



Protect the varieties of potatoes you've chosen to grow this year. Know the varieties' susceptibility to diseases to choose the best field for each.

**PAGE 1**



Growers can reduce costs and the potential for nitrate leaching while increasing yields by using controlled release nitrogen fertilizer.

**PAGE 4**



A Weed Science Society of America fact sheet dispels common misconceptions about superweeds.

**PAGE 6**



Top performing pesticides are now registered in NY in onions. Merivon® controls leaf diseases in onions and Exirel™ can be used in the management of onion thrips.

**PAGE 10**

# VEGEEdge

YOUR TRUSTED SOURCE FOR RESEARCH-BASED KNOWLEDGE

● Volume 11 | ● Issue 3 | ● March 1, 2015

Wheat grass for juicing. Grown in a greenhouse in Ontario County.  
Photo: Judson Reid



**Cornell University**  
Cooperative Extension  
Cornell Vegetable Program

## Potato Disease Management – Early Season Planning

*Carol MacNeil, CCE Cornell Vegetable Program*

You've likely chosen the potato varieties you want to grow and ordered your seed. Take some time now to check out your varieties' susceptibility to common potato diseases, so you can choose the best field for each. Study and choose also from the long list of seed treatments and in-furrow treatments what you want to use to best protect those varieties.

**Varietal susceptibility to disease:** Early season planning for potato diseases should take into account the susceptibility of the varieties you'll be growing. Varieties susceptible to pink rot, for example, should not be grown in fields where pink rot was a problem in recent years, or in fields that tend to be wet. For a list of common varieties and their susceptibility to common scab, Helminthosporium silver scurf, Colletotrichum black dot, Phytophthora pink rot, Alternaria early blight and Phytophthora late blight, go to: [http://vegetablemdonline.ppath.cornell.edu/NewsArticles/Potato\\_Cultivars\\_NE\\_Production.pdf](http://vegetablemdonline.ppath.cornell.edu/NewsArticles/Potato_Cultivars_NE_Production.pdf) If you would like a print copy of this table contact Angela Parr at [aep63@cornell.edu](mailto:aep63@cornell.edu) or 585-394-3977 x426. Keep in mind that Yukon Gold and some other yellow flesh varieties are very susceptible to expressing Potato Virus Y tuber necrotic ringspot. Most other varieties can carry this virus without showing symptoms.

**Potato seed and in-furrow treatments:** There are eleven fungicide active ingredients, alone and in various combinations, in potato seed and in-furrow treatment products. Some control or suppress just one disease while others control several. Quadris Ridomil Gold is one of the in-furrow treatments listed in the 2015 Cornell Veg Guidelines. Note that mefenoxam (Ridomil, OLFs) resistance has been confirmed in some fields in Pythium (leak, sprout decay) and in Phytophthora (late blight and pink rot) in-

*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:  
CCE Cornell Vegetable Program  
480 North Main Street, Canandaigua, NY 14224  
Email: [cce-cvp@cornell.edu](mailto:cce-cvp@cornell.edu)  
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Information provided is general and educational in nature. Employees and staff of the Cornell Vegetable Program, Cornell Cooperative Extension, and Cornell University do not endorse or recommend any specific product or service.

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 NYS must be registered with the NYS Department of Environmental Conservation (DEC). Questions concerning the legality and/or registration status for pesticide usage in NYS should be directed to the appropriate Cornell Cooperative Extension (CCE) specialist or your regional DEC office.

CCE and its employees assume no liability for the effectiveness or results of any chemicals for pesticide usage. No endorsement of products or companies is made or implied. **READ THE LABEL BEFORE APPLYING ANY PESTICIDE.**

Help us serve you better by telling us what you think. Email us at [cce-cvp@cornell.edu](mailto:cce-cvp@cornell.edu) or write to us at Cornell Vegetable Program, 480 North Main Street, Canandaigua, NY 14424.



**Cornell University**  
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Cornell Vegetable Program

# Contents

## Contact Us

Cornell Vegetable Program .....12

## Crops

Onions: New Top Performing Pesticides Now Registered in New York .....10  
Potato Disease Management – Early Season Planning .....01  
Potato: 2014 Upstate New York Potato Variety Trial Report .....04  
Potato: Specialty Potato Varieties Evaluated in Michigan .....10  
Potato and Sweet Corn: Controlled Release Nitrogen .....04

## General

2015 Cornell Vegetable Guidelines Available .....02  
The Updated Cornell Soil Health Test, and the Soil Renaissance .....03  
SNAP Webinars for Direct Marketing Farmers .....05  
Superweeds – Dispelling Common Misconceptions About Superweeds .....06  
Looking for a Farm Loan? .....11  
NYS Mesonet Weather Observing Network .....11

## Events

Garlic School 2015 .....08  
Farm Food Safety for Post-Harvest Handling and Small-Scale Facility Design .....08  
Weed Management Workshop for Processing Veg & Dry Bean Growers .....08  
Forecasting Tomato/Potato Late Blight Risk on Your Farm .....08  
Pesticide Training and Exam (Wayne County) .....08  
2015 NYS Dry Bean Meeting .....09  
Ontario County Agriculture Appreciation Banquet .....09  
13th Annual Celebrate Genesee Agriculture Dinner .....09  
Farm Food Safety for Post-Harvest Handling and Small-Scale Facility Design .....09  
High Times with High Tunnels .....09  
DEC Special Permit Trainings .....09

## 2015 Cornell Vegetable Guidelines Available

The 2015 edition of the Cornell Commercial Vegetable Production Guidelines is now available. This annual publication provides up-to-date vegetable crop production information for New York State. It has been designed as a practical guide for vegetable crop producers, crop consultants, and ag suppliers. In addition to the annually revised pesticide and crop production information, this edition also includes revised soil management guidelines; adding mode of action/group numbers to all pesticide listings; updated Colorado potato beetle resistance management information; totally revised organic vegetable production information; and the addition of western bean cutworm in sweet corn and western flower thrips in tomatoes as pests of concern.

NOTE: Beginning in 2015, Vegetable Guidelines will no longer be offered for free online. Instead, you will have the option to purchase just a print copy (\$33 plus shipping), online version (\$33), or a bundle of a print copy plus online access (\$46 plus shipping). You can order this publication, or other Cornell Guidelines from the [Cornell Store](http://Cornell Store) at Cornell University at 800-624-4080. ●

fections. Some products also include an insecticide for control of Colorado potato beetle (CPB) and other insects. Note, however, that all these insecticides are in Insecticide Resistance Class 4A, which the CPB has shown significant resistance to on some Upstate NY farms. The potato seed and in-furrow treatment products, the diseases they control, and other details, can be seen at the beginning of Disease Management in the Potato section of the *2015 Cornell Vegetable Guidelines*, Section 23.5.1.

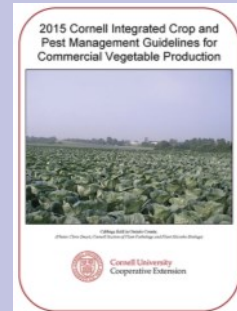
For a table of *2014 Potato Seed Piece/In-Furrow Fungicide Products*, with details on use, from Tom Zitter, Cornell, go to: <http://vegetablemdonline.ppath.cornell.edu/NewsArticles/Potato-Seed-Piece-fungicide-chemicalgroup.pdf> (*Fungi* refers to most potato seedpiece diseases; *Oomycetes* refers to late blight, pink rot, and Pythium diseases; *Bacteria* refers to bacterial soft rot, etc.) If you would like a print copy of this table, contact Angela Parr at [aep63@cornell.edu](mailto:aep63@cornell.edu) or 585-394-3977 x426.

**New potato seed treatments for 2015** (from Dan Digiacomandrea, Bayer CropScience):

- **Emesto Silver**, EPA Reg. No. 264-1123, penflufen (Grp 7) plus prothioconazole (Grp 3) – For Suppression of Rhizoctonia black scurf, stem & stolon canker, silver scurf, and Fusarium seed piece decay.
- **Reason 500 SC Fungicide**, EPA Reg. No. 264-695, fenamidone (Group 11)\* – This is a new use for NY, for late blight in potato seed pieces. It is locally systemic and will protect new growth.

\*Restricted Use in NYS. ●

## Do you think you ordered 2015 Vegetable Guidelines but haven't received it yet?



If you ordered the Guidelines during your county Cornell Cooperative Extension enrollment period but haven't yet received it, please contact your local CCE office.

Note: The Guidelines are no longer free online. Order online access, or a combo of online and print, from the Cornell Store at <http://store.cornell.edu/c-875-guidelines.aspx> or 800-624-4080. ●

## The Updated Cornell Soil Health Test, and the Soil Renaissance

Bob Schindelbeck, Cornell (from the 2013 Expo, ed. by C. MacNeil, CVP)

*(Soil samples for the Cornell Soil Health Test can be taken anytime the soil is not frozen or saturated, and prior to tillage. Tile drains should have stopped running. The complete CSHT can be done, including 9 biological and physical tests, in addition to the standard nutrient analyses, or individual tests can be requested. There are add-on tests for soluble salts and soil disease suppressiveness. Growers, consultants or extension need to measure compaction with a penetrometer prior to submitting the sample to have those results evaluated. It takes from two to six weeks for results depending on the tests requested. Follow directions for sampling, handling and shipping VERY carefully, for accurate biological and physical test results. There are important differences between CSHT sampling and sampling for nutrient analysis alone. See details at: <http://soilhealth.cals.cornell.edu/extension/test.htm> ed. C. MacNeil, CVP)*

It seems that everywhere a grower turns they are hearing about soil health, and the need for cover crops and reducing tillage, to increase soil resiliency. Do you really know what the health of your soil is? Have crop yields been dropping over the years? Have your crops been suffering due to extremes of excess rainfall or drought? The Cornell Soil Health Test/Assessment (CSHA), available since 2007, can assess the soil health or functioning of your soil, beyond simply its ability to supply nutrients. This COMPREHENSIVE assessment includes additional tests of essential soil biological processes (available or "active" carbon levels and soil respiration rate, indicators of the level of beneficial microbial activity, and soil protein/N content) which are performed on soil samples in the lab. Physical soil factors such as the % water-stable soil aggregates, water storage capacity, and soil hardness are also tested.

The Soil Health Test Report for each sample submitted was expanded in 2014

to a 10-page document which clearly explains what each test measures and why it's important. The lab test value for each analysis done on a sample is related to the soil function it represents and the value is then compared to that of similar soils. Subsequently the lab values are linked to soil management practices which, if adopted, can improve soil functioning/ improve soil health.

A six-step guide to Soil Health Management Planning can be used by growers or technical service providers, such as consultants, extension personnel, etc.) to develop a soil management plan which addresses soil limitations AND fits the grower needs.

Cornell is a part of a Soil Renaissance where the Noble Foundation and the Farm Foundation are supporting an integrated systems approach to soil health with defined goals of measurement, education, research and economics. ●



# 2014 Upstate New York Potato Variety Trial Report, January 2015

D. E. Halseth, E. R. Sandsted, and J. M. Kelly, Horticulture, Cornell

Potato variety yield trials were conducted in four counties in upstate New York in 2014 in which a total of 30 named varieties and 206 breeding lines were evaluated. Ten replicated variety yield trials and two observational trials were conducted at the Thompson Vegetable Research Farm near Freeville in Tompkins County. Grower chip processing trials were conducted on mineral soils near Arkport (Steuben County) and Bliss (Wyoming County). Grower red and white tablestock trials were

planted on muck soil near Marion (Wayne County). All trials at Freeville and on grower cooperator farms were grown using standard commercial cultural practices. Marketable yield, tuber quality and appearance, maturity, storage life and processing potential are among the important characteristics which are evaluated. Round whites, red, blue and purple-skinned potatoes, and russets were evaluated, in addition to breeding lines from Cornell, University of Maine, and USDA-Beltsville.

Thanks to Mahany Farms, McCormick Farms, and Williams Farm for their continued assistance!

To view the *Potato Variety Trial* report go to the Cornell Vegetable Program website at [cvp.cce.cornell.edu](http://cvp.cce.cornell.edu)

This publication is also available in print form by contacting Carol MacNeil at [crm6@cornell.edu](mailto:crm6@cornell.edu) or 585-394-3977 x406. ●

## Controlled Release Nitrogen for Sweet Corn and Potatoes

Kevin Sanwald, CCE Suffolk County (ed. by C. MacNeil, CVP)

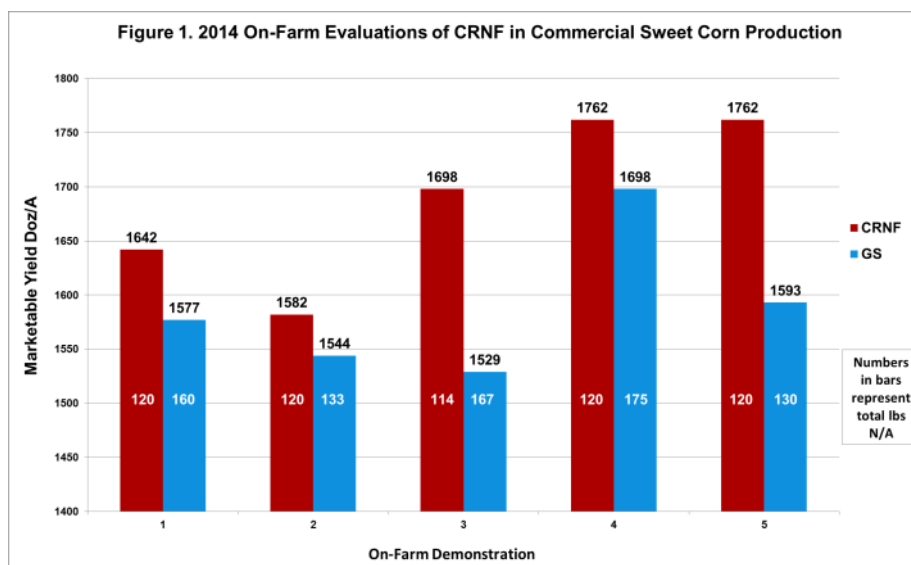
Controlled Release Nitrogen Fertilizer (CRNF) can be an excellent alternative to standard, soluble, immediately available, nitrogen fertilizers. The benefits of CRNF are many, including increased plant nitrogen use efficiency, decreased leaching of nutrients, and fewer trips through your fields. Research and trials conducted locally and nationally have shown promising results from CRNF in a variety of crops.

CRNF technology allows nitrogen to be released at a slower rate throughout the season, therefore plants are able to take up most of the nutrient without loss by leaching (*N losses from denitrification under wet conditions may also be reduced.* ed. CRM, CVP). A controlled release nitrogen fertilizer program often requires a single fertilizer application compared to multiple applications with a soluble fertilizer program.

Each trip across the field leads to additional costs. During seasons with leaching rain events, N in CRNF will likely remain in the field available to the crop, and not be lost to surface and ground waters. Soluble fertilizer programs may need additional N to be added during the season after heavy rains to make up for leaching. But with a CRNF program, it's likely no additional nitrogen would need to be added.

CRNF is more expensive than traditional soluble fertilizer on a per unit basis,

though the benefits often outweigh the initial added cost. By using the CRNF rate at or below the grower's standard rate, growers can potentially reduce their costs and reduce the potential for nitrate leaching, all while maintaining or increasing yields. (*ESN, a 44-0-0 product, is being used on Long Island. Sandy Menasha, CCE-Suffolk Co, recommends that 20-30% soluble N fertilizer be used in a blend with the ESN fertilizer for vegetable/potato production.*)



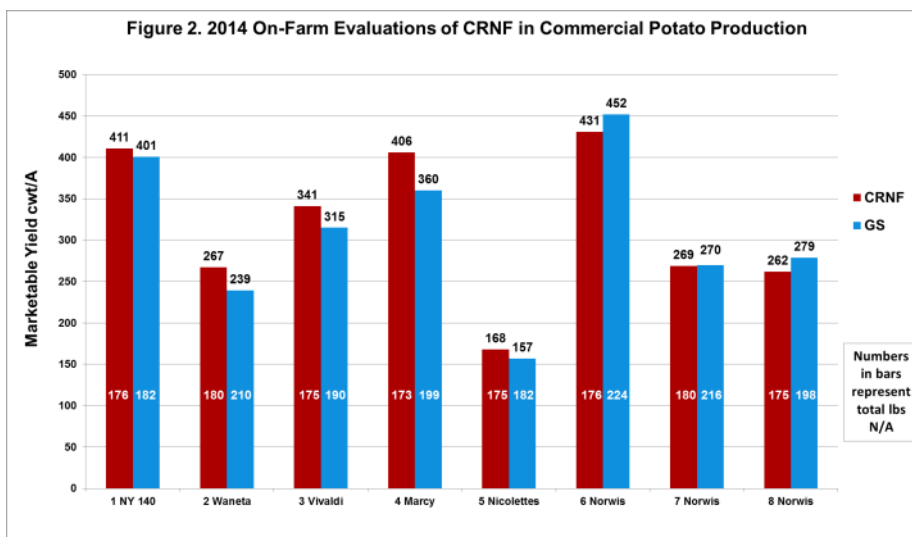
CRNF = Controlled Release Nitrogen Fertilizer; GS = Grower Standard Fertilizer

This year we had the opportunity to work with on-farm demonstrations of 5 sweet corn and 8 potato growers using CRNF in commercial production. (*In Riverhead in 2014, rainfall was somewhat above normal in the early part of the season.* ed. CRM, CVP) In the on-farm demonstrations CRNF yields were, in general, similar to or greater than that of the grower standard (GS) soluble fertilizer for crop production. Therefore, CRNF shows the ability to supply sufficient N for growth and production in order to obtain similar results to that of the standard soluble fertilizer.

Results from the Sweet Corn evaluations (Figure 1) show that in all of the 5 grower plantings, the CRNF programs produced marketable yields that were similar or greater than the grower standard (GS) programs. Marketable yields were increased by as much as 169 dozen ears per acre for both Grower 3 and 5 in the CRNF pro-

gram over the GS program. Growers 1, 2 and 4 saw an increase of 65, 38 and 64 dozen ears/A, respectively, in the CRNF programs compared to the GS programs. In addition, total N rates per acre were reduced by 10 – 55 lbs/A in the CRNF programs. Growers were able to reduce the total N rate per acre anywhere from 10 – 30% with CRNF programs, because of the reduced N losses, while maintaining or increasing marketable yields.

In the Potato evaluations (Figure 2) Growers 1-5 saw an increase in marketable yields ranging from 10 - 46 cwt/A in the CRNF programs compared to the GS programs, with between 6 - 30 lbs less N/A. Marketable yields between the CRNF and GS programs were the same for grower 7 even though N rates/A were reduced by as much as 36 lbs in the CRNF program. However, growers 6 and 8 saw a decrease in yield of 21 and 17 cwt/A in the CRNF over the GS program. The GS program on



CRNF = Controlled Release Nitrogen Fertilizer; GS = Grower Standard Fertilizer

these two farms applied 48 and 23 lbs more N/A than in the CRNF program, respectively. The results suggest that when using CRNF instead of conventional soluble fertilizer, total N rate/A can be reduced by as much as 21% while still maintaining and/or increasing marketable yields.

In summary, the CRNF programs we looked at have been shown to be a win-win opportunity for growers, by providing increased nitrogen uptake, increased yields and reducing nitrate losses. ●

## SNAP Webinars for Direct Marketing Farmers, Farmers Markets

*Diane Eggert, NY Farmers Market Federation*

USDA has appropriated another \$4 million to help direct marketing farmers and farmers markets join the SNAP program (Supplemental Nutrition Assistance Program) to enable them to accept digital payments from SNAP recipients. The National Association of Farmers Market Nutrition Programs (NAFMNP) has created MarketLink, an online solution to an expedited application process, nationally negotiated rates for SNAP, debit and credit; as well as state-of-the-art equipment, an iPhone 5, card reader and blue-tooth connected printer.

Joining the SNAP program involves a three step process. The first is to complete an eligibility assessment to determine whether the USDA funds can supply a free terminal (iPhone 5 with data plan, card reader and printer) or whether NYS funds can be used to assist you in using your own iPhone, iPad or Android. The second step is the online USDA SNAP retailer application. The final step is to complete the appli-

cation for a third party processor, WorldPay, to process transactions. With MarketLink, you can complete your applications today and be accepting transaction payments through your iPhone in as little as two weeks!

The Farmers Market Federation of NY will be holding free webinars to help direct marketing farmers and market managers understand the MarketLink program and will schedule phone appointments with attendees to complete the application process. The presentations should take approximately 60 minutes for the presentation and question and answers.

To register, click [here](#) for the registration information, then click on the link for your choice of date and complete the registration information. Once submitted you will receive a link to the webinar. Save that link! This is how you will access the live webinar.

### SNAP for Direct Marketing Farmers and Farmers Markets Webinars

|                     |            |
|---------------------|------------|
| Tuesday, March 3    | Noon – 1pm |
| Wednesday, March 18 | Noon – 1pm |
| Tuesday, April 7    | 6pm – 7pm  |
| Wednesday, April 15 | 6pm – 7pm  |

For more information, contact the Farmers Market Federation of NY at 315-400-1447 or email [deggert@nyfarmersmarket.com](mailto:deggert@nyfarmersmarket.com). ●

# superweeds

## DISPELLING COMMON MISCONCEPTIONS ABOUT SUPERWEEDS

Weed Science Society of America Fact Sheet

Use of the term superweed has exploded in recent years and is frequently featured in news reports about herbicide-resistant weeds choking out crops. A few recent headline examples:

- **Superweeds Choke Farms** (*Des Moines Register*, June 22, 2014)
- **The Rise of the Super Weed Around the World** (*Wall Street Journal*, June 23, 2014)
- **U.S. Midwestern Farmers Fighting Explosion of “Superweeds”** (*Reuters*, July 23, 2014)
- **Superweed Spreading through Wall, Texas** (*KLST-TV*, July 29, 2014)
- **Super Weed Spreads Closer to Quad Cities** (*WQAD TV*, August 4, 2014)

While there is no science-based definition for superweed, the term is often used to describe weeds believed to have special capabilities that are helping them outcompete other plants in ways never experienced before. Many associate superweed with glyphosate-tolerant crops and the suspected transfer of resistance genes from these crops to weeds. The Oxford Dictionary, for example, is one of many online resources to define superweed as “a weed which is extremely resistant to herbicides, especially one created by the transfer of genes from genetically modified crops into wild plants.”

But is that the truth? Are today’s weeds “supercharged” in some way? And if so, why is that the case?

As a nonprofit organization that promotes science-based information about weeds, their impact on the environment and how they can be managed, the Weed Science Society of America (WSSA) has compiled the information below to clarify two common misconceptions about superweeds.

**MISCONCEPTION 1: Rampant gene transfer between genetically modified crops and weeds is creating weeds able to resist treatment by herbicides.**

**REALITY:** There is no evidence that gene transfer is a major factor in the development of herbicide resistance. Instead, overreliance on herbicides with a single mechanism of action to control certain weeds has led to the selection of weeds resistant to that mechanism of action.





The transfer of resistance traits from genetically modified crops to weeds growing in the field is rare, and the occurrences observed and reported to date have had minimal impact. The only currently known mechanism for any crop trait to move into weeds (or vice versa) is through cross pollination – a sexual crossing between the crop and the weed. Gene flow is more likely to happen if the crop and weed are sexually compatible, near relatives. Gene flow among more distantly related plant species is rare because they do not cross as readily. There are often physiological barriers, including pollen incompatibility, varying numbers of chromosomes and other factors that serve as impediments.

Even among sexually compatible crops and weeds, the opportunity for crop-weed gene flow depends on proximity of the crop plant to its wild weedy relatives. For example, there have been no reports of gene transfer in the more than 160 million annually planted acres of genetically modified corn, cotton and soybean crops where herbicide resistance weeds are such a significant issue today. Since these crops don't have sexually compatible, near relatives in the U.S. and Canada, the risk of gene flow to other plants in the region is extremely low. Crops like sunflower, wheat and canola do have compatible weed relatives in their major production areas (e.g. wild sunflower, jointed goatgrass, and wild relatives of canola, respectively). As a result, the risk of gene flow between those crops and wild plants is greater. Where gene flow has occurred, the resulting plants are no more weedy than their parent plants.

**MISCONCEPTION 2: Herbicide use is creating a new breed of herbicide-resistant superweeds unlike anything we've ever seen before.**

**REALITY: The costly issue of herbicide resistance isn't new – and neither are the competitive characteristics of weeds. Although the number of acres affected by resistant weeds has increased over the last decade as more growers have come to rely solely on herbicides with a single mechanism of action for weed control, weeds have exhibited resistance to many types of herbicides over the past 40 years. Many weed populations have even evolved resistance to multiple herbicide mechanisms of action.**

Herbicide resistance is an important, costly and escalating issue, especially as growers have come to rely more than ever on a single class of herbicides that targets weeds in the same way. It is more critical than ever for a variety of carefully integrated weed management strategies to be used so weeds resistant to one method can be controlled in other ways before they have an opportunity to spread. This includes nonchemical means of weed control, such as crop rotation, tillage, cultivation, hand hoeing, seed capture, etc. The WSSA has created a variety of free educational materials and recommendations concerning resistance and how to avoid it, available online at <http://wssa.net/weed/resistance>.

As to those super powers that many individuals ascribe to herbicide-resistant weeds? Under herbicide-free conditions, resistant weeds are no more competitive or ecologically fit than their susceptible partners. Both can crowd out crops and other desirable plants by outcompeting them for water, nutrients, sunlight and space. They grow incessantly and can be prolific seed producers. A single Palmer amaranth plant, for example, can produce hundreds of thousands of seeds, regardless of whether it is herbicide resistant or not.

Weeds can be economically devastating if allowed to grow unchecked. As a result, we need to monitor vigilantly and use a variety of herbicide and non-herbicide strategies to control weed populations before they get out of hand.

The WSSA thanks the following scientists for their special contributions to this document:

- Brad Hanson, Ph.D., Cooperative Extension Weed Specialist in the Department of Plant Sciences at the University of California - Davis.
- Andrew Kniss, Ph.D., Associate Professor in the Department of Plant Sciences at the University of Wyoming and a WSSA board member. ●



## UPCOMING EVENTS *view all Cornell Vegetable Program upcoming events at [cvp.cce.cornell.edu](http://cvp.cce.cornell.edu)*

### Garlic School 2015

March 3, 2015 | 9:30 AM - 3:00 PM

NYS Agricultural Experiment Station, Jordan Hall, 630 W North St, Geneva, NY 14456



This year's garlic school will have a broad focus on disease, insect and weed pests that growers are already dealing with or that may show up in New York from other parts of the country. Cornell pathologists and growers will discuss the latest research on Aster Yellows, a disease which has devastated the garlic industry in the Midwest, and the soil-borne diseases such as Fusarium. The latest fertility and weed control research will also be presented. Industry updates will be presented by David Stern of the NYS Garlic Seed Foundation. [For more information](http://cvp.cce.cornell.edu), visit the Cornell Vegetable Program website at [cvp.cce.cornell.edu](http://cvp.cce.cornell.edu).

Cost: \$20 CVP enrollee / \$25 non-CVP enrollee includes lunch. [Register online](http://cvp.cce.cornell.edu) or call Robert Hadad at 585-739-4065 and pay at the door.

### Farm Food Safety for Post-Harvest Handling and Small-Scale, Low-Cost Facility Design

March 9, 2015 | 9:30 AM - 12:30 PM

Lakestone Family Farm, 1089 County Road 28, Shortville, NY 14548



Join NOFA-NY and Cornell Vegetable Program's Robert Hadad to learn how to design, build, and operate a small-scale, DIY post-harvest handling system! This workshop will focus on food safety, maintaining high quality and efficiency, and affordability for new and small growers. Includes a discussion and hands-on demonstration of how to design and set-up your wash line, tables, and packing shed, with a focus on safe and efficient product flow to separate "dirty" field harvested produce from the washed and "clean" final product. Look at setting up standard operating practices, as well as the why and how of using organic sanitizers. Exam clean-up procedures and post-harvest handling considerations. \$10/person and \$15/two or more people per farm. To pre-register, call Stephanie at 585-271-1979 ext. 509. Pre-registration is encouraged and closes at 4:00 PM on March 4. Contact Robert Hadad at [rg26@cornell.edu](mailto:rg26@cornell.edu) or 585-739-4065 for more info.

### Weed Management Workshop for Processing Vegetable and Dry Bean Growers

March 11, 2015 | 12:30 PM - 3:30 PM

First United Methodist Church, 8221 Lewiston Rd (Rt 63), Batavia, NY 14020



Workshop will focus on developing a long-term plan for managing weeds and weed seed banks, selection and use of herbicides for processing vegetables and dry beans, and reducing the risk for herbicide resistant weeds. DEC and CCA credits have been applied for. Cost: \$10/CVP enrollee; \$20/non-enrollee. [Register online](http://cvp.cce.cornell.edu) at [cvp.cce.cornell.edu](http://cvp.cce.cornell.edu) or pay at the door. For more info, contact Julie Kikkert at 585-394-3977 x404. [Sponsor opportunities – details online](http://cvp.cce.cornell.edu) or contact Angela Parr at [aep63@cornell.edu](mailto:aep63@cornell.edu) or 585-394-3977 x426.

### Forecasting Tomato/Potato Late Blight Risk for Your Farm – Online Workshop

March 16, 2015 | 1:00 PM - 4:00 PM

CCE Niagara County, 4487 Lake Avenue, Lockport, NY 14094



or

March 20, 2015 | 9:00 AM - 12:00 Noon

NYS Ag Experiment Station, Jordan Hall Staff Room, 630 W North St, Geneva, NY 14456

Set up an account for your farm location on the Late Blight (LB) Decision Support System (DSS) website at this live, online workshop. Learn how late blight (development) units, and fungicide (loss) units, are used to forecast when you'll need to apply a fungicide spray. This system uses both weather station data, and National Weather Service forecasts for your farm. The residual activity of the specific fungicides you input is taken into account. Personal email or text Alerts are available. A smart phone or tablet can be used once you've set up your account. Finally, learn how you can get your own farm weather station for more accurate forecasts. DEC and CCA credits will be available if you haven't taken the class before.

**Free, but preregistration required by March 11.** Contact Carol MacNeil at [crm6@cornell.edu](mailto:crm6@cornell.edu) or 585-394-3977 x406, with your name, email address, phone number, and town. **Bring a wireless internet capable laptop, or ask for a loaner *in advance*.**

### Pesticide Training and Exam

March 17 and 19, 2015 Training | 12:30 PM - 4:00 PM

March 20, 2015 Exam | 12:30 PM - 4:00 PM

CCE Wayne County, 1581 NYS Rt 88N, Newark, NY 14513



CCE Wayne is offering a pre-exam training and test to become a private certified pesticide applicator. **Pre-register by March 2** by calling: 315-331-8415. Registration is \$50 pp; make checks out to *Cornell Cooperative Extension*. This training does not qualify for 30 hour pre-test training. All participants must have experience working on their farm, or through employment on another farm, and will need to sign a document stating so. Participants will need the most recent core manual (2012) and category manual: Field and Forage-21 (2003), Fruit – 22 (2003), and Vegetable – 23 (2004). **Order and pay for all manuals by March 2 to ensure delivery.** There is a link to order manuals, and more info on pesticide training at: [ccewayne.org](http://ccewayne.org) Search "agriculture" and "pesticide certification".

**You must register separately for the exam.** Call Chris Wainwright, NYS DEC at: 607-776-2165 x23. A check or money order for \$100, made out to NYS DEC, and an official photo ID, are required for the exam.



## UPCOMING EVENTS *view all Cornell Vegetable Program upcoming events at [cvp.cce.cornell.edu](http://cvp.cce.cornell.edu)*

### 2015 NYS Dry Bean Meeting

March 18, 2015 | 9:00 AM - 3:00 PM

LeRoy County Club, 7759 E Main Rd/Rt 5 (1 mile east of LeRoy), LeRoy, NY 14482



Topics to be included are: the performance and development of new varieties and breeding lines; weed management update; white mold management recommendations; Western bean cutworm risk and control; the effects of tillage, cover crops and rotation on dry bean yields. Bean dishes at lunch! The NYS Dry Bean Committee will meet right after the meeting. DEC and CCA pesticide credits will be available. Cost: \$20/CVP enrollee; \$30 all others, *if preregistered by March 10*. \$5 more at the door. Meeting details: Carol MacNeil at [crm6@cornell.edu](mailto:crm6@cornell.edu) or 585-394-3977 x406. Sponsor opportunities - contact Angela Parr at [aep63@cornell.edu](mailto:aep63@cornell.edu) or 585-394-3977 x426.

### Ontario County Agriculture Appreciation Banquet

March 20, 2015 | 6:00 Social Hour; 7:00 Dinner and Program

Club 86, 86 Avenue E, Geneva, NY 14456

\$25 per person/\$40 per couple. For details, contact Nancy Anderson at 585-394-3977 x427 or [nea8@cornell.edu](mailto:nea8@cornell.edu).

### 13th Annual Celebrate Genesee Agriculture Dinner

March 21, 2015 | Doors open at 6:00 PM

Alexander Fire Hall, Rt 98, Alexander, NY 14005

Cost \$25, tickets available at the Genesee County Chamber of Commerce, 210 East Main St., Batavia. *Questions? Call 585-343-7440 x27.* Join us in recognition and celebration of the abundance agriculture provides in Genesee County. The dinner is open to the public.

### Farm Food Safety for Post-Harvest Handling and Small-Scale, Low-Cost Facility Design

March 23, 2015 | 9:30 AM - 12:30 PM

Sweetland Farm, 9732 State Route 96, Trumansburg, NY 14886



Join NOFA-NY and Cornell Vegetable Program's Robert Hadad to learn how to design, build, and operate a small-scale, DIY post-harvest handling system! This workshop will focus on food safety, maintaining high quality and efficiency, and affordability for new and small growers. Includes a discussion and hands-on demonstration of how to design and set-up your wash line, tables, and packing shed, with a focus on safe and efficient product flow to separate "dirty" field harvested produce from the washed and "clean" final product. Look at setting up standard operating practices, as well as the why and how of using organic sanitizers. Exam clean-up procedures and post-harvest handling considerations. \$10/person and \$15/two or more people per farm. To pre-register, call Stephanie at 585-271-1979 ext. 509. Pre-registration is encouraged and closes at 4:00 PM on March 18. Contact Robert Hadad at [rgh26@cornell.edu](mailto:rgh26@cornell.edu) or 585-739-4065 for more info.

### High Times with High Tunnels

March 24, 2015 | 10:00 AM - 2:00 PM

Finger Lakes Produce Auction, 3691 Rt 14A, Penn Yan, NY 14527



This course will educate growers on disease and pest management, varieties and marketing issues in greenhouse and high tunnel tomatoes, as well as other vegetables such as leafy greens. Topics such as disease resistant varieties, pest ID, grafting, and attributes of successful growers will be shared. The [full agenda](#) is posted online at [cvp.cce.cornell.edu](http://cvp.cce.cornell.edu). FREE! Contact Judson Reid at 315-536-5123 for more information.

### DEC Special Permit Training

April 8, 2015 | 8:30 AM - 12:30 PM English Session | 1:00 PM - 4:30 PM Spanish Session  
CCE Wayne County, 1581 Rt 88N, Newark, NY 14513



April 9, 2015 | 8:00 AM - 12:30 PM Concurrent English and Spanish Sessions  
Orleans County Cooperative Extension Fairgrounds Trolley Bldg, 12690 Rte 31, Knowlesville, NY

DEC Special Permit allows non-certified workers to apply and handle federally restricted use pesticides: The Special Permit does not relieve the responsibility of the certified applicator that supervises these employees, but it does relieve the requirement of "on-site, within voice contact" supervision while federally restricted pesticides are being applied. Several of the pyrethroid, organophosphate, and carbamate insecticides such as Warrior, Capture, Diazinon, Lorsban and Lannate, and a few herbicides such as Gramoxone and Atrazine, are federally restricted-use materials.

This permit is renewed annually through Special Permit Trainings. Trainings include Worker Protection Safety (WPS), non-target and environmental hazards, and prevention of the risk of exposure.

\$20 per DEC Special Permit. Pre-register your non-certified applicators for this training by April 3 by calling Kim Hazel at 585-798-4265 x26 or email [krh5@cornell.edu](mailto:krh5@cornell.edu). A mail-in registration form is available at <http://tinyurl.com/2015SPT>. We need info regarding farm name and address, name of applicators' supervisor and their DEC pesticide license number, and names of applicators/handlers so that special permit forms may be prepared in advance.

# New Top Performing Pesticides Now Registered in Onions in New York

Christy Hoepting, CCE Cornell Vegetable Program

## Merivon® Xemium® Brand Fungicide (BASF) for control of leaf diseases in onions.

Available as a FIFRA Section 24 (c) Special Local Need Label

Merivon is a pre-mix of Xemium® brand fungicide with the new active ingredient, fluxapyroxad belonging to mode of action group 7, and pyraclostrobin belonging to mode of action group 11. Merivon is like a new and improved version of Pristine, which contains the same amount of pyraclostrobin, but has fluxapyroxad instead of boscalid (also group 7). Of all of the fungicides labeled on onions in New York, Merivon and Pristine are the only ones containing group 7 mode of action.



Merivon is labeled for Purple blotch, Stemphylium leaf blight (SLB), Botrytis leaf blight (BLB) and Botrytis neck rot, and suppression of downy mildew (DM). In recent Cornell trials, Merivon has been a top performer for control of SLB and BLB, and plant health, and demonstrated suppression of DM. To limit the potential for development of resistance, no more than two sequential applications may be made before rotating to a different modes of action, and no more than a total of three applications may be made per season. Look forward to the summer issues of *VegEdge* for specific recommendations on how to incorporate Merivon into an onion leaf disease management program.

In New York, Merivon is only available on bulb vegetables (dry bulb onions) and pome and stone fruit via FIFRA Section 24 (c) Special Local Need Labels, which includes the restriction, "Not for sale, distribution, or use in Nassau and Suffolk counties in New York State". It is also classified as restricted use in New York State. **Both the SLN label and the NY-stamped label need to be in the possession of the applicator.**

SLN label (EPA SLN No. NY-150001): <http://128.253.223.36/ppds/541184.pdf>

NY-stamped label: <http://128.253.223.36/ppds/541187.pdf>

Merivon will not be legal to use in New York on cucurbit, leafy and root vegetables until new product labeled with the container label with the NY restrictive language is in the channels of trade, which is projected for Spring 2016.

## DuPont™ Exirel™ for control of onion thrips in onions

The active ingredient in Exirel, cyantraniliprole belongs to mode of action group 28, the diamides, which is completely different than all of the other insecticides labeled in onions for control of onion thrips (Movento – group 23; Radiant – group 5; Agri-Mek – group 6; Lanante – group 1A; pyrethroids – group 3). In Cornell research trials, Exirel (also trialed as Benevia) has been a top performer along with Radiant and Movento providing excellent control of onion thrips. Look forward to summer issues of *VegEdge* for specific recommendations on how to use Exirel to manage onion thrips as part of an effective management program.

Exirel is also labeled on Brassicas (cabbage, broccoli, kohlrabi, etc.), cucurbits, fruiting vegetables (pepper/eggplant), commercial greenhouse grown peppers, eggplant and tomatoes, and leafy vegetables (lettuce) for worms, aphids and thrips (foliage feeding only). Exirel is toxic to bees and has restricted use in New York State. ●



## Specialty Potato Varieties Evaluated in Michigan

Ron Goldy and Virginia Wendzel, Michigan State University, Benton Harbor

The purpose of this trial was to evaluate the performance of 18 specialty potato selections for their adaptability to southwest Michigan growing conditions. This is the third year for evaluating specialty potatoes in an attempt to encourage farmer's market vendors to make them part of their offerings. A range in yield and tuber quality was found in the entries. Entries included fingerlings, round whites and a yellow, russets, and heirlooms. Photos of the

varieties are included. To view the 2014 report go to: [https://ag.purdue.edu/hla/fruitveg/MidWest%20Trial%20Reports/2014/08-01\\_Goldy\\_Potato.pdf](https://ag.purdue.edu/hla/fruitveg/MidWest%20Trial%20Reports/2014/08-01_Goldy_Potato.pdf)

A trial in 2012 evaluated 37 specialty potato varieties. It's available at: [https://www2.ag.purdue.edu/hla/fruitveg/MidWest%20Trial%20Reports/2012/06-01\\_Goldy\\_Potato.pdf](https://www2.ag.purdue.edu/hla/fruitveg/MidWest%20Trial%20Reports/2012/06-01_Goldy_Potato.pdf)

The complete 2014 Midwest Vegetable Trial Report for many different vegetables has been published online at <http://ag.purdue.edu/hla/fruitveg/Pages/mvtr2014.aspx> ●

## Looking for a Farm Loan?

Karen Rugenstein, FSA

The Farm Service Agency (FSA) offers farm loans to farmers who have experience and want to own or operate their own farm, but are unable to get financing from a traditional lender.

FSA provides financial assistance and business planning to help ensure the future well-being of American agriculture.

For more information, visit [www.fsa.usda.gov](http://www.fsa.usda.gov) or contact Karen Rugenstein, Farm Loan Manager at USDA/FSA Office, 3037 County Road 10, Canandaigua, NY 14424. ●



## New York State Mesonet Weather Observing Network

Dr. Jerald Brotzge, NYS Mesonet Project Manager

The New York State (NYS) Mesonet is an advanced weather observing network which promises to expand weather detection coverage across the state. This network will be the first of its kind in New York and will consist of up to 125 surface weather stations, with at least one site deployed in every county. This weather detection system is funded by FEMA and is designed primarily for emergency management. However, these data are **expected to complement existing weather networks, such as NEWA, to provide a wide range of sectors, such as agriculture, energy, and transportation, with access to high-resolution, real-time data and integrated products.**

- Data will be collected, quality controlled, and made available every 5 minutes, 24/7.
- Each station will measure temperature, relative humidity, wind speed and direction, precipitation, solar radiation, atmospheric pressure, and soil moisture and temperature at three depths (5 cm, 25 cm, and 50 cm).
- 17 sites will have additional instrumentation to measure vertical profiles of wind up to 1 km and temperature, and moisture up to 10 km.
- 20 sites will measure snow depth and snow water equivalent for hydrological applications.
- Each site will also be outfitted with a camera, which will be used to record still images to record snow depth, vegetation height, and visibility.
- Each station consists of a 33 ft tower centered within a 33 ft x 33 ft plot of land. To ensure the highest quality of data, each station will be sited at least 300 feet from the nearest obstacle (tall trees, buildings, etc.) or potential heat sources (pavement).

If you would be interested in hosting a Mesonet site, please contact Dr. Jerald Brotzge at [jbrotzge@albany.edu](mailto:jbrotzge@albany.edu). The University at Albany will pay for any expenses associated with installation and maintenance of each station. The stations are designed as permanent installations. If you would like to learn more about the NYS Mesonet, please visit our website at <http://www.nysmesonet.org>. ●

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# VEGEdge

YOUR TRUSTED SOURCE FOR RESEARCH-BASED KNOWLEDGE

## VEGEdge

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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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