



TOMATOES FOR PROCESSING IN EASTERN NORTH CAROLINA

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The per capita consumption of processed tomatoes has increased steadily in recent years. This has been due to changes in eating habits and development of new and better products. Over 8 million tons of processed tomatoes are produced in the United States annually. Average yields for the United States are 25 tons per acre while the range is 9 to 40 tons per acre. North Carolina growers can produce high yields of processing tomatoes. Satisfactory color, pH, sugar and acid content needed to produce a fine quality canned product can be attained if tomatoes are grown according to recommended practices.

Special attention should be given to soil drainage, fertilizers, nematodes, insect and disease control, and stand establishment. Processing tomatoes may provide a good income for growers. Three hundred dollars per acre net returns are not uncommon.

Steps to Success

1. Select a well-drained sandy loam soil.
2. Have the soil tested for fertilizer and lime requirements. Soil pH should be above pH 6.2. Follow soil test recommendations for lime and fertilizer. If the soil test for calcium is "medium" to "low", consider adding 600 pounds per acre of land plaster or gypsum pre-plant; this will reduce blossom-end rot. Average soils will

require 400 to 500 pounds of 10-20-20 per acre, or a blend of fertilizer with less phosphate may be used. Broad-cast this before planting and thoroughly mix with soil. Use 1 to 2 pounds of boron per acre.

3. Have a nematode assay performed on your soil to determine the need for fumigation.
4. Select a proven variety. We suggest Wolfpack 1, Wolfpack 2, Heinz 722, Peto 882, for whole pack tomatoes and products. Usually your contract will specify the variety to be grown.
5. Grow your own plants. If you buy plants, make sure they are certified to be free of insects, diseases and nematodes and arrange early to have plants produced.
6. Weed control* is critical to good yields. Use at planting, preplant incorporated or post plant materials. Also use materials in mid-season.
7. Use soluble phosphorus fertilizer such as 12-48-8 (6 pounds/ 100 gallons) in your transplant water for an early, fast growing start.
8. Use wide, flat beds to reduce fruit rotting during maturation.

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- Plant spacings are very important. You should set from 8,000 to 12,000 plants per acre depending on your variety.

Suggested spacings include:

Between row spacings

| | | | |
|----------|----|----|----|
| (inches) | 48 | 54 | 60 |
|----------|----|----|----|

In row spacing

| | | | |
|----------|-------|------|------|
| (inches) | 12-16 | 9-12 | 9-12 |
|----------|-------|------|------|

- For insect and disease control* use high pressure sprayer of the drop nozzle or air blast type with at least 200 psi pressure at the nozzle. Diseases and insects can be controlled very well with the pesticides when high pressure is used. Roller pumps will NOT develop the pressure you need to distribute spray material well. You may wish to leave blank rows which can be used for the sprayer and later as truck rows for hauling tomatoes out of the field.
- For early production you should set plants the first two weeks of April. For later production you should consider direct seeding.
- Irrigation is necessary during most seasons. Tomatoes need at least one inch of water per week. Irrigation increases yields and reduces blossom-end rot and sunburning. (Read *Horticultural Information Leaflet No. 28-D*).
- Spray a fungicide every 7 days (and after every 1 inch rain) for disease control and as pest populations warrant for insect and worm control.* Begin disease control when first flowers appear.
- Two to three sidedressings of 20 to 30 pounds nitrogen per acre at each application will be necessary. You may wish to include an equal amount of potassium with the side-dressing depending on the soil's natural potassium content. When rains of 1.5 inches or more occur additional side-dressings are necessary. On soils low in potassium use 15-0-14, 8-0-24, or 13-0-44.

- Harvesting of most varieties will begin about 75 days after field setting. With the concentrated fruit set of most new varieties you should harvest most of your fruit in 2 or 3 pickings. DO NOT start before a profitable harvest can be made. Ethephon can cause more of the tomatoes to ripen at one time. Spray 0.8 pounds active ingredient per acre of ethephon when 5 to 15 percent of the fruit are pink or red. Tomatoes will ripen 10 to 14 days after spraying. (Ethephon can be purchased under the tradename of Ethrel.)

- PICK ONLY red-ripe tomatoes. Closely supervise your picking crews to make sure they harvest ONLY red-ripe fruit but ALL of the red fruit.
- Tomatoes should be placed in the shade as soon as possible after they have been harvested. They should be moved to the processor promptly.
- Under average conditions yields should range from 15 to 20 tons per acre. Growers in past years have received yields varying from 10 to 30 tons per acre. The primary difference in yield has been due to planning and management.
- Contract prices vary with processors, grades and years. Contract prices are seldom as high as fresh market prices but the cost of producing processing tomatoes is not as much as the cost of producing fresh market tomatoes.
- Machine harvesting of tomatoes is a reality in many areas. Contact your county extension agent regarding this and other means of mechanizing your tomato operation.

* Consult the *N.C. Agricultural Chemicals Manual* or your county extension agent for the most recent recommendations on pesticides.