

VEGETABLE PRODUCTION SERIES

PEPPERS

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Small Fruit and Vegetables Production

(Based primarily on research work of the Virginia Truck Experiment Station, Norfolk, and VPI Horticultural Research Farm, Blacksburg.)

SOILS:

Peppers can be grown on any good garden or truck crop soil. They are grown successfully on soils ranging from fine sands to clay and silt loams. Good soil preparation is essential to the production of a profitable crop. Prepare a firm, well-fitted area free from clods, air pockets, and weeds. The soil must be well-drained. A cover crop should be grown prior to the pepper crop. Sod land is good if a recommended soil insecticide is applied, broadcast or in transplant water, for control of cutworms.

VARIETIES: (Type: mild-fleshed, dark green when immature, turning to brilliant red when mature)

FOR FRESH MARKET:

Midway (about 75 days from field setting) is resistant to tobacco mosaic virus. Has a concentrated fruit set over a wide temperature range. Fruit are of good size, blocky, and 4-lobed. Productive over long picking season. Average size of 3-1/2" to 4" long, and 3" to 3-1/2" in diameter.

Keystone Resistant Giant (about 74 days from field setting) is resistant to tobacco mosaic. It produces a large number of fancy fruits, mostly 4-lobed with thick, sweet flesh. Fruits are 3 to 3-1/2" across at the stem and 4 to 4-1/2" long. Plants have abundant foliage.

Yolo Wonder B (improved strain) (about 74 days from field setting) is resistant to tobacco mosaic. Fruits are 3 to 3-1/2" in diameter and 4" long, mostly 4-lobed, and upright. Fruit flesh is thick, firm, glossy, and an attractive green.

Calwonder, Early (Selected strain of California Wonder) (about 75 days from field setting) is NOT resistant to tobacco mosaic. A large-fruited variety, grades out well; plants are stocky, highly productive over a long period. Fruits are 3-3/4" and 4-1/4" long, 3 or 4 lobes, and glossy green. Flesh is thick, with a mild, sweet flavor.

FOR PROCESSING:

The varieties grown should be those specified by the firm purchasing the peppers. Many times, it will be one of the above varieties.

FERTILIZING

On sands and sandy loams, use 500 lbs. of 10-10-10, broadcast and disked in before planting. On silt and clay loams, use 600 lbs. of 5-10-10 per acre. Avoid using heavy applications of manure or high-nitrogen fertilizers which promotes excess plant growth and poor fruit set.

When several fruit have set, sidedress with 30 lbs. per acre of nitrogen ONLY IF plant growth and leaf color indicate a need for additional nitrogen. Use of 20-0-20 or 14-0-44 (150 and 200 lbs./acre, respectively) may improve yields and quality.

LIME REQUIREMENTS

The best pH range is 6.0 to 6.5. Do not guess at the amount of lime to apply. Be guided by a soil test made several weeks prior to setting the crop, or even the fall before. Apply 1/2 the lime and fertilizer before plowing and the rest before disking down the field. Run disks several times to promote complete mixing in the plow layer.

PLANTING

Pepper plants should be grown in hotbeds or greenhouses for early plantings; for late planting, they may be produced in coldframes, or outdoors in Eastern Virginia. DO NOT seed cold frames as early as for tobacco or tomatoes. Temperature should not get below 60°F. at night after peppers are up. Seed will not germinate in cold soil. In Western Virginia use of greenhouse grown transplants is recommended.

Time-Pepper seeds require from 8 to 12 days to germinate. About 7 to 8 weeks are required to grow plants from seed suitable for setting in the field. For an early crop, plants should be set in the field after all danger of frost is past and the ground is warm. This means LATE May in Western and SW Virginia, earlier in Eastern Virginia. For late crops set plants at a time that will assure maturity at least 3 to 4 weeks before the first average frost date.

Spacing-Set the plants 1 to 1-1/2 feet apart in rows 3' apart. Recent experience, even with hybrids, suggests a 1' x 3' spacing, or 14,520 plants per acre, gives higher yields, than wider spacing. Many growers have been able to get 2 pounds of good peppers per plant, or about 7 peppers per plant, for 14 tons per acre yields or better, in good seasons.

Method-Transplanting at best is a shock to the plant. Transplant with a plant setter, or by hand, using water and a starter solution. Handle plants carefully to avoid injury. Use of water soluble fertilizer in the transplant water is highly recommended. Peppers respond to starter solution even better than most vegetable crops. Dissolve 2 to 3 lbs. of 10-52-17, 10-40-10, or similar material in 50 gallons of water and apply 1/2 to 1 pint of this starter solution around each plant immediately after setting.

Cultivating-Should be shallow and often enough to control weeds. DO NOT CULTIVATE DEEPLY NEAR PLANTS, NOR WHEN FOLIAGE IS WET WITH DEW. Peppers have a small root system, and any damage will reduce yields. Any handling of wet plants may spread diseases.

DISEASE CONTROL

Practice general sanitary measures such as: Use disease-free plant beds located away from woods and fence rows where weed hosts may harbor diseases. Rotate with crops other than tomatoes, potatoes, eggplant, and tobacco. Select a field that is not near these crops, and that has good soil and air drainage. LOW, BOTTOM LAND IS USUALLY A POOR SITE FOR PEPPERS, because of more disease problems, and because residual fertility from past crops may be too much for peppers, causing excess plant growth and poor pod set. Do not use tobacco when handling pepper plants since this may spread tobacco mosaic. Dipping hands and plants in whole or reconstituted milk when setting plants will help control mosaic virus since milk kills the virus. Use resistant varieties, especially if you or any of your workers use tobacco. Practice a preventative control program to keep out insects, particularly aphids and European Corn Borer, and for disease such as Bacterial Spot and Anthracnose. After first fruit has set, a regular 7 day spray program should be followed. For latest approved chemical controls, including weeds, contact your county extension agent.

HARVESTING

Harvest when fruit is at best marketable size and color. The seeds should be mature and all the fruit should be the same color. Break fruit from the plant, leaving the stem attached. Harvest often enough to keep all mature fruit removed from the plant. Usually this will mean once per week for fresh market harvest, and once every 2 weeks for processing. Remove damaged and poorly shaped peppers and leave them behind when they go to the fresh market. Wipe off loose dirt, trim stems to the level of the shoulders, and pack in baskets. The net weight of a bushel of peppers is about 25 lbs. Keep shaded and cooled then move to market as soon as possible to prevent loss.

STORAGE

Peppers for fresh market may be stored 2 to 3 weeks at a temperature of 45 to 50°F. Keeping at lower or at higher temperatures causes rapid breakdown. Storage or shelf life of peppers may be increased by waxing and storing in perforated polyethylene plastic-lined containers. ONLY SOUND, FIRM PEPPERS SHOULD BE STORED.

LABOR

Studies by the USDA and University of Kentucky indicate total labor requirement from time to field setting plants to last of harvest, is about 200 hours per acre. About 60-70 hours of this is spent in harvesting, more for fresh market. Harvest will often run June-July in Eastern Virginia, and August-October in Western and SW Virginia. This crop fits well into some small family farm operations, because each adult family member can usually handle about 1 acre, if the family has had experience with similar row crops and has few other jobs competing for their time.

FOR FURTHER READING

See USDA Agricultural Information Bulletin #276, Pepper Production, 39 pages

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