



Horticulture 2011 Newsletter

No. 25 June 22, 2011

Video of the Week: Controlling Bagworms [Controlling Bagworms](#)

UPCOMING EVENTS

Bedding Plant & Flower Field Day - July 28

Olathe K-State Research & Extension Center

Olathe Center Open House - July 30

Olathe K-State Research & Extension Center

Turf & Ornamentals Field Day - August 4

Olathe K-State Research & Extension Center

For more information, go to <http://www.hfrr.ksu.edu/doc3157.ashx>

FRUIT

June Drop of Fruit



Fruit trees have started their annual "June drop" with apples, peaches, and apricots losing excess fruit. Small, weak, or poorly pollinated fruit is usually the first to go, but dropped fruit may look as good as what's left on the tree.

June drop is a natural process to ensure that the fruit that remains matures. Often, remaining fruit must be thinned to maximize size and quality. Here are suggested spacings for commonly grown fruit.

Note that these spacings are averages. Fruit may be closer together in places. Use these as a guideline when thinning fruit.

Apples: 4 inches.

Apricots: 2 inches.

Peaches: 6 to 8 inches. Start thinning after June drop six to eight weeks after full bloom.

Pears: Require little fruit thinning. 'Bartlett,' 'Hardy,' and 'Bosc' may set heavy crops of three to five fruits per spur and need hand thinning to 1 to 2 per spur. Thin 50 to 70 days after full bloom.

Plums: 1 to 3 inches. (WU)

VEGETABLES

Vegetables Produce Flowers But No Fruit



If you have vegetables that are blooming but not setting fruit, you may have a problem with flower pollination. There are several possible reasons for this that usually vary by species. One condition that can affect several species at the same time 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.

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.

Tomatoes are wind pollinated and therefore not dependent on pollinators. But they have another possible problem, which 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. (WU)

ORNAMENTALS

Accumulated Stress May Result in Plant Death



We have received reports of trees in numerous areas of the state dying suddenly. In some cases the trees leafed out and then died. In other cases the trees never leafed out at all. In still other cases, new growth simply broke off. The cause in most of these cases seems to be stress related. Most areas in Kansas were quite dry last fall. The growing season so far this year has ranged from extremely wet to extremely dry, depending on location. Buds and the new growth that came from those buds may have been damaged, resulting in leaves that were able to function during the cool, spring weather but not when the weather turned hot. In such cases, terminal growth dropped with the leaves still green or may have turned to a yellowish green. Let's look at some of these situations and what should be done to compensate, if anything.

Plants that seemed to wither overnight may have actually died earlier but had enough food reserves to put out leaves and grow for a period of time. When food reserves were depleted, plants died suddenly. Often they seemed to die overnight. Be careful not to confuse this with feeding damage from May beetles. May beetles strip a tree of leaves rather than leaving them wilted and dead on the plant. Healthy trees recover from May beetle damage by throwing out a new set of leaves. Before a tree is cut down, check the twigs. Dead trees will have brittle, dry stems that snap. Live stems may break, but they won't be dry. If the tree is alive, give it time to put out a new set of leaves.

Trees that lose individual branches should have those branches cut out. There are other possible causes of branch loss such as verticillium wilt. You may want to take a sample to your local K-State Research and Extension office to have it sent to the plant disease lab on campus if you suspect disease rather than stress. To find out more about verticillium wilt, go to <http://www.hfir.ksu.edu/DesktopModules/ViewDocument.aspx?DocumentID=1737>

Trees that are losing leaves through the loss of new growth or a general thinning should be fine. If the thinning is severe enough, the tree will grow a new set of leaves from dormant buds. Because it is still early in the growing season, the tree has plenty of time to make the energy it needs before leaves drop in the fall.

If you suspect you have stressed plants, try watering them if we do not receive rainfall. Trees should be watered every two weeks. Trees transplanted within the last couple of years should be watered every week. Water to a depth of 12 to 18 inches, if possible. Though this will not reach all the roots of a tree, it will reach the majority of them. Trees normally have at least 80 percent of their roots in the top foot of soil. Shrubs should be watered every week to a depth of 8 to 12 inches. Check depth of watering by pushing a wooden dowel or metal rod into the soil. It will stop when it hits dry soil. (WU)

PESTS

Sweet Corn Earworm



Corn earworm tends to be a problem every year on sweet corn in Kansas. The earworm moth lays eggs on developing silks at night. When the egg hatches, the larva crawls down the silk and into the ear. Feeding starts at the tip of the ear and works down. Though several earworms may hatch and attack a single ear, only one is usually present at harvest due to the cannibalistic nature of the insect.

Control is challenging as silks continue to grow over a period of time. This means that even if silks are treated, new silk will appear that hasn't been protected. Applications every 2 to 3 days are needed for insecticides to be effective, especially in late June to early July when peak flights of these moths usually appear.

There is a three-week period from silking to harvest, but there is only a two-week period from when the silks appear to when they begin to dry. Since moths prefer juicy silks and shun those that have started to dry, insecticides are only needed the first two weeks of silking.

Homeowners can use cyfluthrin (Bayer Powerforce Multi-Insect Killer) or carbaryl (Sevin), though cyfluthrin is more effective. Commercial growers have additional choices including zeta-cypermethrin (Mustang Max), bifenthrin+zeta-cypermethrin (Hero), spinetoram (Radiant) and flubendiamide (Belt).

Though more time consuming, mineral or other light horticultural oils may also be used. The oil is placed inside the silk end of the ear with a medicine dropper (1/2 to 3/4 of a dropper) after the silks brown. This will coat the earworms already present and likely suffocate them, though some damage to the tip of the ear will likely have occurred. Applying the oil before the silk has browned may interfere with pollination, leading to incompletely filled ears. (WU)

Juniper Webworms and Juniper Budworms



Juniper webworm moth [*Dichomeris marginella* (Fabricius)] is regarded as a widespread insect pest of many *Juniperus* species ranging from Quebec and Maine to North Carolina and west to the Pacific coastal states and British Columbia.

Juniper budworms [*Choristoneura houstonana* (Grote)] have a range mainly restricted to Pinyon-Juniper woodlands of the southwestern and Great Basin states.

Although both moths and larvae are very different in appearance, they share similar habits and seasonal life histories and may be treated as one. A broad generalized description is as follows:



Moths appear in late June and July. A person may be unaware of their presence because of their small size (2-3 cm long) and them being active during nighttime hours. Eggs are deposited singly on needles, often near axils of current growth. Newly emerged larvae feed within needles, but subsequently become surface feeders. They construct silken tubes within which to feed. Silken tubes expand to accommodate growing larvae but remain hidden because of the small size of the larvae and the fact they are camouflaged with bits of trash.

Both species overwinter as partially grown larvae inside silken homes. Feeding resumes in the spring. The presence of either Juniper webworms or Juniper budworms becomes evident from matted foliage when silken tubes of larvae coalesce.

Tearing apart these nests can expose larvae. Later, pupa may be found, or empty pupal cases if moths have already emerged. Moths mate, eggs are deposited, and the cycle is repeated.

The actual impact of Juniper webworms and Juniper budworms is not known. They may be more of an aesthetic concern than a cause of tree mortality. Population levels ebb and flow. Over several years, populations of various parasitic wasp species build up to levels able to counter populations of Juniper webworms and Juniper budworms.

Homeowners should consider direct control measures to preserve the appearance of landscape and windbreak plantings. Removal of infested branch tips can be effective on individual trees. If the problem is widespread, it may be more feasible to use timely insecticide applications to kill newly emerged larvae before they become protected within silken shelters. Timing will depend on moth activities. Moths are small and inactive during the day. But when branches are shaken, moths briefly flit about before settling down. Initiate insecticide applications when moths are detected. Insecticides registered for use against caterpillars, defoliating caterpillars and/or webworms can be used against both Juniper webworms and Juniper budworms. (BB)

Thrips on Roses...What Can You Do?

There are a number of thrips species that feed on roses this time of year, but one of the predominant species is the western flower thrips (*Frankliniella occidentalis*). Adult thrips are approximately 2.0 mm in length, with the nymphs slightly



smaller. They vary in color from pale yellow to dark brown. Both nymphs and adults feed on rose leaves and flowers, although the adults tend to feed more on flowers. Leaves initially appear “stippled” and then eventually turn brown. Rose petals appear white or silvery, and there may be brown streaking on the petals. Flower buds may be distorted or abort before opening. In general, light-colored or white roses tend to be more susceptible to thrips.

Thrips tend to reside and feed in unopened flower buds and terminal growth. Once leaves or flowers have been damaged there is nothing that can be done to correct it. Insecticide applications should be initiated early to alleviate feeding damage. They must be applied before thrips enter terminal or flower buds because most insecticides are unable to penetrate buds or flowers. In addition, repeat applications may be required, particularly if there is an abundance of overlapping generations.

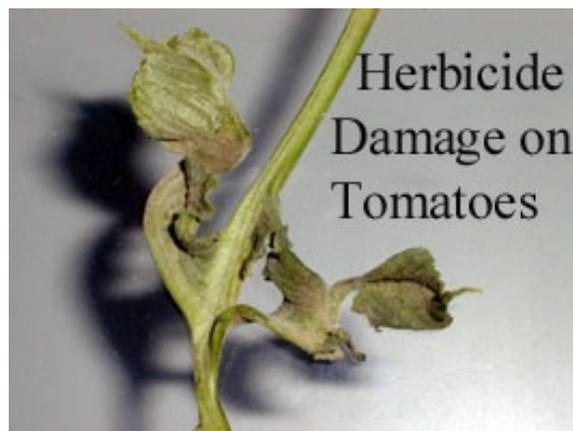
Exercise caution when spraying open flowers with insecticides, especially liquid formulations because there is the possibility of harming rose petals. Most insecticides commercially available for use against thrips have contact activity only so thorough coverage of all plant parts is important to obtain sufficient mortality. Systemic insecticides (e.g., imidacloprid) or those that are absorbed and translocated throughout plant parts are typically not effective against thrips feeding in rose flowers. There are a number of insecticides that may be used to combat thrips including spinosad (Captain Jack’s DeadBug Brew, Spinosad Lawn and Garden Spray), malathion (Ortho Max Malathion Insect Spray), acephate (Orthene), potassium salts of fatty acids (insecticidal soap), horticultural oils (petroleum or paraffinic-based), and pyrethrin (Pyrethrin Garden Insect Spray). Read the label thoroughly to determine recommended application rates and application frequency. Avoid using the same insecticide over and over again as this may result in the development of resistance to that specific insecticide mode of action. Rotate products to deter thrips populations from developing resistance. But do not use malathion and then switch to acephate, or vice-versa, because both insecticides have similar modes of action. If you have questions or comments regarding control of thrips on roses, contact your local K-State Research and Extension office. In addition, the “Compendium of Rose Diseases and Pests” (second edition) contains information on how to deal with thrips and other insect and mite pests of roses. The publication is available through the American Phytopathological Society (APS) at www.apsnet.org. (RC)

MISCELLANEOUS

Herbicide Damage to Trees, Shrubs and Gardens

Every year we see damage caused by exposure to herbicides. Symptoms vary with herbicide applied, plants exposed, concentration of product and environmental factors. Here is a list of the types of damage commonly seen.

Broadleaf herbicide drift. A number of herbicides used on farms and on home lawns are essentially



plant growth hormones. These include 2,4-D, triclopyr, and dicamba and are commonly used to control broadleaf weeds in lawns, pastures, or grassy crops. These products may become a gas (volatilize) at high temperatures, causing them to drift and damage nontarget plants such as trees and shrubs. Symptoms may include twisting and distortion of plant foliage, leaf yellowing, and, in severe cases, branch dieback. One of the trademark signs of this damage is the curly-Q twisting of leaf petioles or stems. Though tomatoes, redbud trees, and grapes are sensitive to these herbicides, a number of species will show some damage if drift has occurred. If you see twisting on more than one species, chances are that herbicide drift has occurred. Often, plants recover from drift due to volatilization.

Damage to vegetable gardens. Though drift is the most common cause of herbicide damage on vegetables, other potential problems exist as well. Cattle fed prairie hay from pasture treated with picloram (Tordon) can have manure tainted with the herbicide. If this manure is used on a vegetable garden, plants may sicken and die. Also, lawn clippings treated with quinclorac (a crabgrass killer) and used as mulch can have the same effect. Both products can remain active for up to 24 months.

Damage from stump or sprout treatments. Tree stumps often are treated to prevent resprouting. Two commonly used products are picloram (Tordon) and triclopyr (Remedy, Stump Killer, Brush-B-Gon, etc.). Be careful when applying these herbicides to prevent contamination of the soil. Nearby trees may be damaged if they pick up enough herbicide. Foresters warn that picloram also may leach from roots of a treated tree into the soil and be absorbed by roots of another tree species. This does not occur with triclopyr. Be very careful about using these products near valuable trees and shrubs.

Sprouts are often treated to keep them from growing where they interfere with the aesthetics of a lawn or other landscaped area. Never use a herbicide to treat sprouts coming from a root system of a tree you want to keep. A number of tree species including honey locust, black locust, hackberry, western soapberry, persimmon, and occasionally, maples may send up sprouts from their roots.

Treating these sprouts will effectively treat the tree to which they are attached. This may ultimately kill the tree. Also remember that trees of the same species growing next to one another may share a root system as a result of root grafting. Treating one tree in the group is like treating all of the trees.

If treating volunteer sprouts, use a product such as Monterey Sucker Stopper or Fertilome Prune Smart Sprout Inhibitor RTU. Neither will harm the plant to which the sprouts are attached.

Liquid Weed Edgers. Herbicides are often used along fences, on sidewalks or gravel drives to prevent plant growth. Some of these, including glyphosate (Roundup) and glufosinate (Finale) rarely cause damage unless sprayed directly on the foliage of a shrub or tree. Other liquid weed edger products are soil sterilants and have a long residual (months to years) in soil and are highly toxic to trees and shrubs. Symptoms may include yellowing, marginal leaf scorching, branch dieback and tree mortality. Once the tree takes up these products through their roots, they suffer permanent damage. Never use these soil sterilants in areas where tree roots may be exposed.

Remember that tree roots extend well beyond the drip line. It is almost impossible to use liquid weed edgers in the landscape without coming in contact with tree roots. Also remember that some of these products, such as prometon, will move with water until they become affixed to the soil. (WU)

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