

Cornell University  
Cooperative Extension

# Eastern NY Commercial Horticulture Program

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## Berry News

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### Berry "To Do" List:

#### All crops

- Growing degree days are still behind average although last week helped us immensely. Soil still quite cold north of Albany and in the Mohawk Valley, but Hudson Valley is moving rapidly. Blueberries are at delayed dormant and bud swell in most locations. Some southern locations were at green tip last week. Some concern about winter injury in tips of mature plants. Raspberry cane dieback looks minimal thus far, although lots of damage from rabbits which may cause more cane loss than cold temperatures. Raspberries in most locations are at budbreak or beyond. Haskaps (see short article in this newsletter) are in bud. Strawberries look like they have wintered nicely, although straw has been difficult to remove as it was matted by heavy snow. Currants and gooseberries have moved past dormant into bud burst in most locations.

#### Blueberries

- Prune before bud break – still time for many growers. Removing obvious winter damaged wood can help prevent canker.
- Check for rodent activity in the planting – burrowing holes, chewing etc. and make a note to place bait stations in planting in early November. Reduce habitat where possible.
- If you have a canker problem – spray copper sulfate, lime sulfur, Pristine, or Quash according to label directions. This should be done at delayed dormant which we are rapidly going past!
- If you have scale – molt-X, Triple Crown, Brigade or oil are all labelled. Again – spray at delayed dormant.
- Green tip sprays for Mummyberry and Botrytis should be applied soon. Abound and Indar are labelled for both diseases, but there are other choices as well. Again – check the Guidelines or the label.

*continued on next page*



For small bramble plantings this technique might work well. Landscape cloth between the rows weighed down by large planks. This planting has not yet been spring pruned.

*Serving the educational and research needs of the commercial small fruit, vegetable and tree fruit industries in  
Albany, Clinton, Columbia, Dutchess, Essex, Fulton, Greene, Montgomery, Orange, Putnam, Rensselaer,  
Saratoga, Schoharie, Schenectady, Ulster, Warren and Washington Counties*

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### Raspberries/Blackberries

- Perfect window to get pruning done! Make sure to prune to the proper density – 4-6 canes per square foot of row. Rows should be no wider than 18” preferably 12” wide.
- NOW is the time to spray for Anthracnose, Spur Blight and Cane Blight. Lime sulfur is labelled for all three, but if you don’t like using it there are many other choices. Give Jim or Laura a call if you are wondering about materials.

### Strawberries

- Straw should be removed from strawberries now. The plants are growing under mulch in all but the coldest locations. Once that happens straw really should be removed.
- High tunnel strawberries should be on the lookout for mites which thrive in hot, dry conditions. The scouting threshold is 1 mite per leaf on at least 15 leaflets out of 60 samples OR 5 mites/leaf. Don’t let mites get ahead of you. Many different pesticides including JMS Stylet Oil which is organic and Agri-Mek, Kanemite and Acramite.

### Ribes

- Powdery mildew sprays (many organic options including oil, Kailgreen, sulfur and Actinovate, but also Rally, Cabrio and Rampart) should begin now if this has been a problem in the past.
- In plantings where currant aphid has been a problem, begin control now. Many options available including Malathion, PyGanic and Assail.

## Digging for Root Weevil Larvae

Root “worms”, in this case, the larval stages of strawberry root weevil and strawberry black vine weevil are major pests of strawberries. Because it is the larval stage of these pests that cause the most damage, their injury may go unnoticed by growers. Often, injury by these pests is seen as strawberry plants dying back in certain areas of the field. Although the die back is noticeable, it can be mistaken for other issues (e.g. poor site, or unfavorable cultivar).

Recently, Laura McDermott (ENY Small Fruits Capital Region) and Lindsey Pashow (ENY Technician Northern NY) traveled down to Ulster County to scout for these pests. Laura, Lindsey, and I have teamed up with Elson Shields, an entomologist at Cornell to investigate the use of NY native nematodes as a biological control. Although a little early in the season for root worm to be active, they were able to find some larvae in an established strawberry planting. Lindsey and Laura plan to return to Ulster County as the season progresses to scout for strawberry root weevil larvae. If you have a strawberry planting where you notice you have sections where strawberries will not grow, and you don’t mind if we do some digging, contact one of us and we will arrange a time to meet you and scout your strawberry planting. -JMO



Dig up strawberry plants now (above) to look for root weevil larvae (at right).

Photo above from JMO; photo at right from Cornell Berry Diagnostic Tool <http://www.fruit.cornell.edu/berrytool/index.html>

Lower Hudson Valley - Jim O’Connell, 845-691-7117

Capital Region and Northern NY - Laura McDermott, 518-746-2562



## Blueberry Stem Gall Wasp

At one of the Berry workshops this spring we were discussing pruning in a young blueberry planting. One of the growers asked what was on the row of 'Elliot' blueberries, and when turning saw small kidney and globular shaped growths on most of the terminal stems of the plants.

These 2-4 cm growths are galls caused by small wasps laying eggs in the stems of the plant during the growing season. The eggs overwinter in the galls and then adult wasps complete the cycle by emerging from the galls during or after bloom. They immediately lay several eggs in more, young blueberry stems. The galls develop around these stems during the year, turning from green to brown.

Because the exit of the wasps is over a fairly long period in the spring, pruning the galls out of the fields is the most effective control for this insect, as it is difficult to apply a targeted spray. -LGM



## New Berry Pesticides for 2015 Growing Season

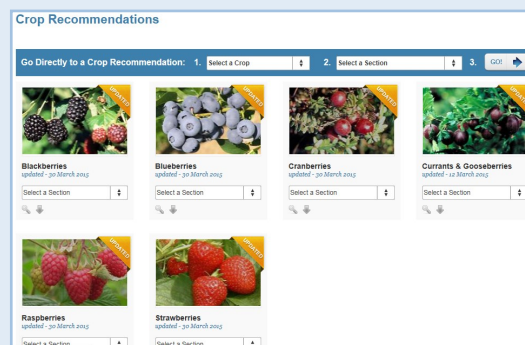
The following is a list of pesticides that were approved for use in NY since September 2014. For actual labels of these pesticides, please refer to Cornell's Pesticide Management Educations Program website: [pmep.cce.cornell.edu](http://pmep.cce.cornell.edu).

- Merivon Fungicide (EPA Reg. No. 7969-310) – contains fluxapyroxad. Approved for use on **strawberries** against leaf spot, powdery mildew, anthracnose, and gray mold (Botrytis).
- Evito 480 SC Fungicide (EPA Reg. No. 66330-64) – contains fluoxastrobin. Approved for use on **low growing berries** (i.e., lowbush blueberry, cranberry, lingonberry, strawberry) against anthracnose, powdery mildew, Botrytis (suppression), and seedling root rot/basal stem rot.
- Exirel (EPA Reg. No. 352-859) – contains cyantraniliprole. Approved for use on **bushberries** against cherry fruitworm, cranberry fruitworm, blueberry aphid, blueberry gall midge (suppression), blueberry maggot, spotted wing drosophila, and plum curculio.
- Protexio Fungicide (EPA Reg. No. 59639-179) – contains fenpyrazamine. Approved for use on **bushberries** against gray mold and mummy berry; **caneberries** against gray mold; **low growing berries** against gray mold; and **small fruit vine climbing subgroup** (i.e., gooseberry) against botrytis bunch rot.
- Omega 500F (EPA Reg. No. 71512-1) – contains fluazinam. Approved for use on **bushberry** subgroup 13-07B against twig blight and fruit rot, anthracnose, and Botrytis fruit rot;
- 2(ee) recommendations for Pristine Fungicide (EPA Reg. No. 7969-199) – approved for use on **currants and gooseberries** against the unlabeled pest white pine blister rust.

## New Interactive Berry Guides!

These guides are produced by British Columbia so realize that variety recommendations, pest management timing and materials are not necessarily appropriate for our region. Still, it's a really nice tool!

<http://productionguide.agrifoodbc.ca/guides/14>



## Growers Try Their Hand at Next Wave of Berry Crops

By Christina Herrick, *American Fruit Grower Magazine*. Published in *Small Fruit News*, Vol. 15, No. 2 April 2015

Ever heard of a goji berry? What about a Saskatoon or an aronia berry? These might sound new but growers in the U.S. are trying their hand at growing these berries. They are favored for their ‘nutraceutical’ value, or health profile, and with these unusual plantings growers are finding great market potential.

### Goji: A Challenging Berry

Goji berries are actually a popular crop in China, where the majority of the world’s plantings are found. They’ve proven to be tricky in the U.S., with some climates considered unsuitable for these berries. Goji are pesky and sensitive, says Kenny Demcik of LGD Farms in Spanish Springs, NV.

Roots can grow 15 feet down, searching for water and minerals. Some plants will produce, some won’t. Some only produce leaves, which can be used in a goji tea. They take about 5-7 years to get into full maturity.

“They are more intense than grapes. If the climate isn’t perfect, you might not harvest. If the watering is not perfect, you might not harvest,” he says. Demcik also says hand harvesting is a must. The skin on goji berries is very easily bruised and should be picked early in the day, when it is cooler. “Any machine picking could cause a large loss since the berries drop and move around,” he says.



Goji Berries Photo courtesy of Wikimedia Commons



Aronia Berries Photo courtesy of Wikimedia Commons

### Aronia: An Easy Keeper

When compared with goji berries, aronia berries seem like a piece of cake to grow. “It really likes long, hard winters and it grows in almost any soil type. It is relatively pH tolerant,” says Bill O’Brien of Bellbrook Berry Farm in Brooklyn, WI.

O’Brien says the berry plants do well with and without an irrigation and fertilization plan. Weeding, though, is vital for these plants. “You don’t want competition with the weeds, that is one of your biggest issues,” he says.

### Saskatoon: A Pome Berry?

Saskatoon berries go by several names (Juneberry, shadbush, serviceberry and *Amelanchier*) and they are actually a distant relative of pome fruit. These native plants are also hardy, although they too can be susceptible to early competition from weeds and take a while to get into full production.

“Once you get them past that second year, they’re pretty hardy, because the canopy starts to shade the root system,” Jim Dixon of the Saskatoon Berry Patch in Williamsburg, MI, says. Proper pruning can help keep these berries in check. “They will actually grow too large, becoming tree-like without proper cultural practices,” says Duke Elsner, a small fruit educator with Michigan State University (MSU).

Saskatoon berries are prone to cedar apple rust. Berries of infected canes will turn bright orange. Researchers at MSU have worked on some timing of fungicide sprays. Good nutrition is also key. “They like nitrogen. You can really put the nitrogen to them and they’ll get lots of good growth,” says AJ MacArthur of AJ’s Berry Farm in Lachine, MI.



Saskatoon Berries Photo courtesy of Wikimedia Commons

## Haskap's in the Hudson Valley

Haskap berries (*Lonicera caerulea* var. *edulus*) also known as honeyberry or edible blue honeysuckle are well known in Russia and Japan, but are a relatively new introduction to North America. Breeding research in North America started with Dr. Maxine Thompson, a retired horticulture researcher from Oregon State University. Ongoing breeding at the University of Saskatchewan has sought to make this berry more suitable for commercial production.

Many of the commercial nurseries that sell Haskaps, promote their extreme cold hardiness (down to -40F). However, when considering production in the Hudson Valley, one major unknown factor is in how warm of a climate they may be grown. The Hudson Valley is home to a diverse mix of soils and climates, which influence small fruit production. Low temperatures and heavy soils often slow the development of fruit crops, while warm temperatures and lighter soils have the opposite effect. The concern is that these plants may break dormancy too early in the Hudson Valley, resulting in injury to the emerging shoots and flowers.

A project has been proposed for our area that will seek to evaluate how well Haskaps perform under climate and soil conditions in the Hudson Valley. It will also see to evaluate their potential as a new berry crop; examining yield, flavor, and marketability.

Look for more information about Haskap's in this newsletter as the season progresses. -JMO



To the left is a Haskap plant at Highland lab in bud as of April 20. Photo by JMO

Haskap fruit below. Photo courtesy of Univ. of Saskatchewan <http://www.fruit.usask.ca/haskap.html>



## Record Number of Organic Producers in U.S.

USDA recently announced the organic industry continues to show remarkable growth domestically and globally, with 19,474 certified organic operations in the U.S. and a total of 27,814 certified organic operations around the world.

According to data released by the Agricultural Marketing Service's (AMS) National Organic Program (NOP), the number of domestic certified organic operations increased by more than 5% over the last year. Since the count began in 2002, the number of domestic organic operations has increased by more than 250%. The certified operations list is [available online](#).

"Growing demand for organic goods can be especially helpful to smaller family operations," says Tom Vilsack, agriculture secretary. "The more diverse type of operations and the more growing market sectors we have in American agriculture, the better off our country's rural economy will be."

Along with programs to support conservation, provide access to loans and grants, fund organic research and education, and integrated pest management, USDA administers organic certification cost share programs to offset the costs of organic certification for U.S. producers and handlers nationwide.

Now, USDA is using funding from the 2014 Farm Bill to develop the Organic Integrity Database, a modernized certified organic operations database that will provide accurate information about all certified operations that is updated on a regular basis. The system will allow anyone to confirm organic certification status using the online tool, support market research and supply chain connections, allow international verification of operator status to streamline import and export certificates, and establish technology connections with certifiers to provide more accurate and timely data. The initial launch is planned for September 2015.

Additional information about USDA resources and support for the organic sector is available on the USDA Organics Resource page at [USDA.gov/Organic](http://USDA.gov/Organic).

Source: USDA news release



## SAVE the DATE!!

July 14<sup>th</sup> – High Tunnel Raspberry Field Day, Geneva, NY. More details to follow

July 21<sup>st</sup> – Blueberry Variety Review Field Day, Winney's Farm, Schuylerville, NY.  
More details to follow.

**2015 Weather Table**—We are again happy to supply Growing Degree Day and Precipitation information this year from selected weather stations around eastern NY. Please note that some locations are outside NY. We felt that there was significant production in the area and because there were no immediate weather stations located around these areas, we chose to use the closest one we could find. If there are other weather stations that you feel are missing or are redundant, please let us know. This chart is compiled using the data collected by Northeast Weather Association (NEWA) weather stations and is available for free for all to use. For more information about NEWA and a list of sites, please visit <http://newa.cornell.edu/> This site has information not only on weather, but insect and disease forecasting tools that are free to use.

<b>2015 Weekly and Seasonal Weather Information</b>						
	<b>Growing Degree Information Base 50<sup>o</sup> F</b>			<b>Rainfall Accumulations</b>		
<b>Site</b>	<b>2015 Weekly Total 4/13 - 4/19</b>	<b>2015 Season Total 3/1 - 4/19</b>	<b>2014 Season Total 3/1 - 4/19</b>	<b>2015 Weekly Rainfall 4/13 - 4/19 (inches)</b>	<b>2015 Season Rainfall 3/1 - 4/19 (inches)</b>	<b>2014 Total Rainfall 3/1 - 4/19 (inches)</b>
<b>Albany</b>	<b>31.4</b>	<b>39.9</b>	<b>41.5</b>	<b>0.11</b>	<b>2.43</b>	<b>3.74</b>
<b>Castleton</b>	<b>32.2</b>	<b>41.3</b>	<b>42.3</b>	<b>0.10</b>	<b>2.34</b>	<b>3.93</b>
<b>Clifton Park</b>	<b>31.2</b>	<b>38.0</b>	<b>30.9</b>	<b>0.03</b>	<b>1.66</b>	<b>4.12</b>
<b>Clintondale</b>	<b>51.8</b>	<b>60.3</b>	<b>51.3</b>	<b>Na</b>	<b>2.07</b>	<b>5.41</b>
<b>Glens Falls</b>	<b>13.4</b>	<b>15.9</b>	<b>24.5</b>	<b>0.02</b>	<b>1.43</b>	<b>4.65</b>
<b>Guilderland</b>	<b>22.0</b>	<b>27.5</b>	<b>35.5</b>	<b>0.14</b>	<b>2.68</b>	<b>0.41</b>
<b>Highland</b>	<b>51.8</b>	<b>60.3</b>	<b>48.4</b>	<b>0.23</b>	<b>4.59</b>	<b>5.35</b>
<b>Hudson</b>	<b>39.7</b>	<b>49.2</b>	<b>46.4</b>	<b>0.09</b>	<b>3.37</b>	<b>4.22</b>
<b>Marlboro</b>	<b>43.7</b>	<b>48.2</b>	<b>42.8</b>	<b>0.26</b>	<b>3.80</b>	<b>4.93</b>
<b>Montgomery</b>	<b>30.6</b>	<b>46.0</b>	<b>42.5</b>	<b>0.18</b>	<b>4.12</b>	<b>4.69</b>
<b>Monticello</b>	<b>17.3</b>	<b>17.3</b>	<b>28.0</b>	<b>0.01</b>	<b>0.02</b>	<b>3.31</b>
<b>Peru</b>	<b>16.7</b>	<b>25.3</b>	<b>18.3</b>	<b>0.12</b>	<b>1.89</b>	<b>3.25</b>
<b>Shoreham, VT</b>	<b>19.7</b>	<b>25.7</b>	<b>23.9</b>	<b>0.01</b>	<b>2.29</b>	<b>3.82</b>
<b>Willsboro</b>	<b>15.0</b>	<b>21.4</b>	<b>16.2</b>	<b>0.01</b>	<b>0.24</b>	<b>2.39</b>

Every effort has been made to provide correct, complete and up-to-date pesticide recommendations. Nevertheless, changes in pesticide regulations occur constantly, and human errors are possible. These recommendations are not a substitute for pesticide labelling. Please read the label before applying any pesticide. This material is based upon work supported by Smith Lever funds from the Cooperative State Research, Education, and Extension.

Diversity and Inclusion are a part of Cornell University's heritage. We are a recognized employer and educator valuing AA/EEO, Protected Veterans, and Individuals with Disabilities.