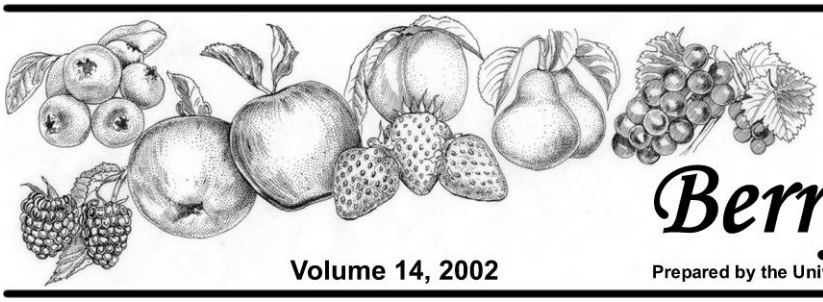

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Berry Notes

Prepared by the University of Massachusetts Fruit Team

MASSACHUSETTS BERRY NOTES

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Message from the Editor:

Winter Injury: This winter has presented many challenges, with both cold weather and snowfall amounts we haven't seen for many years. Deep snow is keeping some growers from their appointed pruning rounds. Yet, pruning is one of the main activities for berry growers at this time of year and the effects of winter injury can play a role in pruning decisions. This issue of Berry Notes contains some information on how to assess winter injury at this time of year and how winter injury can influence your pruning practices.

There is Still Time to be Counted in the 2002 AG CENSUS!! Have you been counted in the USDA's 2002 Census of Agriculture that is currently underway? Report forms will be accepted through June 2003 as the USDA reviews and summarizes the data. If you are not counted, your industry will not be properly represented. Thus far, reporting numbers are down in the Northeast. This is a big problem. State and regional census figures determine many federal programs and dollars. If you did not receive a Census report form, please call 1-888-424-7828 to get a copy. You may call the New England Agricultural Statistics Service, USDA in Concord, NH at1-800-642-9571, if you have questions.

On-line Berry Diagnostic Tool: Dr. Marvin Pritts at Cornell University has established a diagnostic support site on-line that can be accessed by going to http://www.hort.cornell.edu/department/faculty/pritts/BerryDoc/Berrydoc.htm. This website is constructed for easy use by growers who want to diagnose problems they find in their plantings. By clicking on pictures and general descriptions you can easily key out some of the common disease, insect, nutritional, and cultural problems that occur in strawberries, blueberries, raspberries, and currant/gooseberries.

Strawberries

Timing Winter Straw Removal in Strawberries

Jeff Kindhart and Tony Bratsch University of Illinois

Many strawberry growers have already removed their straw mulch. Growers who have not yet done so should begin examining their plants. A common sign that mulch should be removed is the presence of new growth. Many growers delay mulch removal in an attempt to delay flowering time and avoid frost damage. Unfortunately, this delay has little effect on flowering time and may result in reduced yields.

Let's look at the whole story ...

To be successful with strawberries in the Midwest it is critical to apply straw over strawberry plantings in the late fall. Straw protects plants from winter cold and dessication and guards against excessive frost heaving which can damage the shallow, brittle roots of strawberries. Its other advantages are spring frost protection, weed suppression and soil moisture conservation. Straw also acts as a barrier between ripening berries and the soil, keeping fruit clean and dry during harvest. It has often been a question from growers as to ideal timing to apply and remove mulch. Recent research by Dr. Bob Skirvin and Research Specialist Alan Otterbacher at the University of Illinois has given growers solid guidelines for removal of winter straw.

The best way to gauge the timing of straw removal is by soil temperature monitoring. Because most strawberry roots are found in about an 8 inch zone, taking soil temperature to a depth of about one half of the root zone (about 4 inches) is recommended. In a University of Illinois study, mulch removal timing was evaluated at 38, 43, 48 and 54 degrees F, to determine when soils held steady at these temperatures for at least 3 days. In Champaign, these temperatures were correlated with roughly mid March, late March, mid April and late April removal timings, a range of about five weeks.

Results from this study indicated that the greatest yields were obtained where mulch was removed when the 4- to 5-inch soil temperature was 40 to 43 degrees F. They also found that even between the earliest and latest dates of removal, early bloom was separated by only 11 days; and first harvest by only 3 days. Thus advantages of early mulch removal to promote early maturity were minimal. However, production was shown to increase by early removal. Late removal (a delay to 54 degrees) actually decreased yields, mainly due to leaf etiolation (elongation under shade conditions) and reduction of leaf area due to sunburning. Crowns were also killed by a delay in straw removal.

Again, the ideal 4- to 5-inch soil temperature for straw removal is 40-43 degrees F; in central Illinois, these temperatures were reached by the end of March. This allowed time for leaves to begin growth with little danger of sunburning, and produced the greatest yields. For more information on this study, see pages 72-74 of the Proceedings of the 1998 Small fruit and Strawberry Schools. (***Source:*** *Illinois Fruit & Vegetable News, Volume 5, Number 4, March 25, 1999*)

Brambles

Brambles - Plant Cold Injury, Soils, Minerals, and Pruning

Richard C. Funt, Ohio State University

Brambles, raspberries and blackberries, are susceptible to plant injury or death when planted, fertilized, or pruned improperly. Improper planting or cultural practices can cause plant injury and lower yields. Climate (temperature and rainfall) has a lot to do with plant injury, particularly in fall and late winter. Red raspberries survive colder winter temperatures than blackberries. Cultivars differ in surviving cold temperatures.

Poorly drained (internally) soils or wet soils are detrimental to high yields. Roots grow poorly and do not reproduce sufficiently for maximum leaf surface. Plants may not produce sufficient carbohydrates for resistance to cold temperatures. Brambles should not be planted in soils which are saturated in the upper 12 to 18 inches for long periods of time. Raised beds are recommended for the medium to heavy textured soils in Ohio. Organic matter, incorporated into the top four inches of the raised bed, can improve internal soil drainage.

The pH of the soil should not be above 6.5 to 6.7. A high pH can reduce the uptake of zinc. A pH of 5.8 to 6.2 is recommended. Soils with a good pH may be low in zinc. Low zinc reduces plant vigor and resistance to cold

temperatures. Generally, soils should contain 5 to 8 pounds of actual zinc per acre.

High soil levels of nitrogen and potassium can cause vigorous growth, cause plants to have a reduced level of acclimation and predispose plants to cold injury. Heavy applications of manure and/or fertilizer and lime can all affect raspberry cold injury. It is recommended that fresh organic matter be added to the soil prior to planting and that soil tests should read 3 to 4% organic matter after planting. The amount of annual nitrogen fertilizer needs to be reduced when soil test results show 3 to 4% organic matter. Leaf (tissue) samples can be the best method to determine fertilizer application after raspberries are planted.

Removal of the floricanes (fruiting canes) before Christmas can increase the chances of cold injury. Old canes provide carbohydrates to the crown of the plant that will be used by the new plants. In a critical cold injury situation, removing old canes in March before new growth starts is the best cultural practice.

Proper soil selection, soil water management, soil fertility, and cultural practices are necessary for brambles. For more information refer to OSU Extension Bulletin 782 - Brambles and to OSU Extension Bulletin 861 for soil and leaf (tissue) elemental content recommendations. (***Source**: Ohio Fruit ICM News, Volume 6, No. 10, April 18, 2002*)

Weather and Winter Hardiness: Raspberries

Richard C. Funt, Ohio State University

Weather is one factor in plant hardiness and cold injury. Cold injury is generally referred to when plants have not entered a stage known as rest (true dormancy). Once brambles receive a specific number of hours of chilling (32 to 45 degrees F) and overcome dormancy, they begin to grow again. Bramble cold injury can occur after warm, wet conditions in November before dormancy. Spring thaws (even a January thaw - January, 2002 had 10 days of thaw) and cold March weather can cause serious damage after dormancy. Ohio growers have reported early and mid-March 2002 low temperatures of +3 degrees F and +18 degrees F. At these temperatures some cold injury is expected, especially on black raspberries and blackberries.

During December, January, and/or February brambles are in dormancy near the 40 degrees latitude (Columbus, Ohio = 40 degrees or the same as Peoria, Illinois). Depending on type and cultivar, raspberries require 800 to 1700 hours of chilling and blackberries require 350 to 600 hours. While in dormancy, raspberries can survive temperatures of -10 degrees F to -20 degrees F. After chilling hours have been met and plants have had warm days and nights of 42 degrees F or higher, damage may occur below +20 degrees F.

Over a 45-year period (1951 to 1995) Illinois researchers found that in Peoria, 500 chilling hours never occurred before November 28 nor later than December 6. Based on this research it can be concluded that plants in Ohio were susceptible to cold temperatures and injury in March. Furthermore, 1,500 hours of chilling would not have been met until April 16th (Peoria data). By January 29, 2002, Wooster, Ohio had 1450 hours of chilling.

Therefore, those plants in central Ohio requiring 1,500 chilling hours were probably still dormant on or about February 1, 2002. However, they could have been susceptible to cold injury as temperatures dropped below 10 degrees F in March, because the 1,500 chilling hours had been met and warm temperatures may have caused plants to grow resulting in injured plants.

For some blackberries that require 500 hours of chilling, cold injury could occur as early as December. For raspberries that require 1500 hours of chilling, cold injury could occur as early as mid-February.

The outside of the plant may show discolored laterals and stems when cold injury occurs. The inside of the stem (cut across) will be brown or black on one side or completely across. Healthy plants will be a normal red to reddish brown and green just inside the outer edge. As shoots emerge, some vegetative buds never grow, some grow to several inches and collapse, and some produce flowers but fruits never mature. Some shoots or new canes may grow normally. A complete assessment of cold injury is not generally made until late May or June. (***Source**: Ohio Fruit ICM News, Vol. 6, Issue 9, April 11, 2002*)

Blueberries

Winter Acclimation and Cold Hardiness of Blueberry

Bernadine Strik et al, Oregon State University

Acclimation

The degree to which a blueberry bush hardens off in the fall depends upon many factors, including length of the growing season, alternating day/night temperatures, nutrition, pruning, and fluctuating temperatures during the dormant season.

Actively growing tissues are not cold hardy and are injured by temperatures around 28 F. As the daylength shortens and temperatures decrease in fall, blueberry canes cease active growth and begin a very complex process known as acclimation. Optimum cold hardiness develops when day/night temperatures decrease steadily from mid-summer to late fall, followed by several mild frosts. The degree of cold hardiness varies, according to temperatures, throughout the dormant season. A minimum of 850 to 1,000 chilling hours is needed for shoot growth and flowering to occur the following spring.

Maximum cold hardiness occurs after fully acclimated plants have been exposed continuously to several days of non-lethal, sub-freezing temperatures. Hardiness is lost during periods when temperatures rise above freezing. Most freezing injury occurs when temperatures fluctuate above and below freezing, and is typically associated with sub-freezing temperatures which follow mid-winter thaws. Blueberries in many areas of Oregon and Washington seldom attain maximum cold hardiness due to mild and fluctuating fall and winter temperatures in the coastal areas.

Cultural practices that promote late fall growth can interfere with acclimation and inhibit cold hardiness development. For example, excessive or late fertilization with nitrogen forces late season growth that is susceptible to early fall frosts.

Pruning too early in the fall, before plant dormancy, interferes with cold acclimation by stimulating late, tender growth. Even if no visible growth develops, early pruning can cause cane tissues to de-acclimate. Delay pruning until canes are fully dormant. Pruning during late winter and early spring also allows for identification and removal of injured wood and buds.

Although research indicates that maximum cold hardiness is associated with drought stress in some woody species, blueberry plants should not be allowed to become drought stressed, either during the growing season or after the plants are dormant. In regions with low annual rainfall, irrigate deeply before the ground freezes to provide enough moisture to supply the blueberries during the winter.

Insect damage, disease, other stresses which damage foliage, and overcropping limit the production of food reserves and interfere with acclimation.

Cold Injury

Not all of the tissues of a blueberry plant attain the same degree of cold hardiness. In fully dormant plants, the wood is normally somewhat hardier than the buds, and the roots do not develop any great degree of cold hardiness. Mulching with bark or sawdust can help moderate root zone temperatures and minimize root freezing injuries.

The basal tissue that connects the flower bud to the shoot is the part of the bud that is most easily injured during the dormant period. Following a freeze, florets in a bud may show no injury even though the basal tissue is injured. The amount of growth of a new shoot or flower cluster depends on the extent of injury at the base of the bud. If injury restricts the flow of nutrients and water, growth of the shoot or flower cluster is slow or stunted, or completely inhibited.

Injury to the basal tissue can be determined by slicing longitudinally through a bud from the tip through the bud base with a sharp razor blade. Freeze-injured tissues will have a brown, water-soaked appearance, while healthy tissues will be green or white. For best results, wrap tissues to be tested in a plastic bag and hold at room temperature for several days before slicing and examining for browning.

Winter injury to the vascular cambium (thin layer of tissue beneath the bark) of the cane or roots interferes with the movement of water and nutrients to the buds and, later, shoots. Depending on which tissues have been injured and the degree of injury, symptoms of "delayed winter injury" may not appear until late spring or early summer. Shoots may bloom, leaf out, and even begin setting fruit before suddenly collapsing and dying over a 1- or 2-day period.

Sudden collapse is usually related to the onset of hot weather, which increases the demand for water by the developing shoots and fruit. Injured vascular tissues are unable to supply the needed water and nutrients and the shoot collapses. Often, injury to vascular tissue can be determined by scraping away the bark a healthy vascular cambium is bright green, whereas one injured by cold is brown. (***Source**: Excerpted from Northwest Berry and Grape Information Network factsheet, http://berrygrape.oregonstate.edu/fruitgrowing/berrycrops/blueberry/winter.htm*)

Grapes

Assessing and Responding to Winter Cold Injury to Grapevine Buds

Robert Pool, Cornell University

There are three ways to deal with cold:

1. Avoid the cold stress
   a. Find a warm place to grow grapes - this is site selection
   b. Protect the buds or tissues from exposure to cold by burial or other means.
2. Tolerate the cold
   a. Grow a variety with sufficient cold hardiness to tolerate the expected temperatures.
   b. Maximize the maturity of the tissues you grow by applying excellent viticulture.
3. Tolerate the cold injury

If all the above ground vine tissues are killed, there is little you can do except replant or retrain from below the ground, but partial vine death is much more common. Delay pruning as long as feasible so that the danger of cold injury is reduced. (If December, January and February have passed without extreme cold, the danger is reduced. March may still produce damaging temperatures, but your odds of avoiding injury have increased.) If you suspect possible cold damage, examine the buds and proced on the basis of actual injury.

Assessing cold injury of grape buds

1. Choose buds similar to those you will save during pruning. This means the lower nodes of canes of the better quality on the vine.
2. Sample based upon differences in your vineyard. This can be by variety, rootstock or based upon site and soil differences (lower vs upper sections, better or less well drained, etc.)
3. Collect at least 100 nodes from each section.

If the freeze event was recent and the buds may not have thawed since exposure to potentially harmful temperatures, then bring the canes into a warm room, keep the canes moist and wait for 24-48 hours before examining the buds. This allows damaged cells to thaw and the oxidative reactions which reveal damage to happen.

Cut the buds and record the number of live and dead primary buds. People often also record the status of secondary and tertiary buds. This is worthwhile information, but not as important as primary bud survival.

Compensating for bud injury

If you know buds have been injured, you can retain more to compensate for the proportion of dead buds. Remember even when there is no cold damage, it is not uncommon for 10% or more of the buds not to develop.

Table 1. What to do at various levels of damage.

% dead primary buds	Compensation
0 – 20%	Do not change normal pruning practice
20 - 80%	Increase the number of buds retained in proportion to the injury
>80%	Prune away only those nodes which will intrude into the space of adjacent vines or which will produce fruit so low that it hangs to the ground

(***Source**: Excerpted from Dr. Robert Pool's Grape Pages; http://www.nysaes.cornell.edu/hort/faculty/pool/GrapePagesIndex.html*)

Assessing Bud Injury

Tim Weigle, Cornell University

With temperatures hitting below zero numerous times this season there has been some concern expressed as to how badly the buds have been injured. One comment I have heard is that the best defense is a good offense and more buds will be left up to combat winter injury and to guard against another spring frost. I will leave the discussion of how you need to look at the whole picture and be prepared to thin during the growing season and the effects of over cropping on the vines carbohydrate storage to Terry Bates and Hans Walter-Peterson.

I would like to direct your attention to some of the pest management problems that can be caused by leaving up more buds than you need.

Number 1 - While not specifically a pest management issue, it is an issue of common sense. Most everyone has complained about the job an unsupervised migrant crew does, leaving up too many buds, not leaving up the best buds, etc., leaving you with a mess that requires additional input of man hours in future years to get back to a training system you recognize. Why would you do on purpose what you have tried to avoid over the years?

Number 2 - Along the same lines as minimal pruning, or hedging (but hopefully not as drastic) will be the number of smaller shoots that come out in the spring quickly filling in the canopy. Take the problem with getting coverage in the interior of the canopy (the fruiting zone) during late season sprays for grape berry moth and move it up earlier in the season due to a quicker closing in of a denser canopy.

Number 3 - One of my favorites, the law of limiting factors. As you push a vine toward maximum yield you will eventually run into a factor required for getting that crop ripe, while maintaining a healthy vine, that will become limiting. Powdery mildew is an excellent example of this. When the vines are hanging a moderate to high yield per acre, some powdery mildew on the foliage is not considered to be worth treating, the vine can ripen the crop while building carbohydrate reserves. However, with an excessive crop, management of late season powdery mildew becomes much more important and will require much more time and effort devoted to it than a vineyard with an appropriate sized crop.

The Take Home Message is: do a little detective work to see what you have in the vineyard to get the information necessary to make a good decision. Take the time to check each vineyard block, each variety within a block, and check areas separately if you know they have a tendency to be cold spots.

A guide to checking bud for cold injury can be found at: http://www.nysaes.cornell.edu/hort/faculty/pool/budcoldinjury/Assessingbudcoldinjury.html

If the pictures are a bit small for you try clicking on the picture, it should enlarge the pictures for you. As always, I welcome any questions on vineyard pest management. Just send an e-mail timweigl@netsync.net, call me at (716) 672-6830 or drop by the office at 412 E. Main St in Fredonia NY. (***Source**: Lake Erie Regional Grape Program Update, March 5, 2003*)

Midwinter Vineyard Care: Propagation

Susanne Howard, University of Missouri

If you have pruned your vineyard, the major winter chore is done. If you pruned before the onset of really cold weather, in December or early January, you should have left some extra buds on the canes so the loss of a few buds to the cold nights still ahead doesn't lead to over pruning. What else can be done in late winter or very early spring?

One answer is propagation through layering and by cuttings. Layering is a method of propagation that is mostly used to 'fill in' empty spaces where one or two vines adjacent to other vines are missing in a vineyard. To layer a vine, you need to select a long, vigorous cane from the adjacent vine and remember to not remove this cane during pruning. Flagging this cane helps. The selected cane needs to be long enough to reach to the position where the new vine will be, plus 2-3 feet. Whenever the ground is not frozen, dig a hole at the planting position, bring the long cane down into the hole, and back up again, forming a loop. Fill the hole with

soil so that the loop is covered but the end of the cane is sticking out. Place a stake or other training aid next to the tip of the buried cane and tie the tip to the stake.

During the growing season, buds along the partially buried cane will open and start to grow. Continuously remove all shoots that grow on the section of the cane between where it is attached to the mother vine, and where it disappears into the soil. The buried part of the cane will eventually form roots. Once the part of the cane that forms the new vine is thicker in diameter than the part that comes from the mother vine, the new vine is well established and the connection to the mother vine can be removed. Just cut the cane as close to ground level as possible (where it went into the soil) and shorten the other end to within the canopy of the mother vine. Layered vines, especially where a really long cane was available which extended a few feet out of the ground, have a better chance for survival in close proximity to large, established vines, than small, rooted cuttings, because of the lasting connection to the mother vine. They will fill out their canopy space possibly a year earlier than replacement vines from cuttings. The only drawback is that you have to have a neighbor vine with a long enough cane close to the location of the missing vine.

Another form of propagation can also begin around pruning time. This is the collection of cuttings from the canes that have been pruned off. Select healthy, undamaged canes and cut them into about 3 (bud) node sections. These cuttings can be lined out into a nursery area in a vineyard. The nursery is an area that is protected, will not be sprayed along with the vineyard and that can be kept weed free. Insert the cuttings 2-3 inches into the ground so that the buds point upwards. They can be placed close together. After one growing season, these young plants can be dug up and transplanted. Not all cuttings will root under these circumstances, but it is the easiest and simplest way. You will have increased percentages of rooting if you can place the cuttings into a heated soil bed first that will keep the bottom end of the cuttings around 75-80ºF. This stimulates root formation. The tops of the cuttings should be kept cool during this time, so that the buds do not open before roots have started to form. To achieve this combination of warm root zone and cool top, the soil bed can placed in an unheated garage or similar location and the bottom heated with a heating mat designed for starting seedlings. You can check on root formation by removing some cuttings from the soil and looking at the bottom end. New roots will be easily visible and should be white. At that point the cuttings can be potted into small pots or planted in the vineyard nursery area, but only after the danger of all frosts is past, especially if any buds have opened. (***Source**: The Berry Basket, Vol. 5, No. 4, Winter 2002/3*)

General Information

Spring Weed Control

John Avery, University of Missouri

Winter is here and pruning should be underway. It is now time to consider your spring/summer weed control program. This is the time of the year to evaluate your past weed problems and plan for the coming year. Some weeds which cause problems in the spring and early summer actually germinate in late summer to early fall. These weeds need to be dealt with during late winter if they have not been dealt with already. They can compete with fruit plants early in the growing season, tying up nutrients and moisture that may be needed for the crop at that time. Other weeds germinate early in the spring and compete with the fruit crop all summer. They can be especially bothersome in years when there is an extended dry period. Hopefully, we have used the fall period first to identify our summer weed problems from the previous year. Second, we need to determine what methods to use for best control in the crop. And last, we must decide on the timing - when do we need to control the weeds that are present in our fruit planting?

There are basically two types of weeds that we have to deal with on a yearly basis. The first type we dealt with in the last issue of the The Berry Basket is the winter weeds that generally germinate in late summer, grow fall to early spring, and then produce a late spring/early summer seed crop. The second is the summer weeds that generally germinate in spring, grow during the summer and produce a seed crop from mid-summer through fall. This article deals with summer weeds. Examples of these weeds are the annual grasses like crabgrass, panicums, and foxtail; and broadleaves like pigweed, ragweed, and chickweed. Also in this group are the summer perennials like horsenettle, bindweed, plantain, and milkweed. Unlike the winter weeds, the summer weeds can be very competitive with our fruit crop since they grow all summer. They can take moisture and nutrients, needed by the crop plant to grow new wood, mature a crop of fruit and set new fruit buds for the following year. It is very important to control weeds during the summer and particularly the early fall period. The health of our fruit planting can be negatively affected by the growth of many summer weeds throughout the summer and early fall.

In review, there are three primary methods of controlling weeds. The first is mechanical removal of the weeds. The old trustworthy hand hoe works for a few weeds or a small planting. Other devices include tractor mounted weed hoes or weed badgers. A newer concept is the use of fire to burn weeds down. These devices use a torch with a portable propane gas tank pulled behind the tractor. The second method is the use of post emergent herbicides. There are two basic types of post emergent herbicides to use. The contact type kills any green tissue the herbicide contacts. The other type are systemic herbicides which are translocated within the plant and will kill the tops has well as the root system. Within the systemic group are herbicides that will kill only plants within the grass family (fluazifop, sethoxydim, or clethodim) and others that will kill only plants within the broadleaf family (2,4-D). 2,4-D is labeled for use in strawberries, grapes, apple, pear, and stone fruits. There are two systemic herbicides, glyphosate and sulfosate, which will kill both grasses and broadleaf weeds. The use of any particular herbicide will depend on the type of weeds that are present.

Emerging seedlings of annual or perennial weeds are best controlled by the use of contact herbicides while the presence of mature perennial weeds may require the use of a systemic herbicide. A note of caution here is systemic herbicides will do damage to the fruit crop if any green tissue is contacted. This can be severe when the herbicide is sprayed late in the fall. The systemic herbicides should be used primarily in the winter after the fruit crop has gone dormant and leaves are no longer present. Spot treating early in the season can accomplish some control of perennial broadleaf weeds but care must be exercised to not let the systemic herbicide contact new leaves or stems or the fruit crop. For some crops like the brambles, systemic herbicides should never be used because canes can take up the herbicide even when dormant. For grassy weed problems, use grass killing systemic herbicides early in the season. Be sure to check labels for the crop and days to harvest before using any herbicide.

A third method of weed control in crops is the use of pre-emergent herbicides. These herbicides work by creating a chemical barrier to the germinating weed seedling. As the seedling grows through the barrier and the seedling takes up the chemical it will be killed. There are a number of pre-emergent herbicides on the market. Each has its strengths and weaknesses for the weed species it will control. It is very important to identify the species that are causing problems in the fruit planting and then study the labels of the herbicides available for the crop to determine which herbicide to use. Over time the composition of weed species causing trouble will change and the use of herbicide(s) will need to change too. As a general rule it is best to rotate the use of pre-emergent herbicides on an annual basis. This will help to control more of the weeds without letting one or two build up large populations. Pre-emergent herbicides are a good choice for giving season long control.

Late February to early March is a good time for a herbicide control program. Cool season weeds will not grow all winter and may even appear to be dead during the cold days of December and January but will re-appear and grow during late winter. A systemic herbicide can be applied in a tank mix with your spring/summer pre-emergent herbicide program. As stated in the last issue, where the predominant weed species are annuals such as henbit or annual bluegrass, you may want to leave them until spring to help with winter soil erosion in the planting, especially where the crop is planted on a slope. Keep in mind that these

annuals need to be allowed to mature a seed crop every second or third year if you wish to use them to your benefit.

When more competitive weeds predominate then control needs to take place before the fruit crops begin to break buds in the spring so that systemic herbicides can be used to good advantage. Use the winter season to develop a good weed control program for the next growing season. Identify your weed problems, update your spray guides, study herbicide labels, and develop a spray program that will help reduce competition with your fruit crop. (***Source**: The Berry Basket, Vol. 5, No. 4, Winter 2002/3*)

Meetings

Transferring the Farm Workshop Offered Throughout New England

During March 2003, farm families will have the opportunity to learn about transferring the farm in a daylong workshop offered in 5 locations throughout New England, thanks to a grant from the Northeast Center for Risk Management Education. The workshop will help farmers navigate the farm transfer process and will include presentations by farmers, extension specialists, attorneys, and land link and land trust personnel. Topics will include: elements to consider when transferring the farm to the next generation whether they be related or not; communicating for success; goal setting with the family and farm in mind; keys to estate and retirement planning; tools to transfer labor, management and farm assets; and the roles that farm link programs and land trusts can play in farm transfers. The program will also include a panel of farmers who will share their personal experiences with farm transfers. The workshops are offered by a partnership of the following organizations: Univ. of NH Coop. Extension, Univ. of VT (UVM) Ext., Land Link Vermont at UVM's Center for Sustainable Agriculture, CT Dept. of Ag., ME Farm Link, the New England Small Farm Institute, and the Univ .of ME Ext.

Transferring the Farm will be offered in five sites:

Clarion Hotel and Conference Center in Northampton, MA on March 12;
Zenny's Restaurant in Storrs, CT on March 13;
Benton Grange in Benton, ME on March 18;
Makris Lobster and Steak House in Concord, NH on March 19;
Charlmont in Morrisville, VT on March 20.

Each workshop is scheduled from 9:00 a.m. to 3:30 p.m. The workshop fee, which includes registration, a workshop packet and lunch, is $15 per person if postmarked before March 5. After March 5, the fee is $20 per person. Checks should be made payable to: UNH Cooperative Extension and mailed to: Transferring the Farm Workshops, UNH Cooperative Extension, 320 James Hall, 56 College Road, Durham, NH 03824. For a workshop brochure or more information, please contact Debra Heleba at (802) 656-0233 or debra.heleba@uvm.edu. Anyone requiring special accommodations or scholarship help to attend should call (802) 656-0233

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