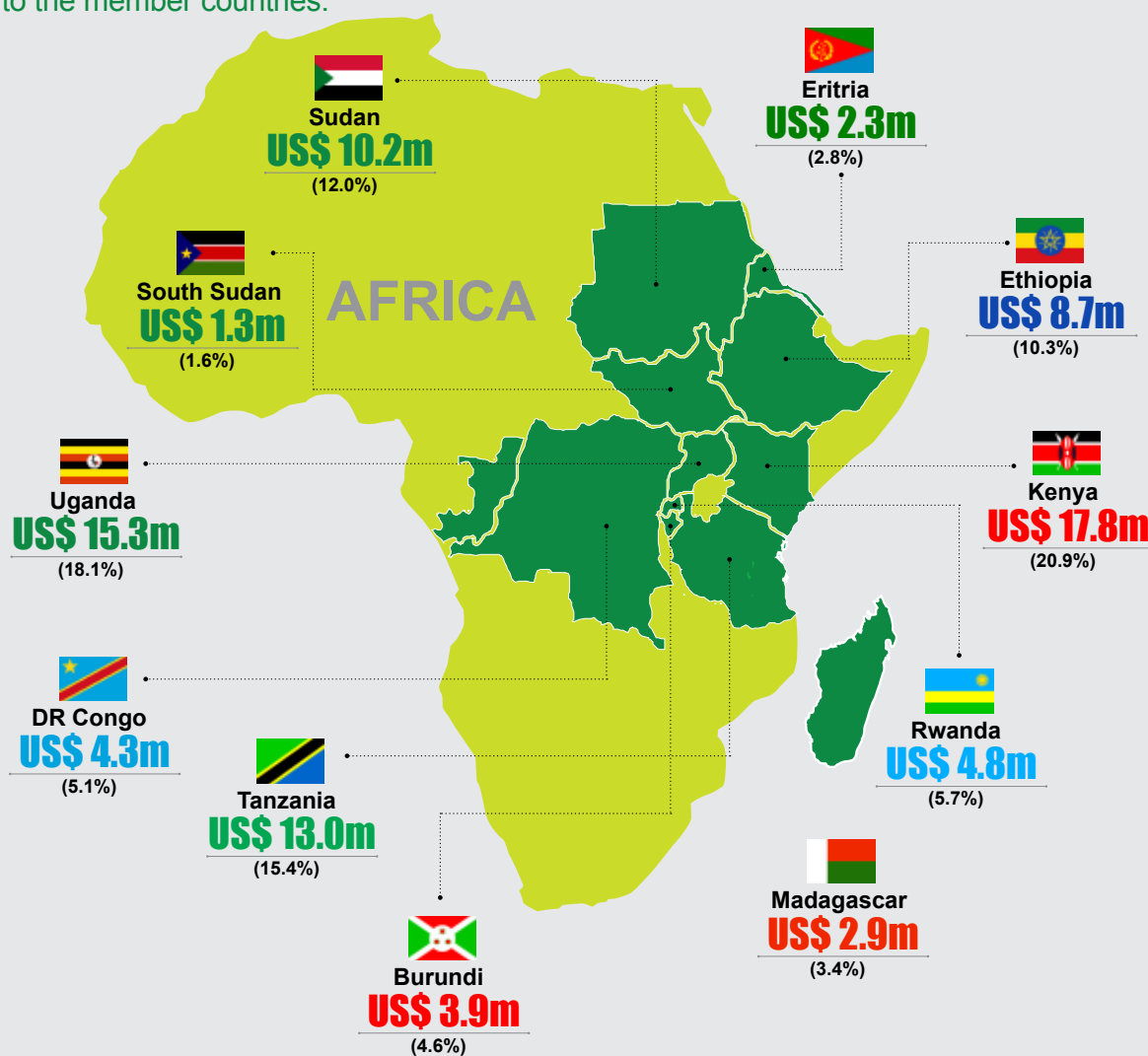


Contribution to Member Countries

Since inception in 1994, ASARECA has worked with National Agricultural Research Systems (NARS) of its twelve member countries: Burundi, Democratic Republic of Congo, Eritrea, Ethiopia, Kenya, Madagascar, Republic of the Congo, Rwanda, South Sudan, Sudan, Tanzania and Uganda. Between 1994 and 2018, ASARECA mobilized **US\$ 131 million** to implement Agricultural Research for Development (AR4D) initiatives in the countries. In addition, ASARECA coordinated the EAAPP programme in five member countries. Below are snapshots of ASARECA contribution to the member countries.

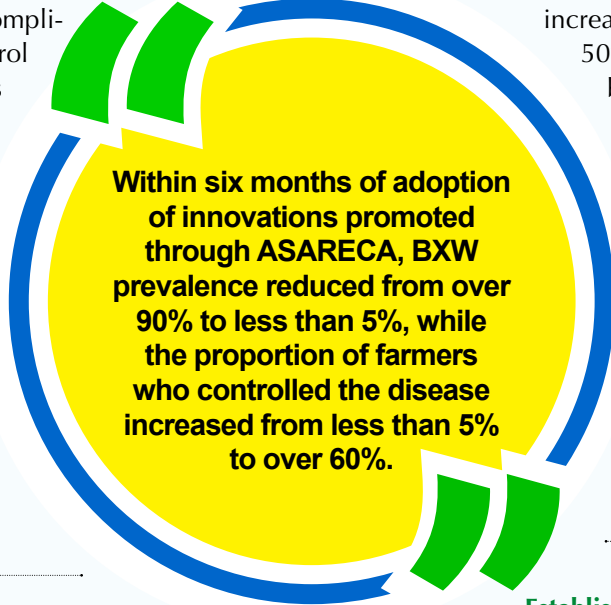


Tanzania

Tanzania is a founding member and one of the 12 constituents of ASARECA. Since inception, ASARECA has worked mainly with the Division of Research and Development, constituent NARIs and the Ministry of Agriculture, among others, to jointly address AR4D challenges in the country. Between 1994 and 2018, ASARECA invested US\$ 13.0 million to catalyze agricultural transformation in Tanzania through key beneficiary projects highlighted below:

Controlling the spread of Banana Xanthomonas Wilt (BXW):

ASARECA supported researchers from Tanzania to promote proven and cost-effective measures to control the deadly BXW epidemic that threatened to wipe out the banana crop in the country. In Muleba district, researchers deployed disease eradication approaches, including propagation of clean planting materials and trained farmers on how to detect and control the disease. Since then, the committees monitor the compliance of households to control measures. Within six months of adoption, BXW prevalence reduced from over 90% to less than 5%, while the proportion of farmers who controlled the disease increased from less than 5% to over 60%. After 15 months, banana production recovered from zero percent in some places to over 80%.



Within six months of adoption of innovations promoted through ASARECA, BXW prevalence reduced from over 90% to less than 5%, while the proportion of farmers who controlled the disease increased from less than 5% to over 60%.

Introducing mixed crop livestock innovations:

ASARECA supported scientists in National Livestock Research Institute (NLRI) in Tanzania to work with farmers to improve efficiency and quality of crops and livestock production. In Ilemela and Nya-

gagana, a feeding ration comprising maize bran and cotton seed cake with 75% energy, 20% protein and 5% mineral content was produced. The ration led to significantly higher milk yield per animal per day than any other ration tested in the project and was therefore quickly promoted to 3,100 beneficiaries. As a result, farmers reported an increase in income from US\$1,00 to 1,600 when cows were supplemented with

the blocks. In addition, farmers realized increased fodder availability by 50%, and crude protein content by 20% through inter-cropping Napier grass with forage legume (*Centrosema pubescens*). Feeding livestock with the new fodder mixture increased feeding efficiency by 30%. The fodder yields increased by 22%, milk yield (65%), vegetable yield (500%) and household income (66%).

Establishing cassava and potato standards for EAC states:

ASARECA in partnership with the National Bureaus of Standards of the East African Community (EAC) states coordinated the formulation of the East African standards for cassava, seed potato, potato and related products. As a result,

11 rationalized and harmonized standards for cassava and sweet potato were approved by the EAC in 2010, hence opening up space for structured trade and industrialization of the commodities. The Standards are anticipated to stimulate the emergence of value addition and processing initiatives for both the local and export markets.

Clean planting materials: In an effort to reduce disease infestation of potato, cassava and other staple crops, ASARECA supported researchers in Tanzania to apply tissue culture interventions for mass production of disease-free planting materials of cassava, sweet potatoes and banana. New laboratories, mainly for tissue culture were built and old ones were refurbished, technicians were recruited and trained, thus reducing the cost of production of tissue culture plantlets by 40%. Over 200 farmers benefitted from this initiative.

Controlling Napier smut and Napier stunt diseases: Following the outbreak of Napier smut and Napier stunt diseases, ASARECA coordinated researchers from Uganda, Kenya and Tanzania to quantify the incidence of the diseases in the region. Consequently, scientists developed tolerant clones and molecular diagnostic tools to identify the diseases. In Tanzania, ASARECA provided additional support to researchers to scale up adoption superior Napier clones by farmers using recommended management practices. As a result, there was a reduction of disease incidence by up to 35%, and increase in milk production by over 40%.

Eastern Africa Agricultural Productivity Project (EAAPP): ASARECA coordinated this regional initiative of the Governments of Ethiopia, Kenya, Tanzania and Uganda. Tanzania provided leadership as the Regional Centre of Excellence for rice, thus bringing together 128 researchers to work on 33 regional projects.

Through ASARECA's coordination, Tanzania sold over 676,436 doses of livestock semen within EAAPP countries. On the other hand, Tanzania received: A livestock breed survey tool and Nine Napier grass collections from Kenya; and protocols for quality management, virus diagnostic procedures and cassava-processing equipment.

Promoting Quality Protein Maize (QPM): ASARECA supported Tanzania in rapid scaling-up of QPM. This improved variety of maize containing 70-100% more building blocks of proteins than normal maize varieties. Two varieties (Lishe K1 and TAN H611) were promoted, alongside crop management and post harvest handling practices. Over 80% of the farmers adopted these varieties, leading to improved nutrition and income. Value addition has been promoted, including use of QPM recipes in cakes, samosas, biscuits and salads.

Delivering high yields through irrigation innovations: ASARECA is supporting the National Irrigation Commission, Sokoine University and Arusha Technical Institute to facilitate 1,200 households in Buigiri, Kiwere and Msolwa-Ujamaa Irrigation Schemes to promote the use of soil moisture and nutrient measuring tools. The farmers use these tools to make decisions on when to irrigate and add nutrients to the soil. The project has so far supplied about 4 Wi-Fi readers, installed 80 chameleon sensor arrays and 55 Wetting Front Detectors to farmers' fields. This has reduced the frequency of irrigation from six times a week before the intervention to only two times. This in turn has reduced conflicts over water, which is attributed to increased availability of water; improved household incomes; increased yields; new jobs and improved food security. As a result of applying the new knowledge, farmers are now able to save time for other activities such as grazing livestock or work in factories.