



On the left ; KALRO lead agricultural Entomologist Paddy Likhayo and Dr Prassana Boddupalli, Director Global Maize Program at International Maize and Wheat Improvement Center (CIMMYT) at Kiboko explaining to farmers about the intergrated Pest Management project . Photo Credit: Marion Wagaki

Scientists push for joint efforts in war on transboundary pests

By Marion Wagaki

EAST and southern African scientists have called for a partnership to address the challenge pests and diseases pose in the region.

The scientists working on integrated pest and disease management solutions to address the fall armyworms menace say there is a need to develop and scale up proper technologies to help farmers fight the insects.

The scientists under the Plant Health Initiative (PHI) have been working on eco-friendly pest management techniques such as the use of resistant varieties, biopesticides and related biological control methods to contain the spread of fall armyworm.

During a workshop on Integrated Pest and Disease Management (IPDM) held at the UN Complex in Kenya, Dr Prassana Boddupalli, PHI lead for the Consultative Group on International Agricultural Research, said a variety of technologies are often applied and disseminated only to farmers singly, limiting pest control.

“Countries cannot work in isolation. There is need for partnerships to come up with different combinations of pest management control for hundreds of farmers to be able to benefit,” he said.

Dr Prassana said most technologies fail to scale up because of bottlenecks such as farming communities not knowing about their existence.

“There is still the gap of access to information when it comes to input and plant health innovation and services, which are critical for scaling up technologies to the farmers, especially the rural women and marginalised communities,” he said.

Dr Prassana, who is also Director of, the Global Maize Programme at the International Maize and Wheat Improvement Centre (CIMMYT) said there is a need to develop the technology but once it is done, farmer involvement during the testing was crucial.

"In the East and southern African region, we are working with more than 700 on-farm locations where farmers test our seeds and we ensure that 30 per cent of them are women," he said.

The IPDM project fronted by CIMMYT, Kenya Agricultural and Livestock Research Organization (KALRO), International Centre of Insect Physiology and Ecology (ICIPE) and Centre for Agriculture and Bioscience International is currently in the trial phase at Kiboko field station in Makueni County and is expected to be concluded by next February.

"We want to encourage farmers in sub-Saharan Africa and Asia where the outbreak of the fall armyworm devastated their yields to adopt less toxic and affordable ways of containing the invasive pests. We want them to dissociate from the application of synthetic toxic pesticides and chemicals but revert to combined approaches like the use of resistant varieties, biopesticides and related biological control methods that are environmentally friendly," said Dr Prasanna after hosting more than 80 farmers at the Kiboko site.

Dr Godfrey Aseya, a breeder and Director of Research at the National Agricultural Research Organisation (NARO) in Uganda said they are working as a region to identify common challenges of pests and develop IPDM.

This, he said, comes in the backdrop of efforts by each country in the region to validate technologies that address the fall armyworm in the East African region.

In Africa, fall armyworm is estimated to cause 8 to 20 million tonnes of maize losses yearly because of little knowledge of the pest and ways of managing it.

"We are in the process of identifying varieties that are promising and will soon be released as well as recommending some chemicals for farmers in combination such as bio-pesticides and bio-control," said Dr Aseya.

"We see light at the end of the tunnel. Our work is showing some promising results and scores on integrated pest management."

Dr Aseya, however, said farmers are key to the success of the efforts and are working with them to win the battle against the pests.

He added that they have also integrated indigenous farming practices in pest control through the agroecological management of fall armyworms such as early planting, cultural and mechanical control, weed manipulation and push-pull technology.

KALRO lead agricultural entomologist Dr Paddy Likhayo said since the outbreak of fall armyworms was reported in Kenya in 2016, the maize yields dropped by between 30-50 per cent, aggravating the already fragile food security.

He added that at least 80 farmers were enlisted in the validation of the project to scale up extension services and ensure that agronomic practices, including the new integrated pest control technology, were adopted within one year.

CABI has also introduced a naturally occurring virus that once extracted and formulated could control the worms.

CABI scientist Duncan Chacha said the viral formula was cost-effective because the farmers could use worms killed in the initial spraying to develop more pesticides.

The participating scientists were from Kenya, Uganda, Ethiopia, Zambia, Zimbabwe and Malawi.



Maize at Kiboko farm where integrated Pest Management technologies Project is being undertaken by scientists. Photo Credit: Marion Wagaki.