

**COLLARD PRODUCTION**

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The collard is a cool season crop that should be grown during early spring or fall. The mature plant will withstand frosts and light to medium freezes. It is one of the most popular garden vegetables in the south and is rapidly becoming a delicacy in northern states as well. Collards provide a good source of vitamins and minerals. For additional information, consult Extension Bulletin, AG-487, *Commercial Cabbage, Broccoli, Cauliflower and Greens*.

**Soils** - Collards may be grown in a variety of soils. Heavier loamy soils will produce the greatest yields. The lighter, well drained, sandy soils are best for early spring crops. Soils should be well drained, rich in organic matter and have a pH of 6.0 to 6.5.

**Fertilizer** - Leafy vegetables require quick, continuous growth for best quality. They need ample nitrogen for good green color and tender growth. Soil testing is recommended. For average soils, use 600 pounds of 10-10-10 (or equivalent) fertilizer per acre (8 pints per 100 feet of row) before planting. Sidedress with 15 to 30 pounds of nitrogen per acre (one pint of nitrate of soda per 100 feet of row), 3 to 5 weeks after the seed comes up or after transplanting, and 2 to 3 weeks after that.

**Varieties** - Plant Vates, Carolina Improved Heading (or Morris), Georgia Southern,

Blue Max, or Heavi crop. These varieties have consistently done well in North Carolina conditions.

**Cropping Systems** - There are four general ways to produce collards.

1. Grow plants and set transplants in early spring, and harvest the whole plant 50 to 60 days later.
2. Grow plants and transplant in early spring, and market cropped leaves in late spring, and carry plants over to fall when the entire plant is harvested.
3. Seed direct about August 15, or transplant from September 1 to 15, and harvest in late October to December.
4. Seed direct to field in spring. These may be harvested as leafy greens or thinned to 15 to 18 inches and carried over to fall. Requires about 1½ pounds of seed per acre.

**Growing Plants** - Plants may be grown by seeding directly in the field (1 to 2 pounds seed per acre) or in protected beds (1 pound of seed per 1000 square feet). This should produce about 50 to 60 thousand plants or enough for about 4 to 5 acres. About 6 to 8 weeks will be required to produce plants ready for transplanting.

**Direct Seeding** - There are several good precision seeders on the market. In

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general, the seeders reduce seed use by 40 to 70%. The stands are much more uniform and require very little thinning. Uniform stands are easier to grow and harvest, thus reducing the cost of production. Uniform stands grow evenly and are better weed competitors. Precision seeds that can be used with collards include StanHay (belt type), Gasparado and StanHay (vacuum type), and Nibex (spoon type). Direct seeding can also be done with a Planet Jr., but requires more seed and more thinning than stands established with precision seeders. Seed should be placed in moist soil usually  $\frac{1}{2}$  to  $\frac{3}{4}$  inch deep, but never deeper than 1 inch. If adequate moisture for germination is below  $\frac{3}{4}$  inch, irrigation should be applied. Frequent irrigation is also important in obtaining good stands in hot weather ( $\frac{1}{4}$  inch per day at midday).

**Spacing** - Spacing depends on how the crop will be produced. If the plants are to be cut when half grown, they may be spaced 10 to 15 inches apart. If they are to be harvested when full grown they should be spaced 15 to 18 inches apart. If the seed is to be drilled in the row and the young collard plants are to be harvested, similar to mustard greens, the plants may be 2 to 4 inches apart. Rows should be 36 to 42 inches apart for conventional systems. However, multi-row beds of 2 to 4 rows on 38 to 60 centers provide greater yields and improved quality. In such a system, rows on each bed are spaced 12 to 18 inches apart. This provides rapid ground cover, fewer weeds and more tender growth.

**Irrigation** - Collards, like other members of this plant family, require above average moisture. Use irrigation liberally in times of moisture stress, usually 1.5 inches per week when precipitation is less than this.

**Weed Management\*** - The production method you use and the season you plant the crop will determine the kind and extent of your weed problems. Chemical herbicides are available for use on collards and are generally recommended. Whether you use a herbicide or not, some cultivation will likely be necessary. Avoid deep cultivation. Close spacing and rapid growth will help to suppress weeds.

**Insect Management\*** - Several worms (imported Cabbage worm, Cabbage looper, Diamond-back larvae) and Harlequin bugs are the predominate insects. A rigid control program will be necessary, especially during summer and fall. Aphids are also a

serious problem during cool weather. Use high pressure (200 psi) sprayers and a sticker to provide best control.

**Disease Management\*** - Some diseases like black rot are seed borne. You should insist on western grown, chemically treated seed to reduce this disease. Another major disease is Downy Mildew which produces discolored spots on the leaves. The Carolina variety has resistance to one or more strains of Downy Mildew. Refer to the *N.C. Agricultural Chemicals Manual* for chemical recommendations.

\* For all chemical recommendations check the latest issue of the *N.C. Agricultural Chemicals Manual*.

**Harvesting** - Harvesting may be:

1. Cutting entire plants when very young, similar to mustard greens (spaced 2 to 4 inches apart). Successive cutting can be done with these systems.
2. Cutting entire plants when about half grown (spaced 10 to 15 inches apart). These are tied in bunches of one to three plants with a rubber band, twist-em or string.
3. Cutting entire plants when full grown (spaced 15 to 18 inches apart).
4. Harvesting tender leaves from full grown plants. When marketed these leaves are tied in one-or two-pound bunches.

Check with your buyer to see how they would like the product packaged. Local sales can often be made in bulk, but distant shipments and supermarket sales will have to be placed in crates or cartons. Icing will also be necessary for quality maintenance.

### Steps to Successful Collard Production

1. Use crop rotation.
2. Lime to pH 6.0 to 6.5.
3. Test soil.
4. Plant to meet market expectations and desires.
5. Have transplants inspected for black rot.
6. Space plants for the desired harvest and marketing method.
7. Use precision seeding.
8. Control weeds.
9. Manage pests.
10. Pack with ice.