



Agricultural research for sustainable development in Myanmar



The International Center for Tropical Agriculture (CIAT) recently completed a scoping mission to establish formal relationships with the Ministry of Agriculture and Irrigation (MOAI), and the Ministry of Livestock, Fish and Rural Development (MOLFRD) in Myanmar. The visit also included discussions with donors, NGOs, producer groups, and the private sector. Now CIAT is in the process of signing a formal

Letter of Agreement for cooperation with MOLFRD to define specific areas of agricultural research for development in support of food, nutrition, and livelihood security.

The greatest opportunities for immediate impact are through the testing and adoption of improved cassava varieties, improved bean varieties, and improved tropical forages in smallholder crop-livestock systems, as well as through the establishment of seed systems and enhanced production and management methods. CIAT proposes the following:

Forage and cassava farming systems for resilience and markets *Upper Irrawaddy and Dry Zone*

Crop-livestock farming systems play a multi-purpose role in Myanmar. Increased productivity from livestock is required from these systems to meet the increased demand for animal products and to improve the livelihoods of farmers. However, information about current forage and cassava varieties under production is severely lacking. Varieties and production methods appear to be sub-optimum, e.g. require high levels of labor input, and do not maximize the return on typical smallholder production systems. Through participatory research, and in collaboration with local producer organizations, CIAT would like to test improved forage and cassava varieties to target growing local and regional markets for food security, animal feed, and industrial uses to boost income. Additionally, through enhanced farm management practices alone, CIAT anticipates that consequent production increases, crop diversification, and labor savings will significantly boost livelihoods. CIAT will complement local and regional capacity to integrate eco-efficient technologies across the value chain.



From keepers to producers: Through forage crop-livestock systems

Dry Zone and Shan Plateau

Myanmar, a major producer of livestock and dairy products, has the highest density of bovines in the region and is a major producer of ducks, geese, and goats. Yet despite the importance of livestock, productivity is low. An analysis of the current use of tropical forages will provide the evidence base to determine effective strategies to sustainably intensify highly productive tropical forage-based systems and enhance management techniques. In this way – complimented with market-based approaches to scale adoption – CIAT aims to boost livestock production and improve animal health. Cultivating improved forages can reduce the time farmers spend collecting feed and raise their incomes by increasing the market value of livestock products, meanwhile enhancing ecosystem services, such as reduction of soil erosion and contribution to land restoration.

Baseline for beans: Triple win for food security, nutrition, and livelihoods

Dry Zone and Kayah State

Myanmar is the largest producer and exporter of beans and pulses within the ASEAN region, with dry beans accounting for more than half of Myanmar's total agricultural exports. Still, the full potential of the bean sub-sector is far from being reached. A baseline study of the current bean varieties, production, and markets will provide more information to determine effective impact pathways to bring bean production to scale. Increasing uptake of improved beans, in collaboration with local organizations and the private sector, to target local and export markets can produce a triple win for food security, nutrition, and rural livelihoods. CIAT aims to make bean production more profitable for smallholder farmers and to boost the nutritional value and supply of beans, through large-scale introduction, evaluation, and dissemination of improved beans. These outcomes will be sustained by developing a local seed system and strengthening national capacity.

Contacts

Aparna Mani
Asia Program Coordinator
a.mani@cgiar.org

André Zandstra
Head, Partnerships
& Donor Relations
a.zandstra@cgiar.org

Asia Regional Office
c/o Agricultural Genetics Institute
Pham Van Dong Street
Tu Liem (opposite the Ministry of Security)
Hanoi, Vietnam
Phone: +84 (0)43757576969

www.ciat.cgiar.org

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