Conduct a Road Safety Check-Up on Farm Equipment

Bruce MacKellar, Michigan State University Extension, 9/17/13

Day length is rapidly growing shorter and growers and their employees find themselves on the road at dawn, dusk or in the dark, with motorists unfamiliar with agricultural activity. This can be a recipe for tragedy. If you haven’t done so yet, don’t delay to check tractor, wagon, equipment, harvester and combine lights, slow moving vehicle (SMV) signs and reflectors.

While lights are the best way to warn approaching motorists that equipment is on the road, SMV signs and reflective tape remain visible if lights burn out. SMV signs fade with exposure to weather, but it is easy to add a new sticker on top of the old one. Reflective tape and fluorescent sticks can be added at the widest point of the implement to show the width of the equipment to passing motorists. For on-coming traffic, the configuration of lighting on farm equipment can be confusing. Much of the newer equipment has yellow or orange rotating lights to help motorists recognize that a large piece of equipment is ahead. After-market strobes and reflectors can be added in similar configurations to older equipment to help increase recognition and visibility. Test all the lights to make sure they work and are aimed properly. Bulbs, wiring and fuses or circuit breakers can be issues on older equipment. Adjustment can substantially reduce the potential for blinding on-coming traffic.

Newer technology has continued to become more affordable for agricultural equipment. Combines are one of the hardest implements to operate safely on a public roadway because of their size and limited operator visibility. Tractors with grain carts are also very difficult to see behind. There is increasing variety in rear-facing cameras with in-cab monitors to allow operators to see behind and around equipment. Very good quality agricultural grade camera systems are available for $900 to $1,000. They can greatly improve visibility for the operator compared to conventional mirrors.

Wagon safety check: Wheel bearing failure and tire blowouts are common problems with wagons bearing heavy loads. Completing a quick check of the wheel bearings for “play” and smooth operation, and observing the tires for wear and weather checking, can save both time and loads of frustration if you end up having to fix one of these problems in the field or along the side of the road. Also, make sure your wagons have safety chains of adequate strength to keep your load with the tractor in the case of a hitch failure. Welded links often lose strength, so safety chain with the correct size links should be connected to the implement hitch or frame.
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Control Summer Pests for Clean Winter Greens

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.

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Torrey Farms Receives 2013 Grower Achievement Award

From the American Vegetable Grower Online, 9/19/13

**Torrey Farms**, Elba, NY will be presented with the 12th annual Grower Achievement Award at the United Fresh Produce Association’s (www.unitedfresh.org) Washington Public Policy Conference, Sept. 30 - Oct. 2 in Washington, DC. The award recognizes recipients striving to produce high-quality produce while working for the good of the industry. John, Maureen and Mark Torrey are the owners of an 11,000 acre farm with 7,000 acres of fresh market and processing vegetables. The farm expanded from ~700 acres after they took over all aspects of the business, including growing, packing and shipping. Maureen Torrey has spoken before Congress on the Farm Bill and on the need for immigration reform. She also serves with state and national agricultural organizations.

Some of the family members involved with Torrey Farms include, from left: Travis, Lucas, Shannon Kyle, Max, John, Maureen Torrey Marshall, Mark, Molly Torrey Anderson, Jordyn and Jed Torrey. Photo courtesy of United Fresh

Update on Potato Tuber Necrotic Ringspot Disease (PVYntn)

*Sandy Menasha, CCE Suffolk Co., Long Island Fruit & Veg Update, 9/19/13*

(This disease first showed up on numerous farms in the CVP region last year. In some cases a large percentage of tubers of certain lots were unmarketable. ed. C. MacNeil, CVP.)

A sample of Yukon Gold tubers was recently identified and confirmed as having Potato Tuber Necrotic Ringspot Disease, caused by Potato Virus Yntn, on Long Island. All growers should be watchful for symptoms of this virus while grading. *(Report any suspect samples in the CVP region to: Carol MacNeil at: crm6@cornell.edu or 585-313-8796; in Eastern NY to Chuck Bornt at: cdb13@cornell.edu or 518-859-6213. Medium to large, rough, raised rings develop on the surface of infected tubers of susceptible varieties after harvest. Make plans to destroy all culls and volunteers from fields where this disease occurred. Do not plant susceptible varieties in or near these fields in 2014. ed. C. MacNeil, CVP.)*

The disease is seed borne. Yellow fleshed varieties like Yukon Gold are more susceptible to expressing symptoms on the tuber (symptoms can also be detected in Marcy and Waneta) while many other varieties may not show any tuber symptoms at all even if infected, thus making it difficult to detect. Aphids are responsible for spreading the disease in the field during the growing season. Since the virus is seed borne it is important to order certified seed and to be diligent about asking for the postharvest/winter test data on virus incidence as well as specifically ask if the seed lot has been tested for PVYntn. *(Testing for PVYntn specifically in a potato seedlot is time-consuming and may not be done routinely. If a seed lot tests positive for PVY in general, as reported on the North American Certified Seed Potato Health Certificate, assume there’s a higher risk for PVYntn. ed. C. MacNeil, CVP.)*

If the seed is certified this information should be readily available and provided by either the seed grower or easily accessed by the broker.
Late Blight - Use a Penetrating Adjuvant When Applying Ridomil

Carol MacNeil, CCE Cornell Vegetable Program

Three growers in the Cornell Vegetable Program area had poor late blight (LB) control after applying Ridomil Gold Bravo twice in the recommended manner. Samples from the fields were identified as US-23, which has always been sensitive to mefenoxam, the active ingredient in Ridomil. Ridomil is fully systemic, and on a sensitive LB strain it should provide better control than any of the other “late blight fungicides.” Why didn’t it work?

From Jeff Zelna, Syngenta, 9/20: I would recommend a penetrating surfactant and not use a sticker. Making this change should help with effectiveness of Ridomil against late blight.

Ridomil is a systemic fungicide which needs to get into the leaf to move up and down the plant in the vascular system; hence the need for a penetrating surfactant. A sticker sticks the pesticide to the outer leaf surface preventing it from getting into the leaf.

One of the three growers mentioned above, the one with the poorest LB control, had used a sticker with Ridomil Gold Bravo. Another had used an ordinary surfactant. The third had used no adjuvant at all.

If you have LB and plan to apply mefenoxam (Ridomil Gold Bravo, other formulations with mefenoxam) be sure to tank mix with a penetrating surfactant, and do NOT add a sticker to the tank! If you have questions regarding LB, contact Carol MacNeil at crn6@cornell.edu or 585-313-8796.

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Potato Storage Management

Sandy Menasha, CCE Suffolk Co., Long Island Fruit & Veg Update, 9/19/13

Over the years, a major problem has been temperatures in the center of the bulk pile going into the 70’s and at times into the 80’s during curing. This can occur when night temperatures are warm, in the 50’s and lower 60’s, and growers aren’t ventilating. Bringing cooler outside air into the storage and exhausting the warm air is necessary during the curing stage to remove field heat and the heat of respiration, and to supply oxygen. Temperatures in the pile should not be allowed to build up above 60°F. Check temperatures on the top and in the center of the pile. If these temperatures are above the outside air temperature then ventilate the storage. An exhaust fan is ideal for removing warm air from the top of the storage and bringing in cooler air.

Immediately after the curing period, tubers should slowly be cooled down to the holding temperature. A rapid reduction in storage temperature, followed by a mid-fall warm spell, will cause fluctuation in tuber temperatures. This may reduce storage life and potato quality.

In addition, it may cause condensation on tubers, which favors the spread of any disease present. ed. C. MacNeil, CVP]

Cool a maximum of 4 – 5°F per week. Use a pulp thermometer, with a stem that’s pushed into a tuber, to check tuber temperature. Potatoes should be cooled with humid air no lower than 3 - 5°F below the tuber temperature.

The holding environment for good quality potatoes should be maintained at a high relative humidity (90 – 95%; only 85% if silver scurf/black dot are concerns) and at a temperature of 38-40°F for fresh market; 50°F for chipstock like Atlantic or Norchip; or 45°F for chipstock like Monona, Snowden or Kanona. During this period tuber quality should be preserved by keeping weight loss to a minimum and by controlling sprouting and rot. Tubers should be held at a uniform temperature. Temperature should not vary more than 2-3°F from the bottom to the top of the pile or +/- 2°F from the desired holding temperature. Fluctuating temperatures may cause condensation within the pile or on the ceiling and accelerate sprouting at higher storage temperatures. A pulp thermometer gives the most accurate temperature readings. Max/min thermometers and hygrothermographs are helpful in monitoring fluctuating air temperatures. Aerated psychrometers are helpful for measuring relative humidity.

(Edited by C. MacNeil, CVP)

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  Gale.E.Drake@usa.dupont.com
  585.447.7305
- Megan Patterson, Eastern NY & New England
  Megan.L.Patterson@dupont.com
  207.890.1645

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Diagnosing Soil Compaction

Sjoerd Duiker, Penn State Extension, May 2013

The standard tool to measure soil compaction is the penetrometer, or soil compaction tester. It has a pressure gauge, a solid rod and a standard tip (usually of 0.5 inch diameter at the top). It has to be pressed into the soil at approximately 1 inch per second when soil is at field capacity (when excess soil moisture has drained away). Measuring at field capacity is necessary because penetration resistance will increase when soil dries out. Root growth, however, will resume once the soil wets back up. The gauge tells you if you reach ‘root limiting’ compaction.

The tool was developed in soil packed to different densities. Seedlings were grown in these soils and it was found that roots did not penetrate soil if the penetration resistance exceeded 300 psi, and were starting to be inhibited when penetration resistance exceeded 200 psi. In tillage literature you will find that if penetration resistance is less than 100 psi seed-to-soil contact is likely to be poor due to excessive air pockets (so soil that has been tilled has to be firmed to 100 psi to get good seed-to-soil contact, which is why we use discs, harrows, baskets and cultipackers).

Measure compaction respective to wheel tracks, plant rows, and other recognizable patterns in the field. For example, if you know the areas of wheel traffic, take measurements in and out of the track. If there are subsoiled zones in the field, measure penetration resistance in and out of the subsoiled zone. If there are planted rows, take measurements in and between the rows. (The Cornell Soil Health Test recommendation is to measure compaction at ten spots for every 20 acres or less, at 0 – 6” deep and at 6 – 18” deep. ed. C. MacNeil, CVP)

While the penetrometer can give you a first assessment, it is not advisable to base your conclusion solely on it. This is especially the case in soil that has not been tilled. In long-term no-till, sod or forest soil the penetration resistance may exceed 300 psi and yet there may not be a compaction problem. The reason is that in these soils firm aggregates are surrounded by a network of pores that allow root growth, aeration, and water percolation to take place. So in addition to using the penetrometer, you need a shovel and dig to a depth of 12-18 inches to assess soil structure.

You need to determine if the soil is massive/solid or crumb-like. If the soil falls apart easily or are held together by dense root networks, that is a first sign compaction may not be a problem. Look for severe plate-like structure in the surface soil. Then you need to search for evidence of root growth restrictions. Look where there is living vegetation in the field (for example, weeds or cover crop), and determine if root growth is limited - in compacted soil roots typically follow cracks without being able to grow into the solid clods, or the roots crowd in the horizontal voids between solid plates.

Do you see evidence of shiny surfaces created by tillage tools working in wet soil? If there is a hard pan, roots may make an abrupt turn or many fine roots may crowd above this layer. If roots grow downward without a problem, compaction is not likely to be severe. Also look for organic matter content - does the soil show evidence of organic matter accumulations, which lead to soil becoming better aggregated and crumb-like? Finally, look for biological activity, such as that of earthworms.

At the surface of the soil, you can look for middens/little piles left by earthworms near their holes. Underneath each hole there is a 4-5 foot deep open nightcrawler channel, so if you have many middens there is not likely to be a compaction issue. Other worms dwell in the surface of the soil and fill their channels with casts as they go. If you have many earthworms that is more evidence that compaction is not a problem. Good times to look for earthworm activity is in spring and fall when the soil is moist.

If examining the soil surface for signs of earthworms, and examining the soil 12-18” deep does not reveal crumb-like structure and unrestricted root growth, then the penetration resistance can be used as a guide regarding when to sub-soil. If more than 50% of spots tested measure 300+ psi at any point from a 0 – 15” depth then sub-soiling is likely to be beneficial. Be sure to sub-soil at least an inch below the compaction zone or soil drainage will not be improved. (Sub-soiling should only be done if the soil as deep as you intend to rip is at field capacity or drier. A soil ball firmly in the hand will crumble into small pieces when a thumb is pressed into it if it’s dry enough. If it’s too wet a thumb print will remain. The ball may break in two but it will not crumble. ed. C. MacNeil, CVP)

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Lowering Soil pH with Sulfur

Tamson Yeh, Turf Specialist, CCE Suffolk Co., Ag News, May 2013

(Growers in the CVP region have occasionally asked if they could lower their excessively high soil pH levels by applying sulfur, to make soil nutrients more available to their crops. This information may be worth a small strip trial. ed. C. MacNeil, CCE, CVP)

With the salt from Hurricane Sandy lots of people were pushing lime to try to make the calcium pop the sodium from the salt water off the soil matrix. The result may have been raising your pH a little too much. Use of elemental sulfur might be just the answer, but how much do you need? For one thing, you never want to apply more than 5 lbs. of sulfur/1,000 sq. ft. per application. If more is needed to reach the desired pH then apply it in multiple applications, such as in the fall and in early spring. Sulfur applications result in the production of heat which can burn plants.

(With the salt from Hurricane Sandy lots of people were pushing lime to try to make the calcium pop the sodium from the salt water off the soil matrix. The result may have been raising your pH a little too much. Use of elemental sulfur might be just the answer, but how much do you need? For one thing, you never want to apply more than 5 lbs. of sulfur/1,000 sq. ft. per application. If more is needed to reach the desired pH then apply it in multiple applications, such as in the fall and in early spring. Sulfur applications result in the production of heat which can burn plants.

Clay loam soils are closest to muck soils in cation exchange capacity. The application of anhydrous ammonia as a nitrogen fertilizer contributes to lowering the soil pH. Chemical fertilizers that contain sulfur generally form an acid, which lowers the soil pH. The latter, when banded at planting, have been beneficial to bean production in high pH soils. ed. C. MacNeil, CVP)

Cantalooppe Farmers Arrested in Food Safety Case

Robert Hadad, Cornell Vegetable Program with info from the Packer Online Daily, 9/27/13

(This case must be watched by all produce farmers in the country. It is a tragedy that so many people got sick and many died. However, the degree of negligence will have to be proven against the fact that there really were no regulations, only guidelines for best practices, as well as the fact that the farm was inspected only weeks before by one of the top auditing companies in the country. How will this affect issues with food safety in the future? R. Hadad, CVP)

Eric and Ryan Jensen, Colorado growers, were indicted on federal charges last week. It is the first time that criminal charges have been brought against a grower relating to a foodborne illness outbreak. In an article published by the Packer Online Daily on September 27, 2013, the Jensen brothers surrendered to federal authorities September 26 in Denver, according to a statement from U.S. Attorney John Walsh. The brothers each posted bonds of $100,000 and were released, said Jeffrey Dorschner, spokesman for the U.S. Attorney’s office in Denver. The brothers were charged against the Food, Drug, and Cosmetic Act of 1938. This law prohibits food marketers from selling food into the marketplace that has been adulterated. Pathogens are considered adulterants. In the past, this argument has been used in civil cases and not tried in federal court. The charges are for introducing adulterated melons into interstate commerce. The maximum sentence could be as much as 6 years in prison and $1.5 million in fines per defendant.

The Packer article noted that Special Agent in Charge Patrick Holland of the FDA Office of Criminal Investigations, Kansas City Field Office, said in the U.S. Attorney’s news release that “the filing of criminal charges in this deadly outbreak sends the message that absolute care must be taken to ensure that deadly pathogens do not enter our food supply chain.”

Elemental sulfur per 1000 sq ft to lower the pH to 7.0

<table>
<thead>
<tr>
<th>Soil pH range</th>
<th>Sandy loam</th>
<th>Loam</th>
<th>Clay loam</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;8.0</td>
<td>17 pounds/1000 sq ft</td>
<td>34 pounds/1000 sq ft</td>
<td>47 pounds/1000 sq ft</td>
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<tr>
<td>7.5-8.0</td>
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<td>35 pounds/1000 sq ft</td>
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<tr>
<td>7.0-7.4</td>
<td>7 pounds/1000 sq ft</td>
<td>14 pounds/1000 sq ft</td>
<td>9 pounds/1000 sq ft</td>
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</tbody>
</table>
Western bean cutworm (WBC) is a bean and corn pest which has moved eastward into New York. It has shown its potential to reduce dry bean yield and reduce quality in Michigan. Trap counts of WBC moths can pinpoint when to scout bean pods for damage to determine whether an insecticide spray is needed. WBC moth trapping in NYS from 2010 through 2013 showed a steady increase in the population. There were 75 traps across NYS in 2013 in dry bean, sweet corn and field corn fields.

### Total WBC moths captured in traps in WNY

<table>
<thead>
<tr>
<th>County</th>
<th>Town</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2013 Range*</th>
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<tbody>
<tr>
<td>Genesee</td>
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<td>96</td>
<td>16</td>
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<tr>
<td>Genesee</td>
<td>Bat/Alex</td>
<td>-</td>
<td>23</td>
<td>64</td>
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<tr>
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<td>Pavilion</td>
<td>56</td>
<td>0</td>
<td>-</td>
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<tr>
<td>Livingston</td>
<td>Caledonia E/S</td>
<td>19</td>
<td>28</td>
<td>64</td>
<td>13 - 64</td>
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<tr>
<td>Livingston</td>
<td>Caledonia W</td>
<td>22</td>
<td>-</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Livingston</td>
<td>Cuyler/Grove</td>
<td>0</td>
<td>9</td>
<td>53</td>
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<tr>
<td>Monroe</td>
<td>Church/Bergen</td>
<td>24</td>
<td>35</td>
<td>109</td>
<td>13 - 109</td>
</tr>
<tr>
<td>Ontario</td>
<td>Hopewell</td>
<td>59</td>
<td>8</td>
<td>-</td>
<td>5 - 39</td>
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<tr>
<td>Steuben</td>
<td>Wayland</td>
<td>9</td>
<td>34</td>
<td>62</td>
<td>10 - 62</td>
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<tr>
<td>Wyoming</td>
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<td>-</td>
<td>-</td>
<td>109</td>
<td>109 - 181</td>
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<tr>
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<td>Attica</td>
<td>164</td>
<td>276</td>
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<td>Wayne</td>
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<tr>
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<td>Benton</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Erie/Niagara*</td>
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<td></td>
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<tr>
<td>St. Law. Valley</td>
<td>various</td>
<td></td>
<td></td>
<td></td>
<td>41 - 853</td>
</tr>
</tbody>
</table>

* 2013 County Range in total WBC moth catches per trap for dry bean and field/sweet corn sites.

WBC pheromone traps were set up in June at 11 dry bean fields in Genesee, Livingston, Monroe, Steuben, Wayne, Wyoming and Yates counties. Traps were placed near field or sweet corn fields. WBC moth activity was monitored using bucket traps with WBC pheromone lures to attract male moths. CVP and CCE staff and a consultant checked the traps weekly. Pheromone lures were replaced every 14 days.

A cumulative count of 100 - 150 moths in a trap is the trigger for scouting.

#### % of 2013 WBC moth traps with the following season total counts

- 39% - 10 or fewer WBC moths
- 12% - 11 - 20
- 32% - 21 - 99
- 17% - >100 (Range 107 – 853)

The highest cumulative moth catch in monitored dry bean fields occurred once again in Attica, with 181 moths, over the threshold of 100-150 moths. No WBC eggs or larvae could be found in nearby corn, and no damage could be found in the pods or dry beans in that area. The grower had sprayed insecticide on the dry bean fields near the Attica trap, and also near the Wyoming trap (catch of 109), however, when he was told of the high WBC moth catches. WBC larvae were found in corn ears adjacent to the Monroe Co. dry bean trap where the moth count reached 109, but no damage was seen in the dry beans. WBC larvae were also found in field corn in the St. Lawrence Valley, where WBC moth catches have been the highest in the state since the survey began. It’s likely that migrant WBC moths from Ontario, where populations have been higher, likely populated the Valley in past years. Most moths caught in the state this year were in good condition, indicating that they overwintered here.

As WBC larvae mature they stop feeding, drop off their hosts and burrow into the soil. They construct earthen chambers where they will overwinter, about 5-10 inches beneath the soil. Sandier soils allow larvae to penetrate deeper. The underground overwintering location provides greater protection from winter temperatures and tillage equipment, and increases overwintering survival. The larvae will pupate and complete development to moths the following spring and summer. Researchers suggest factors contributing to risk of WBC establishing economically significant populations may be: high % of acres in reduced/ no-till (increase in overwintering survival); lake effect weather – mild fall, deep snow cover along lakes (increase in overwintering survival); and high summer humidity (increase in the survival rate of eggs and young larvae).

We have not had economic losses in NY attributed to WBC to date, but the population continues to climb. We are very interested in documenting any damage associated with WBC this season. If you think you may have WBC larval damage on bean pods or bean seeds we would very much like to hear from you! Please contact Carol MacNeil at crm6@cornell.edu or 585-313-8796.

Thanks to the NYS Dry Bean Industry Committee for their support of this work, and to the WNY Crop Management Association and Cornell Cooperative Extension – Wyoming Co., for their assistance.
### Upcoming Meetings

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
<th>Time</th>
<th>Location</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Organic Cover Crop Workshop &amp; Tour</strong></td>
<td>Thursday, October 17, 2013</td>
<td>9:30 AM - 4:00 PM</td>
<td>USDA-NRCS Big Flats Plant Materials Center, 3266 Rt 352, Big Flats, NY 14814</td>
<td>NRCS and Cornell speakers on nitrogen cycling, cover crops, and soil ecology; tillage, seeding and roller/crimper equipment demonstrations; and, over 180 cover crop/ forage plots to view. Guest speaker Jean-Paul Courtens will discuss cover cropping on Roxbury Farm (see more at: <a href="http://www.roxburyfarm.com">http://www.roxburyfarm.com</a>). Lunch: $12. CCA credits available. See more and Register at: <a href="http://events.constantcontact.com/register/event?llr=2ex5qzeab&amp;oeidk=a07e7i0eqy23d4363df">http://events.constantcontact.com/register/event?llr=2ex5qzeab&amp;oeidk=a07e7i0eqy23d4363df</a>. Questions? Contact Paul Salon, NRCS, 607-562-8404 or <a href="mailto:paul.salon@ny.usda.gov">paul.salon@ny.usda.gov</a>.</td>
</tr>
<tr>
<td><strong>Cover Crop and Soil Health Field Day</strong></td>
<td>Tuesday, October 29, 2013</td>
<td>6:30 PM Discussion</td>
<td>Double Tree Resort, Lancaster, PA</td>
<td>October 30 includes: field tours and speakers on cover crops and soil health, equipment and technology, research, and economics. Speakers include Mike Plumer, IN cover crop expert, Steve Groff, PA cover crop innovator, and Jay Fuhrer, ND soil health teacher. Cost:$95. See more at: <a href="http://www.covercropsolutions.com/documents/events/CCS-FieldDay-2013-Events.pdf">http://www.covercropsolutions.com/documents/events/CCS-FieldDay-2013-Events.pdf</a>. Register online at: <a href="http://www.covercropsolutions.com">www.covercropsolutions.com</a>.</td>
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<tr>
<td><strong>Cornell Potato Breeding Line Show &amp; Tell</strong></td>
<td>Wednesday, November 6, 2013</td>
<td>11:30 AM - Lunch</td>
<td>Plant Breeding Field House</td>
<td>Cornell potato breeder Walter De Jong has scheduled his very popular discussion on the best breeding lines coming out of the Cornell Potato Breeding Project. An annual report is provided documenting yield, tuber quality and important horticultural characteristics. Small quantities of seed of the most promising lines have been grown on farms across the state. All fresh market and processing potato growers are invited. Grower and processor comments on the newer lines are invited, whether you plan to attend or not. Pre-register: Walter De Jong at: <a href="mailto:wsd2@cornell.edu">wsd2@cornell.edu</a> or 607-254-5384; Don Halseth at: <a href="mailto:deh3@cornell.edu">deh3@cornell.edu</a> or 607-255-5460; or, Carol MacNeil at <a href="mailto:crm6@cornell.edu">crm6@cornell.edu</a> or 585-394-3977 x406.</td>
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<tr>
<td><strong>Tomato School</strong></td>
<td>Thursday, November 7, 2013</td>
<td>8:00 AM - 4:45 PM</td>
<td>NYSAES, Jordan Hall</td>
<td>Cultural and chemical pest and disease control options will be presented, with an emphasis on understanding biological concepts. Attendees will learn how to develop successful, integrated management systems. Growers will share their knowledge and experiences raising transplants and field tomatoes. A tomato buyer's panel will offer insight into working with restaurant and re-sale venues. Specialty topics like precision nutrient management, site-specific late blight forecasting, and high tunnel considerations will be discussed. 4.75 DEC credits and 5.5 CCA CEU credits are available. Cost: $50 for CVP enrollees; $60.00 all others. More info or register online at <a href="http://cyp.cce.cornell.edu/event.php?id=97">http://cyp.cce.cornell.edu/event.php?id=97</a> or call Karen Krysa at 716-433-8839. Pre-registration is required by October 31 as space is limited.</td>
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<tr>
<td><strong>Squash School</strong></td>
<td>Friday, November 8, 2013</td>
<td>8:45 AM - 4:30 PM</td>
<td>CCE Monroe County</td>
<td>The Squash School is designed to cover both winter and summer squash production for large and small growers. There will be a heavier focus on winter squash and pumpkin production. Cultural and chemical control options will be discussed as part of designing proactive pest, weed and disease control programs. Crop production topics like fertility management, pumpkin production, curing and storing squash, reduced tillage adoption and the use of supplemental beehives will be covered. Cost: $40 for CVP enrollees; $50.00 all others. More info or register online at <a href="http://cyp.cce.cornell.edu/event.php?id=98">http://cyp.cce.cornell.edu/event.php?id=98</a> or call Karen Krysa at 716-433-8839. Pre-registration by October 31 will be required as space will be limited.</td>
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5th Annual Cover Crop Workshop & Tour
November 14, 2013
USDA-NRCS Plant Materials Center
3266 Rt 352, Big Flats, NY 14814

USDA-NRCS Plant Materials Center (PMC), 3266 Rt 352, Big Flats 14814*. See cover crop plantings: time of seeding; diverse mixes; PA State no-till row crop interseeder; and, cover crops for nitrogen production and cycling. Hear farmers and equipment dealers on best use of no/zone till equipment. Hear from PA No-till Alliance farmers, dedicated to improving soil quality/ productivity with success in no-till through shared experiences and technology. Meet with them after the meeting. Hear Cornell and PA State speakers. For info, or special needs, contact Paul Salon at: paul.salon@ny.usda.gov or (607-562-8404). USDA is an equal opportunity provider and employer.

Marketing for Profit: Tools for Success Webinar Series
For dates, times and to register go to: http://www.nyfarmersmarket.com/work-shop-programs/webinars/registration.html

In these sessions you will learn key concepts in effective communications with your customers and presenting your product for maximum profits.

- How to Say What We Mean and Mean Something! Communications Assessment
- You Are What You Look Like! Preparing the Product
- You Are What They Think You Are! Selling the Product
- Keeping an Eye on Your Customers: Business Assessment
- Putting a Handle on the Tomato: Reinventing the Product
- Drudgery that Pays Well! Maintaining Databases and Information

Processing Beet, Carrot & Peas Advisory Meeting
Tuesday, December 3, 2013
Batavia First United Methodist Church
8221 Lewiston Rd (Rt 63), Batavia

A complimentary lunch will be included. DEC and CCA credits will be available. No registration is required and the meetings are FREE.

For more info, contact Julie Kikkert, 585-394-3977 x404 (office), 585-313-8160 (cell) or jrk2@cornell.edu.

Upstate NY Potato Advisory Meeting
Wednesday, December 4, 2013
9:30 AM - 3:00 PM
CCE Ontario Co
480 N Main St, Canandaigua

Annual roundtable discussion on concerns of fresh market and processing potato growers and processors, reports on research, and agency updates. All potato growers are invited. (Note: Walter De Jong, Cornell, has scheduled his Potato Breeding Line Show & Tell for Wednesday, November 6, at Cornell, Ithaca.)

Cost - $10. Pre-registration for the Potato Advisory Meeting and lunch required by Friday, November 29. Contact Carol MacNeil at crm6@cornell.edu or 585-313-8796.

High Tunnel Schools
December 4-5: Batavia, CCE Genesee
December 9: Saranac Lake
December 12: Mohawk Valley

3 locations around NYS. Come learn about growing vegetables in high tunnels. These sessions are geared towards beginning to intermediate growers, particularly those who have received NRCS grants.

In Batavia, Day 1 will cover winter growing and Day 2 will focus on summer production. Contact Judson Reid at jer11@cornell.edu or 585-313-8912 for info.
AEEP has officially opened for new applications on a first-come first-serve basis through 12/1/15 or until funds are exhausted. This program offers assistance to identify and implement electric and natural gas energy efficiency measures for eligible farms and on-farm producers. Farms must be a customer of a New York State investor-owned utility and contribute to the Systems Benefit Charge (SBC) in order to be admitted to the program.

Eligible applicants to the AEEP can receive one or both of the following:

- Farm Energy Audit free of charge up to a $2,500 cost. For energy audits that exceed this amount, cost-sharing is required.
- Implementation Funding for installation of approved energy efficiency projects. Projects are approved based on the amount of energy saved and their cost. NYSERDA will pay up to 75% of approved project costs.


Please note: NYSERDA accepts completed AEEP applications ONLY through postal mail. Please submit your application to the following address: NYSERDA, Attn: AEEP Coordinator, 17 Columbia Circle, Albany, NY 12203-6399

Questions and additional guidance with completing applications can be obtained by calling a Program Representative on the AEEP implementation team (contractors to NYSERDA) at 800-732-1399.

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**NYSERDA’s Agricultural Energy Efficiency Program (AEEP)**

*From Agricultural News of Suffolk County, October 2013*

AEEP has officially opened for new applications on a first-come first-serve basis through 12/1/15 or until funds are exhausted. This program offers assistance to identify and implement electric and natural gas energy efficiency measures for eligible farms and on-farm producers. Farms must be a customer of a New York State investor-owned utility and contribute to the Systems Benefit Charge (SBC) in order to be admitted to the program.

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**USDA Posts Information Regarding SNAP and Farmers’ Markets**

*From Agricultural News of Suffolk County, October 2013*

In an effort to help the farmers’ market community make the most cost-effective decisions possible when acquiring wireless Point of Sale (POS) equipment for markets wishing to participate in the Supplemental Nutrition Assistance Program (SNAP), USDA is happy to announce that that information has been posted. You can access that information by going to [http://www.fns.usda.gov/snap/ebt/fm.htm](http://www.fns.usda.gov/snap/ebt/fm.htm) and clicking on the link that says “Farmers’ Markets: EBT Vendor Information,” in the “Resource Center” column. Alternatively, you can access the information directly by clicking on this link: [http://www.fns.usda.gov/snap/ebt/pdfs/Farmers_Markets_Vendor_Info.pdf](http://www.fns.usda.gov/snap/ebt/pdfs/Farmers_Markets_Vendor_Info.pdf).
Food Safety Modernization Act - Comment Deadline November 15

Carol MacNeil, CCE Cornell Vegetable Program, info from the Food and Drug Administration (FDA)

The comment period for the proposed rules written by the Food and Drug Administration (FDA) for the Food Safety Modernization Act (FSMA) were extended to November 15. If you have an opinion about the rules, now is the time to comment directly to FDA. For details, and the procedure for commenting, go to: www.fda.gov/FSMA Click on “Toolkit For Farmers” at the bottom right, for links to fact sheets answering many questions. After reviewing the fact sheets you can click on “How to Comment” at the bottom of Key Issues. Scroll down to Open Dockets. The FSMA rules are broken into topics for commenting. You may want to comment on: “Standards for the Growing, Harvesting, Packing and Holding of Produce for Human Consumption.” Click on a topic of the FSMA proposed rules, and then Scroll way down to Commenting. Click on “Comment Now on the Proposed Rule” and a form for you to fill out and submit will come up. You will receive a receipt and you will have done your part to influence the FSMA rules.

New Resource Helps to Connect Small Farms to Cornell Research

Cornell Small Farms Program

As a small farmer, finding the time to look up the latest agriculture research and extension projects unfolding on the Cornell University campus can be a challenge, especially during the growing season. Yet, while you’re putting in long hours in the fields, Faculty, Staff and Extension at the Cornell University College of Agriculture and Life Sciences (CALS) are hard at work conducting research to support you. From developing new raspberry cultivars to identifying helpful management practices to reduce labor during lambing, CALS is engaged in a wide variety of projects to improve production, marketing, and business management for small farms of all enterprises in New York.

In an effort to create quick and easy access to these projects, the Cornell Small Farms Program is pleased to announce release of the new Campus to Farm Guide: A Directory of Cornell University Research and Extension Projects Supporting Small Farms. The Guide brings ongoing research in horticulture, small dairy, livestock, field crops and forages, agroforestry, farm energy and more, together into one easily navigable booklet. Each project listing includes a short, descriptive summary and points you quickly to top impacts of the project, relevance to small farms, and contact information. The Guide also directs you toward resources such as the Northeast Center for Food Entrepreneurship or the NYS Integrated Pest Management Program.

The Campus to Farm Guide can be viewed online or downloaded from http://smallfarms.cornell.edu/resources.

For more small farm news and resources, visit www.smallfarms.cornell.edu. For beginning farmer support, visit www.nebeginningfarmers.org, or contact Linda Holm at 631-727-7850, ext 341.
As we continue our NESARE sponsored work to develop natural pest management techniques in winter high tunnels, we’d like to review the tools to keeping greens pest free. In approximate order, chronologically, and by importance/feasibility these are:

- Manage pests in summer crops
- Use resistant varieties
- Use biological control
- Use soil/tunnel rotation
- Use pesticides as appropriate

Let’s look at the first of these steps.

High tunnel profitability is largely dependent on fruiting summer crops, most often tomatoes. Cornell Vegetable Program (CVP) research has demonstrated gross revenue potential of over $6.00 per sq. ft. in well managed tomato crops. Winter greens may be less than half of this, however, the labor input is also lower, and the greens crop creates cash flow in the normally ‘dead’ time of year. One farmer recently shared that winter greens were the missing piece that now allows his farm to avoid borrowing operating capital each spring. So to make this system as profitable as possible farmers stretch the tomato season into greens season, often overlapping crops (see photos).

We should remember though that these summer crops are the single highest source of pests of winter greens. We’ve noted repeatedly in this project that managing a high population of aphids, slugs, cabbage worms, etc. is difficult under cold conditions; bio-controls are too cold sensitive, biopesticides are temperature driven, days below freezing make sprays impossible. It is clearer now more than ever that managing pests on the summer crops is key to having marketable greens.

For example in scouting tunnels this week we found low-to-moderate populations of slugs on peppers. The occasional pepper showed feeding damage as did foliage. In the meantime a lettuce crop is going in the ground as the peppers are gradually removed. This tender lettuce foliage will be more attractive to the slugs, and it since it is so small it can bear little damage before becoming unmarketable.

It is simple: the key to keeping this lettuce crop clean is to manage slugs in the peppers ASAP. Fortunately we have a good option in iron phosphate baits, which are labeled for greenhouse use, and include an organic label (Sluggo). Our experience with iron phosphate is that while it will reduce slug populations, it needs to be applied carefully or it too...
can become a crop contaminant.

Similar examples could be given for aphids, cabbage worms and more. Would you like to learn more about growing greens? We are pleased to announce a Winter High Tunnel School to be held December 4 in Batavia at CCE Genesee Co. This workshop will include experienced growers presenting on their winter tunnel production as well as a tour of locally operated winter tunnels. Please call Judson at 585-313-8912 or Elizabeth at 607-425-3494 for details.

More information on the other steps for keeping greens free of pests will be available in future issues of Veg Edge.
Contact the Cornell Vegetable Program

Cornell Vegetable Program (CVP) Specialists

Robert Hadad
Extension Specialist
* Member of the Cornell Vegetable Program Administrative Management Team
Food safety; Western region fresh market vegetables; marketing; organic
Phone: (716) 433-8839 x228
Cell: (585) 739-4065
Email: rgh26@cornell.edu

Julie Kikkert*
Extension Specialist
Processing crops: sweet corn, snap beans, peas, beets and carrots
Phone: (585) 394-3977 x404
Cell: (585) 313-8160
Email: jrk2@cornell.edu

Judson Reid
Extension Specialist
Greenhouse production; small farming operations; Eastern region fresh market vegetables
Phone: (315) 536-5123
Cell: (585) 313-8912
Email: jre11@cornell.edu

Christy Hoepting
Extension Specialist
Onions, cabbage, field research and pesticide training
Phone: (585) 798-4265 x38
Cell: (585) 721-6953
Email: cah59@cornell.edu

Carol MacNeil
Extension Specialist
Potatoes, dry beans and soil health; Editor of Veg Edge
Phone: (585) 394-3977 x406
Cell: (585) 313-8796
Email: crm6@cornell.edu

Elizabeth Buck, Field Technician
Phone: (607) 425-3494
Email: emb273@cornell.edu

John Gibbons, Field Technician
Phone: (585) 394-3977 x405
Email: jg10@cornell.edu

Courtney Hill, Field Technician
Phone: (585) 813-5136
Email: ch733@cornell.edu

Visiting the Cornell Vegetable Program Website at http://cvp.cce.cornell.edu

CVP Administration

Mark Giles*, Regional Ag Team Leader
Cornell University
Phone: (607) 255-6619
Email: fmg4@cornell.edu

Angela Parr, Admin. & Comm. Lead
Veg Edge, Enrollment, & Sponsorships
Phone: (585) 394-3977 x426
Email: ape63@cornell.edu

Steve Reiners*, Co-Team Leader
Cornell University
Phone: (315) 787-2311
Email: sr43@cornell.edu

Cornell Cooperative Extension Offices of the CVP

Allegany County CCE
Phone: (585) 268-7644

Cattaraugus County CCE
Phone: (716) 699-2377

Erie County CCE
Phone: (716) 625-5400

Genesee County CCE
Phone: (585) 343-3040

Monroe County CCE
Phone: (585) 461-1000

Niagara County CCE
Phone: (716) 433-8839

Ontario County CCE
Phone: (585) 394-3977

Orleans County CCE
Phone: (585) 798-4265

Seneca County CCE
Phone: (315) 539-9251

Wayne County CCE
Phone: (315) 331-8415

Yates County CCE
Phone: (315) 536-5123

CVP Region Fruit & Berry Specialists

Deborah Breth, Lake Ontario Fruit Program Team Leader
Monroe, Niagara, Orleans, Oswego & Wayne Co.
Phone: (585) 798-4265 x36
Email: db1@cornell.edu
Website: http://www.fruit.cornell.edu/lof/

Cathy Heidenreich, Berry Extension Support Specialist
Allegany/Cattaraugus, Erie, Genesee, Ontario, Seneca & Yates Co.
Phone: (315) 787-2367
Email: mcm4@cornell.edu
Website: www.fruit.cornell.edu/berry.html
Contact the Capital District Vegetable & Small Fruit Program

Capital District Vegetable and Small Fruit Program (CDVSFP) Specialists

Chuck Bornt, Team Leader
Extension Specialist
Vine crops, sweet corn, potatoes, tomatoes and reduced tillage
Office: (518) 272-4210 ext 125
Cell: (518) 859-6213
Email: cdbs13@cornell.edu
Address: 61 State Street
Troy, NY 12180

Laura McDermott, Extension Specialist
Small fruits, leafy greens, labor, high tunnels, and food safety
Office: (518) 746-2562
Cell: (518) 791-5038
Email: lgm4@cornell.edu
Address: 415 Lower Main Street
Hudson Falls, NY 12839

Crystal Stewart, Extension Specialist
Small and beginning farms, organic, root crops, brassicas, and garlic
Cell: (518) 775-0018
Email: cls263@cornell.edu
Address: 141 Fonclair Terrace
Johnstown, NY 12095

Abigail Foster, Field Technician
Email: aef225@cornell.edu

CDVSFP Administration

Mark Giles, Regional Ag Team Leader
Cornell University
Phone: (607) 255-6619
Email: fmg4@cornell.edu

Steve Reiners, Co-Team Leader
Cornell University
Phone: (315) 787-2311
Email: sr43@cornell.edu

Cornell Cooperative Extension Offices of the CDVSFP

Albany County CCE
William Rice Jr. Extension Center
24 Martin Road
Voorheesville, NY
Phone: (518) 765-3500

Columbia County CCE
Education Center, 479 Rte. 66
Hudson, NY 12534
Phone: (518) 828-3346

Fulton & Montgomery Counties CCE
50 E. Main Street
Canajoharie, NY 13317
Phone: (518) 673-5525

Greene County CCE
Agroforestry Resource Center
6055 Route 23
Acra, NY 12405
Phone: (518) 622-9820

Rensselaer County CCE
61 State Street
Troy, NY 12180
Phone: (518) 272-4210

Saratoga County CCE
50 West High Street
Ballston Spa, NY 12020
Phone: (518) 885-8995

Schenectady County CCE
Schaffer Heights
107 Nott Terrace, Suite 301
Schenectady, NY 12308
Phone: (518) 372-1622

Schoharie County CCE
Extension Center
173 S. Grand Street
Cobleskill, NY 12043
Phone: (518) 234-4303

Warren County CCE
377 Schroon River Road
Warrensburg, NY 12885
Phone: (518) 623-3291

Washington County CCE
415 Lower Main Street
Hudson Falls, NY 12839
Phone: (518) 746-2560

Advisory Members
Albany: Tim Albright and Tim Stanton
Columbia: John Altobelli, Bryan Samascott, Jody Bolluyt (organic)
Fulton: Eric and Stephanie Grey
Greene: Pete Kavakos, Jr. and Jim Story
Montgomery: Jim Hoffman and Ken Fruehstorfer (organic)
Rensselaer: Larry Eckhardt and David Mesick
Schenectady: Al Lansing and Keith Buhrmaster
Saratoga: Cyndi Pastore and Craig DeVoe
Schoharie: Bob and Linda Cross, and Jake Hooper
Warren: Kim Feeney
Washington: George Armstrong and Rich Moses

Industry Representatives: Jay Matthews and Paul Peckham

Visit our website at http://cdvsfp.cce.cornell.edu

If you have questions or comments about this publication or the Capital District Program in general, please contact your county’s grower advisory member or the Agricultural Program leader of your local Cornell Cooperative Extension office.
The Norman’s attentiveness is paying off, and they have figured out that generosity is another important success factor. For every 10 CSA shares they sell, they donate a full share to a church or other charitable entity. Over time, their reputation for generosity has proceeded them as they pay it forward.

Food for thought.

Success Factors in Farming provides tips and advice from the vast collective knowledge found among farmers in our area. These thought-provoking commentaries have been collected by Extension agent Jim Ochterski, and are presented exclusively in the Cornell Vegetable Programs award-winning newsletter, Veg Edge to offer real-life insights about sustainability and long-term success in agriculture.