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Maine Tree Fruit Newsletter

Monday, April 30, 2018 Vol 25:2

It's Apple Season

Apple buds around Maine started reaching Green Tip around Thursday April 26. This is a few days later than normal, but with warmer temperatures this week, development will soon catch up.

Between Green tip and before Half inch green is the best time to apply a copper and oil mixture. Only a small amount of oil is needed to help seal the copper, but using a higher rate of 3 gallons per 100 gallons water dilute mix if spraying at Green Tip, and 2 gallons per 100 gallons dilute at Half Inch Green will help smother overwintered eggs of European red mite, San Jose Scale, mealybugs and perhaps some codling moth eggs.

Spray season brings sprayers and spray calibration. If you haven't already, make sure your sprayer is operating correctly. There is a preflight checklist that starts on page 21 of the 2015-2016 New England Tree Fruit Management Guide at <http://fruit.umext.umass.edu/tfruit/2015-16netfm/4-sprayer.pdf>

Some key steps are to confirm that there are no supply line leaks or blocked nozzles and that the spray distribution is reaching the tops of taller trees. There is a great discussion of airblast sprayer calibration at <https://sprayers101.com/how-to-calibrate-an-airblast-sprayer-operator/>

That article includes a discussion of how to use water sensitive paper to confirm spray coverage (<http://sprayers101.com/confirm-coverage-with-water-sensitive-paper/>)

You can get water sensitive spray cards at <https://www.gemplers.com/product/TJC/TEEJET-TeeJet-Water-Sensitive-Spray-Cards>

Apple scab

If you had a more active apple scab on more than 1% of the leaves at harvest time last fall, then you have too much potential for overwintering scab to skip fungicide protection at Green Tip. Fortunately, copper which serves as a nutrient and helps suppress fire blight bacteria reproduction in the orchard, also serves as a good fungicide, providing about a week of protection. Reports from NY and MA indicate the scab ascospore maturation may be running a bit ahead of its normal synchrony with apple bud stage this year. If so, this would increase the risk of scab infection at Green tip to Tight Cluster. Normally, scab infection risk at those bud stages is much lower than at the main infection season of Pink to Petal Fall.

Fruit Tree Bud Survival

Flower Bud Survival as of April 10.

Location	Species - Varieties	Percent living flower buds
Jay-Livermore	Peach - Madison, Gloria, Redhaven	36
Highmoor Farm - Monmouth lower ground	Peach	
	Redhaven	5
	Harrow Beauty	0
	Starfire	5
	Blushing Star	0
	Bailey rootstock	26
	Sweet cherry	
	Cavalier	20
	Hartland	66
		Duke cherry - Balaton
	American plums - Toka, Superior	100
	European pear – mixed varieties	77
Highmoor Farm - Monmouth upper ground	Peach	
	Harken	50
	Salish	34
	Asian plum - Obilnya, Early Golden, Vanier	100
	European plum - Valor, Long John	100
Wayne	Peach - Reliance	89

If you grow **peaches**, expect a light crop again. The cold temperatures this winter have killed at least 50% of the flower buds on most trees, and in some cases, the entire tree. However, it appears that peach flower bud survival is greater at higher elevations where the temperature is more stable through winter and with better air movement. Peaches on our upper ground and at the farm in Jay-Livermore have greater survival than at the lower ground where they are planted in a “protected site”.

Bud survival is also better in some varieties such as Bailey, a variety normally used as a rootstock. Bailey also has less injury in its wood compared with scion varieties. This is the variety I used as a source of cold hardiness in my peach breeding last year. Peach tree deaths may become more apparent later this spring or summer because it was cold enough to kill the wood in some trees.

Flower bud survival was greater in **cherry**, but they have a tendency to die from spring freezes. With cherry, you don't know that you have a potential crop until bloom or one week later. Cherry buds have an average of 4 flowers, so one bud can have a mix of living and dead flowers. Our trees had a heavy crop of cherries last year which is usually followed by lots of blind wood or shoots with no lateral buds. Flower buds on cherries do not grow leaves or shoots, so when they flower, it is the end of the line for that branch section. Consequently, highly fruitful branches fail to regrow new spurs with flower buds. The only correction is renewal pruning to replace the branch. Cherries benefit from severely pruning several branches on each tree.

Plum flower bud survival is better than for peach, but Early Golden is showing signs of severe biennial bearing, a bad trait that occurs in some plums as well as apples. Japanese and American plums are at the bud swell stage.

Pear and apple flowers appear alive. The bark and wood look healthy despite leaves remaining on shoots through winter. The long delay in cold temperatures interfered with the formation of the leaf abscission zone, but not the normal development of dormancy. The tree trunk is usually the most vulnerable late onset of cold weather, but damage to the trunk will not be apparent until much later. This type of injury is rare.

Pesticide Residue Tests

The following excerpt is from "Review Further Debunks EWG's Residue Claims", an April 10, 2018 article by the The Alliance for Food and Farming, a non-profit organization comprised of both organic and conventional farmers. Copyright ©2018 Alliance For Food and Farming. <http://safefruitsandveggies.com/blog/review-further-debunks-ewgs-residue-claims>

"We often talk about how minute residues are on organic and conventional fruits and veggies. How 99.8% of residues found in government sampling, if present at all, are well below stringent safety standards set by the Environmental Protection Agency (EPA). But a recent review of residue sampling data published in Forbes provides a perspective that might clarify how low residues are on all produce – organic and conventional.

The review of the United States Department of Agriculture's (USDA) Pesticide Data Program results found this: 76% of the residues detected on conventional apples and strawberries were so low that they would meet the standard for residue levels under the organic label. For conventional spinach, 80% of the detected residues would meet the residue level standard for organic.

You see the USDA National Organic Standards Program deems it acceptable for organic produce to have synthetic residues that are less than 5% of EPA established safety levels, a very rigorous standard for sure. This Forbes review is another illustration of how safe organic and conventional produce really is.

And, if you haven't already received enough facts or science about how unsupportable the Environmental Working Group's (EWG) annual release of its so-called "dirty dozen" list is, you can add this onto that very tall stack. Confused? Or agree that the list is completely unsupportable? Add in that peer reviewed research also shows the "dirty dozen" list may be negatively impacting consumers' consumption of produce and, well, maybe EWG should move away from this decades-old tactic.

The Forbes review is really just another way of saying what peer reviewed research has already proven regarding the "dirty dozen" list: EWG's recommended substitution of organic produce for conventional forms does not result in any decrease in risk because levels on conventional are so very low, if present at all.

For 23 long years, EWG has released this list in an effort to promote one production method over another. It has never been about science, it has always and only been about promotion. Thanks to this review in Forbes, that is now more apparent than ever."

I completely agree that the "Dirty Dozen" list misleadingly conflates detection of pesticide molecules at any level with a meaningful residue. But instead of listening to a fund raising pitch by EWG, an industry organization, or me, just see what the people who do the testing say.

"WASHINGTON, February 8, 2018 – The U.S. Department of Agriculture's (USDA) Agricultural Marketing Service (AMS) today published the 2016 Pesticide Data Program (PDP) Annual Summary. The Summary shows more than 99.5 percent of the samples tested had pesticide residues well below benchmark levels established by the Environmental Protection Agency (EPA) and 22 percent had no detectable residue.

PDP scientists and staff use rigorous sampling and advanced methods to test a wide variety of domestic and imported foods, helping ensure that the U.S. food supply is one of the safest in the world. The 2016 report includes data from over 10,000 samples, giving consumers confidence that the products they buy for their families are safe and wholesome.

PDP data is used by EPA to conduct dietary risk assessments and to ensure that any pesticide residues in foods remain at safe levels and adverse health effects are unlikely. The data also provides regulators, farmers, processors, manufacturers, consumers and scientists with important insights into the actual levels of pesticide residues found on widely consumed foods.

The annual pesticide residue results are reported to the Food and Drug Administration (FDA) and EPA in monthly reports as testing takes place throughout the year. FDA and EPA would be immediately notified if a PDP test discovered residue levels that could pose a public safety risk."

<https://www.ams.usda.gov/press-release/usda-releases-2016-annual-pesticide-data-program-summary>

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