April, 1996

THE PEANUT CRSP

Economic and Social Advancement

Through Development of

Sustainable,

Environment and Health Protecting

Peanut-based Industries in

Developing Countries and the U.S.A.

GRANT EXTENSION PROPOSAL
1996 -2001

.... IN A NUTSHELL....

SYNOPSIS

The Peanut Collaborative Research Support Program (CRSP) is seeking to have Grant No. DAN-4048-G-00-0041-00 extended. This grant was provided through the Title XII legislation that extends to developing countries the Land Grant paradigms for education, research and extension to encourage economic development, relieve hunger and prevent famine.

A CRSP activity for peanuts is particularly important to the realization of the goals of USAID because peanut is the most important crop for development in many areas of the developing world, particularly Sub-Saharan Africa. This crop provides an important source of purchasing power to its small-scale farmers, many of whom are women. The peanut is nutritious and versatile and thus promotes health and family welfare and value-adding industries in developing countries. Because local markets exist for peanuts, they provide an essential opportunity for small-scale subsistence farmers to purchase inputs, such as fertilizers, needed to make farming sustainable.

Substantial technical and economic advancement has occurred in many host countries because of collaborative research between U.S. and national scientists. **The USA's peanut industry also presently benefits by at least 10 dollars for each dollar invested in the Peanut CRSP, based on variety releases alone.** Future benefits to US agriculture will increase due to the development of virus resistances in the pipeline, and the basic research coming to fruition on aflatoxin.

The project will progress to **new constraint and geographic areas, focusing on aflatoxins, production efficiency, socioeconomic forces and utilization/postharvest issues.** The optimum funding level needed is $2.9 million (annually), which should be derived from more than the traditional CRSP funds because of this CRSP's relevance in other areas of the USAID's programs. Both these plans and the past performance of the Peanut CRSP justify the extension and funding at the optimum level requested.

The project will now involve the following U.S. states and institutions:

The Peanut CRSP is backed by the National Peanut Council, the State Peanut Commissions of involved States and US Industry.

Alabama	Alabama A&M and Auburn Universities
Connecticut	University of Connecticut
Florida	University of Florida
Georgia	University of Georgia
Indiana	Purdue University
North Carolina	North Carolina A&T and North Carolina State Universities
Virginia	Virginia Polytechnic Institute & State University
Texas	Texas A&M University

and the following regions and countries:

West Africa:	Benin, Mali, Ghana, Senegal
Southern Africa:	Malawi, Zimbabwe, Zambia, South Africa
South & South East Asia:	Philippines, Bangladesh, Thailand, Indonesia
Latin America and Caribbean:	Bolivia, Peru, Jamaica, Haiti
Eastern Europe	Bulgaria

WHAT'S NEW

Technical Emphasis and Disciplinary Areas:

- Social, nutritional and economic aspects are now included to address the problems of adoption of technologies, gender related issues associated with the peanut sector, market and policy issues.
- Aflatoxin will receive increased emphasis.
- Systems research and simulation modeling to improve research programs and policy decisions will be initiated.
- GIS-based information systems will be developed to maximize transfer to technologies.
- Thailand has become a graduate country and will now be a partner in training and technology transfer to other Asian countries.

New U.S. Institutions will join the Peanut CRSP:

- Auburn University
- University of Connecticut
- North Carolina A & T University
- University of Florida
- Purdue University

Host Country Changes:

New collaborators with the Peanut CRSP will include:

- Malawi, Zambia, Zimbabwe — for Aflatoxin, Production Efficiency, Socioeconomics
- Benin — for Production and Socioeconomics
- Haiti — for Socioeconomics, Production and Utilization
- Bolivia and Peru — for Production Efficiency Research
- Bangladesh — for Production Efficiency Research

Phase out areas:

- Philippines — for Production Efficiency research.
- Burkina Faso and Thailand — for all research activities
- Jamaica and Belize — for postharvest research

Enhanced program management using modern project management models and computers for planning research, monitoring results and reporting progress and impacts.

RELEVANCE TO USAID

Improved peanut industries arising from the proposed research are linked directly to, and important for the achievement of, three out of four of USAID's defined strategic objectives. All of the goals of the Global Bureau, Center for Economic Growth, Office of Agriculture and Food Security, Sustainable Production Division are addressed.

Strategic Objectives

USAID's Global	Economic Growth Center	Office of Agriculture's and Food Security
Economic Growth ✓	Environmentally sustainable improvement in food security and rural incomes through agricultural enterprise development. ✓	Adequate quantities and qualities of food to become consistently available to the target population ✓
Environmental Sustainability ✓		Adequate access to food by the poor households (through self-production and/or purchasing power) ✓
Health & Population✓		Improved agricultural practices that enhance conservation of natural resources. ✓
Democracy		

RELEVANCE TO DEVELOPMENT

We believe that peanuts are critically important to development. In many areas of the developing world peanut plays a crucial role in gender equity, economic development and sustainability of small farm agriculture. Peanuts are not often grown purely as a subsistence crop, about 50% of production is traded within the producing country and used for oil production. A further fraction is traded and often forms the basis of village-level value-adding industries. While peanuts often are vital as a high energy, high protein food for many at or below the poverty line, the readily saleable products which the crop provides are a source of purchasing power for producers and processors, many of whom are women. Cash crops, such as peanuts, play a critical role in financing inputs of items such as fertilizer (necessary for sustainable productivity at the system level) and are associated with the growth of economic activity and better standards of human well-being. Peanuts also contribute up to 60 kg ha^{-1} nitrogen to the soil, diminishing the need for a fertilizer essential to sustained yields of the subsistence cereals that do not readily enter trade. The alternative is subsidized, chemical nitrogen fertilizer. Therefore, peanuts are particularly important in the development of employment, trade, purchasing power and for the sustainability of agriculture-dependent economies in the developing world.

In addition, peanut production and processing are common activities of women in developing countries; therefore, the Peanut CRSP can make an important contribution to improving the position of women in society. Since population growth rates are correlated with the economic status of women, peanuts also have an indirect role in achieving these goals.

World trade in peanuts is small (5% of production). Most production is used in the producing country. The Peanut CRSP will also help to promote the **development of trade** since peanuts are contributing to the development of free-market economies in Eastern Europe. U.S. peanuts are imported into this area,

and research relevant to the use of peanut in these market economies is planned. In developing countries peanut has a high elasticity of demand in that as income increases demand for peanut products increases.

RELEVANCE TO SUSTAINABILITY

The Peanut CRSP is addressing sustainability and bio-diversity issues in the broad sense through the support of projects: that develop plant resistances and decrease need for chemical inputs; that will sustain the natural resource base through efficient production technologies; and through increased purchasing power to allow agriculture sustaining inputs. Higher yields can be directly related to conservation of soil through greater cover of the soil and less erosion, and less cultivation of marginal land. Indirectly peanut also contributes to sustainability by providing alternative employment and thereby decreasing the dependence cultivation of marginal lands.

RELEVANCE TO US AGRICULTURE

The research proposed will benefit US Agriculture because of the global nature of the constraints addressed. Aflatoxin elimination or control, and nutrition research will increase market value both internally and internationally by increasing demand and diminishing some adverse perceptions concerning peanuts. Technologies which increase the value of contaminated peanuts by detoxification seem possible as a result of Peanut CRSP research. Basic research now suggests that the development of genetic methods to block the production of aflatoxin in *Aspergillus flavus* infected peanuts can be achieved. Virus based research has provided the tools to introduce these synthetic genes into peanut. Much has been done to provide a scientific basis to for the management of the aflatoxin problem. This information will be synthesized into a model which will be available as a management tool for the peanut industry.

Experience in low input production systems will help US scientists maintain peanut profitability as (or if) the peanut subsidies diminish. The use of genetic options combined with better management practices to control pests and diseases of peanut could reduce inputs that currently represent 50% of production costs in the USA. Virus resistances produced through biotechnology have produced the prospect of eliminating the ~20% yield losses due to Tomato Spotted Wilt Virus in the USA; this will also benefit other crops for which TSWV is a major constraint. The only Cylindrocladium black rot resistant variety available in the USA derives from Peanut CRSP supported research and permits continued peanut production to continue in certain areas of the S. E. The presence of virus expertise on foreign viruses acquired through the Peanut CRSP allowed Georgia scientists to control an outbreak of Peanut Stripe virus that could have seriously damaged the crop and would have required expensive regulatory control if it had become established.

The utilization emphasis of the Peanut CRSP will increase demand for peanuts and increase prices and international trade in this commodity. The USA peanut industry has benefitted by $10 for every 1 spent by the Peanut CRSP, and the Peanut CRSP is supported by the National Peanut Council, industries and State Peanut Commissions in affected states because of its extremely high relevance to the USA's peanut farmers.

RELEVANCE TO THE CGIAR

The Peanut CRSP always has been relevant to the research being conducted by the ICRISAT which has the CGIAR mandate for peanut. CGIAR funds for peanuts are provided by Japan, European countries and OPEC, not from the USA The Peanut CRSP has been planned in concert with the groundnut research effort of ICRISAT and has always been complimentary to that program. Numerous coordinated or joint activities have resulted in achievements, such as in virus research, that neither organization has had the resources to undertake alone. In Africa the PEANUT CRSP has provided the majority of entomology research, and all the nutrition/utilization research. The ICRISAT peanut research effort in Africa has recently been halved (budget), and the changes in the Peanut CRSP will help fill that gap. Coordinated and collaborative research between ICRISAT and the Peanut CRSP is more important now than ever before for Africa.

The Aflatoxin projects identified are should be the core of the Aflatoxin task force's effort and help ICRISAT and CIRAD-CA leverage funds from European sources. The production efficiency projects inject a large amount of peanut expertise

GLOBAL ISSUES

Although the research is focused in selected host countries, the problems addressed are all of regional or global relevance. Resolution of the aflatoxin problem through measures being developed in Southern and West Africa will be important for all peanut-consuming populations and could increase consumption in Europe significantly. The production problems selected are all of world-wide significance. This is why, as in the past, the U.S. peanut farmer stands to gain substantially from this research. Additionally, the Peanut CRSP plans to maintain bio-diversity though the project in South America. The socioeconomic research addresses problems of technology adoption mainly in Africa, where development has been so difficult. The utilization and nutrition projects have a regional focus, having potential to promote local industries in Asia, Eastern Europe and West Africa, and to contribute to very important aspects of child survival, gender equity and access to purchasing power. In some cases these projects will promote trade in peanuts to support value-adding industries. Collaboration with the USAID-PLUS project in Haiti will promote aspects of the peanut sector in this high priority area.

STRATEGY

Use interdisciplinary, collaborative research on priority constraints to generate peanut-related technologies and knowledge that will:

- enhance economic advancement,
- increase the efficiency and sustainability of peanut production,
- improve human health, and
- raise the value of peanut products.

Ensure the **relevance, complementarity and dissemination** of the research results through the establishment and nurturing of close cooperation between national, international, and non-governmental research, educational and trade institutions and organizations.

Focus on **research with wide applicability**, so that although conducted in a few countries many countries, including the USA, benefit.

Develop **scientific capability** in developing countries and the USA through long and short term training.

Exploit modern **modeling, information and geo-referencing technologies** to disseminate and utilize existing knowledge to best advantage.

Because the Peanut CRSP is relevant to so many objectives of USAID we seek it's funding from multiple sources within USAID. The core budget is sought from the CRSP budget (Agriculture) with additional funds asked for from outside the traditional CRSP budget.

BACKGROUND AND ACHIEVEMENTS

The Peanut CRSP has operated for 13 years. The initial program was designed through extensive consultation with developing countries and other international organizations with a stake in peanut research. Although focused on research to resolve the priority constraints, a substantial impact on the trained, human capital of both developing countries and the USA, and a wide distribution of information to scientists, extension workers and farmers has been achieved.

During the past 13 years a wide range of new technologies and knowledge have been developed: New varieties have been released in Thailand (4), Philippines (5), Senegal (1), Jamaica (1) and the USA (these two varieties cover 20% of the cultivated area in Texas, Oklahoma, North Carolina and Virginia and have a value of $30 million per year). IPM technologies save farmers in North Carolina and Virginia $1.5 million each year and keep from the environment 42,000 tons of chemicals). Valuable genes from both within and from outside the cultivated peanut germplasm have been identified and accessed, and the first successful genetic transformation of peanuts has been achieved. Resistances to nematodes that are in the pipeline will have a bigger impact when they reach maturity, allowing farmers to avoid the present environmentally harmful chemical to be used more sparingly. The value of Peanut CRSP varieties in Thailand, Philippines and Jamaica will be established in this phase.

New food products have been developed and market tested in Thailand, Philippines, Burkina Faso. Advances in the management of aflatoxin have been achieved, and made possible for peanuts. This has a potential to add $5 million to the economy of Senegal, and to reestablish the value of contaminated peanuts. The fundamental pathways for aflatoxin synthesis have been determined and are now the subject attempts at biotechnological manipulation.

Independent observers have reported the transformation of localized, rural economies in Belize because of Peanut CRSP supported activities.

The USAID Impact Review Team found that the Peanut CRSP caused significant and important impacts that prove our capability and comparative advantage for achieving these strategic objectives.

CONSTRAINT RESOLUTION

The priority constraints identified for Peanut CRSP attention have been numerous (1990 project documents list 9), but good progress has been achieved in their resolution. In some areas the technical resolution of the constraint has been achieved and now requires deployment. Because of the globality of the constraints for peanut the progress documented for the USA acts as an early indicator of constraint resolution on a global scale. The following section examines this progress and relates it to the program changes intended for the extension period.

1. **Low yields because of unadapted cultivars without resistances to diseases, insects and drought.** Progress is reflected in the release of varieties with 10 - 25% greater yields within most host countries. In the new phase this expertise will redeploy into new geographic areas to help relieve these constraints there.

2. **Yield losses due to infestations of weeds, insects and diseases, and nematodes.** IPM and virus management programs have made significant advances in S. E. Asia. This expertise will now be focused onto the sub-humid areas of West Africa.

3. **Health hazards and economic losses due to mycotoxin contamination.** The basic metabolism of aflatoxin production has been established and attempts to manipulate this process will be part of the extension. Processes to detoxify contaminated peanuts have been developed and need to be extended in the extension period, research to investigate exciting new additional options are planned. Information on mycotoxin management has advanced sufficiently that this will be integrated into a model based risk assessment and management system in the extension period.

4. **Lack of appropriate food technologies to exploit a relatively well adapted peanut crop.** Products have been developed and test marketed several countries. Transfer of these technologies to small enterprises and women's cooperatives would be part of the next phase. Evaluation of the extent of benefits will be measured in historic areas of activity.

5. **Physiological and soil microbiological barriers to higher yield.** The exploitation of microbiological technologies has been successful and remains available for situations for which it is a limiting factor.

6. **Resource management situations preventing efficient production and utilization.** Progress has been made towards the use of locally available fertilizers such as wood ash from cooking fires. Slash and burn agriculture in Belize has been transformed into sustainable, continuous cropping. Production and utilization research has been guided by socioeconomic survey information.

7. **Inadequate numbers of trained researchers and support personnel.** In many of the host countries involved so far there is now a critical mass of peanut expertise. The extension period would address this constrain in new countries through continued training of both technicians and scientists.

8. **Lack of adequate equipment to conduct research.** Substantial priority equipment has been provided.

9. **Information not available to beneficiaries for support of production and utilization.** This has been addressed by the publication of the newsletters, workshops and brochures in collaboration with ICRISAT. In the extension program GIS and 'cyber' technologies will be added to increase the defusion of technologies.

OPPORTUNITIES AND PRIORITIES

To achieve our strategic objectives the ME identified through extensive consultation with the Peanut CRSP stake holders, both nationally and internationally the research opportunities and priorities for attention during the extension period. This was done for the Peanut CRSP by an invited Expert Panel from the USA (Scientists, National Peanut Council and Industry), International Agriculture and Developing Countries. Highest priority was accorded to the constrains of aflatoxin contamination, then production efficiency. Of equal priority after these two areas was socioeconomic forces and postharvest and marketing technologies. The outcome of the Expert Panel corresponded with the recommendations of the External Evaluation Panel regarding the progress towards the relief of the defined constraints and priority of remaining needs for continued research, development and technology transfer.

PROJECT IDENTIFICATION

A call for pre-proposals in the identified constraint areas was made to all institutions with potential or known interest. To encourage applications, this pre-proposal called for contributions for individual scientists rather than for teams. The best pre-proposals in each area were identified by a panel of evaluators, and the successful scientists were invited to prepare a full proposal. For this they could describe teams to achieve the multi disciplinary balance, and were provided with the relevant indications of interest from scientists in the host countries. The resulting 35 proposals were evaluated by the same evaluation panel, and the projects and their constituent objectives were prioritized. Not all of the previous participants are included in this project proposal. All interested participants were required to enter into this process; no present participants were protected.

CONSTRAINT BASED PROJECTS

The evaluation panel accorded priority to the constraint areas for which research projects with the greatest potential have been selected from 114 pre-proposals and then from 35 proposals as below:

Aflatoxin Contamination	**Four Projects**
Production Efficiency	**Eight Projects**
Socioeconomic Forces	**Five Projects**
Postharvest and Marketing Technologies	**Five Projects**
Training, Information and Program Support	**Two Projects**

The projects recommended by the Project Evaluation Panel satisfy as well as is possible the recommendations of the Program Review Panel and the Management Review Panel. Many of these projects are allocated funds sufficient to achieve a restricted set of objectives, and we look for these core funds to leverage contributions from other sources both within and outside of USAID.

PEANUT CRSP

Aflatoxin Contamination

Project Title	Institution	Country	Budget
Genetic Approaches to Eliminate Aflatoxin Contamination of Peanuts	Texas A&M	SADCC	100,000
Extrusion Cooking of Peanut Meal in the Presence of Lysine to Deactivate Aflatoxin and Improve Nutritional Quality	U. Georgia	Ghana	33,000
Research on Aflatoxin Contamination as an Indicator of Quality of Preharvest and Stored Groundnuts in Southern Africa and Indonesia	U. Georgia	SADCC Indonesia	100,000
Systems Research to Assess Risk of Preharvest Aflatoxin Contamination and to Develop Technologies to Reduce Aflatoxin Contamination of Peanut	U. Georgia	W.A.	70,000

Production Efficiency

Project Title	Institution	Countries	Budget
Improved Production Efficiency through Standardized, Integrated, and Enhanced Research and Technology	NC State	Benin Ghana	75,000
Utilizing Arachis Species for Peanut Improvement	NC State	Bulgaria Ghana	100,000
Breeding Peanut for Resistance to Foliar Diseases and Arthropod Pests	NC State	Ghana Benin Peru	100,000
Collection, Preservation and Utilization of Wild Arachis Germplasm from South America	Texas A&M	Peru, Bolivia Brazil	100,000
Breeding Peanut for Better Productivity and Quality	Texas A&M	Senegal Mali	80,000
Simulation of Peanut Cropping Systems to Improve Production Efficiency and Enhance Natural Resource Management	U. Florida	Ghana Benin Mali	100,000
Development and Use of Multiple-pest Resistance to Improve Production Efficiency of Peanut	U. Florida	Bolivia	75,000
Control Strategies for Peanut Viruses: Transgenic Resistance, Natural Resistance, and Virus Variability	U. Georgia	Malawi Zambia	109,000

Socioeconomic Forces

Project Title	Institution	Countries	Budget
Production Efficiency and Market Development of Peanuts and Peanut Products for Haiti, Dominican Republic, and Jamaica	Auburn	Haiti DRep Jamaica	75,000
Adoption/diffusion Processes, Persistence, and Socioeconomic Impacts of New Inputs and Peanut Varieties	NC State	Jamaica Philippines	75,000
Socioeconomic Impacts of Alternative Peanut Production Marketing Systems in Senegal	U. Connecticut	Senegal	94,000
Analysis of Response of Peanut Production in French West Africa: Policy Implications of Currency Devaluation	VPI	Senegal Mali Benin	100,000
Peanut Production and Consumption Systems: Intra-household and Inter-sector Transactions	VPI	Malawi Zambia	100,000

Postharvest and Marketing Technologies

Project Title	Institution	Countries	Budget
Development of Appropriate Technology for New and Improved Weaning Foods and Aflatoxin Detoxification in Peanuts	Alabama A&M	Ghana Mali	125,000
Development of Spicy Meat Analogs and Technology Transfer of Value-added Products from Peanuts	NC A&T	Haiti Jamaica	50,000
Effects of Peanut Consumption on Hunger, Ingestive Behavior, Energy Expenditure and Coronary Heart Disease Risk	Purdue	Ghana	84,000
Development of Peanut Postharvest Handling, Processing and Packaging Technologies and Transfer to the Food Industry	U Georgia	Philippines	125,000
Development and Transfer of Peanut Processing Technologies in Bulgaria	U Georgia	Bulgaria	110,000

Training, Program Support and Information

Project Title	Institution	Countries	Budget
The World Geography of the Peanut: Global Networking Approach to Social Equity, Environmental Protection, and Technology Exchange	U. Georgia	All	100,000
SE Asia Training in Peanut Technologies	Khon Kaen U.	Thailand	30,000
Training of Host Country Nationals for Priority Skill Requirements	Requirement dependent	All	220,000
Program Support		All	100,000

THE RESULTS FRAMEWORK

The global program of the Peanut CRSP is presented in a results framework which conforms to the USAID paradigm. Here only the objectives and the expected results are summarized for each major endeavor. This framework extends into the management model adopted for this phase of the Peanut CRSP and will improve planning, execution and documenting the results of the program.

Aflatoxin Contamination

Improved health, trade and peanut value through decrease or elimination of aflatoxin contamination.

- Genetic prevention of aflatoxin production in Aspergillus-infected peanuts.
- Management of preharvest aspergillus infection by integration and exploitation of existing knowledge and technologies.
- Detoxification of contaminated peanuts and peanut products.

Production efficiency

Increased farm prosperity through improved production efficiency and sustainability.

- Increase in yield through the genetic control of biophysical constraints to production.
- Increased production and sustainability though exploitation of Integrated Pest Management techniques.
- Increased production through model-guided management, research and policy recommendations.

Socioeconomic forces

More rapid development through the greater adoption of technologies resulting from more sociologically appropriate research, policy interventions and technology transfer mechanisms.

- Determination of gender considerations in research decisions, technology adoption, production and processing.
- Determination of policy effects on production, marketing and nutritional concerns about consumption.
- Impact studies to determine the value of adopted technologies.

Postharvest and marketing technologies

Improved health, increased prosperity and trade through marketing, processing and consumption of peanuts in safer, more nutritious value-added products.

- Better understanding of nutritional benefits of peanut.
- More peanut products matching local preferences.
- Greater production and higher prices from value adding-industries for peanuts.
- More employment created by value adding industries.

Training, Information and Program Support

Development and adoption of profitable technologies through increased training, technology diffusion and scientific exchange.

- Consolidation and distribution of existing information in appropriate media.
- Trained host country scientists and technicians.
- Scientific exchange, development of collaborative linkages.

CAPABILITY AND COMPARATIVE ADVANTAGE

The USA is the only developed country where a large multi-disciplinary cadre of scientists specialized in peanuts are actively involved in research on the crop in their own country. The project draw from most of the US universities with active peanut research programs. The project expands the U.S. institutions participating in the Peanut CRSP to include universities outside the traditional "peanut states" and taps these resources for development, bringing into the team social scientists and food science/utilization expertise. The Peanut CRSP is totally capable of achieving the objectives detailed.

Through the coordination of research agenda with that of ICRISAT and CIRAD and the collaboration with host countries, the Peanut CRSP will remain focused on those areas for which it has comparative advantage. Among these are biotechnology, information technologies and management and post harvest areas.

The peanut is a crop with major advantages for development because of it's potential contributions to food, health, population, gender equity, sustainability and economic advancement from intra-household to international scale.

LEVERAGE AND COORDINATION

The research programs of the participating U.S. Institutions that are relevant to the Peanut CRSP are supported by matching funds. Besides this, research on peanuts by the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) is complimentary to this research and available to the scientists of the Peanut CRSP for the benefit of both the USA and host countries. By coordinating this research and combining resources to achieve common goals the Peanut CRSP accesses research (worth *c.* $4 million annually supported by the Japanese and European donors) conducted by ICRISAT. Aflatoxin is also a problem of maize, and the Peanut CRSP will coordinate and collaborate with the International Institute for Tropical Agriculture (IITA) in this area. The expert panel that helped define the future focus of the Peanut CRSP had representatives from ICRISAT, IITA and IFPRI.

The Peanut CRSP is unique among CRSPs in its wide relevance to the diverse USAID objectives. For this reason we seek to use the Agriculture CRSP funds available for the Peanut CRSP to leverage other sources of support within USAID. Two of the Institutions are HBCUs eligible for funds earmarked for those Institutions. The utilization projects are variously eligible for contributions from the population, health, women in development, small enterprise development, transition funds (Haiti and Eastern Europe) and the new office of trade development. The aflatoxin projects make contributions to population, health, and small enterprises and we seek contributions from those offices. The production efficiency projects are important to the advancement of women, sustainability, biodiversity, alternative crops (drugs) and of course agriculture objectives of USAID. The socioeconomic projects have direct gender, trade development, and enterprise development relevance. The wide spread importance of peanut suggests that the Regional Bureaus for Eastern Europe, West and Southern Africa, Asia, Caribbean and Latin America also have a stake in the Peanut CRSP - and in it's financing.

Training programs are relevant to the establishment of healthy peanut sector support services in the host countries and the country missions of all our target countries are stakeholders in this training opportunity.

MANAGEMENT

The project will be managed under the guidance of USAID by the Management Entity (ME) at The University of Georgia. The previous management structures of a Board, Technical Committee (TC), and External Evaluation Panel (EEP) will remain unchanged. However, the membership, roles and responsibilities will be adjusted to increase the involvement of stakeholders in the Peanut CRSP.

The portfolio of projects will be determined by the funds available to the program. Project design provides for projects with constituent objectives. Variations in funding level will be absorbed by adding or shedding objectives within projects until projects lack coherence; then projects will be dropped and resources concentrated elsewhere.

The ME will update the project management methods to exploit the power of computers and modern project management tools. This change is already reflected in the identification of the objectives and activities to achieve results. The project management model being implemented conforms to the Results Framework initiative of USAID. Project reporting will be streamlined to exploit the benefits of modern communications and the model. The intention of these developments is to maximize the administrative and management efficiency and provide opportunity for closer oversight of the projects.

The training opportunities and priority recommendations will be considered each year by the EEP. Included in this training project is the collaborative effort with the Thai Training and Technology Transfer Initiative, which will examine the training requirements for the S.E. Asia region and decide annually on which activities that can and should be supported by the consortium. Thailand is committed to provide the major share of costs in support of these regional activities. It is anticipated that in this training effort U.S. scientists will contribute to the faculty of short-term training courses developed to satisfy regional needs.

BUDGET

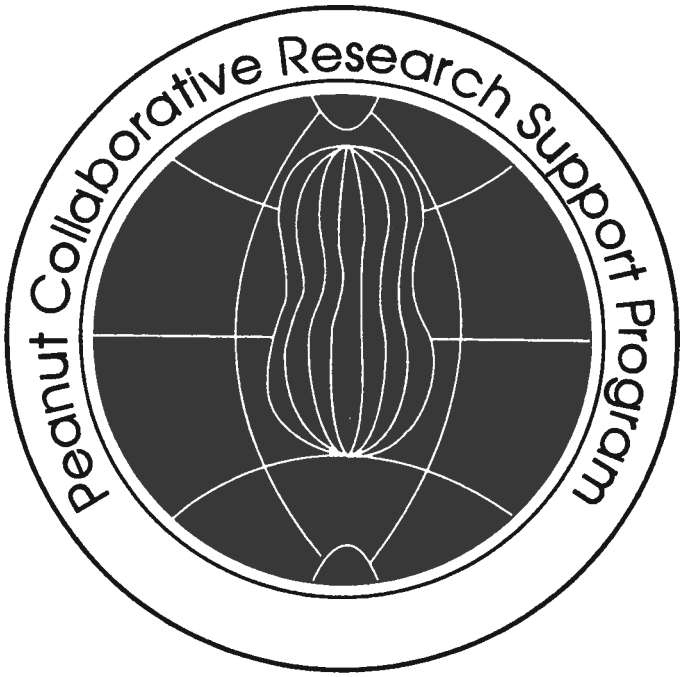
The budget was as a result of hard choices between projects, and many good projects were excluded since they were assessed as being of geographically restricted relevance, or because the impact was too far into the future. The program satisfies the guidelines for Peanut CRSP funding in the distribution between host countries and USA institutions, and in the matching funds contributed by these institutions. The matching fund contributions from host country institutions will be established as part of the agreements developed between the partners in this research.

The program support line will fund activities such as reviews, general peanut meetings, and "seed" projects to explore new ventures and leverage additional funds. We anticipate that support from Missions, Regional Bureaus and other sources can be secured to compliment this program particularly in the area of technology transfer and training. Once the overall project is accepted the ME will work to develop auxiliary funds in concert with the expectation outlined in the earlier Leverage and Coordination section.

BUDGET PROVISIONS

1996/1997

Constraint	P #	Institution	Region/Country	U.S.	H.C.	Total	Cost Share
Aflatoxin	Detoxification	U. Georgia	Ghana	18711	14289	33000	4678
	Management	U. Georgia	Malawi Zimbabwe Indonesia	40094	59906	100000	12266
	Risk Assessment	U. Florida/	Senegal Mali Benin	29988	5012	35000	8020
		U. Georgia		13136	21864	35000	6657
	Genetic	Texas A&M	Zimbabwe Ghana	74000	26000	100000	18842
				175929	127071	303000	50462
Production	Modeling	U. Florida /	Ghana Benin	34139	15861	50000	17215
		U. Georgia		21066	28934	50000	10040
	Biodiversity	Texas A&M	Senegal Latin America	60052	39948	100000	19617
	Breeding / IPM	U. Florida /	Bolivia	37500	12500	50000	21250
		U. Georgia		25000	0	25000	6284
	Breeding	Texas A&M	Senegal Mali	41026	38974	80000	17162
	IPM	NC State	Ghana Benin	35814	39186	75000	8994
	Biodiversity	NC State	Bulgaria Global	54407	45593	100000	14058
	Virology	U. Georgia	Malawi	64264	44736	109000	16041
	Breeding	NC State	Benin Ghana Zambia	52358	47642	100000	13089
				425626	313374	739000	143750
Socioecon	Impact	NC State	Global	41226	33774	75000	10324
	Policy	VPI	Benin, Mali	68756	31244	100000	27273
	Systems Mgt.	Auburn	Haiti	9279	65721	75000	20742
	Household econ	VPI	Zambia Malawi	79668	20332	100000	15491
	Village econ	U. Connecticut	Senegal	51605	42395	94000	24040
				250534	193466	444000	97870
Utilization	Products	U. Georgia	Philippines	66256	58744	125000	16564
	Nutrition	Purdue	Ghana	50299	33701	84000	12575
	Products	U. Georgia	Bulgaria	61356	48644	110000	15361
	Products	Alabama A&M	Ghana Mali	89748	35252	125000	31345
	Products	NC. A&T	Haiti Jamaica	25253	24747	50000	7929
				292913	201087	494000	83775
X Cutting	Information	U. Georgia	Global	57647	42353	100000	24706
	Training	Thailand	S.E. Asia	0	0	30000	0
	Training	All	All	0	0	170000	0
	Program	All	All	0	0	50000	0
				57647	42353	100000	24706
Management	40	U.Georgia		0	0	560000	0
					Total	2890000	



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Peanut CRSP Management Entity Office
The University of Georgia
1109 Experiment Street
Griffin, Georgia 30223-1797 U.S.A.

Telephone: 770-228-7312
FAX: 770-229-3337
Internet:
crspgrf@gaes.griffin.peachnet.edu