



Cooperative Extension Service  
Institute of Food and Agricultural Sciences

## Tomato Production Guide for Florida: Pest Management Introduction<sup>1</sup>

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Tomatoes are subject to damage from many insects, nematodes, and fungal, viral, and bacterial pathogens. In addition, weeds and several physiological disorders, such as nutrient deficiencies, can cause yield losses. Specific chemical control measures can be obtained from the Pest Management Guides or from Circular SP-170, "Commercial Vegetable Production Guide."

Chemical control of pests must be practiced only according to the pesticide label. Where several chemicals are available to control a pest, alternating the use of the materials may help reduce chances of developing pest resistance to a chemical. Misuse of chemicals can lead to possible worker contamination and environmental pollution in addition to exceeded tolerances for pesticide residues on fruit. Before using any chemical, read the product label and the information in the guides detailing precautions and suggestions for proper use.

Pest control should consist of an integrated pest management (IPM) system which relies on efficient use of all appropriate control strategies. Action is taken to prevent problems and suppress damage levels without relying solely on chemicals. Effective IPM consists of four basic principles: *exclusion* of the pest from the field, *suppression* of pest levels below an economic threshold, *eradication* of certain pests where deemed absolutely necessary, and *plant resistance* in cultivars of crop plants.

To carry out these principles, several steps are taken: *identification* of key pests and beneficial organisms, *preventative cultural practices to minimize pest development*, *pest population monitoring* by trained field scouts, *prediction* of loss and risk to determine when levels of yield and quality will be threatened, and *action decision* on which control measure is warranted. All sound IPM programs include an evaluation phase to assess the level of success.

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