



# Healthy Fruit

Volume 12, 2004

Prepared by the University of Massachusetts Fruit Team

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## [Orchard Radar for west-central Massachusetts \(Belchertown\)](http://pronewengland.org/content/AllModels/Mamodel/RadarMa-belchertown.htm)

<http://pronewengland.org/content/AllModels/Mamodel/RadarMa-belchertown.htm>

## [Orchard Radar for eastern Massachusetts \(Waltham\)](http://pronewengland.org/content/AllModels/Mamodel/RadarMa-waltham.htm)

<http://pronewengland.org/content/AllModels/Mamodel/RadarMa-waltham.htm>

### Upcoming meetings/events

Date	Meeting/Event	Location	Time	Information
July 14	MFGA Summer Meeting	UMass Cold Spring Orchard Belchertown, MA	10 AM	Jon Clements (413) 478-7219

### Insects

When July 1st hits, thoughts turn to apple maggot. So far, we have not seen many flies caught in traps, but they are coming. Trapping is a good way to monitor apple maggot fly. Reprinted below is a timely article about trapping that just appeared in Scaffolds Fruit Journal:

#### Monitoring

Once again, it is nearly time to expect the first appearance of apple maggot (AM) flies in volunteer apple stands and abandoned orchards, particularly in eastern N.Y. (in fact, the first AM fly was caught in Highland on 6/17); western N.Y. could be about a week later, or not, depending on what kind of temperatures we get over the next week or so. Crop scouts and consultants have been using traps to monitor AM populations for a long time, but this tactic, useful as it is, nevertheless is not recommended in all cases. Some orchards have such high or such low AM populations that monitoring for them is a waste of time; that is, sprays are needed predictably every season in some blocks, and on a calendar basis; conversely, they are rarely needed at all in other blocks. However, most commercial N.Y. orchards have moderate or variable pressure from this pest, and monitoring to determine when damaging numbers of them are present can reduce the number of sprays used in the summer with no decrease in fruit quality.

Sticky yellow panels have been in use for over 30 years, and can be very helpful in determining when AM flies are present. These insects emerge from

their hibernation sites in the soil from mid-June to early July in New York, and spend the first 7-10 days of their adult life feeding on substances such as aphid honeydew until they are sexually mature. Because honeydew is most likely to be found on foliage, and because the flies see the yellow panel as a "super leaf", they are naturally attracted to it during this early adult stage. A few of these panels hung in an orchard can serve as an early warning device for growers if there is a likely AM emergence site nearby.

Many flies pass this period outside of the orchard, however, and then begin searching for fruit only when they are ready to mate and lay eggs. That means that this advance warning doesn't always have a chance to take place -- the catch of a single (sexually mature) fly then indicates a spray is necessary immediately to adequately protect the fruit. This can translate into an undesirable risk if the traps are not being checked daily, something that is not always possible during a busy summer.

To regain this time advantage, researchers developed newer traps that have the form of a "super apple" -- large, round, deep red, and sometimes with the smell of a ripe apple -- in an attempt to catch that first AM fly in the orchard. Because this kind of trap is so much more efficient at detecting AM flies when they are still at relatively low levels in the orchard, the traps can usually be checked twice a week to allow a one- or two-day response period (before spraying) after a catch is recorded, without incurring any risk to the fruit. In fact, research done in Geneva over a number of years indicates that some of these traps work so well, it is possible to use a higher threshold than the old "one fly and spray" guidelines recommended for the panel traps. Specifically, it has been found that sphere-type traps baited with a lure that emits apple volatiles attract AM flies so efficiently that an insecticide cover spray is not required until a threshold of 5 flies per trap is reached.

The recommended practice is to hang three volatile-baited sphere traps in a 10- to 15-acre orchard, on the outside row facing the most probable direction of AM migration (south, or else towards woods or abandoned apple trees). Then, periodically check the traps to get a total number of flies caught; divide this by 3 to get the average catch per trap, and spray when the result is 5 or more. Be sure you know how to distinguish AM flies from others that will be collected by the inviting-looking sphere. There are good photos for identifying the adults on the Apple Maggot IPM Fact Sheet (No. 102GFSTF-I8); see p. 224 of the Recommendations for details on obtaining one, or else check the web version at:

<http://www.nysipm.cornell.edu/factsheets/treefruit/pests/am/applemaggot.html>. In home apple plantings, these traps can be used to "trap out" local populations of AM flies by attracting any adult female in the tree's vicinity to the sticky surface of the red sphere before it can lay eggs in the fruit. Research done in Massachusetts suggests that this strategy will protect the fruit if one trap is used for every 100-150 apples normally produced by the tree (i.e., a maximum of three to four traps per tree in most cases), a density that makes this strategy fairly impractical on the commercial level.

A variety of traps and lures are currently available from commercial suppliers; among them: permanent sphere traps made of wood or stiff plastic, disposable sphere traps made of flexible plastic, and sphere-plus-panel ("Ladd") traps. The disposable traps are cheaper than the others, of course, but only last one season. Ladd traps are very effective at catching flies, but are harder to keep clean, and performed no better than any other sphere trap in our field tests. Brush-on stickum is available to facilitate trap setup in the orchard. Apple volatile lures are available for use in combination with any of these traps. These tools are available from a number of orchard pest monitoring suppliers, among them:

- Gempler's Inc., 100 Countryside Dr., PO Box 328, Belleville, WI 53508; 608-424-1544, Fax, 608-424-1555
- Great Lakes IPM, 10220 Church Rd. NE, Vestaburg, MI 48891; 800-235-0285, Fax 989-268-5311
- Harmony Farm Supply, 3244 Gravenstein Hwy, No. B, Sebastopol, CA 95472; 707-823-9125, Fax 707-823-1734
- Ladd Research Industries Inc., 83 Holly Court, Williston, VT 05495; 800-451-3406, Fax 802-660-8859
- Olson Products Inc., PO Box 1043, Medina, OH 44258; 330-723-3210, Fax 330-723-9977
- Scenturion Inc., P.O. Box 585, Clinton, WA 98236; 360-341-3989, Fax 360-341-3242

By preparing now for the apple maggot season, you can simplify the decisions required to get your apples through the summer in good shape for harvest.

Reprinted from Scaffolds Fruit Journal, Vol. 13, No. 4, June 21, 2004, online at <http://www.nysaes.cornell.edu/ent/scaffolds/>:

## **Diseases**

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It's definitely time (July – August) to think about applying fungicide(s) targeting sooty blotch and flyspeck. Captan and EBDC's are classic protectant fungicides, while Flint, Sovran, or Topsin-M all have some post-infection activity. Don't underestimate the importance of summer pruning and removing hedge-rows as cultural practices that can reduce the incidence of sooty blotch and flyspeck. The most recent issue of Scaffolds Fruit Journal, (<http://www.nysaes.cornell.edu/ent/scaffolds/>) has an excellent article on sooty blotch and flyspeck – it's worth looking at.

## **Horticulture**

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It's about as dry as it has been in months. If you have irrigation, it should be running. Young trees in particular need the water to keep growing.

Calcium sprays should be ongoing. Calcium chloride sprays are by far the cheapest form of calcium, and should be applied at a rate of 2.0 to 2.7 lbs. per 100 gallons dilute this time of the year. (Add 2/3 ounce vinegar per pound calcium chloride.) Avoid concentrating calcium chloride sprays beyond 3 or 4X and when it is very hot. Calcium *nitrate* (fertilizer) sprays may also be

used, but increase the rate to 3.2 to 4.3 lbs. per 100 gallons. For more information on calcium sprays, see F-119R Foliar Calcium Sprays on the UMass Fruit Advisor <http://www.umass.edu/fruitadvisor/factsheets/factsheets.html>.

## Bonus Article

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### **IDFTA Growers Tour Honeycrisp™ in Wisconsin and Minnesota**

Win Cowgill, County Agricultural Agent, Jon Clements, Extension Fruit Specialist, UMass Amherst

The International Dwarf Fruit Association (IDFTA) has a long history of conducting summer tours of grower orchards. This year was no exception with over 160 growers, extension workers and researchers attending the “Honeycrisp” Summer Tour June 21-22 to Wisconsin and Minnesota. In a beautiful part of the world, we visited orchards in both states on the bluffs and hills straddling the Mississippi river.

As you may have guessed, the tour focused on the Honeycrisp apple, released from the University of Minnesota breeding program in the mid 1970’s. First crossed in 1960, it was selected in 1974 and tested as MN 1711. Its parentage is now unknown. (Previously thought to be Macoun X Honeygold, but it was recently discovered this is probably not the case.) This apple has been planted extensively over the past 10 years in colder growing areas around the world. It is estimated there are over one million trees in the ground.

In the last New Jersey Orchard Survey in 1999, Honeycrisp was one of the most widely planted new apples. Honeycrisp grows best in northern climates -- basically anywhere you can grow good high color McIntosh apples. That doesn’t make one think of NJ except for the northern-most counties in some years. Honeycrisp, however, is such a high-quality eating apple that NJ growers are having success with it even if it doesn’t color. They’ve found offering samples to taste will sell this apple every time.

On the Tour, we visited six orchards in Wisconsin and Minnesota. All sold Honeycrisp apples wholesale and retail, and gladly shared the trials and tribulation of growing this apple. All expressed the hope that overproduction and/or poor quality fruit will not ruin the current “honeymoon with Honeycrisp.”

Much of the tour and discussion focused on how to maintain the quality and prices for Honeycrisp. Clearly, it is not a grower-friendly apple with many problems, including: biennial bearing and weak per/acre yields; too large fruit size; susceptibility to storage disorders; stem punctures, etc., etc. But, interest has remained high with this apple because of the high prices growers are receiving -- upwards of \$600-\$800 per bin for premium, high colored fruit. \$40 a packed box wholesale was the norm last season. Growers selling Honeycrisp at retail are demanding and receiving \$2.00-\$2.50 a pound for this apple!

More details of the orchards and stops can be found in the online photo journal:

<http://www.idfta.org/2004/summertour/summertour.html>

For more details on Honeycrisp visit:

[http://www.extension.umn.edu/distribution/horticulture/components/5877\\_01.html](http://www.extension.umn.edu/distribution/horticulture/components/5877_01.html)

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