



Ohio Fruit ICM News



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Calendar

June 28: Ohio Fruit Growers Society Board Meeting, Burnham Orchards, Berlin Heights, OH, 6:30 to 8:00 p.m. Contact Tom Sachs at 614-246-8290 or e-mail Tsachs@ofbf.org or Kathy Lutz at 614-246-8292 or e-mail growohio@ofbf.org.

June 28: Ohio Apple Marketing Program Board Meeting, Burnham Orchards, Berlin Heights, OH, 8:00 to 9:30 p.m. Contact Tom Sachs at 614-246-8290 or e-mail Tsachs@ofbf.org or Kathy Lutz at 614-246-8292 or e-mail growohio@ofbf.org.

June 29: Ohio Fruit Growers Society Summer Tour, Burnham Orchards, Berlin Heights, OH, 8:00 a.m. to 3:00 p.m. Check out <http://www.ohiofruit.org/ofgs/> (click on 2005 Summer Tour). Burnham's website is <http://www.burnhamorchards.com>.

Apogee Timing

Source: Peter Hirst, Purdue Horticulturalist, Facts for Fancy Fruit, Volume 5, Issue 2, May 6, 2005

If you are going to apply Apogee this year, the time is now! Apogee is a relatively new growth regulator for use on apples, and can reduce shoot growth dramatically. I understand the cost is significantly reduced this year compared with last year. Its main application is likely to be in blocks where there is excessive vigor due to crop loss, or inappropriate tree spacing / rootstock combination. Apogee can also reduce the incidence of fire blight - it does this not by affecting the fire blight bacteria directly, but by reducing the amount of susceptible new shoot growth on the tree. Timing of application is critical, and if this product is applied after shoots are about 3" long, then it is likely to have little effect.

For best effect, apply Apogee when new shoots are about 1" long - this is likely to be around the time of petal fall. Apogee is not toxic to bees, so applying this product while there is still open bloom in the orchard should not pose a problem. Generally, 1-3 applications can be applied, with about 10 days between applications. For high vigor trees, apply a single application of 10-12 oz/100 gal or 2 applications of 6-oz/100 gal spaced about 10 days apart. The 36 to 48 oz listed in the spray guide are total amounts of product applied per acre per season, not the rates per 100 or of each application. Pay particular attention to the recommendations on the label concerning water conditioners. Research by Dr. Jim Schupp has shown water conditioners to have a beneficial effect, whether using hard or soft water. Remember that the higher rates of Apogee can sometimes increase fruit set; so take this into account when planning your chemical thinning program.

Apple Thinning

Source: Peter Hirst, Purdue Horticulturalist, Facts for Fancy Fruit, Volume 5, Issue 2, May 6, 2005

The thinning decision you make with apples is one of the most critical management decisions you will make all year, and one that affects not only the crop this year, but next year also. Thinning is all about tradeoffs and compromise. The earlier you thin, the better the response will be, both in terms of fruit size increase and in return bloom for next year's crop. The problem is that early thinning is risky, so what do you do? Use the nibble approach, where you don't try to get the job done in one shot.

Put on a mild thinner application early (say around petal fall) and then follow up with another application about 10-14 days later if you think it is needed. This way you achieve some of the benefit of early thinning while at the same time spreading some of your risk. A few other pointers for thinning:

- Thinners work best when temperatures are 70 to 80°F at the time of application and for a few days afterwards. Don't apply thinners when temperatures are below 65°F, as they will have little affect.
- Keep detailed notes of what you applied, what rate, when, what the conditions were at the time of application and for a few days afterwards, and what the result was. This will help you build up a picture of what works best on your farm.
- If you suffered some frost damage, think long and hard before you decide not to thin this year. The risk is that there may be more crop left than you think, and by not thinning you may be compromising next year's crop as well as the crop this year.
- Leave a few check trees so you can assess what the thinner application did.

With the cool conditions in many parts of the state from the time of mid-late bloom, it is possible we will have a heavier than usual drop, but I'd be surprised if it was dramatically different. I think it would be a mistake to back off too much on your thinning because of this.

Once again, the nibble approach will help spread your risk. Apply the first application soon

after petal fall, then assess the crop load about 10 days later and apply a follow up application if necessary.

The best book I know of on thinning is the *Apple Thinning Guide* by Phil Schwallier at Michigan State University. It is available from Great American Publishing, P.O. Box 128, Sparta, Michigan 49345. Cost is \$10 plus \$1.50 for postage and handling for each book. For more information call 616-887-9008.

Care of New Trees

Source: Peter Hirst, Purdue Horticulturalist, Facts for Fancy Fruit, Volume 5, Issue 2, May 6, 2005

If you planted new trees this spring, here's a few points to remember to help them get off to a good start:

- Heavy pruning on young trees delays the time when cropping begins. So to bring trees into cropping early, minimal pruning should be done in the early years.
- Make sure the graft union is a few inches out of the soil to reduce the chance of scion rooting.
- If planting dwarfing trees, provide a post or trellis as tree support right from the time of planting.
- Pay attention to weed control. Weeds can severely impact the establishment of young trees.
- If deer are likely to be a problem, apply control measures from day 1 (deer fence, soap, etc).
- Even though trees won't have fruit the first year, good pest and disease control is essential.

Remember, your goal is not for the trees to just survive (although that is definitely a good start!), but to have them perform close to the optimum.

Spraying Strawberries

Source: Dr. Andrew Landers, Cornell University, NYSAES, Barton Lab., Geneva, NY 14456, New York Berry News, Volume 5, Issue 4, May 13, 2004
<http://www.nysaes.cornell.edu/ent/faculty/landers/pestapp>

There are many new developments in spray technology that will help reduce the costs involved in applying pesticides. The main costs associated with pesticide application are the cost of pesticides, which continue to rise in many cases. Any technology that reduces the amount of product necessary to control a weed, insect, or disease, or improve its effectiveness, is welcome. The other major costs to consider are those of labor and timeliness.

Timeliness is crucial if pesticides are to control disease or insects. Applying the spray mix too early may act in a prophylactic way if the product is designed to do that. Many sprays must be applied to the target at a specific growth stage of the weed, insect, or disease. Failure to apply products on time will lead to increased disease levels or insect activity.

Coverage is essential. Poor spray coverage is a major factor contributing to poor disease control. Better coverage leads to better control, and a thorough application of an effective material is required. Uneven coverage increases the amount of fungicide that must be applied in order to provide adequate control on poorly covered areas and the number of sprays required if it allows a disease to become established.

Whilst canopy size and shape will affect application volume, there are equally dangers in not applying enough spray and in applying too much spray. There is an optimum quantity required for a thorough coverage of the target. The old adage that you should spray until the leaves drip is misplaced; likewise lowering spray rates to below the minimum which offers control is also misguided advice.

A number of growers have reduced application volumes to extremely low levels and are observing poor control due to inadequate coverage. Interestingly, research around the world confirms similar results and indicates that there is an optimum volume to provide thorough coverage and control.

A number of pesticide manufacturers are adopting the ASAE/BCPC nozzle selection system and stating on the pesticide label the spray classification needed for their product. Reference nozzles, tested in a laboratory using a laser analyzer, are then classified according to the characteristics of the spray produced. Fine, medium, and coarse are the categories of agricultural sprays. The label recommendation makes nozzle selection far easier for the sprayer operator.

A general guideline:

- Fine classification for contact fungicides and insecticides
- Medium classification for herbicides
- Coarse classification for pre-emergent sprays

Growers may find these spray classifications in the latest nozzle catalogs and should cross-reference the selected nozzle type, based upon flow rate, with the spray classification. Growers have to consider good coverage and penetration into the canopy, so traditional fine sprays may not penetrate, and so the traditional compromise takes place, a medium spray quality should be chosen. On no account should large droplets or coarse spray quality be used, as the droplets run off the target. Large droplets can also be created from worn or damaged nozzles; remember to change nozzle tips when their output is greater than 10% of the manufacturer's recommended flow rate.

However, weather conditions, particularly wind and its effect upon drift, must be taken into consideration. If the label or supplier makes no recommendation concerning nozzles or spray quality, then a reasoned choice of spray quality must be made based upon the target, the product, and the risk of drift. Spray drift of pesticides is an important and costly problem facing pesticide applicators. Drift can result in damage to susceptible off-target crops, environmental contamination to watercourses, and a lower than intended rate to the target crop, thus reducing the effectiveness of the pesticide. Pesticide drift also affects neighboring properties, often leading to concern and debate.

There are two types of drift: airborne drift (often very noticeable) and vapor drift. The amount of vapor drift will depend upon atmospheric conditions such as humidity, temperature, and the product being applied and can occur days after application is made.

Drift is influenced by many inter-related factors, including droplet size, nozzle type and size, sprayer design, weather conditions, and last, but not least, the operator.

Directing the spray to the target is the key to successful penetration and deposition. Whilst many modern nozzles can control drift successfully, e.g. drift-guard and air induction nozzles, there is still much to be done on positioning those nozzles in relation to the crop target. Multi-nozzle assemblies surrounding the target often help. Air assistance certainly helps, usually when there is a good canopy to intercept the spray plume and capture the droplets. In early season spraying, when little foliage exists, air assistance can cause more drift. There is a need to consider adjusting the airflow to match the canopy development.

There is very little work published specifically for strawberry spraying. Nils Bjugstad, a colleague at the University of Norway, has conducted a five-year trial on improving spraying equipment. Bjugstad and Sonsteby (2004) observed the main issue is to obtain approximately the same spray and pesticide coverage and amount on the leaf surface on the outer and inner leaves, as well as the upper and underside of the leaves (mainly spraying against grey mold in Norway).

Because the plant canopy increases considerably during the growing season, they concluded that they had to adapt the volume rate according to this change of mass. As shown in their papers, they recommend using three nozzles in the start of the season; two from each side and one from the top, and for larger plants five nozzles per single row; one from the top and two from each of the sides. In this way adjust the volume rate from 12.5, 19.0, 25 pints per 109 yards row length, (converted from the metric system). 015 nozzles seem to be too small and increase the risk of drift (drift will be measured next year) and lower the capacity (rows per hour).

02 and 03 nozzles seemed, therefore, to be more suited. They did not use cone nozzles in this study, only flat fan nozzles. Top angle 65 and 80 degrees should be used to maintain good penetration into the plant (but a good overlap has to be ensured). Best results were at 75 psi with the nozzles 4-8 inches above the target.

They also tested Air induction (AI) and

Drift guard (DG) nozzles, but they did not prove to be better, mostly they gave poorer results. They tried them out in combination with conventional nozzles, using AI and DG on the top. This will be interesting to study in the forthcoming drift experiments. They use mostly front mounted equipment in Norway to ensure a good overview and control, but operator exposure has to be taken into account, and therefore the nozzles making larger drops may be interesting in some occasions, but always combined with conventional nozzles to ensure a good coverage.

Conventional crop sprayers as well as air assisted boom sprayers are not in use in strawberries in Norway, because the inter-row is sprayed and penetration is poor, especially down to the inner leaves and to the lower sides. Normally they use front mounted equipment that cover three single or double rows. For good conditions this equipment may be built out for five rows. Finally, labor, their skill, and attitude toward spraying will assist greatly in getting good spray coverage. Training of operators is a must if the product is to work successfully.

References:

Bjugstad N. and Sonsteby A. (2004) Improved spraying equipment for strawberries. In: *Aspects of Applied Biology 71*, International advances in pesticide application. pp.335-342.

Taiwan Reopens Borders to U.S. Apples

Source: *Fruit Growers News*
<<http://www.fruitgrowersnews.com>>

U.S. apple exports to Taiwan, cut off since last December after codling moth larvae were found, were allowed to resume April 27, according to notice given April 26 by the government of Taiwan. In a letter from the economic division of the Taipei Economic and Cultural Representative Office, Francis Liang said "the U.S. apple industry should address concerns identified by BAPHIQ (in an) on-site verification visit of March 13-19, 2005, and strictly follow the newly amended 'Systems Approach Work Plan for the Exportation of Apples from the United States to Taiwan.'" BAPHIQ is the Taiwanese Bureau of Animal and Plant Health Inspection and Quarantine.

The work plan outlines the procedures that must be in place to assure that no live codling moth larvae arrive in Taiwan in apples imported from the United States. The notice restores an important market for West Coast apples, especially large Fujis.

The suspension hit Washington particularly hard, since Taiwan is the state's top export market. It exports about 2 million boxes of apples to Taiwan in a normal year. Taiwan suspended imports from the United States on Dec. 21, 2004, just as the peak shipping season was starting, after a codling moth larva was found in a shipment from Oregon.

BAPHIQ had previously found codling moths in three separate shipments from Washington and California on Sept. 1, Oct. 7 and Oct. 14. The last two discoveries were counted as one incident. Taiwan and the United States had agreed two years earlier to a "three strikes and out" policy; three codling moth finds trigger a halt to exports. This was the second time exports had been stopped because of codling moth findings. The previous stoppage was two years earlier.

Shipments were halted in December and were to last until U.S. shippers found a protocol that Taiwan would accept. Taiwanese protocols against codling moths are stringent because apples and pears are grown there in an environment now free of the pest.

May Apple Holdings Up 46% Over 2004

Source: *Fruit Growers News*
<<http://www.fruitgrowersnews.com>>

Total U.S. holdings of fresh and processing apples on May 1 were 50.1 million bushels - 46 percent more than holdings on May 1, 2004, and 23 percent more than the five-year average, according to the latest U.S. Apple Association survey of apple storage facilities.

Holdings of fresh-market and processing apples in controlled-atmosphere storage on May 1 were 46.7 million bushels, a 46 percent increase compared to May 1, 2004, and 21 percent more than the five-year average for that date. Total processing apple holdings as of May 1 were 16.5 million bushels, a 33 percent increase from May 1, 2004, and 21 percent more than the five-year average for processing holdings for that date.

Total fresh-market apple holdings of 33.6 million bushels on May 1 were 54 percent more than at the same time last year, and 24 percent more than the five-year average.

On a regional basis, fresh holdings in the Northeast were 11 percent lower than holdings on May 1, 2004, but 10 percent higher than the five-year average for that date. Southeast May 1 fresh holdings were 45 percent less than on May 1, 2004, and 57 percent less than the five-year average for that date. In the Midwest, May 1 fresh holdings were down 6 percent as compared to holdings on May 1, 2004, and 15 percent less than the five-year average. Southwest fresh-market apples in storage totaled 27,000 bushels on May 1 while supplies were sold out on May 1 last year. These holdings are 50 percent lower than the five-year average.

Northwest May 1 fresh holdings were 67 percent more than on May 1, 2004, and 27 percent more than the five-year average for that date. Fresh CA holdings as of May 1 were up 50 percent compared to May 1, 2004, and 21 percent more than the five-year average for holdings on that date.

On a varietal basis, May 1 fresh Red Delicious holdings were 15.1 million bushels, a 53 percent increase from 2004, and 1 percent more than the five-year average. Fresh Golden Delicious holdings of 5.8 million bushels increased 79 percent as compared to last year's holdings and were up 27 percent as compared to the five-year average.

May 1 fresh Granny Smith holdings of 3.9 million bushels increased 33 percent from holdings on May 1, 2004, and were 57 percent more than the five-year average. McIntosh holdings on May 1 were 619,000 bushels, up 11 percent from holdings on May 1, 2004, and up 48 percent from the five-year average.

Fresh Fuji holdings of 3.8 million bushels on May 1 increased 111 percent as compared to last year's holdings on that date and were up 92 percent as compared to the five-year average. Fresh Gala holdings were 1.1 million bushels, a 27 percent increase from May 1, 2004, levels, and a 153 percent increase from the five-year average. Fresh Empire holdings were 522,000 bushels, 38 percent lower than 2004, and 21 percent less than the five-year average.

Avoid Stunting in Dwarf Sweet Cherries

Source: Jim Nugent, Greg Lang, and Bill Shane, Michigan State University's Fruit CAT Alert, May 17, 2005

Producing sweet cherries on dwarfing rootstocks has both advantages and challenges. One of the challenges is that trees will sometimes become prematurely stunted or “runt out.” This results in trees that do not fill their space and do not come close to reaching their yield potential. The problem is much more prevalent on sandy soils than on heavier soils.

The typical growth pattern we observe in dwarf sweets is that trees begin life in the orchard with good growth in year one. Terminal growth continues strong in year two, with a high level of spur production in first year growth. The spurs on first year growth begin producing cherries in year three, which may begin suppressing terminal growth a little. The problem really doesn't show up, however, until years four or five. By the fifth growing season, the spurs produced on growth in years one, two and three are all fruiting, plus some fruit on year four terminal growth.

This heavy fruit load, particularly when combined with sandy soils or insufficient irrigation, can cause a major reduction in vegetative terminal growth and lead to severe stunting of future growth (both shoot growth and leaf size). Fruit size at this point is greatly reduced because the trees accumulate diminished levels of storage reserves as well as develop insufficient leaf area to produce the carbon for good fruit growth and development. Typical vigorous new growth is 18 inches or more per year. If new terminal growth is less than 15 inches, or especially down to 12 inches or less per year, stunting is occurring.

Reinvigorating stunted trees

It is very difficult to reinvigorate stunted trees. Spur removal alone is not adequate. The best results have been obtained by severe pruning in the dormant period. Limbs are headed back into two- or three-year-old wood. This removes a lot of tree canopy and fruiting capacity, thus increasing the relative levels of storage reserves to growing points and encouraging strong re-growth. It may also be beneficial to use a high rate of gibberellic acid to reduce flower formation (and hence, crop load) the following year, but this has not yet been tested

directly.

Avoiding stunted trees

It is a far superior strategy to avoid the stunting problem in the first place, rather than trying to correct the problem once it has occurred.

The challenge is to know when to expect the problem and when it's not likely to occur. In other words, how do I best manage my trees? Following are our suggestions.

Irrigation

Cherry trees on Gisela (Gi) rootstocks are highly sensitive to drought, which can definitely contribute to stunted trees. All dwarf sweet cherries planted on sand, loamy sand, and sandy loam soils in Michigan need irrigation. If irrigation is not available on a droughty soil, don't plant a dwarf or precocious rootstock.

Dwarf rootstocks probably can be grown successfully on heavy soils without irrigation where rainfall during the growing season is regular and adequate, but a couple of drought periods in the early years could have serious consequences.

The irrigation system should be designed with multiple emitters per tree or micro sprinklers, rather than one emitter per tree to better disperse the water. Management of irrigation also changes for trees on Gisela rootstocks. Water should be applied more frequently and in greater volume than necessary with conventional rootstocks.

Pruning

Trees need fairly aggressive pruning during the early years to better balance fruiting with vegetative growth. Here is where one program does not fit all conditions. Pruning needs to be more aggressive in lower vigor situations and less aggressive when higher vigor is expected.

Vigor is strongly influenced by soil type and water availability. Vigor is also influenced by nutrition, weed management, climate (lower vigor in north), rootstock (G5 less vigorous than G6), and precocity of varieties. The combination of precocious varieties with dwarfing rootstocks may result in overproduction that causes both tree growth and fruit size problems. Partial debudding of the leader for the first three years or so works well for all vigor situations.

In lower vigor situations, also consider:

- Techniques such as nub-whipping after year one
- Heading scaffolds for the first three years or so to reduce early crop loads and maintain strong terminal growth and/or
- Removal of a portion of the spurs. Spur removal can be conducted quickly by raking off the spurs from the underside of the limb. Regular heading of new growth even during the mature bearing years has been found to help keep tree vigor and crop load more in balance.

Use of GA

Gibberellic acid (GA) is also a tool that can be used to avoid overcropping during the early years. It is typically applied three to four weeks after full bloom, or when the tree has five to seven leaves (three to five leaves fully expanded) on terminal growth. This causes a portion of next year's buds to shift from fruit to vegetative. Application rate greatly influences the portion of buds that are affected.

Unfortunately, not much research has been done on this technique in dwarf sweet cherries. GA has been used successfully for many years on both tart and sweet cherries on standard rootstocks to help delay fruiting and hence increase vegetative growth. It is a tactic that is often employed to improve growth until the tree can reach a size that is suitable for mechanical harvesting. The use of GA on dwarf sweets should help to avoid overcropping in the early years, but the rates need to be worked out.

GA is never applied to first year trees and there is rarely a need to apply during year two, as mostly vegetative buds are produced naturally at that time. The greatest advantage may be gained when used during the third and probably fourth growing seasons. This could increase vegetative growth and reduce crops in years four and five when trees seem most negatively affected by overcropping.

The problem at this time is that the rate for this purpose has not been determined. We know the rate for keeping young trees from producing much fruit is 100 ppm (40 fl.oz of ProGibb 4% per 100 gal), while the rate used on mature tart cherries to help minimize blind wood is 10 to 20 ppm. So to

delay fruiting by a year, we would recommend the full rate, followed by a reduced rate the following year. To accomplish a reduction, but not elimination of fruiting, will likely require rates closer to those used on bearing tarts.

Plum Curculio

Source: Art Agnello, Cornell Entomology, Geneva, Scaffolds Fruit Journal, Volume 14, No. 9, May 16, 2005

Adults move into orchards from overwintering sites in hedgerows or the edges of woods, and adults are active when temperatures exceed 60°F. Adult females oviposit in fruit during both day and night but feed mostly at night.

Depending on temperature, overwintering adults remain active for two to six weeks after petal fall. Because adults are not highly mobile, orchards near overwintering sites, woodlands, and hedgerows are most susceptible to attack. Fruit damage is usually most common in border rows next to sites where adults overwinter.

Although initial post-bloom sprays for plum curculio control should begin at petal fall, growers are often unsure how many additional sprays will be necessary to maintain protective chemical residues to prevent subsequent damage throughout the PC oviposition cycle, which varies according to temperatures and weather patterns after petal fall.

Following from the fact that PC activity and oviposition are greatly affected by temperature, an oviposition model has been developed to determine when control sprays after petal fall are no longer necessary to protect fruit from PC damage.

This model is based on the assumption that residues from control sprays after petal fall only need to be maintained on fruit and foliage until PC adults stop immigrating into orchards, which corresponds with when about 40% of the oviposition cycle is complete. This is predicted by the model to occur at 308 DD (base 50F) after petal fall. [NOTE: This number used to be advertised as 340 DD, but that figure was the result of an incorrect metric conversion that had gone undetected until just this year.]

Probably, this strategy works because after 40% of PC oviposition is complete, adults usually are not moving into the orchard from outside sources, or moving around within orchards from tree to tree. Therefore, by this time, adults residing in treated trees have already been killed by insecticide residues and are unable to complete the remainder of their normal oviposition cycle.

In order to use this strategy:

- Treat the entire orchard at petal fall with a broad spectrum insecticide.
- Start calculating the accumulation of DD after petal fall (base 50F).
- No additional sprays are necessary whenever the date of accumulation of 308 DD falls within 10-14 days after a previous spray. In cherries and other stone fruits that are already at shuck fall, sprays should start at the first opportunity (i.e., like last week)

**Degree Day Accumulations for Ohio Sites
May 18, 2005**

Ohio Location	Degree Day Accumulations Base 50°	
	Actual	Normal
Akron-Canton	206	292
Cincinnati	438	490
Cleveland	175	274
Columbus	345	369
Dayton	297	379
Kingsville	130	230
Mansfield	197	285
Norwalk	180	267
Piketon	380	508
Toledo	195	260
Wooster	217	261
Youngstown	166	255

Pest Phenology

Coming Events	Degree Day Accum. Base 50°F
Redbanded leafroller 1 st flight peak	103 - 193
Lesser appleworm 1 st catch	104 - 286
Lesser peachtree borer 1 st catch	110 - 553
White apple leafhopper nymphs present	123 - 404
Spotted tentiform leafminer sap-feeders present	130 - 325
First codling moth catch	141 - 491
Lesser appleworm 1 st flight peak	181 - 483
European red mite egg hatch complete	183 - 298
Plum curculio oviposition scars	232 - 348

Revised thanks to *Scaffolds Fruit Journal*
(Art Agnello)

Fruit Observations and Trap Reports

Site: Waterman Lab, Columbus

Dr. Celeste Welty, OSU Extension Entomologist

Apple: 5/11 to 5/18/05		
Redbanded leafroller	0	down from 1
Spotted tentiform leafminer	1	down from 9
San José scale	0	same as last wk.
Codling moth (3 trap mean)	8.0	up from 3.0
Lesser appleworm	6	down from 19
Tufted apple budmoth	0	same as last wk.
Variiegated leafroller	0	same as last wk.
Obliquebanded leafroller	0	same as last wk.

Note: Biofix for codling moth on 5/10/05

Mites: The European red mite population in our Columbus orchard currently has high levels of summer eggs, low levels of adults, and almost no nymphs. It is the ideal time (in central Ohio) to treat with Zeal, Savey, or Apollo.

Codling moth: The degree-day accumulation has been slow during the recent cool weather. In central Ohio we are nearly at 75 degree-days (DD) past biofix, which is the start of the ideal time to apply Rimon. Rimon works best if applied to leaves before eggs are laid; 75 to 150 degree-days (DD) is the best time to use Rimon. For other insecticides that target young larvae emerging from hatching eggs, the best time to spray is still at least one week away; products such as Guthion, Imidan, Calypso, Assail, Avaunt, or pyrethroids are most effective if applied 200-250 DD after biofix.

Site: Holmes, Medina, and Wayne Counties

Ron Becker, IPM Program Assistant

Spotted tentiform leafminer is still low, around 25 per trap. Codling moths were found at Moreland (average of 2 per trap) to establish a biofix. Otherwise, there is little activity. Strawberries are showing very light spittlebug.

Site: East District: Erie and Lorain Counties

Jim Mutchler, IPM Scout/Technician

Apple: 5/10 to 5/17	
Codling moth (3 trap mean)	0.2 first report
Oriental fruit moth	31.3 up from 17.6
Redbanded leafroller	7.6 up from 5.3
San Jose scale	0.0 same as last week
Spotted tentiform leafminer	568 down from 913

Beneficials found: brown lacewings

Note: Biofix for Oriental fruit moth on 5/8/05

Peach: 5/10 to 5/17	
Redbanded leafroller	7.2 down from 13.3
Oriental fruit moth	5.0 up from 1.8
Lesser peachtree borer	0.2 first report

Site: West District: Huron, Ottawa, Richland, and Sandusky Counties

Lowell Kreager, IPM Scout/Technician

Apple: 5/9 to 5/16	
Codling moth	3.2 up from 0.0
Oriental fruit moth	14.0 up from 5.3
Redbanded leafroller	5.5 down from 9.0
San Jose scale	0.0 same as last week
Spotted tentiform leafminer	233 up from 215

Beneficials found: brown lacewing, lady beetle

Note: Biofix for codling moth on 5/10/05

Peach: 5/9 to 5/16	
Redbanded leafroller	12.5 down from 54.0
Oriental fruit moth	14.5 up from 3.3
Lesser peachtree borer	0.0 same as last week