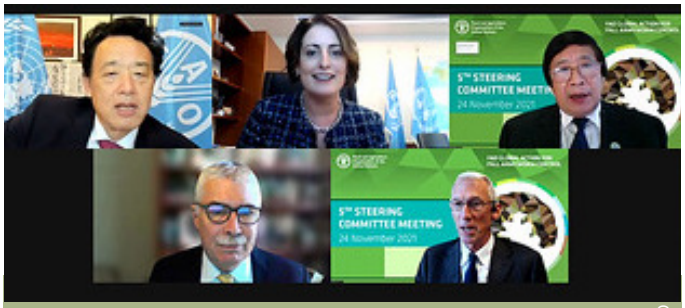
Food and Agriculture Organization of the United Nations

Fall Armyworm Control in Action Newsletter

January 2022 - Issue #7



GA Steering Committee 24 November 2021

Highlights

The Global Action (GA) Steering Committee (SC) held its fifth meeting on 24 November 2021, with opening remarks by FAO Director-General QU Dongyu to over 50 participants. In his remarks, the DG said that efforts to address fall armyworm (FAW) over the past two years have shown that through strong and effective coordination at all levels, FAW is predictable and manageable with high-level damage preventable. Progress and achievements during two years' work under the GA were reviewed during the meeting and directions set for implementation in 2022. Support from tecnical partners should continue to deliver science-based control solutions for farmers.

The GA Technical Committee (TC) held its fifth meeting on 10 November 2021 with 42 participants including observers and TC members. GA achievements from 2019 through 2021 were highlighted, including the establishment of coordinatio mechanisms at multiple levels, monitoring and early warning processes, as well as FAW management successes with some demonstration countries reporting national-level yield losses below five percent. Ways forward for the GA in 2022 include raising awareness of FAW among decision-makers; increasing the capacities of farmers and other stakeholders through training and scaling-up of technologies for prevention, early warning and Integrated Pest Management (IPM), especially through field demonstrations.

Annual meetings for all of the demonstration and first-line pilot countries were conducted in December 2021. The meeting for countries in Africa on 9 December 2021 saw each demonstration country share results and achievements from 2021, while demonstration countries in Asia and the Near East and North Africa (NENA) shared their progress on 13 December 2021. In 2022, countries must finalise IPM packages and translate these into action; technologies must be scaled up for prevention, early warning and IPM, especially through field demonstrations; an impact study will be conducted in select countries in collaboration with Centre for Agriculture and Bioscience International (CABI); and a collaborative effort with World Agroforestry (ICRAF) will allow demonstration countries to standardize technology evaluation protocols and submit data to a common database.

GA Annual Meeting for GA in Africa 9 December 2021

Implementation

The third FAW prevention, preparedness and response webinar was conducted online on 10 December 2021 with 122 participants from Asia, Africa, Europe, and the Pacific region. Information was shared on the FAW outbreak response, de-limiting surveys, phytosanitary measures, and communication with stakeholders. Israel, the Solomon Islands, and Iraq shared National Plant Protection Organization (NPPO) case studies. The training was held in English with Arabic, French, and Russian interpretations.

Malawi's Ministry of Agriculture, in collaboration with FAO and national technical partners, has been setting up **four FAW control demonstration sites during the 2021-2022 rainy season**, with the aim of scaling-up adoption of sustainable and effective FAW management technologies in Malawi and southern Africa. The demonstration sites will showcase sustainable FAW management practices, such as conservation agriculture, intercropping, use of botanicals (*Tephrosia vogelli, Azadirachta indica and Neorautania mitis*) and low-risk pesticides (Flubendiamide). Each demonstrate site will conduct three field days during Malawi's maize growing period, from December 2021 to April 2022 The 10-hectare national demonstration site is located at the Chitedze Agricultural Research Station, and three five-hectare sites include: the Lweya Irrigation Scheme (North region), LUANAR University (Central region), and Kasinthula Agricultural Research Station (South region).

Communications and Partnerships

The General guidelines for developing and implementing a regional integrated pest management strategy for fall armyworm control[1] in demonstration countries is now available for public download. These guidelines provide a framework for development of regional strategies aimed at managing FAW by developing evidence-based IPM packages. Of particular value is the list of various IPM options, as well as a narrative outline of IPM tactics.

In Southeast Asia, a regional workshop to share results of a regional technical cooperation project on FAW management, held virtually on 2 December 2021, included 41 senior officials, national FAW focal persons, plant protection and extension officers, plus experts from research organizations in the Philippines, Indonesia, Cambodia, Nepal, Bhutan, and the Lao People's Democratic Republic (PDR). All countries involved said the project increased local awareness of FAW management, and strengthened the capacity of more than 70 technical and extension staff and farmers in the identification, surveillance and monitoring of FAW, and in implementing IPM programmes. The project also brought a focus to the role of farmer field schools (FFS).

New Developments

A modeling exercise[2] by scientists at Pennsylvania State University and the International Centre of Insect Physiology and Ecology (icipe) showed that, under current climate conditions, almost all countries in eastern and central Africa as well as a large part of western Africa can support year-round populations of FAW. Heat, cold and drought stresses may limit FAW's ability to survive year-round in north and southern Africa. Using various climate scenarios, future projections (for 2050 and 2080) suggest that the range for year-round FAW populations may retract to concentrate around the equator, serving as hotspots from which migrating populations may move north- or southward during favorable seasons.

Scientists at Chinese Academy of Agricultural Sciences (CAAS), Nanjing Agricultural University, Beijing University of Agriculture and United States Department of Agriculture Agricultural Research Service reported[3] that some cover crops, namely *Vicia villosa*, *Vicia sativa* and *Astragallus sinicus*, negatively affect population growth and flight performance parameters of FAW. This finding indicates that rotation with these cover crops may form an effective option for FAW management.

Field stories

In Burkina Faso, a GA demonstration country, about 1 087 460 ha of maize were planted in 2021. Of that area, 776 300 ha were infested with FAW and FAW control measures were applied on 57 300 ha. Activities carried out in the country under the GA have included the development of a regional IPM package, farmer trainings, and the evaluation of biopesticides and biological control potential of native arthropod natural enemies.

In Nepal, a GA pilot country, 957 000 ha of maize was planted in 2021. Losses due to FAW in 2021 were estimated to be around nine percent. GA implementation in the country included coordination meetings, coordinated monitoring and surveillance, loss assessment, and IPM FFS trainings. An IPM FFS trainers' manual was published in Nepali and translated into English. Training was also held in mass rearing of Trichogramma with laboratory support; and FAW lures and traps distributed. Training materials were also distributed as well as a video broadcast on FAW managment.

Malawi national demonstration site Chitedze agricultural research station

[1] https://www.fao.org/documents/card/en/c/cb7549en

[2] https://www.nature.com/articles/s41598-021-04369-3.pdf

[3] https://academic.oup.com/jee/advance-article/doi/10.1093/jee/toab235/6460145

Contact information:
Plant Production and Protection - Natural Resources and Sustainable Production
Email: Fall-Armyworm@fao.org
http://www.fao.org/fall-armyworm/global-action/en/
https://www.ippc.int/en/the-global-action-for-fall-armyworm-control/
Food and Agriculture Organization of the United Nations
Rome, Italy

CB8340EN/1/01.22
©FAO, 2022