Cool, Wet Spring Favors Seed Corn Maggot

Take steps this year to minimize damage from seed corn maggot in susceptible crops (see sidebar). Attack is most severe when cool, moist spring conditions slow seed germination and growth of young plants. Seed corn maggot adults are now emerging from overwintering pupae. Mated females fly close to the ground in search of suitable egg laying spots – preferably near decaying organic material or germinating seed to provide a food source for the newly hatched larvae. The larvae tunnel in seeds (Fig. 1) and young plants, and often prevent germination or cause weak, misshapen plants.

Prevention is the key to control, because there are no effective rescue treatments. Here is a list of steps you can take:

- Encourage fast germination by planting high quality seeds in a well prepared seedbed at the minimum depth consistent with soil moisture.
- Handle seeds carefully since cracked seed coats can provide entry points for maggots.
- Using transplants may reduce your risk, but maggots can tunnel in stems of young plants, especially if growth is delayed by cold weather after planting.
- Avoid low, wet areas.
- Incorporate crop residues/cover crops 2 to 3 weeks prior to planting.
- Reduced tillage seems to result in lower maggot populations because the organic matter stays on the soil surface (K. van Wychen Bennett, et al, Univ. MN).
- Avoid manure applications right before planting as this attracts egg-laying adults.
- Plant after the first generation maggots have pupated (mid-June).
- Row covers may prevent egg laying and subsequent plant damage.
- Use insecticide and fungicide treated seed to protect seeds/seedlings – Cruiser 5FS (beans, peas, sweet corn), Lorsban 50-SL (beans), Sepresto 75WS (onions), Poncho 600 (sweet corn).
- In furrow insecticide treatments can be used: Lorsban 4E (onions, legume vegetables) or 15 G (corn); Capture LRF, Force CS or Counter 15G (sweet corn).
- Planter box treatments for field/sweet/popcorn include Concur Seed Treatment, Latitude Seed Treatment, and Kernel Guard Supreme (D. Gilrein, CCE-Suffolk, NY).

Vegetables Affected by Seed Corn Maggot:
- Beans
- Beets
- Corn
- Cruciferous crops
- Cucurbits
- Onions
- Peas
- Spinach

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Scout Fields for Damage:
Areas of poor seedling emergence may indicate seed corn maggot injury. Dig up 5 to 10 seedlings or transplants. Infested seed and plant parts are often hollowed out. Finding the maggots in association with the damaged tissue is the best evidence. Full grown maggots are yellow-white, tough skinned, legless, about ¾ inch long. They have wedge-shaped heads and two black hooks for feeding (see website below for photos).

Maggots burrow into seeds and sometimes plant stems. They also feed on cotyledons and growing tips. Seeds may be killed and fail to germinate. Infested seedlings are often weak and die. They may have damaged cotyledons or lack a growing point. Onion plants infested early may not emerge, whereas, later damage to pre-bulbing plants may cause misshapen bulbs from which the foliage tends to grow from the side of the bulb.

MORE INFORMATION and PHOTOS can be found at http://web.entomology.cornell.edu/shelton/veg-insects-ne/pests/scm.html. (J. Kikkert)

Figure 1. Seed corn maggot larvae tunneling in a lima bean seed (courtesy of Brian Nault).

Dates to Remember...

**May 13** - Horticulture & Organic Agriculture Titles in the 2012 Farm Bill, 10am - 12pm, Bistro of the Arts & Home Building, NYS Fairgrounds, Syracuse. NYS Ag & Markets is holding a series of meetings for stakeholders to prioritize NYS concerns regarding the reauthorization of the Farm Bill. Pre-registration required by May 11. Call 518-457-8876.


Prevented Plantings

Nicole J. Angelo, Genesee Co. FSA, Batavia

When bad weather delays planting or damages crops, producers must immediately report their crop losses, says James Barber, NY Farm Service Agency (FSA). The deadline for reporting unplanted acres is 15 days from the Final Planting Date. This applies to all crops, whether covered by crop insurance, not covered by insurance, or covered by FSA’s Non-insured Assistance Program (NAP). Crops not covered by insurance or NAP should still be reported in case disaster assistance becomes available. For more info contact your local FSA office or visit www.fsa.usda.gov.
Starter Fertilizers

Mosbah Kushad, University of Illinois

Most vegetable growers are familiar with the importance of starter fertilizers and are applying them. However, some may not know that starter fertilizers are very important when the weather is wet and cold, which makes this spring an ideal time to consider applying a starter fertilizer with all your plantings. A starter fertilizer is a small quantity of either soluble or granular fertilizers that contains mainly nitrogen and phosphorous and in some cases potassium and other micronutrients as well. Phosphorous in particular is very important because of its poor mobility in the soil, which makes it difficult for the roots of young seedlings to get the necessary amount for root growth, unless soil analysis indicates that the soil is high in phosphorous.

What starter fertilizers to use? There are many to choose from, but make your decision based on a soil test. Generally a high quality starter fertilizer that contains at least nitrogen and phosphorous will be helpful. A standard starter fertilizer is 8-32-16 or 10-52-8, but any water-soluble fertilizer that is high in phosphorus will be satisfactory. In soils with high phosphorous (more than 15 ppm), ammonium nitrate is a good starter fertilizer, while in soils with high pH and low phosphorous, ammonium sulfate maybe a better choice. If soil test show less than 10 ppm, phosphorous, then a starter fertilizer containing two to three times more phosphorous than nitrogen, such as mono- or di-ammonium phosphate, will be better. You can also add micronutrients, such as boron, manganese, and iron with the starter fertilizers if soil analysis indicates deficiency.

What rates to apply? The rate of starter fertilizer to apply will depend on the soil analysis and the crop. Read and apply the recommended amounts listed by the manufacturer. Here are general recommendations for some vegetables. For example, in sweet corn, if the soil test shows low phosphorous, less than 10 ppm, then apply about 40 to 50 lb/ac along with about 10 to 20 pounds of nitrogen. Apply the fertilizer banded in a furrow about 3 inches away from the seeds and about 3 inches below the seed depth. In other words, if you planted the seeds at 3 inches deep then place the starter fertilizer at 6 inches deep. If soil tests show more than 15 ppm, then reduce the amount of phosphorous to 10 to 20 pounds. In peppers, if the soil test is less than 10 ppm, broadcast 80 to 90 pounds phosphorous before transplanting and then apply 30 to 40 pounds of either ammonium phosphate or another form of starter fertilizer in furrows below the transplants as mentioned above. Nitrogen levels in the starter fertilizer should be somewhere around 10 to 15 lb for both chili and sweet peppers. Watermelons and cantaloupes will also respond to a starter fertilizer, depending on soil analysis. A 50 to 60 lb per acre rate of phosphorous, along with 10 lb of nitrogen maybe applied if the soil analysis shows less than 10 ppm phosphorous. Make sure to band the fertilizer and to provide adequate soil moisture at or soon after the fertilizer application.

Soil nutrient levels exceeding crop needs can be as harmful as deficient soils. Very high P levels (above about 310 lbs P2O5 /acre or 140 lbs P/acre) in the soil may lead to iron and zinc deficiencies. Serious nutrient imbalances can also occur in soils high in potassium, magnesium or calcium. For these reasons, soil nutrient analysis is highly recommended at least every two years in order to help establish rates of starter and regular fertilizers needed for good growth and best yield.

Asparagus & Frost

Bernard Zandstra, Michigan State Univ.

When moderate frost settles on emerged asparagus spears, they often remain erect and appear to be normal for a few days. A hard frost normally turns spears to mush and they fall over and disintegrate. The day after the frost the spears can be harvested and eaten, but frosted spears should not enter processing or fresh trade. By the second day, the color turns dark green and the tips become corky and brittle. The spears may even elongate an inch or two. After the second day after the frost, the spears are not usable and they begin to shrivel and slowly turn brown.

Frozen spears that remain standing in the field appear to have an adverse effect on the plant, and new spear production is reduced for several days. The effect can last a week or more. The most effective management of a frosted field is to snap off all frosted spears as soon as possible. If a field was entirely frosted or frozen, the simplest method for removing spears is to mow the field. If only spots or individual plants are affected (which is quite common, for some strange reason), have pickers snap off the darkened and bent spears and leave them lying in the field, while harvesting the good spears.

New Late Blight Blog

New Late Blight Blog, Resource Page – NYS IPM Vegetable Specialist Abby Seaman has started up a Late Blight Alert Blog to keep tomato and potato growers updated on the latest findings in NYS and surrounding areas. Go to: http://blogs.cornell.edu/lateblight/about/ for a long list of resources on LB. At the bottom right of the page check out the Archives for recent Alerts, and subscribe to the Alerts by typing in your email address and then clicking on Subscribe by Email. From a 5/9 posting: “LB has been identified on volunteer tomatoes in a soil bin in a greenhouse in Maine”. We don’t have information yet on the LB strain that’s shown up this spring but US-22 was most common in NY last year, though US-8 was also present. US-22 is more virulent on tomatoes while US-8 is more virulent on potatoes. (C. MacNeil)
LETTUCE
The cool weather was a help for young plantings unlike last season but the lack of sunshine has kept growth on the slow side up till late last week. Plants are starting to come along now and are putting on some size. Wetter ground might be more susceptible to more head rots this spring.

ONIONS
The sunshine was a welcome relief this week. Fields are being plowed, onions seeded, plastic laid and onions transplanted like crazy! In general, the crop is about 1 month behind with the earliest direct seeded onions at the loop-leaf stage and earliest transplants just getting established.

Reminder: FSA requires natural disaster prevented planting to be reported within 15 days of the final planting date of the crop. For onions, this is May 10th. For more information about reporting, contact your local FSA county office or visit www.fsa.usda.gov.

SWEET CORN
This will be one mixed up season. Some of the early plastic corn has seedlings emerging and the next few days of sunshine should really push things along. For some, just getting into the field has been challenging due to the wet conditions. A number of growers will be skipping laying plastic and go for field planted corn and hope for the best.

PROCESSING CROPS
2011 brings a reduction in acreage of all processing crops in New York, the most significant being peas and sweet corn. Overall, this can be credited to the weak economy and high inventories. High yields per acre in sweet corn also result in reduced acres needed to produce the desired tonnage. Peas have a high raw product cost compared to other vegetables and are less desired for blends.

Planting is finally getting underway, except for beans which are usually planted after May 15th. Take note of the general article on seed corn maggot.

TOMATOES
Important new from Steve Johnson, Crops Specialist and Extension Professor, University of Maine: “Late blight has been identified on volunteer tomatoes in a greenhouse in Waldo County, Maine. This is from an organic greenhouse that apparently had volunteers growing in a soil bin within the greenhouse. Late blight was present in the greenhouse in 2009 and uncertain in 2010. All plants have been destroyed in the organic wing of the greenhouse. At this point, late blight beyond the volunteers is unknown and there are plans to monitor the greenhouse.” So we are left with questions in this situation, as our previous understanding has been that an infected potato tuber would have been the source of spring Late Blight infections. Future details may elucidate. An article from Meg McGrath covers Late Blight in further detail.

New Late Blight Consortium, Website, Forecast

Chris Smart, Meg McGrath and Bill Fry, Cornell; and Abby Seaman, NYS IPM Program

Announcing a new consortium to improve the management of potato and tomato late blight (LB) ! There have already been several reports of LB in the Northeast this year, so it’s important to be looking for it even in mid-May. More info will soon be on our website: http://usablight.org (It will report LB outbreaks across the US, including potato seed and tomato transplant-growing areas). Please report potential outbreaks of LB and submit fresh samples of infected materials to identify the strain of the pathogen and its sensitivity to Ridomil. Be sure to scout greenhouse and high tunnel tomatoes, early potatoes and potato culls/volunteers for LB. If you think you may have LB contact a member of the Cornell Vegetable Program (contact info on the back page). Knowing where LB has been found is critical for making the best management decisions. When an outbreak is reported, it will only report the county in which the outbreak occurred.

Our project involves 17 institutions in the US, Mexico and Scotland, and is funded by a 5-year USDA award. Our activities will integrate extension, research, and education to help control the disease. These include systems for helping growers make management decisions, methods for identifying pathogen strains and their traits, and plant varieties that are more resistant. (For information on using Bill Fry’s new online LB Decision Support System (DSS), a big improvement over the Blitecast LB forecast, contact Carol MacNeil at 585-313-8796 or crm6@cornell.edu)
Late Blight in 2011: Expect & Participate in National Reporting System

Meg McGrath, Long Island Horticulture, Cornell

A couple unexpected finds of late blight on tomato in greenhouses in the northeast during April plus detections in seed potatoes expose an unfortunate but important fact – everyone growing tomatoes and potatoes in 2011 needs to expect and thus prepare for late blight occurrence in their plants. Preparing is critical since late blight is a top contender for most difficult disease to manage when started after detection.

The unsolved nature of the outbreaks this spring, as well as some outbreaks in 2010, reveals there is clearly a need to obtain a better understanding of the sources of the pathogen, especially for early season outbreaks. Knowledge of the sources will lead to targeted management practices and minimize the potential for growers being caught off guard. This can be accomplished through growers and researchers investigating occurrences together. Fortunately, the resources are now available to a team of researchers at 17 institutions to do this work as part of a national project with funding from the USDA. This project will also address other aspects of late blight and its management during the next five years. Activities will integrate extension, research, and education to help control the disease. These include systems for helping growers make management decisions, methods for identifying pathogen strains and their traits, and plant varieties that are more resistant.

There is also a need to know where late blight occurs throughout the growing season in order to study movement of the pathogen and develop a predictive system to enable growers to be more informed about potential outbreaks in the future. Thus it is important to report all occurrences. Success of this late blight project is dependent on growers participating in the National Reporting System.

Routine inspection for symptoms beginning at the start of production. Plants in high tunnels and greenhouses are now recognized to be vulnerable rather than fully protected. If you think you may have late blight, contact your local Extension office for verification of the diagnosis and submission of a sample to the national research team, which will initiate study of your outbreak. Information on how to sample is under ‘Reporting Outbreaks’ at the project website (http://usablight.org/). Samples are needed to determine the genotype of the pathogen responsible for the outbreak. You can stay informed about occurrences of late blight to gauge the potential threat to your crop by checking reports at the project website. Information about late blight and its management is also being posted there.

Some early-season outbreaks of late blight in tomato have raised concern that the new pathogen genotypes may have another means to survive between crops over winter in the north other than the only known means, which is in potato tubers. This concern was heightened following a recent report of late blight on volunteer tomatoes in a greenhouse. Potatoes were in the vicinity of other outbreaks; however, if the source was an infested tuber, it remained elusive even when extensive searching was done. This might reflect the fact a tomato genotype of the late blight pathogen being less aggressive on potato consequently does not produce as distinctive symptoms characteristic of a tuber infection. Without knowledge of the sources for the early-season outbreaks of late blight in tomato, there is concern that they will continue to occur, as we cannot effectively manage what we do not understand.

Cabbage & Cole Crops: Ranman for Managing Clubroot

Meg McGrath and Sandy Menasha, Long Island Fruit and Vegetable Update, May 5, 2011

The fungicide Ranman now has a supplemental label that includes clubroot in crucifers (as well as downy mildew), thus there is a fungicide alternative while Blocker is not available. Ranman has been effective in several evaluations conducted at the Muck Crops Agricultural Research Station in Ohio where conditions are very favorable (acidic soil) and clubroot is severe. Severity was reduced by up to 56% with Ranman at the highest rate tested and plant vigor was greatly improved in these experiments. A PCNB fungicide was not included in these experiments, but Ranman was more effective than other fungicides tested. According to the manufacturer, FMC Corporation, good incorporation and maintaining moist soil are key to maximizing control of clubroot with Ranman. Soil should be moist when Ranman is applied at planting and kept moist afterwards. Till Ranman into moist soil or drench into soil with ample water. The label states to apply as a transplant drench or in at least 50 gallons of water and incorporate 6-8 inches deep. Ranman starts to become inactive when soil dries. The supplemental label needs to be in the possession of the user at the time of application. Labels can be obtained on the web at <http://pims.psur.cornell.edu/index.php?page>. Other measures that provide some control of clubroot include very long rotations and raising the soil pH to 7.2 or higher with hydrated lime.
Blocker Fungicide (PCNB) Unavailable

Meg McGrath, Cornell - Riverhead, and Sandy Menasha, CCE-Suffolk Co.

The EPA has issued a Stop Sale, Use or Removal Order to American Vanguard Corp. (AMVAC) and AMVAC Chemical Corp. for pesticide products containing PCNB due to potential violation of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). As a result, pesticides containing PCNB, such as Blocker, are not being distributed until further notice. Growers who have product can still legally apply it, according to EPA. Some distributors may still have stock, which can be purchased, but supplies are very limited. AMVAC hopes to resume sale this season. Blocker has been used to control clubroot on crucifers. It is also labeled for Rhizoctonia in crucifers (wire stem), potatoes (stem canker and black scurf), and beans (root rot), white mold in beans, and white rot in garlic. See more at: http://www.epa.gov/compliance/resources/cases/civil/fifra/americanvanguard.html

Onions: Preemergent Weed Control of Transplants Grown on Mineral Soil

The beauty of growing onions from bare root transplants is that excellent weed control can be achieved by applying high rates of herbicides within days of transplanting, because the onions are in a dormant stage and much more tolerant to herbicide injury compared to actively growing plants. Seasoned onion growers are generally aggressive with weed control, because onions are very poor competitors with weeds. Often, the decision is made to control weeds at the risk of some herbicide injury, with stunting being the most common injury of PRE herbicide apps in onions. Outlook, Prowl and Goal are the most commonly used PRE herbicide apps in bare root transplanted onions. They are applied to dormant plants after the soil has settled, preferably after rainfall or irrigation. Risk for injury is higher when conditions are cold and wet, because herbicides can be washed into the root zone, and the onions are not as actively growing to metabolize the herbicide into non-toxic metabolites.

Outlook: a.i. dimethenamid. Controls annual and perennial grasses, and nutsedge. May be applied as a single application of 21 fl oz (maximum of 18 fl oz on coarse soil) or as a split application of 10.5 to 14 fl oz first and 10.5 to 7 oz 14 days later. Maximum 21 fl oz per season.

Prowl 3.3EC and Prowl H2O: a.i. pendimethalin. Controls annual and perennial grasses, and selected broadleaf weeds. H2O is a safer formulation with respect to crop injury and tank mix compatibility and is applied at slightly lower rates. Apply rates according to soil type.

Goal 2XL and GoalTender: a.i. oxyfluorfen. For broad spectrum broadleaf weed control. GoalTender is a safer formulation with respect to crop safety and tank mix compatibility and is applied at half the rates of Goal 2XL. Apply up to 1 pint (Goal 2XL) and 0.5 pt (GoalTender) per acre. Can be tank mixed with Outlook and Prowl. Use Prowl H2O and GoalTender for improved crop safety.

For plug transplants, Outlook and Prowl may be applied in the same manner as for bare root transplants, but do not use Goal. High rates of Goal can be injurious to actively growing plants.

On a small-scale, growing onions on plastic mulch is an excellent means of achieving weed control. Although there is the added cost of the plastic mulch and onions have to be hand-harvested, Cornell studies have shown that onions grown on plastic mulch yield higher than those grown on bare ground. Weeds do grow through the holes in the plastic and will have to be pulled by hand. Weeds between the plastic beds should be managed, via hand weeding, cultivation or with herbicides. Some growers spread straw mulch between the beds of plastic to keep weed pressure down.

(C. Hoepting)

Garlic: Spring Weed Control

Post-emergence to garlic, PRE-emergent to weeds.

Prowl 3.3EC and Prowl H2O: a.i. pendimethalin. For control of annual grasses and selected broadleaf weeds. Garlic must have 1-5 true leaves. Adjust rates according to soil type. May be applied as a split application at both PRE and POST timings. PHI: 45 days

Outlook: a.i. dimethenamid-P. For control of annual grasses, yellow nutsedge and some broadleafes like pigweed.

Crop Stage: Garlic needs to have at least 2 leaves, application prior to 2-leaf stage may result in significant injury. Adjust rates according to soil type. May be applied as a single or split application 14 days apart.

Caution: Stunting is more likely to occur when soil is cold and wet, use lower rates.

PHI: 30 days

Post-emergence to garlic, POST-emergent to weeds

Goal 2XL and GoalTender: a.i. oxyfluorfen. For broad spectrum broadleaf weed control. Garlic should have at least 3 leaves. Do not apply to garlic grown for seed. Multiple applications can be made per season. Goal may cause chlorotic leaf spotting and stunting. Symptoms are more severe if garlic emerged under cool, wet, overcast or foggy weather. Injury is temporary. Do not mix Goal 2XL or GoalTender* with oils, surfactants, liquid fertilizers or pesticides except as specified on the label. GoalTender is a safer formulation than Goal 2XL with respect to crop injury and tank mixing. PHI: 60 days.

Buctril: a.i. bromoxynil. For broad spectrum broadleaf weed control. Apply after emergence, but before garlic reaches 12 inches in height. May cause temporary leaf burn. Applications should be made to dry foliage.

PHI: 112 days, 60 days in muck soils.

Select Max: a.i. clexthodim. For control of annual and perennial grasses including quackgrass. Higher rates used for perennial grasses. Multiple apps every 14 days. Apply with 0.25% v/v Non ionic surfactant (NIS).

PHI: 45 days.

Poast: a.i. sethoxydim. For control of annual and perennial grasses. Always use with a crop oil concentrate (COC) or methylated seed oil (MSO). Multiple apps every 14 days. Do not cultivate 5 days before or 7 days after applying Poast.

PHI: 30 days

Fusilade DX: a.i. fluazifop-P-butyl. For control of annual and perennial grasses. Always use with an adjuvant (see label).

PHI: 45 days

(C. Hoepting)
Working Wet Soil

While growers are understandably in a hurry to get their fields worked and crops planted be aware that working the soil when it’s wet causes its own set of problems. Take a handful of soil from the deeper parts of the plow layer and make a ball. If the ball is plastic rather than somewhat crumbly it’s too wet to till. Tilling in wet conditions leaves a significant plow pan and wheel track compaction that can extend much deeper than the track. Compaction results in shallow rooting, reducing a crop’s ability to take up sufficient water and nutrients. Compaction also slows water percolation through the soil if excess rain falls later in the season. Frequent use of cover crops can improve soil structure, water-stable soil aggregates and thus drainage.

Soils with a significant amount of silt or clay are especially susceptible to compaction when worked wet. There is a narrow window between these soils being too wet to work and too dry to crumble when fitted. In addition, these soils may need to be plowed and fitted the same day to avoid the hard lumps which later fitting can’t easily break down.

If you are using deep zone tillage, ripping when soils as deep as the length of the shank are too wet can leave an open, air-filled pocket with compacted sides. This results in poor conditions for precision depth of planting, seed germination and crop growth. In fields where deep zone tillage has been used for a few years growers report better drainage and less ponding than when they used conventional tillage.

(C. MacNeil)

Greenhouses & High Tunnels: Phosphorus Deficiency in Tomatoes

Phosphorus deficiency in tomatoes can be observed in a number of high tunnels. Leaves take on a purple to reddish cast and plant growth is slow (see photo ‘p def’). Soils in these tunnels test high for phosphorus levels and the plants were watered in with a dilution of 12-48-8 (48% phosphorus). Why then would the plants be deficient? Cold soils. Phosphorus is not readily taken up by plants at lower soil temperatures. This problem is directly related to our Spring weather. Although temperatures were not abnormally low, April (and early May) was a cloudy period. Soil temperature in tunnels is related to the amount of sunlight that penetrates the greenhouse covering, and is then transmitted via black plastic mulch to the soil. Thus even with high air temperatures soils under black mulch can remain cool if there is no sunshine to warm the mulch and the subsequent physical heating of the underlying soil. In actuality these soils may remain cooler than uncovered soils in cloudy weather as moisture is retained under the plastic. Plants showing these symptoms can quickly regain healthy color once soil temperatures rise. Avoid over applying phosphorus to remedy the deficiency as this nutrient persists in the soil considerably and can create problem at excess levels. (J. Reid)
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 at http://cvp.cce.cornell.edu/.

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This publication contains pesticide recommendations. Changes in pesticide regulations occur constantly and human errors are possible. Some materials may no longer be available and some uses may no longer be legal. All pesticides distributed, sold or applied in New York State must be registered with the New York State Department of Environmental Conservation (DEC). Questions concerning the legality and/or registration status for pesticide usage in New York State should be directed to the appropriate Cornell Cooperative Extension specialist or your regional DEC office.

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