### Don't Let Bugs Ruin Your Garden

#### **Tomato Hornworms**

Tomato hornworms are large, light green caterpillars that strip the leaves off tomato, eggplant, pepper and potato plants. Most often they are found on tomatoes. The caterpillar can be hard to spot, but often the gardener will notice all the leaves missing on a single branch of their tomato plant—a closer look will likely reveal a hornworm. An easy control method is to simply pluck the caterpillars off the plant and toss them where birds will find and eat them. One time you do not want to pluck off a tomato hornworm is when you see white spots along it's back. That means the caterpillar has been parasitized and is full of beneficial insect eggs. The eggs will hatch and eat the caterpillar and a new generation of beneficials will be born. Some gardeners also like to keep the caterpillars because they turn into beautiful, large moths. Occasionally, the camouflaged caterpillar cannot be found for hand removal. In these cases, you can use Bt (Dipel, Thuricide), spinosad (Conserve; Colorado Potato Beetle Beater Conc; Captain Jack's Dead Bug Brew, Monterey Garden Insect Spray) and cyfluthrin (BioAdvanced Vegetable & Garden Insect Spray). Pay attention to the harvest interval, which is the number of days between when the spray is applied and when the fruit can be harvested.

### **Green June Beetle**

Green June Beetles are large, shiny green insects that are easy to spot. These beetles are mostly harmless but often cause concern as they buzz loudly when they fly and are sometimes mistaken for large bees. You should be concerned about Green June Beetles if you have apricots, nectarines, peaches, plums, prunes, apples, pears, grapes, figs, blackberries or raspberries as the adults will feed on these fruits as they ripen. Larvae can feed on grass roots, but their primary diet is humus in the soil. If you do not have any of the abovementioned fruit crops, there is no need to treat for Green June Beetles. For fruit growers, you can use many general use insecticides to discourage feeding. Carbaryl (Sevin Dust), acetamiprid (Ortho Flower, Fruit & Vegetable Insect Killer) and malathion (Bonide Malathion) are all affective. It is important to note that not all formulations of Malathion have peaches and blackberries on the label, but Bonide Malathion does. As with the tomato hornworm, pay close attention to the harvest interval before spraying.

## **Blister Beetles**

Blister beetles are smaller (.5-.75 inch) gray, black or brown beetles with long cylindrical bodies. These beetles will strip many ornamental plants and vegetables, tomatoes especially, of their leaves. If you spot a blister beetle, make sure to use gloves to remove it from your plants. Their name comes from the cantharidin the beetles contain which is an irritant that can cause blisters on the skin. The beetles can also be effectively controlled with chemical applications. Cyfluthrin (BioAdvanced Vegetable and Garden Insect Spray) and permethrin (Bonide Eight and Hi-Yield Lawn, Garden and Farm Insect Control) are recommended. Once again, with edible plants, pay attention to the harvest interval.

# Chigger

Chiggers are a serious garden pest that often make our outdoor spaces uncomfortable and unenjoyable. Contrary to popular belief, chiggers do not suck our blood or burrow into the skin. Instead, they bite at the skin's surface and secrete saliva that digests skin cells. If they are only on the body for a short period of time, they do not cause much itching. The itching is primarily caused by histamines released from the

dissolved skin cells. A good indication of if a bite is caused by a chigger is its location. While bites can occur anywhere on the body, chigger bites are most commonly found where clothing is tight, like socks and waste bands, the ankles, backside of knees and armpits.

In lawns, keeping the grass mowed and healthy helps to reduce chigger numbers. When you're outside, try to avoid areas of tall grass or weeds and certainly try not to lay or sit in these areas, especially in the shade. Chiggers are notorious for penetrating layers of clothing, but high boots and pants can help deter some biting activity. Repellants sprayed over layers of clothing add an additional barrier of protection. After coming inside, shower as soon as possible, making sure to soap and rinse a few times. Clothes worn outside should be laundered immediately.

Chemical acaricides are usually effective against chiggers if properly applied. There are many products registered for use (in Kansas) against chiggers and mites on turf/lawns, but not all are marketed for use by homeowners. Check local retail outlets for product availability or consult with a lawn care company.

### **Assassin Bugs**

One good bug that has made a notable appearance in our gardens this year is the assassin bug. Assassin bugs come in many shapes and sizes, although this year we've received the most reports about large, grey insects with long legs and antenna. These insects are predators that feed on many insects including aphids and caterpillars. They received their name for the many ways they lure insect prey to come in close, sometimes even stalking other insects before biting them with their piercing-sucking mouthparts. While we consider assassin bugs to be our friend in the garden, they are a friend best left alone. They have been reported to bite humans and the bite has been said to be extremely painful.