

**PURDUE UNIVERSITY**  
**International Education and Research**  
**International Programs in Agriculture**



**PORTUGAL UNIVERSITY  
INSTITUTES  
DEVELOPMENT PROJECT**

**(Contract AID/NE-C-1701)**

**END-OF-TOUR REPORT ON  
LONG-TERM ASSIGNMENT**

**Submitted by  
DR. JAMES L. AHLRICHS  
Department of Agronomy  
Purdue University**

**January 24, 1981 - January 24, 1983**

PORTUGAL UNIVERSITY INSTITUTES DEVELOPMENT PROJECT  
(Contract AID/NE-C-1701)

END-OF-TOUR REPORT ON  
LONG-TERM STAFF ASSIGNMENT

at the

Instituto Universitario de Tras-os-Montes e Alto Douro  
Vila Real, Portugal

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Department of Agronomy  
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## END OF TOUR REPORT<sup>1</sup>

James L. Ahlrichs  
Long-Term Adviser at the  
Instituto Universitario de Tras-os-Montes e Alto Douro,  
Vila Real, Portugal  
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The Instituto Universitario de Tras-os-Montes e alto Douro (IUTAD) is an impressive place. It is a good institution located at an excellent site to be useful in a region which needs a center for education, research and community/regional service. In addition, the philosophy of the need for useful research and for service to the region is spoken of often and is the true feeling of nearly all of the agricultural faculty. A large amount of research has been initiated during these first years of the university's existence, and various extension and service activities are being tried.

IUTAD has good leadership and has new leaders coming in the young faculty members who will complete their doctorates in the next few years. The general high quality and the dedication of these young faculty proves that one can get good people to stay in the more remote and less developed areas of the country if the institution has a mission which is worthy and in which they believe.

The working environment at IUTAD is good for an outside advisor such as myself. It would have been difficult to have found a better situation. I am proud to have been at IUTAD and will look forward to coming back in the future if only to see how it has grown and how it has succeeded.

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<sup>1</sup>Monthly reports during time of assignment were submitted to USAID/Lisbon and AID/W.

My time in Portugal closed with a week of consulting and three lectures on educational methods and types of teaching-learning resource centers and their operation based on 15 years of experience in developing such centers within my department at Purdue. Also during these last weeks we initiated the latest of our efficiency schemes into the soil testing laboratory. It is a system for organizing all flasks etc. into racks of 11 and sets of 3 ( $3 \times 11 = 33$ ) or sets of 6 ( $6 \times 11 = 66$ ) so that 11 samples can be handled almost as easily as 1 (or 66 as 6).

During the past two years we have had 10 short term advisors at IUTAD on the planned program plus visits from numerous others on PROCALFER and on personal business. We utilized all of them effectively. Two short course schools were offered (Ag. Econ. and An. Sci.) which included the possibility for Purdue credit. As a matter of principle we worked our visiting advisors very hard while they were here. I was proud of the high quality and effectiveness of the advisors. Our program for 1983 has been planned, implementation has started and it promises to be a good year.

We have had 17 IUTAD faculty work in the USA, three received M.S. degrees and four are working on advanced degrees there now. In addition, the English teacher at IUTAD was able to accompany her husband who was on a bolsa to the University of Wisconsin and she also had a useful program.

The work done during the two years has been enumerated in the monthly reports. I will only comment on several items of special interest or concern to me.

The soil survey and mapping program of the north is advancing slowly. We have a good man in the work, Eng. Afonso Martins, but I am not sufficiently competent in this work to have been of much help in advancing it. Detailed mapping would be of value to all crops and soils work as well as to regional and area planning activities.

Plant analysis is going more rapidly now but is not as efficient as the soil analysis program. We have developed a good and efficient system for plant analysis which will permit preparing of about 60 samples every few hours but it is not totally activated because the lack of an adequate hood for perchloric acid use and because of the lack of an adequate hot plate to give the temperature needed for efficient sulfuric acid digestions for nitrogen. An efficient plant analysis system is important to both the research programs in forestry-crop-soil sciences and for service work for others.

However, in general I am very pleased about the soil and plant analysis program and its progress. It has good people and an excellent responsible person in charge. The quality of the work is high. They provide analytical service to their colleagues at IUTAD, to MACP, to private farmers and to consulting companies. The capacity to handle samples has increased greatly. The lab provides carefully considered interpretations of the analysis for its customers. The next planned step, and a needed one, is to computerize some of the recommendation activities so that the lab director does not need to spend so many hours each night making fertilizer recommendations.

Our analytical work on samples from our survey and research has not been all completed thus we were not ready to publish any of our work before my leaving. However a paper has been drafted on magnesium

problems for PROCALFER, by Eng. Coutinho, another is planned for the April meeting of the Portuguese Grassland Society by Eng. Ana Pires, and another is being submitted with her and Eng. Coutinho for the American Society of Agronomy Meetings in August at Washington D.C. Continued pressure should be put on the group to publish their work. The extension type publications can best be done and distributed through IUTAD and the DRTM or PROCALFER, but more sophisticated writings should be published in national or international journals.

I have had some input into the field experimental program and also in the greenhouse research which started last year when we got our first greenhouse completed. My main contributions have been in work on delineating the problems of magnesium deficiency and of aluminum toxicity.

Using my AID-COPY privileges we were able to get a very complete bibliographic collection of the literature on acidity in soils. This is valuable to Eng. Coutinho for his analyses of the acidity problem of the region and in his doctoral research.

With the help of many persons we established a rather complete set of back volumes of at least eight major agricultural journals for the library.

I have worked to greater or lesser degrees with most of the agricultural faculty during this two years and this wide contact has been of special pleasure to me. Several advanced degree programs have gotten started. We have Eng. Coutinho's program for doctoral work outlined and he was approved by the scientific council for doctoral work. Professor Quelhas dos Santos of ISA has agreed to be the orienting professor and agrees with the program. We plan for him to

do some of the laboratory work this summer when he gets to Purdue and to continue the lab and field work in Portugal. I might be interested in returning to IUTAD briefly in 1984 if it would expedite his work. Eng. Pires has been set up for an M.S. program based on her field and lab data already partially completed. We expect her to come to Purdue in January 1984 with her data from Portugal already analyzed and ready to work on thesis writing and course work; thus rapidly completing an M.S. degree (18 months).

There was nothing major to limit my work at IUTAD. My limited language competence was often a difficulty which the Institute could have helped by offering Portuguese classes. On the other hand, the English competency of the faculty has developed greatly during these two years of continued English usage and with the help of teaching by my wife and I, along with others.

Increased general access to the faculty would have been helpful to me. Without general faculty meetings or departmental meetings, and with no current affairs publication within the Institute it was difficult for me to be aware of what was happening or to communicate with more than individuals. Yet I must add that the university was totally open to my presence and the Rector and the faculty were all available to me as individuals when ever I needed to interact with them as individuals.

More use could perhaps have been made of me by the university. I was used extensively by my young colleagues especially on technical things. However after 25 years of being involved in many of the councils of a major university I missed being included in the discussions and analysis of the university's business and academic affairs.

Recommendations:

1. Most of our trainees were scheduled for periods of 3 months. This was an unfortunate choice of time. Three months is too long to be a general visitor, but it is too short to effectively participate in most research programs or to take any university courses. In a university "institution building" program a few short visits of 1-2 months may have served a purpose but most should have been 4-6 months to have permitted participation in a university semester plus some research or extension activity and some should have permitted time for actual advanced degree completion. As it was, we preoccupied some of the young faculty with learning English and preparing for their short visits, then they returned to Vila Real after the visit with their original dilemma of the short time left for them to complete a doctoral if they wish to remain on the university faculty. I recommend continuation grants so a small selected group could continue advanced degree work in the USA.

2. Do not ever make a project in "institution building" with only a single two year term. You do not "build" institutions in two years. Young faculty need an 8-10 year period of development of teaching, research and extension programs and especially progress toward advanced degrees. We should have had at least one person there over a period of years or a series of persons, each one with strong competence in one of the important technical areas of the University and each staying at least for two years.

3. Two years without provision for extension or replacement was not long enough for having the technical person at the project. Projects like this start slowly with problems of housing, vehicles,

language, understanding the university system, establishing communication links with people, and difficulties in comprehending the needs in a systems as complex as education and agriculture. For me many of these problems only began to be solved in the second year of my stay.

4. Force the visiting American advisors, short and long term, into teaching courses for university credit. Credit can be either given by the host institution or by Purdue. Our experience with bringing several advisors in related areas at the same time and asking them to present a short course worked very well. The advisors worked very hard to do this but it exposed them in an intense way to a larger group of people. Long termers also should be asked to do more of this.

We have established many links between IUTAD and professors from a number of American universities through this program. I urge Purdue and AID to do all they can to continue support for these linkages. The IUTAD as a young institution needs support from AID and other agencies during this early growth stage, but it also merits continued support because of its hard working and high quality faculty and administrators and its dedication to worthy missions.

Our stay here was blessed by a positive and productive relationship with IUTAD, AID-Lisboa, PROCALFER, my Purdue colleagues (Professors Foley, Atkinson and Sanders) and with the Vila Real community. A special thanks is for Ana Paula Lopes and Isabel Caupers at AID-Lisboa and June Lang and Vivian Rider at Purdue who together did hundreds of things to help us and the program be successful.

Thank you to Reitor Fernando Real and the IUTAD faculty for their help and hospitality as well as for their patience with me.