



Berry Notes

Prepared by the University of Massachusetts Fruit Team

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Crop Conditions:

Strawberries: Disease management remains the highest priority. Harvest will be starting within the week for early varieties. Check soil in fields with failing plants for white grubs or root weevil larvae. Root weevils, especially Black Vine Weevils, appear to be a growing problem throughout New England. Remember to pick blossoms and control weeds in new plantings. Also, check new plantings for infestations of potato leafhopper. **Blueberries:** Fruit are sizing nicely. Cranberry Fruitworm trap catches are still relatively low indicating low overall populations this summer. Blueberry maggot should be active soon. Keep a look-out for aphids. A second fertilizer application should be made at this time. **Raspberries** are in bloom. Botrytis fruit rot management are still key. Keep up the monitoring for tarnished plant bug and mites (two-spotted spider mites and European red mites). Watch for potato leafhopper on **fall-bearing raspberries**. They can cause significant stunting and leaf-curl at this time of year. **Black raspberry** primocanes should be tipped back to about 2.5 or 3 feet. This will encourage sturdy canes with lateral branching. Avoid tipping in wet weather. **Grapes** are progressing toward bloom. Disease management will remain a high priority, especially Black Rot. Continue to monitor for grape berry moth. Japanese beetle will be emerging from the soil in the next 7 – 14 days.

Environmental Data:

STATE WEATHER SUMMARY For the Week Ending Sunday, June 8, 2003

Prepared by AWIS, Inc. (available at <http://www.nass.usda.gov/weather/cpcurr/new-eng-crop-weather>)

STATE	AIR TEMPERATURES				PRECIPITATION	
	LO	HI	AVG	DFN	LO	HI
ME	27	81	56	-4	0.00	2.38
NH	24	80	55	-5	0.03	2.63
VT	29	83	56	-5	0.19	0.84
MA	37	81	59	-4	0.56	3.95
RI	44	79	59	-4	0.08	2.43
CT	40	81	59	-5	1.44	2.72

(Source: New England Ag. Statistics Service, Weekly Crop Weather Report, Volume 23, Number 7, June 9, 2003)

Strawberries

Disease Management Update in Strawberries

Sonia Schloemann, UMass Extension

Prolonged wet weather always raises concerns about disease problems. Gray mold caused by *Bortyris cinerea* is the disease most often discussed in this context. But, other diseases can also cause significant damage and yield losses. Among these are **angular leaf spot** caused by bacteria and the 'water molds', **red stele and leather rot** caused by fungi.

Angular Leaf Spot

Angular leaf spot is a bacterial disease caused by *Xanthomonas fragariae*. This bacterium infects only strawberries. It is sporadic in New England, but it can be important when it strikes. This disease causes leaf, petiole and calyx spots in New England, but has been reported occasionally to kill plants in California. It is favored by wet, cool (65°F day, 35°F night) weather.

Symptoms - Tiny water soaked spots appear on the lower surface of the leaves, which are angular in shape because they are bordered by veins. When the leaves are held up to the light, the spots are translucent. When viewed normally, they are dark green. Later, the spots will grow together to form larger, reddish-brown irregularly shaped spots, which may become surrounded by a yellow ring. These larger spots often follow veins. The leaf will have a ragged appearance. Spots can also appear on the petioles and on the calyx of the fruit, darkening them and making the fruit less attractive. In wet weather, a thick fluid can appear on the undersides of the infected leaves, which will dry to a shiny brown varnish-like film. This fluid and film is diagnostic for this disease.

Control - If this disease has been a significant problem, rotate the affected field away from strawberries for at least one year. When replanting, space plants widely in the row and plant narrow rows to maximize air circulation within the row. If the field is to be kept over, remove as much leaf debris from fields as possible at the time of renovation. Avoid working in the fields when the plants are wet.

Scouting should begin in fields that have a history of the disease as soon as buds extend from the crown, and should continue until bloom. If symptoms are seen, discontinue irrigation unless needed for frost protection or if weather is very dry. If irrigation is needed, time it so that plant dry off from morning dew for 1-2 hours before irrigation is turned on and/or so that plants dry for 1-2 hours before dew settles on to the plants in the evening. Some guides recommend the use of copper containing fungicides for control of angular leaf spot. However, the general opinion is that copper is not very effective and may cause phytotoxicity if used

improperly. Cultural practices that minimize wetness and maximize drying are the best options for controlling this disease. Cultivar selection can also help. Cavendish, Annapolis, Allstar, Honeoye and Kent are very susceptible to angular leaf spot.

Leather Rot

Leather rot is caused by the fungus *Phytophthora cactorum*. It can infect the crowns, runners, and fruit of strawberry, and many other plants as well. This disease is more common in southern and midwestern states than in the Northeast. When it does affect this area, losses can be quite high. This disease is favored by wet weather, and temperatures of approximately 60° - 80°F. It can progress quickly when conditions are favorable, causing huge losses in just a few days.

Symptoms - On immature fruit, brown to dark brown spots that remain firm appear. The spots expand quickly until they cover the entire fruit. The fruit appears dark and leathery in texture, inside and out. Mature fruit may become soft and be dull pink to lilac, or may remain a normal color. When the fruit is split open, it usually has a sharp, pungent smell. The fruit tastes quite bitter. A white fuzzy growth may appear on the fruit if conditions are moist or if it is placed in a plastic bag with a moist paper towel for a few days.

Control - The fungus, *Phytophthora cactorum*, is in the soil, and can infect fruit after being splashed onto it by rain or by the fruit being in direct contact with the soil. A thick layer of straw mulch is important to keep the fruit off the ground and to prevent the soil from splashing onto the fruit. Mulching with straw rather than plastic prevents the berries from sitting in water. This disease is worse in wet situations, so plant in well-drained soil and avoid compacting the soil around the plants. Plant narrow rows and space plants widely within the row to keep the canopy dry. Plant in an area with good air circulation and control weeds to improve air circulation. Irrigate in the morning so that plants dry quickly.

There are systemic fungicides that will help manage infections by *P. cactorum*. Ridomil Gold 4EC (mefanoxam) and Aliette (fosetyl-Al) are registered for control of leather rot and can provide significant control especially when combined with the use of the cultural practices mentioned above.

Red Stele

This disease is caused by the soil-borne fungus, *Phytophthora fragariae*. Many commercial strawberry cultivars are susceptible to the red stele fungus while many are resistant to one or more strains. This root rot disease has become a serious problem facing strawberry production in

the northern United States. The disease is most destructive in heavy clay soils that are saturated with water during cool weather. Once it becomes established in the field, the red stele fungus can survive in soil up to 13 years, even if no strawberries are grown during that time.

Normally, the disease is prevalent only in the lower or poorly drained areas of the planting; however, it may become fairly well distributed over the entire field, especially during a cool, wet spring. The red stele fungus may become active at 40° F. However, the optimum temperature for growth and disease development is between 55-60°F. Under favorable conditions of high soil moisture and cool temperature, plants will show typical disease symptoms within 10 days after infection.

Symptoms - When plants start wilting and dying in the more poorly-drained portions of the strawberry field, the cause is very likely red stele disease. Infected plants are stunted, lose their shiny green luster, and produce few runners. Younger leaves often have a metallic bluish-green cast. Older leaves turn prematurely yellow or red. With the first hot, dry weather of early summer, diseased plants wilt rapidly and die. Diseased plants have very few new roots compared to healthy plants that have thick, bushy white roots with many secondary feeder roots. Infected strawberry roots usually appear gray, while the new roots of a healthy plant are yellowish-white.

The spores of *P. fragariae*, which reside in infected soils, are attracted to developing strawberry rootlets. After infection, the roots begin to rot from the root tip upwards toward the crown causing a characteristic reddening of the inner portion (stele) of the root; thus, the name "red stele". The best way to identify the disease is to carefully dig up a wilted plant and peel off the outside portion of several roots. If the stele is pink to brick red or brownish red, the plant has the red stele disease. The red color may show only near the dead tip of the root or it may extend the length of the root. The

red stele is best seen in the spring up to the time of fruiting. No other disease of strawberry produces this symptom.

Control - Red stele development is favored by cool, wet soil. As a result, proper site selection and preparation are both important management tools for this disease. Soil drainage (both surface and internal) should be good because red stele requires free water (saturated soil) in order to develop. Avoid low-lying areas, which tend to have poor water drainage. If the site selected does not have good soil drainage, the strawberry planting should be established on raised beds of 10 inches or more. The raised beds will allow excess soil water to drain away from the strawberry root system, creating an environment less favorable to the disease causing fungi. In addition, less soil compaction will occur near the root system. Be sure to clean cultivators or equipment used to build raised beds to insure that soil is not being carried from red stele infected fields.

If a high-risk site is being planted to strawberries, select varieties with resistance to the red-stele disease. These include: Allstar, Darrow, Delite, Earliglow, Guardian, Lateglow, Lester, Midway, Redchief, Redglow, Sparkle, Sunrise and Surecrop. (Note: The varieties classified as "resistant" are not resistant to all strains of *P. fragariae*. Therefore, it is possible that a new planting may again succumb to the disease if the site has poor drainage or if the site is improperly prepared.) Also, inspect transplants carefully before putting them in the soil to be sure they are not already infected with red stele.

There are systemic fungicides that will help manage infections by *P. fragariae*. Ridomil Gold 4EC (mefanoxam) and Aliette (fosetyl-Al) are registered for control of red stele. If red stele develops in an established planting, these fungicides should help control the disease especially if used in combination with good cultural practices. However, fungicides should not be used on a routine or preventative basis. Such use would be uneconomical and might result in the development of resistance by the fungus to these materials.

Brambles

Black, Purple Raspberries, and Blackberries: Summer Heading (Tipping)

Richard Funt, Ohio State University

If shoots of these plants are allowed to grow unchecked, they get long and are very difficult to manage without support of some kind. To prevent this, the tips of new canes should be pinched off (headed) when the canes have reached a certain height. This induces growth of side branches and results in plants that are stocky and self-supporting and have a large amount of bearing wood.

Black raspberry shoots should be tipped when canes reach about 28 to 30 inches. Brandywine purple raspberries are usually tipped about 36 inches. Erect

blackberries are permitted to grow to a height of about three feet before tipping. Generally, plant height will be less than two feet for the planting year. Therefore, heading is done every year from the second season. Royalty purple raspberries do not require heading, because their growth is similar to red raspberries.

In heading, the usual practice is to remove four inches of the top. It is necessary to go over the planting several times, because all shoots do not reach the same height at the same time. If shoots are permitted to grow much above the desired height and then headed, the extra shoot growth is wasted, and

the side branches will not be as strong as if heading had been done at the proper time. The laterals should not be shortened until the following spring.

In most cases, the laterals mature sufficiently well and are not winter-killed to an extent that yields are lowered. Canes that do not reach the height for tipping by the time

harvesting is started are usually not tipped. These weak canes will not grow much higher, and late tipping results in weak, immature laterals. (*Source: Ohio State University Bulletin 782-99 Brambles - Production Management and Marketing*)

Correction to Summer Red Raspberry Spring 2003 Evaluation: In last week's Berry Notes (Original article: Ohio Fruit ICM News, May 22, 2003 by Shawn Wright, Ohio State Univ.) The summer reds definitely aren't normally listed as thornless. *Sorry for the misprint.*

Blueberries

Blueberry Sampling Reveals Fruitworm Eggs and Post-bloom Management Timing

Rufus Isaacs, Michigan State University

As part of the Blueberry RAMP Project, ten commercial blueberry fields across Southwest Michigan are being scouted each week by MSU entomologists. Since petal fall started, we have been scouting for eggs of cranberry fruitworm and cherry fruitworm (see accompanying picture http://www.msue.msu.edu/ipm/CAT03_frt/F06-03-03.fruitwormeggs.htm). At the furthest south farm in this project (Covert), eggs of cranberry fruitworm were found for the first time yesterday (June 2), and there are also reports of egg laying in Allegan County farms. Conditions are ideal now for this egg laying to continue and to spread north with the temperature accumulation. This is because fruitworm moths have been found in monitoring traps for a few weeks, the bushes have open calyx cups after petal-fall, and evening temperatures are increasing. Farms that are further south than Covert or in other warmer areas should consider either scouting for eggs or preparing for a post-bloom insecticide application in fields with histories of fruitworm infestation.

Scouting for eggs is not as difficult as it might seem at first. You'll need a 16 to 20 power hand lens and a site where fruitworm adults have been monitored in the past few weeks. Adult female moths must wait until petal-fall to lay their eggs in the calyx cup, so looking inside the open calyx cups in fields with a history of infestation near to wooded borders is the best site to find the eggs. In our experience, one egg is laid per berry, but an area of a bush may receive many eggs, while other areas receive none.

Because of this clumped distribution, it is a good idea to spread your sampling along wooded borders to help improve the chance of finding eggs.

Finding eggs can provide more accurate information on the best time to apply an insecticide. Fresh eggs are light yellow, meaning that there are three to four days until the egg hatches and the tiny larva crawls to enter the berry. However, if the eggs are a dark orange color or if a head-capsule is visible inside the egg, then the larva is ready to hatch in the next day and fruit protection steps need to be taken. Another reason to better determine whether eggs are close to hatching relates to product selection. Insecticides that are safe for use during bloom, such as Dipel and Confirm, are most effective when targeted for the egg hatch timing, to kill the youngest larvae before they enter the fruit.

The MSUE resources below can help with identification of fruitworms and making decisions on how to manage this blueberry pest:

Fruitworm fact sheet on the MSUE blueberry website:
<http://www.msue.msu.edu/fruit/bluberry.htm>

For fruitworm management options, see the recent CAT Alert article:

http://www.msue.msu.edu/ipm/CAT03_frt/F05-20-03.htm
(*Source: Michigan CAT Alert, Vol. 18, No. 8, June 3, 2003*)

Midwest Blueberry Crop Down

Bruce Bordelon, Purdue University

At the Blueberry Growers of Indiana meeting this week, growers discussed the crop "guestimate" for the 2003 season. They are expecting a crop 25-30% below average due to winter injury. Jersey, the most widely grown variety in the state, suffered the most damage. Growers in Michigan are also reporting considerable winter injury, so Michigan's crop will likely be lower than normal as well. Due to below average crops in most

production areas, prices this year should be better than last year for both fresh and processed fruit. Last year Indiana produced about 3.1 million pounds of blueberries and ranks 7th nationally in production. (*Source: Facts for Fancy Fruit, Vol. 03, No. 06, June 6, 2003*)

A Real Opportunity for Blueberry Growers in 2003

Mark Longstroth, Michigan State University Extension

This spring we are seeing a lot of winter injury in blueberries. We see cane dieback in Jersey, Rubel and some other varieties. I think that this dieback is a combination of winter injury from early cold in December and other stresses the plants suffered last year. I often see Phomopsis in affected fields and I think that last year's drought had a lot to do with the winter injury we see. The point is that many growers are pruning out lots of dead canes and some are even mowing off all the canes and hope to bring up new shoots from the crown. If you are going to be drastic enough to mow down the bush, you should seriously think about replacing them with a newer variety.

If you mow down a bush, you need to come back and thin out the canes that come up from the crown. If you want to get back in production quickly, you should do this in the growing season so that the plant puts its energy into the shoots you are going to keep instead of the shoots you are going to cut out. If you force that growth into fewer canes, you will get back into production sooner. And thinning out the canes makes disease control easier and more effective. In three years you should be back into production. In 5 or 8 years, you should be getting back into full production of 3,000-4,000 pounds of Jersey fruit a year.

If you plant with a new variety like Nelson, you will have the same yields in five years as you do with Jersey but yields will continue to increase. Most Michigan growers

should be able to double their yields with newer, higher yielding varieties. The fruit from new varieties is larger and has higher quality that carries a premium in the fresh market. Ten years from now would you rather have a field of Jerseys averaging 3,000 pound/acre or Nelsons averaging 6 to 8,000 pound of high quality, fresh market fruit? How many years of higher production would you need to make up for the fact you could restore that old Jersey field in five years?

Most tree fruit growers need to replace their orchards with newer varieties as the trees age. Often the planting is replaced with new varieties or old varieties that have withstood the test of time and produce high volumes of quality fruit. We do not see this in blueberries because it takes so long for the fields to reach full production and our production does not fall off if we vigorously maintain the fields.

The loss of old, weak Jersey fields is a blessing in disguise. Examine the records of the fields that are most damaged and replace the poorer ones. Use 2003 to put everything you know about growing blueberries to good use and get the field ready for new plants and line the plants up to plant. How many years do you think you can make a profit on the best blueberry variety in 1960 when your competition is planting the best blueberry variety in 2003? (*Source: Michigan CAT Alert, Vol. 18, No. 8, June 3, 2003*)

Grapes

More On Managing Winter Injury This Season

Hans Walter-Peterson, Cornell University

In last week's update, I discussed some signs of winter injury that were appearing in several Niagara vineyards around the region. At our coffee pot meeting yesterday, Rich Erdle with National Grape Cooperative (and our host for the meeting) noted that their field staff were finding more evidence of winter injury not only in Niagaras but in some Concord

vineyards as well (we have also heard of damage in Catawbas, many of the hybrid wine varieties and certainly vinifera varieties).

So what should growers do in response to this latest 'challenge' from Mother Nature? While it may be tempting to get out there and hack out vines that don't look like they're doing anything, I

would wait to do some more evaluating before moving ahead with any vine removal. Some things to consider:

- 1) Are there suckers growing from the base of the vine? If so, then make sure to keep several of them for potentially retraining new trunks. If not, and you have little or no growth above, keep an eye out for good layers on neighboring vines this fall.
- 2) How vigorously are the suckers growing compared to the growth on top of the vine? If the sucker growth at the base of the vine is much stronger than the shoots emerging from the fruiting canes or spurs (or the top growth is highly irregular), you're probably looking at some level of winter injury.

The recommendation that I've read made to growers in the past, and makes sense to me, is to wait until bloom to evaluate what kind of trunk injury you're looking at (by bloom, the vascular connections in the vine have usually been completed). Make a shallow cut into the trunk just above where the snow line was last winter (wood below the snowline would have been insulated from the extreme cold temperatures we had). You should see one of three possible conditions:

- 1) No discoloration & the bark slips or peels off smoothly - the trunk has received little or no injury; no need to replace it.

- 2) Phloem is discolored (darker brown, not light colored) and bark slips - the phloem was injured, but the cambium layer has reformed.
- 3) Phloem is discolored and bark does not slip - extensive injury occurred, and the cambium layer is not regenerating.

Vines that appear as described in #2 may survive to the end of the season, and perhaps even carry a small crop, but will very likely produce poorly from then on. Vines described by #3 above may very well collapse during the season, if there's any growth at all. In situations 2 or 3, the vines should be flagged and removed this winter. Retaining trunks through this growing season, even if they are severely injured, will help to control the growth of the suckers this season. Long vigorous suckers will be less hardy next winter, so be sure to control vigor to the extent possible.

In addition to controlling the vigor of the suckers, keeping the trunk this season can allow you to use it as a training aide, which might be helpful particularly in those vineyards that don't have a bottom wire.

Much of the information used for this article is based on portions of 'Cold Injury of Grape Canes and Trunks' by Dr. Bob Pool. The entire article, along with illustrations, can be

found at Dr. Pool's website, <http://nysaes.cornell.edu/hort/faculty/pool/GrapePagesIndex.html>.

(Source: *Lake Erie Regional Grape Program Crop Update, June 5, 2003*)

Important Grape Sprays

Bruce Bordelon, Purdue University

Grapes have been blooming across the state over the past two weeks. Cool weather is causing the bloom period to be extended. The next few fungicide applications are very important for controlling the major fruit pathogens. May has been a fairly wet month, so

disease pressure should be high. The immediate pre-bloom (or early bloom) and the first two post bloom applications are the most important sprays for controlling black rot, but also are important for downy and powdery mildew. Care should be taken to get thorough coverage of all foliage and developing fruit. Slow the tractor speed, spray every row middle, increase volume, and use full label rates. This would

be a good time to use one of the new strobilurin fungicides such as Abound or Sovran. On bunch rot susceptible varieties, addition of a botryocide such as Rovral, Vanguard, or Elevate may be beneficial. For a complete discussion of grape pest management refer to the Commercial Small Fruit and Grape Spray Guide (<http://www.hort.purdue.edu/hort/ext/sfg/>) and the Midwest Small Fruit Pest Management Handbook (<http://www.ag.ohio-state.edu/~sfgnet/>). [Ed. Note: New England Growers see the New England Small Fruit Pest Management Guide at <http://www.umass.edu/fruitadvisor/nesfpmg/index.htm>].

(Source: *Facts for Fancy Fruit, Vol. 03, No. 06, June 6, 2003*)

Crop Load Adjustment in Grapes

Bruce Bordelon, Purdue University

Annual pruning of grapes is necessary to balance the amount of fruit production with the amount of vegetative growth to insure economic yields of high quality fruit. Pruning severity is based on the strategy of 'balanced pruning,' which dictates the correct number of buds to retain, or 'crop load,' which determines the number of clusters to retain. Both methods are based on the vine's pruning weight or 'vine size', which is an indication of the vine's capacity to ripen the crop. Many growers prune vines lightly during the early spring to assure adequate bud number in case of damage by a late frost or

freeze. Now that the danger of frost and freeze is over and grape shoots are growing rapidly, growers should go back through the vineyard and determine if crop load adjustment is needed. The crop load is adjusted by removing shoots and/or clusters. New shoots are easily broken off by hand without the need for pruners. Growers should pay close attention to the fruitfulness of shoots. Shoots from primary buds have full fruiting potential, whereas secondary buds and latent buds on older wood produce shoots with little or no fruiting potential, depending on cultivar. Ordinarily, all secondary shoots and shoots from older wood

should be removed. However, on early budding varieties that may have suffered frost damage this year, the secondary shoots should probably be retained. Shoots should be spaced evenly along the trellis if possible and at a density of about four to six shoots per foot of row. Cluster thinning (removing one or more of the clusters on each shoot) done before bloom results in the least yield reduction because the remaining cluster(s) generally set more berries. However, on tight

clustered cultivars, cluster thinning after bloom can result in looser, less rot susceptible clusters. Keeping records of average cluster weights and vine yields can help determine the appropriate amount of fruit to retain now. (*Source: Facts for Fancy Fruit, Vol. 03, No. 06, June 6, 2003*)

Pesticide Update

Switch Label for Berry Crops

Kathy Demchak, PennState University

A supplemental label for Switch 62.5 WDG has been approved for use on crops in the berry crop grouping (blueberries, currants, gooseberries, currants, huckleberries, blackberries or raspberries, and their hybrids). Though the label is written to cover a number of diseases on these crops, not all the berry crops listed are susceptible to all the diseases listed. So, the main value of this product will be for control of mummy berry, anthracnose (*Colletotrichum* spp.), alternaria fruit rot, and phomopsis on blueberries, and Botrytis (gray mold) on all of the berry crops. In addition, it

had been labeled for gray mold control on strawberries for some time. The use rate is 11-14 oz/acre. Switch is a mixture of 2 active ingredients, both of which have different modes of action from other fungicides labeled for use on the berry crops. As with other fungicides, Switch should be alternated with other materials such as Captan, to avoid disease resistance buildup. The pre-harvest interval is 0 days, and the re-entry interval is 12 hours. (*Source: PennState Fruit Times, Volume 22, No. 8, June 3, 2003*)

SpinTor registered on caneberries:

SpinTor 2SC (spinosad) is now registered on caneberries for several pests of caneberries. While the label primarily addresses Lepidoptera, several non-lepidopterans are included in the label's pest list: raspberry fruitworm and sawfly (Hymenoptera). The use rate is 4-6 fl oz/A. The PHI is 1 day.

in the environment (One of the more serious problems with DDT resulted from its bioaccumulation, building up in body tissues increasingly higher up the food chain, ultimately causing eggshell thinning in waterfowl and raptors). This label situation is more drastic than when a crop use is simply deleted from the label, as in the current case with Imidan on home fruit. In the latter case, if a grower has a container with the old label (containing the crop use), the product can still be used. When the tolerance is revoked, as with methoxychlor, the product may not be used legally after the effective date. More information is available on the Federal Register web site (html or PDF format).

Diazinon uses cancelled by Syngenta, but...:

In the May 30, 2003 Federal Register, EPA announced that Syngenta has requested cancellations of all uses of diazinon, effective June 30, 2003. Syngenta may not distribute product after August 31. Retail supplies may be sold until supplies exhausted. However, while Syngenta diazinon is leaving the marketplace, Makhteshim-Agan will continue manufacture and sales, so diazinon will remain available.

Spinosad registration expanded on blueberry:

SpinTor 2C has been expanded on blueberry, now to include blueberry maggot in addition to the cranberry/cherry fruitworm complex, among the most important pests of blueberry. The product is used at the rate of 4-6 fl oz/A. PHI = 3 days, REI = 4 hours. An organically-approved version of spinosad (Entrust) is also labeled for blueberry.

Tolerances for methoxychlor revoked:

Effective October 15, 2002, all tolerances for methoxychlor (sold under the name Marlate) were revoked by EPA. Methoxychlor is an organochlorine that was widely used in home fruit settings because of low mammalian toxicity. Although related to DDT, methoxychlor did not accumulate

(*Source: Virginia Tech Fruitfiles Update, June 9, 2003, <http://www.ento.vt.edu/Fruitfiles/HotBramble.html>*)

General Information

Driving Farm Machinery Safely

Adapted from University of Maine Extension Bulletin #2310, by D.L. Cyr and S.B. Johnson

Farm Driveways

The entrances to farm driveways often do not provide good visibility. Road collisions often occur where the farm's driveway meets the public road. To reduce this hazard, trim bushes and trees. Parked machinery and clutter should not obstruct the view at the driveway entrance.

Before Driving Farm Machinery on Public Roads

Safety is important when operating farm vehicles on public roads. Before driving, clean windshields and check wipers and defrosters. Check lights, tires and slow-moving vehicle signs. Keep lights, reflectors and side mirrors clean. Replace burned-out bulbs promptly. Use the flashing amber lights when traveling on a public road. Make sure brakes are functional and capable of safely stopping the vehicle and its load. Lock brake pedals together to assure straight-line stops. Be sure to inflate all tires to the correct pressure.

Pulling Out and Driving on Public Roads

Always stop at the end of the driveway or lane and look both ways before pulling onto the road. Switch on the flashing lights. Adjust travel speed to road conditions. Special problems include frost bumps, highroad crowns, soft shoulders and narrow right-of-ways. Signal slow-downs, stops and turns. Avoid sudden maneuvers. Before turning left, watch for cars that might try to pass. Never turn left immediately in front of oncoming traffic.

Extra safety must be taken when pulling loads on public roads. Pull only from the drawbar unless using hitch-mounted equipment. Make sure the hitch is sound and the load secured. Stay away from ditches and roadside obstacles. Watch for power lines. Never operate

attachments during transport. Keep the PTO lever in neutral.

If possible, move wide equipment during the day and when traffic volume is relatively low. Switch on all lights. If transporting equipment on a flatbed, make sure to comply with local and state highway regulations. Use an escort car or a lookout to help you on blind curves or bridges. Avoid sudden unexpected maneuvers, swerves, stops or turns.

Drive tractors on the shoulder of paved highways, if possible. Do not drive with the tractor and machinery over part of the shoulder and part of the paved lane. If it is not possible to drive on the shoulder, drive on the paved lane. Do not force a line of cars or trucks to stay behind a slow moving tractor or machinery. If a suitable shoulder is available, pull over to permit traffic to pass.

Traffic signs at many rural intersections may be missing, damaged or hidden by vegetation. Always slow and prepare to stop at intersections, narrow bridges and all rural railroad crossings.

Slow-Moving Vehicle Emblems

Use flashing warning lights, a legible slow-moving vehicle (SMV) emblem and other lights to see and be seen on public roads. Replace your slow moving vehicle emblem centers every two years. The red reflective borders, for nighttime visibility, often last for seven or more years. The orange fluorescent centers, for daylight visibility, fade and last an average of only two years. Properly position SMV emblems two to six feet above the ground with the point up in the center of the vehicle. The SMV emblem color and shape are visible at a half mile in daylight.

Drive Defensively!

Meetings

Fruit Team Twilight Meetings (primarily tree fruit)

June 10, 11, and 12, 2003

- ⇒ Pesticide-license recertification credit (1.5 hours) will be offered.
- ⇒ A \$10/person registration fee will be charged (at the door) for all meetings.
- ⇒ If any of the directions presented above are unclear, call Jon Clements (413-323-4208) or Wes Autio (413-545-2963)

June 10, 2003 Bartlett's Orchard, Swamp Road, Richmond, Massachusetts

Program: 5:30 PM Farm tour; 6:30 PM Speaking program (snacks and beverages provided)

Directions: From the center of Pittsfield, travel west on Route 20. In about 0.9 miles, turn left onto Barker Street. In approximately 3.5 miles, Barker Street will become Swamp Road as it crosses from Pittsfield into Richmond. Bartlett's Orchard will be on the left in approximately one mile (a total of about 4.5 miles from Route 20).

June 11, 2003 Honey Pot Hill Orchard, Sudbury Road, Stow, Massachusetts

Program: 5:30 PM Farm tour; 6:30 PM Speaking program (light dinner provided)

Directions: From the intersection of Routes 117 and 62 in Stow, travel south on Route 62 (toward Hudson) for approximately one mile. Turn left onto Whitman Street. In approximately 0.8 miles, Whitman Street will intersect with Boon Road and Sudbury Road. Progress across the intersection, and Honey Pot Hill Orchard will be on the right.

June 12, 2003 Noquochoke Orchard, Drift Road, Westport, Massachusetts

Program: 4:30 PM Farm Tour; 5:30 PM Home-cooked meal!; 6:30 PM Speaking program

Directions: Traveling south on Route 88, approximately 5 miles south of Route 6, take a left onto Charlotte White Road. In approximately 1/3 mile, Charlotte White Road will end at Drift Road. Take a right onto Drift Road. Noquochoke Orchard will be on the left in about 1/4 mile.

Small Fruit Twilight Meeting

June 24, 2003

A twilight meeting will be held on Tuesday June 24, 2003 at Nourse Farms (<http://www.noursefarms.com/>) in Whately, MA starting at 5:30 pm. This meeting will showcase varieties of strawberries, raspberries, gooseberries and currants. You'll have a chance to preview some of the new varieties coming out of various breeding programs. We will also discuss cultural and pest management issues that have come up this season. Please contact either Nourse Farms (413-665-2658) or me (413-545-4347) for more information and directions.

June Twilight Meeting

Diversified Vegetable Farm Integrating Animals With Renewable Energy Applications

Thursday, June 26, 4-6 pm

To be held at Caretaker Farm, Owners Sam and Elizabeth Smith, at 1210 Hancock Rd., Williamstown, MA (413)-458-4309

Caretaker Farm has been operating as an organic vegetable farm successfully for over 35 years. The 35 acre farm has 16-24 acres in pasture, 7 acres in planned stages of vegetable production, with 3 and 1/2 planted and the remainder at rest or in rotation. Originally a market garden with farm stand and restaurant accounts, Caretaker Farm is now and has been a Community Supported Agriculture Farm (CSA) for the last decade. It has 215 CSA members or sharers who purchase a share in the annual harvest of mostly vegetables, with some small fruits and flowers.

The Smiths are currently integrating animals for farm fertility and pasture and weed management, with sheep, lambs, pigs, heifers, chickens, and a cow and calf. Future plans are to market beef and lamb to farm members/sharers. They are also pioneering solar powered electric fencing, livestock feeders and will eventually install a rooftop PV for providing barn lighting and vegetable refrigeration.

Directions: Caretaker Farm is located just under a half mile from the Five Corners Intersection which is marked by a blinking yellow light at the intersection of Rte. 7 and Rte. 43 near Williamstown. From Rte. 7 heading north, turn left at the intersection onto Rte. 43. Go one-half mile to the farm.

Floriculture Program Summer Field Day

July 29, 2003

Each year the UMass Extension Floriculture Team, in collaboration with the Massachusetts Flower Growers Association organize a summer field day at Elm Bank Reservation, Dover MA. These meetings, provide growers an opportunity to learn from and socialize with peers, attend educational sessions and tour Flower Trial Gardens.

Date: July 29, 2003

Place: Elm Bank Reservation, Dover MA

Visit our **Trade Show** under the tent! 1:00 PM - 5:00 PM