

Curled Tomato and Pepper Leaves  
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Tomatoes and peppers with curled or odd-shaped leaves has been 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 fast enough. This is known as physiological leaf roll.

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

The plant then reduces 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 appear normal although they may feel leathery. This is the best way to distinguish leaf roll from herbicide injury or a virus disease.

Herbicide injury results in leaves that are curled, cupped or otherwise abnormal. The veins will also be distorted. With leaf roll, a gardener can unfurl a rolled tomato leaf and it will still 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 in the area may also show leaf distortion. Tomatoes and peppers are very sensitive to herbicides and so leaf curling is more pronounced on them than on other plants. Also with herbicide injury, new growth occurring 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. Vapor drift can come from a long distance away from the garden. This is why most herbicide labels state not to apply the product on windy days or at certain temperatures. Completely calm days with no breeze are not good times to apply herbicides either.

Tomatoes and peppers are susceptible to virus diseases. With a virus, only one or two plants 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 and plants are often stunted. There is no cure for virus diseases in plants.

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

With herbicides, we cannot say it is safe or is not safe to eat fruits from these plants as we have no science-based research related to this. It is up to the gardener to decide if they want to consume the produce or not.