

INSTITUTO UNIVERSITÁRIO DE TRÁS-OS-MONTES E ALTO DOURO

MONTHLY REPORT, PURDUE - AID - IUTAD PROJECT
November, 1981; J. L. Ahlrichs

RESEARCH:

From the information on aluminum tolerance screening which I provided, the soil fertility group decided to run a small preliminary screen of a number of cereals provided by the genetics group. This pot experiment was started this month. This and the pot experiments started last month are growing a little because of the good fall weather, but we need the completion of the greenhouse to get them inside for better growth.

I visited Mirendela and Montelegre with Joao Coutinho to make our first follow-up sampling of the soils from the lime experiments. This is the first of a series of samplings of the same plots in order to follow the soil pH change with time after our limings at various rates.

Nuno Magalhaes, Joao Coutinho, Ester Portela and I visited the Quinta adjacent to the silicon plant at Regua to determine whether there were damages from the dust of the plant smokestack settling on the Quinta. The quantity of dust was surprizingly large. While no foliage damage was evident it was too late in the season to adequately determine foliage injury. Preliminary lab work shows the dust to have a nearly neutral pH with a high carbon content and considerable silica (SiO_2) with very little if any silicon (Si^0). Our first hypothesis is that it is mostly incompletely burned products of the coke and wood materials used in the furnace. We will have more information on this in December.

Jose Baltazar and Afonso Martins took me to their experiments on tillage and wheat-pasture rotations in the north-east. Baltazar has some excellent pastures established; some as old as six years and still very productive. They are based on sub-clover.

I am trying to give some help to Afonso Martins and Sr. Sousa as they begin a preliminary study on composting of some of the liquid cattle manure with sawdust at the Quinta milking barns. The three concerns are that the soils need more organic matter which the compost would provide; the solid product would be easy to store at times when it is not convenient or possible to put the liquid on the land; and they need to better understand the implications of replacing the traditional use of the tojo and geista branches with sawdust as animal beddings.

VISITORS AND MEETINGS:

Mr Black and Mr Huffnagle of the Procalfer program visited briefly on Nov. 5.

Over one week was spent in the Project Review activity. I went to Covilha to get Prof. Thomas and Mr Fales. After their visit in Vila Real I helped take them to Lisboa for the meetings there.

Antonio Nazare and I went to the Portuguese Biochemistry Society meetings in Povoa de Varzim for the day on biomass conversion to energy, and to hear Dr George Tsao speak. Dr Tsao is a chemical engineer and is in charge of Purdue's research program in biomass conversion. The meeting hosts asked us if we could utilize Prof Tsao for a day at Vila Real which Antonio arranged, thus making another link between IUTAD and Purdue.

SOIL TESTING:

In order to have consistent soil testing from our laboratory, Engrs. Joao Coutinho and Afonso Martins obtained a large quantity of a standard

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soil from the Rebelo da Silva Laboratory in Lisboa. This sample has been included this past month with each days sample run along with a local standard soil and a solution standard. They are now getting a base or reference system to aid in reducing lab error.

We are still waiting for the Procalfer equipment.

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