By Aimable Twahirwa;

Rwandan agricultural researchers are striving to join forces with their counterparts from the East African Community (EAC) within a win-win framework during the second phase of Science Granting Councils Initiative (SGCI2) implementation.

Through this partnership, scientists from Rwanda and Kenya have been working together in strengthening research cooperation in mass-rearing of locusts used for livestock feeding.

For the second phase of partnership which is yet to be approved by different stakeholders including the University of Rwanda and Rwanda's National Council of Science and Technology (NCST), the two sides support the continuation of this partnership yet it is a completely different project.

Based on the initial results of the study, the project is being considered by researchers from both countries during the second phase funding of SGCI 2 so that the locust mass rearing system (Roof Park Greenhouse Technology) prototyping can be completed to the model deliverable to food and feed industries, given that one year was too short for the initial phase of the Science Granting Councils Initiative.

Edible insects for human food

According to Dr. Didace Ndahimana, from the School of Agriculture and Food Sciences at the College of Agriculture, Animal Sciences and Veterinary Medicine of the University of Rwanda, the second phase of this partnership and collaboration with their Kenyan counterparts is to be approved by the top management of the University of Rwanda.

"We look forward to continuous and in-depth scientific partnership with our Kenyan peers in sharing knowledge that combine food science and nutrition to meet the challenges facing the industry," the Rwandan researcher said while referring to the insects that are often considered a nuisance to human beings and mere pests for crops and animals.

Although this agreement framework for SGCI 2 is yet to be approved by relevant

stakeholders, food security researchers from both sides have been collaborating during the initial phase of SGCI in mass production of edible insects for human food and livestock in East African Community.

Speaking during an interview, Dr Ndahimana explained that locusts are highly nutritious; hence they can be excellent sources of food and feed. According to him, safe and efficient harvest of locusts could offer nutritional and revenue opportunities in East African countries and serve as a more sustainable management method than the widespread use of insecticides.

During the implementation phase, fully-funded master's Degree program in Entomology, a science of insects were offered to students from different countries in East Africa to pursue their research Sokoine University of Agriculture (SUA) Tanzania, Makerere University in Uganda, Egerton University in Kenya.

Experimentation phases

In addition, a total of 4 Roof Park Greenhouses (RPGs) were also developed as a new system of locust mass rearing, under the collaboration between Egerton University and Sagala Parks with the system still being optimized.

According to Dr Ndahimana, a system for the measurement of greenhouses gases emitted during insect rearing has been developed, and setting is underway to conduct measurements.

By funding collaborative research projects, the Science Granting Councils Initiative (SGCI) mostly supports researchers from regional institutions to come together and identify initiatives of regional importance in the fight against food insecurity.

Working together

Although, there is no established system of locust mass rearing of locusts for food or feed production in any EAC country, experimentations have been conducted inside insect laboratories such as the one at ICIPE, usually requiring the use of expensive machines.

Four countries including Rwanda, Kenya, Tanzania and Uganda were the first to explore the possibility of having a system of mass rearing out of the laboratory environment, focusing on the system development and analyzing its efficiency.

Prof Joshua Ondura Ogendo from Egerton University who is the project Principal Investigator is convinced that by funding collaborative research projects, the Science Granting Councils Initiative (SGCI) supports researchers from regional institutions to come together and identify initiatives of regional importance in the fight against food insecurity.

“As a way forward, researchers can take advantage of the network build and continue to work together on more innovative projects,” he said. (END)