



UMASS
EXTENSION



Vegetable Notes

For Vegetable Farmers in Massachusetts

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CROP CONDITIONS

It has been a good fall for producing cold-hardy greens under row cover or in high tunnels, and even in the open field. Despite several hard frosts, temperatures have been warm enough to keep things growing. At the South Deerfield research farm, we have just finished harvesting the latest broccoli varieties in our fall broccoli trial. The goal was to be able to harvest broccoli for Thanksgiving, so it looks like we made it. We will publish our results in future issues of Veg Notes.

Farmer's markets that remained open in November have been handling root crops, salad mix and braising greens, root crops such as rutabega, turnip, celeriac, daikon, radish, carrots, onion, potatoes (all colors, shapes and sizes), cabbage, broccoli, kale, and cauliflower, frost-hardy herbs such as dill and cilantro, and winter squash of many varieties. Farmstands and wholesale accounts are shipping similar product, with an emphasis on squash and root crops.

Market demand for peeled squash and peeled/cut root vegetables (turnip, rutabega, carrots) is high. Farms that ship out peeled squash have been working long hours to



Spinach and brassica greens planted mid October will not be harvested until March 2007, after weathering the winter cold under row cover

meet the Thanksgiving demand. We have no data on how many tons of butternut squash are tucked away in storage in Massachusetts, but there is a lot. Most is in barns that have been retrofitted with insulation, heat and some means for circulating air. Late November and early December inevitably bring some temperatures in low twenties and teens. If you have squash in storage, be sure to watch

the temperatures in all parts of your storage—watch for cold, dry or wet spots. Provide heat if needed, and use fans if necessary to circulate air. Butternut squash stores best at 55-60 degrees F and 50 - 60% relative humidity. If temperatures drop below 50 degrees F, chilling injury occurs and quality declines. Worse, diseases such as black rot that may be present but stable at 55 will become more active when squash has been chilled.

The skills and techniques for late fall, winter and early spring production of cold-hardy greens have been growing steadily among New England farmers, and we see more growers getting into this. (Others are happy to see the season come to a close and take a well-deserved break!) Succession-planted greens in a high tunnel grow enough for harvest through at least mid December, and pick up their growth again as the daylength and stronger sun returns. It is difficult to harvest during the 'dead zone' from winter solstice to late January, but seedlings that have been established by the end of November survive and grow. Common crops include spinach, mizuna, mustards, red Russian kale, endive, arugula, tatsoi, and leaf lettuce. Row covers inside the greenhouse help protect from the deepest cold.

Last week's twilight meeting at Sidehill Farm in Ashfield featured a large wood-framed hoop house, unheated with single glazing, filled with succession-planted greens.



Succession-planted greens (Sept 25 - Oct 16) in unheated, single-layer greenhouse, Sidehill Farm, Ashfield



Mizuna, a Brassica rapa type, is a popular component of salad mix

Warmer than expected weather in November meant larger greens to harvest late into fall. Some plants will be cut now and regrow later, and later plantings will grow on. Many growers have observed that the younger plants withstand the cold better than larger plants. Amy Klippenstein and Paul Lacinski received a farmer SARE grant to develop a heat-retaining cover that will be easy to roll on and off during the winter months. They hope this will provide better crop growth with less labor.

Cover crops have also benefited from good growing conditions this fall. It is interesting to notice the strips of green down the field, indicating where rye is doing its job of picking up leftover nitrogen and storing it for next year's crop – instead of allowing it to leach away during the winter.

POTATOES: CONDENSATION IN STORAGE

Condensation is a major problem in many storages. This problem occurs at high relative humidity when the interior surface temperature is a few degrees cooler than the storage air temperature. Excess moisture dripping from the ceiling onto the top of the pile is the most common condensation problem. Wet potatoes are an ideal site for rot development. Condensation is most often a problem during and immediately after filling the storage when the respiration rate is high, and during periods of low temperatures. Adequate insulation is the key to minimum condensation. An insufficient insulated storage will “sweat” even at moderately cool temperatures. Ceiling condensation can also be reduced by maintaining a constant flow of air with small circulating fans, between the top of the pile and ceiling. Storages with forced air systems should have the return air duct extended to the highest point of the ceiling. This will return the warmest, most humid air back into the pile. Condensation

can also be a problem in the top layer of the pile when air moving through the pile warms up and condenses on the cooler potatoes near the top. Circulating air, slightly warmer than the potatoes, over the pile or providing uniform temperature throughout the pile with proper ventilation will help prevent condensation.

-- Dale Moyer, *Cornell Cooperative Extension, Long Island Fruit and Vegetable Update, No. 30, NOVEMBER 2006*

UPCOMING EVENTS AND MEETINGS

1. New England Vegetable and Berry Growers' Association

and

New England Cooperative Extension

present an

ALL DAY MEETING

Saturday, December 2, 2006

Best Western Hotel

**580 Rt. 1 Bypass at the Portsmouth, NH Traffic Circle,
Right off of I 95**

Schedule:

9:30 AM: Registration: \$10.00. Registration fee is waived for members of the Association.

10:00 AM: A Prototype of A Solar Collection System for High Tunnels-- Barbara Murphy and Gleason Gray, University of Maine. This is a report on a research project funded by NEV&BGA.

10:30 AM: Vegetable Production in Bangladesh-- Rob Wick, University of Massachusetts

11:00 AM: IRS Form 8903; Domestic Production Credit-- Mike Sciabarrasi, University of New Hampshire

11:30 AM: On Farm Trials of a New Bird Repellent for Sweet Corn-- Jude Boucher, University of Connecticut. This is a report on a research project funded by NEV&BGA.

NOON Lunch \$16.00. To reserve lunch, return the enclosed card or call the Secretary at (413) 665-3501 by Nov. 24, or email: howell@umext.umass.edu

1:00 Sweet Corn Trials-- David Handley, University of Maine. This is a report on a research project funded by NEV&BGA

1:20 Strawberry Variety Evaluations, David Handley, University of Maine. This is a report on a research project funded by NEV&BGA

1:40 Sidedressing Crops; Choice of Materials, Using Coated Urea--John Howell, NEV&BGA and University of Massachusetts, retired.

2:10 Raspberry Susceptibility to Strawberry Bud Weevil

– David Handley, University of Maine. This is a report on a research project funded by NEV&BGA

2:30 Blackberry Production in Cold Climates – David Handley, University of Maine. This is a report on a research project funded by NEV&BGA

NOTE: There will be 1 ½ hrs credit toward Pesticide Recertification for New England States.

More upcoming meetings:

Friday, January 5, 2007, Chicopee, MA: All-Day Vegetable and Berry Meeting. More information to follow.

2. Tomato Grafting Workshop & Discussion Wednesday, November 29, 2006

1:00 pm – 3:30 pm

At The Society for N.H. Forests Building Concord, N.H.

More and more greenhouse tomato growers are starting to use grafted plants to prevent root diseases and increase plant vigor and yields. The grafting process entails splicing the tops of “scion” seedlings (Buffalo and Trust are common) onto “rootstock” seedlings (such as Maxifort or Beaufort) that have large root systems and tolerance to several soilborne diseases.

Dave Colson of New Leaf Farm in Durham, Maine has been successfully grafting greenhouse tomato plants for several seasons. In a hands-on demonstration, Dave will share his technique, experiences and tips for success. Participants will receive rootstock seeds and supplies to try their hand at grafting.

The grafting demonstration will be followed by a discussion. This will be an opportunity for greenhouse tomato growers with varying levels of experience to network and learn how other growers cope with common issues. Topics might include varieties, yellow shoulders, fertilizers, rotations in other tunnels or greenhouses, disease management and any others you’d like to discuss.

A registration fee of \$25 per farm attending will cover the cost of materials and Dave’s travel from Maine. For more information, please contact Becky Grube at (603) 862-3203 or becky.grube@unh.edu or Amy Ouellette at (603) 527-5475 or amy.ouellette@unh.edu. If you require special accommodations to participate, please call Becky or Amy by November 22.

3. Vegetable Production: From Greenhouse to Market A Three-Day Farmer-to-Farmer Workshop for Vegetable Farmers December 11, 12 & 13, 2006

United Methodist Church, Corner of Henning & 5th Avenue, Saratoga Springs, NY

Presented by the Sustainable Farmers Network, with as-

sistance from Washington County Cooperative Extension

You are invited to join us for three days of presentations and group discussions by four highly experienced and successful vegetable farmers. Dan Kaplan will be joining us for only one day; the other three farmers will be with us all three! The workshop will focus on all aspects of greenhouse production, crop varieties, field production (including soil management, tillage, cultivation, & rotations), insect & disease management, recordkeeping for profitability, harvesting techniques, post-harvest handling/storage, and marketing. The presentations will consist of detailed, valuable information with PowerPoint pictures. Come and enjoy great food prepared with lots of local organic products, the company of friends old and new, and a lively and engaging learning environment. This workshop is designed for all levels of farmers with any size farm and any type system (conventional, organic, sustainable, etc.). This workshop will also offer special 20 minute “Earn Your Meal” presentations by other successful farmers attending the workshop, and there will be extensive networking/group discussion time.

Presenters:

- Dan Kaplan; Brookfield Farm; Amherst, Massachusetts
- Paul Buccigliaglia, Fort Hill Farm, New Milford, Connecticut
- Jim Crawford; New Morning Farm; Pennsylvania
- Jack Hedin; Featherstone Farm; Rushford, MN

Registration:

Participants MUST pre-register, but please check to ensure that space is still available. Registration costs \$175 per person, and includes an informative conference binder, morning refreshments, and lunches & dinners during the conference. A second additional person from the same farm will receive a \$25 discount. Overnight accommodations can be arranged for nearby hotels and homestays. **To register:** Send check and the registration form to: Sustainable Farmers Network, c/o Sandy Arnold, 118 South Valley Road, Argyle, NY 12809. Please make checks payable to “Sustainable Farmers Network”.

For more information or to receive a registration form: Call Sandy at (518) 638-6501, or (preferably) send an email to arnold3@capital.net.

4. Integrated Pest Management and Weed Management for Herbaceous Perennials January 16, 2007 Sturbridge Host Hotel, Sturbridge, MA 9:00 am – 12:30 pm

Sponsored by the University of Massachusetts Extension, University of Connecticut Extension and Northeast SARE

Topics will include IPM strategies to control key insects, diseases and weeds for the major types of perennials produced as well as new and emerging pests and diseases. Come learn how to use cultural controls, natural biological controls and environmentally friendly pesticides to produce healthy perennials - whether you are propagating perennials, growing them on in your greenhouses, producing container-grown perennials outdoors or selling perennials from your retail garden center.

Registration is \$20 per person and includes educational materials and continental breakfast. Financial support is being provided with a grant from Northeast SARE. Three pesticide recertification credits.

For more information contact: Tina M. Smith, University of Massachusetts, (413)545-5306, tsmith@umext.umass.edu

Paul Lopes, University of Massachusetts, (508)295-2212 ext. 24, lopes@umext.umass.edu

Or Visit: http://www.umass.edu/umext/floriculture/upcoming_events.html

5. Sustainable Greenhouse Health Maintenance Program For The 2007 Spring Crop Season

The University of Massachusetts Extension Floriculture Program is now accepting registrations for one-to-one training for the 2007 spring crops season. This project is designed to assist growers in Massachusetts who have diversified farms that include greenhouses. Extension educators work one on one with growers, demonstrating the use of on-site disease test kits, pH and EC meters and helping growers to identify pests and choose solutions to pest problems.

Farmers that have greenhouses growing spring crops are encouraged to call and arrange for a visit to their greenhouse. Cooperating growers will be required to provide information for a short survey and follow-up evaluation.

If you are interested in participating in the project, please complete the form below. The program will begin in mid-February and continue through May. Northeast SARE is providing funding for this project.

For More Information Contact: Paul Lopes, lopes@umext.umass.edu (508) 295-2212 ext. 24 or Tina Smith, tsmith@umext.umass.edu (413) 545-5306

NORTHEAST SARE PARTNERSHIP AND FARMER GRANTS: APPLICATION DEADLINE APPROACHING

Northeast Sare offers grants to agricultural professionals who work directly with farmers. **Partnership Grants** explore sustainable production and marketing techniques using on-farm research and demonstrations. Grants are

capped at \$10,000. **The postmark deadline for Partnership Grant application is December 5, 2006.** You can get application materials electronically by going to www.uvm.edu/~nesare, or call (802) 656-0471 to request a printed copy. If you have questions about the Partnership Grant program, visit the website, call, or send an email to nesare@uvm.edu.

The Northeast SARE **Farmer Grant** application is now available online at www.uvm.edu/~nesare. Also available is a guide, "How to Write a SARE Farmer Grant Application." This booklet explores what makes a proposal competitive. You can download the guide and the application from the web site or request printed versions by calling (802) 656-0471. If you have questions about the Farmer Grant program, visit the website, call (518) 733-0602, or send an email to farmergrants@taconic.net. **The postmark deadline for Farmer Grant applications is December 22, 2006.**

VEGETABLE/STRAWBERRY IPM EDUCATOR EXCHANGE PROGRAM: FOR FARMERS, EXTENSION EDUCATORS, AND OTHER AGRICULTURAL PROFESSIONALS

Would you like to learn more about integrated pest management for vegetables or strawberries, but can't afford to travel to a meeting? Do you have an interest in sharing what you know with others?

The Northeast Vegetable IPM Working Group, funded by the Northeastern IPM Center, is launching an Educator Exchange Program. We will pay for qualified expenses to help agricultural professionals in the Northeast learn about and share integrated pest management practices in vegetables and strawberries.

Why the Educator Exchange Program?

The goal of the Northeast Vegetable/Strawberry IPM Educator Exchange Program is to raise the level of interaction among vegetable agricultural professionals in different parts of the region by funding travel to vegetable and/or strawberry conferences that they would otherwise not attend. Educators and farmers will gain knowledge at the conferences they attend, meet a new set of colleagues and growers, and return with fresh ideas, contacts, and information that will be included in educational programs for farmers in their communities. This project will help strengthen the communication and networks in the Northeast, support professional development among vegetable and strawberry farmers and educators, and will, through follow-up activities, directly impact growers' ability to implement IPM.

Who May Apply

This program is open to vegetable and/or strawberry spe-

cialists, Cooperative Extension educators or county agents, growers, crop consultants, government agency staff, agricultural professionals in nonprofit organizations, or anyone who will be in contact with many vegetable or strawberry growers. The person must provide unbiased, research-based information and be a resident of a northeastern state (Connecticut, Delaware, Maine, Maryland, Massachusetts, New Jersey, New Hampshire, New York, Pennsylvania, Rhode Island, Vermont, West Virginia) or the District of Columbia.

Successful Applicants Will Have

- A demonstrated ability to present the information they gain to an audience of farmers in their home area;
- Interest in IPM-related subjects; and
- Involvement with vegetable or strawberry crops. What will be learned should help the applicant address integrated pest management issues of importance to strawberries or a vegetable crop in their state or region.

Available Funding

The maximum amount of money awarded will be \$800 per person. We will reimburse travel, registration fees, and overnight accommodations. Educational programs and travel must take place before December 31, 2007. A total of approximately \$15,000 will be apportioned for the entire Educator Exchange Program.

What Can Be Funded

1. Travel requests to meetings or conferences within the Northeast. Travel must be to a different state or sub-region from your usual travels. In New England, for example, travel could be to the Mid-Atlantic Vegetable and Fruit Conference (Hershey, PA); state-level meetings, such as the New York Fruit and Vegetable Expo (Syracuse), Delaware Ag Week, and the New Jersey Vegetable and Fruit Conference (Atlantic City). Other vegetable or strawberry meetings where IPM techniques will be presented or discussed could also qualify.
2. Travel requests to conferences that occur outside the Northeast region, if well justified.
3. Self-designed educational opportunities, such as visiting a farm, farming region, or laboratory where you can learn specific techniques or practices.

How You Give Back

Recipients will be required to share what they learn about vegetable and strawberry IPM. Possible methods include

- Presenting or organizing a program at a conference, workshop, or twilight meeting;
- Writing newsletter articles for publications that reach farmers, that could also be posted on the Northeastern IPM

Center website;

- Working directly with growers to implement or evaluate a new practice;
- Participating in the planning committee for the next vegetable or strawberry conference (or other educational program) in your home state; and
- Making use of new professional contacts to invite speakers to the region.

Reaching new audiences with information is encouraged. Recipients will report to the Vegetable IPM Working Group the number of people and audiences who were exposed to the new information and other impacts of the activities that resulted from their travel.

How to Apply

Application format: one to two pages in length, include the following information:

1. Contact Information: your name, title, name of your organization, address, email, and phone number.
2. Objective and Rationale: what you want to learn and why it is important to implementation of vegetable or strawberry IPM in your region.
3. Statement of Work: tell us why you need the funds; what educational program you wish to attend; and ways in which you will share or use the information.
4. Deadline for Conference Registration. Travel must take place before December 31, 2007.
5. Statement of expenses being requested.
6. List of in-kind or matching funds (not required).

Submit your application electronically to: westgate@umext.umass.edu or in hard copy to:

Ruth Hazzard
Department of Plant, Soil and Insect Sciences
250 Natural Resources Way
University of Massachusetts
Amherst, MA 01003
(413) 545-3696
(413) 545-5858 (fax)

Timetable and Review Process

You will receive confirmation that we received your application and an answer as soon as a decision can be made. All applications received by November 30 will be reviewed by the Vegetable IPM Working Group at its December 5 meeting. However, **do not hesitate to contact us after that date**. If funds are not fully allocated after the first round of applications, further applications will be accepted on a rolling basis. Funding of qualified proposals will be based on the availability of funds at the time of submission. For further information, including updates on funds remain-

ing in this category throughout the year, see http://northeastipm.org/work_vegetable.cfm.

Who is the Northeast Vegetable IPM Working Group?

We include farmers, Extension agents and specialists, private crop consultants, and representatives of processors, EPA, NRCS, and food distribution. We represent the 13 states of the Northeast Region, from West Virginia to Maine and work under the umbrella of the Northeast IPM Center. Our mission is to foster the development and use of IPM as a means to achieve ecological and economic sustainability of vegetable farms in the Northeast. The Educator Exchange is one of several projects we have undertaken to support this goal.

For more information, visit http://northeastipm.org/work_vegetable.cfm.

USDA COST-SHARE FOR CONSERVATION WORK HELPS VEGETABLE GROWERS

Farmers understand better than most people the value of farming practices that conserve natural resources and protect the environment. They also know implementing those practices can be expensive because the initial costs can rarely be recovered from the sale of their crops. To better support growers' efforts, the 2002 Farm Bill increased the funding available to assist growers with the expense of initiating conservation practices. One of the programs funded by the Farm Bill is the Environmental Quality Incentives Program (EQIP). EQIP offers technical expertise for planning and designing conservation practices that protect water and air, increase soil productivity, manage agricultural waste and sustain agricultural land. The EQIP Program offers cost-share funds to make these practices affordable.

Many vegetable farmers have had little experience with NRCS or other government conservation programs. Taking advantage of these opportunities may seem challenging. This article is intended to guide you in the steps you need to get started.

Who Can Participate?

Participation is voluntary. Private landowners and operators who have produced and sold \$1000 or more of agricultural products for two of the last five years may participate in the EQIP program. Land considered for enrollment may be privately or publicly owned, as long as the land is under private control for the contract period, and installation of conservation practices will contribute to an improvement in the identified natural resource concern. Cost-share for irrigation related practices is available only on land that has been irrigated for two of the last five years.

What Kinds of Conservation Practices are Covered?

Many kinds of conservation practices qualify for incentive payments. The particular practices that would be appropriate to your farm will depend on the needs of your operation, what resources need to be protected, and the conservation plan that you develop with the NRCS staff in your district. There are many conservation practices that are well suited to vegetable operations. Potential practices that might be part of your conservation plan:

Conservation Practice
Crop Management Practices
Agrichemical Mixing Facility
Comprehensive Nutrient Management Planning
Contour Farming
Cover Crop
Critical Area Planting
Diversion
Fence (deer)
Nutrient Management
Pest Management
Residue Management - No Till/Strip Till
Residue Management - Mulch Till
Residue Management - Ridge Till
Transition to Organic Production
Erosion Control Practices
Access Road (erosion control for existing roads)
Field Border
Filter Strip
Grade Stabilization Structure
Grassed Waterway
Lined Waterway or Outlet
Sediment Basin
Stripcropping
Subsurface Drain (as a component of terrace, waterway, stripcropping, or other approved practice)
Terrace
Underground Outlet (as a component of terrace, waterway, stripcropping, or other approved practice)
Water & Sediment Control Basin
Irrigation Water Conveyance
Irrigation Storage Reservoir
Irrigation System, Micro-irrigation
Irrigation System, Sprinkler
Irrigation Water Management
Pumping Plant
Water Well (multiple use wells will be pro-rated for agricultural use)

Agricultural Waste Management
Composting Facility
Comprehensive Nutrient Management Planning
Constructed Wetland
Critical Area Planting
Diversion
Roof Runoff Structure
Sediment Basin
Waste Utilization
Waste Water Treatment Strip
Windbreak/Shelterbelt

Pest Management Incentives:

Implementing Integrated Pest Management on the farm often saves money, but may also involve some initial investment or some new practices that growers are not sure, at the outset, will pay off. The Pest Management incentive payment helps offset the cost of trying these new practices. EQIP offers an IPM base payment on a per-acre basis, and covers activities such as pest monitoring, using action thresholds, weather monitoring and disease forecasting, releasing beneficial insects, crop rotation, utilizing less hazardous chemicals, adhering to DAR storage guidelines, improving sprayer coverage, applying pesticides with retrofitted sprayers, perimeter trapping systems, and spot treatment.

How to Get Started:

1. Contact your nearest NRCS office and tell them you want to apply for or EQIP.

Schedule a visit to sign up for EQIP. As part of this initial step, the NRCS District Conservationist or a conservation planner will help you fill out a pre-application form to see if you are eligible for the program. The pre-application form asks basic questions about your farm. There is a rolling application process, so applications can be submitted at any time. However, it is best to submit pre-application form directly to the District Conservationist as soon as possible, so that your application can be completed in time to be included in the state ranking process.

2. Work with NRCS to draft a conservation plan for your farm.

Next, a visit to your property will be scheduled. You will work with a conservation planner to inventory your resources and identify opportunities for conservation improvements. Together you will decide how to address your natural resource concerns. Your decisions will be recorded in a conservation plan. Your conservation plan will become part of your EQIP application and will be ranked against other farms in Massachusetts for a portion of avail-

able funding.

3. Complete the application.

Once you have identified the resource concerns and practices to address those concerns, you and the District Conservationist will complete your application. If you are a Limited Resource Producer or Beginning Farmer, you are eligible for higher payments – check with the NRCS staff to determine if you qualify.

4. Submit the application to NRCS

Once you have submitted your application to NRCS, it will be ranked with other applications in the state based on the number of points it has received. The NRCS District Conservationist will contact you about whether or not your application is funded. If your application has been accepted, you will complete and sign a contract stating the payments and your obligations.

USDA-NRCS Offices

- Massachusetts State Office
451 West Street, Amherst, MA 01002
(413) 253-4350
- Barnstable Field Office
270 Communications Way, Unit 1G, Hyannis, MA 02601
(508) 771-6476
- Greenfield Field Office
55 Federal Street, Room 290, Greenfield, MA 01301
(413) 772-0384 ext 3
- Hadley Field Office
195 Russell Street, Suite B6, Hadley, MA 01035
(413) 585-1000 ext 3
- Holden Field Office
52 Boyden Road, Room 10, Holden, MA 01520
(508) 829-4477 ext 3
- Pittsfield Field Office
78 Center Street, Suite 206, Pittsfield, MA 01201
(413) 443-1776 ext 3
- Westford Field Office
319 Littleton Road, Suite 302, Westford, MA 01886
(978) 692-1904 ext 3
- West Wareham Field Office
15 Cranberry Highway, West Wareham, MA 02576
(508) 295-5151 ext 2

For more information on the Massachusetts EQIP program visit: www.ma.nrcs.usda.gov/programs/eqip.html

--This article was adapted for Massachusetts from guidelines developed by Michael Brewer and Joy Landis, Michigan State University IPM Program (“Succeed with EQIP”) and by staff at the Massachusetts NRCS office (“How EQIP Works in Massachusetts”).

Don't Forget -

**New England Vegetable and Berry Growers'
Association
and
New England Cooperative Extension
present an
ALL DAY MEETING
Saturday, December 2 , 2006**

See page 2 for more information.

*Vegetable Notes, Ruth Hazzard, editor and Kate Reidel, Assistant
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