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TOMATO CRACKING

Tomatoes often have problems with cracking caused by pressure inside the fruit that is more than the skin can handle. Cracks are usually on the upper part of the fruit and can be concentric (in concentric circles around the stem) or radial (radiating from the stem). We don't know everything about cracking but here is what we do know. Tomatoes have a root system that is very dense and fibrous and is quite efficient in picking up water. Unfortunately, the root system can become unbalanced with the top of the plant. Early in the season it may be small in relation to the top growth resulting in blossom-end rot during hot, dry weather. Later it may be so efficient that it provides too much water when we get rain or irrigate heavily after a dry spell. This quick influx of water can cause the tomato fruit to crack. Therefore, even, consistent watering can help with cracking. Mulching will also help because it moderates moisture levels in the soil. However, you can do everything right and still have problems with cracking in some years. We have evaluated varieties for cracking during our tomato trials at K-State. It takes several years worth of data to get a good feel for crack-resistant varieties but we have found some real differences. Some varieties crack under about any condition and others are much more resistant. The difference seems to be pliability of skin rather than thickness - the more pliable the skin the more resistance to cracking. The old variety Jet Star has been the most crack resistant of any we have tested including the newer types. Unfortunately, Jet Star is an indeterminate variety that puts out rampant growth. Newer varieties with more controlled growth are often more attractive to gardeners. Mountain Spring, Mountain Pride, Mountain Fresh, Floralina and Sun Leaper are smaller-vined types that have shown good resistance to cracking.

Watering Fruit Plants During the Summer

When temperatures exceed 90 degrees F, fruit plants lose water quickly. When this happens, moisture is withdrawn from the fruit to supply the tree. Stress from high temperatures, along with a moisture deficit in the root environment, may cause fruit to drop or fail to increase in size. The stress may also reduce the development of fruit buds for next year's fruit crop. If you have fruit plants such as trees, vines, canes, and such, check soil moisture at the roots. Insert a spade or shovel or a pointed metal or wood probe -- a long screwdriver works well for this. Shove these into the soil about 8 to 12 inches. If the soil is hard, dry, and difficult to penetrate, the moisture level is very low, and plants should be irrigated to prevent drooping and promote fruit enlargement. Water can be added to the soil using sprinklers, soaker hose, drip irrigation, or even a small trickle of water running from the hose for a few hours. The amount of time you irrigate should depend upon the size of plants and the volume of water you are applying. Add

enough moisture so you can easily penetrate the soil in the root area of the plant with a metal rod, wooden dowel or other probe. When hot, dry weather continues, continue to check soil moisture at least once a week. Strawberries have a shallow root system and may need to be watered more often - maybe twice a week during extreme weather. Also, newly planted fruit trees sited on sandy soils may also need water twice a week.

Pear Rust

Many people are noticing spots on the leaves of their ornamental or fruiting pear. Though these spots resemble the cedar-apple rust spots on apple leaves, they are actually caused by a different organism. Pear leaves are infected with cedar-hawthorn rust rather than cedar-apple rust. Though this disease is different than cedar-apple rust it works just the same and the control is exactly the same as well. This disease is usually more of a nuisance rather than a disease that causes significant harm. Therefore, control is optional unless you see substantial leaf drop.

It is too late to do anything about "pear rust" once the month of May is over. It is only active in April-May time period. If you would like to control it next year, use myclobutanil (Immunox, Immunox Plus or Fertilome F-Stop Lawn and Garden Spray). There are other fungicides that will work but those with myclobutanil have an advantage. Most fungicides must be present on the foliage before the disease spore germinates or they are ineffective. Myclobutanil will kill the rust spore up to 4 days after it germinates. Big deal. What does that mean in the real world.

Normally, we would recommend that trees be sprayed every 7 to 10 days starting at the beginning of April until the end of May. However, since we have this 4-day kickback with myclobutanil, we can wait until we actually see evidence of spores being released before we spray. How do we do that? First of all remember that cedar-apple rust and cedar-hawthorn rust must go back and forth between junipers (cedars) and apples (or pears in this case). The spores from junipers can only infect apples or pears and those from apples or pears can only infect junipers. Therefore we look at the juniper to see when to spray either apples or pears. When you see the orange globs (galls) on the junipers, you know you have 4 days to spray the apples and/or pears. These orange globs are actually cedar-apple rust but cedar hawthorn rust develops under the same conditions. We key off of cedar-apple rust because it is much more noticeable on the juniper. If you see cedar-apple rust, cedar-hawthorn rust is likely present. It is also important to note that the orange galls only develop during rainy weather. So, this is what you do. During any rainy period during April and May, watch the cedars. When they bloom (orange galls appear) get ready to spray. You have 4 days to apply your myclobutanil fungicide.

Elm Leaf Beetle

There are normally two generations of this insect in Kansas with this being the second generation. All species of elms are attacked, but Siberian elms (often referred to as Chinese elms) are preferred. Elm leaf beetles are serious nuisance pests of elms. Both adults and larvae feed on the elm leaves. Adult beetles are green-and-yellow striped and about 1/3-inch long. Young larvae are black and hairy but become yellow with two longitudinal dark stripes as they

mature. The larvae cause most of the injury by window-feeding on foliage, resulting in a skeletonized appearance. Heavily infested leaves turn brown as if scorched by fire and often will drop prematurely. After several weeks of feeding, the larva crawl down the trunk or fall to the ground where they pupate. Elm leaf beetles overwinter as adults. Active larvae can be controlled with a number of insecticides. However, check to make sure that larvae are still active before spraying. In many cases, the larvae have dropped from the trees and are pupating. Spraying is ineffective and unnecessary once pupation starts. Effective sprays for larvae (and adults) include carbaryl (Sevin), acephate (Acephate, Orthene), spinosad (Conserve; Captain Jack's Dead Bug Brew, Borer; Bagworm, Leafminer & Tent Caterpillar Spray) lambda-cyhalothrin (Scimitar, Spectracide Triazicide, Bonide Beetle Killer).

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