

# Horticulture 2019 Newsletter

No. 27 July 9, 2019

1712 Claflin, 2021 Throckmorton Plant Science Cntr.  
Manhattan, KS 66506 (785) 532-6173

---

Video of the Week: [Efficient Water Use in the Garden](#)

## UPCOMING EVENTS

### KNLA Summer Event

July 18 & 19

John C. Pair Horticultural Research Center, Haysville

For more information, contact [kansasnla@gmail.com](mailto:kansasnla@gmail.com)

### Turf & Ornamentals Field Day

Thursday, August 1

K-State Research & Extension Center, Olathe



The K-State Turf and Ornamentals Field Day will be held Thursday, August 1 at the Research & Extension Center in Olathe (35230 W. 135<sup>th</sup>). The field day program is designed for all segments of the turf industry - lawn care, athletic fields, golf courses, and grounds maintenance. Included on the program are research presentations, problem diagnosis, commercial exhibitors, and equipment displays. There will be time to see current research, talk to the experts and get answers to your questions.

1 hour of pesticide recertification credit is available in both 3A and 3B, as well as GCSAA education points. For more information and to register, go to: <https://2019turfday.eventbrite.com>

## VEGETABLES

### Vegetables Produce Flowers But No Fruit



This is the time of year that gardeners often have trouble with vegetables that are blooming but not setting fruit. There are several possible reasons for this. One condition that can affect several species is overfertilization. Too much nitrogen causes the plant to emphasize vegetative growth, often to the detriment of fruit production. Overfertilization can lead to a delay in flower production and a decrease in fruit set among the flowers produced. This is especially true of tomatoes. Overfertilized tomatoes will produce a large, apparently healthy plant with no flowers or with flowers that don't set fruit.

Another possible problem with tomatoes setting fruit is temperature. Tomatoes normally won't set if the night temperature is below 50 due to sparse pollen production. They also won't set when nighttime temperatures are above 75 degrees F and daytime temperatures are above 95 degrees F with dry, hot winds. Under such conditions, fertilization is not completed and no fruit develops. However, cherry tomatoes may be more forgiving of high temperatures than the larger slicers and will often set fruit in the heat.

Squash, cucumbers, watermelon, and muskmelon can have a couple of other problems. First, the early flowers on these plants are usually all male. The production of both male and female flowers becomes more balanced as time passes. You can easily tell the difference between the two because only the female flower has a tiny fruit behind the blossom. If you have both, have not over-fertilized, and still have a problem, make sure you have pollinators.

Look for the presence of bees visiting the plants. If you don't see any, try hand-pollinating several flowers. Use a painter's brush to transfer pollen from the anther of the male flower to the stigma of the female flower. If you get fruit on only those flowers you pollinated, you need more pollinators. Make sure you aren't killing them with overuse of insecticides. If you must use an insecticide, spray near dusk when the flowers have closed. (Ward Upham)

### **Weird Squash, Cucumbers or Melons**



Occasionally we receive a call from someone who has a squash (or cucumber or melon) that just doesn't look like what was supposedly planted. They often wish to know if that fruit had cross-pollinated with another vegetable close by. In such cases, the gardener is assuming that cross-pollination will affect the fruit. Such is not the case. The characteristics of the fruit is determined by the mother plant and is not affected by cross-pollination. However, there will be a problem if seed is saved for the next year from a flower that was cross-pollinated. All bets are off on what you will get if that happens.

So, how do we end up with this weird fruit? Though it could be that the gardener had forgotten exactly what he planted, more likely is that the seed he planted had been cross-pollinated before packaging. Another possibility is that it came from seed that came from fruit that had rotted in the garden the previous year. Regardless, don't worry about planting different cultivars of squash or cucumbers or melons close to one another. Though cross-pollination may occur in some cases, the fruit will not be affected. (Ward Upham)

### **Fall Gardening**



Probably the last thing most gardeners are thinking of now is planting vegetables. However, fall gardens will often produce higher quality, tastier cool-season crops as the vegetables mature during cooler, less stressful temperatures.

Plant slightly deeper than you would in the spring so the seed stays cooler and the soil around the seed stays moist longer. Plant more thickly and thin later. The plants may need to be protected from rabbits through the use of fencing.

Following is a “calendar” of what to do when.

*Mid-July:* Plant potatoes if you can find or have saved back seed potatoes. Do not use freshly dug potatoes as they have a built-in dormancy that will prevent growth. Also, grocery store potatoes are often treated so they don't sprout.

Cabbage, broccoli, and cauliflower can be started from seed at this time. Choose a protected place where the soil can be kept moist and rabbits will not bother them. This will not be where they will grow the entire season but these crops will be transplanted about mid-August.

*Late July:* Seed beets, carrots and beans.

*Late July to Early August:* Seed spinach and long-season maturing lettuce. Leaf lettuce will be seeded later.

*Second Week of August:* Transplant cabbage, broccoli and cauliflower to their final location.

*Mid to Late August:* Seed radishes and leaf lettuce.

Use light amounts of fertilizer before planting. For example, apply 1/4 cup of a low-analysis fertilizer (6-7-7) per 10 feet of row. Sidedress two weeks after transplanting or four weeks after sowing seed by applying 2 tablespoons of a 16-0-0 or 1 tablespoon of a 27-3-3, 30-3-4 fertilizer, or something similar per plant.

Watering must occur more frequently because seed should not be allowed to dry out. Overhead watering often causes soil to crust, making it more difficult for young, tender plants to emerge. Prevent this by applying a light sprinkling of peat moss, vermiculite or compost directly over the row after seeding. Even better, use a soaker hose or drip irrigation right next to the row to allow water to slowly seep into the ground. (Ward Upham)

## PESTS



### Blister Beetles

These beetles are notorious for quickly stripping vegetables (especially tomatoes) and ornamentals of their foliage. There are several species of blister beetles which vary in size (often between 0.5-0.75 inch long) and color (such as black, gray or brown-striped), but most are

recognized by their elongated, narrow, cylindrical, soft bodies with middle body part (thorax) narrower than the head or wingcovers.

Some home gardeners like to use hand picking as a nonchemical method for controlling these large insects. However, wear gloves and use caution because these beetles contain a substance called cantharidin. This chemical is an irritant capable of blistering internal and external body tissues exposed to the chemical. On tender human skin, body fluids of adult blister beetles may cause large, erect, watery blisters.

Chemical control of blister beetles is also possible and may be the only practical method of control if populations are large. Cyfluthrin (BioAdvanced Vegetable and Garden Insect Spray) and permethrin (Bonide Eight and Hi-Yield Lawn, Garden, Pet and Livestock Insect Control) are recommended. Cyfluthrin and permethrin have a 0 day waiting period on tomatoes. (Ward Upham)

### **Budworms on Garden Plants**



If you have noticed a small hole in the buds of some of your flowers, you may have tobacco (geranium) budworm (*Helicoverpa virescens*). Though a number of flowers can serve as hosts, geraniums and petunias are most commonly attacked. The larva of this insect damages the buds by boring into them before they open. The caterpillars feed on the flowers for about a month and then drop to the soil to pupate. There are normally two generations per year, with the second causing the most harm. The striped caterpillars vary widely in color with green, red, light brown and dark

forms possible. The color of the larva is related to the color of the flowers on which they feed. The adult of this insect is a moth.

Damaged buds often fail to open. Those that do will show evidence of feeding on the petals. Damage normally peaks in late summer because of increased numbers from the second generation.

Control of the budworm is difficult. Handpicking at dusk can be effective on small plantings. For larger plantings, chemical control may be the only practical option. Look for products with synthetic pyrethroid active ingredients such as permethrin (Bonide Eight and Hi-Yield Lawn, Garden, Pet and Livestock Insect Control), esfenvalerate (Asana, Bug Buster II), cyfluthrin (BioAdvanced Vegetable & Garden Insect Spray), bifenthrin (Hi-Yield Bug Blaster Bifenthrin) or gamma-cyhalothrin (Spectracide Triazicide). Products with the organic active ingredient spinosad (Natural Guard Spinosad, Captain Jack's Dead Bug Brew, Monterey Garden Insect Spray) should also be effective.

Severe winters can be a natural form of control from one year to the next. Temperatures below 20 degrees F are hard enough to kill overwintering pupa. Because pupal cases are usually 2 to 6 inches deep, most exposed areas in Kansas will provide good control during a cold winter. Microclimates next to heated buildings may allow survival. (Ward Upham)

1712 Claflin, 2021 Throckmorton  
Manhattan, KS 66506  
(785) 532-6173

For questions or further information, contact: [wupham@ksu.edu](mailto:wupham@ksu.edu) OR [cdipman@ksu.edu](mailto:cdipman@ksu.edu)

This newsletter is also available on the World Wide Web at:

<http://hnr.k-state.edu/extension/info-center/newsletters/index.html>

The web version includes color images that illustrate subjects discussed. To subscribe to this newsletter electronically, send an e-mail message to [cdipman@ksu.edu](mailto:cdipman@ksu.edu) or [wupham@ksu.edu](mailto:wupham@ksu.edu) listing your e-mail address in the message.

Brand names appearing in this newsletter are for product identification purposes only. No endorsement is intended, nor is criticism implied of similar products not mentioned.

K-State Research and Extension is committed to making its services, activities and programs accessible to all participants. If you have special requirements due to a physical, vision or hearing disability, or a dietary restriction please contact Extension Horticulture at (785) 532-6173.

Kansas State University Agricultural Experiment Station and Cooperative Extension Service K-State Research and Extension is an equal opportunity employer. Issued in furtherance of Cooperative Extension Work, Acts of May 8 and June 30, 1914, as amended. Kansas State University, County Extension Councils, and United States Department of Agriculture Cooperating, Ernie Minton, Dean.