



Berry Notes

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Prepared by the University of Massachusetts Fruit Team

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IN This Issue

MESSAGE FROM THE EDITOR

STRAWBERRY

STRAW REMOVAL ON STRAWBERRIES
TRICKLE IRRIGATION TIPS FOR STRAWBERRIES

BRAMBLES

NEW CONTAINER-GROWN PRODUCTION SYSTEM
BEING EVALUATED

BLUEBERRIES

IT'S PRUNING TIME!
COMMERCIAL POLLINATORS FOR 2002

GRAPES

NEW BULLETIN; GROWING TABLE GRAPES IN A
TEMPERATE CLIMATE
GRAPE WEED MANAGEMENT
SUSTAINABLE VITICULTURE

PESTICIDE UPDATE

NEW MITICIDE REGISTERED
HERBICIDE UPDATE FOR SMALL FRUIT

GENERAL

BARE GROUND IS WARMER

FYI

SPECIALTY CROP FUNDING ANNOUNCED
2002 FARMERS' MARKET OPPORTUNITIES

ERRATA

CASSIS RECIPE—CREDIT WHERE CREDIT IS DUE

Message from the Editor:

Drought Information: despite the welcome rain (and in some cases, snow), that has fallen in March and early April, we are still entering the 2002 growing season with a significant deficit of soil moisture. Reports indicate that southern New England is operating at a deficit of approximately 15 inches of precipitation since last August. Based on information from the National Weather Service, the Massachusetts Drought Management Taskforce has issued a statewide *Drought Advisory* and a *Drought Watch* for certain areas in the state. Detailed updated information about the status of the advisory can be found on the internet by going to www.umassdroughtinfo.org. This site provides a lot of specific information about the advisory and many, many useful links on this issue. I encourage you to visit this site often to keep yourself informed of the progress of this situation. Long-range forecasts do not offer much hope of this situation abating. Water conservation practices will be key this summer.

Topsin-M Correction: The inclusion of grapes and pears on the Topsin-M label as suggested in the last Berry Notes was premature. The manufacturer, Cerexagri, is expecting EPA approval in time for this growing season. However, in the meantime, Topsin-M is NOT labeled for use on grapes or pears.

Section 18 Emergency Exemption Petitions: In 2002, we have submitted 3 petitions for Section 18 Emergency Exemptions for pesticide use patterns that do not currently have federal labels. The first two are for the use of imidacloprid (Admire® 2F) for control of white grubs (Oriental beetles, Japanese beetles, European chafers and Asiatic garden beetles) in blueberries and strawberries. These were two separate petitions. The third petition is for the use of fenbuconazole (Indar 75WSP) for the control of Mummyberry. This product is effective against both the primary phase (shoot blight) and the secondary phase (blossom blight) of the disease. This helps replace the loss of Benlate® as well as the absence of Funginex®. Notification of the outcome of the

petitions is imminent and a letter will go out to all growers as soon as word comes through. This is expected soon. Use of these, or any products under section 18 labels require that,

- 1) applicators have a copy of the Emergency Exemption label in their possession at the time of application, and
- 2) that applicators file use reports according to label directions

Failure to follow these guidelines will jeopardize our ability to petition for such supplemental labels in the future.

A word about Quadris (new strawberry label) and Abound (new blueberry label): As reported in the last issue of Massachusetts Berry Notes, two formulations of azoxystrobin have new labels in 2002. I want to stress again the potential for phytotoxicity of this compound on several common apple cultivars. IT IS VERY TOXIC TO APPLES. So much so that even a washed out sprayer refilled with water and sprayed on susceptible apple cultivars can defoliate them. Be very careful of drift to apples and do not use the same sprayer on apples that has been used to spray Quadris or Abound.

Strawberries

Straw Removal on Strawberries

Bruce Bordelon, Purdue University

Studies done in Illinois indicate that proper time to remove straw from matted row strawberries is when the bare soil temperature at 4 inches averages about 40-43°F. According to data from the Purdue Applied Meteorology Group bare soil temperatures are averaging in the high 30s for most areas of the state. Soil temperatures should rise steadily through the month of March and should reach the low 40s over the next two weeks. Once temperatures reach this range the straw should be raked off the tops of the beds and into the row middles. Leaving some straw on top of the beds for plants to grow

up through provides a clean surface for fruit. Straw should be removed from strawberry beds before the plants grow enough to cause yellowing of foliage. Allowing the leaves to become etiolated (yellowed with long petioles) due to late straw removal can reduce yields by as much as 25%. However, uncovering the plants early may promote early growth and increase chances of frost or freeze injury. This is a judgment call that growers have to make for themselves. After the straw is removed the frost protection irrigation equipment should be set up. (*Source: Facts for Fancy Fruit 2001-01 March 14, 2001*)

Trickle Irrigation Tips for Strawberries

David Handley, Univ. of Maine

In recent years many strawberry growers in the northeast have begun using trickle irrigation in strawberry beds. While trickle is considered an essential component of growing strawberries in a raised bed plastic mulch system, it is also becoming more popular for matted row system production. In the past, the conventional wisdom has been that since overhead (sprinkler) irrigation is necessary for frost control in strawberries, there's no need to install a trickle system as well. However, several factors have now led growers away from this view, and trickle irrigation is more often seen in the fields. Some of the reasons for making the investment in trickle include the relatively low cost of a system compared to other types of irrigation, less labor moving pipes around, less water needed to meet the plants needs, and the ability to fertilize through the system.

During the growing season, strawberries can use 15,000 gallons of water per acre per week for optimum growth. During the fruit development period, this amount can triple. If nature doesn't provide this amount of water, the plants are likely to have slower growth and lower yields. Supplying this much water to strawberry fields with overhead irrigation presents the problems of having to move pipe from field to field, having a dependable source of high volumes of good water, and a big enough pump to move it. The overhead system also wets the entire plant surface which, while good for frost control, can encourage the development of diseases, and requires lots of water to get sufficient moisture down into the soil to the roots.

Trickle irrigation systems require relatively low volumes of water. For example, a source providing as little as 10 gallons per minute can irrigate 1/2 acre of strawberries per day. A 50 gallon per minute source can irrigate up to three acres per day. This means that smaller sources of water, such as wells, can be used to irrigate, and a much smaller pump can be used than is required for overhead irrigation. Because less water is used with trickle, growers can also consider using municipal supplies, if other sources are not available.

The water is brought to a field from a pump through plastic pipe ranging in diameter from one inch to six inch (1 1/2 to 2 1/2 is common). Larger diameter pipe requires higher pressure (larger pump, more water) to push liquid through. Elevation will also effect water pressure. For every 2.4 feet of elevation the water has to climb, one pound per square inch (psi) of pressure is lost. This pipe is usually buried and outlets are set up around the field according to the planting scheme. A lateral pipe is attached to the outlet and runs along the surface, perpendicular to the strawberry rows. This pipe is usually flexible (e.g., "lay-flat") so that it can be run over by equipment and customers. Trickle tape is attached to the lateral pipe so that a line is running down the center of each row of strawberries. This line can be buried about 2 1/2 inches below the soil surface prior to planting, or laid on the surface. While burying the lines can add to the cost of installation, it reduces problems with the lines being damaged by animals, people and machinery. Most trickle tape is designed to adjust the water pressure for even distribution along the length of the row, and can even compensate for changes in elevation through the field, provided they are not extreme.

The amount of water pressure available will determine how much of a field can be irrigated at one time. If lots of pressure is available, whole fields may be irrigated at once. If the pressure is weaker, then the field must be divided up accordingly and one section is watered at a time. But this can be accomplished with the simple switching of a few valves, rather than disassembling and moving lots of pipes.

The water used in a trickle system must be clean; otherwise the system will easily clog. Clean sources of water, such as a well or a municipal supply will require very little filtering, and the system would be relatively inexpensive. Other sources such as ponds may require more elaborate filtering systems, which can become a

major part of the total outlay. Fertilizer injectors can be placed near the pump and used to run liquid forms of nutrients through the system. Fertilizing in this way can provide more accurate distribution of nutrients in a more readily available form.

Growers who have adopted trickle irrigation in strawberries have generally been pleased with the amount of labor it has saved them. It has also made them more likely to water the plants when they need it, resulting in improved growth and yields. Trickle irrigation technology has become less expensive and easier to use over the years, and now may be the time to consider a system for your strawberry fields. (*Source: Univ. of Maine Vegetable & Berry News, No. 3, March 5, 2001*)

Brambles

New Container-Grown Production System Being Evaluated

Sonia Schloemann, UMass Extension

Hamilton Orchards in New Salem, MA has received funding to test a new production system for raspberries and related bramble fruits. This system involves growing raspberry canes in 3-5 gallon containers, outdoors, with drip irrigation and fertilizer injection. The canes that are planted are dormant, bare-root, one-year old 'long cane' plants. They differ from ordinary transplants only in that the one-year old canes are left on the plant rather than being cut back to a handle. These long canes are 'over-wintered' floricanes ready to produce flowers and fruit the first year out.

The system evolved from a project funded by the Dept. of Food and Agriculture in 2001 to test greenhouse production of raspberries in containers. The project ended up with more plants than could fit in the greenhouse and the extras were put out in the spring to see what they would do. The answer was, "A LOT!"

The variety that was grown is 'Tulameen', a Pacific Northwest variety which is not hardy in our growing area.

Since the plants are kept in cold storage for the winter, cold hardiness is not a limiting factor. The plants are shipped from the nursery in the spring and, after going through an acclimation period, can be potted up and set out in rows in late spring. The fruiting begins around the same time as our field grown summer raspberries, but the fruit is larger than most of our local varieties (as big or bigger than 'Titan') and extremely flavorful. Shelf-life is longer than most of our local varieties, too.

This summer's project will systematically evaluate this system and try to confirm if it can work for more growers. We will also look at other types of bramble fruit like Boysenberries, Marionberries, and 'Kiowa' and 'Lochness' blackberries to see if they respond well to this system.

We will hold a summer twilight meeting to show growers how this system works, so keep an eye out for the announcement.

Blueberries

It's Pruning Time!

Ben Fuqua, University of Missouri

Pruning is one of the more important cultural practices in producing high yields of quality blueberries. Highbush blueberry plants need some pruning each year; the extent depending on plant age, plant vigor, and overall growth habit of the plant. The goals in pruning blueberries are to remove diseased, damaged, and unproductive canes, promote new cane growth, and balance fruit production with vegetative growth. While pruning reduces the number of fruit buds, and ultimately the number of berries per plant, the remaining berries will be larger and

will ripen slightly earlier than fruit on un-pruned plants. Pruning also "opens up" the center of the bush, permitting better light penetration throughout the plant canopy, thereby increasing the sweetness of the ripened fruit.

Pruning can be done any time during the dormant season, however the best time in Missouri is during January, February, and March. Diseased and damaged canes are more easily identified at this time, the chances of freezing injury at the newly cut surfaces are lessened, the absence of leaves

makes it easier to properly shape and thin the plant, and the colder temperatures reduce the potential of spreading diseases from one plant to another. Pruning of plants after growth starts should be avoided as developing buds can be easily injured.

Flower buds of highbush blueberries are located near the tip of new growth. Flower buds are initiated in late summer and early fall and bear fruit the following year. Under good growing conditions every new shoot, including tiny lateral shoots, will set one or more flower buds. There is a direct relationship between the size of fruiting wood and the size of fruit produced. Larger berries are produced on thicker wood, while weak, twiggy growth produces small fruit, factors to keep in mind when pruning blueberry plants.

Pruning Tips

Young Plants: Only limited pruning is required on young, non-bearing plants. The emphasis during the early years should be on developing a good, strong plant framework, not on production. Flower buds should be rubbed off by hand for the first two years to encourage maximum vegetative growth. Pruning should be restricted to removing diseased, broken, and low-growing canes. Three to five of the strongest canes should be allowed to develop for each year of age. Plants of low vigor may need three or even four years of vegetative growth before being allowed to set fruit.

Producing Plants: The extent of pruning needed to maintain healthy, high-producing blueberry plants will increase with age. During the first two or three fruiting seasons, developing a strong, healthy plant should still be emphasized. All plants should be pruned to remove weak, twiggy growth, diseased, broken, and low-growing (within 12" of mulched surface) canes and branches. The larger and stronger canes should be permitted to set an increasing amount of fruit each year. In some cases, tip pruning (removal of a few fruit buds) may be necessary to balance the fruit load with vegetative growth. While the rate of plant growth varies greatly from one planting to another, healthy, vigorous blueberry bushes should have approximately 20 good, strong canes by the end of the 5th growing season.

As plants become older, additional pruning will be required. First, remove all diseased, broken, and low-growing canes and branches as done in previous years. Secondly, remove a few of the older, less vigorous canes as older canes tend to produce smaller berries and lower yields than younger ones. Older canes also inhibit the development and growth of new canes from the base or crown of the plant. Since the strongest canes originate from below ground level, all old canes need to be cut off at or slightly below ground level. Cutting canes off too

high leaves stubs or stumps that will produce weak twiggy growth. Stubs/stumps also rot and become sources of disease inoculum.

Most older bushes require additional thinning of branches and removal of twiggy growth from the center of the plant. Opening up the center of the plant allows better light penetration and air movement, two important factors in improving fruit ripening and curtailing the potential for diseases. The overall growth habits of the different varieties will dictate the type and extent of detailed pruning needed. Some varieties, such as Bluetta, Blueray, and Bluecrop produce a large number of canes each year from the crown of the plant, thereby necessitating removal of some of the new, but weaker canes. On the other hand, Coville, Lateblue and Berkeley produce most of their new growth off of older, existing canes. These varieties require more thinning and removal of branches from the interior of the plant. Ideally, all plants should have an equal number of canes from one to eight years in age. This balance can be accomplished by continually removing approximately 15-20% of the older canes each year.

Complete Rejuvenation: In some plantings, a complete rejuvenation of plants (all canes removed) may be warranted. When all old canes are cut off at ground level, a large number of new canes are usually produced that first summer. Do not fertilize these plants. Select six to ten of the most vigorous canes and remove the rest. Return to a regular pruning schedule the next year by removing 15-20% of the older canes. Eventually, these plants will become more productive, although from one to two years of berry production are normally lost by this process.

Use good sanitation: Good sanitation practices are essential in all cultural operations, but are especially critical when pruning. All pruning tools, loppers, hand pruners, saws, etc. should be thoroughly cleaned and sharpened so that neat, smooth cuts that callus rapidly can be made. Older canes should be cut as close to the crown as possible; branches should be removed as close to the main cane as possible. Avoid leaving short stubby wood. Frequent dipping of pruning tools into a disinfecting solution of 20% bleach and/or 70% alcohol will help prevent spreading of diseases to adjacent plants. Removal and destruction of all pruned material will also help prevent the buildup of inoculum in the planting.

Conclusion: Annual pruning of highbush blueberry plants is required for sustained production of high quality berries. Weather conditions, birds, and other uncontrollable factors that affected blueberry yields last year should not influence the extent of pruning this year. Good pruning practices must be followed from year to year to maintain the vigor and productivity of blueberry bushes. (*Source: The Berry Basket, Volume 3, No. 4, Winter 2000/2001*)

Commercial Pollinators for 2002

The University of Maine Cooperative Extension has published their updated list of commercial pollinators. This list contains contact information for 50 commercial providers and is appropriate for growers throughout New

England. It is available as Fact Sheet No. 224, Bulletin No. 2040. Please call me at 413-545-4347 if you want a copy of this list. See the article near the end of this newsletter for more information on the value of pollinators in small fruits.

Grapes

New bulletin; Growing Table Grapes in a Temperate Climate

Tom Zabadal, Michigan State Univ.

A new grape bulletin entitled Growing Table Grapes in a Temperate Climate Extension Bulletin E-2774 is now available from the bulletin office. This 44-page color bulletin has a retail price of only \$7.00 due to financial support from an anonymous donor. It will be useful not only for table grape production but also others. It has a section that reviews in detail parts of the vine and the

steps in pruning a vine. Together with E-2642, Table Grape Varieties for Michigan and E-2698, Pest Control in Small Vineyards, these three bulletins give comprehensive information to anyone wanting to grow table grapes. (*Source: Michigan Fruit Crop Advisory Team Alert, Vol. 17, No. 1, March 26, 2002*)

Grape Weed Management

Tony Wolf, Virginia Tech

Surflan (oryzalin) is a pre-emergent herbicide registered for use in both young (including first year) and bearing vineyards. Prowl would be a good alternative to Surflan in nonbearing vineyards. Chemically, Prowl is very similar to Surflan and will provide similar control. Prowl, like Surflan, works best on annual grass and small seeded broadleaf weeds. The manufacturer has never registered Prowl for use on bearing vineyards. Prowl should be applied as a directed spray to dormant grape vines. Prowl can stunt growth and cause abnormal leaves to form if sprayed over the top of plants after budbreak. Another substitute for Surflan would be Solicam, but only if the

vines have been in the ground for 2 seasons. Watch the rate of application on sandy soils. Vines growing in heavier soils can tolerate higher rates of Solicam. The injury symptom from Solicam is bleaching of foliage, which is more likely to occur in sandy soils. Plants will outgrow any bleaching that occurs. Solicam works well in combination with Princep. Solicam controls annual grasses and certain annual broadleaf weeds, and will suppress nutsedge. Combining it with Princep will provide better broadleaf control. (*Source: VA Viticulture Notes, March-April Issue, April 5, 2002.*)

Sustainable Viticulture

Alice Wise, Cornell Coop. Ext. of Suffolk Cty, NY

Mark Chien will be the guest speaker at an organizational meeting for the Long Island Sustainable Biticulture Program. Chien is currently the winegrape Extension Specialist for Southeastern PA. In a former life, he worked as a vineyard manager at Temperance Hill in Oregon and was a founder of the Oregon LIVE – Low Input Viticulture and Enology – program. The goal of this meeting will be to listen to Mark's philosophy and wisdom; to discuss the creation of and goals of the Long Island program; to present the draft guidelines; and to recruit a small group of growers to go through the program in 2002. Briefly, the guidelines are meant to evaluate and rate various farm practices ecologically.

For example, putting nitrogen on a vineyard in March is less desirable (The N is more susceptible to leaching at this time) than an application after budbreak. The idea of sustainability is to educate and encourage the use of ecological practices through all facets of vineyard management. The meeting will be held at LIHREC, 3059 Sound Ave., Riverhead, Wednesday, April 17 at 5:00 p.m. This will be a dinner meeting; those wishing to partake of dinner should send in their money prior to the meeting. Call Alice Wise for more information at 631-727-3595. Directions can be found at <http://www.cce.cornell.edu/suffolk/General/soundmap.gif>. (*Source: LI Fruit & Vegetable Update, No. 3, March 2002*)

Pesticide Updates

New Miticide Registered

Celeste Welty, Ohio State University

Acramite® was registered for use on fruit crops in February 2002. Acramite® is a general use product (not restricted) made by Crompton/Uniroyal with the active ingredient bifenazate. Bifenazate is also the AI in Floramite® which is used in greenhouses. Acramite® can be used on apple and pear (7-day pre-harvest interval), plum and peach (3-day PHI), grape (14-day PHI), and strawberry (1-day PHI). The re-entry interval is 12 hours. Acramite® kills nymphs and adults of European red mite and two-spotted spider mite but does not kill apple rust mite or predatory mites. Acramite® is formulated as a 50WS, which is powder in water soluble bags. Acramite® is used at 0.75 to 1 lb per acre. The

0.75 lb rate is adequate for two-spotted spider mite control while the 1 lb rate is needed for European red mite control. Acramite® acts by contact and residual action. On apple, Acramite® is best used as a summer miticide after mites exceed threshold. For best results, it is important to get good coverage of Acramite® in the crop canopy; the minimum spray volume needed is 50 gallons per acre but the manufacturer strongly recommends a spray volume of 75 gallons per acre. Acramite® works best when applied with a surfactant. Evaluation of mite control by Acramite® should be delayed until 4 days after application because the mites are slow to die from this pesticide. (*Source: Ohio Fruit ICM News, Volume 6, Issue 4, March 4, 2002*)

Herbicide Update for Small Fruit

Dr. A. Richard Bonanno, University of Massachusetts Amherst

Select 2E (clethodim)

This is a postemergence grass herbicide which is similar in activity to Poast (sethoxydim). Growers should see improved activity on cool season grasses such as annual bluegrass and on perennial grasses as well. Registered crops include potato, tomato, pepper, eggplant, celery, carrot, radish, summer squash, winter squash, pumpkin, cucumber, melon, watermelon, and strawberry. The label contains pre-harvest intervals for all registered

crops. A crop oil concentrate at a rate of one quart per 100 gallons spray mix must be used. Do not spray on hot and humid days as crop injury can result. See label for other precautions.

2,4-D formulation Change

Amine 4 is the new formulation of 2,4-D amine (salt) available for use in asparagus, sweet corn, and strawberry. Formula 40 will no longer be available. There are many ester and low-volatile ester formulations on the market for other uses of 2,4-D. Be certain to NEVER use ester or low-volatile ester formulation of

2,4-D on vegetable or fruit crops. Both ester and low-volatile ester formulations of 2,4-D can move from the target area after application during warm weather or low humidity. They have the potential to damage crops far from the site of application and their movement is unpredictable.

Gramoxone (paraquat) formulation change

Gramoxone Max 3S is the new formulation replacing Gramoxone Extra for all uses. Label rates are generally lower than the old formulation since Gramoxone Max contains more active ingredient per gallon. As with the old formulation, the use of a nonionic surfactant is still required. With Gramoxone, always remember that better weed coverage through the use of more water per acre will result in better weed kill.

Dacthal 75WP (DCPA) is available

Dacthal herbicide is back on the market with all the previous labeling. The price of this product has more than doubled, however, rising to approximately \$14 per pound. Critical uses of this product are on newly transplanted strawberry and on direct-seeded onions.

Note: These articles are based on our best available knowledge at the time of publication. No endorsement is implied by inclusion, nor is lack of endorsement from non-inclusion. Always read and follow the label before using a pesticide; if the label disagrees with the above information, follow the label.

General

Bare Ground is Warmer

*Mark Longstroth
Michigan State Univ.*

Spring frosts are a worry for all fruit growers. Radiation frosts occur when clear, calm conditions during the night allow the ground to cool by radiation to the sky. The cool soil chills the air above it lowering the air

temperature. Cultivation is one measure that growers can do to increase soil temperatures during radiation frosts. Cover crops serve many valuable functions in fruit plantings such as reducing or preventing soil erosion, reducing soil compaction

and allowing vehicle traffic over wet soils. Cover crops also shade the soil resulting in cooler soils during radiation frosts. Keeping the soil surface clean of vegetation allows it to absorb more heat during the day. Soils have a large heat capacity, so they can capture and store considerable heat during sunny days. This heat can maintain warmer air temperatures during cold nights. Weeds and sod insulate the soil surface from the sun. In addition, tall, unmowed cover crops raise the effective ground level, so even higher flower buds may be injured where there is a tall stand of grass or weeds.

Also important is the fact that wet or moist soils have a higher heat capacity than dry soils, and packed soils are able to absorb more heat than recently cultivated soils. This means that clean, moist and packed soil surfaces will absorb more radiant energy during the day, and protect from frost by releasing this heat during the night.

In general, unmowed cover crops are cooler than mowed covers, which are cooler than loose cultivated soils. Packed bare soils are warmer than loose soils and wet soils are the warmest of all.

Moist packed soils can be as much as 5° F warmer than unmowed cover crops during radiation frosts. It is unlikely that such high increases in temperature are common, but I have seen noticeable differences in fruit set between orchards that were cultivated as opposed to those nearby where nothing was done to the cover crop. Cultivation is not for everyone, especially where the fruit planting is on uneven ground where soil erosion is a concern. Cultivation is more suited to flatter plantings where drainage or cold air out of the planting is not a major factor in the orchard. (*Source: Michigan Fruit Crop Advisory Team Alert, Vol. 17, No. 1, March 26, 2002*)

FYI

Specialty Crop Funding Announced

Diane Baedeker Petit, Massachusetts Department of Food and Agriculture

The Department of Food and Agriculture has selected 17 projects proposed by 15 agricultural groups statewide to receive a share of \$890,000 in funding provided by the USDA's federal agricultural economic assistance package.

This Federal assistance is targeted to "specialty crops" which USDA defines as "any agricultural crop, except wheat, feed grains, oilseeds, cotton, rice, peanuts and tobacco." This can include non-food crops like nursery, floriculture, or Christmas trees. MDFA is administering the funds through a competitive bid process.

The Department of Food and Agriculture requested proposals that clearly promote Massachusetts agriculture from Bay State agricultural organizations, commodity groups, cooperatives, non-profit organizations, collaboratives, and other entities that directly support agricultural initiatives.

Farmers seeking funding for activities on their own farms were not eligible. The funds are for one year only. Organizations and projects that will receive funding are:

- 1) **Berkshire Grown**, Great Barrington, \$36,670 for their on-going campaign.
- 2) **Cape Cod Cranberry Growers Association**, Wareham, \$211,613 to implement a domestic campaign promoting cranberries, and \$25,887 for a cranberry weevil control program.
- 3) **Community Involved in Sustaining Agriculture (CISA)**, Amherst, \$75,000 for the "Be a Local Hero" campaign.

- 4) **Essex Conservation District**, Hathorne, \$35,000 to continue the "Buy Fresh" campaign started last year.
- 5) **Mass. Aquaculture Association**, North Eastham, \$14,827 to market hard shell clams.
- 6) **Mass. Flower Growers Association**, Littleton, \$110,000 for promotion of locally grown flowers, a video and a manual.
- 7) **Mass. Fruit Growers Association**, Belchertown, \$40,000 to produce a marketing campaign and \$35,000 for an apple pest control program.
- 8) **Mass. Nursery and Landscape Association**, Conway, \$22,003 to develop a pocket guide of native and low-maintenance plants.
- 9) **New England McIntosh Growers Association**, Hatfield, \$27,500 to implement a marketing program to increase year-round demand for Massachusetts apples.
- 10) **New England Small Farm Institute**, Belchertown, \$31,500 for their New American Farmers Initiative.
- 11) **New England Vegetable and Berry Growers Association**, \$72,000 for new crop research, a pest control program and a marketing program.
- 12) **Open Field Foundation**, Amherst, \$15,000 to study the feasibility of creating a milk processing facility in Western Mass..
- 13) **Pioneer Valley Growers Association**, South Deerfield, \$28,000 to hire a sales consultant and cover transportation costs in marketing Pioneer Valley grown produce.

- 14) **Southeastern Mass. Agricultural Partnership (SEMAP)**, West Wareham, \$60,000 for their ongoing "buy local" campaign.
- 15) **University of Mass. and the Livestock Marketing Cooperative**, Amherst, \$50,000 to establish a web site promoting fodder crops for livestock.

(Source: *Mass. DFA Farm & Market Report, Vol. 79, No. 2, March/April 2002*)

2002 Farmers' Market Opportunities

The following farmers' markets are seeking vendors for the 2002 season. Please call the contacts below for more information. For general information about selling at farmers' markets, contact David Webber at 617-626-1754 or David.Webber@state.ma.us

Adams: Wednesday, 3:00 pm - 6:00 pm, all types of vendors. Everett Randall, 413-743-3111.

Arlington: Wednesday, 2:00 pm - 7:00 pm, specialty vendors. Oakes Plimpton, 781-648-5117 (eve.).

Auburn: Saturday, 9:30 am - 2:00 pm, fruit and vegetable growers. Ray Samek, 508-867-7363.

Dudley: Town Common/Boston - Tuesday and Thursday, 4:00 pm - 7:00 pm, fruit and specialty growers. Kristin Brennan, 617-442-1322

Fall River: Wednesday, 9:00 am - 1:00 pm and Saturday, 7:30 am - 12:30 pm, Susan Medeiros, 508-880-1372.

Fitchburg: Tuesday, 3:00 pm - 6:00 pm and Friday 8:45 am - 12:00 noon, vegetables. Rachel Gonzalez, 978-544-6063.

Great Barrington: Saturday, 9:00 am - 1:00 pm, meats, dairy products, eggs, fruit. Christa Stosiek, 518-325-4261.

Hingham: Saturday, 10:00 am - 2:00 pm, grower with corn. Ted Paquette, 781-749-3444.

Holden Tuesday Evening: Tuesday, 3:00 pm - 7:00 pm. sweet corn, potatoes, orchard products, bakers and value-added products, vegetables, small fruits. Jacqui Marsh, 978-874-0244.

Ipswich: Saturday, 9:00 am - 12:00 noon, all types of growers. Bill Walton at 978-356-4622.

Gloucester (proposed): Bill Stevens, 978-283-6776

Greenfield: Saturday: 8:00 am - 12:30 pm. honey and eggs. Peg Pucino, 413-773-8577.

Mass. Turnpike: Thursday - Saturdays, 10:00 am - Dusk, service centers on Mass Pike, including, Lee, Blandford, Ludlow, Charlton, Westboro, Framingham and Natick. All types of farm products. Dave Fenton, 781-431-5192.

Marlboro: Thursday, 2:00 pm - 6:00 pm and Saturday, 9:00 am - 12:00 noon. fruit, flowers, plants, crafts. Gaston Gauthier, 508-393-6350

Middleboro: Saturday, 9:00 am - 1:00 pm, fruit and breads. Donna Blischke, 508-866-9762.

North Adams: Saturday, 8:00 am - 12:00 noon, jams, jellies produce and hand crafted items. Everett Randall, 413-743-3111.

Orleans: Saturday, 8:00 am - 12:00 noon, produce, horticultural products and processed foods. Gretel Norgeot, 508-255-8374.

Sheffield: Friday, 4:00 pm - 7:00 pm, specialty greens, ice cream/dairy products, cheese. June Wolfe, 413-229-2012.

Shrewsbury: Tuesday, 11:00 am - 3:30 pm, specialty items, Andy O'Keefe, 508-753-7761.

South End/Boston: Wednesday, 3:00 pm - 7:00 pm, organic produce, eggs, honey, maple, cheese, flowers, any specialty items. Linae Handy, 617-437-0999.

Southwick (new): Thursday, 1:00 pm - 6:00 pm. Diane Johnson, 413-569-3436.

Springfield Cooperative: Saturday, 7:00 am - 11:00 am, fruit, leafy vegetables, prepared foods, vendors with a wide variety of produce. Al Fini, 413-786-1012.

Springfield/Eastfield Mall (new): Thursday, 10:00 am - 2:00 pm, opens in June. Betty Kibbe, 413-589-8576.

Sturbridge: Thursday, 11:00 am - 3:30 pm, fruit and specialty items. Andy O'Keefe, 508-753-7761.

Taunton: Thursday: 1:00 pm - 6:00 pm, baked goods, herbs, jams and jellies. Antonio Coutinho, 508-880-9363.

Topsfield: Saturday, 7:00 am - 12:00 noon, fruits and vegetables. Jane Cook, 978-922-1648.

Turners Falls: Wednesday, 3:00 pm - 6:00 pm. full season produce, cut flowers, crafts. David Detmold, 413-863-4772.

Waltham: Saturday, 9:30 am - 2:30 pm, turkey products, mushrooms, jams, pastry, organic produce. Marc Rudnick, 781-894-0357.

West Newbury/Laurel Grange: Saturday, 9:00 am - 12:00 noon, home grown or home made items. Peter Carter, 978-352-2986.

Worcester Common: Friday, 9:30 am - 2:00 pm, specialty items. Andy O'Keefe, 508-753-7761.

Worcester/Westside: Monday and Wednesday, 9:30 am - 2:00 pm, specialty items. Andy O'Keefe, 508-753-7761.

For the following markets contact Jeff Cole at the Federation of Massachusetts Farmers' Markets, 781-893-8222 or 1-800-628-6336.

Boston City Hall Plaza, Monday and Wednesday, 11:00 am - 6:00 pm

Boston Copley Square, Tuesday and Friday, 11:00 am - 6:00 pm

Cambridge/Central Square, Monday, Noon - 6:00 pm

Framingham/Route 9, Thursday, 11:30 am - 5:00 pm

New Bedford, Saturday, 9:00 am - 1:00 pm

Norwood, Tuesday, 1:00 pm - 6:00 pm

Springfield/Downtown, Friday, 10:00am - 2:00 pm

Cassis Recipe, Credit where Credit is Due

In the November/December issue of BerryNotes, we published two recipes for using black currants; one for Cassis and one for Coulis. They were both credited to Tommie van de Kamp, Queener Fruit Farms, Scio, Oregon. While the Coulis recipe is, in fact, from Tommie, I am informed that the Cassis recipe is from "Clearly Delicious" by Elizabeth Lambert Ortiz and Judy Ridgway. Either way, I hope you try them out!

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 endorsements over like products are intended or implied.