WASHINGTON STATE UNIVERSITY
BENTON COUNTY EXTENSION

HOT WEATHER TOMATO PROBLEMS

This unrelenting hot summer weather that's been stressing us, has also been stressing our yards and gardens. Lack of adequate soil moisture is one of the major plant stresses related to hot weather. This lack of water shows up first on lawn and garden plants with relatively shallow root systems. On these plants, wilting or a change of leaf color are the first signs that something may be amiss. It usually takes longer for signs of drought stress to appear on woody trees and shrubs. Nevertheless, a lack of adequate moisture or problems related to watering will eventually show up on both small and large plants.

Of course when we think of watering problems, our first thought during hot weather is that we're not applying enough liquid sustenance. However, sometimes it's the way we water that causes problems. One of the places this is most apparent is on tomatoes in the vegetable garden.

Blossom end rot and fruit cracking are two physiological problems often encountered by tomato gardeners. In our region these disorders are most commonly caused by uneven watering. Blossom end rot first shows up as a water-soaked or darkened area on the bottom or "blossom end" of the fruit. This spot may become quite large and later turns brown and leathery.

Technically, blossom end rot is caused by a lack of available calcium when the fruit is developing. However, calcium is seldom lacking in area soils. Instead the problem arises from wide variations in soil moisture...from dry to wet.... to dry.... to wet. Other poor cultural practices can also lead to a problem with blossom end rot. Over-irrigation and excessively wet soils, high nitrogen fertilization, and root damage from cultivation can all lead to blossom end rot on tomatoes.

"Cracking" of tomatoes is brought about by uneven watering too. These "cracks" are concentric or radial splits in skin of the fruit, usually close to the stem end. "Cracking" is caused by an uptake of water and enlargement of the fruit so quickly that the skin can't expand fast enough. The skin is unable to accommodate the enlarged fruit and it "cracks". Small cracks often heal over, leaving leathery scars. Larger cracks fail to heal, leaving the fruit open to attack by bacterial and fungal pathogens.

Widely fluctuating soil moisture...from dry to wet... to dry... to wet... contributes to cracking especially during hot, dry weather. Also, certain tomato varieties are more prone to cracking than others. Beefsteak types and many of the lobed heirloom varieties are especially susceptible to cracking. Heavy pruning of tomato vines and a low fruit load can exacerbate fruit cracking problems.

The solution to both problems, blossom end rot and fruit cracking, is simple... maintain even soil moisture. Saturated soils or wide fluctuations in soil moisture lead to problems. Don't water by a schedule or a timer. Water by checking soil moisture. Mulching tomato plants also helps by controlling both weeds and by reducing water loss from the soil surface.