



# Newsletter

Extension

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## Apollo Label Change

*Source: Dr. Celeste Welty*

Apollo can now be used up to 45 days before harvest on apples. This registration change went into effect on April 9, 1999. Apollo has been registered for use on apples since 1995, but it had been restricted to use during the delayed dormant to tight-cluster bud stage. There is no change in the registration on peaches, cherries, and pears, where Apollo has always had a 21-day pre-harvest interval. Apollo is a miticide made by AgrEvo. It kills European red mites and two-spotted spider mites only when they are in the egg or larva stage; it does not kill protonymphs or deutonymphs or adults. Apollo on apples is usually most effective when applied at petalfall or first cover. Application of Apollo later in the season can be effective if the mite population is mostly in the egg stage, but application is not very effective if there are many large nymphs and adults. For good resistance management practices, the manufacturer still recommends using Apollo only once per year.

## Mike Ellis' Comments on Apple Scab

*Source: Dr. Mike Ellis, Dept. of Plant Pathology, OARDC*

The information in the next article on apple scab is from Dr. Dave Rosenberger and is taken from Scaffolds Fruit Journal No. 4, 1999. It provides some interesting thoughts on situations that have occurred in New York this spring and some of the options that growers can consider in relation to scab control. I have tried to emphasize the importance of starting the scab fungicide program early in Ohio this year (no later than half-inch green). This is when I recommend starting the program every year in

Ohio. Starting the program early to provide protection against scab is particularly important this year, due to the large amount of scab we had last year and the large amount of overwintering inoculum present in most Ohio orchards.

At Wooster we made our first protectant spray at half-inch green (on Delicious) on April 8th. On the evening of the 8th, we got rain and had a moderate level scab infection period. We couldn't have timed the spray better, and I hope that other growers in the Wooster area did the same. I know that scab inoculum was mature and ready to cause infection, so growers that didn't have a protectant spray on had no choice but to make a curative spray such as those described by Dr. Rosenberger in the following article. The point I want to make is that making early protectant sprays is always "risky" in relation to whether or not you do or do not get an infection period; however, I think it is a risk that needs to be taken. If you spray and don't get infection, you lose some money. If you don't spray and get infection like last year, how much money can you lose? Especially in years when we know we have a lot of scab inoculum out there, I don't think we can risk not making the early sprays. Conditions vary greatly throughout Ohio, and there is no way of predicting exactly what is going to happen with the weather. This is the main reason I recommend at least starting off the year with an early application of a good protectant fungicide.

## **More on Controlling Apple Scab**

*Source: Dr. Dave Rosenberger, Plant Pathology, Highland, NY*

Weather conditions during the early scab season have created the usual "unique" dilemmas concerning when and what to spray for apple scab. In the Hudson Valley, weather forecasters have predicted "scattered showers" on three different occasions since green tip. Any one of these events could have turned into a scab infection period. As it turned out, none of them did.

With conditions like these, Hudson Valley growers who took the cautious approach and applied protectant fungicides ahead of the infection periods probably "wasted" their money. Those who opted to wait until after the first infection period and then spray with an eradicant fungicide may have shaved one or two fungicide applications from their spray bill. On paper, it appears that delaying the first scab spray until after the first infection period makes good sense. Those opting for eradicant fungicides have the option of using either Vangard (with 48-hour kickback activity) or one of the SI-protectant combinations (96-hour kickback).

However, there are some hidden risks in depending on eradicants for the first spray. First, weather conditions after the infection period are often less-than-ideal for getting good coverage. Figure that the infection period itself lasts one day, so that leaves only one more day of spray time to take advantage of the eradicant activity of Vangard or three days of eradicant activity for SI fungicides. Then, remember that the frontal systems that bring clear weather also bring wind, so there's a good chance that day 2 (and perhaps day 3) after the infection period will be windy. Maybe you're willing to gamble that day 3 or day 4 will provide ideal spraying conditions, but then there's always the risk that the sprayer will break down, especially if this is the first spray of the season.

If sprays are applied in the wind, one must assume that coverage will be less-than-perfect. When a protectant fungicide (mancozeb, metiram, or captan) is applied under windy conditions ahead of a rain, one can take comfort in knowing that the same rains that discharge scab spores will also redistribute fungicide residues. Thus, protectant fungicides are a bit "forgiving" when it comes to coverage, and

imperfect coverage does not necessarily result in poor scab control. When fungicides are applied as eradicants, however, the scab spores are already in place when the fungicide is applied and complete coverage is essential for good control.

In my opinion, waiting to apply the first spray until after the first infection period is a high-risk strategy for orchards where inoculum levels are high. There are just too many uncontrolled variables and too many things that can go wrong. Using an eradicant as the first scab spray can save money in dry years and is a sensible approach for low-inoculum orchards. **In high-inoculum orchards, it will be safer to get a protectant fungicide applied ahead of the first scab infection period.** It will allow you to sleep better and appreciate the rain!

## Fruit Report

*Source: Dr. Richard C. Funt, Horticulture & Crop Science, OSU*

All peach cultivars at Waterman Farm (Columbus) reached full bloom yesterday. This is near normal or slightly ahead of average by 1 to 2 days. (At Overlook average full bloom was 4/14 to 4/21 during the 1980's.) Mark Schmittgen repeated the tight cluster spray on the 13th for apple, anticipating the rain of today.

Growers may want to control quackgrass now, as the growth is near 4 to 6 inches. . . best to wait for some warm, dry weather. . . maybe next week.

I checked six peach blooms and had 100% good on three cultivars on trees 3 to 8 years of age. The latest frosts in Columbus were near 30 to 31 degrees F with generally dry ground surface.

Raspberry primary buds are slow to emerge, probably due to both a warm fall and changing February and March temperature. There is some winter damage present, probably lowering yields about 10%, but this is an early prediction that remains to be proven. (Could move higher.)

Strawberries look good and should be uncovered throughout the state. Herbicides should be applied as soon as possible.

Blackberries look good in central Ohio with little or no damage.

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*Source: Dr. Celeste Welty, Extension Entomologist, OSU*

Delicious is at early pink here in Columbus. I set up first traps (OFM, RBLR, STLM) yesterday.

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*Source: Howard Siegrist, Licking County Ag Agent*

Peaches are in full bloom. Bloom is erratic, not heavy. There is some anxiety about cold weather damage, also forecast looks somewhat questionable.

Early apples are in tight cluster.

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*Source: Ted W. Gastier, Huron Co. Ag Agent*

### Erie County Report

Apple development from green tip to half-inch green, depending on variety. Insect pests, average of 2 traps: 255 STLM adults, 24 RBLR. Beneficials observed were brown lacewings.

Peach development ranges from swollen bud to 1st bloom on one early variety. Insect pests, average of 2 traps: 0 OFM, 6.5 RBLR. Beneficials observed were lady beetles.

## **Fruit Trees & Honey Bees**

*Source: Zachary Huang, Entomology, CAT Fruit Advisory Team Alert, Michigan State University*

### **Prices for pollination**

Expect to pay anywhere from \$35 to \$55 per colony for spring fruit tree pollination. There is a range here because if you only need 10 hives, you might be expected to pay a higher price than a grower who is renting 500 hives. Colonies might also be of different strengths. Try to deal with the same beekeeper year after year in your area so that you know what to expect. Long-term relationships are always better in business. If the beekeeper is new in the pollination business, make sure he or she knows how to manage hives and pollination. Make sure you sign an agreement for pollination purposes.

### **Hive density requirements have increased**

Studies done long before mites were here suggested that one needs one hive per acre for most fruit trees. That was when there were many feral (unmanaged, wild) colonies that might contribute to pollination in addition to rented colonies. After the invasion of Varroa mites in 1987, virtually all feral colonies were eliminated by the mites. Nobody knows the proportion of contribution to pollination of the feral bees relative to managed colonies. Still it is safe to say that we need higher densities today than when feral bees were present.

Do not cut corners when putting bees in your orchard. If you have 100 acres of fruit trees, invest some money to have 100 colonies there. You will get many times more of your investment back. Here are the recommended densities for various fruit trees:

- Three colonies per acre: cranberries, blueberries, high-density apples
- Two colonies per acre for semi-dwarf apples
- One colony per acre: standard apple orchards and all other fruits (nectarine, apricot, plum, pear, peach, cherry).

## **Fruit Farm Website Highlight**

<http://lyndfruitfarm.com/>

The Lynd Fruit Farm is located at State Route #310 and Morse Road about 12 miles east of I-270 in Licking County, near Pataskala.

Features:

- General Farm Info
- School Tours
- Farm/Family History
- Pick Your Own Apples
- Pick Your Own Pumpkins
- Activity Center
- Restored John Deeres

## **Sprout & Sucker Control on Apple and Pear**

*Source: Ohio 1999 Commercial Tree Fruit Spray Guide*

Tre-Hold Sprout Inhibitor A112 can be used to inhibit sprouting when applied to pruning cuts on scaffold limbs and trunk bases, and to rootstock suckers on bearing and non-bearing trees.

To make 1 gallon of spray mixture, add 10 fluid ounces of Tre-Hold to 1 gallon of water. For sunscald protection, 1 to 4 pints of interior white latex paint may be substituted for an equal volume of water. One gallon of dilute spray will treat 50 to 100 trees.

Tre-Hold RTU Sprout Inhibitor, a ready-to-use formulation (1.15% Ethyl, 1-NAA) is also available to control sprouts and sucker growth on apples and pears. Follow manufacturer's label for use instructions.

## **Northern Ohio Scab Watch**

SpecWare 4.0 calculations April 1-14

- Modified Mills Method - no infection
- Cornell Method - infection on April 9

SkyBit Apple Scab Product April 1-14

- No infection
- Based on forecasts April 15-21, infection predicted for each day.

**Degree Day Accumulations for Selected Ohio Sites January 1, 1999 to date indicated**

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Location	Actual DD Accumulations April 14, 1999		Forecasted Degree Day Accumulations April 21, 1999			
	Base 43° F	Base 50° F	Base 43° F	Normal	Base 50° F	Normal
Akron - Canton	199	80	213	246	85	100
Cincinnati	333	130	361	439	133	196
Cleveland	213	87	229	231	88	95
Columbus	314	137	335	317	144	136
Dayton	269	107	286	319	111	138
Elyria	211	101	225	243	101	101
Fremont	177	76	186	202	76	81
Mansfield	210	81	229	238	84	98
Norwalk	201	81	209	212	81	86
Toledo	183	71	197	198	72	80
Wooster	223	91	234	223	91	87
Youngstown	173	67	183	214	67	87

## Phenology

Coming Events	Range of Degree Day Accumulations	
	Base 43° F	Base 50° F
Redbanded leafroller - 1st catch	32-480	5-251
Tarnished plant bug adults active	71-536	34-299
Spotted tentiform leafminer - 1st adult catch	73-433	17-251
Rosy apple aphid nymphs present	91-291	45-148
Green apple aphids present	127-297	54-156
Oriental fruit moth - 1st adult catch	129-587	44-338
Spotted tentiform leafminer - 1st oviposition	141-319	48-154

Thanks to Scaffolds Fruit Journal (Art Agnello)

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