

## **Alignment of Dry Grain Pulses CRSP with FTF Research Strategy**

**Pulse CRSP and Feed the Future Alignment Overview.** The Dry Grain Pulses Collaborative Research Support Program (Pulse CRSP) is a five-year (2007–2012) research and capacity building program funded by [USAID](#)'s Office of Agriculture Research and Policy that focuses on pulses, that is, edible grain legumes, including common bean, cowpea, pigeon pea, lima bean, and the like. This program builds on the scientific advances and technological achievements of the Bean/Cowpea CRSP that ran from 1980 to 2007, while responding with innovative research to the agricultural development priorities and objectives set forth in [USAID's Feed the Future \(FTF\) Global Food Security Research Strategy](#) and in the development strategies by [USAID Missions](#) in [FTF Focus countries](#) and [regions](#).

The Pulse CRSP is strategically positioned to support and contribute to the goals and objectives set forth in USAID's FTF global research strategy. Pulses are recognized as a nutrient-dense staple that plays multifunctional roles in smallholder farm systems in developing countries. These strategically important roles include providing for the food and nutritional security of households; generating needed income, especially for women, who are the principle producers of grain legumes in many regions of the world; and contributing to the sustainability of farm systems.

**Geography.** The Pulse CRSP supports 13 projects involving collaborative research, capacity building, and technology dissemination activities in 19 countries in four target regions, including 12 FTF "Focus" countries (in bold):

- West Africa: Benin, Burkina Faso, **Mali**, Niger, Nigeria, and **Senegal**;
- East and Central Africa: **Kenya**, **Rwanda**, **Uganda**, and **Tanzania**;
- Southern Africa: Angola, **Mozambique**, South Africa, and **Zambia**; and
- Latin America: Ecuador, **Haiti**, **Honduras**, **Guatemala**, and **Nicaragua**.

Beans and other grain legumes are among the strategic value chains and core investments for Guatemala, Haiti, Kenya, Mozambique, Nicaragua, Rwanda, Uganda, and Zambia.

**Research Strategy.** The global themes of the Pulse CRSP are as follows:

- To reduce production costs and risks for enhanced profitability and competitiveness of bean, cowpea, and other grain legumes
- To increase the utilization of bean and cowpea grain and food products to expand market opportunities and improve community health and nutrition
- To improve the performance and sustainability for bean and cowpea value chains, especially for the benefit of women
- To increase the capacity, effectiveness, and sustainability of agriculture research institutions that serve the pulse sectors and developing country agriculture in Sub-Saharan Africa and Latin America

The research, technology dissemination, and training investments by the Pulse CRSP seek to achieve these global themes by the following strategies:

1. Increasing pulse productivity through genetic improvement
2. Increasing pulse productivity through integrated management of pulse-based cropping systems
3. Increasing pulse utilization through improved knowledge of dietary contributions of pulses to human nutrition and health
4. Strengthening pulse value chains

The Pulse CRSP is well aligned and effectively contributes to the FTF research goals of “advancing the productivity frontier of grain legumes” and “enhancing the nutritional value of diets,” especially of young children and women in focus countries. Examples of specific ongoing Pulse CRSP projects that are consistent with USAID’s FTF Research Strategy include:

- enhancement of biological nitrogen fixation in grain legume cropping systems,
- genetic enhancement of bean and cowpea yield potential,
- genetic improvement of drought and heat tolerance in beans and cowpeas,
- assessment of the impact of bean technology dissemination,
- use of insect genomics and biologicals as part of a comprehensive IPM strategy to manage pod-sucking insect pests in cowpeas, and
- nutritional rehabilitation and strengthened immune systems in HIV+ children through consumption of bean- and cowpea-based foods.

**Production Systems.** The Pulse CRSP research themes and engaged approach directly contribute to the sustainable intensification of smallholder farming systems in the West African Sudano–Sahelian systems and the Southern and Eastern Africa maize-/legume-based systems, and to the bean-/maize-based hillside cropping systems in Central America (a priority region in FTF).

**Research Focus.** Collaborative research and technology dissemination activities of the Pulse CRSP contribute to four global themes, which is consistent with USAID’s FTF Research Strategy. Crosscutting themes that are integrated in all subcontracted Pulse CRSP projects include improving the livelihoods of women and sustainably enhancing the research capacity of NARS (National Agricultural Research System) and agriculture universities in participating host countries.

**Title XII and the Pulse CRSP.** The Pulse CRSP has been funded under Title XII legislation. Enacted in 1975, the primary objective of Title XII is “the development of the LDC capacity for research, education, and/or extension; the training of participants; the conduct of research; the building or strengthening of related institutional infrastructure; and/or the provision of university advisors to development projects, all in agriculture, nutrition, agroforestry or closely related fields” ([USAID Policy Directive 9/9/82, p. 1](#)). As shown above, the Pulse CRSP ensures that its projects with U.S. universities and host country institutions are designed to meet the combined objectives of quality research and institutional building. Each project should dedicate a minimum of 30 percent of funds to host country capacity building, for example, in training and equipment.

The Pulse CRSP has also dedicated a specific line of special funding for competitively bid, capacity-building projects submitted by host country institutions. All projects have invested in formal degree programs for host country nationals. When formal training programs such as master’s and doctoral degree programs are funded through Pulse CRSP projects, a U.S. scientist is always present as an official member of the advisory committee or as an external advisor to ensure appropriate mentoring of students. Through the Pulse CRSP program, U.S. university researchers have the mandate and funding to extend their research with host countries in Latin America and Africa, creating sustainable professional research exchanges and collaboration, and achieving Title XII objectives.

**Alignment with Other USAID Partners.** The Pulse CRSP management office has proactively sought to strengthen partnerships with other institutions involved in international research on edible grain legumes. Partnerships are important to the Pulse CRSP because they allow for scientific leadership to influence the international research agenda on grain legumes, the setting of joint research priorities, the avoidance of duplication, improved complementary efforts, coordination of collaborative research activities to exploit comparative institutional strengths and capacities, and partnering to facilitate the dissemination of research outputs to achieve developmental outcomes in target countries and regions. Examples of such strategic partnerships by the Pulse CRSP include:

1. Research collaboration by three USDA–ARS scientists with financial support in two Pulse CRSP projects.
2. Research collaboration by scientists at IITA and CIAT (serving as Co-PIs) in several Pulse CRSP projects.
3. Two research priority-setting workshops convened that involved participation by CGIAR and other international research team leaders and scientists, program heads from USDA/ARS and NIFA, the McKnight Foundation, and various private organizations. These workshops informed the thinking of participant institutions on appropriate research priorities for edible grain legumes to achieve FTF global research objectives.
  - “Enhancing pulse productivity on problem soils by smallholder farmers—Challenges and Opportunities.” Workshop hosted by Pennsylvania State University, August 14– 18, 2011.
  - “Enhancing Dietary Quality with Pulses to Improve Nutrition and Health of Children and Women in Developing Countries.” Consultation hosted by Michigan State University, December 5–6, 2011.
4. The Pulse CRSP has been identified as a “strategic research partner” in [CRP3.5 on Grain Legumes](#). In this role, the Pulse CRSP has contributed to the planning and preparation of the CRP3.5 proposal and has ongoing discussions with the leadership about setting research priorities and coordinating international research activities on grain legumes.
5. The Pulse CRSP participated in the “Sustainable Cropping Systems Intensification Research Planning Meetings” hosted by IITA in Tamale, Ghana, and in Dar es Salaam, Tanzania, in January and February 2012. As a result, the Pulse CRSP is a partner in two funded, jump-start subprojects for FY12.