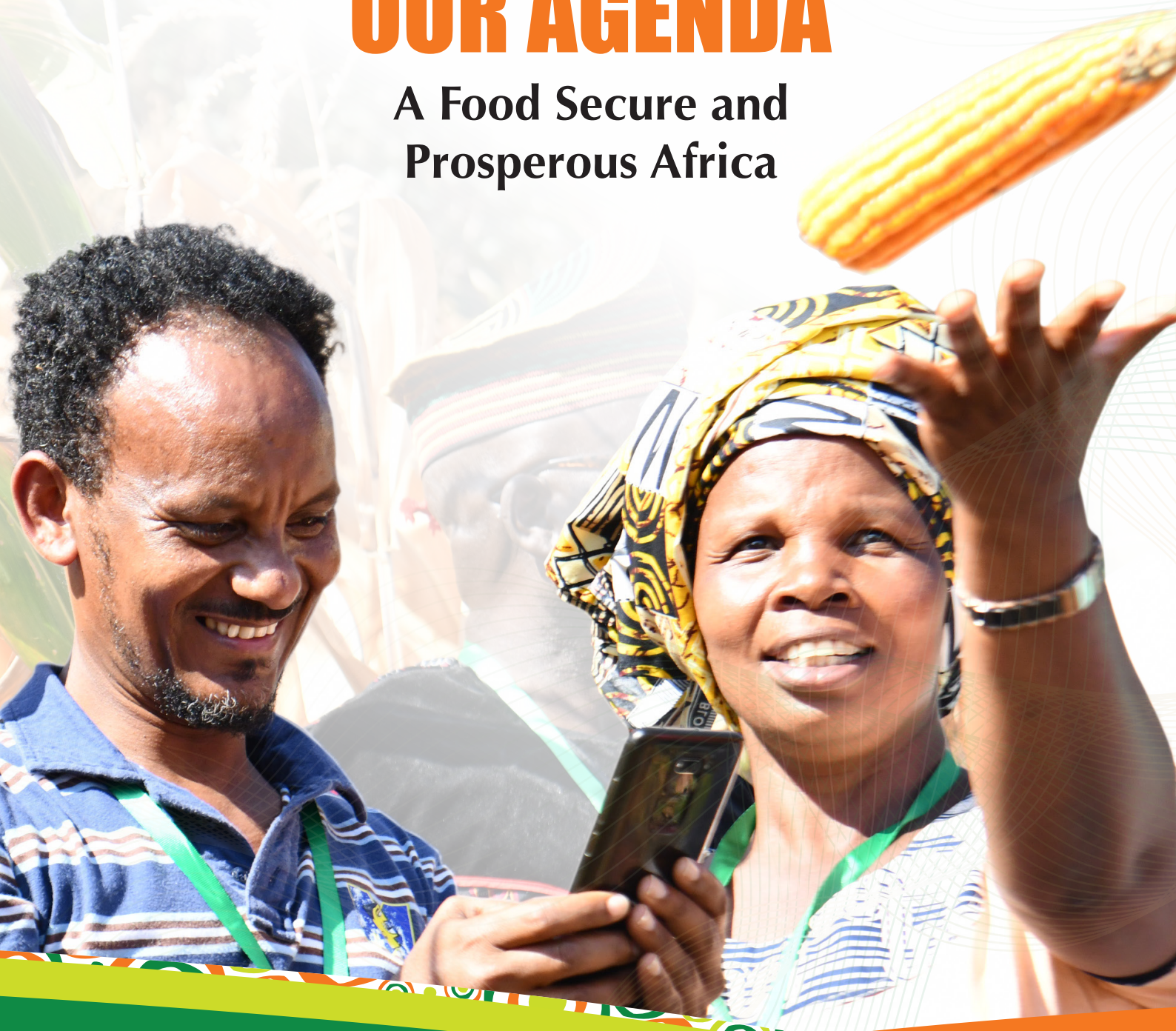




OUR AGENDA

A Food Secure and
Prosperous Africa



Find out more on;

www.asareca.org



ASARECA at a Glance

The Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA) is an Inter-Governmental Organization created in 1994 and owned by the Governments of 15 Member States in Eastern and Central Africa (ECA) through their National Agricultural Research Systems (NARS). ASARECA's overarching mandate is to Transform Agriculture for Improved Livelihoods, Sustained Economic Growth, and Inclusive Development in ECA in alignment with the Sustainable Development Goals (SDGs), Agenda 2063, Malabo Targets, and Country Strategies.

The Member States are: Burundi, Cameroon, Central African Republic, Democratic Republic of Congo, Ethiopia, Eritrea, Kenya, Madagascar, Republic of the Congo, Rwanda, Somalia, South Sudan, Sudan, Tanzania, and Uganda.

ASARECA Mandate



ASARECA is mandated by Member States to **strengthen, catalyze, facilitate** and **coordinate** regional agricultural research for development (AR4D) to improve delivery of national and regional **research-driven** inclusive and sustainable agricultural transformation and development **outcomes and impact** in ECA through the following initiatives: (i) enhancing sustainable livelihoods for all; (ii) supporting value addition of selected commodities; (iii) enabling smallholder farmers to deal with climate change issues via climate smart agriculture; (iv) enhancing livelihoods among regional pastoral communities; (v) supporting Member States in development of Agricultural Development Plans; (vii) coordinating ASARECA Regional Agricultural Market Information System (A-RAMIS), and (viii) managing Agricultural Digital Transformation for Development (AgDT4D) Hub.

ASARECA Vision



A transformed ECA agriculture sector contributing to improved livelihoods, sustained economic growth and inclusive development.

ASARECA Mission



To contribute to increased productivity, commercialisation and competitiveness of agriculture and sustainable food systems through strengthening, supporting and coordinating agricultural research for development in the ECA sub-region.



Major Benefits of Being an ASARECA Member State



Political Benefits

ASARECA creates a platform for Ministers, Permanent Secretaries and the Board of Directors from Member States to: (i) collectively formulate, execute, evaluate, and approve policies that apply to and benefit more than one Member State; (ii) lobby Development Partners to support Regional Priority Projects for generation of regional public goods; (iii) approve establishment and funding of Regional Centres of Excellence, Regional Centres of Leadership and National Centres of Specialization; and (iv) become part of decision-making organs on issues of Agricultural Research for Development in Eastern and Central Africa.



Technical Benefits

ASARECA provides: (i) platform for technical research exchanges; (ii) medium of consolidating technical experts to engage in national, regional, and continental decision-making forums on AR4D in Africa; (iii) podium for sharing national priorities and lessons learned that enable Member States identify quick solutions to their similar challenges; and (iv) opportunity for scientists to lead or co-lead a team of experts from other Member States, including being Chair of any of the ASARECA Communities of Practice.



Socio-economic Benefits

ASARECA facilitates Member States to: (i) transfer and disseminate research technologies, innovations, products, services, and goods, thus saving on cost, time, and other resources; (ii) implement regional projects that tackle joint regional challenges and cross-border issues; and (iii) have a platform for peer learning, exchange, mentorship, and exhibitions.



ASARECA Targets by 2030



4.5 million

Farmers out of severe climate risks, including 1.5 million from pastoral communities



10 million

Farmers adopting anti-food loss and waste technologies and innovations



5 million

Farmers diversifying production of priority commodities

10,000 hectares

Degraded lands reclaimed, thus addressing conflict and fragility issues



25%

Farmers accessing healthy seeds and planting materials



5%

Facilitate 5% increase in intra and inter-country trade volumes for priority commodities

5%

Increase in adoption of nature-based solutions in management of land, soil, water, and biodiversity

Enforcement of **standards on agrochemicals**

to prevent contamination from hazardous chemicals



10 million

Children & mothers accessing sufficient, safe & nutritious foods using biofortification initiatives



Facilitate generation of **350 TIMPs** & Scaling of **500 TIMPs**

15,000

Train human resources in agriculture for food and nutrition security



50 million

Stakeholders accessing ASARECA knowledge platforms and products

Coordinate **100** Policy analyses

50 Policy dialogues

22 Policies approved

10 Policies implemented



3%

Increase in youth employment in agribusinesses



Issues: Major AR4D Challenges and solutions in Eastern and Central Africa

AR4D Challenges

- ✗ Capacity gaps in diverse fields in the food systems.
- ✗ Limited capacity in implementation of Agricultural ICT.
- ✗ Limited capacity to deal with the effects of climate change.
- ✗ Complexities in adopting climate-smart agriculture.
- ✗ Skewed policy cycles on foresight, policy analyses, approval and implementation.
- ✗ Staggered market access by different smallholder farmers.
- ✗ Increased incidences of fragility and conflicts in some Member States.
- ✗ Gender inequality in almost all Member States.
- ✗ Limited value addition of major value chains.
- ✗ Limited commercialization of proven agricultural food technologies and innovations.
- ✗ Non-targeted communication due to diverse delivery channels.
- ✗ Imbalanced demand and supply of new, superior home-grown technologies and innovations.
- ✗ Escalation of food and nutrition insecurity and poverty.
- ✗ Weak interaction between the private sector and farmers.
- ✗ Decreased agricultural productivity and access to seed and fertiliser.
- ✗ Incoherence and limited economies of scale in AR4D technology generation and transfer.

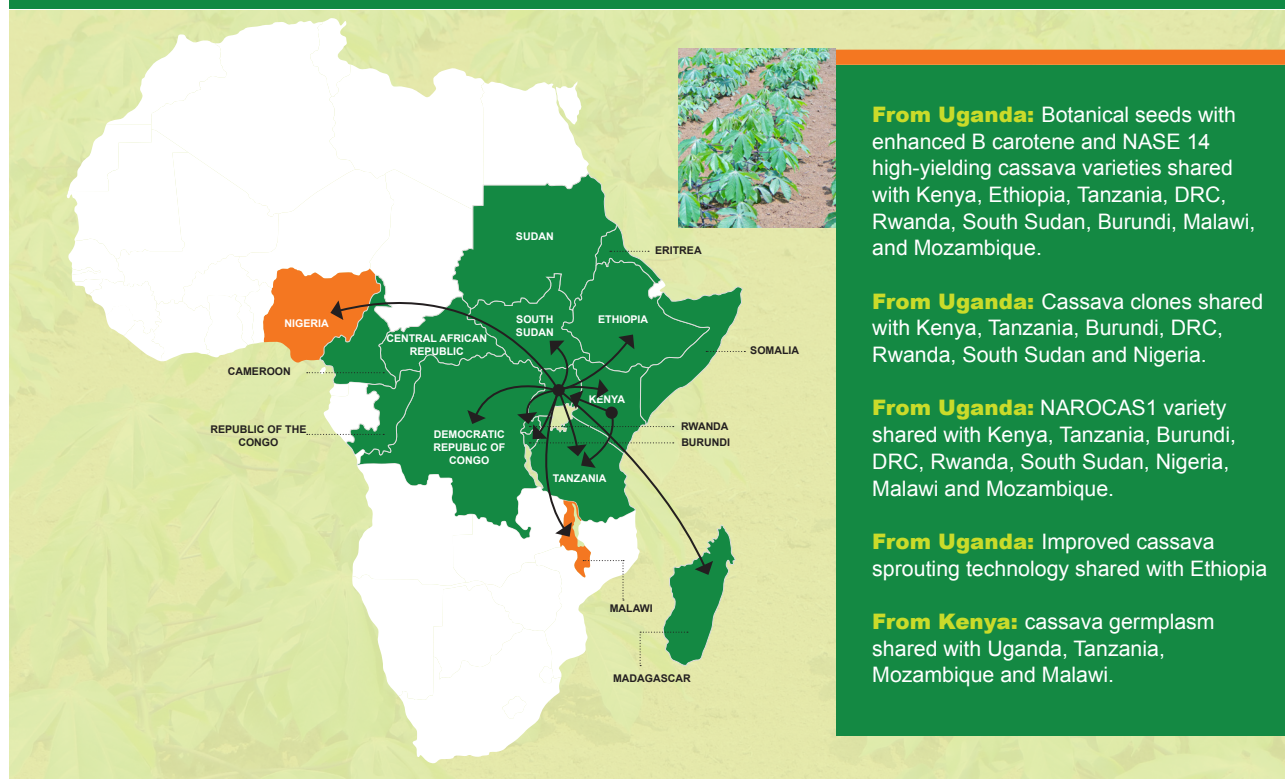


AR4D Solutions

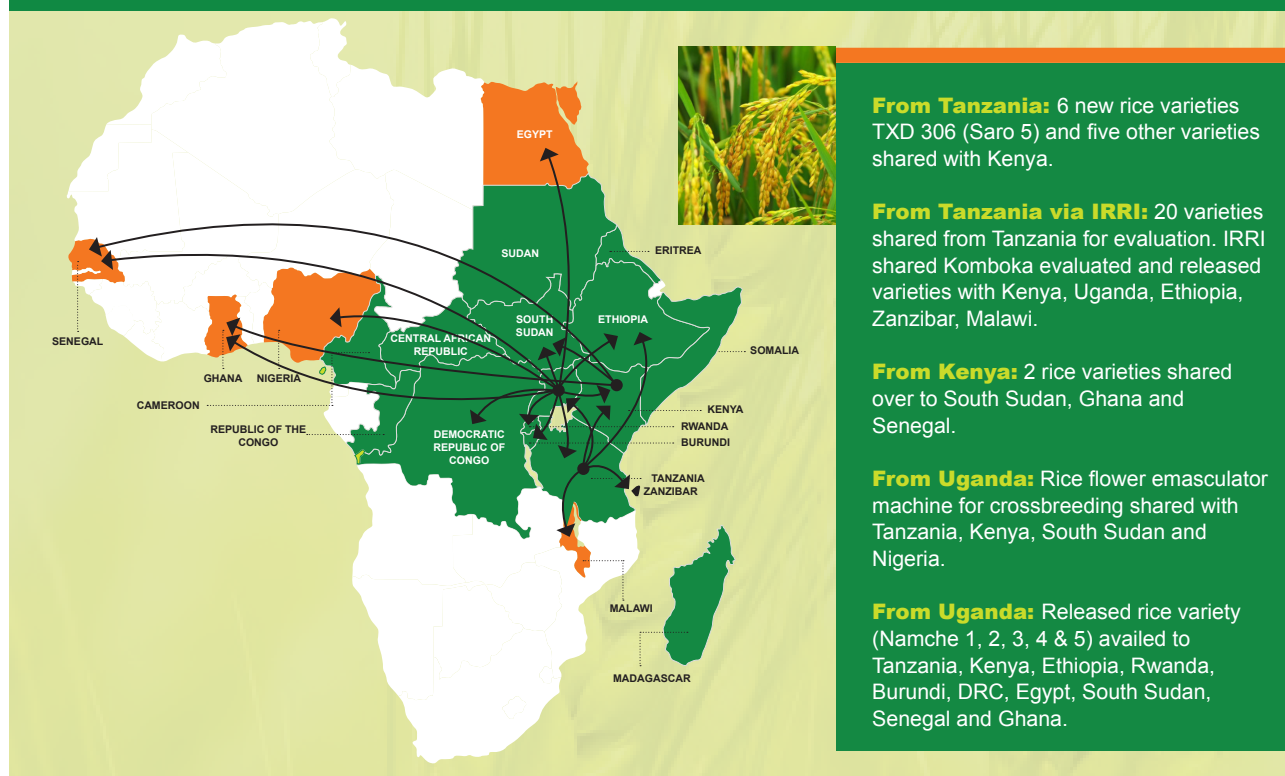
- ✓ Providing and facilitating tailored capacity strengthening initiatives identified in ASARECA Capacity Strengthening Plan.
- ✓ Establishing centres of excellence in given commodities and other AR4D specialisations in Member States.
- ✓ Promoting smart agriculture on smart farms using proven technologies and innovations.
- ✓ Enhancing knowledge building by operating data collection, dissemination of best practices, and brain gain.
- ✓ Tightening regional integration via trade promotion, joint policy implementation, and harmonization of standards.
- ✓ Facilitating private sector network for enhanced trade and commercialization of TIMPs.
- ✓ Enhancing ICT-based regional AR4D environment.
- ✓ Coordinating actions aimed at addressing threats of climate change.

ASARECA's Impacts

Movement of Cassava Technologies Across Borders



Movement of Rice Technologies Across Borders



Movement of Dairy Technologies Across Borders



From Kenya:

- 4 clones of Napier Grass that are high yielding and disease resistant to head smut and stunt shared with Uganda, Burundi, Rwanda and DRC.
- An assortment of assisted reproductive technologies including semen from bulls for dairy cattle shared with Uganda, Tanzania, Burundi, Rwanda, Ethiopia, Burundi, Zanzibar and Rwanda.
- 1 tube silage-making technology shared with Uganda, Tanzania and Mozambique.
- Improved dairy breeds germplasm shared with Tanzania, Uganda, Ethiopia and Mozambique.
- Crop residue (maize and molasses) utilisation protocols shared with Tanzania Mozambique.
- Forage suitability maps shared with Uganda and Tanzania.
- State of the art lab equipment shared with Ethiopia, Tanzania and Uganda.
- Animal health and zoonotic disease management protocols shared with Uganda and Ethiopia.
- Animal feed and milk safety practices shared with Tanzania and Uganda.
- Milk value addition and marketing innovations with Tanzania, Ethiopia, Mozambique, DRC, Egypt, South Sudan, Senegal and Ghana.

Movement of Wheat Technologies Across Borders



From Ethiopia: A full package of East African wheat improvement nurseries shared with Kenya, Tanzania and Uganda.

From Kenya: 5 wheat varieties (Kingbird, eagle 10, kwale, robin) resistant to UG99 wheat virus shared with Ethiopia, Tanzania and Uganda.

From Kenya: Standard protocols in grain quality analysis shared with Uganda.

From Kenya: Standard protocols in regional disease scoring for wheat rust shared with: Uganda, Tanzania, Ethiopia, Mexico, Burundi, Rwanda, India and Sudan.

From Tanzania: wheat varieties shared with Kenya.

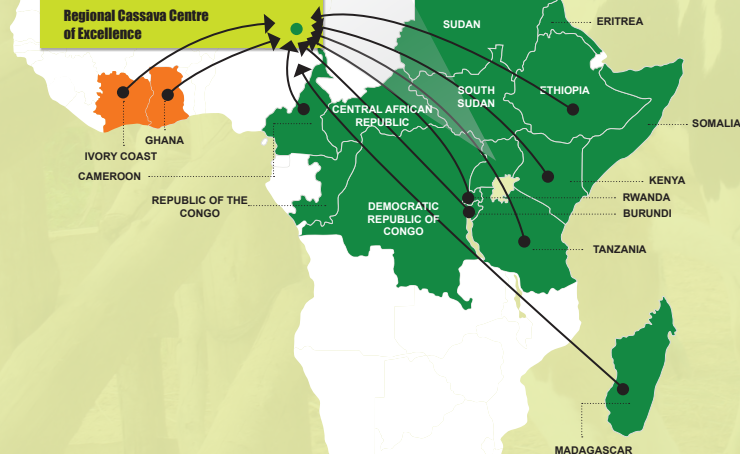
From Sudan: 5 best performing (especially tolerance to heat stress) varieties (Bohaine, Amel Ageeb, Imam and Milan/Pastor/Debeira) from ARC-Sudan shared with Cameroon.

From Kenya: 4 wheat varieties including impala shared with Cameroon.

Strengthening of Cassava Research Capacities Across Borders



Regional Cassava Centre of Excellence



Regional Cassava Centre of Excellence

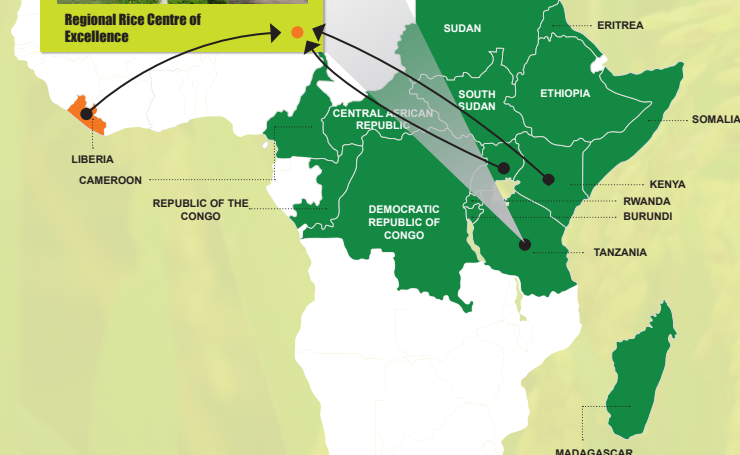
The Cassava RCoE provided capacity building and training through PhD supervision, Msc and short courses to scientists, students and staff from Kenya, Tanzania, Ethiopia, DRC, Rwanda, Burundi, Cameroon, Ghana, Ivory Coast and Mozambique.



Strengthening of Rice Research Capacities Across Borders



Regional Rice Centre of Excellence



Regional Rice Centre of Excellence

Under the rice Centre of Excellence headed by Tanzania, Uganda provided training to 7 Msc students from Tanzania, Uganda, Kenya and Liberia.



Strengthening of Dairy Research Capacities Across Borders



Regional Dairy Centre of Excellence



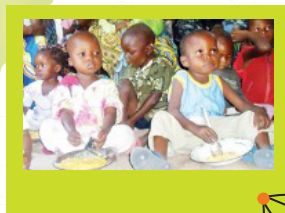
Regional Dairy Centre of Excellence

Dairy centre of excellence (Kenya) provided training and supervision for 44 Phds, 105 Msc, 1,019 short courses, which were offered to Uganda, Tanzania and Ethiopia.

The RCoE also provided access to training and use of hi-tech lab facilities to technicians, students and researchers from Uganda, Tanzania and Ethiopia.



Transfer and Dissemination of Quality Protein Maize



ASARECA promoted the rapid scaling-up of Quality Protein Maize, reputed for its protein value.

Achievements

- QPM was adopted as a major ingredient in regular diets for over 800,000 people, mainly malnourished children, and lactating mothers.
- Breeder seed for varieties promoted by the project including LONGE 5 for DR Congo and Uganda, and LISHE K1, LISHE H1, and LISHE H2 for Tanzania were produced and disseminated.

Climate-Smart Crop-Livestock Innovations

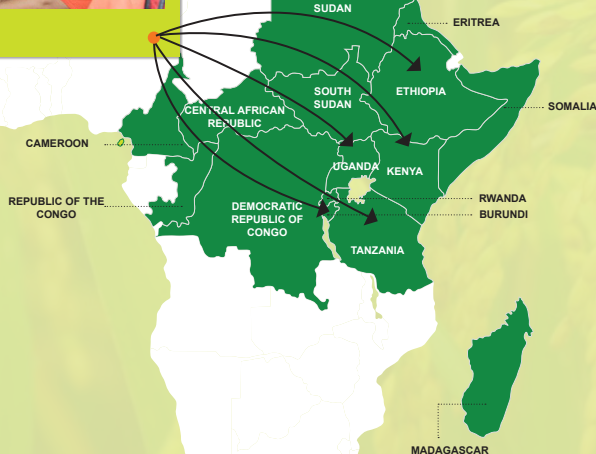


ASARECA promoted climate-smart initiatives to improve the resilience of smallholder farmers to climate change.

Achievements

- 200,000 people accessed water harvesting, small-scale irrigation facilities and labour saving innovations.
- Soil fertility improved, leading to increase in crop yields from 22 to 44t/ha
- Fodder yield increased by 2%, milk by 78% and vegetables by 500%
- Household income increased by 66%

Upscaling Adoption of Orange-Fleshed Sweet Potato



Promoted adoption of OFSP technology to improve livelihoods by increasing production, consumption & marketing. OFSP is reputed as a cheaper source of Vitamin A, thus suitable for breastfeeding mothers and their children.

Achievements

- 12 high yielding, nutritious OFSP varieties adopted in the 5 countries.
- OFSP improved the food and income security for over 800,000 vulnerable communities.
- 2,000 ha were put under multiplication of OFSP varieties

Work in Biotechnology – Fighting CBSD



Countries affected: Uganda (100% crop losses), Kenya (5-100%), Tanzania (80%); **Spillovers:** Rwanda, Burundi, Sudan, Malawi, Ethiopia

ASARECA coordinated efforts by NARIs and international partners to:

- Promote use of resistant varieties
- Study the spread of the disease
- Generate information to control spread.

Achievements

- Researchers adopted use of resistant varieties as long term control strategy.
- Existing relatively tolerant varieties multiplied and distributed to farmers.
- CBSD was subdued.
- Uganda's Cassava Centre of Excellence hosted by Uganda, advanced progress in finding CBSD resistant varieties

Biotechnology – Fighting Striga



Over 47,000 ha of sorghum infested by Striga, leading to yield losses of up to 2.3 million metric tons annually. ASARECA coordinated efforts to fight Striga by deploying resistance genes to boost sorghum productivity & enhancing sorghum adaptability to climate change.

Achievements

- 51 lines of striga-resistant sorghum varieties generated using molecular marker breeding technology.
- 4 lines code named ASARS1, ASARS2, ASARS3, ASARS4, released in Sudan.

Platforms: Main Mechanisms ASARECA Adopts



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