

Vermont Vegetable and Berry News – September 22, 2010

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<http://www.uvm.edu/vtvegandberry>

QUESTIONS FROM THE FIELD

Do we still have to be worried about root maggots in radishes/ turnips or is it safe to remove rowcovers to get some air circulation in there? There is a great research paper that graphed the timing and size of cabbage maggot adult flights over 3 years in upstate NY. It shows that the last (4th) generation emerges during the second half of September or early October, but is relatively small, with only about 5 to 10% of the number of adults that were trapped during emergence of the first 3 generations. So if you expect to lose marketable crops to disease due in part to poor air circulation it would be best to uncover them; if the foliage looks OK then better safe than sorry, leave the cover on. See: <http://www.nysaes.cornell.edu/pubs/fls/OCRPDF/87a.pdf>

Is it safe to grow vegetables on land where pigs have been raised? Pigs can harbor roundworms, which are intestinal parasites that can also infect humans. In general, roundworm eggs are resistant to about everything and they can last for years in soil. It's debatable whether composting would kill them. For the same reasons that you shouldn't compost dog or cat fecal material and then use that compost on your garden, you should not use pig manure on your crops, or grow edible crops on land where pigs were recently raised or used to root up crop residues. However, if the pigs are properly dewormed (and fecal samples were analyzed to confirm the lack of parasites) then it's much less of a concern. Exactly how many years one should wait until growing vegetables after pigs is not clear; unlike many parasites, the roundworm eggs do not break down easily over time. So the safest strategy is to avoid the situation altogether; otherwise, wait as long as you can, at least 5 years, before growing vegetables on land that held pigs; then be sure to wash hands and vegetables very well to minimize risk of contamination. (Thanks to Dr. Anne Lichtenwalner, UMaine Extension and UMaine Animal Health Laboratory, for this answer.)

What are the leaf spots on my organic raspberry crop and what can be done about them? The spots are likely raspberry leaf spot or anthracnose leaf spot, for help with identification see: <http://www.fruit.cornell.edu/berrytool/raspberry/leavesstems/Raspleafspot.htm>. To suppress the disease be sure to encourage good air circulation in the canopy next year: thin canes to no more than 5 per square foot and of course remove all dead and weak canes; narrow the rows to 18 inches or less in early spring. Do not overfertilize with N, and do not overhead irrigate. You may want to apply a copper fungicide, but how effective this will be for disease suppression is not clear. Both NuCop 50WP and Champ WG are OMRI approved and labeled for raspberry leaf spots as a delayed dormant spray in spring and after harvest in the fall, at 4 lb/acre plus 1 qt crop oil.

What coverings do you recommend for our winter growing greenhouse and where can I get them? Consider a greenhouse covering with infra-red (IR) heat conserving plus anti-drip (anti-condensate) features. There are several brands such as TuffLite, Klerke, etc. that seem similarly priced, in the range of about \$250 for a 24'x100' 6 mil roll. Less expensive covers without these features don't save you a lot over the 4 year life of the plastic.

New England sources include Griffin Greenhouse Supply and Rimol Greenhouses. Here's a link to an article by John Bartok on the topic of coverings:

<http://www.gmpromagazine.com/gmpro-0510-choose-right-plastic-film-polyethylene.aspx>

When do you recommend rowcovering plasticulture strawberries that were propagated from tips and will be mulched later on for winter protection? Late-summer planted strawberries for production next spring should be rowcovered once night temperatures start getting down to the 40's. The goal is to keep the soil warm and the plants growing and actively photosynthesizing longer so they store up carbohydrates for next spring's fruiting. Here's a link to an excellent article on organic annual strawberry production by Paul and Sandy Arnold in Argyle NY:

http://www.newenglandvfc.org/pdf_proceedings/OrgStrawberriePleasantValley.pdf

What system is best for ventilation in high tunnels without electricity: aluminum louvers, trap doors in the endwalls or automatic temperature-sensing openers? Roll up sides are the essential piece of passive ventilation equipment in tunnels without any fans, and the higher the sidewalls and thus the roll-ups, the better the air flow. Of course, someone needs to open and close the tunnel when it's cold at night and hot in the day. The auto-vents you describe are really for emergency measures only, for venting some heat when the tunnel does not get opened and the sun comes out. These are best placed in the plastic, near the peak. It would take a lot of them to adequately vent a tunnel. To help ventilate, build endwalls so they open up a lot, using large doors and a hinged flap at the peak. Shade cloth is another tool to consider in the heat of summer to keep the heat down when passive ventilation is sub-optimal due to dense crop foliage or short roll up sides.

Every year my Brussels sprouts get some black crap on them; we try to pick early and keep ahead of it but this year it's happening before the sprouts have any size. What is it and can I spray something organic to slow it down? This is probably *Alternaria* of crucifers according to UMass Extension,

http://www.umassvegetable.org/soil_crop_pest_mgt/articles_html/alternaria_blight_of_crucifers.html

"Leaf spots vary in size from specks to an inch or more in diameter. The lesions often have concentric rings giving them a target or zonate appearance. *A. brassicae* usually causes a grey, light to dark brown spot while *A. brassicicola* causes a dark sooty spot. On cabbage, cauliflower and broccoli, the lesions are most common on the older leaves. On brussels sprout, the lesions may extend through several leaf layers of the edible bud." One organic spray Oregon Extension recommends is JMS stylet oil, see <http://plant-disease.ippc.orst.edu/disease.cfm?RecordID=1510>. This should be applied only if temps are below 90F and above 50F (but who cares if you are losing the crop to disease?). Another possibility is Oxidate which will provide surface 'sterilization' but no residual protection.

Why can't I use corn-starch based plastic mulch (Biotelo) on my organic crops? Biotelo does not meet USDA National Organic Program guidelines because it is considered a synthetic material. It starts out as corn, but is made into a polymer using the corn-based chemicals. The organic guidelines in the U.S. do not allow the use of synthetic mulches unless they are removed from the field at the end of the season. This is not possible with Biotelo nor what it is designed for. It is allowed in Canada and Europe, but that's because they use a different organic rule. It is hoped that the Italian manufacturer will petition USDA to have the material put on the "allowed synthetic list." In the U.S. this petition process is the only way that synthetic materials deemed to be non-toxic can be approved for use on organic farms. (Thanks to Eric Sideman of MOFGA for clarification on this issue.)

Mexican bean beetles were terrible this year, what can I do to suppress them next year? Try the commercially available wasp that attacks bean beetle, called *Pediobius*. For details see: http://www.umassvegetable.org/soil_crop_pest_mgt/insect_mgt/bean_mexican_beetle.html. As with any biological control, plan ahead so you can make releases as soon as the pest is present – not after it has built up to damaging numbers. *Pediobius* is available from the following suppliers: Green Spot Ltd., NH., www.greenmethods.com 603-942-8925; IPM Laboratories, NY 315-497-2063; ARBICO, 800 -827-2847 (AZ), <http://www.arbico.com/>.

Is it OK to leave pumpkins in the field for another couple of weeks? Once the fruit rind is hard (cannot be easily punctured by fingernail) and there is some color starting, pumpkins should be harvested, since nothing good is likely to happen in the field this late in the season, and a partially colored pumpkin will ripen to full color in a week or so if kept warm. Exposure to temps below 50F causes chilling injury - not much at 45 but a lot more below 40F - and repeated cold injury adds up over time, reducing storage life of pumpkins. Even if you don't have 'perfect' storage conditions a barn or shed offers some protection. USDA's Commercial Storage of Fruits, Vegetables, and Florist and Nursery Stocks, at <http://www.ba.ars.usda.gov/hb66/116pumpkin.pdf> says: for storage, all pumpkins and winter squashes should be well matured, carefully handled, and free from injury or decay; recommended conditions are 50 to 55 °F with RH 50 to 70%. Higher RH promotes decay while lower RH causes excess weight loss and texture deterioration.

SWEET POTATO STORAGE TIPS

Sandy Menasha, Cornell Extension, Long Island

Harvesting and Storing Sweet Potatoes: Sweet potatoes should be harvested before soil temperature drops to 50 degrees F in order to prevent injury. It is best to dig sweet potatoes when the soil is dry making it easier to handle the roots. Soon after digging, sweet potatoes should be cured to help heal any wounds. This is necessary for successful storage. Cure for 7-14 days at a temperature of 80 to 90 degrees F with relative humidity at about 85 to 90 percent. Store sweet potatoes in a warm building where the temperature will be uniform. The curing room may also be the storage room if conditions are right. Temperature during storage should be kept as close to 55 degrees F as possible. The roots can deteriorate rather quickly if temperatures drop below 50 degrees F. It is also important to ventilate the storage room, at least one air exchange per day, especially if temperatures rise above 60 degrees F.

SIGN UP FOR A FREE FARM ENERGY AUDIT

Agricultural Energy Management Plans (AgEMP) will once again be available through the Natural Resources Conservation Service in Vermont. An AgEMP is an analysis of current farm infrastructure and management with recommendations on how you can be more energy efficient and save on your energy costs. It will also identify financial assistance opportunities for implementation that are appropriate to your particular situation. Plans can be developed for field crop systems, greenhouses, cold storage and more. Your AgEMP will be developed by a qualified professional (Technical Service Provider or TSP) registered with USDA. Eligible producers will receive a payment from NRCS, and Efficiency Vermont will pay the balance due - so your AgEMP is free! AgEMPs are on a first-come first-served basis (depending on funding availability) as the applications are received and certified as eligible. Contact EnSave (the TSP for AgEMPs in VT) at 800-732-1399 for more details. Questions? Bob Kort, Civil Engineer, NRCS-VT, 802-951-6796 x233 or Bob.Kort@vt.usda.gov

REBATES FOR TRACTOR ROLL BARS

The Vermont Rebates for Roll Bars program will rebate 70% of the entire cost of retrofitting your tractor with a roll over protective structure (Roll bar and seat belt kit, shipping, parts, and installation if you choose to dealer install) up to \$765. First come, first serve as funds are limited and only one tractor per year. Before ordering a ROPS, participants must register online (<http://ropsr4u.com/>) or call toll free 877-ROPS-R4U. Both should be operational on Sept. 28, 2010. After you register, ROPS staff will send information regarding available options (rigid rollbars, folding rollbars, ROPS awnings, or cabs), estimated costs, as well as ROPS suppliers. To reserve a rebate, the farmer must re-contact the ROPS staff by phone, as funds are available on a first come, first served basis. Upon submission of receipts for all expenses, a rebate check will be mailed to the farmer within 30 days. Farmers need to provide their name, address, phone number, tractor make, and tractor model. For more info: Matt Myers, UVM Extension, matthew.myers@uvm.edu or 802-888-4972 x404.

BE AWARE OF NEMATODES IN GARLIC

(adapted from Cornell Extension and the Garlic Seed Foundation)

Stem and bulb (or bloat) nematode has been found on garlic in the region. Symptoms include twisting, looping or swelling of leaves; stunting and yellowing. Infested cloves are also prone to attack by *Fusarium* and other pathogens. Initially cloves may appear mealy or spongy and then they break down. There may be more roots on one side of the bulb than the other. If you've been growing only your own stock for many years it's doubtful you'd have this pest. If you have brought the pest in on purchased stock it can spread on equipment and boots, and can infect other crops and weeds. It would be wise to test your seed if you suspect infection. Univ. of Michigan offers a nematode assay for \$75 to out-of-state growers, see: <http://www.pestid.msu.edu/> or call 517-432-1333. Submit 10 suspicious bulbs for testing. Look for bulb splitting, damaged basal plates, and dried or shrunken bulbs. Steps to manage this nematode include: 1) Plant clean seed. Bloat nematode is introduced and perpetuated by planting infested seed. Talk with your suppliers to determine how they have ensured their seed is clean; if they have not had seed tested, you should. 2) Don't sell nematode infested garlic for seed, but selling quality bulbs infested with bloat nematode for food is acceptable, since it is not a human pathogen. 3) Rotate fields out of garlic for at least 4 years; also rotate away from alternate hosts: onions, leek, chives, celery, parsley, salsify, and nightshade weeds. 3) Plant cover crops after harvesting garlic. Mustard or sorghum-Sudangrass can reduce nematode populations due to their bio-fumigant effect. 4) Keep fields moist: bloat nematodes can't survive long periods in moist soils, but they do in dry soils.

UPCOMING EVENTS See <http://www.uvm.edu/vtvegandberry/meetings/meetlist.html>

Sept. 30, 4-6 pm. We will walk the cover crop trials with 20 plots at Brattleboro UVM Extension office field, where the trial has been split to add wood chips to half of all plots for several years; but don't drive too far it's been a dry year.

Oct. 20, 3-5:30 pm. Johnny's Selected Seeds Twilight Walk featuring: new quick hoops trial, root crops, fall ornamentals, onions, winter squash, Irish and sweet potatoes, leeks. Directions: 877-564-6697 or see www.johnnyseeds.com.