



Fall Armyworm Control in Action Newsletter

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Highlights



The Cameroon workshop discussed the use of biological control, botanicals, and farmer trainings. It was opened by the Secretary General of the Ministry of Agriculture and Rural Development, Mbong Epe Bambot Grace Annih.

The Kingdom of Saudi Arabia reported fall armyworm (FAW) infestations in fields in Najran Governorate, with in Al-Kora Governorate of Al-Baha Province illustrating continuous spread of FAW in NENA region. The Ministry of Environment, Water, and Agriculture announced the insect pest was detected on maize plants. In response, authorities have implemented phytosanitary measures, destroyed infested maize crops, installed traps around infested sites, and is managing FAW populations in neighbouring crops.

In Zambia, FAW has reportedly reached concerning population levels in ten provinces and in 96 out of 116 districts, illustrating the need for continuous capacity development in FAW management. FAO, under the aegis of the Global Action for Fall Armyworm Control (GA), will support the government of the Republic of Zambia in improving capacities for FAW management among farmers and extension workers. FAW has reportedly affected 129 517 households and 96 222 hectares of maize fields.

Based on lessons learned during the work conducted by the International Plant Protection Convention (IPPC) technical working group on FAW quarantine and phytosanitary measures, a new work programme on banana Fusarium wilt (TR4) is under way. The IPPC Secretariat is holding a virtual workshop series on Fusarium TR4 diagnostic, surveillance, inspection and simulation exercises. The first of three sessions is scheduled for 24 March 2022, followed by sessions on 19 April 2022 and 10 May 2022. The three sessions will be held in English, and two of the sessions will have simultaneous interpretation in French and Spanish through an in-kind contribution from the Comité de liaison Europe ACP (COLEACP).

Implementation

FAW was named as top national priority for key pest control in the People's Republic of China for 2022 in February as the National Agricultural Technology Extension and Service Center (NATESC) renewed the annual strategy for FAW control. This followed a national expert working group meeting organized by NATESC to analyse FAW data and control measures that had been implemented in 2021. The working group also presented conclusions to facilitate the delivery of early warning messages with regard to FAW at the national level.

Resource mobilization training was conducted on 28 February 2022 for 30 people including national focal points and FAO focal points in country offices. A general overview of the resource mobilization situation with regard to the Global Action was provided during the session. The training was based on the new GA resource mobilization guide and was also interpreted in the French language.

In the Republic of Cameroon, a three-day training workshop began on 28 February 2022 to enhance capacity of national focal points from central Africa countries in FAW monitoring, early warning and sustainable management of the pest. The workshop also aimed to strengthen coordination between GA demonstration and pilot countries through theory as well as farm-level practical sessions. The 25 participants, including including leaders of farmer organizations, extension officers, researchers and FAO facilitators, were asked to validate the strategy document at the central Africa geo-zone level. The workshop included participants from the Republic of Cameroon, Central African Republic, Republic of Equatorial Guinea, Equatorial Guinea, the Gabonese Republic, Republic of the Congo, Democratic Republic of the Congo, and the Democratic Republic of Sao Tome and Principe.

The Republic of the Philippines Bureau of Plant Industry hosted **seven geo-zone webinar training events** in January and February 2022 covering multiple topics, including monitoring and early warning, host plant resistance, biological control, biopesticide and pesticide application.

Communications and Partnerships



A **GA resource mobilization guide** has been finalized and will be available for public download. These guidelines provide a framework for mobilizing essential resources to support the work of the GA and the FAW Secretariat.¹

New Technical Cooperation Programmes have been initiated, including a USD 500 000 emergency response to strengthen the management and preparedness capacities of five North African countries – the People’s Democratic Republic of Algeria, the State of Libya, the Islamic Republic of Mauritania, the Kingdom of Morocco, and the Republic of Tunisia – to mitigate the impact and risk of FAW.

Field stories

In **Burkina Faso**, field work by two university partners of the GA – Université Nazi Boni (UNB) and Université Joseph Ki Zerbo (UJKZ) – has included trials to evaluate a number of potential FAW control measures including: production of *Telenomus remus* parasitoid; selection of maize varieties for FAW tolerance; the efficacy of several types of FAW traps; efficacy of local strains of entomopathogens; biological control potential of local arthropod natural enemies; and effectiveness of combining other crops with maize (herbs, pigeon peas and other species) on FAW.

In the **Republic of Cameroon**, a **field visit** was organized following the **training workshop** that began on 28 February 2022. The **field visit** included the area around Ntui in central Cameroon, and around Foubot in the western region, with the goal of identifying sites for large-scale demonstrations of integrated pest management (IPM) technology. Foubot holds particular significance because it is also the first site where FAW was reported in Cameroon.

New Developments

By comparing genetic characteristics of FAW populations collected from 22 sub-Saharan countries between 2016 and 2019, Nagoshi *et al.* (2022) inferred that the strain preferring maize as the host plant predominated the FAW populations in Africa. Additionally, a broad grouping of genetic characteristics of FAW collected in East and West Africa seem to indicate limited natural migrations of FAW at a continental scale. The authors suggested that smaller-scale movement through trade probably contributed to the initial spread of the pest across Africa. Nagoshi, R.N., Goergen, G., Koffi, D. *et al.* Genetic studies of FAW indicate a new introduction into Africa and identify limits to its migratory behavior. 2022. *Sci Rep* 12, 1941.²

A study led by *icipe* and NIBIO showed that FAW density levels could be predicted using host availability as well as climatic data. The study utilized FAMEWS data, among others, to validate the predictions. The authors suggested that further detailed data on the natural enemies of FAW, their occurrence and efficiency in regulating FAW populations, will further strengthen the predictive mode. Harnessing data science to improve integrated management of invasive pest species across Africa: An application to Fall armyworm (*Spodoptera frugiperda*) (J.E. Smith) (Lepidoptera: Noctuidae) - *ScienceDirect*.³



During the field visit, members of a young farmers cooperative, local leaders and extension agents were consulted to discuss collaborations for successful implementation of the GA in the Republic of Cameroon as the demonstration country in central Africa geo-zone.

¹ <https://www.fao.org/3/cb8910en/cb8910en.pdf>

² <https://www.nature.com/articles/s41598-022-05781-z>

³ <https://www.sciencedirect.com/science/article/pii/S2351989422000580?via%3Dihub>



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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