



# Fall Armyworm Control in Action Newsletter

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## Highlights



Steering Committee of the Global Action for FAW control meeting in April 2022

At its sixth meeting on 22 April 2022, the Steering Committee of the Global Action for Fall Armyworm (FAW) Control agreed to extend the three-year Global Action (GA) for another year, through 2023. This demonstrates the importance of the GA in fighting FAW as the insect pest “continues its rapid march across the globe,” said FAO Director-General QU Dongyu as he welcomed the 45 participants to the meeting. Extension and expansion of the GA will close adoption gaps in integrated pest management (IPM) and begin expanding the GA’s scope to cover other invasive pests and diseases. Similar support was heard at the **sixth meeting of the Technical Committee of the GA**, held virtually on 15 March 2022, and at the second meeting of the Working Group on Resource Mobilization for the GA, held virtually on 29 March 2022. Extending the GA makes it possible to potentially address other pests and diseases on priority crops worldwide by promoting sustainable pest and disease management practices and directly contribute to the One Health issue.

The Regional Steering Group for Fall Armyworm Control in Africa held its second meeting on 27 April 2022, chaired by FAO Assistant Director-General (ADG) Africa region Abebe Haile Gabriel. Jingyuan Xia, Executive Secretary of the Fall Armyworm (FAW) Secretariat and Director of the FAO Plant Production and Protection Division (NSP), emphasized that important work was being done in Africa. Progress was reported on implementation of the GA across African geo-zones and associated pilot countries. Aspects of the GA were discussed, including a suggestion to organize a regional conference on FAW control.

## Implementation

The 20<sup>th</sup> meeting of FAW national focal points and project teams in the NENA region was held virtually on 22 March 2022. During the session, a short briefing covered the most recent technologies on mass production of *Bacillus thuringiensis* in China. Participants acquired knowledge and experience on how to incorporate this into FAW management strategies.

The Technical Cooperation Programme (TCP) titled *Emergency preparedness and response to strengthen management capacities of Maghreb countries to mitigate the impact and risk of Fall Armyworm in North Africa* will strengthen management and preparedness capacities of five North African countries (Algeria, Libya, Mauritania, Morocco, and Tunisia) to mitigate the impact and risk of FAW. Additionally, field demonstrations and an extension conference are being planned with representatives from pilot countries. Field demonstrations will start in May/June 2022; an extension conference is planned for November 2022.

A TCP titled *Prevention, detection and management of Fall Armyworm infestation in the Solomon Islands and neighbouring Pacific* includes four recipient countries: Fiji, Samoa, Solomon Islands and Vanuatu. The programme, which began in December 2021, aims to raise awareness of FAW; train personnel on FAW incursion management; and build capacity in monitoring, surveillance, and identification of the pest in the sub-region. It also aims to formulate suitable integrated pest management (IPM) strategies against FAW, a novel pest in the area.



FAO DG QU addresses Steering Committee of the Global Action meeting

## Communications and Partnerships



The Centre for Agriculture and Bioscience International (CABI), in collaboration with the FAW GA Secretariat, has initiated an Impact Assessment of the GA and its partners' activities, to be piloted in two demonstration countries in Africa and Asia: Kenya and India, respectively. Its primary objective is to document changes in yield loss that are attributable to FAW, analyse the changes in farmers' practices and the contributions of the GA and its partners' activities in effecting these changes.

FAO has been recognized with an award from the Government of the Philippines for its support to the government in mitigating the damage caused by FAW as an invasive pest in the country. The recognition was given during the 92<sup>nd</sup> Anniversary Celebration of the national Bureau of Plant Industry in May 2022.

## New Developments

A study analysing the population genetic structure of FAW from Asia and East Africa indicated complex introduction events of FAW to Africa and found multiple introductions of FAW from different sources into Africa, including a movement from Asia to Africa. The authors hypothesized that FAW was potentially introduced to Asia before its 2016 detection in West Africa. The results implies that similar pathways are likely to be used by other exotic and related pest species; official pest reporting dates did not coincide with incursion dates; and robust monitoring/detection systems are needed, requiring global cooperation. Tay, W.T., Rane, R.V., Padovan, A. *et al.* 2022. Global population genomic signature of *Spodoptera frugiperda* (fall armyworm) supports complex introduction events across the Old World. *Commun Biol* 5, 297.<sup>1</sup>

A review paper was published on the state of the art of host plant resistance against FAW in both Africa and Asia. The review reported the developmental and release status of FAW resistant/tolerant varieties in the continents, the current knowledge on the genetic and molecular basis of native resistance and identify gaps, challenges and priorities in scaling up this solution to FAW invasion. Prasanna, B.M., Bruce, A., Beyene, Y. *et al.* 2022. Host plant resistance for fall armyworm management in maize: relevance, status and prospects in Africa and Asia. *Theor Appl Genet*.<sup>2</sup>

## Field stories

In Malawi, the GA demonstration country for the southern Africa geo-zone, 10 demonstration plots measuring one hectare each were installed in January 2022 at the Chitedze Agricultural Research Station. Each plot has two maize varieties for testing and showcasing sustainable FAW management practices, such as conservation agriculture; intercropping with cowpea, soybean and pigeon pea; low-risk pesticides, and botanicals. The latter includes Neem, *tephrosia vogellii*, *azadirachta indica* and *neorautania mitis*. Data analysis is continuing, and technical training is planned as part of a three-day workshop scheduled for the end of June 2022. Standardized protocols on maize yield loss, biological control parameters and other technical issues will be discussed as well as planning for the winter season. The meeting will also evaluate research findings and develop a better understanding of the most efficient sustainable FAW management strategies for the region.

In Cameroon: Demonstration activities have started in the western region around Foubot, prioritising a package of IPM technologies in five specific demonstration plots. Those include: earlier planting



At Malawi's Chitedze Agricultural research station, various treatments against FAW are tested on two maize varieties

dates; use of a local variety of *Phaseolus vulgaris* for maize intercropping; good fertilization; use of biopesticides Neem or *Bacillus thuringiensis* (Bt) to control FAW. Data using the mobile application FAMEWS are also being collected regularly. Foubot holds particular significance because it is also the first site where FAW was reported in Cameroon.

<sup>1</sup> <https://doi.org/10.1038/s42003-022-03230-1>

<sup>2</sup> <https://doi.org/10.1007/s00122-022-04073-4>



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