13-19 November 2023

Govt launches campaign against fall armyworms

Farmers work in their maize plantation in Gisagara District, on November 10. *Photo: Courtesy.*

By Michel Nkurunziza

THE RWANDA Agriculture and Animal Resources Board (RAB), in collaboration with districts, has initiated a comprehensive battle against fall armyworms jeopardizing Agriculture Season A.

Fall armyworm, a destructive insect pest, poses a significant threat to over 80 crop species, including maize, rice, sorghum, and legumes.

Interventions aimed at educating farmers on pest management have been launched in response to reports indicating the imminent threat of fall armyworms affecting the Agriculture Season A harvest.

Maize farmers nationwide have expressed concerns as the armyworms exhibit resistance to conventional pesticides.

The Twizamure Cyuve farmers' cooperative, cultivating maize on 75 hectares in the Cyuve sector, Musanze district, reports devastating attacks on their maize plantations.

"We planted Hybrid 628 maize seeds, and while the crops initially thrived, they were later attacked by armyworms during weeding. Leaves are damaged, and optimism for a good harvest is diminishing. We urgently need effective pesticides," Gloriose Nyirabariha, a distressed farmer said.

Musanze district has emerged as one of the severely affected areas, prompting a recent campaign covering 72 hectares in the wetland of Busogwesector, Nyanza district.

"We are concentrating on areas with minimal rainfall, distributing pesticides under subsidies," Patrick Kajyambere, the Vice Mayor in charge of economic development in Nyanza district. said

Athanase Hategekimana, a scientist spearheading crop disease and pest control at RAB, emphasizes the importance of providing farmers with both subsidized fertilizers (urea) and pesticides, consolidating land.

"The battle against fall armyworms has commenced in Gicumbi, Nyanza, Nyagatare, Gicumbi, Burera, Rubavu, and Gisagara, with plans to extend to all districts," affirms Hategekimana.

Push-Pull technology deployed against Armyworms

Hategekimana said they have introduced 'push-pull technology,' an integrated cropping system involving a repellent intercrop to drive pests away from the main crop.

"We are collaborating with the International Centre of Insect Physiology and Ecology-icipe to promote push-pull technique," says Hategekimana, highlighting its successful trials in Nyanze, Gatsibo, Nyagatare, Gicumbi, Musanze, Ngororero, and Rubavu districts.

Biological Control Agents and GMO Seeds Considered

The government has previously explored biological control agents (parasitoids) to contain fall armyworms, collaborating with International Centre of Insect Physiology and Ecology (icipe) since December 2022.

RAB, in conjunction with Food for the Hungry, introduced this approach in Kamonyi, Muhanga, Ruhango, Gatsibo, Nyagatare, and Ngororero districts.

These parasitoids, previously effective in Kenya and Tanzania, lay eggs into fall armyworms' eggs, hindering reproduction and averting crop damage.

RAB plans to multiply parasitoids in laboratories, conducting confined trials before widespread deployment.

Agricultural scientists are also advocating for genetically modified organism (GMO) seeds, exemplified by the Tela maize variety, designed to withstand drought, stemborer, and fall armyworm, promising enhanced crop immunity while ensuring safety for human consumption.

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The New Times (Rwanda) - Published 14 November 2023

Justin Ongala and field officers from PlantVillage at hear farm in Okame village, Busia County. RICHARD MAOSI I NATION

Technology

Local innovation that destroys armyworms

The innovation by researchers in Alupe, Busia County, has come as a relief to maize, sorghum and cassava farmers in many parts of the country

BY RICHARD MAOSI.

The slow drive on the steep section of the Busia-Malaba road offers one a glimpse of lush cassava, sweet potato, sorghum and maize farms.

At Adungosi trading centre, we leave the highway and turn towards Okame village.

It is here that we find Justin Ongala in the company of two agricultural experts from PlantVillage, inspecting maize plants that are barely a month old.

"I used to harvest eight 90-kilogramme sacks of maize from one acre. Last season, the yields fell to just two bags," Ongala says.

For the last few seasons, fall armyworms have been attacking her maize when the crop is about two weeks old.

This prompted Ongala to look for ways of improving her yields. Fortunately, a friend introduced her to PlantVillage – a youth driven programme that trains smallholder farmers to control Africa's worst crop pest – the fall armyworm. And the innovation is Kenyan.

"I have been shown a biological and environmentally-friendly way of controlling the armyworm. This method does not involve pesticides, which are also know to kill bees and other useful insects," Ongala says, adding that she expects to harvest 17 bags this season.

We then visit a parasitoid laboratory in Alupe and meet Brian Nakitare.

He says parasitoids are organisms that depend on fall armyworms to complete their life cycle

Nakitare says the laboraotory did a study on parasitoids following the destruction of maize, sorghum and cassava by the fall armyworm.

"If uncontrolled, a farmer can lose 100 per cent of her crops," the scientist says.

"Maize is a staple in east, central and southern Africa. That is why farmers are advised adopt integrated pest management through natural remedies," he says, adding that it is cheaper than resorting to pesticides.

Nakitare says the project began towards the end of 2020 when five young people were taken for training at the International Centre of Insect Psychology and Ecology (ICIPE) in Kasarani, Nairobi.

I have been shown an environmentally-friendly way of controlling the fall armyworm. This method does not involve pesticides

Justin Ongala, Smallholder farmer in Okame village, Busia County

The United States Agency for International Development (USAID) then assisted the trainees to set up the laboratory with incubators, humidifiers and other resources.

PlantVillage meets its clients during farmers field days. Farmers undergo training on managing the parasitoids before the eggs are released to their lands.

The moths are the target stage because they lay eggs, which are harvested in cages ,then stuck on the cards for parasitation.

"The cards are taken to the field one day before the parasitoid emerges," he says.

Nakitare says the dream team has been able to scale parasitoid production to more than 35 million wasps since last year.

The team has released over 22.5 million to 750 maize fields across 10 counties.

Small-scale farmers are embracing the innovation in Bomet, Bungoma, Busia and Homa Bay counties.

Others where the technology is being used to fight the fall armyworm are Kakamega, Kilifi, Siaya, Trans Nzoia, Uasin Gishu, Machakos and Vihiga.

According to Nakitare, about 813 farms have been treated with parasitoids by more than 850 farmers who have benefited from the technology.

Through the PlantVillage Nuru mobile app that uses a digital assistant to help farmers diagnose crop disease in the field, some 37,000 farmers have been able to access useful messages on sustainable agriculture.

rmaosi@ke.nationmedia.com.

Saturday Nation (Kenya) - Published 18 November 2023

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11:37 AM · Nov 13, 2023 from Mbita, Kenya · **356** Views

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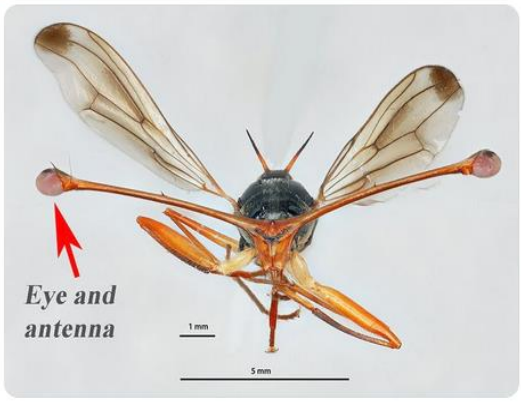
Our #insectoftheweek is Stalk-eyed #fly. A bizarre feature is its enormous displacement of the eyes & antennae from the rest of the head onto the tip of diverging stalks. In some species, the length of the stalks exceeds that of the fly's body! Read more: icipe.org/news/blog/inse...



4:40 PM · Nov 14, 2023 · **824** Views

National Coffee Research Institute Uganda (NaCORI)
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#Robust Project 2nd annual review meeting @Makerere@Cirad @icipe @EU_Commission @IWCAGlobal @NAFORRI_UG @StrandLife @ird_fr @DAFNAE_UniPD @BarbaraZawedde represented @NARO_DG called for more engagement of Zonal Agric.institutestes and use of indigenous knowledge in project work.

1:14 PM · Nov 14, 2023 · **2,365** Views

Agri-based digital Innovation in West Africa
@AgridiAfr

Learn from Dr Jonas Mugabe, #AGriDI's Manager, as he showcases the progress made in creating a regional ecosystem for digital adoption in agriculture. The Accelerating Inclusive Green Growth through Agri-based Digital Innovation in West Africa is a program implemented by @icipe

11:16 AM · Nov 17, 2023 · **298** Views

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Through the support of @FutureForAll, significant progress has been made by @icipe in the #mango production systems in #Ethiopia, translating to improved yield, incomes, and overall livelihoods for #farmers and young entrepreneurs. Read more: icipe.org/news/mangoes-a...

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Newly discovered African crickets fortify African porridge

icipe researchers use insect nutrients to transform continent's popular staple into a nutritious super-food; create a model for food-to-food biofortification

It is known as the staple food of Africa, and for good reason. Made from cereal grains, African porridge, whether in the form of a thick mush, soft or runny, is consumed in most households and by all age groups across the continent. It is a weaning food for infants; nourishment for nursing mothers, the elderly and the convalescents; a go-to breakfast, refreshment, and for some, a main meal.

And now, in a game-changer for nutritional security in Africa, researchers from the International Centre of Insect Physiology and Ecology (*icipe*), have used insect nutrients to transform African porridge from a basic, often low-nutrient meal, into a super-food that meets and exceeds micronutrient requirements for people.

In findings published in *Foods* journal (Paper link: https://doi.org/10.3390/foods11071047), the scientists observe that although the predominant African porridge cereals, like sorghum and finger millet, are rich in carbohydrates, they are extremely low in energy and nutrient densities. This is partly because

9:48 PM · Nov 14, 2023 · **57** Views

African Institute for Capacity Development (AICAD)
@AICAD_Kenya

#AICAD will be hosting the Insect for the Green Economy Conference from 28th - 29th February 2024. the conference is jointly organized by @icipe , @GREEiNSECT ,@flygene_qgg funded by @RockefellerFdn among others
To participate: Submit abstract to igec2024@gmail.com
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