UMASS EXTENSION

Vegetable Notes

For Vegetable Farmers in Massachusetts

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CROP CONDITIONS

Growers have been pushing to get their winter squash and pumpkins in before sunscald, rain, cold, disease, and other threats reduce their quality and value. The heavy powdery mildew and downy mildew outbreaks in August left little protective foliage over the fruit; when the intense heat wave came at the end of August a lot of acorn, buttercup and Delicata suffered from sunscald. Buttercup was better able to withstand the oven-like temperatures. For growers expanding their fall and winter harvests, September has become even busier since fall plantings of greens need to go in along with the major harvest of fall crops. Dry conditions persist throughout the state which has made cover crop establishment more difficult -- though it is surprising how rye, oats and vetch can sprout with very little moisture in the soil. Tomato plantings that came in early have finished early. Thankfully, no additional late blight has been confirmed in Massachusetts since July, though it has been found and confirmed over the past two weeks in new fields in NH and NY. None was found in potato in MA this year. This means that risk of late blight overwintering in the field is far, far lower than it was at this time last year.

Note hoophouse events coming up soon – September 17 at Bolton Flats Mentor Farm, October 21 at Indian Head Farm in Berlin. And don't miss the New England Greenhouse Conference November 3 – 4 in Worcester, focusing on floriculture as well as 'alternative crops' for greenhouses.

SEEDERS FOR HOOPHOUSE AND FIELD GREENS

High tunnels, otherwise known as hoophouses, provide a growing environment that opens the door to year-round vegetable production at a reasonable cost. These unheated structures, with one or two layers of plastic, vented by means of roll-up sides and end-wall vents, require lower energy and infrastructure inputs than full-scale greenhouses. By using interior row covers close to the crop, cold-tolerant crops can be grown through the winter for continued growth and harvest in early spring. These crops include Brassica greens such as Tatsoi, Mizuna, Yukina Savoy, Siberian kale, Winterbor kale, salad turnips such as Hakurei, radishes, lettuce, spinach, chard, and Winter sprouting Broccoli. Frost-sensitive crops such as summer squash or tomato can also be started in spring for an earlier harvest, or started in late summer to extend into fall.

Growers across New England and the US have been using and learning about high tunnels for over twenty years, but they are new to many vegetable growers in the region. This year, through a special funding program from the Natural Resources Conservation Services, over 60 new high tunnels are being built in Massachusetts. Across the US, 2300 tunnels are being built. This represents a terrific opportunity for each farmer to figure out which crops best fit their needs, markets, and yearly schedule.

This is the season for seeding greens that will grow during September-November for Dec-February harvest. The period from late November until late January, with short days, low light, and cold temperatures, won't produce much new growth, but the period both before and after can generate good crop growth and many crops can weather that dead zone to be harvested or to grow on.

Greens can also be grown in the field under low tunnels or row covers for harvest in November-December.

High tunnel bed space is valuable real estate and needs to generate good yields to turn a profit. To get reliable, consistent densities, a good seeder is a vital tool. Consistent between-row and in-row spacing is key. Flexibility for different seed sizes is also important: Brassica seeds are small and round but vary greatly in size; lettuce is larger; spinach, chard, and beets are larger still. This article will attempt to review several options for one-row and multiple-row seeders based on conversations with growers and various resources. This is a work in progress and I welcome feedback and input on what seeders work or don't work, other seeder options, or how to make each one perform best. This article presents information that is available at the time of printing; no endorsement or lack of endorsement is intended or implied.

With all of these seeders, as with most any farm implement, expect to spend some time tinkering and testing different seeding plates or rollers with various seeds in order to get just the spacing that you need.

Seeders

Earthway. Source: Johnny's Selected Seeds, Earthway Outlet, Sutton Ag, price range $90-110. Single row, 6 seed plates. Lightweight, easy to change plates. Seed plates are preset to provide spacing that is typical for the crop. For small seeded crops (eg Brassicas) use cauliflower (extra) or radish (standard set) plate; set for 1 inch space but will give a dense spacing in the row for smaller seeded Brassicas. To adjust spacing, plug some holes with beewax or caulk.

Notes: Many growers use this seeder for a range of seed sizes in both field and hoophouse and are happy with it. One problem with this seeder is that small seeds can get caught behind the seedplate and damaged; manufacturer recommended washing plate in soapy water to solve this. Another limitation is that the seed spacing cannot be adjusted except by plugging holes in the seedplate. Several can be bolted together to plant several, evenly-spaced rows; they can also be purchased as a multi-row seeder.

Pinpoint seeder. Johnny's Selected Seeds. $239. Requires fine seedbed without residues, lumps, or stones. Designed for small seeds (lettuce, Brassicas) and close spacing within-row. Plants four rows 2 1/4" apart, or optionally two rows 4 1/2" apart or two rows 6 3/4" apart. Designed to be pulled. Handle included. Comes standard with four seed-hole sizes for small to medium size seed. http://www.johnnyseeds.com/c-460-seeders.aspx

Notes: Feedback that I have heard from growers indicates that it is difficult to get the desired efficiency and seed placement with this seeder. Requires rolling the seedbed before and after planting for a semi-firm surface and to cover seed after planting. See Six-row seeder below.

Six-row seeder. Johnny's Selected Seeds, $549. An improved version of the 4-row pinpoint seeder based on feedback about the pinpoint seeder. Requires fine seedbed without residues, lumps, or stones. Up to six rows can be planted at once with 2 1/4" spacing between rows. A roller in front firms and levels the soil. One in the back closes the furrows and drives the seed shaft. Four hole sizes are provided for seeds from raw carrots through pelleted lettuce. Three different drive ratios give spacing within the rows of 1", 2", or 4". http://www.johnnyseeds.com/c-460-seeders.aspx

Clean Seeder. Manufactured by Jang Automation Co., Ltd, distributed by Mechanical Transplanter. 800-757-5268. One-row without fertilizer hopper, $379. Drive wheel that turns seed roller, press wheel behind. Seed rollers for varying seed sizes and number of seed holes per roller (to change seeding density). Gear ratios can be changed to alter seeding density for a given seed size. With adjustment of these three elements this seeder can give a range of seed densities. Seed hopper has a cover. Can handle more trash and unevenness in the seedbed compared to the six-row and pinpoint seeders. Multi-row and tractor-mounted designs also available. http://www.mechanicaltransplanter.com/seeder.html

Notes: We have used this seeder at the UMass Student farm and have found it effective in giving various spacings for various size seeds, given that you take time to play around with it. Easy to collect the seeds dropped per 3 ft (one turn of the wheel) to estimate seed count. Good weight for hand use by one person.

Sutton Jr. and Mini-Sutton Jr. Seeders. Sutton Agricultural Enterprises, Inc. Price starts at $1,950 for the Sutton Jr., and $1,671 for the MiniSutton Jr. These are designed specifically for high density, small plot planting, to be hand-driven by one or two people. Sutton Jr is 80-lb Sutton Jr. while MiniSutton Jr. weighs about 65 lbs. and has a narrower handle. Large ground wheel drive in front provides seed agitation, bed is firmed both before and after seeding by PVC rollers. Sutton Jr can seed up to 17 rows on 24 inch wide bed, or seed wider between-row spacing by closing off some of the tubes or using a seed plate with fewer holes. A single hopper feeds all rows. Plastic seed plates with varying hole sizes and spacing can be changed easily and can be custom ordered to fit your needs. Larger, tractor drawn seeders are also avail-

able. http://www.suttonag.com/SuttonJr.html

Notes: one grower reports being very satisfied with this seeder for intensive greens production – seeds quickly and efficiently which is very helpful for a situation with a limited workforce.

LOOKING FOR GROWERS INTERESTED IN DEEP ZONE TILLAGE

Use of deep zone tillage for primary field preparation enhances soil health, protects surface water quality and provides numerous management benefits to vegetable growers. Five years of trials both on farms and at research stations in New York, Connecticut and other states in the Northeast have found that deep zone tillage supports similar yields to conventional tillage for sweet corn, dry beans, cabbage, squash and pumpkins. Cornell has tested reduced tillage for organic pepper and cabbage production with positive results. Growers who have tested deep zone tillage have found savings in labor (between 25 and 60%) and fuel costs (between 25 and 70%) compared to their conventional tillage systems (moldboard plow plus other passes). While cost savings are significant, growers report the most important benefit of reduced tillage is the greater flexibility afforded early in the season. By speeding up primary tillage and field preparation, growers can be timelier with planting, be more efficient with labor, have lower equipment maintenance needs, and improve early-season cash flow. In some cases, growers have been able to expand total farmed acres because of the efficiencies and benefits afforded by reduced tillage systems.

With support from SARE and the UMass Center for Agriculture, we have begun experimenting with deep zone tillage (DZT) in vegetable crops here in Massachusetts. We're particularly interested in how this tillage system affects soil water dynamics, and what impact this may have on how well the plants can tolerate drought and/or flooding, and how this could affect the development of Phytophthora capsici in susceptible crops. To explore these question we have set up trial plots at the UMass Crops Research and Education farm, where we will compare DZT with conventional moldboard plow tillage and record crop growth, yield, soil health, and other measures of crop performance and soil water dynamics over three cropping seasons.

In addition to these trials, we are partnering with growers who are interested in experimenting with this system in their own fields. If you have a field where Phytophthora blight has been a problem, where the drainage has been poor or compaction is an issue, or if you're just curious to see if this system can benefit your farm, we'd be happy to help you experiment with this system. We have deep zone tillage equipment that we'd be willing to trailer to your farm if necessary. We're looking for a small number of growers that would like to participate in a side by side comparison of DZT vs conventional tillage in their own fields. Growers participating in these trials will also receive detailed reports and recommendations about the health and structure of their soil and how it changes over time with these treatments. We're also looking for growers who are just curious about how DZT would work on their farms and would like to try the equipment and follow along with UMass Extension and other growers as we learn about and experiment with this new system.

Spring planting may seem like ages away now that fall harvest is in full swing, but as cover crops get sown and fields are put to bed for the winter it's a good time to start thinking about which fields you might want to try this system in come spring. Your choice of cover crop this fall can have an impact on how the DZT system will be implemented in the following season.

If you'd like to try the equipment, participate in a trial, or just learn more about DZT, please contact Andy Cavanagh at 413-658-4925 or email at acavanagh@psis.umass.edu.

BRASSICAS COVER CROPS

Brassica and mustard cover crops are known for their rapid fall growth, great biomass production and nutrient scavenging ability. However, they are also attracting interest because of their possible pest management characteristics. Most Brassica species release chemical compounds that may be toxic to soil borne pathogens and pests, such as nematodes, fungi and some weeds. The mustards unusually have higher concentrations of these chemicals.

Brassicas are increasingly used as winter or rotational cover crops in vegetable and specialty crop production. Some Brassicas have a large taproot that can break through plow pans better than the fibrous roots of cereal cover crops or the mustards. Those Brassicas that winterkill decompose very quickly and leave a seedbed that is mellow and easy to plant in.

With a number of different species to consider, you will likely find one or more that can fit your farming system. Don't expect Brassicas to eliminate your pest problems, however. They are a good tool and an excellent rotation crop, but pest management results are inconsistent. More research is needed to further clarify the variables affecting the release and toxicity of the chemical compounds involved. Since these cover crops share insect pest and diseases with Brassica vegetables and Brassica weeds, care should be taken when building these into your rotation when Brassica crops are important to you crop mix.

Benefits

Erosion control and nutrient scavenging. Brassicas provide excellent soil coverage and up to 8,000 lb. biomass/A. Because of their fast fall growth, Brassicas are well-suited to capture soil nitrogen (N) remaining after crop harvest. The amount of nitrogen captured is mainly related to biomass accumulation and the amount of N available in the soil profile.

Because they immobilize less nitrogen than some cereal cover crops, much of the N taken up can become available for uptake by main crops in early to late spring. Brassicas can root to depths of six feet or more, scavenging nutrients from below the rooting depth of most crops. To maximize biomass production and nutrient scavenging in the fall, Brassicas must be planted earlier than winter cereal cover crops in most regions, making them more difficult to fit into grain production rotations.

Pest Management. All Brassicas have been shown to release biotoxic compounds that exhibit broad activity against bacteria, fungi, insects, nematodes, and weeds. Brassica cover crops are often mowed and incorporated to maximize their natural fumigant potential. This is because the fumigant chemicals are produced only when individual plant cells are ruptured. The timing and method of incorporation seems to be a key factor in how effective they are at suppressing pests.

University studies have shown Brassica green manures to suppress Rhizoctonia, Scab, and Verticillium in potatoes and Phtophthora blight in cucurbits. It has also shown efficacy in reducing nematode and weed populations in various cropping systems.

The use of Brassica cover crops for disease and insect control is still very much a work in progress. This coming growing season, we're hoping to partner with interested growers on experimenting with using 'Caliente' mustard to suppress Phytophthora blight in vine crops. If you have phytophtora in your fields and are interested in exploring this option with us, please contact Andy Cavanagh at acavanagh@psis.umass.edu or 413-658-4925.

Deep tillage. Some Brassicas (forage radish, rapeseed, turnip) produce large taproots that can penetrate up to six feet to alleviate soil compaction. This so-called "biodrilling" is most effective when the plants are growing at a time of year when the soil is moist and easier to penetrate.

As the large tap roots decompose, they leave channels open to the surface that increase water infiltration and improve the subsequent growth and soil penetration of crop roots. Smaller roots decompose and leave channels through the plow plan and improve the soil penetration by the roots of subsequent crops.

Most mustards have a fibrous root system, and rooting effects are similar to small grain cover crops in that they do not root so deeply but develop a large root mass more confined to the soil surface profile.

Species

Rapeseed (or Canola). Two Brassica species are commonly grown as rapeseed, Brassica napus and Brassica rapa. Rapeseed that has been bred to have low concentrations of both erucic acid and glucosinolates in the seed is called canola, which is a word derived from Canadian Oil. Rapeseed is used as industrial oil while canola is used for a wider range of products including cooking oils and biodiesel.

Annual or spring type rapeseed belongs to the species B. napus, whereas winter-type or biennial rapeseed cultivars belong to the species B. rapa.

Besides their use as an oil crop, these species are also used for forage. If pest suppression is an objective, rapeseed should be used rather than canola since the breakdown products of glucosinolates are thought to be a principal mechanism for pest control with these cover crops. Rapeseed has been shown to have biological activity against plant parasitic nematodes as well as weeds.

Mustard. Mustard is a name that is applied to many different botanical species, including white or yellow mustard (Sinapis alba, sometimes referred to as Brassica hirta), brown or Indian mustard (Brassica juncea)—sometimes erroneously referred to as canola —and black mustard (B. nigra (L.). The glucosinolate content of most mustards is very high compared to the true Brassicas. Mustards have also been shown to suppress growth of weeds.

Because mustards are sensitive to freezing, winterkilling at about 25º F, they are used either as a spring/summer crop or they winter kill except in areas with little freeze danger. Brown and field mustard both can grow to 6 feet tall.

Radish. The true radish or forage radish (Raphanus sativus) does not exist in the wild and has only been known as a cultivated species since ancient times. Cultivars developed for high forage biomass or high oilseed yield are also useful for cover crop purposes. Common types include oilseed and forage radish.

Their rapid fall growth has the potential to capture nitrogen in large amounts and from deep in the soil profile. Above ground dry biomass accumulation reached 8,000 lb./Acre and N accumulation reached 140 lb./Acre in Michigan. Below ground biomass of radishes can be as high as 3,700 lb./Acre. Radishes have been shown to alleviate soil compaction and suppress weeds.

Turnips. Turnips (B. rapa L. var. rapa (L.) Thell) are used for human and animal food because of their edible root. Turnip has been shown to alleviate soil compaction. While they usually do not produce as much biomass as other Brassicas, they provide many macrochannels that facilitate water infiltration. Similar to radish, turnip is unaffected by early frost but will likely be killed by temperatures below 25° F.

Management

Fall-planted Brassica cover crops fit well into vegetable cropping systems following early harvested crops.

Planted in mid to late August, white mustard emerges quickly and produces a large amount of biomass before succumbing to freezing temperatures. As a component of integrated weed management, using Brassica cover crops in vegetable rotations could improve weed control and reduce reliance on herbicides.

Winter-killed forage radish leaves a nearly weed- and residue-free seedbed, excellent for early spring “no-till” seeding of crops such as carrots, lettuce, peas and sweet corn. This approach can save several tillage passes or herbicide applications for weed control in early spring and can take advantage of the early nitrogen release by the forage radish. Soils warm up faster than under heavy residue, and because no seedbed preparation or weed control is needed, the cash crop can be seeded earlier than normal.

Establishment. Most Brassica species grow best on well drained soils with a pH range of 5.5–8.5. Brassicas do not grow well on poorly drained soils, especially during establishment. Winter cover crops should be established as early as possible. A good rule of thumb is to establish Brassicas about 4 weeks prior to the average date of the first 28° F freeze. The minimum soil temperature for planting is 45° F; the maximum is 85° F.

Winter hardiness. Some Brassicas and most mustards may winterkill, depending on climate and species. Forage radish normally winter kills when air temperatures drop below 23° F for several nights in a row. Winter hardiness is higher for most Brassicas if plants reach a rosette stage between six to eight leaves before the first killing frost. Some winter-type cultivars of rapeseed are able to withstand quite low temperatures (10° F).

Late planting will likely result in stand failure and will certainly reduce biomass production and nutrient scavenging. Planting too early, however, may increase winterkill.

Winter vs. spring annual use. Brassica and mustard cover crops can be planted in spring or fall. In our area most species can be managed to winterkill, leaving a mellow seedbed requiring little or no seedbed preparation. For the maximum benefits offered by Brassicas as cover crops, fall planting is usually preferable because planting conditions (soil temperature and moisture) are more reliable and the cover crops produce more dry matter. When using them as bio-fumigants for reducing Phytophthora blight, spring planting may be more appropriate.

Mixtures. Mix with small grains (oats, rye), other Brassicas or legumes (e.g. clover). Brassicas are very competitive and can overwhelm the other species in the mixture. The seeding rate must be adjusted so ensure adequate growth of the companion species. Consult local expertise and start with small plots or experiment with several seeding rates.

Seed and Planting. Because Brassica spp. seed may be scarce, it is best to call seed suppliers a few months prior to planting to check on availability. Brassica seeds in general are relatively small; a small volume of seed goes a long way.

Rapeseed (Canola). Drill 5-10 lb./A no deeper than ¾ in. or broadcast 8–14 lb./A.

Mustard. Drill 5-12 lb./A ¼–¾ in. deep or broadcast 10-15 lb./A.

Radish. Drill 8 to 12 lb/A. ¼–½ in. deep, or broadcast 12-20 lb./A. Plant in late summer or early fall after the daytime average temperature is below 80° F.

Turnip. Drill 4-7 lb./A about ½ in. deep or broadcast 10-12 lb./A. Plant in the fall after the daytime average temperature is below 80° F.

Nutrient Management.

Fall planted Brassicas may be able to scavenge adequate nitrogen, but spring planted Brassicas may benefit from supplemental nitrogen and sulfur fertility, especially if there are to be used as a biofumigant. Brassica sulfur (S) nutrition needs and S uptake capacity exceed those of many other plant species, because S is required for oil and glucosinolate production. Glucosinolates are the key to the Brassicas effectiveness as biofumigant. A 7:1 N/S ratio in soils is optimum for growing rape, while N/S ratios ranging from 4:1 to 8:1 work well for Brassica species in general.

Some Brassicas, notably rape, can scavenge P by making insoluble P more available to them via the excretion of organic acids in their root zone.

Brassicas decompose quickly. Decomposition and nutrient turnover from roots (C:N ratios 20- 30) is expected to be slower than that from shoots (C:N ratios 10-20), but overall faster than that of winter rye. A winter-killed radish cover crop releases plant available nitrogen especially early in spring, so it should be followed by an early planted nitrogen demanding crop to avoid leaching losses.

Brassica cover crops should NOT be planted in rotation with other Brassica crops such as cabbage, broccoli, and radish because the latter are susceptible to similar diseases. Also, scattered volunteer Brassica may appear in subsequent crops. Controlling Brassica cover crop volunteers that come up in Brassica cash crops would be challenging if not impossible.

-- adapted by Andy Cavanagh from 'Managing Cover Crops Profitably', 3rd Edition. Contributors: Guihua Chen, Andy Clark, Amy Kremen, Yvonne Lawley, Andrew Price, Lisa Stocking, Ray Weil

Location	ZI	EII	Total ECB	CEW	FAW
CT Valley					
Sunderland	5	15	16	24	0
Hadley	0	3	3	27	5
Southwick	0	0	0	13	2
Whatley	0	7	7	27	0
Feeding Hills	0	0	0	35	7
Central & Eastern MA					
Dracut	1	4	5	17	4
Concord	1	1	2	19	1
Northbridge	0	1	1	11	3
Framingham	0	1	1	17	1
Spencer	0	0	0	2	0
Still River	0	0	0	7	0
Lancaster	0	0	0	15	0
Littleton	1	7	8	22	3
Tyngsboro	0	1	1	12	1
Berkshires					
Sheffield	1	0	1	3	0
NH					
Litchfield, NH	16	0	16	64	90
Hollis, NH	4	0	4	28	5
Mason, NH	10	0	10	11	0

SWEET CORN REPORT

The sweet corn season of 2010 is slowly drawing to an end. Warm temperatures from this summer sped up harvesting enough that the season is ending a week or two early for some. There are still a few blocks of silking corn here and there that are in danger of corn earworm infestation so spraying

does continue for some growers. Locations in southern New Hampshire and northeastern Massachusetts are still reporting trap captures above or close to 100 CEW this week. For sweet corn that you expect to pick in late September or October, spray schedules can be extended due to the cool nights and low daytime temperatures. Continue on a five to seven day spray schedule where trap captures are over seven moths per week.

Corn Earworm Threshold		
Moths/Night	Moths/Week	Spray Interval
0-0.2	0-1.4	no spray
0.3-0.5	1.5-3.5	every 6 days
0.6-1	3.6-7	every 5 days
1.1-13.0	7.1-91	every 4 days
Over 13	Over 91	every 3 days

European corn borer flight has dropped dramatically or ended most places. Traps for ECB can be removed for the season. Wash traps with a mild bleach solution and store in a dry, rodent protected space for the winter. Replace traps with holes, worn out Velcro or missing ties. New traps, lures and other scouting supplies are available through Great Lakes IPM, visit www.greatlakesipm.com or call 989-268-5693 to order or obtain a catalog. Store extra lures from this season in the freezer for use next season. Pepper growers should be able to stop any further ECB sprays now, if they have not already done so.

This will be the final corn report for the season. We would like to offer a special thanks to the farmers, Extension specialists and consultants who sent in trap counts all season. Without their generosity in time and effort we would not be able to maintain a trapping network that covers the whole state and extends northward into NH. Many thanks to Jim Mussoni, David Rose, Jim Golonka, Paul Willard, George Hamilton, Bruce Howden, Jim Ward and Ilan Harris for their contributions to the scouting network.

As the 2010 season comes to an end you may want to consider how your own on-farm scouting program could benefit you next season. As you may have noticed, trap captures and field infestation levels can be very different from one location to the next. By monitoring flight patterns and caterpillar activity on your own farm you may be able to save yourself some time, money and stress. For information and resources on how to do implement a sweet corn scouting program on your farm, contact us at brown@umext.umass.edu or visit the University of Massachusetts Vegetable Program website at: www.umassvegetable.org and download a copy or the Using IPM in the Field, Sweet Corn IPM Scouting Guide.

UPCOMING MEETINGS

UMass Beginning Farmer Initiative

Presents:

USDA programs outreach forum for beginning farmers

Flats Mentor Farm

Seven Bridge Road, Rt. 117

Friday, September 17th, 2010 from 9:00 AM – 4:30 PM

Learn about growing vegetables in a HIGH TUNNEL

Extend the growing season and expand your farming business.

Learn about USDA programs to assist sustainable farming enterprises.

See attached flier for agenda and details.

New Online Cornell Courses for Beginning Farmers Debut This Fall!

Reserve Your Spot Now!

Need some guidance on the development or expansion of a farm enterprise? Can't find any trainings near you? If you're comfortable enough with a computer to consider learning online, you'll be glad to know that the Cornell Small Farms Program and Cornell Cooperative Extension are expanding offerings of their popular online courses for beginning farmers with two new online courses this Fall, in addition to our usual beginners Fall course, BF 101. Join experienced CCE and farmer instructors and 25 of your farmer peers in a dynamic learning experience that incorporates both self-paced readings and real-time virtual meetings with discussion forums, homework activities, guest presenters, and developing a custom¬ized plan for your next steps in farming.

The Cornell Small Farms Program and Cornell Cooperative Extension (CCE) present:

BF 110: Soil Health Basics: Investing in the Vitality of Your Farm

NOTE: This course will incorporate a face-to-face field day hosted by the Northeast Organic Farming Association at instructor David Belding's Cross Island Farms on Wellesley Island, NY, 4pm-7pm Oct 18th. This will be an amazing opportunity to meet your fellow coursemates and see firsthand how David has improved the soils on his farm over the past 5 years. The field day fee is covered by the course registration cost.

Instructors: David Belding – Cross Island Farms, Wellesley Island, NY, and Dan Welch – CCE Cayuga

BF 104: Financial Record-keeping: A Cornerstone of Farm Profitability

Instructors: Bonnie Collins – CCE Oneida County and Steve Hadcock - CCE Columbia County

BF 101: Taking Stock: Evaluating Your Land and Resources and Choosing an Enterprise

NOTE: You will get the most out of this course if you already have access to land. Each participant will be gathering information about their own enterprise and will begin to create a Farm Plan.

Instructors: Laura Biasillo - CCE Broome County and Dianne Olsen – CCE Putnam County

COURSE DATES: Thurs. Oct 14, 2010 to Wed. Nov 24, 2010. All courses incorporate live webinars featuring farmers, agency staff, and University faculty. See link below for webinar dates and details.

COST is $150 per course, except the Soil Health course, which is $165

TO REGISTER, or for more information on course format and requirements, please visit http://www.nybeginningfarmers.org/index.php?page=onlinecourse

Greenhouse and High Tunnels: Shelled corn for heat in the greenhouse, Crops that work in unheated high tunnels.

Thursday Oct 21

4-6:30 pm

See the attached flier for more information!

Northeast Greenhouse Conference and Expo 2010

November 3 - 4, 2010

DCU Center, Worcester, MA

New England Floriculture, Inc., invites you to attend The Northeast Greenhouse Conference & Expo in Worcester, Massachusetts and join other growers and retailers for the largest nationally recognized floriculture industry show in New England.

For registration and details, please see: http://www.negreenhouse.org/

If you would like to become a Vegetable notes sponsor, please contact Jessica Dizek at jdizek@outreach.umass.edu or 413 545 1445

Vegetable Notes. Ruth Hazzard, editor and Amanda Brown and Andrew Cavanagh, assistant editors. Vegetable Notes is published weekly from May to September and at intervals during the off-season, and includes contributions from the faculty and staff of the UMass Extension Vegetable Program, other universities and USDA agencies, growers, and private IPM consultants. Authors of articles are noted; author and photographer is R. Hazzard if none is cited.