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

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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 and 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 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.

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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 from page 2)

(C)urrants & 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.

Plan to Overwinter Strawberries
Laura McDermott, CCE Eastern NY Commercial Horticulture

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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/

**Aarons Creek Farms, Inc.**
380 Greenhouse Drive
Buffalo Junction, VA 24529
434-374-2174
http://www.strawberryplants.com/

**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

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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.

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

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.

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.
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/