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There has recently been some mention in the agricultural press of the difficulty of obtaining infected alfalfa soil for use in the inoculation of alfalfa fields.

The Illinois Experiment Station is furnishing infected alfalfa soil to farmers in all sections of the State, as was announced last year in our bulletin No. 76, "Alfalfa on Illinois Soil," a second edition of which is now in press and will be sent to any one free of charge upon application.

We furnish this soil in grain bags delivered to the railroad freight houses of Champaign or Urbana for fifty cents a hundred pounds to cover cost of collecting, drayage, and bags. Remittance is best made by post office money order or Chicago bank draft. Personal checks are not accepted.

Orders should be placed at least two or three weeks before the soil is wanted, as weather conditions may make it impossible to collect the soil promptly and get it in suitable condition for shipping.

We advise using at least 100 pounds of infected soil to the acre. Definite trials on large areas have shown that this amount is sufficient to produce a very satisfactory inoculation. The soil should be scattered over the field with some degree of uniformity; but it is not like seeding grain and it is not absolutely essential that every square yard in the field should receive its due portion of infected soil. Some
care should be taken in spreading it over the higher places in the field, but if places should be missed on sloping land or on lower lying lands the bacteria will soon be carried over them by surface drainage waters; indeed, if all the water sheds in the field (that is, all ridges and high places) are well inoculated, the entire field will ultimately become infected, the bacteria being carried by soil washing; but the infection is more rapid, of course, if the infected soil is spread over the entire field with some degree of uniformity when it is first applied.

If possible the soil should be applied at about the time the alfalfa seed is sowed and then harrowed in with the seed; but it may be applied a month or two before sowing the alfalfa or at any time afterward and it is not absolutely necessary that it be harrowed in, although that is advisable.

If applied to a field where the alfalfa is already a year or two old, the infected soil may be mixed with the soil of the field by harrowing or disk ing (the disks being set straight so as not to cut off the alfalfa roots) preferably early in the spring or after a cutting has been made.

The infected soil may be applied in any way to get it over the field,—as by hand (throwing it from the wagon), with an end-gate seeder, if the soil is dry enough and sufficiently well pulverized, or in any other way which may be found convenient.

The results obtained during the past year (as will be shown in the second edition of Bulletin No. 76) fully confirm the results previously reported by this Station concerning the importance and value of inoculation for alfalfa. The information which we now have strongly indicates that if it is provided with the proper bacteria, alfalfa can be successfully grown on any soil where both corn and red clover are successful crops.

Where there is difficulty in obtaining a good stand and luxuriant growth of red clover, the soil is probably acid and should be treated with lime or ground limestone; and on soils which are deficient in phosphorus an application of fine ground steamed bone meal, or some other non-acidulated phosphorus fertilizer, will be found profitable. Farm manure which is of such benefit to the corn crop, has but very little value for alfalfa on most Illinois soils, when free from acidity and well provided with the alfalfa bacteria, as will be seen by reference to Circular No. 68, “Methods of Maintaining the Productive Capacity of Illinois Soil.”