The earliest planted peas already have several nodes of growth. Scouting and managing weeds in all pea fields is critical until the crop begins flowering. Your best chance for control is when the weeds are young. Fresh market growers have the option of cultivation for weed control, but processing growers must rely on herbicide use. Apply post-emergence herbicides based on the dominant weed species present and the growth stage of your peas. A copy of the chart on relative effectiveness of herbicides available for peas in NY from is available on the CVP website in the pea crop section. The only change for 2013 is that Raptor no longer has a PHI. However, when mixing with Basagran, you must follow the 10 day PHI of that product.

The application of post-emergence herbicides to succulent peas must be made at certain growth stages. Herbicide labels often refer to peas at a certain number of nodes (point where a leaf meets the stem). In peas, the first two nodes have only scale leaves and are often below the ground (Fig. 1). These should be counted in green peas. (Note this is different for dry field peas.) Furthermore, afila (leafless) peas do not have true leaves, rather they have stipules and tendrils.

Basagran and Thistrol don’t have any soil residual, so the best time to spray is when the majority of weeds have emerged. Ideally, the first flush of weeds would have one or two leaves and the next flush would be in the cotyledon stage. Keep in mind that rain will stimulate new flushes of weeds. If you have nightshades, pigweed or mustard in your field, a

Figure 1. Node count in succulent green peas. Photos: Julie Kikkert, CVP

continued on next page
Vegetable Transplant Care

From Long Island Fruit and Vegetable Update, CCE of Suffolk Co., May 2, 2013

In order to be successful and to reduce many of the stresses that transplanting can induce on the plant, a few key points should be followed. First, it is important to **harden off** transplants for about a week before field setting. As a result of the hardening process the plants will accumulate carbohydrates, stems will thicken, and a protective waxy layer will form on leaves thus making the soft succulent tissue firmer and harder. Placing the transplants outside, out of full sun and in a sheltered location is a common practice. **Sunburn** could occur if placed in full sun right out of the greenhouse. If night temperatures are forecasted to drop below 40 degrees F, bring them indoors or into an unheated building. Second, ensure that an **adequate root ball** has formed as this will help the plant recover more rapidly from the shock of transplanting. Soil temperatures should be around 65 degrees F for most warm season crops before transplanting. Black plastic mulch can increase soil temperatures more rapidly. Try to **transplant on a semi-cloudy day with minimal wind.** A **starter fertilizer** solution added to the transplant water or hole will help plants recover more rapidly and help to avoid any transplant shock.

Scouting Cole Crop Transplants for Diseases

**C. Hoepting, CVP:** Last year, there was an outbreak of downy mildew in cabbage, which seemingly started in the greenhouse during transplant production. High density plantings under moist conditions in a greenhouse can be optimum for the development and spread of downy mildew, **black rot**, **Alternaria leaf spot** and **damping off.** It can be tricky to distinguish which disease is present based on symptoms alone, but it is important to know, because these diseases are managed differently. In general, look for yellowing, tiny black spots on the leaves and stunting. Anyone with symptomatic seedlings is encouraged to contact one of the Cornell Vegetable team specialists for diagnosis via Cornell Plant Pathologist, Chris Smart.  

**Downy Mildew**  
Young seedlings are more likely to die from downy mildew than when larger plants are infected, although diseased older plants may be more susceptible to bacterial soft rots that eventually deem the heads unmarketable. An infected seedling may grow out of downy mildew symptoms, but the disease can remain in a latent (no symptoms) state within the plant, and flare up when favorable conditions resume later in the season. Yellow angular spots appear on the upper sides of leaves (Fig. 1). Under moist conditions, grayish

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mycelium and spores can be found on the corresponding undersides of the leaves. To manage downy mildew, avoid excessive overhead irrigation to keep leaves dry. This can occur when a string of warm and sunny days give way to cold and cloudy weather. If you find downy mildew in cole crop transplants, fertilizer can be used to stimulate growth to enable seedlings to outgrow infections. Aside from some copper-based products, there are no fungicides labeled for use in the greenhouse, but plants that are outside hardening off can be treated with Ridomil Gold, Bravo, Presidio or any of the several fungicides labeled. Once transplanted into the field, downy mildew-infected transplants should be sprayed with Bravo weekly until no more symptoms are evident. If the weather is hot and dry, infected transplants should grow out of the disease just fine.

**Black Rot**

It is not uncommon for serious outbreaks of black rot to originate from infected seed. Infected seed produces seedlings that are systemically infected with black rot, which is then spread from plant to plant in water droplets. This secondary spread can occur rapidly during transplant production, because the close proximity of plants in these high density plantings make it easy for bacteria to spread in a water droplet from an infected plant to a clean plant. Typical symptoms of plants with a systemic infection of black rot include yellowing leaves and black veins. The discolored veins help distinguish yellowing due to black rot from that caused by nutritional deficiency or water stress. Lesions caused by secondary plant to plant spread are necrotic and V-shaped (Fig. 2). Infected seedlings often show no symptoms at all.

To manage black rot, it is most important to reduce spread of during transplant production. 1) Use new supplies and trays. Disinfest greenhouses, old trays, and equipment used in transplant production with a germicidal agent such as quaternary ammonium chloride salts (Q-salts such as Greenshield or Physan 20), or hydrogen dioxide (ZerOtol). 2) Handle transplants only when the foliage is dry. 3) If Black rot is detected, consider all plants in that flat to be contaminated and remove and destroy immediately. Surface-disinfect the area including benches, tools, and everything that came in contact with the diseased plants. Either destroy or isolate the flats surrounding those infected and monitor plants closely for disease symptoms. Do not attempt to separate healthy from diseased plants within a flat. 4) Use copper bactericides regularly once black rot has been detected in a greenhouse. Since it is so tricky to identify early, preventative use of copper bactericides may also be warranted.

**Alternaria Leaf Spot (ALS)**

Occasionally, ALS occurs on transplants. It appears as small non-descript black spots on the leaves (Fig. 3). Sometimes, more diagnostic target spot lesions occur. There is nothing labeled for ALS in the greenhouse. Once the plugs are transplanted into the field, they should be scouted for ALS and Bravo or other labeled fungicide be applied as long as ALS continues to occur.

**Damping Off and Wirestem**

Damping off is favored by cool, cloudy weather, high humidity, wet soils and over-crowding. It is most commonly caused by *Rhizoctonia solani*, which also causes wirestem, but *Pythium* species can also cause damping off. Either pathogen can cause damping off (Fig. 4). Seedlings infected with *Rhizoctonia* that do not damp off can develop a dark brown lesion on the stem where it contacts the soil surface, and the seedlings start to turn yellow and collapse. The lesion girdles the stem, becomes quite sunken and resembles a “wire” (Fig. 5). Most seedlings with wirestem eventually die in the field, and those that survive, produce unhealthy plants that yield poorly. Wirestem does not spread from plant to plant. Do not over-water. If you have *Pythium*, Ridomil Gold can be applied to plants that are outdoors. Ridomil does not control wirestem. For Wirestem, simply do not plant infected seedlings, or expect poor stands.
Sweet Corn Herbicide Update

Chuck Bornt, ENY Commercial Horticulture Program

Sweet corn is moving along, especially under plastic and floating rowcovers. However, I am concerned that this dry period we are having is going to affect our pre-emergent weed control programs. Many products need rain to activate the herbicides, so plantings done within the last couple weeks are at risk for herbicide failure. I think this year we made need to follow-up with some post-emergent materials.

**Post emergent options for sweet corn herbicides:** There are a few materials labeled for post emergent use on sweet corn—each with their own strengths and weaknesses. Most of the ones discussed below are newer products that have been found to work quite well. Keep in mind that many of these products work best if applied to small, actively growing weeds! The other key is adding the right adjuvants and usually, but not always, a nitrogen source. You need to remember if you are using tank mixes with other materials to read the labels carefully and choose the most restrictive adjuvant type and rate as well as the correct nitrogen source (if required) and rate. When in doubt, call your local extension person or your supplier.

**Impact** has been out for several years and has been working well. It controls many of the troublesome broadleaves as well as barnyard grass, fall panicum and foxtail species (Yellow, Green and Giant) as well as crabgrass. Impact works best when broadleaves are less then 4” tall and grasses are less then 3” tall. Impact at a rate of 0.75 fluid ounces plus MSO (methylated seed oil) and a sprayable grade nitrogen such as AMS (ammonium sulfate) or UAN (urea ammonium nitrate) are recommended adjuvants (see label for rates). The label recommends MSO at 1.5% per finished volume of spray water. You can also use AMS at 8.5—17 pounds per 100 gallons of water. We have also seen that adding 0.25 lbs of atrazine improves weed control. Please be mindful that there is a 45 pre-harvest interval for sweet corn and a 18 month rotational restriction (see label for specific rotations) for most vegetable crops with atrazine. Due to the hot, dry weather, it might be advisable to wait for a rain shower or irrigate before applying Impact to ensure that the weeds will be growing to take up the herbicide and to minimize injury to the corn. Best control will also occur if broadleaf weeds are less then 4” tall and grass weeds are less then 3” tall.

**Option** is another post emergent herbicide which will control several different broadleaves and annual and perennial grass species in sweet corn. Option can be broadcast sprayed in 10—20 gallons of water or applied with drop nozzles on sweet corn in the V1 to V6 (visible leaf collars) growth stage. It is not recommended to apply Option to sweet corn past the V6 stage as concentrating sprays in the whorl will increase crop injury. It works best if most broadleaves are less then 4” tall and grasses are 2-4” tall. It is also effective on Quackgrass up to 10” in height. Do not use on varieties treated with Counter, Thimet or Dyfonate (see label for more information). Again, there is a 45 pre-harvest interval with sweet corn and it should be tanked mixed with MSO (containing at least 80% methylated seed oil and 10% or greater emulsifier) at 1.5 pints per acre in 10—20 gallons of water per acre). For spray volumes of 19 gallons or more per acre use a 1.0% per volume of finished spray water of MSO. The label also recommends the addition of either a spray grade UAN (28% - 32%) at 1.5 2.0 quarts per acre or 1.5—3.0 pounds of AMS per acre. Research and experience has also shown that adding at least 1/4 pound of atrazine per acre can significantly improve weed control. Like Impact, it is not recommended that Option be applied to corn that is drought stressed, in saturated soils or experiencing other poor growing conditions. Please pay attention to the mixing order: fill tank with 25% of the total water volume and begin agitation. Add Option and make sure it is thoroughly mixed; add in other herbicides such as atrazine followed by the MSO and UAN. If your using AMS, this should be added and mixed thoroughly first, before the Option is added. Do not leave mixed product in the tank for more then an hour without agitation as it will settle out and be sure to use all the mixed product in your tank within 24 hours to avoid product degradation. Some sweet corn varieties have also shown more injury to Option so check with your seed salesman to determine if the varieties you plan on using Option can tolerate it.

**Accent** has been around for quite a few years and has had very good success especially on annual grasses. Please note that the formulation has changed and the new one is called Accent Q. On sweet corn, you are allowed one application per season at the rate for Accent Q is 0.45—1.8 ounces per acre for corn that is 12” tall or less and when the weeds are small and actively growing. The label indicates that 0.9 ounces per acre controls many of the weeds listed on the label as long as they are not taller then the maximum height listed in the label. For corn taller then 12”, drop nozzles will need to be used to avoid getting Accent Q in the whorl which can lead to ear malformation—DO NOT USE on corn taller then 18”. The label also recommends the addition of a COC (crop oil concentrate) at 1% finished spray volume or 1 gallon per 100 gallons of water and ammonium nitrogen fertilizer at 2 quarts per acre of UAN or 2 pounds per acre of AMS. The label recommends using a minimum of 15 gallons of water per acre for optimal control. Adding a 1/4 pound of atrazine will also improve
NYS Food Banks Reimburse Farmers for Cost of Harvesting Donated Produce

New York’s fruit and vegetable farmers can be reimbursed for the harvesting costs of produce that is donated to a food bank in the state.

Farmers may be reimbursed for their labor costs in harvesting and packing produce, as well as packaging materials, when produce is donated to food banks. A new initiative, Glean NY, hopes to increase the donation of food from the farm, including produce that might not otherwise have been harvested, produce culled from packing lines and storage, and more.

Glean NY is a partnership of New York State’s eight regional food banks, Cornell University, Cornell Cooperative Extension, New York Farm Bureau, and farmers.

Occasionally, farms have produce that cannot be sold due to cosmetic blemishes, lack of market, or similar conditions. Food-safe produce can be donated to food banks. Donations do not have to be washed, sorted, graded, or packaged as for retail.

In many cases, the food banks’ trucks can pickup produce at the farm. In some regions, food banks have produce crates that can be dropped off at the farm; otherwise farm crates can be returned to the farm.

New York State’s food banks provide food for over 3 million people annually. Food is distributed through more than 5,000 local food pantries, soup kitchens, shelters, and other programs.

NY farmers donated more than 8.5 million pounds of produce, meat, milk, eggs, and other items to food banks in 2012, according to the American Farm Bureau Harvest for All project.

To make a donation, or for more information, call your regional food bank, or call the Food Bank Association of New York State at (518) 433-4505.

On the web: www.gleanny.org
COLE CROPS
Cool weather seems to have slowed flea beetle and other insect activity. When a string of sunny weather gives way to cool and cloudy days, this decreases the water needs of transplants growing in greenhouses – be careful not to over water as this can result in damping off. Also, mitigate cool night temperatures to avoid conditions favoring leaf wetness, as this can increase spread of air-borne diseases like downy mildew – see article, pg 2. There have been some reports of excessive slug feeding in early plantings of cabbage – see article, pg 9.

GREENHOUSE & TUNNELS
A cooler spring has increased input costs for most greenhouse tomato growers, although abundant sunshine has nearly eliminated foliar diseases. Anytime a structure is heated there is an opportunity for combustion gases to poison tomato plants. Trouble shooting problems this spring so far have included several cases of combustion gases causing leaf distortion and bud malformation (see photos). In one case mice had built a nest in a section of a propane hot air furnace. This caused one of the burners to smoke, instead of producing a pure flame.

At another farm a wood stove leaked smoke from its chimney when there was any downdraft. To prevent gas poisoning inspect furnaces (or stoves) prior to the season for any obstructions and position chimneys away from inlet louvers, on the far side of the prevailing wind (if possible). Tomatoes are the ‘canaries in the coal mine’ when it comes to gas sensitivity, but remember, all fuel types can be toxic if improperly vented. Row covers can provide excellent frost protection down to the high 20’s, as an alternative to unvented ‘salamander’ heaters (see photo). Two layers of row cover applied before sunset increase frost protection in unheated structures.

LETTUCE & GREENS
Slugs and flea beetles have been somewhat bothersome in some plantings. With the mix weather conditions we have had, some herbicide damage has been responsible for burnt roots and distorted growth.

ONIONS
It appears that onions escaped damage from Tuesday morning’s frost. Aside from some poor stand establishment due to dry conditions in Potter, the onion crop is looking good. The majority of the crop is at the loop to flag leaf stage with earliest direct seeded onions having the first leaf almost fully extended. Transplanting is finishing up. Some fields have a flush of weeds at the cotyledon to 4 leaf stage. Transplants at the 4-leaf stage are the most tolerant for POST-emergent applications of Buctril and Chateau (Fig. 1).

Buctril is labeled for the 3-5 leaf stage. It is very good at controlling ragweed, smartweed, common groundsil and mustards. It is moderate to weak on pigweed. Higher rates can be used during sunny and dry weather, which is conducive to building up a thick waxy cuticle that helps protect the onion leaves from the contact burner activity of Buctril. Rates of Buctril can vary widely depending on the weather conditions. When onion leaves are tender, use 4 fl oz. When onion leaves have a thick waxy cuticle, 8 to 12 fl oz or more have been used without injury. Buctril can be tank-mixed with Goal. For example, 4 fl oz Buctril + 1 fl oz...
CROPS  Tidbits & Insights (continued)

oz Goal, or 6 fl oz Buctril + 2 fl oz Goal, or 4 fl oz Buctril + 4 fl oz Goal, the latter 3 tank mixes being for when onions have thick waxy cuticles. Wait until foliage and soil surface are dry before applying. Use 50-70 gal per acre of water. Adjust your tank mixes according to the weeds you are targeting. For example, if smartweed is more of a problem than pigweed, favor the Buctril. Make sure you know how to identify the difference between smartweed and pigweed seedlings (Fig. 2). Chateau does a great job of both smartweed and pigweed. There has been a lot of talk about Chateau this spring since last summer’s demo — see article, pg X. Muck Donut Hour starts next Tuesday, May 21st - see announcement in the lower right hand corner of this page.

Figure 1. Early seedling stages of red root pigweed at 4-leaf stage (a) and Pennsylvania smartweed at the first true leaf stage (b). Both have slender oblong cotyledons with red undersides. PA smartweed has a single 1st leaf and PW has paired 1st leaves. PW has a notch at the tip of the leaf blades of the true leaves.
Photos courtesy of South Dakota State University

POTATOES
While very early planted potatoes have been up for a week, and some growers have substantial acreage planted, other growers are just getting started.

PROCESSING VEGETABLES
While good progress is being made on planting crops in NY, I thought you might be interested in reading the following report from the Univ. of Wisconsin Vegetable Crop Update, 5/11/13: The spring has greatly delayed the planting of carrots, peas, and sweet corn which will likely lead to delays in harvest schedules. That said, the general rule of thumb is it takes 2-5 days in April to accumulate the heat units of one day in late May. Of course this is driven by temperatures, sunshine, and other factors. The bigger challenge is getting access to fields with medium textured soils. Some crops have been planted, field corn and soybean planting has been delayed due to the showers and wet soils. That said, a lot of field work progressed over the first few days of last week. A return to those conditions should promote good soil conditions for field work.

SWEET CORN
The cold and windy conditions have slowed down some of the growth. Bare ground corn has been set back a little but should catch up with the warm weather on the way. With enough moisture, the crop should really take off. With more dry weather expected in some areas, be prepared to irrigate.

Veg Growers Value Cover Crops

C. MacNeil, CVP: Eighty-nine vegetable growers and others attended the 2013 Cover Crop session at the 2013 Empire State Producers’ Expo, showing the continued high interest in this topic. Growers surveyed at the session in past years have replied that they’d increased their cover cropping from 43 - 60%, either increasing acres or trying new cover crops. This year growers were surveyed on their actual cover crop acreage, and the value of those cover crops. The 20 growers who responded grew from 3 to 1,800 acres of vegetables (aver. 389 acres) on their farms. All used cover crops, on from 20 – 100% of their vegetable acres (aver. 63%). All used grass cover crops, on an average of 81% of their vegetable acreage, while almost half used legumes, on an average of 35% of their acreage. Four growers used crucifer cover crops and 1 used buckwheat. Half of the surveyed growers estimated the value of their cover crops, with values ranging from $5 – $200/acre (aver. $93/acre). Seven of those growing legume cover crops estimated that 30 – 150 lbs. nitrogen/acre were produced by the crop (aver. 64 lbs. N/acre). At a market price of $.60/lb. N, the value of the legume cover crops ranged from $18 - $90/acre (aver. $38/acre). Whether growers are crediting their legume N, reducing their fertilizer N applications, is the question. Are you? ■

Muck Donut Hour
Every Tuesday

Meet with Cornell Vegetable Program Specialist Christy Hoepting on the corner of Transit and Spoilbank in the Elba muck every Tuesday from 8:30 am to 9:30 am for candid discussions about everything ONIONS

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Results of 2012 Chateau Demonstration in Onions

C. Hoepting, CVP:

Chateau Onion Label: Chateau is a group 14 (cell-membrane disrupter) herbicide that is labeled in onions for broad-spectrum broadleaf weed control. It is labeled as a PRE-emergent herbicide in onions and acts a burn-down material. Chateau is labeled for weed control in transplanted onions between the 2 and 6 leaf stages and in direct seeded onions between the 3 and 6 leaf stages. Apply no more than 2 oz per acre in a single application and no more than 3 oz per crop per season with a minimum of 14 days between applications. There is also a micro-rate application that allows 0.5 to 1.0 oz to be applied between the 2 and 6 leaf stages on a 7-day interval. The only thing allowed in the tank with Chateau is Prowl H₂O; no adjuvants or other herbicides of any kind as tank mixes can get very hot!

Chateau is available in two formulations, WDG and SW. For the WDG formulation, use on onions is available only as a supplemental label (http://128.253.223.36/ppds/516323.pdf), while onions are on the primary SW label. Eventually, WDG will replace the SW formulation for all uses.

2012 Trial Results: In 2012, the use of Chateau WDG was demonstrated for onion crop tolerance and POST-emergence activity against selected species of weeds. Note that some of the applications made were off-label.

POST-emergence efficacy against weeds:

Chateau WDG provided excellent control of pigweed (PW) (Fig. 1)
- 1.0 to 3.0 oz killed PW less than 2 inches tall
- 1.0 oz burned back (but did not kill) PW taller than 4 inches
- 2.0 oz killed PW 4 inches tall, but struggled to kill once 4 inch tall PW had branches
- 3.0 oz killed 6+ inch tall unbranched PW
- Double app (2.0 oz at 3 leaf + 1.0 oz at 5 leaf) provided better control than a single high rate app (3.0 oz at 3 leaf)
- Applying the high rate first (2.0 oz at 3 leaf + 1.0 oz at 5 leaf) provided better control than applying the low rate first (1.0 fl oz at 3 leaf + 2.0 fl oz at 5 leaf)

Chateau WDG killed yellow nutsedge (NS) shorter than 2 inches tall
- 1.0 to 3.0 oz killed NS less than 2 inch tall
- 1.0 to 3.0 oz burned back (sometimes killed) NS 4 inches tall
- The higher the rate, the better the burn-back/kill
- NS taller than 4 inches was burned back, but eventually grew back
- Double app, starting with high rate (2.0 oz at 3 leaf + 1.0 oz at 5 leaf) was more effective than double app starting with the low rate (1.0 oz at 3 leaf + 2.0 oz at 5 leaf)
- Chateau may be used to control emerged NS if applied when NS is less than 2 inches tall. It may be used to hold back larger NS to reduce competition with onions and production of nutlets.

POST-emergence apps of Chateau WDG applied to weeds greater than 2 inches tall or wide did NOT control: lamb’s quarters, purslane, ragweed, hairy galing-soga, milk pusley or pineapple weed
- POST-emergence control of weeds with Chateau requires that they be very small
- Preliminary results in 2013 indicated that 1.0 oz of Chateau killed PA smartweed at the cotyledon to 1-leaf stage.

Onion crop tolerance to Chateau
- None to minor crop injury (necrotic speckling) to onions with 0.5 to 2.0 oz applied to onions at the flag leaf to 5-leaf stage
- None to minor crop injury (necrotic speckling) with 3.0 oz applied to onions at the 2 to 5 leaf stage; even 3.0 oz at 3 leaf + 3.0 oz at 5 leaf did not result in unacceptable injury
- Moderate crop injury with 1.0 to 3.0 oz applied to onions at the 7 leaf stage
- Major leaf burning with 1.0 to 3.0 oz applied to onions at the 8 to 10 leaf stage

Caveat: At least under spray conditions of this trial: 75 to 85°F, 45 to 65% RH, and sunny.

What about PRE-emergent weed control with Chateau?
Chateau has great PRE-emergent activity against a wide spectrum of broadleaf weeds at low rates. Stay tuned! Trials are already underway in Oswego to evaluate the PRE and POST-emergence weed control capacity of Chateau with applications being made starting PRE-emergence to the onions. ■
Managing Slugs in Early Cabbage

*C. Hoepting, CVP:* Slugs are a sporadic pest of cabbage that is favored by cool and wet conditions; over-wintering populations increase in the spring, especially in fields following corn, in weedy areas and along hedge rows. Slug feeding damage is characterized by large holes that skeletonize the leaves (e.g. leave the veins intact) (Fig. 1) and can definitely do some damage on small plants. Since slugs are generally nocturnal, they are often hiding during the day. In contrast, if this amount of damage is caused by caterpillars, the caterpillars can usually be found feeding on the leaves.

 Slug control options:

**Deadline MP** and other products with the active ingredient, metaldehyde, are molluscide baits that are labeled on most vegetable crops for control of slugs and snails. Broadcast 20 lb per acre, and re-apply if necessary. Care must be taken to avoid contamination of the edible portions of the plant with Deadline MP, which is not too much of a problem when applying to small plants. Following application with Deadline MP, the ground will be littered with dead slugs — this is VERY satisfying!

**Lannate LV** is available as a 2(ee) recommendation to control slugs in cabbage ONLY. The key to best control of slugs with Lannate is that it comes into contact with the slugs. Spraying at night (past 12 midnight) or in the early morning when temperatures are cool (50s or 60s) and foliage is wet with dew or rain is the best time to target slugs with Lannate. In Cornell studies, the addition of an adjuvant increased slug mortality when slugs were sprayed at night, as did multiple applications 7 days apart. Lannate is also labeled in Cole crops for control of caterpillars. The label is available at [http://128.253.223.36/ppds/531508.pdf](http://128.253.223.36/ppds/531508.pdf).

**An Organic Option:** The active ingredient, iron phosphate, is labeled under several trade names including some that are OMRI-approved. In the Cornell studies, Sluggo effectively controlled slugs, but was not quite as good as Deadline MP. The baits did not last as long in the field as Deadline MP and needed to be re-applied more frequently.

Canada Thistle Control in Asparagus with Clopyralid

May is a good month for treating perennial colonies of Canada thistle using clopyralid.

The post-emergence herbicide Spur (a.i. clopyralid; Albaugh, Inc. Ankeny, IA) is labeled for Canada thistle control in asparagus with a 48 hour to harvest restriction. This is good news for asparagus growers. At one time the herbicide Stinger (a.i. clopyralid; Dow AgroSciences LLC) was labeled for asparagus but has since been removed. However, Spur and Stinger contain the same active ingredient therefore Spur is a viable alternative source for this active ingredient.

Canada thistle is a common and destructive weed in asparagus plantings. This deep rooted pest grows in perennial colonies that expand in size if not controlled. In addition, infestation from wind-blown seed adds to the problem. Often, only parts of fields are infested and spot treatments can be treated. Proper sprayer calibration is essential in order to deliver the correct rate of herbicide.

May is a good month for treating perennial colonies of Canada thistle with clopyralid. Label instructions suggest the full rate (2/3 pt/A) after the majority of the basal leaves have emerged through bud stage. Treat before flower stalks bolt. Delay cultivation two weeks after herbicide application. Alternatively, a split application could be made: first when leaves first emerge and again at the end of the cutting season, before fern growth. No more than 2/3 pt/A can be applied in one growing season.

Some crooking (twisting) of spears may occur and Spur should not be applied if this cannot be tolerated. Clear cutting of spears before application is advised to reduce potential injury.
Late Blight Risk

We had the first emergence of potato foliage on May 6th this year, a week later than in 2012, in both early planted potatoes and volunteers. This is the date many tomato and potato growers should begin counting late blight (LB) severity values (SV), whether they have potatoes up or tomatoes in their fields or not. The appearance of tomato or potato foliage anywhere within 30 miles of your farm is a concern since LB spores developing that far away can reach your fields. LB is predicted within a week or two once 18 SVs are accumulated at your farm/the nearest weather station. (Fungicide applications are not recommended until potatoes reach 4 inches tall.) Volunteers, or very early planted potatoes, on sandy or muck soil are likely emerging in much of Western NY. Higher elevations in the Southern Tier, and sites within a few miles of Lakes Erie or Ontario, may have a somewhat later emergence date. Potatoes in cull piles in the sun, especially in protected areas, may have emerged slightly earlier.

There are new weather stations in Western NY and the Finger Lakes Region that may be closer to you than the station you referred to last year for LB SVs: Butler, Kendall, Romulus, Silver Creek and Wolcott. For the location of all the weather stations in the IPM NEWA network go to the map at: http://newa.cornell.edu/. For LB SVs at the stations go to the website and click in the upper menu on Crop Pages, then Potato or Tomato, and Blitecast. Choose a site and a first emergence date, enter, and see the LB SV Total.

We do not know what LB strains will show up this year. While Ridomil is excellent on some strains it is ineffective against others. Meg McGrath, Cornell, recommends that Ridomil not be used for LB unless tests by Bill Fry’s lab, Cornell, confirms that the LB you have is sensitive. When you begin fungicide applications use a protectant like chlorothalonil until conditions warrant something more.

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<td>5</td>
<td>Wolcott</td>
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</table>

* Accumulation start 5/6/13  
** For more sites: http://newa.cornell.edu/  
*** Airports (RH increased to estimate field conditions)

Visit the Cornell Vegetable Program website for a complete list of UPCOMING EVENTS at http://cvp.cce.cornell.edu

Twitter Updates
on High Tunnel, Greenhouse and Fresh Market Field Research
For the latest updates on Cornell Vegetable Program high tunnel, greenhouse and field research follow vegetable specialist Judson Reid @Jud_Reid

Check out the Cornell Vegetable Program YouTube Channel
We will be adding more helpful videos for farmers throughout this season. Check back to see what we’ve uploaded.
Weather Charts

**Weekly Weather Summary: 5/07 - 5/13**

<table>
<thead>
<tr>
<th>Location</th>
<th>Rainfall (inch)</th>
<th>Temp (°F)</th>
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<tbody>
<tr>
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<td>Week</td>
<td>Month</td>
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<tr>
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</table>

* Airport stations
** Data from other station/airport sites is at: [http://newa.cornell.edu/] Weather Data, Daily Summary and Degree Days.
Veg Edge Weekly is a seasonal weekly publication of the Cornell Vegetable Program providing information about crop development, pest activity and management, pesticide updates, local weather conditions, meetings and resources.

Veg Edge is published 28 times annually, monthly from October-May and weekly from May-September. If you have any questions about this publication, contact Julie Kikkert at 585-394-3977 x404 or jrk2@cornell.edu. Visit the Cornell Vegetable Program website at http://cvp.cce.cornell.edu/ for information on our research, upcoming events and enrolling in our program.

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