

The Peanut CRSP in West Africa

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The Peanut Collaborative Research Support Program (CRSP) is supported by Grant DAN-4048-G-00-0041-00 from the United States Agency for International Development. The program is managed by the University of Georgia. Participating institutions in the United States are Alabama A&M University, the University of Georgia, North Carolina State University, and Texas A&M University, which collaborate with institutions in West Africa, Southeast Asia, and the Caribbean.

The goals of the Peanut CRSP are to enhance the research capability of both developing countries and the United States and focus this capability to alleviate major constraints that limit sustainable groundnut production and food delivery in an environmentally sound system. The Peanut CRSP enhances the potential of groundnut as a crop for human food and animal feed in host countries and the United States, while contributing to the increase of rural incomes.

The CRSP concept requires that the subjects addressed have a global impact. Groundnut fits into this global concept as a result of the worldwide distribution of the crop, its importance in both developing and developed countries, marked similarity of production and utilization constraints worldwide. Among the other important factors are the potential for research to relieve its production and utilization constraints and enable it to contribute to an increased food supply in countries where total food and protein supply is marginal. The synergistic effect of international cooperation among groups such as ICRISAT and IRHO in groundnut research also add to its global scope. The Peanut CRSP is active in three major world regions—West Africa, Southeast Asia, and the Caribbean—based on constraints to groundnut production and utilization in those regions. Research conducted by Peanut CRSP has impact also on the United States producer and consumer.

West Africa

The Peanut CRSP is concentrating its Africa program on the Sahelian Region of West Africa. The Region has severe constraints to crop production dominated by a short rainy season that is broken by intermittent periods of drought. The drought problems are compounded by disease and insect pressures, and aflatoxin contamination. These constraints and problems make sustainable production difficult, which in turn creates problems in maintaining a sustainable and adequate supply of food for a growing population.

Constraints to production and food delivery in West Africa that have been identified for study under the collaborative mode of the Peanut CRSP are: low yields because cultivars

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are not adapted to the short rainy seasons and lack resistance to diseases, insects, and droughts; yield losses due to infestation of weeds, insects, diseases, and nematodes; mycotoxin hazards to health due to fungal invasion of the groundnut; inadequate food supplies and lack of appropriate food technologies to exploit a relatively well adapted crop that is not generally considered a primary source of food; and resource management (agronomic, economic, and sociological) situations preventing efficient production and utilization.

Countries, Institutions, and Research Programs in West Africa

Senegal. Research is under way to develop cultivars that are disease and stress resistant and adapted to the short season environment. Management of aflatoxin through breeding for resistance, detection, and removal by adsorptive clays is another research action. Leadership is provided by Texas A&M University, the Senegalese Institute for Agricultural Research, and the Senegalese Institute of Food Technology.

Burkina Faso. The cultivar improvement program in Senegal is linked to improvement efforts in Burkina Faso to infuse superior germplasm. Integrated Pest Management (IPM) research is solving problems caused by damage from insect pests. Food technology research is directed toward development of better use of groundnut as a primary food and its delivery to the population. Leadership is provided by Texas A&M University, the University of Georgia, Alabama A&M University, and the University of Ouagadougou, Burkina Faso.

Mali. The cultivar improvement program in Senegal is linked to germplasm improvement in Mali, with leadership provided by Texas A&M University and the institute for Economic Research, Mali.

Niger. The cultivar improvement program in Senegal is linked to germplasm improvement in Niger with leadership provided by Texas A&M University and the Nigerien National Institute for Agricultural Research.

Nigeria. Research to control rosette virus through development of resistant cultivars is led by the University of Georgia and Ahmadu Bello University, Institute of Agricultural Research with linkages to the cultivar improvement programs in Senegal and Burkina Faso.

Networks. The research program is enhanced by networks involving the interaction or linkages between the collaborative centers; cooperation with the ICRISAT Sahelian Center in research planning, implementation, and workshops; and cooperative research support with IRHO in Senegal.

In addition, support is provided in training to upgrade the skills of present researchers and provide graduate training to develop future researchers, purchase of expendable supplies and key items of research equipment, and communication of newly developed technology to farmers and to rural and urban consumers.