

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 STAFF ASSIGNMENT**

**Submitted by
DR. JOHN H. SANDERS
Department of Agricultural Economics
Purdue University**

March 11, 1981 - March 29, 1983

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at the

Universidade de Evora
Evora, Portugal

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PURDUE UNIVERSITY PROJECT AID NE-C-17G1

Final Report - March 1983

John H. Sanders, UE, Évora - Portugal

A. Training Periods for UE Professors in the States

1. Ermelinda Pinheiro's "bolsa" was extended another six months bringing to 75.3 months the n^o of months already utilized or in the process of being utilized in this contract. (Table 1).
2. With the addition of five more people in Agronomy (2 in Horticulture, one in Forages, 2 in Crop Production) 18 trainees are planned to go to the States in the next two years of the contract for a total of 87 months. (Table 2).
3. The total training then combining that already utilized with the planned utilization is 162 1/3 man-months of the 170 man-months in the revised program of November 1981 (Table 5).
4. Problem Area: It was earlier agreed that the Economics and Management Departments could have one person for 24 months. Serrão was their candidate but he has only been scheduled for 12 months because of his very slow progress in learning English.
Serrão is unlikely to be able to pass the TOEFL in the near future so it will probably be necessary to schedule him for only six months (He can probably pass the ALIGU exam if he goes to Lisbon for three months and applies himself) and to name another person for the two year "bolsa". Since there are still 7 2/3 man-months available and it is unlikely that all the money is spent for either short term advisers or that all 18 of these potential trainees actually go to the States, it is no problem to extend one of the three short term trainees in the Economics and Management Department to two years. This only requires freeing up 4 1/3 months. It should also be noted that long term training is less expensive per month than short term training. We have only been treating them as interchangeable to simplify the analysis here.
5. Problem Area: For most of these candidates to go to the States continued English classes are essential. UE is in the process of hiring Alberto Machado Rosa to continue classes until July 1. He is an excellent English teacher.

*Monthly reports during time of assignment were submitted to USAID/Lisbon and AID/W.

B. Short Term Consultants

1. Carter's report was received and distributed.
2. Ahlrichs spent a week here in January discussing agronomy research and giving seminars in the Education Department (Table 3).
3. Work plans and other preparations were made for five short term advisers before July.

H. Taylor and Janick already have their definitive dates. Carter is presently being contracted by Purdue. Workplans have gone out for Schwab and for an adviser in Farm Accounts - Farm Management (Table 4).

Some more suggestions have been made for advisers in 1984. With the contract now extending through June 1985 further suggestions are expected for short term advisers.

4. As of March 1983 UE had utilized 10.75 man-months of short term consultants. Programmed advisers for the rest of 1983 and 1984 would utilize another 13 1/4 man-months for a total of 24 man-months. There are 33 man-months of short term adviser support available so there is still potential to expand the number of short term advisers. There will also be funds released which the long term adviser didn't spend such as the money for his wife's travel and for the childrens' education.

C. Activities of the Long Term Adviser

1. Besides being a tour director and a bureaucrat, there was some professional production (Table 6).
2. Several of the short term advisers were utilized to organize one or two day seminars at UE. These seminars included one on Soil Chemistry (June 1981), Agricultural Development in the Alentejo (July 1982), and Sheep Production in the Alentejo (Nov. 1982). Some of the future short term advisers will probably continue to be utilized in this way.
3. The main professional work was helping some of the younger professors get research going and the extension of the EIPO experimental data with farm data.

Two more papers are in progress in this latter area for a Portuguese and a European journal.

4. Research is still a secondary activity at UE and there is not much collaboration especially between Departments. As research production increases, there should be more incentive for this collaboration. As in any new institution there is often more concern with whose name is first on the paper or the project than with the morale of the people doing the work.
5. I left Évora on March 29.
UE is a nice place. I was well treated and enjoyed the people that I worked with and wish them the best.
6. The project will now be directed by Dr. Carlos Portas with different staff members helping him with the various department. These assistants are:

Dr. Afonso de Almeida	-	Zootecnia
Eng ^o Pedro Silveira	-	Fitotecnia
Dr. Francisco Ramos	-	Extensão Rural
Dr. Víctor Dordio	-	Planeamento e Gestão de Empresas

D. Future Perspective

There are several Priority areas for Research-Service Activities in which Progress has been Slow.

1. Soils Lab: \$ 150,000 (U.S. dollars) of equipment is still in boxes as the installations are still not completed. Nor has it been decided who will be running this laboratory. Meanwhile, Eng^o Rente of the Direcção Regional is very anxious for some more help in this area from UE.
2. Animal Nutrition Lab: Some further construction is still desperately needed to facilitate this young group of UE professors and to accomodate the equipment already obtained.
3. Farm Accounts - Farm Management: The workshops have been meeting regularly. There is a recognition of the importance of farm level research. A short term adviser is programmed. A more direct input into the University farms and the RICA program of the Direcção Regional are both possible with a little more initiative from this group.

4. University farms: Until the management objectives, record keeping system, data generating potential for the Management Department, and the research function of these farms is defined, it is very difficult to utilize a short term consultant. An active coordinating committee including an experienced farm manager, an economist, agronomist, and animal scientist is urgently needed. This raises a fundamental management problem of any institution in power delegation, staff motivation, and getting implementable decisions out of a committee.

5. Relationships with Direcção Regional - PROCALFER

There is a potential financial incentive from the latter program for UE to put more effort in developing service activities for the Direcção Regional. Engº Manuel Rente has expressed substantial interest in the Soil Lab;

Animal Nutrition Lab;

Farm Accounts - Farm Management Area

There are undoubtedly other areas in which collaboration would be useful. UE should refrain from asking the Direcção Regional or PROCALFER for large amounts of money until their research capacity has been developed and proven. Research capacity is defined here as producing data and professional reports recognized by other professionals and useful to farmers and other agencies in the Alentejo.

In the long run both the Direcção Regional and PROCALFER could benefit from an UE actively engaged in the applied research-service area. This will take leadership and coordination from all three parties.

E. Land Grant Model

1. Portugal utilizes an international center model of agricultural research where almost all funding for ag. research goes to INIA's various stations.
2. UE will have to learn to coordinate with INIA and to develop collaborative activities. Due to its isolation IUTAD has less problems in this area.
3. The international center model is followed in all the developing

countries (Latin America), which I know, and is apparently much more effective to obtain specialization, a critical mass of researchers, and to continually evaluate research performance and applicability to applied agricultural problems than the Land Grant model.

4. The role of agricultural research in universities then will need to be integrated with these national centers looking at both more scientific concerns and more applied (farm level) work on evaluation and diffusion of new technology produced at these national centers.

F. Availability of Agricultural Technology.

1. For the Alentejo, Portugal will need to look in areas with Mediterranean climates without significant irrigation (thereby excluding California) such as southern Australia.
2. Cereal yields are high in the Alentejo for dryland agriculture on the better soils. It is time for silly comparisons between Portuguese cereals yields and those in countries with summer cereal production to stop being made. Useful comparisons can be made with cereal yields in southern Australia.
3. More public funds will have to be invested in applied agricultural research, i.e., INIA for cereals and forages before considering extension. Repeating the error of the 1950's of an over emphasis on extension before the technology is developed is so obvious an extreme to be avoided, given what is known about agricultural development from the experience of the sixties and seventies, that it is unfortunate that it is necessary to raise it again. Many people at UE appreciate this point.

TABLE 1

University of Évora Professors: Participants in U.S.
Training Programs under AID-Purdue Program
In First Two and One-half Years (August 1980 - December 1982)

<u>NAME</u>	<u>PERIOD OF TRAINING</u>	<u>AREA OF TRAINING</u>	<u>INSTITUTION(S)</u>
1. Maria José C.V.V. BARRISCO	09/01/81 - 09/03/81 two months	Equine Reproduction	Texas Stock Breeders; Purdue.
2. Maria das Mercês C.M. COVAS	15/06/81 - 28/08/81 two and 1/3 months	Home Economics	University of Georgia.
3. Victor M.C. DORDIO	30/05/81 - 01/09/81 three months	Farm Management and Finance	Iowa State; Purdue.
4. Artur A.M. MARINHO	31/08/81 - 04/12/81 three months	Micro-biology of Animal Nutrition.	Illinois.
5. M. Leonor M.V.S. CARVALHO	23/08/81 - 20/12/81 four months	Regional Implications of EEC Entrance	Purdue.
6. Ana Maria F.S.C.F.P. VASCONCELOS	02/01/82 - 31/03/82 three months	Wine Quality	Davis.
7. Maria Benedita E.G. CECILIO	27/12/82 - 16/06/82 ^a five and 1/2 months	Economics of Ag. Technology	Minnesota
8. Ricardo P. SERRALHEIRO	31/07/82 - 30/10/82 three months	Irrigation	Utah; Phoenix; Colorado State.
9. Manuel O.C. ABREU	13/08/82 - 20/12/82 four and 1/4 months	Animal Nutrition	Texas A & M.
10. M. Ermelinda V.L. PINHEIRO	16/08/82 - 16/11/83 fifteen months	Forage Production	Iowa State.
11. Francisco M. RAMOS	03/09/82 - 19/12/82 three and 3/4 months	Extension Methods	Wisconsin.
12. M. Manuela M. BATISTA	18/09/82 - 05/12/82 two and 1/2 months	Soil Chemistry	North Carolina; Arizona; Riverside
13. Eduardo A.C. FIGUEIRA	05/01/83 - 05/01/85 two years	Extension Methods	Wisconsin.

^a. Stayed at Minnesota on an assistantship and is presently getting a Master's Degree in Agricultural Economics.

TABLE 2: 18 UE PROFESSORS TENTATIVELY SCHEDULED TO GO TO STATES IN NEXT TWO YEARS OF PROGRAM

INPUTS	SEPT. 1982 - AUG. 1983	SEPT. 1983 - AUG. 1984
Training		
a. Farm Management (One short term and one long term)		C. Marques. 5 months. Leaving Aug.'83. [REDACTED]
b. Farm Accounts (One short term)		A. Serrao. One Year. Leaving Aug.'83. [REDACTED]
c. Resource Economics (One short term)		J. Ribeiro. 5 months. Leaving Aug.'83. [REDACTED]
d. Forage Production (Two short term)		A. Salgueiro. 5 months. Leaving Aug.'83 [REDACTED]
e. Livestock Production (One short term)		P. Silveira. 2 months. Leaving June 1983. [REDACTED]
f. Livestock Nutrition (One short term)		P. Vaca Carvalho. Leaving June 1983 5 months [REDACTED]
g. Livestock Management (One short term - sheep)		J.L.T. Nunes. 6 months. Leaving July 1983. [REDACTED]
(One short term - beef)		Ofélia Bento. 2 months. Leaving May 1983. [REDACTED]
h. Soil Fertility (Two short term)		J. Avô. 6 months. Leaving July 1983. [REDACTED]
i. Irrigation and Drainage (One short term)		C. Roquete. 6 months. Leaving July 1983. [REDACTED]
j. Agricultural Mechanization (One short term)		G. Ferreira. 6 months. Leaving July 1983 [REDACTED]
k. Horticulture (two short term)		F. Garcia. 6 months. Leaving July 1983. [REDACTED]
l. Crop Production (Two Short terms)		J. Lino Lúcio. 4 months. Leaving Aug 8 [REDACTED]
		C. Silva Carvalho. 5 months. Leaving July 8 [REDACTED]
		J. Araujo. 3 months. Leaving July 1983 [REDACTED]
		C. Portas. 2 months. Leaving July 1983 [REDACTED]
		J. Banza. Leaving July 1984 4 months [REDACTED]
		M. Carvalho. Leaving July 198 3 months [REDACTED]

TABLE 3: UNIVERSITY OF EVORA SHORT TERM ADVISERS IN FIRST TWO AND ONE-HALF YEARS OF PROGRAM
August 1980 - December 1982

<u>NAME</u>	<u>DATES</u>	<u>AREA</u>	<u>INSTITUTION</u>	<u>COMPLETED FINAL REPORT</u>
1. Amanda BROWN	20/09/80 - 15/11/80 one 5/6 months	Home Economics	Georgia	Yes
2. Robert THOMPSON	18/04/81 - 11/05/81 3/4 month	Regional Economic Impact of EEC Entry	Purdue	Yes
3. Charles RHYKERD	04/07/81 - 19/07/81 1/2 month	Forages and Animal Nutrition - Agronomic	Purdue	Yes
4. Jules JANICK	12/09/81 - 12/10/81 one month	Horticulture	Purdue	Yes
5. Dennis JOHNSON	02/01/82 - 03/03/82 two months	Ag. Planning and Zoning	Houston	Yes
6. Edward CARTER	09/05/82 - 04/06/82 5/6 month	Forage and Animal Nutrition - Agronomic	Waite Institute Australia	Yes
7. Earl O. HEADY	13/06/82 - 27/06/82 05/07/82 - 22/07/82 1 month	Farm Management	Iowa State	Yes
8. Charles RHYKERD	04/10/82 - 07/12/82 2 months	Forage Agronomy	Purdue	In preparation
9. James outhouse	28/11/82 - 07/12/82 10 days	Sheep Production	Purdue	Yes
10. Truman MARTIN	30/11/82 - 08/12/82 one week	Beef Cattle-Reproduction	Purdue	In preparation
11. James AHLRICHS	09/01/83 - 14/01/83 one week	Educational Methods; Agronomy	Purdue	Not relevant

TABLE 4

PERITOS A CURTO PRAZO QUE ESTÃO PREVISTOS
NA UNIVERSIDADE DE ÉVORA PARA 1983 e 1984

1983:

1. Agrônomo Especializado em Forragens
Dr. Edward Carter. Waite Agricultural Institute in Adelaide, Australia.
Abril
Um mês durante a época da produção de feno.
Trabalhar com os docentes da UE, dar seminários e colaborar com outras instituições com quem a Universidade tem trabalhado.
Será a sua segunda visita.
2. Horticultura
Dr. Jules Janick. Purdue.
Maio
Irã trabalhar três semanas com o grupo de Horticultura da UE. Irã colaborar com outros investigadores do Departamento de Fitotecnia.
Será a sua segunda visita.
Depois irá passar uma semana ao IUTAD.
3. Agronomia - Raízes
Dr. Howard Taylor. Texas A & M. Um mês e meio.
Maio - Junho
Para trabalhar com o Prof. Carlos Portas, Eng.^a Maria do Rosário G. Oliveira e Eng.^o Tec. Agr. A. Calado.
4. Contabilidade Agrícola - Gestão de Empresas
Um mês. Junho - Julho
Trabalhar com o "workshop" nesta área e com as Herdades Experimentais da Universidade de Évora.
5. Regadio e Drenagem
Dr. Glen Schwab. Ohio State University. Um mês.
Julho
Consultor para o desenvolvimento dos projectos de investigação em drenagem e regadio em curso.

6. Agronomia - Forragens e Pastagens

Dr. Charles Rhykerd. Purdue. 2 meses.

De 15 de Outubro a 15 de Dezembro.

Para trabalhar com vários docentes na sua área de investigação e ajudar a dar a disciplina de forragens e pastagens.

Fala português e já cá esteve duas vezes.

1984: Programa Provisório

1. Fertilidade de Solos - Prados

Dr. Milton B. Jones. University of California, Davis. Um mês.

Junho - Julho

Para trabalhar com os Engenheiros Gonçalves Ferreira e Francisco Garcia na orientação de experiências com macro e micro nutrientes em prado espontâneo e prado melhorado em diversos sítios. Também irá trabalhar com docentes no laboratório de solos.

2. Fertilidade de Solos - Geral

Dr. Mehehich. North Carolina State. Um mês.

Este período será dividido pela PROCALFER, IUTAD e UE.

Ajudará os docentes a trabalhar no laboratório de solos e apresentará seminários sobre as prioridades de investigação.

3. Produção Ovina

Dr. James Outhouse. Purdue. Um mês.

Este período será dividido pelo IUTAD e UE em Maio - Junho (caso o Eng^o Avô tenha já regressado dos Estados Unidos da América).

Visitará herdades, apresentará seminários e ajudará na investigação sobre ovelhas.

4. Produção de Gado Bovino

Um mês. Altura do ano a ser indicada.

Dar seminários, visitar herdades e ajudar os docentes na investigação.

5. Sistemas de Produção de Culturas - mecanização

Um mês. Verão de 1984

Trabalhar com vários docentes e visitar as Herdades.

6. Agronomia - Forragens e Pastagens

Dr. W.S. McGuire. Oregon State University.

Um mês.

Mesmo programa como para os Doutores Carter e Rhykerd em 1983.

TABLE 5

REVISED SUMMARY OF PROJECT INPUTS TO UE

(Nov. 1981)

Technical Assistance and Training by Areas of Activity (TA in Portugal; TR in United States)	Person Months by Project Year				
	1	2	3	4	Total
A. GENERAL PROGRAM DEVELOPMENT					
1. Long-term Adviser					
a. Resource planning and economics - Dr. John Sanders	5*	12*	7*	-	24
2. Short-term advisers					
a. Extension - Business Management	-	2	2	-	4
3. Training					
a. Extension planning & methodology (one long-term and one short term)	-	-	12*	12	24
	-	-	3*	-	3
b. Organization of agricultural research	-	5*	3	-	8
B. SOCIAL SCIENCE					
1. Long-term Adviser (General)					
a. Assistance in agricultural economics from J. Sanders - See A above					
2. Short-term Adviser					
a. Regional implications of common market accession	1*	-	-	1	2
b. Farm management research and extension	-	1*	2	2	5
c. Family resource management	2*	-	-	-	2
3. Training					
a. Farm Management - Two short-term one long-term	-	3	3	-	6
	-	-	12	12	24
b. Family resource management	3*	-	-	-	3
c. Financial management of cooperatives and agribusiness	3*	-	-	-	3
d. Marketing agricultural products	-	-	4	-	4
e. Cost accounting	-	-	3	-	3
f. Agricultural finance and credit	-	-	3	-	3
g. Regional implications of common market accession	-	3*	3	-	6
h. Resource economics	-	-	4	-	4

REVISED SUMMARY OF PROJECT INPUTS TO UE (Cont.)

Technical Assistance and Training by Areas of Activity (TA in Portugal; TR in United States)	Person Months by Project Year				
	1	2	3	4	Total
C. AGRICULTURAL PRODUCTION					
1. Short term Advisers					
a. Pastures and forage production	0,5*	1,5*	2	2	6
b. Crop production	-	2	2	2	6
c. Horticultural production systems	-	1*	1	1	3
d. Livestock management & reproduction	-	-	2	-	2
e. Soil fertility	-	(1) ^{a)}	2	-	2
f. Irrigation and drainage	-	-	-	1	1
2. Training					
a. Pasture and Forage management systems					
One short term	-	4	-	-	4
One long term	-	-	12*	12	24
b. Plant breeding	-	-	-	4	4
c. Crop production	-	4	4	-	8
d. Livestock reproduction	3	-	4	-	7
e. Livestock nutrition	-	3*	4	3	10
f. Soil fertility and soil chemistry	-	3*	4	-	7
g. Irrigation and drainage	-	3*	3	2	8
h. Animal health	-	-	4	-	4
i. Agricultural Mechanization	-	-	3	-	3
TOTALS:					
1. Long term Advisers (1 adviser)	5	12	7	-	24
2. Short term Advisers (15 advisers) ^{b)}	3.5	7.5	13	9	33
TOTAL (16 advisers)	8.5	19.5	20	9	57
3. Training					
a. Long term (3 trainees)	-	-	36	36	72
b. Short term (29 trainees)	9	28	52	9	98
TOTAL (32 trainees)	9	28	88	45	170

a) Use of Dr. James Ahlrichs of Vila Real.

b) Several of the advisers programmed will be utilized more than once. This estimate includes Dr. Ahlrichs but his time is not budgeted due to the much lower costs when international transportation is not included. This estimate of number of advisers is subject to change

Table 6

Publications, Mimeos - Long Term Advisor

1. J.H. Sanders and Ant3nio C.A. Pinheiro
"Alentejo Agriculture: Background and Some Research Suggestions", mimeo, University of 3vora, November 1981, 7 pages plus figures and tables.
2. M. Benedita E.G. Cec3lio, A.E. Pereira Salgueiro, N.A.A.S. Godinho Mira, John H. Sanders
"Alentejo Cereal Production, Productivity, and Policy in the Last Century: A Brief Synthesis"
Mimeo, University of 3vora, 1982
3. M. Gabriela M. da Silva, Ant3nio C.A. Pinheiro, and John H. Sanders,
"Afecta33o dos Recursos Agr3colas no Baixo Alentejo - Abor33o de M3o-de-Obra e Desenvolvimento Tecnol3gico"
Oct. 1982. Presented to the Portuguese Annual Meeting of Economists and to be published by them.
4. J.J. Freixial Casquinha, M. Leonor P.M.V. Silva Carvalho, J.M. Sim3es Ribeiro, John H. Sanders
"Intensifica33o da Produ33o Ovina no Alentejo: Resultados de uma Experimenta33o na Universidade de 3vora"
To be published in the Proceedings issue, Pastagens e Forragens, in spring 1983.
5. J.J. Freixial Casquinha, M. Leonor P.M.V. Silva Carvalho, and John H. Sanders, "An3lise Econ3mica de Produ33o Intensiva de Borregos no Alentejo", Universidade de 3vora, Mimeo, Novembro 1982. Presented at a Seminar on Sheep Production Problems in the Alentejo, Nov. 1982 and at a PROCALFER seminar on forages and sheep production on Dec. 14, 1982.
6. J. H. Sanders, "Ensino, Pesquisa e Extens3o: O Modelo 'Land Grant' nas Universidades Americanas e a sua Aplica33o na Universidade de 3vora", Extens3o Rural, Universidade de 3vora, Setembro - Dezembro, 1982, pp. 2, 3.

7. J.H. Sanders, "Some Economic Issues in Evaluating and Producing New Technology for Forages, Pasture and Animal Production in the Alentejo of Portugal", mimeo, University of Évora, Portugal, January 1983, 11 pages.

8. C. Rhykerd, A. Almeida, A.M. Ferreira, N. Moreira, J.H. Sanders
"Identificação de Prioridades para Aumentar a Produção de Forragens e Pastagens em Portugal"
Submitted to the Portuguese Pasture and Forage Association for the April meeting, 1983.