A REPORT ON THE GERMINATION OF GREEN MANURE SEEDS.

A good green manure crop serves many purposes, one of the most important being a rapid production of cover which ensures suppression of weeds and conserves soil moisture. In order to achieve this the crop will have to be a quick grower, thus it is essential that the germination capacity of the seeds is high. It happens that many of the green manure crops in cultivation are Leguminous plants recently selected from the wild flora, consequently the seed supply is very uneven; all the seeds or a large percentage of them possessing hard coats which confers a long dormant period on them. The hard coat hinders the entrance of water to the embryo which being not exposed to suitable conditions fails to germinate.

Artificial means have been adopted to do away with this delayed germination by the treatment of the seeds with various chemicals and abrasion agents which destroy the impermeability of the hard seed coat to water. In these pages an account is given of using concentrated Sulphuric acid and rubbing with sand with a view of eliminating delayed germination in a few species of green manure seeds.

PREVIOUS WORK.

Dormancy or delayed germination in seeds has been studied for the purpose of understanding the mechanism of this phenomenon, and also with a view of curtailing it in crop seeds by means of suitable forcing agents (2). Most of these agents are chemical in nature such as acids, bases and various salt solutions, their effectiveness depending upon the nature of the seed, the strength of the solution and the period of contact with seed (6). Exposure to high and low temperatures has also been tried with some measures of success and mechanical means consisting of rubbing or forcing the seed against a rough surface, when the coat is damaged, has proved useful.

In recent years conc. $H_2SO_4$ has come to the fore as the