond Pearl, "Some Factors in Potato Improvement," abstract - what is known about how it can be done, especially maintaining pure strains through tuber selection
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Agriculture of Maine, 1911
Special Report of the Maine Agriculture Experiment Station, for the
Commissioner of Agriculture, for the Year 1911, 269-303
Provided in lieu of printing the significant Bulletins of the year as
had been the case. All aspects of station work discussed with each
experiment listed, and many, especially at Highmoor Farm described
quite minutely. Apparently not circulated as a Misc. Report

Tenth Annual Report, Commissioner of Agriculture, 1911
Proceedings, State Pomological Society
W.W. Bonns, "Two Years' Work at Highmoor," 97-109
Excellent summary of state of the orchard, planned experiments, and
general goals of the station here

Eleventh Annual Report, Commissioner of Agriculture, 1912
(Waterville, 1913)
Special Report of the Maine Agricultural Experiment Station for the
Commissioner of Agriculture, for the Year 1912 (Misc. Report # 485).
pp. 257-304. A straightforward account of experiments underway, and
hoped for results, or queries to be answered. Varietal testing explicated,
especially on oats

Eleventh Annual Report, Commissioner of Agriculture, 1912
(Waterville, 1913)
State Dairy Meeting, Saco, December 12, 13, 1912
More from his experience, and similar to previous year's paper

Proceedings, State Pomological Society, 1912
W.J. Morse, "Growth and Nutrition of the Apple Tree," 115-127. A statement
of fundamental principles, with substantial reference to Highmoor Farm.
G.A. Yeaton, "Results in 1912 at Highmoor Farm," 137-144. More detail
on the experiments underway

Twelfth Annual Report, Commissioner of Agriculture, 1913
(Waterville, 1914)
Dairy and Seed Improvement Meetings, December 2-5, 1913
C.W. Barber, "Work of the Maine Agricultural Experiment Station in
Breeding Oats," 179-190. Excellent lay exposition of the work leading
to the Maine 340 Oat

Twelfth Annual Report, Commissioner of Agriculture, 1913
(Waterville, 1914)
Special Report of the Maine Agriculture Experiment Station for the
Commissioner of Agriculture, for the Year 1913.
60 pps. (Misc. Report # 492).
This, with its predecessors, are good summary statements of Station
work on eve of World War I

Thirteenth Annual Report, Commissioner of Agriculture, 1914
(Waterville, 1915)
Meeting of Dairy and Seed Improvement Association, Bangor, December 8-11, 1914,
Frank M. Surface, "Oat Breeding at Highmoor Farm," 283-291
Continuing report on the effort that led eventually to the Maine 340 oat
Dairy and Seed Improvement Meetings, Bangor, December 8-11, 1914

W.J. Morse, "Some Diseases of the Potato," an illustrated lecture, 346-361. Good state of the art paper, his work led him to an American tour this year. 14 photographic plates of the various diseases


Dairy and Seed Improvement Meetings, Bangor, December 8-11, 1914

Chas. D. Woods, "Growing Crops Without Potash in 1916," 203-217. Forced into this by WWI, a virtue out of necessity. Here he reports alternatives, as well as beginnings of important experimental work. Essentially his Misc. Report #520

Proceedings, State Pomological Society, in Fourteenth Annual Report, Commissioner of Agriculture, 1915

W.J. Morse, "Results from Apple Spraying Experiments at Highmoor Farm," 44-55. What has been learned from our various efforts with Bordeaux mixture and other arsenic compounds. Good summary of results
Fifteenth Annual Report, Commissioner of Agriculture, 1916
(Waterville, 1917)
Dairy and Seed Improvement Meetings, Augusta, December 4-8, 1916
What is going on in the cattle project at MAES. Responds to criticism,
provides first results, and promises a major publication within the year.

Fifteenth Annual Report, 1916
(Augusta meetings)
Seed Improvement Meetings.
W.J. Morse, "Recent Progress in Potato Disease Work, in Maine," 246-258.
Good continuing survey, following his previous year's report. One feature
is an outline of the cooperative work going on with the USDA pathologists
as well.

Numbered Series

Two departments in earlier days of the Agricultural Experiment
Station numbered publications from their members. The first of these was
apparently the Entomology Department which began numbering their publications
from about 1888. This series, or the practice of numbering, ended sometime
in the late 1920s. When Raymond Pearl came to the station a second series
was begun. It also lasted until sometime near the end of World War II. Both
series, entitled Papers From the Entomological Laboratory and Papers From
the Biological Laboratory, have some misnumbering, and some second numbering
but in this listing I have attempted to list all numbers in a straightforward
manner, realizing that some errors might result. Numbers were apparently
assigned as items were filed in the department offices after publication,
and this meant that some received different numbers than in the publication
itself.

A third series, Papers From the Phytopathological Laboratory,
also begun about 1910, was not continued after six or seven numbers.
The listing that follows is for the first two long running listings only.

Biology also bound their numbers in separate volumes, or at least as far as number 134. Volume One, or a copy of it, is in Fogler Library. Entomology as a department has done perhaps the best job obtaining copies of publications of its members, and nearly every number of this listing, as well as all publications since that time, may be seen in the files of the Entomology Department Library. Listing seemed sufficient so relatively few of these items are annotated. Their significance today is their contribution to the history of genetics, then called Mendellism, in the case of Biology, and to nomenclature and ecology in the case of Entomology

1. Certain Points Concerning the Probable Error of the Standard Deviation
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Tech Bull - Technical Bulletin  
A.R. - MAES - Annual Report, Maine Agricultural Experiment Station  
A.R. - M.S.C. - Annual Report, Maine State College  
A.R., Me.Bd. - Annual Report, Maine Board of Agriculture (later becomes Report of Secretary of Agriculture - I use the same key.)  
Pomology - Proceedings, Maine Pomological Society Annual Meeting  
M.F.R. - Maine Farm Research  
RLS - Research in the Life Sciences  
Up - Update  
M.R. - Miscellaneous Report  
M.P. - Miscellaneous Publication  
P.L. - Publicity Letters  
Ent - Entomological Laboratory Number  
Bio - Biological Laboratory Number  
C.F.R.U. - Cooperative Forest Research Unit  
F.R.R.A.C. - Forest Resources Research Advisory Committee  
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