

## PART 2

# Inoculation of Alfalfa and Other Legume Seed with Nitro-Culture

C. H. LEE, M.A., Professor of Bacteriology, Manitoba Agricultural College

### Legumes

Legumes include all plants with a pod like a pea or bean. The following may be found on Western farms:—Alfalfa, Sweet Clover, Red Clover, White Clover, Alsike, Beans, Sweet Peas, Garden and Field Peas.

### Legume Bacteria

On the roots of most thrifty legumes there may be found nodules which contain bacteria. These take nitrogen from the air in the soil and feed it to the plant. Hence, plants with nodules grow better than those that have none, and since they take their nitrogen from the air they are said to be "easy on the soil." In fact, they tend to enrich the soil by leaving some of this nitrogen in it.

### What Nitro-Culture Is

Nitro-culture consists of bacteria growing on the surface of a jelly like culture medium in a bottle. These bacteria are originally taken from the legume nodules and are then grown on the jelly much the same as yeast is grown for baking. In fact, the inoculation of legume seed with nitro-culture is much the same as inoculating bread dough with yeast.

### Necessity for Inoculation

Western soils as a rule do not have Alfalfa or Clover Bacteria in them; hence it is a good practice to inoculate the seed when these are first grown on a certain piece of land.



A Well Inoculated Root