ICRISAT in Tanzania

Country overview

While Tanzania is largely food secure and at times a commodity exporter, there are occasional pockets of food shortages at the regional, district and household levels. This is mainly due to dependence on rain-fed agriculture and limited use of modern farming techniques. Seventy-four percent of rural Tanzanians are engaged in agriculture while agriculture only contributes to 28% of the country’s GDP. One in ten Tanzanians live below the food poverty line, and one in three children is chronically malnourished. Diets generally lack diversity, and nutritious diets remain unaffordable for the majority of households.

– WFP Tanzania Country Brief, 2022

Agricultural research in Tanzania is grossly underfunded. Tanzania Development Vision 2025 (TDV 2025) envisions food security. ICRISAT’s value proposition over the next few years lies in contributing to the TDV 2025 through co-validation and scaling of agricultural innovative technologies and promoting participatory integrated watershed management strategies and introducing new cropping systems while linking farmers to markets.

Partnerships

ICRISAT’s association with Tanzania started in 1977 with the posting of a sorghum breeder to Ilonga. Over the nearly three decades of ICRISAT’s involvement, collaboration has spread from dryland cereals (sorghum, pearl millet and finger millet) to include groundnut, chickpea and pigeonpea. Projects in Tanzania are implemented through the Tanzanian Agricultural Research Institute (TARI), a semi-autonomous body under the Ministry of Agriculture, responsible for all agricultural research activities conducted by the National Agricultural Research System (NARS) in Tanzania.

ICRISAT partnered with the Department of Research and Development (DRD) and Ministry of Agriculture and Food Security (MAFS), Government of Tanzania, as well as with research institutions such as Sokone University of Agriculture (SUA) and its centre Bureau of Agricultural Consultancy and Advisory Services (BACAS), Dodoma University, Agricultural Research Institute Hombolo-Tanzania, National Agricultural Research Institute (NARI) and Naliendele Agricultural Research Institute (ARI Naliendele).

Dodoma Agricultural Seed Production Association (DASPA), Temnar Company Limited, Lima Africa Company Limited and Agriseed Technologies Ltd are some other key
Milestones

- **1983**: ICRISAT launched the Sorghum and Millets Improvement Program (SADC/ICRISAT-SMIP) which led to the release of a number of Sorghum and Millet varieties in Tanzania.

- **2007 – 2019**: Through the Tropical Legumes project (TL II & III), the average annual amount of groundnut seed produced in the country increased from **125 tons** in the three-year period 2007–2010 to **3,700 tons** in 2016–2018. For pigeonpea, seed production improved from **69 tons/year** (2008–2010) to **357 tons/year** in 2012–2014. Production of improved chickpea seed also grew from **131 tons/year** in 2011 to **785 tons/year** in 2014.

- **2009 – 2013**: In Tanzania, the Harnessing Opportunities for Productivity Enhancement of Sorghum and Millets (HOPE I and II) project focused on two major sorghum and finger millet producing areas. Development and release of a hybrid sorghum variety in 2014 is a key achievement.

- **2011 – 2015**: Development of a Robust Commercially Sustainable Multiple Uses Sorghum (MUS) Value chain in Kenya and Tanzania funded by the International Fund for Agricultural Development (IFAD).

- **2012 – 2016**: Africa RISING project focused primarily on intensification of maize/sorghum/pearl millet-legume production. ICRISAT led phase I in Kongwa and Kiteto districts has generated best agricultural production technologies for smallholder farmers.

- **2019**: A study in Tanzania analysed consumer acceptance of pigeonpea, millet and sorghum. Finger Millet and Pigeonpea were tested in school feeding programme to improve the dietary diversity and nutrition. [The Innovation Exchange of the Australian Department of Foreign Affairs and Trade (DFAT)]

- **2017 – 2020**: Strengthening Sorghum and Millet Value Chains for Food, Nutritional and Income Security in Arid and Semi-Arid Lands of Kenya and Tanzania (SOMNI) funded by IFAD. The project focused on breeding of multiple-use sorghum varieties and the development of value chains.

- **2015 – 2021**: Accelerated Value Chain Development of Drought Tolerant Crops (AVCD-DTC) funded by Feed the Future sustained the intervention of tropical legumes project. In 2019, A Seed Revolving Fund initiative has been launched to tackle the challenge of limited access to quality seeds in rural regions.

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**Ongoing Projects**

- Enabling a resilient and prosperous community through participatory agroecological practices in the semi-arid region of central Tanzania
- Transforming smallholder irrigation into profitable and self-sustaining systems in Southern Africa
- Harnessing sorghum and finger millet genetic resources for increased productivity and utilization in the arid and semi-arid regions of East Africa (Kenya, Tanzania and Uganda)
- Safeguarding crop diversity for food security: the finger millet component

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**Key Outcomes**

- **6** sorghum varieties
- **2** pearl millet varieties
- **4** chickpea varieties
- **7** pigeonpea varieties
- **14** groundnut varieties

In 2016, Rosette resistant groundnut variety Naliendele was introduced replacing **40-yr-old varieties**.

ICRISAT provided training for technicians from ARI-Hombolo and Sokoine University of Agriculture (SUA) to use the aflatoxin test kit and assisted SUA in building aflatoxin detection capacity. Currently, the centres test crop samples for aflatoxin contamination and urine samples for the aflatoxin biomarker as part of nutrition activity.

About **3,797 tons** of seeds (as of 2021) were produced and distributed to strengthen the seed system. ICRISAT is working with private seed companies to enhance the production, promotion, marketing and adoption of new high-yielding varieties of groundnut and sorghum in the country.

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