



Hard black sclerotia drop to the soil and can overwinter, waiting for the right conditions to germinate and become a problem in subsequent years.

PAGE 1



Did you utilize a weed management program this year? Evaluate the effectiveness of that program, identify weeds, and plan for next year.

PAGE 3



Now is the time to plan your garlic production and get it planted for higher yields. Learn about other important planting recommendations.

PAGE 5



A period of 7-8 weeks after onion harvest and before a hard frost is required for fall burndown of perennial sowthistle to be most effective – timing is NOW!

PAGE 5



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Photo: Julie Kikkert



Cornell University
Cooperative Extension
Cornell Vegetable Program

What to Do After a Bad Sclerotinia White Mold Season

Julie Kikkert, CCE Cornell Vegetable Program

Wet weather during the 2014 growing season was conducive to many diseases, particularly white mold, caused by the fungus *Sclerotinia sclerotiorum*. This disease can infect nearly every vegetable crop except monocots such as sweet corn and alliums. In New York, it is regularly seen in snap beans, dry beans, lima beans, soybeans and cole crops. Tomatoes, potatoes, lettuce, pumpkins, hubbard and other winter squash are also common hosts. White mold can also be seen on weed hosts such as velvetleaf and ragweed.

The first symptoms are often bleached, water soaked spots. As the fungus grows, white cottony mycelial strands appear, hence the name white mold. The fungus may grow on the outside of the plant, or may be hidden inside stems or seed pods. *Sclerotinia sclerotiorum* is distinguished from other molds by mounds of fungal mycelium that harden and darken into black sclerotia embedded in the cottony mycelium (see photo).

The sclerotia drop to the soil and much like weed seeds, they can remain in the soil waiting for the right conditions to germinate and become a problem



Different stages of white mold infection on lima bean pods. Note the mounds of fungal growth that turn into hard black sclerotia. This is diagnostic for this fungus.
Photo: Julie Kikkert, Cornell Vegetable Program

continued on page 3



VegEdge newsletter is exclusively for enrollees in the Cornell Vegetable Program, a Cornell Cooperative Extension regional agriculture team, serving 11 counties in Western New York.

The newsletter is a service to our enrollees and is intended for educational purposes, strengthening the relationship between our enrollees, the Cornell Vegetable Program team, and Cornell University.

We're interested in your comments. Contact us at:
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Contents

Contact Us
 Cornell Vegetable Program12

Crops
 Crop Insights.....08
 Garlic: Time to Start Thinking About Planting Garlic.....05
 Onion: Fall Burndown of Perennial Sowthistle – Timing is NOW!05
 Potato/Tomato: Late Blight Risk04
 Pumpkin/Winter Squash: Harvest and Storage Reminders07
 Sweet Corn Trap Network Report06
 Tomato: 2014 Tomato Taste Test07

General
 What to Do After a Bad Sclerotinia White Mold Season01
 Evaluate the Effectiveness of Your Weed Management Program03

Events
 2014 NYS Dry Bean Field Meeting.....10
 Disease and Weed Management Workshop.....10
 National Onion Association and NARC Annual Meetings.....10
 2014 Agribusiness Economic Outlook Conference10

Weather.....11

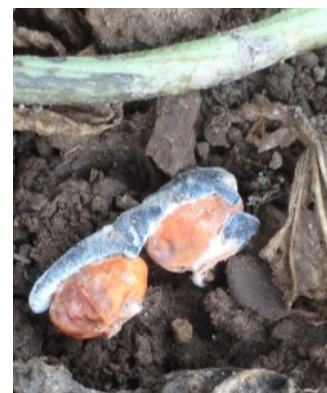
The next issue of VegEdge will be produced in TWO WEEKS on October 1, 2014.



Cornell Vegetable Program Specialist Christy Hoeping talking about onion bulbing physiology and bulb quality during a recent Walk & Talk Discussion Group Meeting at Denny Reynold's farm in Almond, NY. Photo: Elizabeth Buck, Cornell Vegetable Program



White mold infected (lower pod) and normal cranberry bean.
Photo: Julie Kikkert, Cornell Vegetable Program



Dry bean seeds with hard black sclerotia that have fallen to the ground. This allows the fungus to overwinter in the soil.
Photo: Julie Kikkert, Cornell Vegetable Program

in subsequent years. When the soil conditions are moist, shaded and cool (40 to 60°F) the sclerotia at or just below the soil surface produce tiny mushrooms called apothecia that release spores into the air. Senescing blossoms are a particularly good source of nutrients for the germinating fungal spores. Sclerotia in contact with roots or crowns of plants can also infect tissue directly.

WHAT TO DO IF YOU DETECT A WHITE MOLD INFECTION:

- It is too late to apply fungicides once the fungus is detected.
- Rogue out infected plants if possible to prevent the formation of sclerotia.
- Take and keep accurate notes about which fields or portions of fields are infected and how much white mold is seen. Record disease and yield data for different crops and varieties on your farm to help in future planning.
- Harvest infected fields last to avoid spreading sclerotia to non-infected fields.
- Tillage – current research supports the hypothesis that sclerotia degrade faster if left on the soil surface. Deep tillage buries sclerotia initially, but they are brought to the surface with subsequent tillage and may cause infection.
- Consider the use of the biocontrol fungus, *Coniothyrium minitans*, commercially available as Contans. This fungus is a parasite of sclerotia and degrades them. It takes several months to work and when there are a lot of sclerotia from an infested field, it is best applied to the surface of the soil after harvest, with no or little tillage to follow. Used at a rate of 2 lbs/acre, the product costs about \$50 per acre. It will not completely eliminate white mold infection in future years, but can reduce the level of inoculum and subsequent crop damage.
- Plant only non-susceptible cover crops such as grasses and grains. Red clover and other legumes are hosts.

ADDITIONAL STEPS FOR FUTURE YEARS:

- Crop rotation with grains and corn or other non-hosts for three or more years.
- Plant disease-free seed.
- Avoid fields where infected plant debris, such as cabbage leaves and winter squash were dumped.
- Manage plant canopies to improve air-circulation.
- In high risk situations, fungicide sprays to beans during the bloom period may be warranted. Check the Cornell Guidelines for more information and always read and follow product labels.
- Watch for additional information at our winter meetings.

Thanks to Sarah Pethybridge, Amara Dunn and Carol MacNeil from Cornell for resource information for this article. ●

Evaluate the Effectiveness of Your Weed Management Program

Darcy Telenko, CCE Cornell Vegetable Program

Did You Utilize a Weed Management Program this Year? Now Is Time to Evaluate the Effectiveness of that Program, Identify Weeds, and Plan for Next Year

A weed management plan for each field is just as important as a nutrient and disease programs to maximize crop potential, reduce weed seed production, and maximize effectiveness of management tactics within the same growing season. Now is the time to evaluate the effectiveness of your weed management program. Many factors can contribute to the presence of weeds after a herbicide application and later in the growing season. Scouting is the only way to know which weeds are present, and their patterns in the field can help to understand why they are present. Scouting will aid in documenting changes in weed populations overtime and assist in directing future weed management programs. Scouting and creating a weed map in a field should occur at least two times dur-

ing the year 1) early season soon after planting to evaluate the success of current season program 2) at or near harvest to help predict weed control practices for next year. Ideally scouting should continue at regular intervals throughout the season so weed escapes can be addressed in a timely manner before they go to seed. When scouting for weeds you should record weed species, pattern across the field,

weed size and density, if they are alive or dead and if alive are they exhibiting herbicide symptomology. See below for a way to rate weed species within a field.

<u>Weed Size</u>	<u>Density of Each Species</u>	<u>Distribution of Weeds</u>
White Sprout=seed germinating/emerging	0=None	Spotty = found in a few places around field
Tiny=cotyledons or first true leaf	1=Scattered, few weeds	Local=found in small portion of field
Small =weeds less than 1 inch tall	2=Slight, 1 weed per 6 row feet	General=found throughout field
Large= weeds greater than 1” tall	3=Moderate, 1 weed per 3 row feet	
	4=Severe, more than 1 weed per 3 row feet	

Weeds may have escaped management for several reasons including selection of herbicides with marginal activity on weeds that were present, poor timing of application of the herbicide (weeds were too large or seeds escaped exposure to application and germinated), environmental factors reduced herbicide effectiveness such as soil moisture, rain event, and soil characteristics (pH, texture and amount of organic matter), or application issues (sprayer skips, poor calibration, poor spray coverage).

A good weed management program should consist of mechanical, cultural, and biological (if available) tactics in addition to herbicides. A combination of diverse tactics will reduce selection pressure imposed by any single practice, such as the exclusive use of one herbicide, and reduces risk of selecting difficult to control weeds, such as herbicide-resistant weeds. Mechanical weed control tactics includes pre-plant tillage, strip or zone tillage, in-crop cultivation, post-harvest mowing and/or tillage and hand-weeding before seed set. Cultural weed control tactics include crop rotation, choice of hybrid or variety, early or late planting, nutrient management, row spacing and plant populations, seed bed preparation (stale-seed bed), harvesting techniques, and cover crops. Herbicide tactics should utilize multiple herbicides with different mechanisms of action, mixes, sequences, and variability across seasons.

Observant records on weed populations, including their distribution and density, will aid in documenting if changes are occurring in a field and allow for you to make necessary adjustments for future weed management plans.

Information adapted from *Vegetable Guidelines 2014 and WSSA Herbicide Management Lessons* ●

Late Blight Risk

Carol MacNeil and John Gibbons, CCE Cornell Vegetable Program

Late blight (LB) has been reported in nearly every county in Western and Central NY, and is likely present in every county. While the majority of infections this year in NYS have been US-23, an unknown strain (referred to as type B) is present in Allegany County on several farms, and was recently found in Steuben county in a garden, a different unknown strain (referred to as type C) was just detected in Niagara County, and US-24 (previously identified, primarily affects potatoes) was detected in one field each in Erie and Wyoming Counties. Mefenoxam (Ridomil, etc.) sensitivity is not known for the unknown strains, and US-24 varies in its sensitivity, while US-23 is sensitive. The presence of unknown strains is a concern and Bill Fry’s Cornell lab will be spending the next weeks and months trying to determine just what they are and where they came from.

The LB Decision Support System (DSS) called for a 6-7 day fungicide spray interval during the past week, except for Elba, Penn Yan and Sodus, where a 5 day interval was recommended. In many cases this was due to reaching the fungicide (loss) threshold (not shown) in the full DSS, rather than the blight unit threshold (in the chart). Reaching 30 blight units is one trigger for applying a fungicide. Reaching -15 fungicide (loss) units is the other.

Continue to apply a fungicide until all potato leaves and stems are dead, brown and dry, or until all tomato leaves and stems are dead.

If you think you might have LB contact Carol MacNeil at 585-313-8796 or crm6@cornell.edu, John Gibbons at 585-394-3977 x405, or another Cornell Vegetable Program staff member. *LB DSS users:* If you need assistance contact Ian Small at ims56@cornell.edu or Carol MacNeil at crm6@cornell.edu or 585-313-8796. ●

Late Blight Risk Chart, 9/16/14

Location ¹	Blight Units ² 9/10-9/16	Blight Units ³ 9/17-9/19	Location ¹	Blight Units ² 9/10-9/16	Blight Units ³ 9/17-9/19
Albion	NA	NA	Lodi	NA	NA
Appleton	22	9	Medina	36	11
Baldwinsville	25	11	Penn Yan	47	10
Buffalo	34	8	Ransomville	32	9
Ceres	17	9	Rochester	39	11
Elba	42	8	Romulus	NA	NA
Farmington	14	9	Silver Creek	15	7
Gainesville	NA	NA	Sodus	12	8
Geneva	18	8	Versailles	5	8
Kendall	23	10	Williamson	18	10

1 Weather stations. For more sites, and varietal susceptibility to LB: <http://newa.cornell.edu>
 2 Passed Week Simcast Blight Units (BUs)
 3 Three days predicted Simcast Blight Units (BUs)

Time to Think About Garlic Planting

Brad Bergesford, Ohio State Univ. Extension Scioto County and OSU South Centers

Garlic has become an increasingly popular vegetable crop among producers, marketers, and consumers. People are discovering its nutritional values and producers have found garlic to be a potentially highly profitable crop. August and early September is the time to plan your garlic production and marketing. Two main garlic types are "hardneck garlic" and "soft neck garlic," or "bolting" and "non-bolting garlic." The main difference between these two subspecies is that one almost always produces a seed stalk, the top of which will bear small aerial bulbils - not true seed --while the other rarely produces a seed stalk.

Hardneck garlic has smaller bulbs with fewer, more uniform size, and more organized arrangement of cloves. Soft-neck garlic has larger bulbs, more numerous cloves in a more random arrangement and of more variable size. Elephant garlic is not true garlic, but rather a member of the leek family.

The combinations of the sulfur compounds, is different in garlic and "Elephant garlic." The production guidelines and processes are very similar for garlic and "Elephant garlic". August and September is time for planting preparation, since ideal planting dates are September to early November, depending on the area. Primary pre-planting considerations are seed selection, purchase, and field selection and preparation.

Seed availability has, and continues to be, a major obstacle for those who want to enter or stay in the garlic business. Seed quality is critical to profitable production, yet few sources of quality seed, especially the more specialty varieties, exist. If you plan to save your own garlic for seed, or acquire it from your neighbor, special precaution is in order: make certain it is free from nematode, white rot, and any other serious diseases or insects and save the largest bulbs for seed.

Five planting considerations or recommendations are:

1. Earlier planting means higher yield potential. September to November planting is optimum.
2. The size of bulbs harvested is directly related to the size of cloves planted and the spacing of the plants.
3. If you are buying seed, learn the cultural history of the garlic and the field in which it was grown; if saving your own seed, save the largest, best bulbs and cloves.
4. Plant immediately after "cracking" (dividing the bulbs into individual cloves). Individual cloves do not keep long, due to disease susceptibility and desiccation.
5. Cover the top of each clove with 1/2 to 2 inches of soil, depending on winter temperatures. With last winter's polar vortex events shallow plantings resulted in excessive frost heaving, colder winters require deeper planting.

Selection and purchase of quality garlic seed in August is very important. Five cultural practice considerations or recommendations are as follows:

1. Weeds are frequently the worst problem; garlic is a poor competitor; the crop is in the ground a long time. Avoid, prevent and control weeds.
2. Garlic is a moderate user of nitrogen; it may or may not require phosphorus, depending on the soil and previous management. It rarely responds to potassium fertilizer and rarely requires micronutrients. Don't guess always soil test.
3. Up to half of the nitrogen needs should be available at planting or early in the season; another major need will occur in late winter, after rain caused leaching, and when the garlic begins its strong regrowth. No nitrogen should be applied during the last 60 days before harvest; the garlic should run out of nitrogen late in the season.
4. Garlic can grow in a wide range of soil textures and soil pH. Fertilization, irrigation, and harvest practices may be different for individual fields and farms.
5. Diseases and insects to watch for include Fusarium basal rot, purple blotch, white rot, stem and bulb nematode, mites, and cutworms. ●

Fall Burndown of Perennial Sowthistle – Timing is NOW!

Christy Hoepting, CCE Cornell Vegetable Program

In the study that we conducted last summer in an onion field, we achieved improved control by 10-25% of perennial sowthistle when burndown herbicides were applied to the rosette stage compared to the bud stage. We also learned that it takes approximately 3 to 5 weeks for a perennial sowthistle rhizome to produce a new plant at the mid- to late-rosette stage, and that it takes 4 weeks after application of burndown herbicide(s) to achieve effective kill. It is also known that a hard frost will halt growth of perennial sowthistle. Therefore, **a period of 7-8 weeks after onion harvest and before a hard frost is required in order for fall burndown of perennial sowthistle to be most effective.**

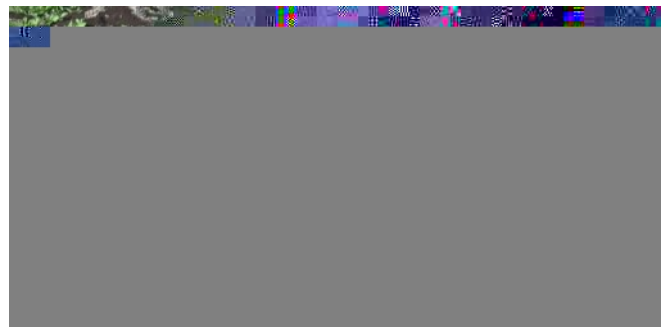


Figure 1. Re-growth of perennial sowthistle following an early onion harvest is now at the perfect stage (mid-to late-rosette) to apply a fall burndown program. Photo: Christy Hoepting, Cornell Vegetable Program *continued on page 6*

In fields that were harvested in early August, the majority of the perennial sowthistle plants are now in the mid- and late-rosette stages, perfect for application of burndown herbicides (Fig. 1). Threat of frost this Thursday night prompts the application of fall burndown herbicides NOW just in time before freezing temperatures stun perennial sowthistle and interfere with its ability to take up the herbicides in order to achieve effective kill.

Last summer when we evaluated burndown programs in an onion field during the growing season, **best control of perennial sowthistle was achieved with the combination of Roundup PowerMax 2 pts + AMS 0.25% v/v + 2,4-D Amine 3 pt**, which provided 97% control at 4 weeks post application. The addition of Stinger 8 fl oz to this combination resulted in 100% kill and clearly resulted in a much faster kill

time, which may be beneficial when time is of the essence when the threat of frost is looming.

2,4-D Amine is a synthetic auxin that is labeled in fallow cropland and crop stubble and may be used as a fall burndown of perennial sowthistle preceding onion. Stinger is in the same herbicide class as 2,4-D, but has a 10.5 month rotation restriction for onions. It is labeled on field and sweet corn, spinach, cabbage, fallow crop land, etc. It could be used in the fall for management of perennial sowthistle on ground where onions are rotated into corn. Roundup PowerMax is a photosynthesis inhibitor and is labeled in onions in row middles and post-harvest. It is important to be aware that **2,4-D and Roundup will harm willow if sprayed directly on the bark or the leaves**. Be very careful not to get any spray on the willow windbreaks.

Willow trees that have mature bark and no branches arising from the base of the plant are much more tolerant to Roundup. Be aware that 2,4-D has residual activity and the ability to leach, which could injure willows when taken up by the roots.

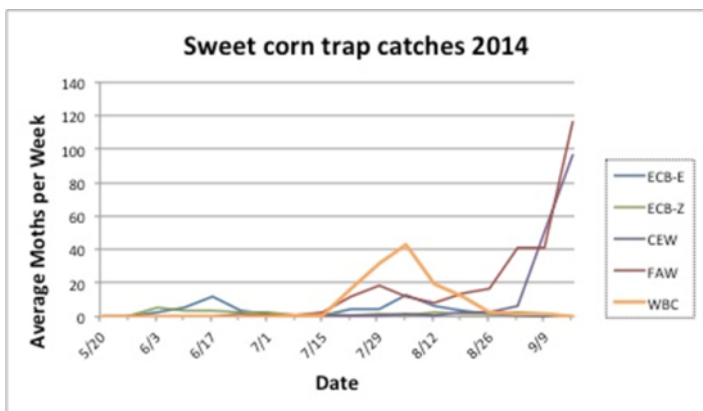
Another trial is planned for this fall to test burndown treatments under real fall conditions when shortened day-length and frost may affect their efficacy. We will also be comparing 2,4-D to dicamba, low (2 pt) vs. high (4 pt) rates of 2,4-D, as well as programs that would not hurt a cereal cover crop (e.g. without Roundup). For more information of management of perennial sowthistle in onions, 2013 trial reports are available at the CVP website (<http://cvp.cce.cornell.edu>) in the onion section. ●

WNY Sweet Corn Trap Network Report

Marion Zuefle, NYS IPM Program

Nineteen sites reporting this week. European corn borer was not caught at any of the reporting locations. Corn earworm (CEW) numbers remain high and were caught at 13 locations. All locations reporting CEW should be on a 3-5 day spray interval. For recommended spray intervals based on trap catches see chart at bottom. Fall armyworm (FAW) numbers have increased since last week and total sites reporting trap catches was 14. The Western bean cutworm (WBC) flight has finished and no moths were caught this week. ●

Average sweet corn trap catches for all reporting sites, 5/20/14 - 9/16/14



WNY Pheromone Trap Catches: September 16, 2014

Location	ECB-E	ECB-Z	CEW	FAW	WBC
Baldwinsville (Onondaga)	0	0	29	46	0
Batavia (Genesee)	0	0	5	48	0
Bellona (Yates)	NA	NA	NA	NA	NA
Eden (Erie)	0	0	23	350	0
Farmington (Ontario)	0	0	0	9	0
Hamlin (Monroe)	0	0	70	18	0
LeRoy (Genesee)	0	0	115	36	0
Lockport (Niagara)	0	0	7	58	0
Pavilion	0	0	0	297	0
Penn Yan (Yates)	0	0	69	72	0
Seneca Castle (Ontario)	0	0	60	30	0
Spencerport (Monroe)	NA	NA	NA	NA	NA
Waterport (Orleans)	0	0	223	8	0
Williamson (Wayne)	NA	NA	NA	NA	NA

ECB - European Corn Borer WBC - Western Bean Cutworm
 CEW - Corn Earworm NA - not available
 FAW - Fall Armyworm

Average corn earworm catch			
Per Day	Per Five Days	Per Week	Days Between Sprays
<0.2	<1.0	<1.4	No Spray (for CEW)
0.2-0.5	1.0-2.5	1.4-3.5	6 days
0.5-1.0	2.5-5.0	3.5-7.0	5 days
1-13	5-65	7-91	4 days
over 13	over 65	over 91	3 days

Add one day to the recommended spray interval if daily maximum temperatures are less than 80°F for the previous 2-3 days.

Pumpkin and Winter Squash Harvest and Storage Reminders

Chuck Bornt, *ENY Commercial Horticulture Program, Weekly Vegetable Update, Vol. 2, Iss. 22, 9/11/14*

If you are planning to store any of your squash into the winter, be especially careful that squash is mature, wound-free, and fully cured before storing. The following quick tips are good reminders of best practices.

- Handle squash and pumpkins as gently as possible to avoid bruising or cutting the skin. Wounds will allow soft rot bacteria and other disease to invade and make the fruit unmarketable and reduce the storage life of that crop. Gently place in bins rather than load buckets or baskets and “dump” them in bins. This will take more time, but will pay off with better quality fruit for storage and market.
- Avoid picking up squash and pumpkins that are wet with dews or recent rain. This increases the risk of pressure bruise and breakdown especially if you are placing them in bins.
- If possible try curing your squash to encourage cuts or bruises to heal over. Place in windrows in the field (this also allows the stem ooze to dry up) especially if the weather is going to be warm and dry for several days. Alternatively, place squash in a

warm, dry atmosphere (70-80°F) with good air movement such as a well-ventilated garage or barn, if temperatures can be maintained. Greenhouses or high tunnels with fans turned on would also work nicely. However, be careful not to expose the fruit to too much intense sunlight as sunscald can occur.

- Many growers will remove the stem especially from butternut and acorn. This practice helps reduce puncturing that can happen in the bins but squash should definitely be cured for up to a week before going into storage. If not allowed to cure before placing in bins, several things can happen such as oozing from the wound onto other fruit and more decay problems.
- Be sure not to pile squash too high in the bins especially if they will be stacked on top of one another. Pressure bruise is another way to decrease squash quality and storage potential.
- When transporting squash and pumpkins from the field to the market or storage, be sure to drive carefully, especially on bumpy farm roads. The jostling of fruit can cause more punctures and pressure bruise and reduce the quality of your fruit.

continued on page 10

2014 Tomato Taste Test

Judson Reid, *CCE Cornell Vegetable Program*

A multitudinous throng mobbed the tasting table. Servers sliced swiftly. Napkins were passed from hand to hand, as murmurs of delight and disgust exchanged. Undersized onlookers dodged drips.

At our recent on-farm research update in Penn Yan, we took advantage of a captive audience to gather feedback on the 10 different tomato varieties on-hand. The conclusion? People have a hard time agreeing on what makes for a good tasting tomato. It also depends on how varieties are rated to truly declare a ‘best-of-show’ designation.

Among heirloom tomatoes, a red variety ‘Aker’s West Virginia’ ranked high with comments such as ‘yum!’ whereas some considered it too acid. The pack of hybrid slicing tomatoes was led by Red Mountain. But, yellow varieties were the winners when ranked by all participants on a scale of 0-5. This may be due to their low acid content and milder flavors. These varieties did not receive as many low ratings, which kept their average up. In other words, they did not provoke the passion of a red tomato, but were well liked enough to win.

Tomato tasting is highly subjective and individualized. For example, the pink heirloom on the bottom of the list is one of this writer’s favorites. Other attributes such as aesthetics and horticultural properties influence our variety choices. Tomatoes here were grown in a range of conditions and sampled for fun. ●

Mild and balanced

Acidic-Yum!

Tangy

Creamy...

Average Ratings from Tasters 0-5:	
Persimmon (yellow heirloom)	3.75
Pineapple (bicolor heirloom)	3.125
Red Mountain (red hybrid)	3
Primo Red (red hybrid)	2.875
Nebraska Wedding (yellow heirloom)	2.875
Aker’s West Virginia (red heirloom)	2.75
Mountain Majesty (red hybrid)	2.625
Carolina Gold (yellow hybrid)	2.625
Red Deuce (red hybrid)	2.5
Crnkovic Yugoslavian (pink heirloom)	2.25



CROP INSIGHTS



CABBAGE & OTHER COLE CROPS

Last week's hot weather resulted in a resurgence of worm pests especially cabbage looper. Worms pests will continue to feed even when temperatures are 45°F; remember that Bts do not work as well when daytime temperatures are less than 70°F. Cabbage looper can be hard to kill when they get large, and should ideally be killed when they are small. To control large CL, high rates of pyrethroids (Baythroid, Brigade, Mustang Max, Pounce and other permethrin formulations, Danitol, Hero, Asana and Warrior) may be needed. Also, Radiant, Synapse/Belt, Coragen, Voliam Xpress and Avaunt provide excellent control of large CL – see July 30 issue for worm control recommendations.

DRY BEANS

Join us **Thursday, September 18 for the 2014 NYS Dry Bean Field Meeting – *Bean Diseases in a Wet Year***. See page 10 for details.

Growers have been busy harvesting the early planted earlier varieties. Yields are down significantly where Sclerotinia white mold (WM) was serious. Many of the hard, black WM sclerotia, overwintering structures, desiccate over winter if left on the surface, so avoid fall tillage if you have a problem field. WM sclerotia can survive for many years if buried. Note that WM is also present in many soybean fields this year. Be sure to wait several years to plant dry beans again if a field experienced heavy WM pressure! Most crops other than corn, small grains, grass cover crops, are hosts to WM and can add to the disease pressure. See the White Mold article on the cover of this issue.

If you see bean pods or seeds that are partially eaten, or have feeding holes, it could have been caused by the Western bean cutworm. Populations continue to rise. Save samples and contact Carol MacNeil at crm6@cornell.edu or 585-313-8796.

Dry bean defoliation is recommended when 80% of seed is physiologically mature (white, not green under the seed coat). Kill will be quicker in warm, sunny weather. *Robin Bellinder, Cornell, recommends:*

Gramoxone Inteon (paraquat) – Plants should be mature with 80% yellow pods, no more than 40% green leaves. Use 1.2 – 2 pts/acre, split if foliage is dense. [Addition of crop oil concentrate (COC) or methylated seed oil (MSO) enhances bean and weed desiccation compared to a non-ionic surfactant (NIS). *C. MacNeil, CVP*].

Defol 750 (sodium chlorate) – Use 3.2 qts/acre, repeat if needed. Use a NIS or COC. Weak against weeds.

Touchdown Total, Roundup, OLF (glyphosate) - Apply a max of 0.75 lb/acre active ingredient at the hard dough stage (max 30% moisture), and when no green leaves are visible. Add ammonium sulfate (AMS) as an adjuvant. Broad spectrum weed burn down, with no bean re-growth. Some importing countries have a low residue tolerance for glyphosate so check with your buyer before spraying!

Valor SX (flumioxazin) – Use 1.5 – 2.0 oz/acre. Use a COC or MSO, PLUS spray grade AMS or liquid N. In Robin Bellinder's trials flumioxazin outperformed paraquat in terms of bean desiccation but weed control was not as good. Use special tank cleaners after Valor. Wait 30 days after application before planting wheat; 3 months for barley, rye!

GARLIC

Now is the time to get ready to plant. When splitting off cloves in preparation to plant, scout for damaged or disease. Poor quality cloves will lead to weak starts or losses over the winter. Look for cracks, dark or pink spots, soft spots, or overly dry cloves. See garlic planting article on page 5.



GREENS

Cercospora leaf spot is showing up on beets and chard. Flea beetles and leaf miners in brassicas, aphids and various woolly bear-type caterpillars in lettuce, and leaf miners in chard are sporadic across the region but high enough in numbers in some locations to cause some real damage. Swede midge damage has been troubling. Kale has been affected causing the growing point to be destroyed. Check the CVP website for Christy Hoepting's articles on Swede midge description and management.

The flip flopping temperatures have stressed some planting and premature bolting in mustards are reducing stands.

Weather forecasts are talking about temperatures dropping into the low 30sF for Thursday morning. Row cover protection might be needed for extra protection.

ONIONS

After the heat wave halted pulling and harvesting last week due to the high risk of sunscald and black mold, seasonable temperatures have returned and onion harvest is once again in full swing, although generally behind schedule of a "normal" year. However, onions are drying down very nicely under the current sunny skies and cool crisp air (Fig. 1). Also particularly impressive at this time is how well weed control was this year, especially when considering what a good year it was for weeds. Weed problems once hidden by the crop canopy are exposed at the end of the season when onions lodge and the majority of fields finished the season in very good shape, a testament to the implementation of new and improved management strategies. The fall is the time of year to implement management strategies for problem perennial weeds including Perennial sowthistle (for which the timing is right now - see article, page 5) and Yellow nutsedge.



Figure 1. Sunset sneaking up on red onions as they dry in windrows in Elba muck land. Photo: Christy Hoepting, CVP

Cornell studies have shown that a fall application of Dual Magnum can provide 90% control of yellow nutsedge in the onion crop the following spring. Apply 1 to 1.33 pt per acre of Dual Magnum to the soil surface after onion harvest in the fall as late as possible before the ground freezes. Typically, onion growers apply Dual Magnum in early to mid-November in New York. Incorporate Dual Magnum to a shallow depth of no greater than 4 inches. In the following spring, do not disturb soil below the depth of Dual Magnum incorporation, as this could drastically reduce its effectiveness. Be aware that fall application of Dual Magnum will be detrimental to cereal cover crops and that it may cause reduced stand and onion size in the following onion crop.

POTATOES

Vine-killing and harvest continue, but there are some late planted fields that are still green, though vines are going down. Continue applying fungicide until potato vines are completely dead and dry. If tuber disease is present consider waiting a couple weeks to harvest for the infected tubers to break down. Manage ventilation so that no air warmer than the tubers reaches them or condensation will result, increasing the risk of disease spread. Curing disease-free potatoes can reduce storage shrink from dehydration by as much as 2-4% in the first month of storage. Tubers heal harvest wounds through the suberization and thickening of the skin during curing. Potatoes should be held at 50-60°F, and at high relative humidity, for 10 – 21 days. Uniform air movement is essential to avoid condensation and lack of oxygen. If silver scurf is present maintain the relative humidity below 85%. If there is decay in the potatoes eliminate the curing period and cool them down as quickly as possible.

Several post-harvest, pre-storage products are available to reduce the spread of potato diseases during storage. They all require uniform treatment of tuber surfaces with a very fine mist. Potatoes should be dry before placing them into storage. Bio-Save is a biological material that research has shown to reduce the spread of Fusarium dry rot (FDR) in storage. The new product Stadium has been shown to reduce the spread of FDR and silver scurf. Phostrol can suppress the spread of late blight and pink rot to new tubers in storage, but is not recommended for fresh market potatoes, especially if there are enlarged lenticels. Follow label directions carefully regarding product rates/ton of potatoes and especially the amount of water/ton of potatoes.

From Sandy Menasha, CCE, Suffolk County, Long Island Fruit and Vegetable Update: More tubers showing signs of the tuber necrotic strain of Potato Virus Y known as PVYntn were found while harvesting and grading. This strain of PVY causes slightly pink, raised ringspots on the tubers. Infected seed gives rise to infected daughter tubers. PVY in 2% of the seed results in 10-20% infection in plants and tubers; 5% virus in the seed can result in 25-50% infection in plants and tubers. Yellow-fleshed varieties like Yukon Gold are more susceptible. IMPORTANT: purchase certified seed and ask for the results of the winter tests which will show percent virus in the seed.

PROCESSING VEGETABLES

BEETS – Harvest continues with good yields overall. There has been a fair amount of pocket rot/root decay due to the excessive rains in some areas this year. Cercospora and Phoma leaf spot are present in fields at this time. However, tops are in pretty good shape in fields that we looked at this past week.

SNAP BEANS – Cool weather has kept plant maturity behind schedule. Some beans have a split or continued set, believed to be due to the beans stopping flowering during a cool, rainy period and then restarting when the weather improved. Various diseases including virus are present in fields, but no major epidemics at this time. Harvest will continue for the next few weeks.

LIMA BEANS – Similar to snap beans, maturity has been behind but harvest is underway. White mold is present in most fields to varying degrees, some severely infested. Gray mold has been much more of an issue this year. Leaf spot diseases are still present but seem to have been kept in check with fungicide sprays. Information about these diseases will be presented at the December Processing Advisory Meetings (date not yet set) and the processing session at the 2015 Empire State Producer's Expo in January.

PEAS – Yes, this crop is long out of the ground, but make sure you manage perennial weeds such as thistle and daisy (corn chamomile) this time of year. Harmony applied to fallow fields in the fall does a good job of cleaning up daisy. Canada thistle management is best done in rotational crops or in the fall. Stinger is the most effective herbicide, because it moves to the roots. There is an 18-month restriction before peas can be planted in a field where Stinger has been applied. Stinger is labeled for field corn, sweet corn, cabbage, beets and spinach, and pasture/forage crops. The optimal time for application is in April and May before the thistle buds open. Later in the season, 2,4-D can be used in labeled crops (not peas). In the fall, Roundup + Banvel can be used.

SWEET CORN – Yields have been excellent this year. Some Northern Corn Leaf Blight and Smut was observed this week, but no major issues overall.

SPINACH – The crop is looking good so far. Be on the watch for virus symptoms which caused devastation last year. Let Julie Kikkert know if you want samples tested.

SWEET CORN

With the heat of the previous weeks we are still seeing some good quality corn coming out of late plantings. The issue remains high insect pressure.

- Try to avoid chilling injury. It is very important to try and remove squash from the field before a frost. Chilling injury occurs when pumpkins and squash are exposed to temperatures below 50°F in the field or in storage.
- After curing, move squash or pumpkins to a dry, well-ventilated storage area. Store squash at 55-60°F with a relative humidity of 50-70%. If humidity levels are lower than that, moisture is removed from the fruit resulting in “pithiness” or shriveling. Humidity higher than that results in conditions that favor decay organisms.
- Continue to scout your crops, even if harvested in windrows in the fields. I have seen late, heavy infestations of striped cucumber beetles feed on the rinds of pumpkins and some winter squash rendering them unmarketable. They can also bore holes into the sides of fruit as well. Additional insecticide treatments might be needed.

More details on storage conditions can be found in last week’s newsletter in “Pumpkin and Winter Squash Harvest and Storage” by Ruth Hazzard, UMASS Extension. ●

UPCOMING EVENTS

2014 NYS Dry Bean Field Meeting

September 18, 2014 | 5:15 PM - 7:45 PM
Tom Corcoran’s farm, 1302 McEwen Rd, Caledonia 14423



Tour the Cornell dry bean variety trial and nearby strip trials. Cornell professors will share research-based ideas on pest issues and management including bacterial diseases and Western bean cutworm updates. Changing bean plant architecture to improve yields will also be discussed. DEC pesticide recertification and CCA credits will be available. A light supper will be provided. Cost: \$5 for Cornell Vegetable Program enrollees; \$10 for all others. The [full agenda and directions](#) to this event can be found on our website. Meeting sponsored by Genesee Valley Bean, Gowan Company, King Cole Bean, New York Bean, and SipcarnAdvan.

Disease and Weed Management Workshop

September 29, 2014 | 8:30 AM - 12:00 PM
CCE Allegany-Cattaraugus Belmont Office, 5435A County Road 48, Belmont 14813



Topics covered will include: Vegetable disease control; focusing on the main diseases of vegetable crops in NYS and their management options; both organic and conventional. Weed topics include: weed biology and identification, difference between annual, perennial and biennial weeds, grasses, sedges and broadleaf, and cool vs. warm season. The major weeds that affect vegetable crops in NYS will be discussed and their management options reviewed. Growers are encouraged to ask questions and actively participate in the course. Hands on examples will be used if available. Pesticide recertification credits will be available.

Cost of the program is \$15.00 per person or \$25.00 for two people from the same farm. If you are interested in signing up for this program, please contact [Colleen Cavagna](#) at 585-268-7644 ext. 12. Hosted by CCE Allegany-Cattaraugus and the Cornell Vegetable Program.

National Onion Association (NOA) and National Allium Research Conference (NARC) Annual Meetings followed by the W2008 Regional Research & Extension Committee Meeting

December 3-6, 2014
Scottsdale, Arizona



The National Onion Association (NOA) and National Allium Research Conference (NARC) Annual Meetings will be held in conjunction for the first time at Scottsdale, Arizona during December 3 – 5, followed by the W2008 Regional Research and Extension Committee meeting on December 6. Check it out!

- Registration for NARC, NOA & W2008 is being handled by the NOA, and the following link provides information on these exciting meetings and great value: <http://onions-usa.org/members/noaconventions>
- Hotel reservations can be made by contacting the Scottsdale Research & Conference Center: <http://www.alliumnet.com/2014NARCAccommodations.htm>

2014 Agribusiness Economic Outlook Conference

December 9, 2014
Cornell University, Warren Hall, Ithaca 14853

New York agricultural leaders (industry leaders, agribusiness professionals, policymakers, educators, and farm managers) learn about the short-and long-term outlook for agriculture and agricultural products in New York and the Northeast. Breakout sessions will provide the near-term outlook for major New York commodities including dairy, grains and feed, and horticultural products. For more information, contact Gretchen Gilbert at 607-254-1281 or gcg4@cornell.edu.

Weather Charts

John Gibbons, CCE Cornell Vegetable Program

Weekly Weather Summary: 9/9 – 9/15/14

Location	Rainfall (inch)		Temp (°F)	
	Week	Month	Max	Min
Albion	NA	NA	NA	NA
Appleton, North	0.46	1.15	77	37
Baldwinsville	0.75	1.22	76	42
Buffalo*	1.23	2.90	78	43
Ceres	0.59	1.50	71	45
Elba	0.68	1.32	74	33
Farmington	0.53	NA	76	39
Gainesville	0.38	0.79	74	33
Geneva	0.37	0.69	75	41
Kendall	0.35	1.11	78	39
Lodi	0.27	0.59	76	43
Penn Yan*	0.19	1.30	75	42
Ransomville	NA	NA	77	36
Rochester*	0.47	0.72	79	41
Romulus	NA	NA	75	44
Silver Creek	0.91	2.32	79	51
Sodus	0.65	1.16	76	38
Versailles	NA	NA	78	49
Williamson	0.46	0.66	77	42

Accumulated Growing Degree Days (AGDD) Base 50°F: April 1 – September 15, 2014

Location	2014	2013	2012
Albion	NA	NA	NA
Appleton, North	1943	2087	2438
Baldwinsville	2307	2375	2643
Buffalo	2264	2378	2775
Ceres	1946	1953	2166
Elba	1738	2008	2352
Farmington	2122	2183	2421
Gainesville	1709	NA	2266
Geneva	2174	2301	2641
Kendall	2176	2435	NA
Lodi	2391	2538	NA
Penn Yan	2317	2358	2649
Ransomville	2024	2034	2538
Rochester	2338	2450	2679
Romulus	2257	2392	NA
Silver Creek	2197	2322	2575
Sodus	2061	2112	2364
Versailles	2121	2233	2460
Williamson	2080	2389	2667

* Airport stations

** Data from other station/airport sites is at: <http://newa.cornell.edu/> Weather Data, Daily Summary and Degree Days.

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VegEdge is the award-winning newsletter produced by the Cornell Vegetable Program in Western New York. It provides readers with information on upcoming meetings, pesticide updates, pest management strategies, cultural practices, marketing ideas and research results from Cornell and Cornell Cooperative Extension. VegEdge is produced every few weeks, with frequency increasing leading up to and during the growing season.



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