Cornell University
Cooperative Extension

Eastern NY Commercial Horticulture Program

Vol. 2, Issue 19
August 21, 2014

Weekly Vegetable Update

ENYCH Program Educators:

Vegetables
Chuck Bornt
Cell: 518-859-6213
Email: cdb13@cornell.edu

Amy Ivy
Phone: 518-561-7450
Email: adi2@cornell.edu

Teresa Rusinek
Phone: 845-691-7117
Email: tr28@cornell.edu

Crystal Stewart
Cell: 518-775-0018
Email: cls263@cornell.edu

Maire Ullrich
Phone: 845-344-1234
Email: mru2@cornell.edu

Fruit
Laura McDermott
Cell: 518-791-5038
Email: lgm4@cornell.edu
Berries

James O'Connell
Phone: 845-691-7117
Email: jmo98@cornell.edu
Berries & Grapes

Dan Donahue
Phone: 845-691-7117
Email: djd13@cornell.edu
Tree Fruit

Anna Wallis
Phone: 443-421-7970
Email: aew232@cornell.edu
Grapes & Tree Fruit

Business and Marketing
Bob Weybright
Phone: 845-797-8878
Email: rw74@cornell.edu

Layout:
Carrie Anne Doyle

Content Editor:
Teresa Rusinek

Regional Updates:

North Country—Clinton, Essex, northern Warren and Washington counties

We've had plenty of rain so crops and weeds are thriving. There is surprisingly little early blight and septoria leaf spot on field tomatoes so far this year, and we are all on the lookout for late blight, but no reports in the north as of August 20. Gardeners and growers continue to complain about beautiful tomato plants loaded with green tomatoes. We have had many nights below 50 degrees this month and few days above 80 so ripening is coming along very slowly. Even vine crops still look good for the most part. Some powdery mildew (pm) is showing up, but it hasn't been that humid which pm loves, and no downy mildew so far; and just a few outbreaks of virus. Bugs seem less severe this summer too. Aside from the slow tomatoes most growers are finding this to be an excellent growing season, so far!

Capital District—Albany, Fulton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, southern Warren and Washington counties

Crops are looking really good throughout the region, though the cool night temperatures are a little worrisome towards the northern edges and at elevation. Cucurbits are looking great, but powdery mildew continues to advance fairly rapidly. See last week's update for spray recommendations. Tomatoes are still cranking along, and should be receiving regular preventative sprays to keep them late blight free. Fall crops are looking great, as long as the flea beetles are being kept off. A small flush of striped cucumber beetles is being seen in some areas, and can cause problems on late cucumbers in particular.

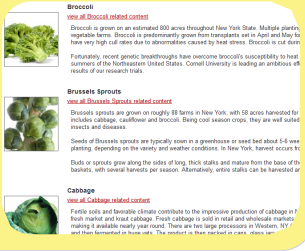
Mid-Hudson Valley—Columbia, Dutchess, Greene, Orange and Ulster counties

Temperatures have been moderate during the day for the most part and some early morning temperatures have gone down as low as 49 F this past week. Rain showers have been localized with some areas getting 1-2 inches and others less than ½ inch. So far late blight has been limited to a few farms in the area and most are battling to some degree with bacterial canker, bacterial speck, septoria and early blight in tomato. Basil downy mildew is present is most plantings of sweet basil. Brassica downy mildew seems to be under control now that growers are aware of the threat and protecting plantings. Overall, the quality and yield of crops has been quite good for most growers.

See Pest and Disease Updates on next pages: Cucurbits, Sweet Corn, and Late Blight

For online class registrations, announcements, previous issues of our newsletters, and more, visit the ENYCHP website at http://enych.cce.cornell.edu/.

Email or call any of the educators with questions or comments on the website – we want to make it work for YOU!



Serving the educational and research needs of the commercial small fruit, vegetable and tree fruit industries in Albany, Clinton, Columbia, Dutchess, Essex, Fulton, Greene, Montgomery, Orange, Rensselaer, Saratoga, Schoharie, Schenectady, Ulster, Warren and Washington Counties

Cucurbit Update

High populations of aphids have been seen in several planting of melons and cucumber. Squash bug eggs and nymphs can be found in most plantings. Squash bugs will feed on fruit so keep them under control. Powdery mildew is around, but in most fields I have scouted it has been relatively well under control. One unconfirmed report of downy mildew in cucumber has come in today, so be on the lookout and protect your cucurbits from this destructive disease that spreads quickly, especially under warm, wet conditions. The following is excerpted from Clemson Cooperative Extension "Cucurbit Downy Mildew Management for 2014." *-TR*

How Cucurbit Downy Mildew Spreads

Downy mildews do not survive on crop debris or in soil. They can grow only on live plants. Cucurbit downy mildew survives overwinter in southern Florida and other areas where cucurbits do not freeze. In the spring, cucurbit downy mildew spreads to newly planted cucurbit crops and reproduces by making spores (fungal "seeds"). Spores are released from infected plants in the morning and spread by air. Wind blows spores northward from the south. Spores move the farthest and fastest during windy, cloudy periods. Spores can be blown 600 miles in 48 hours! Outbreaks of downy mildew, which is caused by a water mold, are most likely in places with wet, warm weather during the time that spores are moving. Rain washes spores out of the air, and spores land on leaves. Rain, dew, or fog makes infection likely. After infection, downy mildew will continue to get worse even in dry weather. Cucurbit downy mildew also can be spread if infected transplants are shipped from one area to another. Although this route is not common, it has been seen several times in the past 5 years.

The Cucurbit Downy Mildew Forecast at cdm.ipmpipe.org/ shows a map and describes where outbreaks of cucurbit downy mildew have been found. The site also predicts where spores will spread from known sources and where weather will be favorable for a disease outbreak in the next 48-72 hours.

Cultural Practices to Limit Cucurbit Downy Mildew

- To avoid downy mildew, plant cucurbits as early as possible. This disease is a greater threat to summer and fall crops than to spring crops.
- Choose cucumber cultivars with resistance to downy mildew. Although these cultivars still get disease, it will start later than on susceptible cultivars.
- Use trellises for cucumber vines, so that the leaves dry quickly after dew or rain.
- Summer squash, zucchini, and acorn squash tolerate some downy mildew. They still produce marketable fruit when diseased.

Sweet Corn Update

An isolated case of **Bacterial stalk rot** (*Erwinia chrysanthemi pathovar zeae)* was reported in a sweet corn planting about two weeks ago. When I went to inspect the field, it showed about 4-5 % stalks infected. Just a very small number of infected stalks were seen in a nearby field that was the same variety but planted a week later. The corn was overhead irrigated with water out of a pond a few weeks prior to the onset of infections.

Bacterial Stalk Rot. *Courtesy Univ. of Delaware*

Occasionally, bacterial stalk rot appears before tassel emergence on random corn plants following heavy rains, flooding or overhead sprinkler irrigation from a surface source of water which may harbor the bacteria. Corn is thought to be susceptible for a short period of time and the older the corn the less likely infection will occur. The disease usually occurs about midseason in hot, damp weather. It begins as a tan to dark brown, water-soaked, soft or slimy disintegration of pith tissues at a single internode. Affected stalks may twist and collapse. Plants usually have a foul odor. The causal bacterium lives as a saprophyte on plant debris in the soil. The organism also may be seedborne. Infection occurs when the bacteria are blown or splashed onto the plants followed by penetration through natural openings (stomates and hydathodes) or wounds made by hail or other injuries. There is no chemical control for bacterial stalk rot. *-TR*

Source Univ. Illinois RPD#200, Dec. 1995

***Pest Report from Peter Jentsch's Lab*:**

The trap catch data for this week at our Warwick and New Paltz sites indicate a decline in the second generation European corn borer (ECB) adult populations. There were no Corn earworm (CEW) adults caught but we continue to catch high numbers of Fall armyworm (FAW) adults. Western bean cutworm (WBC) adult populations are low but they are present in both of our trapping sites. Spray applications should be made based on the combined FAW, ECB and WBC numbers when determining a management schedule. We continue to recommend a 5 day spray schedule.

Late Blight Update

In the past week, there was one new Late blight report in the eastern NY region, south of Albany. So far it has been found on several farms in Columbia and Albany counties and further south on LI. In Western NY, there have been numerous outbreaks and the disease seems to be spreading around rather quickly in that region. All samples of LB from the Eastern New York region, Columbia and Albany Counties have tested to be US23.

The following is excerpted from an alert sent out this week by Carol R. MacNeil, Extension Vegetable Specialist of Cornell Cooperative Extension Vegetable Program in Western NY:

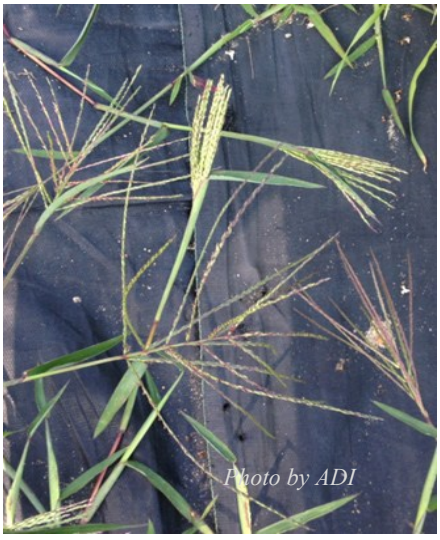
Late blight (LB) in potatoes and tomatoes has now been confirmed in the following counties in Western to Central NY: Allegany, Erie, Genesee, Madison, Livingston, Ontario, Schuyler, Tompkins, Wayne, Wyoming, and Yates Counties. Some of these are new counties confirmed last week. New samples with LB are coming in all the time. It is likely now present in all counties in Western NY, the Finger Lakes Region, and Central NY. New reports have come in from central and northern Maine.

The continued wet weather has been very favorable for development. The majority of LB samples from the area that were tested have been the US23 strain, sensitive to mefenoxam fungicides (Ridomil, other materials). The only exceptions remain in Allegany County, where the mefenoxam sensitivity of the LB is unknown, and one sample each of US24, with variable mefenoxam sensitivity, in Erie and Wyoming Counties.

If you detect LB on your farm contact one of the ENYCHP educators ASAP to arrange for a sample to be sent to Bill Fry, Cornell, Ithaca, to determine the LB strain and sensitivity to mefenoxam fungicides. Mefenoxam does NOT WORK AT ALL on insensitive strains. Immediately spray the field with a LB-specific fungicide such as Previcur Flex + protectant, Revus Top, Ranman + protectant, Gavel, and maintain a short spray interval. Rapidly kill hotspots of infection with Gramoxone, vine killer, or by cutting and bagging, burying or covering plants. Kill an area 30 ft. around the hotspot since it likely has infections that aren't yet large enough to see. Spray clean areas first and infected areas last. Work in the affected field when it's dry, and sunny, if possible, so any LB spores released will be killed by the UV light. Notify your neighbors so they can take extra steps to protect their crop. Note that in parts of the field with 5% or more of the foliage infected it will be near impossible to stop LB development, without a long period of warm, dry weather. *-TR*

Well-Named: Large Crabgrass

It's hard to remember names of bugs, diseases and plants; Drosophila, Phytophthora, Panicum. But here's one that you won't forget: Large Crabgrass (*Digitaria sanguinalis*). Anyone who has had to deal with this weed, knows it. It's as obnoxious and difficult to control as regular crabgrass, with the bonus feature of being huge! Large Crabgrass, you don't want it, but you won't forget it!



All crabgrass seed heads are characteristic, made of several slender, thread-like spikes that emerge as a spidery cluster at the end of the seed stems.

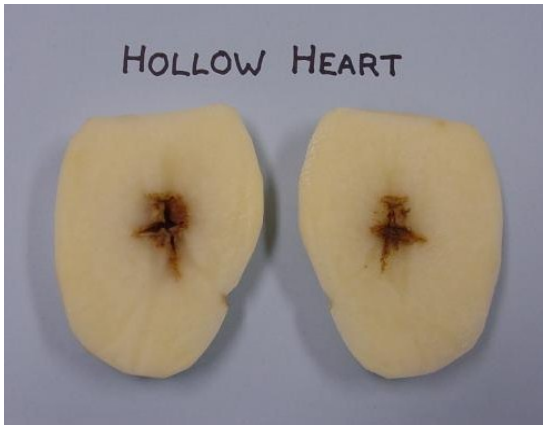
This single Large Crabgrass plant has spread to nearly 4' across, heavily competing with the neighboring squash.

Like it's all too familiar relative, smooth crabgrass (*Digitaria ischaemum,)* large crabgrass is a frost-sensitive annual, that turns purple and dies with the first frost. It is extremely competitive and aggressively spreads to cover large areas. It thrives in hot temperatures so it can be a particular problem on black plastic mulches. One plant can produce 150,000 seeds so try to control this weed before it can set seed. Diligent early weeding before the hot temperatures it loves arrive will help keep it in check. Mowing is ineffective since the plant flattens itself below the mower blades. Black mulch and handpulling or pre-emergent grass herbicides will be more effective. *-ADI*

Potatoes

Early potato harvest is well underway and vines for the most part of storage varieties look good. Early blight is moving in and Late blight continues to show up in fields in the western part of the state. Now that harvest is underway, I thought now would be a good time to include this article from UMASS on identifying some common tuber diseases. I've also included a couple notes and pictures on some non-pathogen disorders that we commonly see as well. If you have questions or just want to know what your potatoes have, please give one of us a call to take a look. We also have two great potato variety trials this year so look for a twilight meeting notice for a "Potato Show and Tell". *-CDB*

Hollow Heart: This is a nonpathogenic disorder that happens when tubers rapidly increase in size in a short period of time. The cells cannot divide fast enough to keep up with expanding tissue resulting in a tiny crack in the middle of the tuber. As the tuber continues to size, so does the crack. It occurs most frequently when there is plenty of fertility in the soil and lots of moisture.



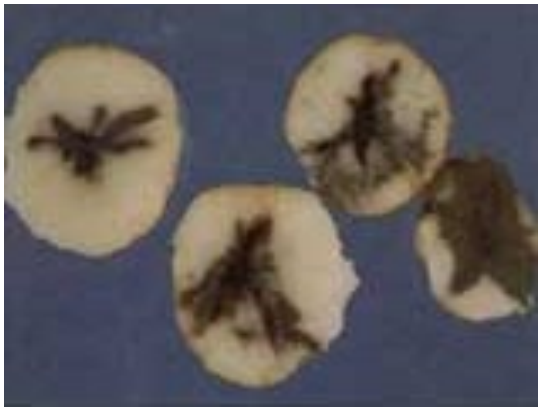
Tubers with hollow heart. *Courtesy of the Western Australia Dept. of Agriculture and Food.*

Blackheart: This injury occurs as the result of low oxygen levels in the interior of the tuber and is relatively easy to diagnose. The center of affected tubers is black to blue black, in an irregular pattern, and the border of the discolored area is usually very distinct. Darkened areas of the tuber are usually fairly firm, in contrast to those of tubers affected by Pythium leak, which are spongy. Affected tissues do not smell, and shrinking of the tissue may result in the formation of a cavity in the center of the tuber. Blackheart develops when tubers are held in a low–oxygen environment or when gas diffusion through the tubers is slowed because of extremely cold (32° F) or warm (96°–104° F) temperatures. This condition can also develop in the field when soils are flooded or in poorly aerated storages. Because seed–piece size is effectively reduced by the death of affected tissues, plant stand and vigor are likely to be reduced.

Silver scurf on red potatoes.

Courtesy of Tom Zitter, Cornell University.

Silver scurf: Caused by the fungus *Helminthosporium solani,* is relatively common on tubers, including those grown for seed. However, the symptoms of this disease may go unnoticed unless tubers are very carefully examined. A fine coating of dark green to black spores, visible to the naked eye only in mass, can sometimes be seen on the surface of infected tubers that have been stored under conditions of high humidity. However, the best way to detect this disease is by washing the tubers and looking for a silvery sheen that occurs in patches on the tuber surface. These patches may cover a large portion of the tuber and are caused by air space, which results from growth of the fungus beneath the tuber periderm. Symptoms can be difficult to detect on some white–skinned cultivars, but are obvious on those with red skin. Heavily infected tubers may not sprout properly and are an important source of inoculum for subsequent infection of daughter tubers. Infection does spread in storage, but can be limited by maintaining temperatures of 40° F and providing forced–air ventilation.



Black Heart of potatoes.

Courtesy of Tom Zitter, Cornell University.

Continued on next page

Potatoes, continued from previous page

Identifying Potato Tuber Diseases

Source: Susan B. Scheufele, UMASS Extension Vegetable Notes, Volume 26, Issue 18. Information for this article was collected from many sources including Cornell University (http://vegetablemdonline.ppath.cornell.edu/factsheets/Potato_List.htm) and Michigan State University (http://www.potatodiseases.org/index.html) extension programs.

Potato harvest is beginning on some farms, especially those where late blight has come in and farmers have had to kill off foliage early. There are many diseases that affect potato tubers so as you begin to sort through your potato harvest this year, take a moment to check for disease symptoms. Proper identification will help you decide which tubers will store well or should be sold as tablestock, and will give you a better idea of which soil-borne diseases are present in your fields, improving future rotations.

Common scab causes rough, circular spots that can be superficial, raised, or sunken. *Photo by R.W. Samson*

Common Scab (*Streptomyces* spp.) produces tan to dark brown, circular or irregular lesions which are rough in texture. Scab may be superficial (russet scab), slightly raised (erumpent scab), or sunken (pitted scab). The type of lesion is dependent on potato cultivar, tuber maturity at infection, organic matter content of soil, strain of the pathogen, and the environment. Common scab can be greatly suppressed at soil pH levels of 5.2 or lower, though a closely related but less common *Streptomyces* sp. known as acid scab (*S. acidiscabies*) can survive down to 4.0.

Early blight lesions can spread in storage. *Photo by S. Jensen.*

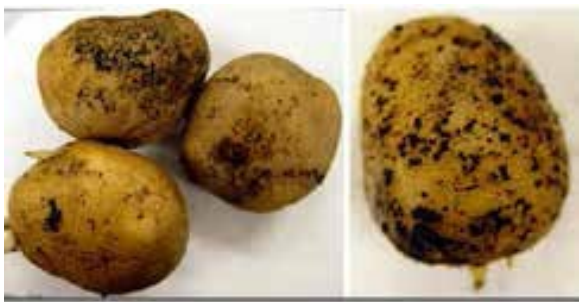
Early blight (*Alternaria solani*) usually affects potato foliage but tuber infections can also occur. Tuber lesions are dark, sunken, and circular often bordered by purple to gray raised tissue. The underlying flesh is dry, leathery, and brown. Lesions can increase in size during storage and tubers become shriveled.

Fusarium Dry Rot (*Fusarium* spp.) causes internal light to dark brown or black dry rot of the potato tuber. The rot may develop at an injury site such as a bruise or cut. The pathogen penetrates the tuber, often rotting out the center. Extensive rotting causes the tissue to shrink and collapse, usually leaving a dark sunken area on the outside of the tuber and internal cavities.

Dry rot causing dark sunken spots on the inside and outside of tubers. *Photo by C. Averre*

Black Dot (*Colletotrichum coccodes*) On potato foliage symptoms are nearly indistinguishable from early blight and on tubers it produces tiny black sclerotia (fungus resting structures). Symptoms on tubers can be easily mistaken for silver scurf.

Black Scurf and Rhizoctonia Canker (*Rhizoctonia solani*) Black scurf is purely cosmetic and does not reduce yield, even in storage. Irregular, black hard masses on the tuber surface are overwintering structures (sclerotia) of the fungus. Presence of these sclerotia may be minimized by harvesting tubers soon after vine-kill and skin set. While the sclerotia themselves do not cause damage, they allow the pathogen to survive in the soil and serve as evidence of its presence. In cool, wet soils, *R. solani* can cause dark, sunken lesions on underground sprouts and stolons. These lesions can cut off the supply of nutrients, killing tubers, or can reduce the transfer of starches to the tubers, reducing their size. Cankers can also form on the tubers themselves, usually at the stolon or in lenticels. Cankers on tubers which can be small and superficial but may be large, sunken and necrotic.



Black scurf symptoms are evidence that *R. solani* is present in soil. *Photo by G. Holmes.*

Rhizoctonia solani causes cankers on stems and stolons and sometimes lenticels. *Photo courtesy Clemson University.*

Continued on next page

Potatoes, continued from previous page

Pink Rot (*Phytophthora erythroseptica*) and **Pythium Leak** (*Pythium* spp.) Pink rot infections start at the stolon end and cause the tuber to become rubbery. As disease progresses affected skin tissue (periderm) may become brown. When cut open, a distinct black line between healthy and diseased tissue can be seen and within 15-30 minutes the tissue turns pink, then brown-black. *Pythium* spp. that cause leak infections invade tubers through harvest wounds and continue to develop in transit and storage. Infections result in internal watery, gray or brown rot with well defined red-brown lines delineating healthy and diseased tissue.

Pink rot causes rubbery, discolored lesions. Internal tissue turns pink after exposure to air. *Photo by UMN Extension.*

Coppery brown late blight lesions. The disease can spread in storage and affected tubers are very susceptible to soft rot bacteria. *Photo by R.W. Samson.*

Late Blight (*Phytophthora infestans*) affects potato foliage and tubers. Foliar symptoms start with brown to black, water soaked lesions on leaves and stems which produce visible white sporulation at the lesion margins under humid conditions. Whole plants and fields may collapse rapidly. Tuber infection is initiated by sporangia from foliage being washed down into the soil and usually begins in wounds, eyes, or lenticels. Lesions are copper brown, red or purplish and white sporulation may occur on tuber surfaces in storage or cull piles. Infected tubers are susceptible to infection by soft rot bacteria which can turn entire bins of potatoes in storage into a smelly, rotten mass.

How to Look Up Labels for Pesticides Labeled in New York

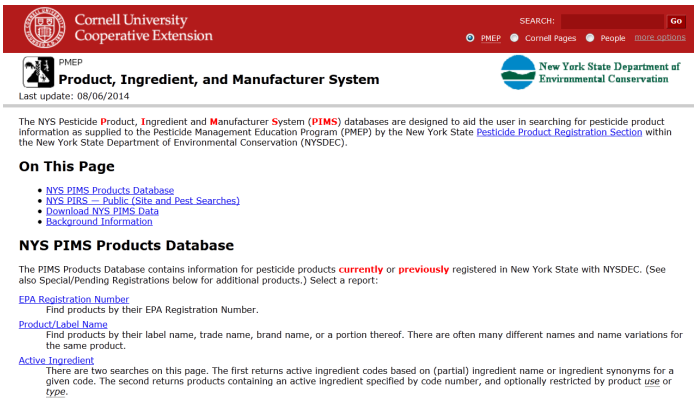
By Christy Hoepting, Cornell Vegetable Program

Go to the website of the NYS Pesticide Product, Ingredient, and Manufacturer System (PIMS) at http://pims.psur.cornell.edu/.

To look up primary and supplemental labels that are currently registered, you may search by product name, active ingredient or EPA number. From the product search results, click the "NYS" label under the "label" column of the pesticide that you are interested in and from the next page, click "view" of the most recent (by date) primary or supplemental label. Often, but not always, Section 24C Special Local Needs and 2(ee) labels will be available via this search.

If you want to check and see if a pesticide has been deregistered, when searching by product name or EPA number, under "search options", select "archive".

To look up Section 18 Emergency labels, from the main search menu, click on "Special registrations". From this screen, scroll down to the "NYS 2 (ee), FIFRA Section 18" section and click on "NYS Emergency Exemptions (FIFRA Section 18s). A list will come up and you can click on the label directly from this screen to view the label as a pdf. Special Local Needs 24 (c) labels can be looked up under "Special registrations" as well.



Cornell University Cooperative Extension

SEARCH: Go

PMEP Cornell Pages People more options

PMEP

Product, Ingredient, and Manufacturer System

New York State Department of Environmental Conservation

Last update: 08/06/2014

The NYS Pesticide Product, Ingredient and Manufacturer System (PIMS) databases are designed to aid the user in searching for pesticide product information as supplied to the Pesticide Management Education Program (PMEP) by the New York State Pesticide Product Registration Section within the New York State Department of Environmental Conservation (NYSDEC).

On This Page

- NYS PIMS Products Database
- NYS PIRS — Public (Site and Pest Searches)
- Download NYS PIMS Data
- Background Information

NYS PIMS Products Database

The PIMS Products Database contains information for pesticide products currently or previously registered in New York State with NYSDEC. (See also Special/Pending Registrations below for additional products.) Select a report:

EPA Registration Number
Find products by their EPA Registration Number.

Product/Label Name
Find products by their label name, trade name, brand name, or a portion thereof. There are often many different names and name variations for the same product.

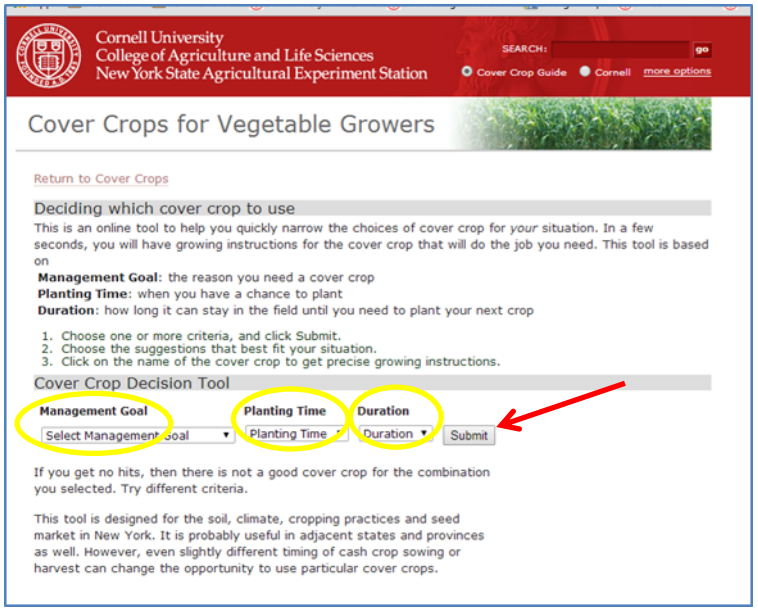
Active Ingredient
There are two searches on this page. The first returns active ingredient codes based on (partial) ingredient name or ingredient synonyms for a given code. The second returns products containing an active ingredient specified by code number, and optionally restricted by product use or type.

Cover Crops Decisions

Most growers accept the fact, and many are true believers, that cover crops are well worth the time, cost and space they consume for the benefits they bring to your soil. So today I'm not going to try to convince you to plant them, I'm going to focus instead on a handy web-based tool to help you decide what to plant, and when.

It's aptly called the ***Cover Crops Decision Tool***, and is easy to find by typing: "covercrop.net" into your browser or by clicking on this link: http://covercrops.cals.cornell.edu/. This site also has extensive information on each cover crop, seeding rates, etc. The Decision Tool link is listed in a column on the left side of the home page. It was developed by Thomas Bjorkman in the Horticulture Department at Cornell and focuses on the 3 main questions you need to ask yourself when choosing a cover crop:

1. What do I want the cover crop to do? (Management Goal)
2. When do I want it to grow? (Planting Time)
3. How long do I want the crop to grow? (Duration)



Click on the drop down boxes to narrow your choices (circled here in yellow): Management Goal, Planting Time, Duration. Then click Submit (red arrow here). http://covercrops.cals.cornell.edu/decision-tool.php

The 3 questions help to narrow down your choices but you don't have to choose something in each category. The Planting Time choice is usually the most important. For example, if you're looking for a crop to plant right now, in the field where you just harvested some onions, you could just could just enter 'late summer' and leave the other 2 categories blank. This gives you 9 possible choices. If you enter 'early autumn' your choices are narrowed to just 3. The results are laid out in table form so you can quickly compare their traits and costs. It's interesting to enter in different criteria to see various combinations of results.

The Management Goal Section is an important factor in deciding what to plant. If your primary goal is to stabilize soil aggregates in summer you might choose buckwheat while if your primary goal is to break up deep soil compaction you might choose sweet clover. Once again it's interesting to see how your options vary as you enter different parameters. We'll address the management goals cover crops can help you address in your fields in future articles. For now here are the 9 goals included in the Cover Crops Decision Tool:

- Suppressing weeds
- Protecting soil from rain or runoff
- Improving soil aggregate stability
- Reducing surface crusting
- Adding active organic matter to soil
- Breaking hardpan
- Fixing nitrogen
- Scavenging soil nitrogen
- Suppressing soil diseases and pests. *-ADI*

3. Click on the name of the cover crop to get precise growing instructions.

Cover Crop Decision Tool

Management Goal: Select Management Goal | Planting Time: Early Autumn | Duration | Submit

Crop	Oats	Rye	Wheat Spelt Triticale
Seeding Rate	80-140 lb/ac	60-200 lb/ac	70-200 lb/ac
Seed Cost	2007 price: $8.00/32lb.bu	2007 price: $0.10-0.20/lb ($6.00/bu)	2007 price: $0.10/lb
Seeding Dates	Mid April-mid May and again August-September	Sept. 15- Oct 10 for winter cover. Oct 15- for spring cover. April 15 as nurse crop for clover.	Mid-late September
Time Until Control	4-6 weeks	When growth resumes in spring (3-6 inches; April). For mulched no-till, roll at heading (mid to late May)	When growth resumes (early May)
Seed Suppliers	Local farm seed dealers, Lancaster Agricultural Products	Seedway, AgriCulver, local farm seed dealers, local farmers	Local farm seed dealers, Lancaster Agricultural Products
Management Goals	Reduce weeds (fall) Stabilize soil aggregates Summer erosion protection Winter erosion protection	Winter manure application Winter erosion protection	Reduce weeds Reduce Root Rot Stabilize soil aggregates Nitrogen scavenging Winter erosion protection
Management Tricks	Plant with legumes such as Field Peas.	Control on time, leave 2-3 weeks between incorporation and replanting. Can be mixed with hairy vetch and red clover.	Drill if possible. If broadcasting increase the rate by 30%. For weed suppression, increase the rate 30%. Triticale can be seeded before the Hessian fly-free date.
Unavoidable Problems	Soil crusting from heavy rain can stop emergence	Can suppress following crop	Excess growth in warm, damp spring.
Avoidable Problems	Use clean seed if buying from farm	Becomes too big and fibrous if left too long. Rainy spring may prevent timely control.	
Classic Uses	Nurse crop with peas and vetch. With Legumes for forage. Killed winter cover for early planting.	Winter cover after late vegetables or soybeans. Rye has a late window of opportunity, often when it is too late for other cover crops	Winter cover for spring plow down. Green manure and weed control.

Here are results when 'early autumn' is selected for Planting Time but the other 2 criteria are left blank, along with the table format comparing the 3 choices.

Sweet Corn Trap Catches for the Week Ending August 17th					
Location	ECB-E	ECB-Z	Corn Earworm	Fall Armyworm	W. Bean Cutworm
Albany	0	0	1	0	2
Columbia	0	2	6	0	3
Dutchess	0	2	1	0	0
Fulton	0	0	0	0	6
Orange	0	2	0	3	1
Saratoga	0	0	N/A	N/A	N/A
C. Ulster	1	2	0	17	3
N. Ulster	0	5	2	0	0
C. Washington	6	0	1	0	0
N. Washington	0	0	0	0	2

2014 Weather Table—This chart is compiled using the data collected by Northeast Weather Association (NEWA) weather stations. For more information on NEWA and a list of sites, visit http://newa.cornell.edu/ This site has information not only on weather, but insect and disease forecasting tools that are free to use.

2014 Weekly and Seasonal Weather Information						
	Growing Degree Information Base 50^{O} F			Rainfall Accumulations		
Site	2014 Weekly Total 8/11– 8/17	2014 Season Total 3/1 - 8/17	2013 Season Total 3/1 - 8/17	2014 Weekly Rainfall 8/11– 8/17 (inches)	2014 Season Rainfall 3/1 - 8/17 (inches)	2013 Total Rainfall 3/1 - 8/17 (inches)
Albany	**118.3**	**1984.1**	**1981.0**	**0.22**	**7.39**	**26.00**
Castleton	**110.7**	**1870.7**	**1979.0**	**0.15**	**8.61**	**23.41**
Clifton Park	**102.9**	**1798.9**	**1871.4**	**0.73**	**9.26**	**26.88**
Glens Falls	**106.0**	**1779.3**	**1714.0**	**0.59**	**10.94**	**21.63**
Guilderland	**101.5**	**1811.5**	**1889.5**	**N/A**	**N/A**	**N/A**
Highland	**125.8**	**1994.8**	**2111.8**	**0.19**	**11.61**	**23.89**
Hudson	**116.5**	**2000.1**	**2080.5**	**0.29**	**9.83**	**20.64**
Marlboro	**116.9**	**1915.8**	**2039.9**	**0.68**	**12.78**	**26.93**
Montgomery	**117.5**	**1948.3**	**2001.5**	**0.83**	**14.46**	**25.72**
Monticello	**84.6**	**1531.2**	**1597.5**	**N/A**	**N/A**	**N/A**
Peru	**104.1**	**1698.8**	**1741.8**	**2.02**	**10.13**	**18.68**
Shoreham, VT	**107.1**	**1778.6**	**1860.8**	**1.18**	**9.22**	**20.24**
Wilsboro	**104.2**	**1637.3**	**1710.9**	**N/A**	**N/A**	**22.00**