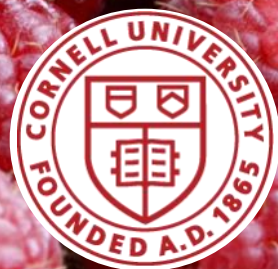


VOLUME 7, ISSUE 13

SEPTEMBER 2019

# BERRY NEWS



## Berry 'To Do' List

### —ALL CROPS—

There is a lot to do before the snow flies. Here is a short list of reminders of what needs doing in the fields. Aside from that, consider your continued education by attending a few meetings this winter. The list of options is quite robust – I'm sure there will be something of interest, and I do hope to see you there!

There is a brief article about variety selection in this newsletter. Make time to do that early and don't hesitate to call if you have questions.

This is the last Berry Newsletter of the 2019 season. *Produce Pages*, ENYCHP's monthly newsletter will be arriving in late October. Look for berry information there and in newsletters from an array of professional organizations. These state and national groups have a LOT to offer including tours, conventions, and newsletters. Here are links to a few of them – check them out!

- [New York State Berry Growers Association](#) – a huge supporter of Cornell outreach and research
- [North American Strawberry Growers Association](#) – wonderful tours and progressive meetings for the strawberry grower
- [North American Raspberry and Blackberry Association](#) – great information about a challenging crop
- [North American Blueberry Council](#) – geared towards market access
- [U.S. Highbush Blueberry Council](#) – supports research and outreach related to the health benefits of blueberries

### —STRAWBERRIES—

- Strawberries will continue vegetative growth and development of flower buds under short days

(Continued on page 2)

## Table of Contents

- 1 Berry 'To Do' List
- 3 Plan to Overwinter Strawberries
- 4 Order Plants Early for Best Selection
- 5 Is Salary Pay the Answer? Myth and Possibilities
- 7 Strawberry Rootworm
- 8 Upcoming Events

and mild fall temperatures.

- In matted rows and between plasticulture beds, fall to early winter is a good time to **apply a pre-emerge herbicide** to control winter weeds. In early November, 2-4-D may work if the weather is warm. In late November, Devrinol at 8 lb/A (which is the seasonal annual limit) and/or Sinbar, then mulch for winter protection.
- **Matted row plantings should be mulched** with straw when air temperature regularly start falling in the 20-30°F range and soil temperatures drop to 40°F (late November in most of the region). Apply clean wheat straw to a depth of 2-4 inches. Straw will help to insulate the planting from temperature extremes and lessen root damage caused by frost heaving of soils, along with suppressing some weeds. Make sure herbicide applications are made before the straw is spread. Plasticulture plantings should also be mulched (see article in this newsletter for more details).

### —BRAMBLES—

- Like strawberries, **pre-emerge herbicides should be applied** to bramble plantings in the fall and/or spring to control winter weeds and early spring weeds. There are several compounds available: simazine (Princep), norflurazon (Solicam), terbacil (Sinbar) and oryzalin (Surflan). Each has specific weed spectrums and rate/use restrictions.
- **Prune** floricanes blackberries and raspberries once dormant, early spring prior to bud break is the best timing from a horticultural perspective. Clean up spent floricanes, then thin remaining primocanes to a desirable density depending on bramble type, age and vigor of the planting. In non-suckering, semi-erect blackberries, 6-8 canes should be left per plant. In hedgerow systems, for erect blackberries, leave 3-4 canes per linear foot, and on average 2-4 canes per square foot with red raspberries. Always remove weak and insect damaged canes first.
- Red raspberries are generally not headed back to maximize flowering, but if canes are too tall, they can be trimmed to 5-6 feet, or pruned past the point of any occurring winter injury. If no support is provided, canes can be cut back to 3-4 feet for greater stability as they flower and fruit in the spring.
- Black raspberry and blackberry canes can be headed back to bring them within bounds of the support trellis, and lateral branches should be shortened. Black raspberry laterals should be trimmed to 8-12 inches or 8-12 buds/lateral, while erect blackberries and purple raspberries should be trimmed to 12-18 inches or an average of 15 buds/lateral. The laterals of large, semi-erect thornless types can be left alone or trimmed to 1.5-2 feet in length, depending on vigor and size.
- For primocane raspberries which were fruited on the current seasons growth, the old canes can be mowed at any point from late fall through early spring prior to shoot re-growth. Select a time when soils are relatively dry to lessen compaction, and

mow canes as close as possible to the soil surface to prevent low bud break and early fruiting the following spring. Apply a pre-emerge herbicide application to the newly exposed soil surface.

- **Apply liquid lime sulfur** (at 24-31%) or a Bordeaux formulation (copper sulfate plus hydrated lime) just prior to bud-break and before shoots are 1/2 inch long to control anthracnose.

### —BLUEBERRIES—

- **Apply pre-emerge herbicides** -Callisto or Chateau for broadleaves, Kerb for grasses. Casoron if needed for grasses and broadleaves. All have different application requirements – check labels for details.
- Blueberries need almost no pruning until the third year after planting, although aggressive pruning can help invigorate berries that are having trouble getting started. Remove dead branches, and low branches near the soil surface every year. Once plants are 5-6 years old, begin renewal pruning.
- For **mummy berry and phomopsis twig blight control**, apply a fall application of lime sulfur and an early spring application of Ziram fungicide when bud scales begin to loosen (and again 7 days later).
- **Voles** can be a serious problem in blueberry plantings. In some cases, the removal of mulch material during winter may help to reduce the meadow vole population. This can be done with relative ease if the mulch is landscape cloth, but this



*Voles look like mice. Snow is a protective blanket for the brownish-colored rodents, who fear cats, hawks, and other birds of prey.*

*Photo: Getty Images/iStockphoto*

maneuver is much more difficult if it's organic material. In such cases, a mulch material that does not support tunneling is desirable, that is, a mulch that caves in easily.

(Continued on page 3)



## —CURRANTS & GOOSEBERRIES—

- Ribes species (currants and gooseberries) will require attention to weeds, pruning and disease control during the winter months. As there are limited herbicides available for use. The use of an organic mulch will help control weeds, and help to

retain soil moisture during the next growing season. Apply composted manure, or both, in the fall to a depth of 3-4 inches. Coarse wood chips can also work well, but apply only a 1-2 inch layer. Supplemental nitrogen may be needed in the spring to offset the seasonal breakdown of wood chips.

- Selectively prune to remove dead canes, low canes and weaker, bent and broken canes in the center to keep the bush open. Be sure to remove canes that are swollen or knotted, which may harbor over-wintering, cane boring insects.

*Gooseberries. Photo: agmrc.org*



## Plan to Overwinter Strawberries

**Laura McDermott, CCE Eastern NY Commercial Horticulture**

The task of overwintering strawberries has become more complex as winter weather is increasingly unpredictable and strawberry growers manage a wider variety of cultural systems.

Strawberry plants enter dormancy slowly during the late summer and early fall. During this period there is less visible plant growth but lots of bud growth in the plants' crown. This growth continues well into the winter. The initial stages of dormancy are triggered by decreasing day length and declining temperatures, but most strawberry plants do not become hardy until mid-to late November. "Hardiness" refers to the plant's ability to resist lethally low winter temperatures. The plant exhibits dormancy by showing no new leaf growth, and becoming "flattened" as the petioles (leaf stems), hug the ground. Older leaves also turn red. The plants will begin to lose

their hardiness as the days lengthen and the temperatures climb. When there is enough heat – the plants will begin to grow.

For traditional June bearing, matted row systems, most growers apply straw mulch from wheat or other grains when the soil temperature drops below 40°F at a 4-inch depth for 3 consecutive days. Mulch should be applied after the plants have attained substantial cold hardiness, but before low temperatures injure the plants. The straw mulch insulates the plants and prevents winter heaving and crown desiccation. Straw will help to delay bloom in the spring, reduce weed pressure and helps keep fruit clean during the picking season. When incorporated at renovation, straw helps to improve soil organic matter content. The downside is that straw is difficult for small growers to handle, and if you have to purchase it, the cost can be considerable.

Additionally, straw mulch can delay spring growth and hold too much water, especially on heavy ground. The biggest problem is that straw with weed seeds makes weed control an enormous problem.

Level plantings with no raised beds, require 2.5 to 3 tons of straw per acre – about 150 forty-pound small, square bales. This will result in a 2-3" layer across the planting. If you have small acreage, applying mulch by hand is the way to go – just shake it out

(Continued on page 4)



with pitchforks evenly over the plants. If you have large acreage, you will want to use a bale chopper. Keep an eye on the most windswept areas of your field during the winter and replace the mulch if it has blown off.

Plastic-covered raised bed systems require 5-6 tons of straw per acre because of the tendency for the straw to drift into the alleys. Cold injury to the plant crown is more likely on raised beds because soil temperatures in the bed changes quickly during a snowless winter due to the increased surface area relative to the soil volume.

Floating row covers placed over the entire planting can slow the loss of the soil heat.

Heavy weight floating row covers (1.25 oz/sq yd or 42 g/ sq m) have been used successfully for winter protection in areas with moderate winters. Anchor the row cover with rocks or other weights. Many growers are using a combination of straw and floating row covers,

particularly those that are trying to overwinter a day neutral strawberry planting. You will want plenty of help and a still day to apply this mulch effectively.

If you are trying to use floating row covers for winter protection, be aware that a prolonged (>3 days) period of temperatures above 60°F with no snow cover, may stimulate buds resulting in freeze damage when temperatures return to normal. Removing floating row covers during warmer winter periods can help to delay bud activity and reduce susceptibility to later freezes. Row covers need to be replaced when freezes are expected. Highest yield potentials are usually obtained by uncovering and covering in the late winter and spring based on expected temperatures when compared to the practice of keeping heavy weight winter row covers on continuously into the flowering stage.

## Order Plants Early for Best Selection

**Laura McDermott, CCE Eastern NY Commercial Horticulture**

*Source: Some information gleaned from the NARBA fall newsletter.*

Plant availability has become a real problem for small direct market growers. Growers across North America seek the same new varieties, and large orders are understandably prioritized. To make the job of searching catalogues explore them through links from the [Cornell Berry Pages Nursery Guide](#). This guide was built to help you compare nurseries selection and prices. The nurseries page contains an alphabetized listing of businesses throughout the United States and Canada that have requested inclusion in our listing. Cultivar pages for each crop list specific cultivars followed by the nurseries that sell them. This includes sources for minor berries like saskatoons, cranberries, currants etc. Use this resource this fall when placing berry orders: <https://blogs.cornell.edu/berrynurseries/>.

One area that we are finding more and more interest is late summer or early fall planting of plugs. The following is a list of nurseries that have offered some selection (it may be quite limited – even to just one variety) for delivery during the Aug – late September window. While this information may be late for use this season, maybe it will encourage people to know that there are nurseries moving to provide plants for later season installation.

### **Ison's Nursery and Vineyard**

6855 Newnan Road, PO Box 190

Brooks, GA 30205-2424

800-733-0324

[www.isons.com/shop/strawberry-plugs/chandler-strawberry-plugs/](http://www.isons.com/shop/strawberry-plugs/chandler-strawberry-plugs/)

### **Aarons Creek Farms, Inc.**

380 Greenhouse Drive

Buffalo Junction, VA 24529

434-374-2174

<http://www.strawberryplants.com/>

### **Tips for Ordering Plants**

- ✓ Plan what you want/need, considering markets, ripening dates, existing plantings, etc.
- ✓ Do your research on variety characteristics, best plant type (plugs, roots, bare root, etc.) for your needs and situation, regional recommendations and experiences.
- ✓ Order early to assure availability of the varieties and plant types you want.
- ✓ Inspect plants on arrival to see if they are healthy looking and up to the standard grade.
- ✓ Contact the nursery if you have questions or see problems.

### **Greenwood Nursery**

636 Myers Cove Road

McMinnville, TN 37110

800-426-0958

<https://www.greenwoodnursery.com/categories/fruiting-plants/strawberry-plants-for-sale>

### **Norcal Nursery Inc.**

PO Box 1012

Red Bluff CA 96080

530-527-6200

<https://www.facebook.com/Norcal-Nursery-Inc-123085204431088/>

### **Indiana Berry & Plant Co.**

2811 Michigan Rd.

Plymouth, IN 46563

800-295-2226

[www.indianaberry.com](http://www.indianaberry.com)

*(Continued on page 5)*

(Continued from page 4)

### **Lassen Canyon Nursery**

PO Box 992400

1300 Salmon Creek Rd

Redding, CA. 96099

530-223-1075

<https://www.lassencanyonnursery.com/>

### **Koppes Plants**

POB 441, Watsonville, CA 95077

(831) 724-6009

[www.koppesstrawberryplants.com](http://www.koppesstrawberryplants.com)

### **Harvest Nursery**

10470 NE 6th Drive

Portland, OR 97211

503-332-0913

<http://www.harvestnursery.com/>

### **L.E. Cooke Co.**

26333 Road 140

Visalia, CA 93292

800-845-5193

[www.lecooke.com](http://www.lecooke.com)

### **Weeks Berry Nursery**

6494 Windsor Island Rd. N.

Keizer, OR 97303

503-393-8112

[www.weeksberry.com](http://www.weeksberry.com)

Some new bramble varieties this year include:

- 1) Caddo – An early ripening, thornless blackberry developed by Dr. John Clark at the University of Arkansas. It is being sold by AgriStarts, Indiana Berry & Plant Co., North American Plants, and Nourse Farms. Photo, University of Arkansas. More information at [www.uaex.edu/mediaresources/news/january2019/0125\\_Caddo\\_blackberry\\_released.aspx](http://www.uaex.edu/mediaresources/news/january2019/0125_Caddo_blackberry_released.aspx)
- 2) Cascade Premier – A red raspberry from Dr. Pat Moore at Washington State University, bred for easy machine harvest. It is available from Northwest Plant Co. Photo, WSU. More information at <https://news.wsu.edu/2019/07/30/wsudebuts-flavorful-easy-harvest-new-raspberry-cascade-premier/>
- 3) Mapema – An early-fruiting primocane red raspberry from the Advanced Berry Breeding (ABB) program in the Netherlands. It is available in very limited supply from Nourse Farms

I have very limited information about these varieties at this point – but please let me know if you decide to plant any of them!

For photos and attribution, visit this newsletter article from NARBA:  
<https://www.raspberryblackberry.com/wp-content/uploads/narba19-09news.pdf>

## **Is Salary Pay the Answer? Myth and Possibilities**

**Richard Stup, Cornell University**

Beginning on January 1, 2020, farm employees in New York will no longer be exempt from overtime pay. A new law passed by the state will require that farm employers pay overtime (1.5 times the regular rate of pay) to eligible farm employees for hours worked over 60 in a week (except for immediate family members). This requirement will encourage employers to adopt strategies that minimize paying overtime. One strategy that employers are considering is moving employees to salary pay, but the answer is not quite that simple...

**Myth: “Employees paid on salary don’t have to be paid for overtime, they can work until the job is done.”** This is a popular myth but it is just not true. An employer can choose to pay a farm employee by salary (which means a regular, pre-determined amount of pay not directly based on hours), but the employer may still be required to pay at least the minimum wage, to pay weekly, to keep track of hours worked, and to pay overtime above 60 hours/week. Simply paying by salary has little to do with whether or not overtime pay is required. The need to pay overtime depends on whether or not an employee is “exempt” or “not exempt” from the overtime law provisions.

Farm employees will no longer be exempt as an entirety, but both New York and federal law identifies several other types of employees who may be employed on farms and may be “exempt” from overtime. The federal Fair Labor Standards Act (FLSA) provides these exemptions for specific types of employees and the federal guidelines are generally followed by New York. The types of exempt employees who might possibly be employed on a farm include: executive, administrative, professional and outside sales employees. For a farm employee to be classified into one of these overtime “exempt” positions, they must meet all of a number of “tests” about the nature of the job.

### **Executive**

Some farm managers may fit into this description, especially if they are truly supervising two or more other employees.

- The Employee’s primary duty consists of the management of the enterprise.

(Continued on page 6)



- The Employee customarily and regularly directs the work of two or more other employees.
- The Employee has the authority to hire or fire other employees.
- The Employee's suggestions and recommendations as to the hiring, firing, advancement, promotion, or any other change of status of other employees have particular weight.
- The Employee customarily and regularly exercises discretionary powers.
- The Employee is paid on a salary basis, inclusive of board, lodging, and allowances.

### **Administrative**

Some farm office employees may meet all of these tests, especially if they have specialized training or knowledge and exercise their own discretion.

The Employee's primary duty consists of the performance of office or non-manual field work directly related to management policies or general operations.

The Employee customarily and regularly exercises discretion and independent judgment.

The Employee regularly and directly assists an employer, or an employee employed in a bona fide executive or administrative capacity or who performs under general supervision, work along specialized or technical lines requiring special training, experience or knowledge.

The Employee is paid for their services on a salary basis, inclusive of board, lodging, and allowances.

### **Professional**

This possible category might include highly educated professionals such as a veterinarian who is employed by a farm. For the professional exemption to apply, the job must meet both a primary duty and a nature of the work test.

*First, the employee's primary duty consists of the performance of work that:*

- Requires knowledge of an advanced type in a field of science or learning customarily acquired by a prolonged course of specialized intellectual instruction and study, as distinguished from: a general academic education, an apprenticeship, or training in the performance of routine mental, manual, or physical processes.

OR

- Is original and creative in a recognized field of artistic endeavor, and produces a result that depends primarily on the invention, imagination, or talent of the employee.

### *Second, the employee's work:*

- Requires the consistent exercise of discretion and judgment in its performance.
- Is predominantly intellectual and varied in character (as opposed to routine mental, manual, mechanical or physical work).
- Is of such a character that the output produced or the result accomplished cannot be standardized in relation to a given period of time.

### **Outside Salesperson**

Some large or specialized farm businesses may employ an outside salesperson, this position is exempt from overtime if it meets the following definition. "The term outside salesperson means an individual who is customarily and predominantly engaged away from the premises of the employer and not at any fixed site and location for the purpose of: making sales; selling and delivering articles or goods; or obtaining orders or contracts for service or for the use of facilities."

### **Salary Minimum Wage**

In addition to the tests required to qualify a job as overtime exempt, salaried positions must also meet New York's minimum wage requirements (see page 3 of the linked document for weekly salary requirements for executive and administrative positions). Weekly salary minimums for upcoming years are:

For most of upstate: \$885.00 per week on and after December 31, 2019; \$937.50 per week on and after December 31, 2020.

For Nassau, Suffolk and Westchester counties: \$975.00 per week on and after December 31, 2019; \$1,050.00 per week on and after December 31, 2020; \$1,125.00 per week on and after December 31, 2021;

The New York State Department of Labor provides an FAQ document that defines these types of employees in more detail. Farms should make sure that employees they want to classify as "exempt" from overtime have an updated job description and real duties that meet one of the categories above.



## Strawberry Rootworm

Source: New York Berry News (<http://www.hort.cornell.edu/fruit/nybn/newslettpepdfs/2017/nybn1602.pdf>);

updated by Laura McDermott

Strawberry rootworm (*Paria fragariae*) is a pest of perennial strawberries and very occasionally blueberries, but is a more serious problem in ornamental plants. This season strawberry rootworm has been seen on more farms across the Midwest and Northeast, even in at least one day neutral planting, so it is worth reviewing.

The adult strawberry rootworm is a small, oval beetle approximately 1/8" long that has a light brown abdomen with 4 large dark spots and a dark brown thorax (Photo 1). Adult feeding results in damaged foliage while the small, white colored larvae feed exclusively on plant roots. Both adults and larvae contribute to reduced plant vigor, although adult feeding tends to be the most visually noticeable.



Photo 1: Strawberry rootworm adult. Photos: N. Wright, Florida Dept. of Ag (left) and C. Hesselein, Alabama Cooperative Extension System (right).

Strawberry rootworm has one generation per year. Female beetles are active during the spring, laying eggs on the lower leaves closer to soil surface. As larvae emerge, they move to the soil where they feed on roots in late spring to early summer. Adults feed on leaves in May and then again in late July generally at night. The beetles continue to

feed on leaves until they overwinter. The damage is often confused with flea beetle damage, as the small 1/16 inch diameter holes form the same type of 'lacey' appearance especially when damage is heavy (Photos 2 and 3). Adult beetles overwinter in hedgerows and protected areas and emerge in mid spring. They remain active until early summer when they lay eggs and the larvae take over.

Adult beetles can be seen when they are feeding – usually at night so a flashlight will be necessary. Sweep netting, or shaking plants over white sheets or paper might also prove fruitful. Adults are very elusive, so looking for larvae by digging up plants in the early summer might also yield results, but larvae is very small even in the largest instar. (Figure 1)

Rootworm populations determined from cursory field sampling do not seem to line up with the heavy damage on plants.

Scouting and rotating crops may help control this pest but no thresholds are established and no cultivars are resistant. PFR-97 (*Isaria fumosorosea* Apopka Strain 97) 20% WDG (1-2 lbs. /A) and PyGanic 1.4 ECII (16-64 fl oz. /A) or PyGanic 5.0 ECII (4.5-17.0 fl oz. /A) can all be used in organic or conventional production. *I. fumosorosea* is a naturally occurring insect fungus that infects the pest insect and eventually kills it. Platinum is labelled in NYS for root weevil and white grubs only, so should not be used unless those pests exist alongside strawberry rootworm. Platinum should be incorporated into the soil with irrigation or a significant rain event. Entomopathogenic nematodes (EPN's) could be effective but the application time should be early enough in the season to allow for infection before soil temperature drops.



Figure 1: Relative size of larvae compared to adult beetle. Source: IPM Univ. of Illinois



Moderate strawberry rootworm damage (left) and very significant damage (right). Photos: P Fisher (L) and E. Kibbe (R).



## Upcoming Events

### New England Fruit and Vegetable Conference

December 10-12, 2019

Manchester, NH

This 3-day meeting has become a major event for diversified growers. Check out the conference program and register at: <https://newenglandvfc.org/>

### Great Lakes EXPO

December 10-12, 2019

Grand Rapids, MI

Another great conference! Register and review program at <https://glexpo.com/>

### Southeast Regional Fruit & Vegetables Conference

January 9-12, 2020

Savannah, GA

A full track of caneberry sessions. A special 'Fundamentals of Blackberry Production Workshop' is offered on the morning of Jan 9: <https://seregionalconference.org/>

### Empire State Producers EXPO

January 14-16, 2020

Syracuse, NY

Back at the Oncenter venue. More information at <http://nysvga.org/expo/information/>

### NOFA-NY Annual Winter Conference

January 17-19, 2020

Syracuse, NY

This year at the Oncenter venue in Syracuse: <https://www.nofany.org/our-events/2020-winter-conference>

### NASGA 2020 Annual Meeting and Conference

January 19-22, 2020

San Antonio, TX

Find more information at: <https://www.nasga.org/n-american-strawberry-growers-conference.htm>

### Mid-Atlantic Fruit and Vegetable Convention

January 28-30, 2020

Hershey, PA

Find more information at: <http://www.mafvc.org/>

### Eastern NY Fruit & Vegetable Conference

February 25-26, 2020

Albany, NY

Save the Date!

### North American Raspberry & Blackberry Conference

March 3-6, 2020

St. Louis, MS

Mark your calendar; NARBA's next annual conference will include a full-day tour and two days of education sessions and trade show: <https://www.raspberryblackberry.com/2020-north-american-raspberry-blackberry-conference/>

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