Tomatoes are the most popular vegetable in the home garden. They are a tasty fruit and supply vitamin C as well as many minerals needed for proper nutrition. They are eaten fresh from the garden and processed in several ways for later use.

Soil: Tomatoes are grown on a wide variety of soils. They do best on a garden loam containing a fair supply of organic matter. It should be only mildly acid in reaction (pH of 6.0-7.0). The lighter sandy soils warm up earlier and ripen the first fruits.

Fertilizer: Manure mixed in the soil adds both organic matter and fertilizer. A handful of a 4-12-4, 5-10-5, or 5-10-10 complete fertilizer placed in a circle 3 inches away from the plant and 3 to 4 inches deep will give the young plants a good start.

Varieties: The small-vined hybrids are especially good for the home garden where space is limited. The newer hybrids are usually earlier and smaller vined, although the vigorous types are preferred for staking. (OSU breeding has been for earliness and small plants.)

There are many good tomato varieties: Among those tested and proved for Oregon conditions are:

- **Early Determinate** (bush): Victor, Bounty, Gem, Pennheart
- **Early Indeterminate** (vining): Valiant, Faribo Hybrid E
- **Medium-Early Determinate** (bush): Wasatch, Pri-chard, Early Pack 7 (eastern Oregon)
- **Medium-Early Indeterminate** (vining): Moreton Hybrid, Big Boy Hybrid, Big Early Hybrid, Burpee Hybrid, Queens, Stokesdale, Red Jacket

Propagation: A temperature of 60 to 70 degrees is desirable for seed germination. Plants may be grown from seed in a greenhouse, hot bed, cold frame, or windowbox, or purchased ready for transplanting. It takes from 5 to 8 weeks to produce good plants from seed, depending on the temperature.

Plant seed in rows in flats of moist garden loam—6 to 8 seeds per inch. Cover with damp paper or glass until plants are up. When the first true leaves appear, transplant into plant bands or other containers 2 to 3 inches in diameter. Fertilize the seedlings by watering once a week with a booster solution made by dissolving 2 tablespoonsful of a recommended fertilizer in a gallon of water.

Planting: The plants should be grown at cooler temperatures for a few days before going into the open ground. Plant as soon as the soil is in a good workable condition. Disturb the roots as little as possible in transplanting, and set the plants to the depth of the first leaves. Plants can be set 3 to 5 feet apart depending on the space available. Water each plant with a pint of booster solution mixed as for seedlings.

Protection: Since tomatoes grow and set fruit better in a warm soil, some protection is advisable. A “tent” of clear polyethylene plastic is useful for this purpose. As warm weather comes, it can be partially or wholly removed. Sometimes protection in the fall is helpful in ripening the fruits.

Supports for the plastic covers in rows can be wickets of 11-gauge wire, 5 feet long, bent to form an arch over each plant. Sheets of plastic are laid over each side, leaving a small opening at the top for ventilation. The bottom of the plastic is tacked to a strip of wood or buried in the soil on each side of the row.

This is one of a series of Fact Sheets reporting Cooperative Extension work in agriculture and home economics, F. E. Price, director. Printed and distributed in furtherance of Acts of Congress of May 8 and June 30, 1914, Oregon State University, Oregon counties, and U. S. Department of Agriculture cooperating.
Spring-type clothespins are useful in holding the plastic to the wickets and in closing the ends of the tunnel. Single plant covers can be made by using two wickets, with plastic wrapped around in teepee fashion, leaving an opening at the top. On bright, sunny days the plastic may be lowered for additional ventilation.

Cultivation: Cultivation should be shallow to prevent damage to shallow feeder roots.

Irrigation: Maintain a uniform moisture level for best results. A shallow sawdust, peat, or leaf-mold mulch, or black polyethylene will hold the moisture for longer periods of time. It is usually better to water around the plant at intervals of a week to 10 days, rather than over the foliage frequently.

Staking and pruning: If plants are to be staked, set them 18 to 30 inches apart in the row. A training program gives less fruit per plant but more on a given area. There will be more labor involved, more danger from sunscald, but less rot. Shoots should be pulled, not cut, since cutting spreads disease.

Effective supports about 18 inches in diameter and 12 inches high can be made of concrete, wood, or reinforced wire around each plant. With this method no pruning is necessary. Keep all branches inside the container until they grow up and over the top. A clear plastic wrap around the container will give some early season protection.

Insect control: Spray or dust as necessary, following the manufacturer's instructions for mixing. Malathion or Diazinon are good general-purpose insecticides for tomatoes. If spider mites are a special problem, use Kelthane. If flea beetles and spotted cucumber beetles are a special problem, use Methoxychlor. Do not apply insecticides within two days of harvest.