



# Berry Notes

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Prepared by the University of Massachusetts Fruit Team

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## Message from the Editor:

In this newsletter I try to provide information on a wide variety of topics that is timely and useful to a broad range of berry growers. With each issue the current horticultural and pest management concerns of each crop are addressed. Additional related topics and notices are included as well. The needs of 'conventional' and organic production systems are considered as well as those of the many growers whose approach falls between. And, the standard practices that relate to crop and pest management in these systems are described. However, in addition to disseminating generally accepted descriptions and recommendations, new advances are presented to help inform growers of what's on the horizon. This could be the release of new cultivars, research results on new production systems, or the discovery of new insects and diseases or new ways to manage them. Sometimes Berry Notes will include articles that are meant to encourage readers to think in a new or different way. Often these come to me from growers.

In the last issue of Berry Notes (<http://www.umass.edu/fruitadvisor/berrynotes/bn1514.pdf>), I included an article by Mark Chien from PennState about sustainable vineyard management practices. In the article,

Mark talks about the absolute imperative of integrating more sustainable practices in grape production to replace the dependency on short-term chemical solutions. An interesting corollary article about 'Terroir' and winemaking was sent to me today (<http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2002/09/18/FD10558.DTL>) provoking further thought. While preparing the September issue of Berry Notes I came across an article written by Pam Fisher from Ontario (<http://www.gov.on.ca/OMAFRA/english/crops/hort/news/allontario/ao0902.htm>) summarizing some of the small fruit information presented at the International Horticulture Society Congress in Toronto this summer. I was struck by the number of research presentations on the use of bio-control organisms, composts, cover crops and other non-chemical agents for controlling black root rot in strawberries. Finally, two articles from Laval University in Canada were sent to me on the use of 'Ramial Chip Wood' (RCW) applications to agricultural soils for rebuilding damaged soil structure and restoring long term soil fertility ([www.sbf.ulaval.ca/brf/regenerating\\_soils\\_98.html](http://www.sbf.ulaval.ca/brf/regenerating_soils_98.html), [www.sbf.ulaval.ca/brf/the\\_hidden.html](http://www.sbf.ulaval.ca/brf/the_hidden.html)). Sometimes it feels like many (if not all) roads lead to soil microbial diversity as the key to plant health and more sustainable production.

For those of you who are interested, look into these articles and see if they offer something useful to you in your operations. Call me if you aren't able to gain access via the internet and I'll send copies to you. I always encourage feedback or suggestions of topics to cover in this newsletter. It's your newsletter. Let me know what you think.

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# Strawberries

## Strawberry Fall Check-List

*Sonia Schloemann, UMass Extension*

**Ö General:** Flower bud initiation deep in the crown of the plants is happening now, determining next years yield. So, maintaining good plant health into the fall is important. In addition to keeping up with the fertilizer program, suppressing leaf diseases improves the ability of the plant to carry on photosynthesis and store starch in the crowns. Don't let leaf spot or powdery mildew get ahead of you. Narrow the rows to about 12" and cultivate the alleys in fruiting fields and new plantings for the last time before mulching. Plant winter rye in plowed down fields as soon as possible in order to get good establishment and growth before winter.

**Ö Nutrition:** Nitrogen fertilizer should be applied to bearing beds in early September to bring your seasonal total up to 100-120 lbs/acre. Most growers apply about 70-80 lbs of nitrogen on at renovation. The fall application should provide another 30-50 lbs (more on soils with low organic matter content). This stimulates good root growth in the fall and supplies nitrogen needed for flower bud initiation. New fields need to have a total of 80 - 100 lbs/acre of nitrogen with about 40 lbs applied in the fall. Ammonium nitrate (35% N) is a good fertilizer for the fall application.

If your leaf tissue analysis shows deficiencies in magnesium or boron, early fall is a good time for foliar applications of Epsom salts (15lbs/100gal/acre for magnesium) and Solubor (3lbs/100gal/acre) for boron. Don't make these applications on hot humid days, however, or phytotoxicity could result. Read the labels.

**Ö Weeds:** Weed management in the early fall is limited to cultivation and hand weeding/hoeing. The only herbicide you should consider using is Poast™ for controlling grasses. Poast™ will only work on relatively

small grasses. Big clumps of crabgrass will have to be pulled by hand. However, quackgrass can be knocked down by cultivation or mowing and then treated with Poast™ when new growth is less than 6" high. One note of caution; Poast™, which is used with a crop oil surfactant, can injure strawberry foliage in cold weather. I would recommend its use as a spot treatment at this time of year rather than a broadcast treatment of the whole field. Weed management later in the fall can include applications of preemergent materials such as Devrinol™ and Sinbar™. These materials are discussed in the following article and will be covered again in next month's issue of Berry Notes.

**Ö Diseases:** Clean up severe infections of leaf spot and powdery mildew. Healthy leaves are important at this time of year to supply the plant with the energy to produce flower buds for next year's crop and to store energy in the roots for the first flush of growth next spring. Apply Ridomil Gold™ or Alliette™ in September or early October in areas where Red Stele has been identified. It is best to apply these materials when the soil is beginning to cool but before heavy fall rains begin.

**Ö Insects:** Check fields for infestations of leafhopper or aphids. Generally, plants can take a fair amount of feeding by these insects, but heavy infestations can be a problem. And, aphids in particular, can vector virus diseases and should not be allowed to build up especially when they are in the winged form and can disperse to other fields.

## Fall Weed Management for Strawberries

*Courtney Weber, Cornell University*

Weed control in strawberries continues to be one of the biggest challenges to growing strawberries in the matted row system in this region. At this time of the year, hand weeding and hoeing is needed to keep hot spots under control until late fall or winter application of herbicide and straw.

Gramoxone can be used now while weeds are actively growing with shielded sprayers for burn down of annuals between rows but will not generally control perennial weeds. Be careful with this one, as it is as toxic to people as it is to plants. Oxalis, quack grass, bindweed, pigweed, and purslane can all be a problem after

renovation and can grow and produce seed well into November. Winter annuals such as chickweed and shepherds purse can also cause problems and wheat or rye seed from the straw mulch may need control.

Fall herbicide applications should wait until the strawberry plants are dormant. This generally means several hard freezes and consistently low temperatures. Herbicide options in the fall include 2,4-D, Devrinol, and Sinbar and all are applied to dormant fields. 2,4-D helps cleanup broadleaf perennials but must not be applied too early as strawberry is a broadleaf perennial and will die if this herbicide is actively taken up.

Devrinol is a good preemergent herbicide and can be applied

under the straw for spring weed control. The straw protects this herbicide from being neutralized by sunlight. Sinbar is also an effective preemergent herbicide that can be applied under the straw but is not as persistent and is best applied in the spring after straw removal while plants are still dormant. It needs to be washed into the soil and off the strawberry plants and you must be aware that many strawberry varieties are sensitive to Sinbar.

Knowing your straw supplier is a good way to ensure weed seed free straw, which eliminates many weed problems. Straw mulch application serves multiple purposes including winter/cold protection, weed control,

and keeping berries off the ground. Straw should be applied in very late fall to winter and often not until January. Application before full dormancy can interfere with acclimation of the plants and make them more cold susceptible. It can also decrease nutrient reserves and reduce future yields. Straw should be applied in a solid mat 35 inches deep using up to 3 tons or 300 bales per acre. This will provide excellent protection in for the winter and good weed control between rows in the spring. A year round program of weed control is necessary to maintain a weed free planting and ensures healthy yields. (*Source: New York Berry News, Vol. 1, No. 7, Sept. 2002*)

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## Brambles

### Raspberry Fall Check-List

*Sonia Schloemann, UMass Extension*

Ö **General:** Encourage hardening off of canes in summer bearing varieties of red and black raspberries and blackberries by avoiding nitrogen fertilizers and supplemental watering at this time. Do not remove spent floricanes until later in the winter unless they are significantly infected with disease. Fall bearing raspberries can still benefit from irrigation in dry weather to help maintain fruit size. Early varieties like 'Autumn Bliss' are starting to run out while 'Heritage' and 'Polana' are still going strong, although fruit size has dropped off from the early pickings.

Ö **Nutrition:** Based on soil and tissue test results, apply non-nitrogen containing fertilizers and lime as needed. For example, Sul-Po-Mag or Epsom Salts can be applied now so that fall rains can help wash it into the root zone for the plants.

Ö **Weeds:** Now is a good time to do a weed survey and map of problem areas, so that you can use this information to develop an effective management strategy. A late fall application of Casoron (dichlobenil) for preemergent control of broadleaf weeds next spring should be made only when temperatures are below 40°F, preferably just before rain or snow.

Ö **Diseases:** Fall bearing raspberries can suffer fruit rot problems due to increased moisture present in the planting (more frequent precipitation, longer dew retention, longer nights) late in the growing season. The majority of this fruit-rot is *Botrytis cinerea*, gray mold. Control options are limited. Captan is **not labeled** for use on brambles. Remaining stocks of Benlate can not be used in PYO plantings. Rovral remains with a 0 day

phi, but resistance is a concern if this product is overused. Elevate is a new material that can be alternated with Rovral. It can only be used up to 4 times per season to avoid the development of resistance. Frequent harvesting and cull-harvesting are the best practices, but are expensive and impractical in many cases. Thinning canes in dense plantings can also help.

Scout summer bearing brambles to look for powdery mildew and treat if necessary. See the *New England Small Fruit Pest Management Guide* for recommended materials and rates. If Phytophthora root rot has been identified in a field, treat the affected area with Ridomil Gold™ or Alliette™ in September or early October. This timing is important to get the material in place in the root zone before the onset of cool wet weather (and soil) in the fall.

Ö **Insects:** Now is the time to check plantings for crown borers. Adults of this pest look like very large yellowjacket, but is actually a moth. They are active in the field in August and September laying eggs. Scout the fields for crown borer damage by looking for wilting canes. This symptom can also indicate Phytophthora root rot, so when you find a plant with a wilting cane (or two), dig up the plant and check the roots for brick red discoloration in the core of the roots (phytophthora) or the presence of a crown borer larvae in the crown. Rogue out infested crowns and eliminate wild bramble near the planting, since they will harbor more of this pest. Insecticide applications can be made to the canes in October and to the crowns (in a drench application) in early spring. See the *New England Small Fruit Pest Management Guide* for details.

## Gray Mold Control in Fall Raspberries

*Annemiek Schilder, Michigan State University*

Gray mold, caused by the fungus *Botrytis cinerea*, is one of the most important diseases affecting fall raspberries. Fall raspberries are usually at greater risk of infection than summer raspberries because of the prevailing weather conditions, such as lower temperatures, heavy dews, and frequent precipitation. Cool, wet weather is conducive to development of the fungus and infection of the fruit.

Typical symptoms include a brown discoloration of the fruit and the presence of a gray, fuzzy mold, which can rapidly develop and spread to neighboring healthy berries. Symptoms tend to be more severe inside the canopy and on clusters closer to the ground. Even if berries look perfectly healthy at harvest, they can change to a moldy mass within 24 to 48 hours.

*Botrytis cinerea* is a ubiquitous fungus, which is able to grow and sporulate profusely on dead organic matter. It overwinters in old, infected canes and plant debris. The spores are airborne and can travel long distances on the wind. When the spores land on plant surfaces, they germinate and can invade the plant tissues directly or through wounds. Overripe berries and bruised berries are particularly susceptible to infection.

Cultural methods are very important for control of *Botrytis* gray mold. Choosing a site with good air flow can reduce humidity in the canopy considerably. Low-density plantings/narrow rows and trellising can also reduce a buildup of humidity. Good weed control and

moderate fertilizer use to avoid lush growth are also important. Selecting a resistant cultivar or, at the minimum, avoiding highly susceptible cultivars will help to reduce the need for control measures. During picking, avoid handling infected berries, since spores can be transferred on hands to healthy berries. Timely harvesting and rapid post-harvest cooling can also help to reduce losses to *Botrytis* gray mold.

Several fungicides are labeled for control of *Botrytis* in raspberries. Fungicide sprays during bloom are important to prevent pre-harvest infections, while post-harvest infections can be reduced by sprays closer to harvest. Elevate is a relatively new, reduced-risk, protectant fungicide with a zero-day PHI that provides good control of pre- and post-harvest gray mold. Since only four applications may be made per season (and only two consecutively) because of the risk of resistance development, Elevate should be alternated with fungicides with a different mode of action, e.g., Captan (note: Michigan has a section 24c Special Local Needs label). My recommendation is to save Elevate for critical sprays, e.g. during wet periods at bloom and for sprays closer to harvest. Other fungicides that may be used in the spray program are Benlate (if any stocks are left, tank-mixed with Captan), which has a three-day PHI, Rovral, which has a zero-day PHI, or Nova, which has a zero-day PHI. Some growers have experienced poor control with Rovral, which may indicate that Rovral-resistant *Botrytis* strains are present in their fields. (*Source: Michigan Fruit Crop Advisory Team Alert, Vol. 8, No. 17, September 10, 2002*)

## Fall Weed Management for Brambles

*Courtney Weber, Cornell University*

Summer brambles are often pushed to the background during the fall as so many other crops demand attention in this busy season, but weed problems requires year round vigilance. In bramble plantings, maintaining weed free aisles through permanent sods or cover crops is the best way to reduce you weed load within the row as well. If not done already, now is the time to be planting the aisles.

For a permanent sod, a companion grass mixture is probably the best bet. A mixture of fine-leaf fescues, perennial ryegrasses, or bluegrass forms a thick sod, which holds up to traffic and needs infrequent mowing. Be sure the seed mix does not contain a broadleaf herbicide such as 2,4-D because brambles are very sensitive. Once established, be sure to prevent the grass

from spreading into the row with by banding grass-selective herbicides in the spring.

For row centers maintained as bare earth, a fall cover crop can reduce weed load and add organic matter to the soil. Cover crops compete with fall germinating weed seeds and reduce erosion over the winter. They also act as mulch in the spring, which retains moisture and smothers germinating weeds. Buckwheat, oats, or rye can be fall planted and either die in the winter or can be mowed or sprayed in the spring. Deep tillage is to be avoided as raspberry roots can be damaged and weed seeds will be uncovered. Once the aisles are taken care of, it is time to consider herbicides to control winter annuals and spring weeds.

Late fall is a good time for herbicide applications in brambles. Casaron is probably the most effective option.

However, it is expensive and can be difficult to apply. It is a fine granular formulation and care needs to be taken to ensure even coverage within the row. A Casaron specific spreader or hand spreading on a wind free day is recommended. Application should not be done until daytime temperatures are below 45/F in late fall or winter. Casaron can be used in conjunction with very good weed control. Devrinol can be applied in late fall or early spring and needs to be washed in within 24 hours as sunlight will break it down. It is a preemergent herbicide and works on germinating seeds. Princep is effective at a single high rate for quack grass in the fall or the application can be split between the fall and spring

at a lower rate for other weeds. Princep should not be used on plantings less than 6 months old, tissue culture plants less than 1 year old, or the variety 'Royalty'. Other herbicides available for fall application are Solicam, Surflan, and Sinbar but are not commonly used due to expense and variety sensitivity.

A weed management program that anticipates problems helps to avoid emergencies during the season and ensures a long life for bramble plantings. Effective weed control in brambles is possible without undue hand weeding but requires vigilance throughout the year. (*Source: New York Berry News, Vol. 1, No. 7, Sept. 2002*)

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## Blueberries

### Highbush Blueberry Fall Check-List

*Sonia Schloemann, UMass Extension*

Ö **General:** As with raspberries, blueberry plants should be encouraged to harden off for the winter. This means no nitrogen fertilizer at this time. Flag bushes that show premature reddening of leaves compared to others of the same variety. This can be an indicator of infection with virus or other pathogens. If you haven't done it already, make some notes on observations from this year that might be helpful in coming years (e.g., variety performance, sections of the field that did well or poorly, how well some practices worked, or didn't, etc.). Relying on memory isn't always accurate enough. Nothing can replace a detailed field history when trying to diagnose problems.

Ö **Nutrition:** Hold off on any nitrogen fertilizers. Based on leaf tissue tests and soil tests, sulfur, lime, and some fertilizers can be added now. Apply these before fall rains begin and also before adding any supplemental mulch to the plants.

Ö **Weeds:** As with other small fruit crops, now is a good time to do a weed survey and map the weed problems in your planting. This information will be very useful in tailoring your weed management plan so that is effective and not wasteful. A late fall application of

Casaron (dichlobenil) for preemergent control of broadleaf weeds next spring should be made only when temperatures are below 40°F, preferably just before rain or snow.

Ö **Diseases:** Weak plants can easily be detected this time of year because they tend to turn red earlier than healthy bushes. Upon finding weakened bushes, try to determine the reason for weakness. Is the root system damaged? If so, is it likely from a disease infection or root damage by voles or grubs? If the roots are healthy, could a crown borer (Dogwood borer) be the culprit? Or is stunt disease the cause? Or Scorch? Accurate diagnosis is the first step in resolving the problem and avoiding spread. Enlist the help of specialists if you have trouble determining the cause of problems.

Ö **Insects:** The main worry now is for sharp-nosed leafhopper which is the vector for stunt disease. If you have determined that you have bushes infected with stunt disease in your planting, an application of malathion to the infected bushes and any immediately surrounding bushes should be made to control leafhoppers BEFORE removing the infected bushes. Failing to do this will likely cause the spread of the disease to clean bushes even after infected bushes have been removed.

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## Grapes

### Grape Fall Check-List

*Sonia Schloemann, UMass Extension*

Ö **General:** Harvest is underway for early varieties and sparkling wine. Check fruit for sugar, acidity and pH twice weekly to keep track of ripening.

Ö **Nutrition:** Apply only lime and non-nitrogen containing fertilizers at this time according to soil and

petiole analysis done earlier in the year. Contact me for more information on petiole analysis.

Ö **Weeds:** As with other small fruit crops, now is a good time to do a weed survey and map the seed problems in your vineyard. This information will be very useful in tailoring your weed management plan so that it is effective and not wasteful. A late fall application of Casaron (dichlobenil) for

preemergent control of broadleaf weeds next spring should be made only when temperatures are below 40°F, preferably just before rain or snow. Should only be used on well established vines.

**Ö Diseases:** Powdery and downey mildew and Botrytis bunch rot can be problems at this time. Generally berries are less susceptible to black rot this late in the season. Don't forget to control the mildews even after harvest, if there is a significant level of infection in the vineyard.

Failure to control it now can effect overwintering and productivity next season.

**Ö Insects:** Now is the time to assess the effectiveness of Grape Berry Moth management practices used this year. Evaluate each block for low, medium, or high levels of infestation this year, taking note of hot-spots within blocks. This will be the first step in your risk assessment protocol for next year.

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## Ribes

### Gooseberries and Red Currants: Cordon Training for Fresh Fruit Production

*Steven A. McKay, Cornell Cooperative Extension of Columbia County, Hudson, NY*

This article is based on observations made while in Europe during summer, 2002, and much appreciated discussion with Adri van Eck, DLV in Holland, and Jim Arbury, RHS Wisley Gardens in England. I have begun trials of cordon-trained plants in New York, and will report on their success in coming years.

Cordon training of Ribes plants whose fruit is intended for the fresh market is standard practice for growers in Holland. The practice has also been popular in England for hobby and display gardens, with some difference from the Dutch system. The basic idea of the system is that one to three trunks (vertical cordons) per plant are developed and trained to stakes vertically. Pruning removes old and excess wood in order to renew the fruiting structures of the plant. Plants are opened up to provide better access to fruit, and better ventilation, light, and spray penetration. Quality and size of fruit can be improved, and labor for picking is reduced.

#### Red Currants

In Holland, red currants are planted about 1/2 meter apart. Three branches are selected as cordons, and trained up bamboo stakes spaced at the center of the plant, and about fifteen centimeters on each side. The cordons are encouraged to grow to a height of five to six feet. A spare branch is left at the base of the plant each year as insurance in case any of the cordons die and need replacement. During the same year, right after fruiting, the year-old branches that bore fruit are removed. Very small branches and misplaced or crowding branches are removed, leaving medium-sized branches that will bear fruit the next season. This way, a plant is completely renewed (except the cordon) on an annual basis.

In England, semi-permanent branches are selected evenly spaced along the cordon. In late June each year, undesirably placed and crowding branches are removed leaving five to seven bud branches for the rest of the

growing season. The five bud branches are shortened to two bud fruiting spurs during dormant season pruning.

#### Gooseberries

Gooseberries can be very difficult to harvest if they are a thorny variety. Cordon training offers the advantage of opening up the plant and leaving fruit accessible. In Holland, a single branch is chosen and trained up a stake to a height of five to six feet. Only new, well spaced, medium-sized branches are left at the end of the growing season. Poorly spaced, small branches, and branches that bore fruit are removed. In England, cordoned gooseberries are trained the same way they train cordoned red currants.

#### Trellising System

I have found that the conduit used for training apples to the vertical axis system are good for a ribes trellis. Ideally, posts would be about two meters long with about thirty centimeters pounded into the ground, and a hole drilled about four centimeters from the top. The posts could be spaced six to eight feet apart, with a number fourteen or twelve wire passed through the holes at the top of the stakes. At each end of the trellis, a conduit anchor post can be driven in, and the wire attached through a hole drilled near the top of the post. Six foot bamboo posts are then spaced as needed along the wire, pushed in a couple of inches, and tied at the top. Green horticultural tape can be used to tie trunks to the posts.

#### Conversion of Bushes to Cordons

Bushes can easily be converted to cordons by selecting three young to medium-aged branches (one in the case of gooseberries) to become cordons. If spacing is too wide between plants, cuttings can be taken and stuck between older plants (best done Sept.15-Oct. 15 in the Northeast US) to develop new plants. Older plants will become adapted within one growing season.

#### Advantages and Disadvantages Summarized

##### Advantages:

1. Plants are opened up for better air circulation, spray coverage, and harvesting.

2. Fruit quality is improved in terms of size, color, and lack of rubbing injury.
3. Pruning is simplified over bush systems, because one can see easier what to cut.
4. The plant's cordon or support system does not constantly need to be renewed as with the bush system. (The trunk, or cordon is relatively permanent, while branches in plants are renewed every three to five years.)

Disadvantages:

1. The system is more costly to establish.
2. Cordons can die out and need replacement.

(*Source: New York Berry News, Vol. 1, No. 7, Sept. 2002*)

## General

### FALL COVER CROPS

*Frank Mangan, UMass Extension*

As crops are harvested you want to be thinking about cover crops that will be seeded on your fields. Here is some information about some of the more common cover crop choices for Massachusetts. There's a more complete list in the New England Vegetable Management Guide (pages 16 and 17).

**Non-Legumes:** Winter rye is easily the most common cover crop used by growers in Massachusetts, and for good reason. It is inexpensive, easy to get and establish, and can be seeded fairly late into the fall and still take. It consistently over winters here and will continue to grow in the spring producing lots of organic matter. Some growers find it difficult to incorporate in the spring if it is left to grow into May. Seeding rate: 90-120 lbs/acre.

Oats can be seeded in the fall and will come up quickly, similar to winter rye. Unlike winter rye, oats will winterkill here in Massachusetts and will not regrow in the spring. For this reason some growers prefer it over winter rye since it is easier to manage in the spring. It might have to be lightly incorporated into the soil in order to germinate. Enough growth is required in the fall to give adequate cover through the winter and early spring. Try to seed by the first week of September. Growers along the coast can plant later. Make sure the oats have not been cooked (used as an animal feed). Seeding rate: 100 lbs/acre.

Ryegrass is used by some growers because of its thick root system that is thought to mop up more nitrogen than winter rye or oat. There are two types: annual and perennial. Despite their names, the annual ryegrass may over winter and the perennial ryegrass may winterkill depending on when you seed them. If you have not seeded them before and would like to evaluate them, I would recommend that you seed a little of each in order to see their growth habits. I have only used these cover crops in the early spring. The seed is small and light, so specialized equipment will be needed if seeding a large area. Seeding rate: 30-40 lbs/acre.

**Legumes:** Clovers are used by some growers as a nitrogen source. There are several types available. Like

ryegrass, I have only used clovers as an early spring cover crop. A clover will have approximately 2.5% nitrogen whereas hairy vetch (see below) averages around 3.5% (this compares to winter rye that is usually below 1%). Clovers are a very small-seeded cover crop that needs specialized equipment to establish. They can be seeded by hand in a small area, but if you want to do several acres, you will need specialized equipment. Seeding rate: 10-20 lbs/acre.

Hairy Vetch is an excellent cover crop for Massachusetts. It can be seeded up to mid September and will survive the winter. Growers near the coast or on the cape and islands can seed vetch up till October or even later. When left to grow long enough in the spring, hairy vetch has supplied over 100 lbs/acre of nitrogen.

It is very important that the appropriate rhizobia species is used for hairy vetch (the rhizobia for hairy vetch will work for all vetches and peas). Without the rhizobia the vetch will not give the desired effects.

We have been recommending you mix the vetch with either winter rye or oat. There are several reasons for this:

1. Both oat and winter rye are very efficient in taking up nitrogen from the soil (remember, the vetch is getting most of its nitrogen from the atmosphere, so it does not need much from the soil). By taking up more nitrogen in the late summer and fall we are reducing the risk of contaminating surface or ground water and the nitrogen is recycled so that it can be used by next years cash crop.
2. The oat and rye can produce tremendous amounts of valuable organic matter if allowed to grow long enough.
3. Both of these cover crops will give better erosion control than vetch alone since they emerge and establish themselves more quickly than vetch. This is especially important when vetch is seeded after September 1.

We have been recommending 40 lbs/acre of oat or rye with 30-40 lbs/acre of hairy vetch. If you are using a grain drill then you can use seeding rates as low as 30 lbs/acre of vetch. If you are spinning the cover crop on and lightly disking it in then a rate of 35-40 lbs/acre is suggested.

Many growers prefer the use of oat rather than rye because of the tremendous growth of rye that occurs in the spring. This can be desirable if you are looking for increased organic matter in your soils, however some growers find the amount of biomass created by these two cover crops too much to handle. In addition, we have found that we get much more growth of the vetch in the

spring when seeded with oat than when seeded with rye. The rye will compete with the vetch in the spring.

Contact Frank Mangan if you have any questions on these cover crops, or would like to discuss other cover crops at (978) 422-6374; [fmangan@umext.umass.edu](mailto:fmangan@umext.umass.edu). (*Source: UMass Vegetable Notes, Vol. 13, No. 19, September 5, 2002*)

## End-of-Year Weed Scouting

*A. Richard Bonanno, UMass Extension*

It is worthwhile to take the time to check your fields for weed problems at this time of year. A quick scouting can alert you to problems that will be expensive to solve if they get out of control and can give you clues that will help you in designing your weed management program for next year.

### Things to look for when you scout:

**How Many? How dense are the weeds?** If weeds are very dense, they may be having an impact on your yields. This is especially true if these weeds emerged early in the season, when competition is greatest. If weeds come into your field during the period of greatest crop growth, you may want to consider changing your weed management program.

**Which Weeds?** Identifying weeds can help you identify potential problems before they get out of hand, and can help you decide if you need to modify your weed control program. Weeds like yellow nutsedge, hedge bindweed, and quackgrass are spreading perennials, which have underground parts that enable them to spread throughout whole fields. Because these weeds can be very damaging, and are very difficult to control, they are worth "nipping in the bud." In addition, keep an eye out for annual weeds which are new to your field or increasing in numbers. Some weeds can be very difficult to control in some or all of the crops in your rotation. Galinsoga, for example, is hard to control in cole crops, peppers, and squash. Nightshades are difficult to control in tomatoes for growers who rely on herbicides for control, because they are in the same family as tomatoes.

Velvetleaf is hard to control in sweet corn. Spot treatment with Round-up, or hand pulling or hoeing, is worthwhile to eradicate small patches of particularly threatening weeds.

**What worked?** It is also useful to look at the whole field and evaluate the effectiveness of your weed control efforts. If some weeds are generally escaping, identify them. They may point to weaknesses in your herbicide or cultivation program. If mostly grasses, or mostly broadleaves are escaping, it may mean you need to adjust either the rates or the timing of your grass or broadleaf herbicides. You may also find the New England Vegetable Management Guide useful. This manual contains a chart listing the effectiveness of vegetable herbicides on most of the common weeds in New England. You can use this guide to find an herbicide labeled for your crop which might give better control.

**Where are the weeds?** Weeds in the rows or planting holes are much more damaging to crop yields than between-row weeds. Weeds in rows may be an indication that cultivation equipment needs adjustment, or cultivation needs to be done earlier. Mapping weedy spots, and keeping some kind of permanent record of weed surveys, can help you evaluate your weed management over the years.

**What to do now?** Once crop harvest and weed scouting is complete, disk or till the fields to destroy existing annual weed growth and to reduce or prevent weed seed dispersal. If perennial weeds such as bindweed or quackgrass are present, consider an application of Roundup before cold weather arrives. Time spent on these tasks now will greatly improve your level of weed management next season.

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## Upcoming Meetings

### Conference on Ecolabels and the Greening of the Food Market

*Date: November 7-9, 2002 in Boston, MA.*

Conference Organizers: The Gerald J. & Dorothy R. Friedman School of Nutrition Science & Policy at Tufts University. Co-Sponsors: Economic Research Service, U.S. Department of Agriculture Agricultural Marketing Service, U.S. Department of Agriculture.

Background: Ecolabels' Potential and Problems - In recent years there has been a proliferation of labels that are intended to convey that foods have been produced in a socially and environmentally preferable way. These "ecolabels" variously apply to areas such as consumption of renewable resources; soil, air and water pollution; biodiversity and wildlife; farm animal welfare; and



social justice and equity. One especially important one ("organic") will be governed by the USDA starting in October 2002 (just two weeks before the conference). Many involve independent third-party certification, but others don't, and it is not clear how confident consumers can be in those. The rationale behind ecolabels is admirable. However, with their rapid growth have come several important questions: How credible are they? How can one distinguish those motivated by bona fide environmental concern from those that are just a marketing ploy? Do consumers understand what they do and do not mean, or are they imposing "information overload"? Which ones are most successful in gaining consumers' confidence and support, and why? How much of a marketing advantage do they give to

American products in the global food market? Do they reinforce each other in "greening" the food market, or are they in competition, with the more valuable and legitimate ones at risk of losing out to the more dubious ones? How have small-volume ecolabeled products fared in today's food retailing environment, which favors larger suppliers who can better afford to pay slotting fees?

Further Information: If you would like a more detailed program with registration information, please contact the Conference Chair, Willie Lockeretz, School Of Nutrition Science & Policy at Tufts University.

## New England Vegetable and Berry Growers Association Winter Meetings

Mark your calendar for the dates and locations of the four winter vegetable meetings! These programs are co-sponsored by New England Vegetable and Berry Growers Association and UMass Extension. There are a couple of changes in dates and locations for this coming year, see below. The exact programs listed are tentative and subject to change; watch for further announcements on program details in future newsletters. For info call Dominic Marini at (508) 378-2546.

**Saturday, November 9, Portsmouth NH** Program may include: Fertilizer Calibration, Vegetable Variety Trials, Windbreaks, Row Covers, New Weed Control Equipment, Bacterial Leaf Spot in Peppers, Greenhouse Bio-Control in Tomatoes and Bedding Plants, New Greenhouse Designs.

**Saturday, December 7, Southeastern Massachusetts.** A Mini Trade Show will accompany the program, which may include: Specialty Crops Grant Report, an Herbicide Update, Fertilizers, High Tunnels, Pesticide

Certification, Reducing Field Sprays, Cultivation after Herbicide Application, How to Use the Veg., Small Fruit, and Flower Guides. Location to be announced.

**Tuesday, January 7, Sturbridge, MA.** For the first time, this meeting will be associated with the annual Tree Fruit meeting and trade show in Sturbridge, which is sponsored by the New England Fruit Growers Association and the UMass Extension Fruit Program . Program may include Strawberries on Plastic Mulch, Strawberry Black Rot Research Report, Rhizosphere Bacteria on Strawberries, Sandea on Pumpkins, Raspberries Grown in Containers, New Sweet Corn Varieties, and Precision Greenhouse Seeders.

**Saturday, February 1, Waltham.** Commercial Members Day-Trade Show. Program may include Specialty Crops Grant Reports, Fences & Deer, Coyotes and People, Update on Curcubit Diseases, Insecticide & Fungicide Updates, New Weed Killers and How they are Working.

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*Massachusetts Berry Notes is a publication of the University of Massachusetts Extension Fruit Program which provides research based information on integrated management of soils, crops, pests and marketing on Massachusetts Farms. No product endorsement or like products are intended or implied.*