

SOIL TEST INFORMATION SHEET NO. V-310

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Cabbage, Cauliflower and Broccoli

1. These crops are sensitive to strongly acid soils, pH below 5.0. Production may be reduced if soil pH is not raised by liming. Apply agricultural limestone if soil pH is below 5.5. On soils low in magnesium, dolomitic limestone should be used. Apply lime 2 to 6 months ahead of planting.

“Tipburn” occurs on cabbage when inadequate calcium is available to the plant. Symptoms are not usually visible from the outside, but affected heads that are cut open exhibit edges of the internal leaves that are brown. This is related to calcium deficiency aggravated by high soil fertility and high temperatures. “Brown bud” of broccoli occurs usually when temperatures are high. Flower buds (heads) of broccoli turn brown as they approach maturity. The problem is associated with calcium nutrition and rapid growth.

Boron deficiency may occur on these crops if soil pH is extremely low (pH below 5.0) or extremely high (pH above 6.8). Boron deficiency is characterized by hollow stems. Usually the head or stems must be cut open to see the damage. High temperatures, combined with high levels of nitrogen and large stems, are associated with this disorder. Wide spacing of plants may also contribute to the problem. Apply 1 to 2 pounds actual boron per acre in fertilizer to avoid boron deficiency where anticipated. Foliar application of 1 to 1½ Solubor\100 gallons. Always apply foliar treatments in the early morning hours to the underside of young rapidly growing plants for best results. Generally 2 or 3 applications 7 to 10 days apart are sufficient to avoid boron deficiency.

Molybdenum deficiency occurs occasionally on cauliflower. It is most common on soils with a pH below 6.0. Edges of affected young leaves turn inward, turn yellow and then turn brown. Generally 2 or 3 applications of sodium molybdate (3 oz/A) 7 to 10 days apart are sufficient to avoid molybdenum deficiency.

2. Apply about ½ the total nitrogen required, 50 to 75 pounds per acre, and all of the phosphorus and potassium fertilizer before seeding or transplanting. Band application is usually more efficient than broadcast applied fertilizer. Fertilizer bands should be placed below and to the side of the seed or transplant to avoid fertilizer burn. On double drills, each drill should have its own fertilizer placed 3-4 inches below and 2-3 inches t the side of each seed drill.
3. Either solid or liquid sources of fertilizer may be used.
4. Apply two or three side dressings of nitrogen to broccoli and cabbage at the rate of 50 to 75 pounds per acre beginning three to four weeks after seeding, two to three weeks after transplanting or when largest leaves are 2-4 inches across. Additional sidedressing should be made 10-14 days apart. The higher rates should be used on double drill culture.
5. Apply one or two sidedressing of nitrogen to cauliflower at the rate of 50 to 75 pounds per acre beginning three to four weeks after seeding, two to three weeks after transplanting or when largest leaves are 2-3 inches across. Additional sidedressing should be made 10-14 days after the first. Over fertilization of cauliflower with nitrogen will result in poor quality heads.
6. Cole crops grown with drip irrigation can be sidedressed by injecting nitrogen fertilizer with the irrigation water. This process is called fertigation. Apply 10-12 pounds of nitrogen per acre per week. Start fertigation 2-3 weeks after planting and continue for 10-12 weeks.

7. Contact your county agent for additional information and help in your fertilization program. The agent also receives a copy of this report for the parish office files.