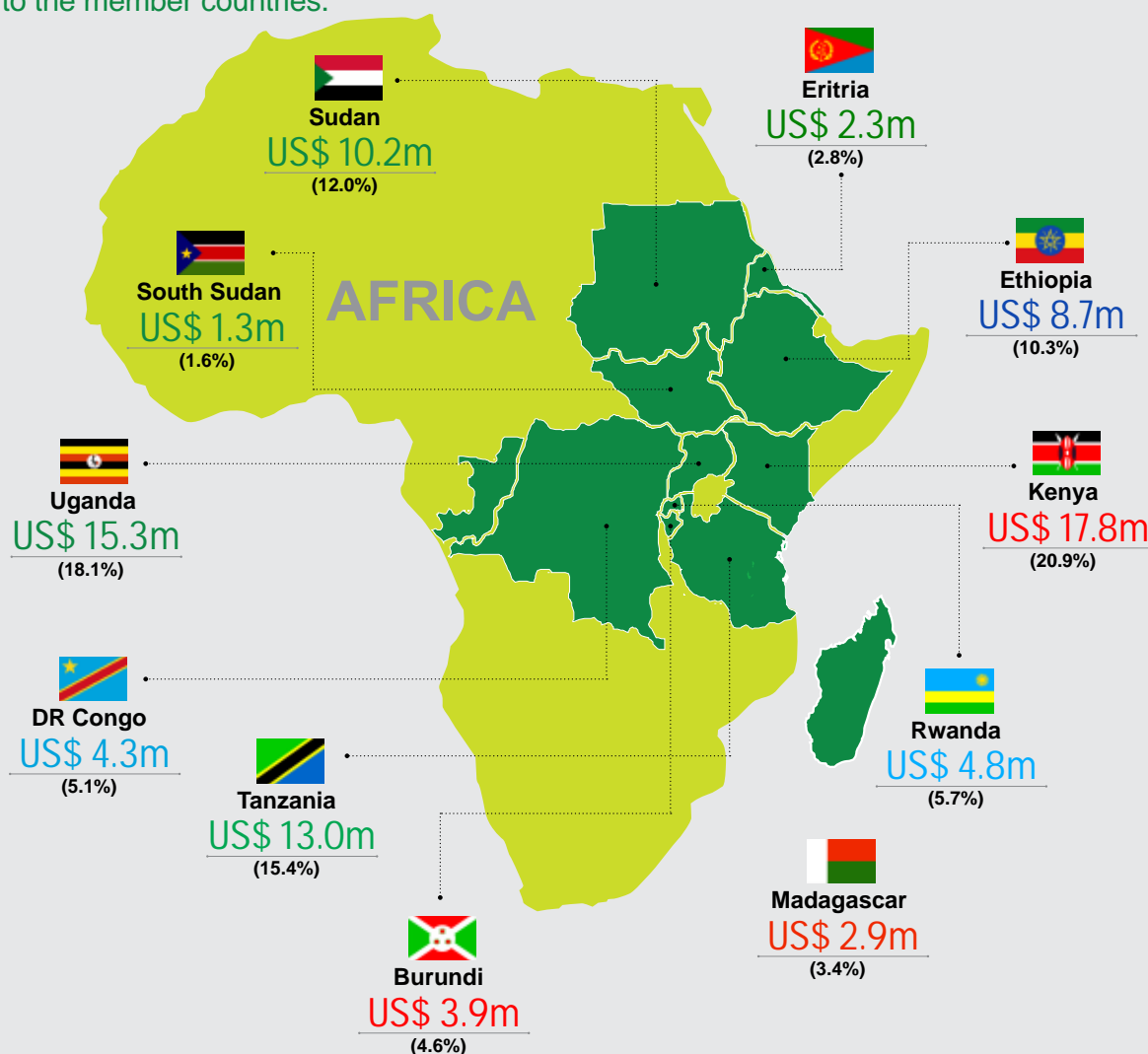


# Contribution to Member Countries

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.



## Rwanda

Since inception, ASARECA has worked mainly with Rwanda Agricultural Board (RAB), formerly Institut des Sciences Agronomiques du Rwanda (ISAR), University of Rwanda and Kigali Institute of Science and Technology to jointly address AR4D challenges in the country. Between 1994 and 2018, ASARECA invested US\$ 4.8 million to catalyze agricultural transformation in Rwanda through key flagship projects highlighted below:

### **Building capacity of Rwanda scientists to deliver AR4D:**

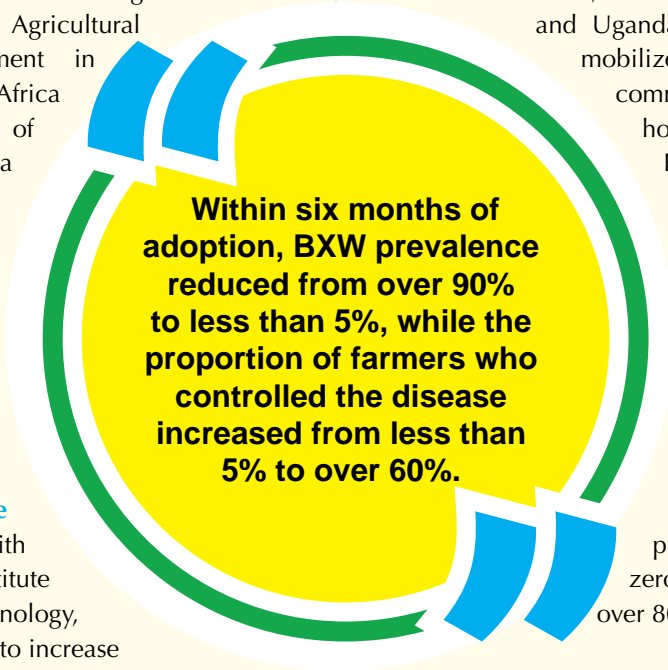
ASARECA in 2008 sponsored 34 young, mid-level scientists from Rwanda, Burundi and Sudan to undertake leadership and mentorship training, and master's degree studies in various disciplines through the Strengthening Capacity for Agricultural Research and Development in Eastern and Central Africa (SCARDA) project. A total of six scientists in Rwanda received Master's degrees, and returned to take up various leadership positions in the ISAR/RAB research structure.

### **Promoting banana productivity and value addition:**

Working with RAB and the Kigali Institute of Science and Technology, ASARECA facilitated efforts to increase productivity and profitability in the banana value chain by promoting use of clean planting materials and improvements in banana processing by Rwandan cooperatives. Specifically, COPROVIBA, a farmer cooperative, benefited from this project and improved its capacity to handle up to 4 tons of banana weekly.

### **Controlling the spread of Banana Xanthomonas Wilt (BXW):**

ASARECA supported RAB to promote proven and cost-effective measures to control the deadly BXW epidemic that threatened to wipe out the banana crop in Rwanda, Burundi, Kenya, Tanzania, DRC and Uganda. Through RAB, ASARECA mobilized and supported Rwandan communities from 26 BXW hotspots in Gisagara and Kayonza to establish sources of clean planting materials. 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%.



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### **Mitigating effects of climate change:**

Working with researchers from Kenya, Ethiopia, Eritrea, Burundi, Uganda, South Sudan, Madagascar and Rwanda, ASARECA implemented projects to increase the availability and productivity of water in rain-fed and irrigated farms. The

projects built capacity to harness water resources from rain, runoff, surface, and ground water at farm, and at the watershed level. As a result, over 500 households adopted water-efficient technologies, leading to a rehabilitation of over 5,000 hectares of severely degraded land. Over 1,000 households previously dependent on relief food are now food secure.

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**Promoting clean potato planting materials:** Research in the early 2000s established that 95 percent of farmers in Eastern and Central Africa were using poor quality tubers riddled with bacterial wilt and viruses leading to low yields. In response to the challenge, ASARECA in collaboration with International Potato Center (CIP), supported scientists from RAB to increase the productivity of Irish Potato through the seed plot technology. The technology involved maximizing production of disease-free seed tubers using best practices. Farmers who adopted the technology witnessed a production increase from 10 to 30 tons per/ha.

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**Promoting climbing bean innovations:** Following decline in yields and quality of most bean varieties in Rwanda, Burundi and DRC, ASARECA supported researchers from Rwanda, Burundi and DRC to identify and test the best bean cropping systems. Two systems, namely intercropping beans with maize stalks (as stakes), and monocropping beans using sisal and banana fibre/strings were selected. Extension workers and farmers were trained on best agronomic practices, with the beneficiary farmers registering yield increases from 780 to 3,500 kg/ha, while those who intercropped climbing beans with maize realized yield increases from 367 to 2,100 kg/ha.

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**Improving wheat productivity:** Despite being a major staple food crop in Rwanda, the productivity of wheat is marginal, leaving the demand gap to be met through imports. To close the gap, ASARECA in partnership

with the International Maize and Wheat Improvement Center (CIMMYT) supported RAB to assess technology adaptability in Kinigi, Rwerere and Nyamagabe Research Stations. Subsequently, fields of improved varieties (*Njoro BW2, Chози, Simba, EN161 and EN48*) were established, while demonstration plots were established in Butaro and Mukura to evaluate promising technologies. The smallholder wheat farmers who adopted these varieties registered increased productivity from 2 to 2.8 tons/ha.

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**Establishing cassava and potato standards for EAC states:** Aware of the dual roles of cassava and potato as food security crops and as commodities with high industrial potential, ASARECA in partnership with National Bureaus of Standards of East African Community (EAC) states jointly formulated the East African standards for cassava, seed potato, potato and related products. Eleven (11) rationalized and harmonized standards for cassava and sweet potato were approved by EAC, hence opening up space for structured trade and industrialization of the commodities. Rwanda realized the potential of cassava and established the Kinazi Cassava Plant, which has promoted the “Made in Rwanda” high quality cassava flour footprint on the global market.

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**Policy reforms in the seed sector:** ASARECA incorporated Rwanda into the Seed Regional Working Group (SRWG), which championed the analysis of the entire sector and recommended actions to ensure a vibrant and transformative seed industry. This led to the formation of Eastern Africa Seed Committee (EASCOM), and subsequently to the harmonisation of Certification Standards and Procedures, Q-List, Variety Catalogue, harmonisation of Import and Export Procedures. These efforts informed the evolution of Rwanda’s Seed Policy, its alignment with COMESA Seed regulations and subsequently becoming law in 2016. ASARECA also spearheaded efforts to establish and strengthen national seed trade associations in Rwanda, leading to the birth of the Seed Trade Association of Rwanda (STAR).