

Homeowner Questions
Answered by:
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Question: My tomato leaves are curling. I don't see any evidence of insects and they are still green. Any idea if this is normal or is there a problem?

Answer: Tomato leaf curling or rolling can be the result of many conditions including environmental stress, viral infection, herbicide damage or insect infestations. To correctly identify the cause, look closely at your plant and ask yourself the following questions. Are the curling leaves old leaves, new leaves, or all of the leaves? Are the leaves curling upward or downward? Are there any other abnormal symptoms such as yellowing or distorted leaves?

Leaf curling due to environmental stress usually occurs from excessive moisture and nitrogen, heat, drought, severe pruning, root damage and transplant shock. If there are no other symptoms appearing it is called physiological leaf roll and is most likely the result of all the rain we had followed by an increase in temperature. Initial curling begins on the lower leaves and rolls upward followed by an inward curl lengthwise. Indeterminate tomato plants seem to be more apt to exhibit physiological leaf roll. This can occur any time during the growing season but most often it occurs during the transition from spring to summer. This will not affect the plant's growth and fruit production should be normal. Prevention of this type of rolling can be helped by maintaining consistent moisture, avoid over-fertilization and properly hardening off seedlings.

Some viral infections can cause rolling of the leaves. Whiteflies transmit a virus that causes new leaves to become cupped. Additionally they can be paler, stunted, have yellow edges, or purplish veins on the underside. Another virus, tomato mosaic virus, causes downward curling of older leaves, mottling, smaller leaves and browning of the inside of the fruit. There is no treatment so removal of the plants is recommended.

Aphids in large numbers can cause leaves to curl and stunt the plant. They can also infect the plant with certain viruses. Control with a strong stream of water should knock the insects off the plant. Young tissue is attacked first especially at the growing tip. As the number of aphids increases the entire plant may begin to exhibit symptoms as the insects remove sap and cause the leaves to curl downward.

When tomato plants are exposed to the herbicide 2, 4-D, a common systemic herbicide used to control broadleaf weeds, damage to the plant will appear as a downward rolling of the leaves and twisted growth. Additionally the stems will turn white and split along with deformed fruit. Herbicide damage is not reversible but depending on the amount of exposure the plant may or may not survive. If it survives the new growth should be normal.