

PEPPER PRODUCTION (Bell, Small Fruit and Pimento)

Douglas C. Sanders, Extension Horticultural Specialist
Charles W. Averre, Extension Plant Pathologist
Kenneth A. Sorensen, Extension Entomologist

By following the steps listed below you will be able to produce earlier peppers with higher yields and better quality. (For more complete information, consult Extension bulletin AG-387, *Commercial Pepper Production in North Carolina*.)

PLANTS AND PLANT BEDS

(See AG-337, *Production of Commercial Vegetable Transplants*, for more detailed information.)

1. The following varieties have performed well in North Carolina:

Bell -- Keystone Resistant Giant Strain 3 (71 days), Yolo Wonder L (80 days), Capistrano (76 days), Hybelle (70 days) (mountains only), Bell Captain (70 days), Camelot (74 days), King Arther (75 days), Murango (72 days) and Gatorbelle (71 days). The latter 6 are hybrids with superior yields.

Small fruit -- Banana Supreme (70 days), Hy-Fry (60 days), Biscayne (70 days), Key Largo (62 days) Cubanella (65 days), Gypsy (60 days), Hungarian Sweet Wax (68 days). Hot -- Red Cherry (78 days), Red Cherry (Small) (75 days), Red Cherry (Large) (75 days) (may be too large), Anaheim Chili TMR 23 (75 days), Early Jalopeno (63 days), Hungarian Yellow Wax (68 days).

Pimento -- Pimento Select (73 days), True Heart Perfection (80 days).

2. Obtain certified seed produced under disease conditions of the arid, western part of the United States. Soak seed in 1.05% sodium hypochloride (1:4 bleach solution) for 40 minutes under constant agitation or use an aquarium aeration stone. One gallon of this solution treats one pound of pepper seed. Then, rinse seed with vinegar, and then water. This will reduce bacterial spot disease. All seed should be treated with a chemical dust (Arasan or Thiram 50) before planting. If plants are purchased, be sure they have been certified. Several serious diseases can be brought in on seed or plants. Serious insect pests can also be introduced on transplants.
3. Locate plant beds in a convenient place. Use a rich, well-drained soil that does not cake, pack or crust easily. Sterilize soil with fumigant. Follow details of soil fumigation carefully according to the label. (See *Plant Pathology Information Notes 69 and 170*).
4. Use ¼ pound of plant bed fertilizer (such as 12-6-6) per square yard. Also use ¼ ounce of seed per square yard of plant bed. Sow seeds ½ inch deep, in rows 4 to 5 inches apart, with 8 to 12

Distributed in furtherance of the Acts of Congress of May 8 and June 30, 1914.

Employment and program opportunities are offered to all people regardless of race, color, national origin, sex, age, or disability.
North Carolina State University,
North Carolina A&T State University, U.S. Department of Agriculture, and local governments cooperating.



**North Carolina
Cooperative Extension Service**

NORTH CAROLINA STATE UNIVERSITY
COLLEGE OF AGRICULTURE & LIFE SCIENCES

seeds per foot of row. Overcrowding is one of the biggest problems with the development of stocky plants. Sow seed 8 to 10 weeks before plants are to be set in the field. Water bed thoroughly and uniformly after seeding. Approximately 1500 to 2000 plants can be produced from each ounce of seed planted properly.

5. If “damping-off” appears, drench plant bed with a fungicide* (according to manufacturer’s directions). Spray or dust with fungicide if blue mold appears in plant bed. Damping-off and mold should not be problems if the bed was fumigated, is well-drained, and well-ventilated.
6. Water plant beds thoroughly when needed. Watering in the mornings will allow foliage to dry off more rapidly and thus reduce the spread of diseases.
7. Prior to pulling, spray the plant bed with an antibiotic* and fungicide* as directed on the label. If bacterial spot appears, avoid using plants from the bed, but if they must be used, spray weekly with a mixture of copper and streptomycin sulfate.
8. To control Mosaic, avoid use of tobacco or wash hands with soap and water before handling plants. Control insects in plant bed and field to prevent mosaic spread. (See *Plant Pathology Information Note 186.*)

IN THE FIELD

1. About 7 to 10 days before transplanting, begin hardening the plants by limiting water and exposing them to wind and sun. Water the plant bed thoroughly a few hours before the plants are to be pulled.
2. Select a well-drained, easily worked loamy or sandy loam soil. Do not select a soil that had cotton, tobacco, eggplant, peppers or Irish potatoes the previous year. Practice crop rotation to control rootknot, bacterial spot, and other diseases. Soil samples should be taken in the fall to determine fertilizer needs and if fumigation for nematodes is necessary. Take a small amount of

soil to a depth of 8 inches, from 8 to 10 locations in the field and mix this soil thoroughly. Then put a cup of this soil in a plastic bag for nematode analysis and another cup in a fertility sample box for determination of fertilizer and lime needs. Soil pH for pepper should be 6.0 to 6.5, lime will allow your peppers to use fertilizer more readily: Lime pays!

3. Be sure that the land is plowed early and deep to insure that trash and other organic matter are well-rotted. Plowing under green manure cover crops early will result in increased yields.
4. Use a row width convenient for cultivation (3.0 to 3.5 feet). Transplant plants 12 inches in the row (about 12,500 plants per acre). Cultivation may not be necessary with a good herbicide program. Recently, use of black plastic and 2 rows (12 inches apart) on beds with 5 foot centers has doubled yields. (Drip irrigation is necessary for plastic mulch.)

Pimento pepper require spacings of 18 to 24 inches in rows spaced 42 inches apart, because of their greater vigor.

5. Apply recommended chemicals for weed control.* Follow directions on the label. For best results use both planting and post-planting herbicides.
6. Apply the recommended fertilizer in 2 bands, each located 3 inches to the side and 2 to 3 inches below the plant roots. On average soils, 400 pounds of 10-20-20 per acre should be used (if soil was not tested). Where banding is impossible, mix the fertilizer thoroughly with the soil before ridging since peppers are very susceptible to fertilizer injury. Apply 20 pounds of actual nitrogen per sidedress. Sidedress 2 to 3 times, starting 2 weeks after planting. Pimentoes will require a third sidedressing.
7. Transplant in late afternoon or on cloudy days to prevent wilting. If soil is low in phosphorus use a soluble starter fertilizer in transplant water.

8. Cultivation should be done only when necessary to control weeds, usually every 10 days. The cultivations should be shallow. Don't permit machinery to touch the plants since this will injure the plant and spread diseases. If herbicides were used, cultivate only if necessary.
9. If bacterial spot appears in the field, spray with a copper fungicide every 7 days as indicated on the label. Complete coverage of the leaves is necessary. Sprayer should have at least 3 drop nozzles per row and 200 pounds of pressure. Airblast sprayers can also be used. (See *Plant Pathology Information Note 162*.)
10. Foliar applications of insecticides* may be necessary on a weekly basis after mid-June. Corn earworms, maggots, armyworms, as well as corn borers, are especially troublesome later in the season. Use black-light insect traps or sex pheromone traps to monitor insect populations. Also, scout fields regularly for insects and their damage and use management tactics.
11. If *Cercospora* leaf spot appears in the field, spray or dust with a fungicide.

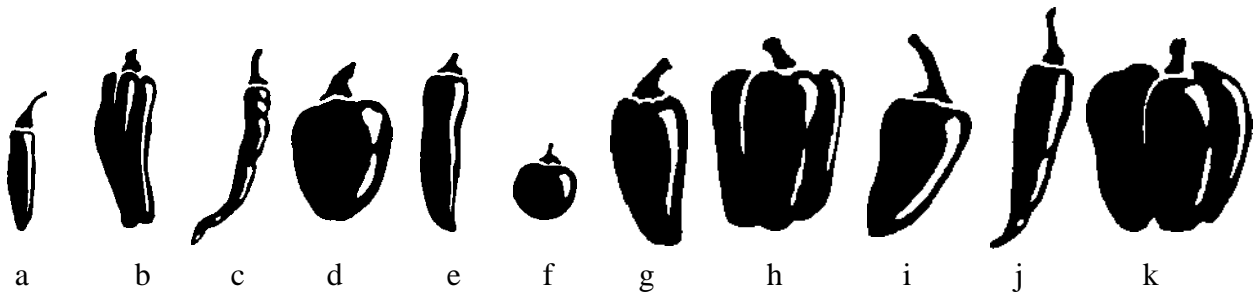
12. Harvested peppers should be kept cool to retard spoilage and removed from the field soon after harvest. You should consider refrigeration prior to loading on transfer trucks. Forced air cooling has reduced in-transit losses by cooling peppers rapidly and reducing bacterial action.

Ten Steps to Profitable Pepper Production

1. Use well-drained soils.
2. Soil test for fertilizer and nematodes.
3. Lime to pH 6.5.
4. Apply fertilizer carefully.
5. Use only disease- and insect-free plants that have not been crowded.
6. Use good weed management practices.
7. Plant carefully to get good stands.
8. Sidedress 2 to 3 times.
9. Control corn borer and other insects.
10. Cool fruit soon after harvest.

* Consult the most recent edition of the *N.C. Agricultural Chemicals Manual* or your county extension agent for pesticide recommendations.

Types of peppers:



- | | | |
|-----------------------------|--------------------|-----------------|
| (a) seranno | (e) Anaheim chile | (i) Ancho |
| (b) cubanelle (frying type) | (f) cherry | (j) banana |
| (c) cayenne | (g) Jalapeno | (k) blocky bell |
| (d) pimento | (h) elongated bell | |