

## Curled Tomato Leaves

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Tomatoes with curled leaves is a fairly common problem. This can be caused by hot weather, herbicides or a virus. It's important to distinguish between the three.

Tomato leaves near the top of a plant can roll up when roots cannot replace water lost from leaves quickly enough. This is referred to as physiological leaf roll.

Leaf roll is harmless and occurs when tomato plants grow vigorously during mild weather or with too much nitrogen. In these cases, top or leafy growth can outpace or be at the expense of root growth. When hot weather arrives, underdeveloped roots cannot keep up.

The plant then tries to reduce leaf surface area by rolling leaves upward. Rolled leaves lose water slower through transpiration than fully opened leaves. Leaf roll is temporary and goes away after a week or so.

Other than rolling upward, leaves affected by leaf roll will look normal although may appear a little leathery. This is the best way to distinguish leaf roll from herbicide injury or a virus disease.

Herbicide drift injury results in leaves that are very curled and distorted. The veins will also be distorted. With leaf roll, a gardener can unfurl a rolled leaf and it will look normal. With herbicide injury, this is not the case. Leaves may also be off-color.

With herbicide injury, nearby plants like other vegetables, flowers and trees or shrubs may also show leaf cupping or curling. Tomatoes are very sensitive to herbicides and so leaf curling is more pronounced on them than on other plants. Also, with herbicide injury, new growth that occurs after the drift will be normal.

Herbicide drift occurs as droplets or as vapor. Drift of droplets typically happens on windy days. Vapor drift happens on hot days when the spray vaporizes and the gas is moved by a breeze. This is why most herbicide labels state not to apply the product on windy days or above certain temperatures.

Tomatoes are susceptible to a few virus diseases although they are not very common. With a virus, only one or two tomatoes would be affected and other types of plants like flowers, other vegetables and trees would show no symptoms.

With virus, the leaves are also more puckered than curled or twisted, however, this is not always the case. Plants infected by a virus will continue to show symptoms on new growth. There is no cure for virus diseases in plants.

When tomatoes are injured by herbicide drift or a virus disease, the plants are best pulled and discarded. If not, the virus is more likely to carry over in the garden and affect plants in upcoming seasons.

With herbicides, we cannot say that it is or is not safe to eat tomato fruits from these plants so it is best to play it safe and discard the plants.