

INTRODUCTION

Legumes have been grown as crop plants for more than 5,000 years; during the Roman era their value in soil improvement was first recognised. In 1886 Hellriegel and Willforth showed conclusively by quantitative experiment that legumes were able to fix atmospheric nitrogen. Since then, much work on temperate legume - Rhizobium symbioses has proved many species capable of fixing substantial amounts of nitrogen. Such work has provided a sound basis for the integration of legumes into temperate agricultural systems as restorative crops.

Research into the ability of, and the requirements for tropical legumes to fix nitrogen has been comparatively neglected. Leguminous cover crops are grown in Trinidad, although it is expected that they probably fix nitrogen, little or no quantitative evidence is available to support or refute this idea.

The aims of this project are:-

1. To give an indication, whether or not the three legumes studied are fixing nitrogen under the field conditions involved.
2. To examine over the seasons the pattern of soil ammonium and nitrate fluctuations.

It is hoped that this preliminary study will provide sufficient evidence to stimulate more detailed research into the problems of nitrogen availability in Trinidad soils.