

LIME RECOMMENDATIONS

Your Soil Test Report contains information on the amount of lime needed to adjust the pH of the soil to 5.5-6.0 for optimum tobacco production. Lime application according to soil test will lower the soil acidity and reduce exchangeable aluminum and manganese, both of which can be toxic to plants. It will also increase the absorption of phosphorus and other nutrients and increase the supply of calcium and magnesium.

Lime is never suggested for tobacco except when a soil test indicates there is a need. Tobacco fields should not be overlimed because of the possibility of increasing certain disease problems (black root rot and black shank) and causing an imbalance of certain micronutrients.

FERTILIZING TOBACCO PLANT BEDS

Apply 50 - 75 pounds of 12-6-6 fertilizer per 100 square yards and disk into the top 2 to 3 inches of soil.

ADDITIONAL INFORMATION

For more information, contact your local Virginia Cooperative Extension (VCE) office or access the Internet and connect to VCE's web site at <http://www.ext.vt.edu>.

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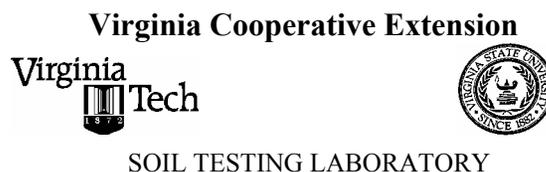
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Soil Test Note 7: Dark-Fired Tobacco (Supplement to Soil Test Report)

FERTILIZER RECOMMENDATIONS

Your Soil Test Report contains information on the basic amounts of nitrogen, phosphorus, and potassium required for optimum growth of dark-fired tobacco according to the information you provided on the Soil Sample Information Sheet and the results of the laboratory tests. In making the recommendations, average soil and weather conditions and the use of high-level management practices are assumed.

An example of the grade or grades of fertilizer that will fit the nutrients recommended is contained in the report. Other grades or combinations of grades that are available locally may be used if desired in meeting the crop's nutrient needs.

It should be noted that your past experience should be a major consideration in arriving at the final fertilizer rates to use.

Do not apply excessive amounts of fertilizer indiscriminately. There has been a tendency for tobacco growers to use much higher rates of nitrogen, phosphorus, and potassium than can be expected to give profitable returns.

HIGH ANALYSIS FERTILIZERS

The analysis of a fertilizer gives the percent of the different nutrients in the material or mixture.

Two fertilizer grade ratios have been available for use on tobacco in Virginia—1:3:3(3-9-9) and 1:2:3(4-8-12, 5-10-15, 6-12-18, and 8-16-24). When used at comparable rates, the 1:3:3 ratio will supply more phosphorus, but, since this extra phosphorus usually is not needed, there is seldom justification for using it over the 1:2:3 ratio mixtures.

The cost per unit of nutrient in a high-analysis fertilizer is generally less than in lower-analysis grades. It is also less expensive for growers to handle the higher-analysis grades since they are used at lower rates.

FERTILIZER APPLICATION

Fertilizer should be placed in the soil so that it will not be in direct contact with the roots of newly set plants. Fertilizer injury is frequently the cause of poor stands and irregular crops. The two general methods of applying fertilizer are broadcast and row placement. Each has a place in the fertilization of dark-fired tobacco. On the heavier soils (e.g., Cecil, Lloyd, etc.) that have been well managed, all of the fertilizer can be broadcast and plowed or disked-in with good results. On the lighter textured soils (Appling), and soils testing Low to Medium in phosphorus and potassium, a part of the fertilizer should be placed in the row. If band placement equipment is available, place the fertilizer in two bands 8-10" apart and slightly deeper than the plant root crowns. Since it is difficult to set the transplants between the bands when the fertilization and transplanting operations are done separately, a combination fertilizer distributor-transplanter is recommended. If band placement equipment is

not available, place the fertilizer so that it will be 3-5" below the root crown.

SIDEDRESSING

Many dark-fired tobacco producers choose to apply all the fertilizer preplant and do not sidedress at all. This is generally acceptable on heavier textured soils where leaching losses are minimal. However, compounds present in fertilizers are relatively soluble in soil water; therefore, the salt concentrations surrounding fertilizer bands may be high enough to injure plants if all the required fertilizer is applied in the row before planting. Many growers choose to apply a part of the fertilizer at planting time and the remainder as a sidedressing after planting. On lighter textured soils, this is a good practice to insure that the fertilizer is not leached from the soil too rapidly. Nitrogen can be lost easily by leaching from sandy soils, and sidedressing a portion of the nitrogen application and adjustments for leaching are often necessary.

Tobacco should be sidedressed early—i.e., during the first two or three weeks that the tobacco is in the field. This will insure that sufficient nutrients are available for the crop just before it normally makes its most rapid growth (this period is generally during the second month the plants are in the field).

Research has shown that there is no advantage to sidedressing with fertilizers containing phosphorus. The most commonly used sidedressing materials are nitrogen fertilizers such as ammonium nitrate or fertilizers containing both nitrogen and potash (e.g., 15-0-15, 8-0-24, etc.). It is very important that nitrogen fertilizer used as a sidedressing contain at least 50% nitrate-nitrogen.