Tying of plants begins three to four weeks after transplanting. Plastic twine is used because it can easily be removed from the field by burning. The twine is wrapped around each stake and past both sides of the tomato plant to provide verticle support. Tying is usually done three to four times during the season.

Following the harvest period, the plants are chemically desiccated and twine burned from the plants and stakes by tractor-drawn propane burners. Some attempts have been made to burn the mulch as well. However, the burn is usually not adequate and never destroys the buried mulch edges. As a result, it is recommended that the mulch be cut down the center and edges lifted free of soil, followed by hand removal. These operations can also be mechanized.

The stakes, once cleared of twine and plants, can be removed by mechanical stake pullers. The initial investment required for these machines makes them attractive only to growers of more than 75 acres. Before re-use, stakes should be disinfested of disease organisms, by steaming or fumigation with methyl bromide. Research has shown that steaming under a tarp for one to two hours at 200 °F was effective in removing Fusarium. In most situations, exposing stakes to methyl bromide under a plastic cover might be more feasible.

Frost protection

Presently, the most effective method of frost protection is overhead irrigation during the freeze period. Timely and complete coverage is required. Sprinklers should be placed so that 50 percent effective coverage is ensured. Sprinklers should be turned on when the temperature falls to 31 °F as measured at plant height in the lowest area in field. The nozzles should make one revolution per minute with the amount of water applied dependent on temperature and wind conditions (5). They should be left on until the temperature rises and ice begins to melt, or until the wet-bulb temperature rises above 32 °F.

Another possible method of frost protection might be row covers, hoop-supported polyethylene or non-supported polyester or polypropylene materials. Research in northern states has shown substantial frost protection from these covers and they may be useful in Florida as well. Application of the covers can be mechanized and they can be reused. Since research on row covers in Florida is not yet complete, growers interested in the system should try it on a small scale only.

Pest Management

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 individual control guides mentioned at the beginning of this publication.

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.