Real time crop water requirement from irrigation and trapping pests to reduce the use of pesticides, are some of the latest smart green technologies that Rwanda Development Organisation (RDO) introduced to farmers in Kagitumba, Nyagatare District on Friday, December 11, 2020.

The new green technologies introduced BazaFarm and RindaFarm devices to be used by farmers save and raise productivity. BazaFarm device has moisture and temperature monitoring sensors for crop water requirement linked to telephone to provide real-time data for irrigation decision-making while RindaFarm is a device with a special mechanism to attract and trap pests thus reducing use of pesticides.

The project which aims at efficient use of water in irrigation and reducing pesticide use was launched by RDO with funding from National Fund for Environment (FONERWA). It will operate at Kagitumba Irrigation scheme targeting 100 small holder farmers on 70 ha of irrigated land.

Diana Mugwaneza, RDO Programs Officer told farmers under KABOKU cooperative who will be the first to benefit under this project that the smart irrigation technology will reduce water used for irrigation, power and pesticides leading to an increase in productivity and savings of small holder farmers.

Diana Mugwaneza, Programs Officer at RDO

The benefits are greater, she said that as a green technology it will also lead to environmental protection and mitigate the effects of climate change.

The Vice Mayor of Nyagatare District, Stephen Rurangwa applauded RDO for the initiative which is directed at benefiting farmers while increasing productivity and was happy it was primarily brought to Kagitumba Irrigation Scheme in his district.

Stephen Rurangwa, the Vice Mayor of Nyagatare District,

He called for farmers to professionalize agriculture as the only it will benefit them. He said farmers should know how much they are investing right from how much time, water, and all other agricultural inputs they are using to calculate value of their harvest.

Thedeo Gashumba, representing FONERWA underlined the importance of the project which will help farmers as well as the country while advancing his organisation’s objectives directed at green initiatives.

Gashumba assured farmers that this project maybe for one year but as stakeholders will continue to work together and was glad that all the involved stakeholders were Rwandans trying to create innovations to develop the country.

These new technologies were developed by a local company STES Group (Seed Technology Engineering and Science), a private company based in Kigali, Rwanda that target the use of innovation, research and development.

The President of KABOKU cooperative, Murwanashyaka Rudandaza thanked RDO for the initiative saying they are hopeful for the new devices that will help reduce water they have been using which takes power that eats into their profits and pests that often destroy plants causing losses to farmers.

KABOKU cooperative brings together farmers working in Kagitumba irrigation scheme, it has 1,083 farmers, 364 are women. Irrigated land totals to over 900 hectares and various crops are produced here for both the local market and for export.

BazaFarm

This’ a solar powered device that is put in the farm to measure water level, soil temperature and the fertility of the soil in real time and the farmer can access the data on their mobile phone, tablet or PC via Internet and make decisions accordingly. The device helps farmers achieve high yields of crops and also provides data of what the soil needs for the best growing environment of crops.

BazaFarm devices use IoT technology and work in a network of sensor nodes to send data to the master which pushes data to the Internet. In a farm less than 5 hectares, one standalone device which is capable to measure and send data to the Internet can be used.

Benefits of BazaFarm

- BazaFarm helps in optimising the use of water and fertilizers
- Improve production in quality
- Allow to collect and store big data for
- Farmers can access weather forecast.

RindaFarm

This device is a solar powered insect trap which is an effective solution for insect control in crop fields. The device identifies pests and insect patterns and develops a pest management and control plan accordingly. The solar powered insect trap offered by STES Group is completely an automatic, economical and eco-friendly device.

RindaFarm controls a variety of pests including Fall Armyworm (FAW), flying nymphs and adults of leaf folder, stem borer moths, fruit borers moths, hoppers, aphids, white flies, fruit weevil and different crop beetles …etc.

The devices are installed in one hectare to ensure proper control of pests, RindaFarm light attracts adult pests which are trapped in the fluid contained in the yellow basin.

Benefits of RindaFarm

- Controlling one adult insect reduces 300-400 insect populations and subsequent progenies in the field.
- Helps identify pests and insects patterns to develop pest management and control plan. It is economical and reduces the use of chemical pesticides.
- Helps in monitoring and controlling pests and insects that are harmful.
- The produced output has less chemical impact which protects the health of people and the eco-system.
- No electricity nor manpower required to operate the device.
- RindaFarm avoids the possibility of trapping beneficial insects

The Smart Irrigation Project involving BazaFarm and RindaFarm is unique and will require an elaborate and demonstration on how the green technologies will work to the beneficiary farmers. Target focus to be trained are the youth in the sector who will be trained by the experts while beneficiary representatives have been trained to clearly understand the project, get involved and own it .