

College of Agriculture & Life Sciences  
Department of Horticultural Science

## GREENS FOR MARKET

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Leafy greens, such as turnips, mustard, collards, kale, and spinach are cool season crops. They should be grown during early spring or fall for maximum yields and quality, but this season can be extended if markets warrant. Kale and spinach can withstand temperature into the upper teens and are often harvested through winter in the east. The other greens may withstand medium frosts. (For more complete information, consult Extension bulletin AG-487, *Commercial Cabbage, Broccoli, Cauliflower and Greens.*)

**Soils**— Greens may be grown on a variety of soils. Loams will generally produce the greatest yields but for early spring growth and overwintering, sandy loams are best. Soils should be well drained, rich in organic matter and thoroughly tilled. A pH of 6.0 to 6.5 is desirable for all of the greens except spinach, which thrives best in a soil pH 6.5 to 6.8.

**Fertilizers** — Leafy vegetables require quick, continuous growth for best quality. They especially need nitrogen for good color and tender-ness. Follow soil test results. For the average soils, use 600 lb of 10-10-10 fertilizer per acre before planting. Sidedress with 15 to 30 lb of nitrogen per acre 3 to 5 times after seeding or transplanting.

**Culture** — Weeds must be controlled by cultivation or with chemicals. Shallow cultivation is a must. Use a rolling cultivator or bunting cultivator. Irrigation is essential, especially for the fall crop, since leafy

vegetables require adequate moisture for continuous growth and high quality.

**Insects** — Cabbage worms, loopers, and aphids, are major insect pests. Once aphids become established, they are difficult to control. A frequent program will be necessary throughout the production season. Insect problems are much worse in fall crops.

**Harvesting** — Harvest only healthy and well-formed plants, roots, or leaves. Remove all dis-colored or damaged leaves. When bunching, use rubber bands, tape, raffia, or similar material and make sure bunches are tied tightly and neatly. Wash thoroughly in clean water to remove sand and dirt.

If weather is warm, and hauling distance is over 50 miles, crushed ice should be used to retain quality. Greens have a high respiration rate, so decay of leaves may start immediately after harvest. Put crushed ice in the middle and on top of each crate. When packing loose in bulk, put crushed ice on top of the stack. In hauling to market use a closed truck or cover the load with a tarpaulin to prevent drying and wind damage.

**Turnips** — Grow Purple Top White Globe variety when roots and tops are desired. Grow Seven Top or Shoegoin for tops only. Plant rows 12 to 18 inches apart. Space plants 1/2 to 1 inch apart for tops, or 2 to 3 inches apart for roots. One to 1.5 lb of seed

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will plant one acre. Harvest turnips when tops are 4 to 8 inches high. Leaves may be cut above or below the crown and tied in 1- to 2-lb bunches or sold loose in bushel hampers. Pull roots when 2 inches in diameter and tie 4 to 6 uniform sized roots in a tight bunch.

**Mustard** — Grow Southern Giant Curled or Tendergreen (Mustard Spinach) varieties. Plant rows 12 to 30 inches apart, and plants 1 to 4 inches apart. One to 1.5 lb of seed will plant one acre. The whole plant may be cut off or the individual leaves may be harvested. Mustard is sold loose in hampers or tied in 1- to 2-lb bunches.

**Collards** — Plant the Vates, Morris Heading, or Carolina varieties. Spacing depends on how plants will be harvested. If seed is drilled in the row and the young collard plants are to be harvested, similar to turnip greens, the rows may be 12 to 18 inches apart and the plants 2 to 4 inches apart. If "head collards" are grown, the rows should be 18 to 35 inches apart and plants set or thinned to 12 to 18 inches apart in the row. For transplants about 4 oz. of seed are required for an acre. About 2 lb is required for direct seeding. For spring collards, do not use young plants that have been in the open field all winter because they will often go to seed very early. Seed may be planted in protected beds in late winter for transplanting in early spring; seeded in the row in late winter and either cut as young greens or thinned; seeded in the row in late

spring to mid-summer to be either transplanted, thinned, or left just as they were seeded and cut for young greens.

**Spinach** — Plant Chesapeake, Hybrid #7, Tyee, Melody, or Old Dominion varieties. Rows should be 12 to 18 inches apart. Plants should be 1 to 4 inches apart, if young plants are to be harvested. If older plants are to be harvested, plant 3 to 6 inches apart. Ten to 12 lb of seed are required to seed one acre. Spinach may be harvested when 6 or more leaves have been formed. Cut the tap root with a knife or hoe just below the lower leaves for selling the entire plant. Cut  $\frac{1}{2}$  to 1 inch above the ground for loose leaves. Spinach may be sold loose in hampers, in bags, or in 1- to 2-lb bunches.

For more information see bulletin AG-487, "*Cabbage, Broccoli, Cauliflower and Greens Production in NC*".

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### Planting Dates for Greens

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Region	Spring	Fall
Coastal Plain	Feb. 1 - April 15	Aug. 1 - Sept. 15
Piedmont	Feb. 15 - April 30	July 15 - Sept. 15
Mountains	March 1	Aug. 15

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