15-21 January 2024

New technology tested for control of vegetable pests

By Correspondent Valentine Oforo, Dodoma

AGRICULTURAL experts at the World Vegetable Center (WorldVeg) in Arusha Region in collaboration with the International Centre of Insect Physiology and Ecology (ICIPE) based in Nairobi, Kenya have introduced a new biological control technology in management of pests in vegetable production.

The PushPull (P-P) technology which does not involve application of any chemical pesticides is being tested for the control of diamondback moth, cabbage aphid, green peach aphid and Indian mustard aphid which are the most devastating insect pests especially in cabbage production.

Among the biotic factors which play a role in causing significant damage to agricultural production and productivity worldwide are a wide range of plant and post-harvest insect pests and diseases and studies have shown that global crop losses due to pests and diseases cause food shortage and hence food insecurity.

Records show that In Tanzania, between 40 to 100 percent of tomato yield loss is due to bacterial wilt disease, primarily caused by Ralstonia solanacearum bacteria species.

Dr Simon Boniface, Entomologist and Laboratory Manager who leads a plant health team at the Worldveg Arusha said in an interview yesterday that the introduced technology is based on the use of repellent and attractive plants intercropped with the targeted crop.

"As the repellent plant pushes the targeted pest away from the main crop, at the same time the pest gets attracted and trapped by the attractive crop and hence reduces the impact of the pest on the main crop. The push-pull technology, therefore, can be employed and it fits well in the integrated pest management programmes in the management of agricultural insect pests," he said.

Dr Boniface added that the technology research activity is under AGROVEG Project funded by Biovision Foundation with the main objective of validating the push-pull technology to control pests on crucifers in order to enhance intercropping, eco-friendly and sustainable IPM technologies, and upscale the use of improved varieties in Tanzania.

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The Guardian (Tanzania) - Published 17 January 2024

European Union Ambassador to Kenya Henriette Geiger tours a maize plantation at the Icipe research farm in Mbita town on January 11. GEORGE ODIWUOR | NATION

Pest management

Icipe showcases eco-friendly pest control system in Mbita

Research institution is conducting experiments to help farmers cut costs, adapt to climate change

BY GEORGE ODIWUOR

At the International Centre of Insect Physiology and Ecology (Icipe) centre in Mbita town, Homa Bay County, is a large research farm used to study the behaviour of insects.

In agriculture, while many kinds of insects are useful, others can be very destructive as they feed on crops and thus negatively impact on yield.

At the research farm, various crops are grown in different sections. One of the major crops used in the study of insects is maize, a staple food in the country.

Anyone visiting the farm for the first time will notice that the maize grown in the different sections of the farm are at different heights despite being planted almost at the same time.

In one section are dwarfed maize plants with leaves that have been damaged by pests. At another section are full-grown plants with fresh green leaves and large cobs.

Healthy maize at the farm has a unique feature—around it is Napier grass and in between the rows is another crop.

Researchers at Icipe say this is one of the best solutions for addressing pest attacks on crops. It is called a push-pull system.

According to researchers, the push-pull system uses two companion crops alongside a main crop such as maize. The "push" plant (such as a legume) is planted in rows in between maize and the "pull" plant (such as Napier grass) is planted as a perimeter around the edges of the maize field.

The Napier grass attracts the stem-borer moth away from the crop, acting as the "pull".

The leguminous crop, which is planted within the maize crop, repels pests, acting as the "push".

A farmer using the push-pull system is able to save money by minimising use of chemicals in controlling pests, while at the same time increasing yields.

A team from the European Union (EU) visited the research farm on January 11 to learn more about the experiment. The EU is funding one of the research projects at the centre.

EU Ambassador to Kenya Henriette Geiger said Icipe has been instrumental in developing technologies that will eventually help the world transition into ecological farming.

According to her, a lot of farmers have adopted the push-pull system. She told those who are yet to use the system to try it saying they will enjoy the benefits.

"Every farmer should know the system and use it. In every part of the world, people are struggling to adopt ecological and organic farming," the EU ambassador said.

One of the major factors affecting agriculture now is climate change, whose adverse impact is threatening food security not only in Kenya but globally.

Unpredictable weather patterns are affecting how farmers plant, with those who depend on rain not being sure when to plant.

At Icipe, researchers are doing experiments to come up with climate change adaptation strategies. Their aim is to empower farmers to have crops that are resistant to climate change.

"The challenge all over the world is that agriculture is taking a back seat as most people pursue careers in medicine, law and other professions where they can make money. Nobody thinks of going into farming, and this is a big problem for food availability and insecurity," the ambassador said.

The challenge all over the world is that agriculture is taking a back seat as most people pursue careers in medicine, law and other professions

Ambassador Henriette Geiger

Ms Geiger urged agricultural stakeholders in Kenya to invest in climate resistant crops to enhance food security in the country. She said one of the best strategies of combating the adverse impact of climate change is to invest in climate resistant crops and new farming methods.

The ambassador added that using technology developed by researchers, farmers in the country can mix both food and cash crops and be able to generate enough income.

"We are looking at the bigger picture where we need to adapt to increased flooding, global warming and other climate change factors," Ms Geiger said.

She announced that more funding will be available from the EU for agricultural research and replication of the already identified pest control systems.

Homa Bay Governor Gladys Wanga, who received the ambassador at her office, said the county's economy depends heavily on agriculture. According to the governor, up to 70 per cent of the county's population depends on agriculture.

She expressed concern about the challenges they face such as drought and floods, but indicated that her administration is focusing on new crop production technology to cushion farmers from losses.

"Among areas we are exploring is taking our farmers away from depending on rain-fed agriculture," Ms Wanga said, explaining that climate change has caused fluctuating rain patterns in the area.

She said Homa Bay must no longer continue relying on rain-fed agriculture.

"In our County Integrated Development Plan, we are prioritising irrigation to ensure our farmers can grow crops without relying on rainfall entirely," Ms Wanga said.

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The Daily Nation (Kenya) - Published 20 January 2023

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KBC Channel1 News
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Dr Abdou Tenkouano assumes office as the Director General of International Centre of Insect Physiology and Ecology (icipe).
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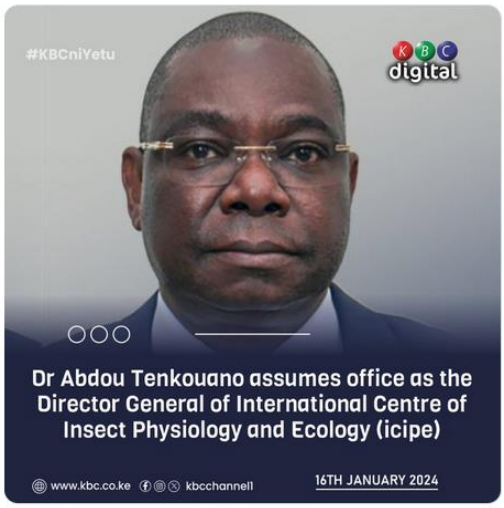

4:59 PM · Jan 16, 2024 · **899** Views

Rothamsted Research
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Controlling Pests With Plants: Why Farmers Are Adopting Push-Pull Technology - great to see this IPM technique developed with @icipe still thriving in Kenya

From kenyans.co.ke

11:15 AM · Jan 15, 2024 · **1,891** Views

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Translated from German by Google

Grasshoppers, worms and flies: Are insects the #Lebensmittel of the future? They contain a lot of proteins and use few resources. Author @ruehl_b visits @icipe in #Kenia , where food and feed from #Insekten riffreporter.de/de/internation... ...

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Forscher in Nairobi entwickeln Insekten als Lebensmittel de
Am Icipe in Nairobi forschen Wissenschaftler daran, Insekten wie Mehlwürmer und Heuschrecken als ...

7:02 PM · Jan 16, 2024 · **531** Views

Australian Centre for International Agricultural Research
18 January at 02:00 ·

In the latest edition of #Partners magazine, read about Ms Roseanne Mwangi, who, frustrated by the lack of jobs for young people in Kenya, left her job to pursue new enterprises that could better support young people with business and employment opportunities.

Five years on, Ms Mwangi leads a dynamic company growing black soldier flies, creating jobs and wealth from waste, strengthening food security and mitigating climate change in eastern Africa.

The success is largely thanks to comprehensive research into black soldier fly production by the ICIPE - International Centre of Insect Physiology and Ecology in Kenya, supported by #ACIAR and Canada's IDRC / CRDI as part of the Cultivate Africa's Future Fund (CultiAF) project.

Read more https://bit.ly/41ksJUm

#BlackSoldierFlies #BSF #FoodSecurity #ClimateChange

7 1 comment

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 Check advert

AICAD Uganda and 3 others

12:44 PM · Jan 15, 2024 · **256** Views

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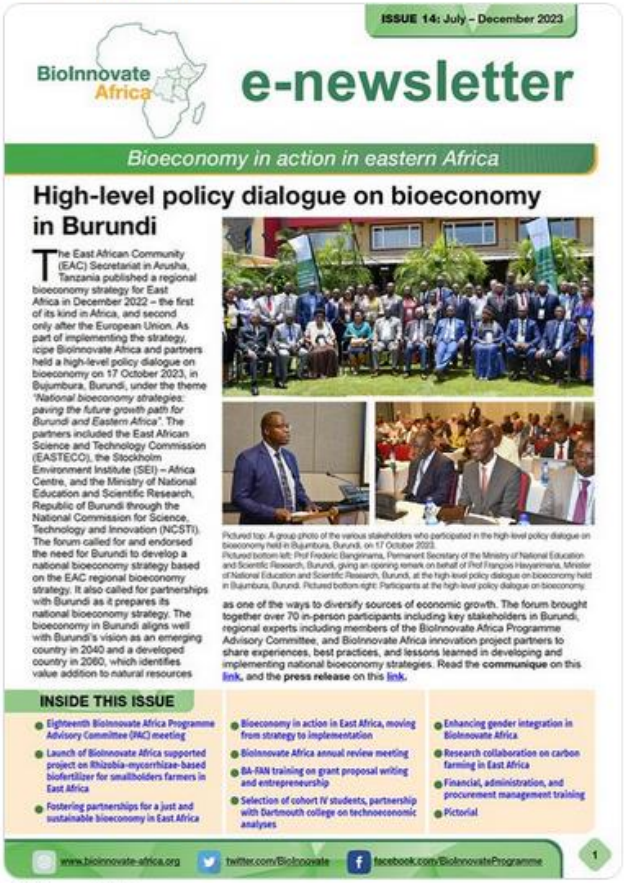

icipe and 9 others

8:06 PM · Dec 20, 2023 · **212** Views

SEI Africa
@SEI_Africa

Underway. Regional consultative w/shop to develop the 2nd report on the state of the bioeconomy in E. Africa. In 2022, the first @jumuiya bioeconomy status report by @easteco1 , @SEI_Africa, @icipe through @BioInnovate was produced

sei.org/events/regiona...

Philip Osano and 5 others

1:38 PM · Jan 18, 2024 · **361** Views

Nature Africa
@natAfrica1

A study conducted by scientists from @uonbi and @icipe showed the consequences of inadequate options and limited knowledge among smallholder farmers, highlighting the urgent need for sustainable management strategies in Sub-Saharan #Africa.

go.nature.com/3O9UrOO

#NatureAfrica

From nature.com

12:06 PM · Jan 21, 2024 · **78** Views

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