



# 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 overcome hunger, malnutrition, poverty, and environmental degradation in service to the 2.1 billion people who reside in the drylands of Asia, sub-Saharan Africa, and beyond.

## Accolades

- UNDP Mahatma Award 2023
- 2022 Excellence in Practice Gold Award
- Africa Food Prize 2021
- 9<sup>th</sup> 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 with 50 years of multi-disciplinary knowledge, experience, and expertise in solving some of the drylands' most pressing issues. 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 marginalized communities, particularly focusing on women and children living in poverty.

## 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 remediation, cropping system improvement, combatting iron deficiency through millet promotion, and tailored fertilizer recommendations for optimized productivity.

## 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, driving agricultural innovation.

## 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 Ilonga. This partnership expanded over nearly three decades, encompassing dryland cereals and pulses like sorghum, pearl millet, finger millet, 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.



ICRISAT received the 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, and groundnut value chains, enhancing the livelihoods of smallholder farmers in Sudano-Sahelian climate zones.

## Niger

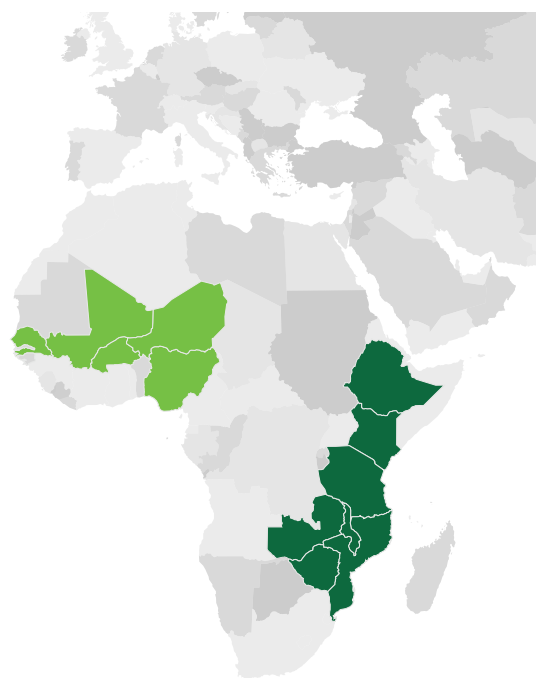
ICRISAT's initiatives in Niger align with the nation's vision of land reclamation and food self-sufficiency. Transformational projects include the African Market Garden, Sahelian Ecofarm, degraded land reclamation, genetic resource preservation, crop diversification, and capacity building. The Sadore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

## Nigeria

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.



### Senegal

(project based location)

V 18

- 1
- 13
- 4

### Mali

V 96

- 59
- 13
- 24



### Burkina Faso

(project based location)

V 27

- 10
- 10
- 7

### Niger

V 36

- 2
- 26
- 8



### Nigeria

V 29

- 14
- 9
- 6



V Varieties released using ICRISAT-supplied germplasm and breeding material

- Sorghum
- Pearl millet
- Chickpea
- Pigeonpea
- Groundnut
- Finger millet

### Zimbabwe

V 25

- 10
- 5
- 2
- 8



### Mozambique

V 22

- 3
- 3
- 5
- 11

### Malawi

V 35

- 5
- 2
- 3
- 7
- 15
- 3



### Tanzania

V 39

- 9
- 2
- 4
- 7
- 14
- 3



### Kenya

V 57

- 21
- 1
- 10
- 8
- 6
- 11



### Ethiopia

V 53

- 14
- 26
- 2
- 5
- 6



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

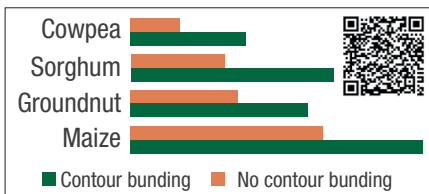
**6.1 million tons** of grain legumes worth US\$ 3.2 billion produced by 25 million smallholder farmers

**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



## Harnessing Opportunities for Productivity Enhancement (HOPE)

**49** varieties released

**83,421** households reached

**8579** tons of seed produced

**3280** National Agricultural Research System scientists trained



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



**A thriving community of women seed producers:** In Burkina Faso, women can earn up to US\$ 200 per cropping season from groundnut production

**Women reclaim degraded lands:** In Niger, research shows that a 200 m<sup>2</sup> bioreclaimed plot yields an average annual income of US\$ 100, equivalent to what men earn from millet production per hectare



**Landscape restoration:** Water weirs bring life to 'desert' tracts in Afar, Ethiopia



Potential for flood-based farming in the Afar region:



**550,000-1,200,000** ha

## Success of seed systems:

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



**437** varieties released as of 2023 across Africa in 34 countries

Implemented close to **600 projects** with **190 partners** over 50 years

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



## Modeling studies guide policy

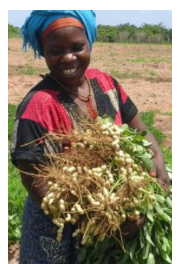
Through AgMIP Clare, we had the opportunity to participate in the revision of future climate and adaptation scenarios for Zimbabwe.

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](mailto:ICRISAT-partnerships@icrisat.org)