



## Design for Everyday Living

# growing tomatoes

The tomato is one of our prize vegetables. It is found in every home garden in West Virginia. It also ranks among the top three vegetables in importance to commercial growers. Any vegetable as important as this should receive considerable attention; therefore, some of the important things to consider in growing the crop have been outlined.

### VARIETY

There are many good varieties of tomatoes available to growers and each grower should try a few plants of several varieties to determine which performs best. Some varieties that have performed well for West Virginia growers are:

**Celebrity:** 75 days. Fusarium, verticillium and tobacco mosaic virus resistant. Determinate.

**Better Boy:** 70 days. Fusarium, verticillium, and alternaria resistant. Indeterminate.

**Mountain Pride:** 75 days. Fusarium and verticillium resistant. Determinate.

**Supersonic:** 80 days. Fusarium and verticillium resistant. Indeterminate.

### GOOD SOIL

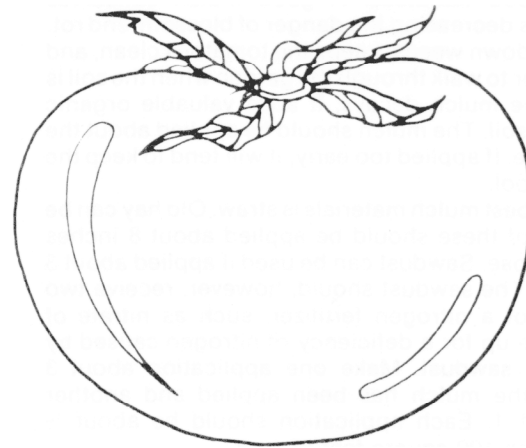
Tomatoes require an immense amount of water during the fruiting season, therefore, they should always be set in soil that is high in organic matter.

If available, apply 15 tons of manure per acre. Plowing down a good sod of red, sweet, or crimson clover, or alfalfa, is one of the best practices to insure high yields. Wheat or rye is also good. A crop rotation should be planned so that there will be good sod to turn down before each tomato crop. **Organic matter is important.**

### FERTILIZE WELL

Use 1500 pounds per acre—or 40 pounds per 1000 square feet—of a good fertilizer such as 5-10-10 or 10-10-10. Of this amount, broadcast 1000 pounds per acre—or 30 pounds per 1000 square feet—on top of the ground and plow under. If it is feasible, the remainder should be applied in bands on either side of the plants. If band application cannot be made, broadcast the remaining portion after plowing and disk or harrow it in.

Applying the fertilizer directly in the row where the plants are to be set will usually injure the roots. Also, applying all the fertilizer on top of the plowed ground and then disking or harrowing it in is a poor practice because the fertilizer will not be deep enough for best results.



### WHEN TO PLANT

Set plants in May just as soon as danger of frost is past. By doing this there will be more moisture for plant growth, and the plants will have a longer period over which to produce fruit. If you produce tomatoes for a special market, such as fall market, remember it will be about 80 days from the time you set Rutgers plants in the field until you can pick ripe tomatoes from them.

### START WITH GOOD PLANTS

Good thrifty plants that are about 6 weeks old are best for transplanting.

### SETTING THE PLANTS

Set plants 1 to 2 inches deeper than they grew in the plant bed. They should be watered in, using a good starter solution. A commercially prepared starter solution is best, but you can make one that is better than plain water by dissolving 1 cup of 5-10-10 or 10-10-10 fertilizer in 4 gallons of water.

If plants are to be staked or trellised, the rows should be 4 feet apart. If not staked or trellised set the plants 5 feet by 5 feet.

### SIDEDRESSING

Tomatoes require most of their nitrogen during the second and third months. To supply this need, apply about 125 pounds of nitrate of soda per acre when the first green tomatoes are about the size of peas. This is equivalent to a little more than 1 tablespoonful per plant. Make this application on top of the ground about 3 inches out from the plant. *It will burn the plants if placed against them.* Nitrate of soda is 16 per cent nitrogen. If other materials with higher nitrogen content are used, adjust application rates accordingly.

Some soils, particularly the lighter ones, may be low in potash and a sidedressing with a 12-0-12 fertilizer—at the rate of 300 pounds per acre—instead of the nitrate of soda, will give much better results.

## WEED CONTROL

**HERBICIDES**—After the soil has been prepared and before the transplanting date, the field should be sprayed with Diphenamid at the rate of 6 pounds actual per acre (Dymid 80W-7.5 pounds or Enide 50W-12 pounds). Follow label directions on bag.

**CULTIVATION**—Only shallow cultivation is necessary for weed control. Deep cultivation will prune many of the feeder roots and will reduce yields, particularly early yields. The proper depth is not more than 1½ inches after plants start to set fruit.

## MULCH

The application of a good mulch will help greatly in producing good tomatoes. A good mulch conserves moisture, thus decreasing the danger of blossom-end rot. It also keeps down weeds, keeps the tomatoes clean, and makes it easier to walk through the garden when the soil is wet. When the mulch decays, it adds valuable organic matter to the soil. The mulch should be applied about the middle of June. If applied too early, it will tend to keep the ground too cool.

One of the best mulch materials is straw. Old hay can be used. Either of these should be applied about 8 inches deep when loose. Sawdust can be used if applied about 3 inches deep. The sawdust should, however, receive two applications of a nitrogen fertilizer, such as nitrate of soda, to make up for a deficiency of nitrogen caused by the decaying sawdust. Make one application about 3 weeks after the mulch has been applied and another about August 1. Each application should be about ½ pound for each 100 square feet of area.

While organic mulches have been an accepted practice for years, the black polyethylene plastic mulch applied at planting time will control weeds, conserve soil moisture, and increase or improve tomato yields.

## PEST CONTROL

The insects most likely to cause significant damage to tomatoes in West Virginia are flea beetles, aphids, and hornworms. All of these are relatively easy to control if you do not permit them to increase their numbers before undertaking some action.

The potential losses from diseases, however, present a great challenge to the tomato producer. Tobacco mosaic and cucumber mosaic are two of the more common virus diseases. Early blight, nailhead spot, and late blight continue to be the chief foliage diseases although they may also occur on the fruit. Such problems as anthracnose, blossom-end rot, and growth cracks are the common ones affecting chiefly the fruit.

It must be emphasized that a totally integrated program is necessary to reduce losses from the wide range of potential diseases. Therefore, the following is suggested.

1. Use disease-resistant, adapted varieties from a known disease-free source.
  2. Do not plant tomatoes too frequently in the same field. There should be an interval of two years between successive tomato crops, or where tomatoes follow potatoes.
  3. Isolate the tomato planting from plants which generally carry diseases injurious to tomatoes, such as potatoes, cucumbers, dahlias, eggplant, and weeds (ground-cherry, pokeweed, jimsonweed, and nightshade).
  4. Do not smoke or handle tobacco in any form when working with tomatoes. This is especially true of tomato plants in the first 12 weeks of their growth.
  5. Follow the soil preparation, fertilization, and transplanting recommendations faithfully.
- Recommendations are constantly changing. For the latest recommendations check with your local Cooperative Extension Office.

The use of product names or manufacturers in this publication does not constitute endorsement. Names are used only to provide knowledge for potential users. A number of similar and satisfactory products are available under a wide variety of trade names.

N. Carl Hardin

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