

A MONTHLY PUBLICATION OF THE TROPICAL LEGUMES II PROJECT

About the Bulletin

The Bulletin of Tropical Legumes is a monthly publication of the Tropical Legumes II (TL II) project, funded by the Bill and Melinda Gates Foundation, and jointly implemented by the International Crops Research Institute in the Semi-Arid Tropics (ICRISAT), the International Center for Tropical Agriculture (CIAT) and the International Institute of Tropical Agriculture (IITA) in close collaboration with partners in the National Agricultural Research Systems of target countries in Sub-Saharan Africa and in India. TL II aims to improve the livelihoods of smallholder farmers in drought-prone areas of the two regions through enhanced grain legumes productivity and production.



Winding up Phase 1

The Tropical Legumes II (TL II) project aims to increase the productivity and production of tropical legumes by 20%, with at least 30% of the total area planted to improved varieties at the end of its conclusion. The project works on six crops - chickpea, common bean, cowpea, groundnut, pigeonpea and soybean – in 10 countries, including Mali, Niger, and Nigeria in Western and Central Africa (WCA); Ethiopia, Kenya, Malawi, Mozambique, Tanzania and Zimbabwe in Eastern and Southern Africa (ESA); and India in South Asia (SA). TL II is planned for a total of 10 years (2007-2017) in three phases. The first phase was launched in September 2007 and is expected to be completed by end of August 2011.

Monitoring and evaluation of the project was conducted through monitoring visits by the Project Coordinator, Objective Coordinators, and Principal Investigators during the cropping season; farmer-scientist interactions during project monitoring; annual in-country review and planning meetings; and regional planning and reporting workshops. Annual Review and Planning Meetings (ARM), including all regions, were also held in Addis Ababa, Ethiopia (29 September – 03 October 2008), and in Bamako, Mali (16-20 November 2009). The ARM this year took a different direction and focused on

a regional approach. Thus regional workshops for SA, WCA and ESA were held at ICRISAT-Patancheru, India (9-11 May), IITA-Ibadan, Nigeria (16-18 May), and Lilongwe, Malawi (22-25 May), respectively. The ESA workshop was opened by the Deputy Minister of Agriculture and Food Security of the Government of Malawi, HE MS Margaret Mauwa.

The regional workshops had three objectives: a) to review and document work completed in Phase 1; b) to discuss country strategies with NARS scientists in the TL II project participating countries; and



c) to draw work plans for the coming crop season (2011/12). The regional approach has enabled the participation of the largest number of NARS scientists possible. The total attendance in the three workshops was 145 (25 in India, 54 in WCA, and 66 in ESA). Of those, 44 were NARS scientists comprising 14 in India, 9 in WCA, and 21 in ESA. Participation by seed companies, NGOs, community-based organizations and faith-based organizations was also significant. Dr David Bergvinson, program officer for TL II from the Bill and Melinda Gates Foundation (BMGF) in Seattle, addressed both the WCA and ESA meetings via telephone; Dr Brian Love, also of BMGF, attended the WCA workshop.

These workshops are noted for a good number of participation by partners and students who have been sponsored by the project. Presentations were made by TL I, N2Africa, AGRA-Program for Africa's Seed System (PASS), AGRA-Soil Health Project, PICS (Purdue Improved Cowpea Storage), SIMLESA (Sustainable Integration of Maize and Legumes in Eastern and Southern Africa), CRS, SNV, FAO, and P4P (Purchase for Progress of the World Food Programme). All presenters have emphasized the importance of partnership and collaboration for the success of their respective projects. Seven students (2 ongoing PhD and 5 completed MSc) have made presentations on the results of their theses in the ESA workshop whereas two students prepared poster presentations in WCA.

Research Highlights

The TL II project's approach for improving the productivity and production of tropical legumes in Phase 1 has focused on:

- Understanding the legumes' environment (through baseline, market and impact studies, effective monitoring and evaluation systems);
- Developing farmer- and market-preferred crop varieties and integrated crop management technologies; and
- Establishing sustainable seed production and delivery systems.

Capacity building for the NARS in the target countries and creating awareness among farmers about available technologies have also received major emphasis in order to speed up the spread of improved technologies. Important milestones have been reached and lessons learned.

Some numbers (Africa)

- 0.2 : Ha of tropical legume plots per household (HH) of smallholder farmers;
- 4: Years of schooling for heads of HH;
- 10: Km distance to nearest main market;
- 48: Age of heads of HH;
- 75: Percent farm HH using saved seed;
- 85: Percent farm HH owning radio;
- 316: Kg per capita production of tropical legumes;
- 70,000,000: Number of farm HH growing tropical legumes.

Examples of lessons learned

- Level of investment and capacity for agricultural research and development among NARS are extremely variable;
- Large seed companies are not enthusiastic to engage in tropical legumes seed production;
- Seed systems are variable among/within NARS;
- PVS (participatory variety selection) is an effective way of technology dissemination;
- The use of small pack seeds (100 g to 5 kg per pack) is a preferred approach for a quick spread of new varieties, and is especially popular among women farmers, where landholdings are particularly small;
- There is a strong need for connecting farmers and markets for both inputs and outputs;
- There is scope for improved targeting through the use of GIS tools (for enhanced understanding of relationships between environmental, social and varietal factors);
- There is a need for emphasizing advocacy to help governments to issue pro-smallholder policies.

Variety releases

The project has facilitated the release (and/or registration) of more than 40 varieties of chickpea, cowpea, groundnut, pigeonpea and soybean across target countries, many more are in the pipeline. Further details can be found in the March 2011 issue of the Bulletin of Tropical Legumes (BTL).

Seed production and delivery

Nearly 93,000 metric tons of all crops have been produced across target countries over the period of Phase 1 of TL II. This amount is enough to plant an estimated 2 million ha, equivalent nearly to 1 million smallholder households. The common bean seed system team has reached over 1

million farmers with small pack seed during the last three years in Ethiopia (ca. 465,000) and Kenya (ca. 637,000). Further details can be found in the April 2011 issue of BTL.

Capacity building

Capacity building included improving the infrastructure for carrying out effective research and development by the NARS, supplying laboratory equipment, and training. Irrigation and seed storage facilities have been established or upgraded, and laboratory equipment has been provided for those NARS that are in need. Short-term training sessions, lasting from a few days to 4 months, have been organized and offered to NARS scientists, technicians, extension staff and thousands of farmers. Long-term training included degree training at PhD and MSc levels across African universities. Majority of the MSc students have now graduated and are back on their job; most of the remaining students are expected to complete their studies by end of 2011.

Creating awareness

Awareness creation has been conducted through PVS trials, demonstrations, farmers' field days, seed fairs, and training. An estimated quarter million farmers, extension staff, and seed traders have been exposed to tropical legume technologies. A detailed story on this subject shall be presented in the September 2011 issue of BTL, after the completion of the workshop on chickpea in India.

Other points of discussion

Questions were raised during the Lilongwe meeting regarding the use of some terms. A committee of five, including Ken Dashiell (N2Africa), Joyce Mulila-Mitti (FAO, Southern Africa), Emmanuel Monyo (ICRISAT-Malawi), Tobias Flaemig (WFP Southern Africa) and Enid Katungi (CIAT-Uganda) were formed to prepare definitions. The following definitions were prepared by Ken and Joyce:

Reach: A farmer has used a variety (technology) that is promoted or recommended by the project on his/her farm.

Adopted: A farmer has used a variety (technology) on his/her farm for at least two seasons and during the second season he/she receives no financial or material support from the project.

Smallholder: 1) Varies by country and region within a country; 2) if country has a definition uses it; 3) if no definition exists, then use 2 ha or less.

Impact: To be determined by a study that measures change for one or more indicators over time. A baseline study is often used as the starting point. Some examples of impact level indicators are production area, income, yield, nutrition and length of time food is available from time of harvest.

Crop area: for crops predominantly grown under intercrop – use land equivalent ration (LER).

Small pack: size of a package of Quality Declared Seed (QDS) or certified seed that, if sold, would be affordable to the vast majority of smallholder farmers in the area; less than 10 kg.

Reach (for training): number trained/participating in field days, attending special events, receiving awareness/training materials (can include farmers, NARS, NGO staff, etc.); impact of the training is likewise to be determined by impact assessment for the application of the knowledge gained; uptake of technology, etc.

Conclusions

The workshops have enabled the compilation of results of work carried out by TL II during the first phase. Participation of NARS representatives from all target countries (and presentations made by them) has provided good background information to be used in the country strategy preparation for tropical legumes in respective countries. Work plans have been organized for each country and will be further refined at national review and planning meetings in each country.

It was obvious that TL II has made significant progress by way of learning lessons and developing/leveraging technologies during its first phase. The project has generated so much excitement among farmers, policy makers and scientists about the possibility of improving livelihoods. It is anticipated that the focus of the second phase would be expanding the gains made in the first phase.

Upcoming TL II Events

September 2011

The TL II Project Review and Planning Workshop for chickpea in India is scheduled for second week of September 2011. It will be held at the ICRISAT-Patancheru campus, Hyderabad, India.