

INTRODUCTION.

In regions of a tropical and semi-tropical nature phosphorus is more often the limiting growth factor than any other plant nutrient. Considerable increases in yield have been obtained, as high as one hundred per cent in Trinidad, upon addition of phosphatic fertiliser to the crop.

A deficiency of phosphorus in the soil may be due mainly to two causes, a low total supply, or a low availability of the phosphorus which is present. It is with the latter case that we are interested.

The ability of the soil to "fix" phosphorus in a form unavailable to the plant, is of considerable practical and economic importance in the farming of soils of such a nature, as it necessitates the addition of large quantities of phosphatic fertiliser to the soil in order to increase the phosphate available to the plant even to a small extent. The realisation of this importance is obvious from the large number of research workers who have devoted a considerable portion of their time to its study, and from the enormous amount of literature which has been published on it in recent years.

As yet no satisfactory method has been found for alleviating soil suffering from this complaint, and the work carried out by the writer was designed to investigate some possible means of prevention or alleviation and to obtain some knowledge of the chemical nature of the phenomenon.