ICRISAT in Africa

The International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) is a pioneering, non-profit international scientific research for development organization, specializing in improving dryland farming and agri-food systems. The Institute was established as an international organization in 1972, by a Memorandum of Agreement between the Consultative Group on International Agricultural Research and the Government of India. ICRISAT works with global partners to develop innovative science-backed solutions to overcoming hunger, malnutrition, poverty and environmental degradation serving the 2.1 billion people who reside in the drylands of Asia, sub-Saharan Africa and beyond.

Accolades
- 2022 Excellence in Practice Gold Award
- Africa Food Prize 2021
- 9th India CSR Award 2020
- National CSR Award India 2019
- King Baudouin Award 1996, 1998 and 2002

ICRISAT locations
ICRISAT - Hyderabad, India (Headquarters); New Delhi, India (liaison office).
ICRISAT - Nairobi, Kenya (Regional hub ESA); Addis Ababa, Ethiopia; Lilongwe, Malawi; Bulawayo, Zimbabwe; Maputo, Mozambique; and Dar es Salaam, Tanzania.
ICRISAT - Bamako, Mali (Regional hub WCA); Niamey, Niger; Kano, Nigeria; and Dakar, Senegal.

Value Proposition
ICRISAT brings scientific, evidence-based solutions to agriculture and food systems in the drylands with a special focus on sub-Saharan Africa and Asia. The Institute is recognized as a global knowledge leader and holds 50 years of multi-disciplinary knowledge, experience and expertise in solving some of the most pressing issues facing the drylands. The Institute has a wide range of global, regional and local networks and an inclusive partnership approach to developing innovations to deliver at scale.

Mission
ICRISAT’s mission is to reduce poverty, hunger, malnutrition and environmental degradation in the dryland tropics.

Vision
Our vision is a prosperous, food-secure and resilient drylands that can adapt to a changing world. We will support this through the faster deployment of our scientific innovations, at a greater scale, at lower cost, and with greater impact to overcome poverty, hunger, malnutrition and environmental degradation. Our science will continue to drive tangible improvements in food security and nutrition for the poorest of the poor, especially women and children.
Kenya
Kenya’s connection with ICRISAT dates back to 1981 when the organization launched the Semi-Arid Food Grain Research and Development Program (SAFGRAD). USAID primarily funded this initiative. Kenya’s focus has been on bolstering resilient livelihoods through climate-smart agricultural technologies and improved dryland crop varieties. Collaborating with the Government of Kenya, ICRISAT prioritizes traits like drought tolerance, shorter maturity durations, minimal external inputs, climate resilience, and nutrient recycling in breeding enhanced crop varieties suitable for diverse agro-ecological conditions.

Ethiopia
ICRISAT’s engagement in Ethiopia started in 1981, partnering closely with the Ethiopian government to address key agricultural priorities. Current areas of focus align with the country’s agricultural policy, emphasizing natural resource management, seed system development, capacity building, and integrated soil health improvement. Over time, ICRISAT has significantly contributed to various aspects in Ethiopia, including integrated soil fertility management, acid soil handling, cropping system improvement, combatting iron deficiency through millet promotion, and tailored fertilizer recommendations for optimized productivity.

Mozambique
ICRISAT-Mozambique, established in 1982, collaborates extensively with Mozambique’s Institute of Agricultural Research and the National Agricultural Research System. Joint efforts have established post-war seed systems, including the crucial USEBA basic seed unit. A decade of research and development, supported by the government, transformed Mozambique into a significant pigeonpea exporter and producer. About a million rural households cultivate pigeonpea on 250,000 hectares, contributing to the economy alongside groundnut and rice.

Tanzania
Starting in 1977, ICRISAT’s collaboration with Tanzania began with a sorghum breeder stationed at Ilongo. This partnership expanded over nearly three decades, encompassing dryland cereals like sorghum, pearl millet, and finger millet, along with groundnut, chickpea, and pigeonpea. Interventions focus on sustainable intensification for these crops through better varieties and land/water management practices, aiming to enhance agricultural productivity and sustainability.

Zimbabwe
ICRISAT Zimbabwe was established in 1983, in line with the country’s strategic plans. The center’s efforts are dedicated to enhancing agricultural productivity, eradicating hunger, improving nutrition, and promoting sustainable agriculture. ICRISAT addresses micronutrient malnutrition through improved sorghum, millet, and groundnut varieties. Smart water management tools and Agriculture Innovation Platforms have yielded impressive results in communal irrigation schemes.

Malawi
Established in 1985, ICRISAT-Malawi’s main focus initially was groundnut improvement. The center plays a vital role in advancing agricultural productivity and commercialization, aligning with Malawi Vision 2063. Progress has been made in enhancing agricultural production, productivity, and ecosystem resilience. By promoting legumes and adopting improved technologies, ICRISAT has reduced costs and increased crop yields. Notable achievements include the release of improved chickpea, finger millet, and drought-tolerant groundnut varieties in 2021, driving agricultural innovation.

ICRISAT received Africa Food Prize 2021.
Mali

The ICRISAT West and Central Africa (WCA) hub, in collaboration with Mali’s Institute of Rural Economy (IER), has led Agricultural Research for Development (AR4D) efforts since 1979. Initiatives focus on sorghum, millet, groundnut value chains, enhancing the livelihoods of smallholder farmers in Sudano-Sahelian climate zones.

Niger

ICRISAT’s initiatives in Niger align with the nation’s vision of land reclamation and food self-sufficiency. Transformational projects include African Market Garden, Sahelian Ecofarm, degraded land reclamation, genetic resource preservation, crop diversification, and capacity building. The Sadore genebank conserves Pearl millet, Sorghum, Groundnut, and Pigeonpea accessions.

Mali

Establishing a research station in 1988, ICRISAT has played a significant role in improving sorghum varieties and hybrids in Nigeria. The organization has excelled in sorghum, millet, and groundnut value chains, promoting climate-smart practices and crop residue utilization. Initiatives like ATASP-1 connect farmers to industrial markets, fostering a green revolution.

Senegal

ICRISAT collaborated with the Institut Sénégalais de Recherche Agricole (ISRA) to develop drought-resistant pearl millet varieties. This partnership expanded into other agricultural sectors, including the revival of groundnut cultivation.

Note: Scan the QR code for more details on ICRISAT’s work in various countries
Impact of ICRISAT’s major initiatives in Africa

Tropical Legumes (2007-2019)
- 239 new improved legume varieties released for cultivation
- 6.1 million tons of grain legumes worth US$ 3.2 billion produced by 25 million smallholder farmers
- 380,000 tons of certified seed was produced
- The initiative implemented in 13 countries was awarded the Africa Food Prize 2021

Watershed impact: Contour bunding preserves soils and boosts farmers’ incomes by 20% in Mali

Remote sensing: In Mali, ICRISAT and Sentinel-2 Agriculture partners deliver the first countrywide 10-meter cropland, crop type and crop condition maps

Landscape restoration: Water weirs bring life to ‘desert’ tracts in Afar, Ethiopia

Harvesting Opportunities for Productivity Enhancement (HOPE)
- 49 varieties released
- 83,421 households reached
- 8579 tons of seed produced
- 3280 National Agricultural Research System scientists trained

Thriving community of women seed producers: In Burkina Faso, women can earn up to USD 200 per cropping season from groundnut production

Women reclaim degraded lands: In Niger, research shows that a 200 m² bioreclaimed plot yields an average annual income of USD 100, equivalent to what men earn from millet production per hectare

Success of seed systems: Use of improved legume varieties in Malawi led to increased farmer incomes - 45% for groundnut, 66% for pigeonpea

Saving water: Using soil moisture sensors in Mozambique, Tanzania and Zimbabwe, 40-85% of farmers reduced irrigation frequency

Modelling studies guide policy
- Through AgMIP Clare, we had the opportunity to participate in the revision of future climate and adaptation scenarios for Zimbabwe
- Climate Change Management Department, Zimbabwe

Big innovations
- Striga-resistant sorghum
- Biofortified sorghum and pearl millet
- Aflatoxin tolerant, dry season groundnut
- Drought and heat tolerant chickpea
- Fertilizer microdosing and Warrantage system

Partner with us
To explore partnership opportunities with ICRISAT, contact ICRISAT-partnerships@icrisat.org

Impact of ICRISAT’s major initiatives in Africa