UMASS EXTENSION

Vegetable Notes

For Vegetable Farmers in Massachusetts

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CROP CONDITIONS

Rain has blanketed the state, over 2 inches in one day in the Southeast with more expected in the path of hurricane Ophelia. Lower levels of rainfall were reported in west and central parts of the state. Growers have been working hard to get late season crops out of the field, whether it be pumpkins and winter squash, peppers and tomatoes, late sweet corn, cabbage, potatoes, or greens. Pumpkins are on the move around the state, headed to their destinations at farmstands and stores as markets all gear up to feature New England's classic fall crops. Winter greens are being succession-planted in hoop-houses. For many fields in southern New England the end of the drought is too late to help with yields. Soil moisture will help establish fall cover crops.

This is the final weekly issue of Vegetable Notes for the 2005 growing season. We hope the information has been useful for your farm. When we send out a brief survey in October, we hope you will send us feedback and suggestions!

We would especially like to thank the growers, consultants and USDA agency staff who checked sweet corn traps weekly and reported their counts. This has been a four-state effort – Vermont, Rhode Island, New Hampshire, and Massachusetts for the first time. Thanks to all the following people:

Charles Leitch – Pittsfield MA
Dave Dumaresq – Dracut MA
David Rose – Swansea MA
Paul Willard – Still River MA
Bruce Howden – Sheffield MA
Frank Ciesluk – Deerfield MA
Joe and John Boisvert – N. Hadley MA
Joe Czajkowski – Hadley MA
Jim Golonka – Hatfield, MA
Jay Otto – Dighton, MA (Farm Services Agency)
Wayne Kinglsey – Brandon VT
Tom Harlow - Westminster VT
Tim Gallagher – Coventry RI
Keith Marshall -- Litchfield, NH
Frank Whittemore - Hollis NH
Matt LeClair - Mason, NH
George Hamilton, New Hampshire Cooperative Extension, who reported on NH captures.
Amanda Duphily, UMass Extension, who scouted and reported on several MA farms.
Ben Hunsdorfer, who compiled the data and posted it on the PestWatch website.

We would also like to thank the Environmental Protection Agency Region I, the New England Vegetable and Berry Growers Association, and individual farmers and farm businesses, without whose financial support this newsletter and the sweet corn network would not have been possible.

Vegetable Notes will be published every 4-6 weeks during the winter, to notify you of educational programs and report on research and news in vegetable farming. We look forward to seeing you at a fall twilight meeting, the New England Vegetable and Fruit Conference and other winter meetings!

--Ruth Hazzard, and the UMass Extension Vegetable Team.

COME TO IPSWICH FOR TWO FALL TWILIGHT MEETINGS!

Wednesday September 28
Marini Farms, Ipswich, MA
5:30-7:30 pm

This 200-acre vegetable farm, which has been in operation since 1928, is managed by Mario Marini and his son Michael. They sell 60% wholesale and 40% retail at their farmstand. The farm has used IPM since 1985, and has hired a private IPM consultant for many years. Flowers, vegetables and berries are key crops.

Program will include:

- Late crops for after frost including sweet corn and tomatoes harvested green and stored (with irrigation for frost protection);
- Customer entertainment such as a corn maze and a straw man scare crow;
- Plasticulture for vegetables and strawberries and a plastic retriever which Mario designed;
- Use of IPM in sweet corn including releases of Trichogramma wasps for control of European corn

borer and Avaunt for fall armyworm;

- Weed control programs in sweet corn including the new herbicide Callisto.

Light refreshments will be served.

Directions:

On I-95 going north from Boston, take exit 50 (merge onto US-1 N). Go 6 miles north on Route 1 to Linebrook Rd; turn right. On I-95 going south, take Exit 54, take Route 133 to US 1. Go south to Linebrook Rd, turn left. The farmstand is 1 mile east of Rte 1 on Linebrook Rd, on the left side. Park at the farmstand.

Contact:
Marini Farm: (978) 356-0430

or **A. Rich Bonnano:** 978-361-5650

Wednesday October 19, 2005
Appleton Farm CSA,
219 County Rd., Ipswich MA
3:00-5:30 pm

Appleton Farms, as a whole, is a 900+ acre farm and conservation property in Ipswich, managed by The Trustees of Reservations. The farm includes a 430-share CSA (Community Supported Agriculture) in its fifth year; a grass-based 40-head Jersey dairy; educational programs, hay lands, wetlands, woodlands and public trails. The twilight meeting will focus on Appleton Farm CSA. The tour will begin promptly at 3:15.

Program will include:

- Tour of cropland and fall crops, as well as the barns used for crop storage and CSA shareholder pickup.
- How the farm plans for harvesting 400 CSA weekly shares from June through November.
- How nutrients, pests and crop rotations are managed using organic methods.
- The first year's results of the farm's participation in the Brassica Research project through UMASS/SARE. This research being managed by the farm staff and is focusing on 1) improved broccoli quality throughout the season, 2) managing fall rutabagas and turnips for root maggot and 3) managing brussels sprouts for the best size and quality.

Light refreshments will be served.

Directions:

From Rt. 95/128N: Stay on 128N when the roads split. Take exit 20A, Route 1A north toward Hamilton – this exit comes quick and is a sharp curve. Go about 7 miles north on 1A (1A is County Road in Ipswich). Look for a road sign that says "Entering Ipswich". Appleton Farms is on the left, the driveway is set back immediately after a guard rail. Turn left onto the dirt drive, then bear left at the fork in the road toward the big hay barn with green doors. This is the CSA barn, and our fields are just beyond it. Park in the lot in front of the barn.

Contact: Jenny Hausman, Appleton Farms CSA, 978-356-5728 or 978-356-1655. appletonfarms.org or Ruth Hazzard, UMass Vegetable Program 413-545-3696

One hour of pesticide recertification credit will be given for attending each meeting.

DATES FOR WINTER VEGETABLE AND BERRY GROWER MEETINGS

Dates have been set for the regular all-day vegetable and berry meetings that are sponsored by the New England Vegetable and Berry Growers Association and New England States Cooperative Extension. Program details will be published in the October issue of Vegetable Notes.

Meeting # 1. Saturday November 5, 2005
Location: Westport MA, at White's of Westport, 66 State Road, Route 6 Exit 9 east or Exit 10 West off I-195
Time: Registration 9:30 am. Program 10:00 am to 4:00 pm.

Meeting # 2: Friday, January 6, 2006
Location: Chicopee, MA at Day's Inn at the Parwick Centre 450 Memorial Drive, Next to Exit 5 off I-90

Meeting # 3: Saturday, January 28, 2006
Location: Waltham, MA at the Eastern Massachusetts Extension Center 240 Beaver St.

Time: All meetings begin with registration at 9:30 am. The program runs from 10:00 am to 4:00 pm.
Pre-registration required for lunch.
Contact John Howell at 413- 773-0412 for pre-registration
Contact hours for pesticide recertification credit will be offered.

SWEET CORN UPDATE

Sweet corn harvest is 80-85% competed in New England. Insect pressure is down. For sweet corn that you expect to pick in late September or October, spray schedules can be extended. European corn borer flight has dropped dramatically and has ended most places. Captures of the Z strain increased in South Deerfield which may indicate a third flight. Pepper growers should be able to stop any further ECB sprays now, if they have not already done so. Corn earworm is down but a 5 day schedule would be recommended where captures are over 7 moths per week. It is possible that the hurricane will bring a new flush of corn earworm, which would be a concern especially near the coast, for corn that is still in fresh silk. We hope that winds and rains leave the corn standing. Get rye cover down as

soon as possible after harvest to take up nitrogen and store it for next year's crop.

SWEET CORN TRAP COUNTS 9-10 TO 9-16

LOCATION	DATE	ECB Z1	ECB EII	CEW	FAW
CT River Valley					
Old Deerfield	9-15	12	10	31	-
S. Deerfield	9-15	41	6	-	-
N. Hadley	9-15	5	12	19*	21
Feeding Hills	9-15	3	5	31	3
C.& E. MA					
Concord	9-15	1	0	5	3
Tyngsboro	9-15	1	0	5	0
Northbridge	9-15	3	0	1	0
Lancaster	9-15	0	0	3	1
Still River	9-15	-	-	31	-
Monson	9-15	1	0	1	0
N.H.					
Litchfield, NH	9-15	-	-	3	7
Hollis, NH	9-15	-	-	8	7
Mason, NH	9-15	-	-	4	2

**Avg of 4 traps*

--R.Hazzard, A.Duphily, J.Mussoni, D.Rose, W.Kingsley, P.Willard, G.Hamilton

SUSPECT SWEDE MIDGE FOUND IN MASSACHUSETTS

The swede midge is an introduced pest of brassicas that has been found in Niagara County, New York and in 15 counties in Ontario and 20 counties in Quebec, Canada. Massachusetts Department of Agricultural Resources and UMass have been working collaboratively to survey for this pest in Massachusetts as part of the USDA, APHIS Cooperative Agricultural Pest Survey (CAPS). Two suspect swede midge specimens were captured in Hampshire County this summer. One specimen was caught in a garden in Northampton with mixed brassica species. The other was from a vegetable farm in Hadley in cabbage. The suspect swede midge specimens were identified visually and with PCR by Dr. Tony Shelton's lab at Cornell University. Massachusetts Department of Agricultural Resources is continuing to trap in Hampshire County to find another specimen to have its identification verified by a USDA insect identifier. Several other states are also surveying for swede midge this year under the CAPS program. Once the full survey results are in we should have a better idea of distribution of swede midge in the Northeast and what regulatory actions are most prudent to slow its spread.

How did it get here?

The swede midge is a major pest in Europe where it is endemic. No one knows how it reached North America or exactly how long it has been present in Canada. The presence of the swede midge in North America was not confirmed until 2000. The symptoms growers in Canada had been seeing in their fields since 1996 were mistakenly attributed to nutrient deficiency. Since the swede midge is a poor flier, this insect is unable to move long distances on its own. The larvae pupate in the soil; therefore, soil movement is one way in which swede midge may move long distances. Transplants are also considered a vector for transport of swede midge eggs, larvae, or pupae. Canada has put a directive in place to regulate the importation and domestic movement of transplants of host species and soil that may contain life stages of swede midge to prevent the further movement of swede midge. Produce is not seen as a likely vector for movement of the midge.

What does a swede midge look like and what kind of damage does it cause?

An adult swede midge is a very small, brown fly only a few millimeters long. Since adults live only a few days we have been using a pheromone trap that remains in the field for several weeks to catch their flight period. Males are attracted to the pheromone lure in the trap and caught on a sticky card inside the trap. We are looking for adults because they can be identified to species. Larval specimens can only be identified to genus. Larvae cause the damage through feeding on plant tissue. Scouting for swede midge in the field you will see the damage before you see this minute insect. Larvae are initially small (less than 1mm) and transparent. At maturity larvae are 3-4mm long and lemony yellow in color. If you suspect swede midge larvae in host plant tissue, you can place the tissue in a plastic bag in the sun or put the tissue in 70% alcohol to force the larvae out of the tissue.

Damage is more likely to be found around the edges of fields in more sheltered areas (near hedgerows or buildings) because the swede midge is a poor flier and prefers areas of low wind movement. Signs of damage include: brown, corky scarring; swollen and twisted leaf stalks; galls at the growth point of the plant; no head formation; and multi-headed or multi-stemmed plants. Swede midge damage looks like damage caused by cultivation, genetic variability of seed, heat stress, frost damage, or feeding by other insects (e.g. flea beetle or tarnished plant bug) that can damage growing point of the plant. One needs to find larvae within the plant to confirm swede midge is the cause of the damage.

What can you do?

Swede midge is a difficult to control and cultural practices are a big part of the management strategy. Good crop rotation is one of the reasons damage seen in the United

States so far is not as bad as in Canada. Suggested practices include:

1) Start with clean transplants Transplants are considered a likely vector for swede midge movement.

2) Crop rotation out of crucifers for 2-3 years Pupae can remain in the soil for 2 years if they don't have favorable conditions for emergence.

3) Field sanitation Controlling cruciferous weeds eliminates an alternative host for swede midge.

4) Deep plowing and chopped of infested residue Pupae are usually found in the top 5cm of the soil so deep plowing will reduce the viable number of pupae.

5) Early planting Swede midge has between 3-5 generations per season so early planting will allow you to harvest before populations reach their peak.

6) Plant in open fields Early damage occurs along tree lines, buildings, and hedge rows.

7) Cultivar selection Some varieties of broccoli such as Paragon, Eureka, and Packman are more susceptible to damage than Everest, Triathalon, and Regal. While the swede midge will attack any brassica crop, the highest levels of damage have been seen on broccoli, Chinese broccoli (gai lan), Brussels sprouts, cauliflower, Chinese cabbage, and other Asian greens.

8) Preventative insecticide applications. Canadian growers have been using acetamiprid on greenhouse transplants and lamda-cyhalothrin and acetamiprid in the field. Research is continuing to figure out the best pesticides and application times/techniques for use against swede midge.

Please contact me if you suspect swede midge damage in your fields (julie.callahan@state.ma.us or 413.577.0809). Detecting this pest early will allow growers to implement management to keep population levels low and take measures to prevent further spread of swede midge. As any new information about the swede midge is discovered it will be posted on our website (www.massnrc.org/pests).

-Julie Callahan, Massachusetts Department of Agricultural Resources

Sources:

-2005 Interim Best Management Practices to Control the Swede Midge (Contarinia nasturtii Kieffer) http://www.omafra.gov.on.ca/english/crops/facts/bmp_swedemidge.htm

-The Swede midge-A New pest of crucifer crops in Ontario http://www.omafra.gov.on.ca/english/crops/facts/03-035.htm

-Swede midge fact sheet from Cornell University http://www.nysipm.cornell.edu/factsheets/vegetables/cruc/sm.pdf

-Canadian Food Inspection Agency: Interim Phytosanitary Requirements to Prevent the Entry and Spread of Swede Midge (Contarinia nasturtii) http://www.inspection.gc.ca/english/plaveg/protect/dir/d-02-06e.shtml

ADJUSTED GROSS REVENUE (AGR) CROP INSURANCE UPDATE

"Can I get coverage for crops that are not insurable in Massachusetts? Right now in MA we have the following vegetable crop insurance programs: Sweet Corn, Potatoes, and Winter Squash). What if I grow cucumbers or peppers in MA? "

This is a very good question. The Adjusted Gross Revenue (AGR) program was created for you. Cucumbers, peppers, tomatoes, asparagus, cabbage, etc. are crops that are currently uninsurable in Massachusetts. This is where the AGR program fits best. As a diversified farming operation, whether wholesale or retail, you have risks that are unavoidable. Weather, production, quality and market fluctuation, these risks can impact your business by decreasing your gross revenue.

I want to add another important risk management product that you should be looking at if you are growing uninsurable crops. That is the NAP program (Non-insurable Crop Disaster Assistance Program), this product is purchased through the Farm Service Agency and the cost is $100 per crop, per county. Contact your Farm Service Agency for further details. This program goes hand-in-hand with the Adjusted Gross Revenue Program.

AGR Update: The Federal Crop Insurance Corporation Board met a few weeks ago and one of the topics was the Adjusted Gross Revenue program. The Board is looking at making changes to this program to enhance its features, stay tuned!

--Jeremy Forrett, Crop Growers Insurance Services

Vegetable Notes, Ruth Hazzard, editor and Ben Hunsdorfer, Assistant Editor. 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.