

# Processing tomatoes, a revived alternative for Del. growers

NEWARK, Del. — Delaware's vegetable industry is alive, strong, and a very important part of Delaware's agricultural economy.

"There are approximately 40,000 to 45,000 acres of vegetables in Delaware, a figure that hasn't changed much in the last five years," says University of Delaware Extension vegetable specialist Ed Kee. Opportunities abound for both fresh market and processing crops, he says.

One processing crop that's making a small comeback is tomatoes. "Due to the increased popularity of tomato products with fast-food restaurant chains and other outlets, some Delmarva processors are offering contracts for tomatoes to be harvested mechanically," reports Kee. Delaware farmers used to grow a significant amount of this crop for canneries, but acreage declined as the number of canners shrank.

"Of course," he says, "all growers need to weigh the economics of any one farm enterprise versus another. In the case of processing tomato contracts, the gross value per ton isn't the only factor to consider."

Make sure the contract also makes clear which party pays for the seed or plants, who assumes hauling and harvesting costs, how other production costs will be handled, and what value will be placed on reductions for lower grade products. All these factors must be considered in comparing the potential profit of any processing vegetable against corn, soybeans, fresh market vegetables or some other farm enterprise, he says.

Growers who are thinking of raising tomatoes for a processor need to consider some other basic production factors, too. Tomatoes should be grown on a well-drained sandy loam, loamy sand or loam soil. Uniform soil conditions are important for uniform maturity and harvest. Avoid fields that are heavy and poorly drained.

Field orientation is also important. Long rows speed field operations by reducing turning time. Rows running north-south allow windbreaks that cut the northwest spring winds which sandblast seedlings on Delmarva. It's a good idea to leave unplowed small grains every 80-100 feet for these windbreaks, advises the specialist.

The soil surface should be as level as possible to insure proper recovery of fruit by the harvester. It's desirable to form a bed four to six inches high. This will improve drainage, simplify weed control and encourage uniform plant growth.

"Perhaps the most significant improvement in the processing tomato business is the recent development of good varieties," the specialist says. "In the last decade, several good-yielding, high-quality, crack- and disease-resistant varieties have appeared. Three of the leading ones are Campbell 38, U.S. 28, and VF134-1-2. All of these are determinate vined varieties."

When growing tomatoes, follow soil tests for fertility rates. Limit nitrogen levels to 50 to 75 pounds per acre for transplants and 40 to 60 pounds for direct-seeded plants. Approximately half of this should be broadcast and half side-dressed during the season. The uniformity of maturity can be affected by how and when you you fertilize, says

Kee. The nitrogen should be almost used up when most of the fruits turn red. It's important to avoid heavy and late applications on tomatoes which are to be machine harvested. When growth regulators are used, increase the nitrogen rate by 20 pounds.

Planting date depends on whether you establish your crop by direct-seeding or transplants. Direct-seeding should start when the soil at one inch is 55 degrees—usually about April 15 or 20 in Sussex county. There are precision planters now that do a good job of planting small-seeded vegetables like tomatoes, says Kee.

But if you're just getting started with this crop, transplants may be the best way to go. Set them out as soon as possible after the frost-free date. For lower Kent and Sussex counties this means late April or early May.

Transplants set in early May will be ready for harvest about one week before April 20 direct-seeding plantings of the same variety. One factor to consider with direct-seeding is that Colorado potato beetles can destroy emerging seedlings.

Rows for tomatoes should be five feet wide. Seed spacing for direct-seeded plants will vary according to the type of planter used. Perhaps the way to obtain the best stand is to overplant and then thin, says Kee. This requires planting 20 to 30 seeds per foot and then thinning back to two to three plants every six to nine inches. Shallow or rotary cultivation may be necessary to allow seedlings to emerge through a crusted soil.

Set transplants one foot apart in the row with rows five feet apart. This will require 8,712 plants per acre. Use good sturdy plants that are not too "leggy". These can be grown in greenhouses, field plant beds, or shipped in from southern sources.

The last major consideration in growing tomatoes is use of the growth regulator ethephon to promote ripening. Trade names for this material are Ethrel and Cepha. Apply it when 10 to 30 percent of the fruits are ripe or pink. It's important to sample accurately to determine time of application.

Growers who want to obtain further information on ethephon use and other aspects of processing tomato production may want to obtain copies of New Jersey Extension bulletin No. 36 or Maryland mimeo HE 123-81, "Growing Tomatoes for Mechanical Harvesting." In Delaware, reprints are available from Extension offices in Newark, Dover and Georgetown.

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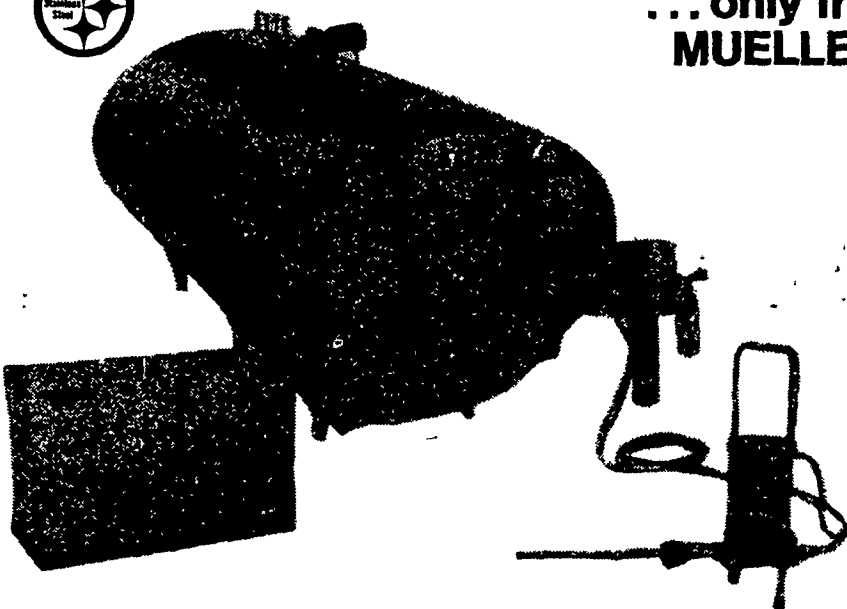
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