Variations in stands of plants of hemp do not necessarily indicate corresponding differences in total tonnage of hemp stalks per acre of ground. Experiments reported by Herzog, together with unpublished data collected by the U. S. Dept. of Agriculture, have shown that sowings of 3, 4, and 5 pecks per acre resulted in no significant differences in yields of stalks. However, the thicker rates of seeding produced more plants and plants with smaller diameter stalks and higher fiber content. It is well recognized that the percentage of fiber in relation to wood in thin stems is greater than in thick stems. The increase of fiber under normal conditions between sowings of 3 to 5 pecks of seed per acre may amount to approximately 50 to 100 pounds more fiber per acre. This increased return makes it evident that seed treatment in addition to providing a saving in outlay for expensive seed may insure more productive yields of fiber per area of ground.


A METHOD FOR INOCULATING SMALL LOTS OF LEGUME SEED

When seed treatment studies involving several leguminous plants were begun at the Alabama Agricultural Experiment Station in 1940, certain results were obtained that suggested a time-saving method for the inoculation of numerous small lots of seed. The method proved so effective that it is now being used in the legume breeding nurseries at Auburn whenever inoculation of the seed is deemed advisable. It is also possible, by this method, to use legume inoculants in combination with seed disinfectants ordinarily considered to be lethal to root nodule organisms.

The method developed dispenses with the ordinary direct application of the inoculant to the seed. Rather, it is an indirect method involving the incorporation of commercial legume culture into finely-ground stable manure and application to the plot rather than to the seed.

A small-sized package of culture (for 100 to 120 pounds of seed) was thoroughly mixed into 300 pounds of well-composted, finely ground stable manure. The mixture was usually sacked and allowed to stand for 1 or 2 days, but it has been used effectively immediately after mixing or as long as 1 week after mixing. In the case of row crops, the inoculated manure was evenly applied to open furrows at the rate of 300 pounds per acre. The seed was dropped into the row directly in contact with the inoculated manure and covered. Small seed, such as crimson clover, was mixed into the inoculated manure and broadcast onto the plot prior to raking in or cultipacking. The crimson clover yields reported in Table 1 were obtained from plots sowed with seed treated in this manner.

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