



## Briefing Note on FAO Actions on Fall Armyworm in Africa

FAO Briefing Note on FAW  
Date: 24 October 2017

### BACKGROUND

**Fall Armyworm** (*Spodoptera frugiperda*), FAW, is an insect native to tropical and subtropical regions of the Americas. Its larval stage (photo) feeds on more than 80 plant species, including maize, rice, sorghum, millet, sugarcane, vegetable crops and cotton. FAW can cause significant yield losses if not well managed. It can have a number of generations per year and the moth can fly up to 100 km per night.

FAW was first detected in Central and Western Africa in early 2016 (Benin, Nigeria, Sao Tome and Principe, and Togo) and further reported and confirmed in whole of mainland Southern Africa (except Lesotho), in Seychelles (Island State), in Burkina Faso, Cabo Verde, Cameroon, Gambia, Ghana, Guinea Bissau, Niger, Senegal, and Ethiopia, Burundi, Kenya, Rwanda, Somalia, South Sudan, Uganda, and it is expected to go further. The pest has been detected in Sudan raising the alert for the North Africa and Near East region. Its modality of introduction, along with its biological and ecological adaptation across Africa are still speculative. A map on page 7 shows the spread of the pest to-date.

FAW is a dangerous transboundary pest with a high potential of continuing to spread due to its natural distribution capacity and trade. Farmers will need great support to sustainably manage FAW in their cropping systems through Integrated Pest Management.



Figure 1- FAW feeding on a maize leaf, Zimbabwe. ©FAO/Edward Ogolla

### FAO COORDINATION ROLE IN FAW MANAGEMENT

- 1. A Framework for Partnership for Sustainable Management of the Fall Armyworm in Africa:** Based on the action points and recommendations identified in the All Africa Consultation meeting in Nairobi, FAO has formulated a region-wide multi-stakeholder Framework for the Coordinated Management of FAW which has been reconfigured into a Framework for Partnership for sustainable management for the Fall Armyworm in Africa composed of seven components as follows: Management of FAW; Immediate Recommendations & Actions; Short-term Research Priorities; Medium to Long-term Research; Communications & Training; Surveillance & Early Warning; Policy & Regulatory Support; Coordination. This

Framework is intended as a guide for the development of projects and programmes by the various stakeholders in the areas of their comparative advantages, including FAO. The Framework has been presented during the 2<sup>nd</sup> Conference of the AU Specialized Technical Committee on Agriculture, Rural Development, Water and Environment on 3 October. It has received the STC' endorsement while comments are still expected from stakeholders to finalize it.

2. **FAO Programme for Action for Sustainable Management of the Fall Armyworm in Africa.** Based on the Framework for Partnership, FAO formulated a Programme for Action composed of 6 components costed at USD 87 million. This Programme has been presented as a side event at the African Union Second Conference of the Specialized Technical Committee on Agriculture, Rural Development, Water and Environment during a Partners' Round Table on 4 October 2017.
3. **African Union meeting:** A meeting took place between FAO and African Union Commission (AUC) in Addis Ababa on 29 June 2017, to discuss coordination on immediate, mid-term and strategic response to manage FAW in Africa. FAO presented the Framework for Partnership on FAW sustainable management in Africa during the Senior Officials/Experts segment of the 2<sup>nd</sup> Conference of the AU Specialized Technical Committee on Agriculture, Rural Development, Water and Environment on 3 October. It was endorsed by the ministerial segment of the STC on 6 October 2017. A Partners' Round Table on FAO FAW Programme for Action for Sustainable Management of the FAW in Africa was organized on 4 October, 2017 as a side event of the 2<sup>nd</sup> AU STC.
4. **Consultative meeting** in Harare (14-16 February 2017) with governments and stakeholders from Southern Africa, which addressed pest awareness, situational update, emergency preparedness and rapid response for management of transboundary plant pests and animal diseases.
5. FAO organized and co-organized two back to back meetings in Nairobi:
  - a. **FAO Southern Africa FAW Technical Meeting (25-26 April 2017)** was held to review and update current status of the pest as well as to assess its impact on production and livelihoods with extended participation of all FAO sub-regional offices in Africa.
  - b. **All Africa Stakeholders Consultation meeting AGRA/CIMMYT/FAO (27-28 April 2017)** main objectives were to review the status of the pest incidence and impact in Africa and discuss the options for minimizing damage caused by the FAW. Participants in the meeting included CIMMYT, IITA, CABI, AGRA, National Governments, Plant Protection Officers and Extension Staff, Coordination of Agricultural Research and Development for Southern Central Africa, Resource Partners, and world renowned experts on Fall Armyworm research. It has been agreed in the above meeting with partners that FAO takes the lead coordination in FAW response in Africa.

## FAO ACTIONS IN RESPONSE TO FAW

FAO has taken and is taking several actions in response to FAW:

- 1. FAO projects:** Technical Cooperation Programme (TCP) projects on FAW management are ongoing in Central Africa (Sao Tomé and Príncipe, since July 2016 and Democratic Republic of Congo, since March 2017). In response to the request of many countries, FAO developed and approved the funding of many more TCP projects: in August-September 2017 projects started in Ethiopia, Gambia, Ghana, Nigeria, Somalia and South Sudan; 3 more have been launched this month in Chad, Kenya and Zimbabwe. A TCP project in support of the African Union Commission Rural Economy and Agriculture Department was signed on 6 October in Addis Ababa on the margins of the 2nd AU Specialized Technical Committee on Agriculture, Rural Development, Water and Environment (STC) Conference. Another 13 countries will also benefit soon from TCP projects or facilities. The total budget allocated so far since August 2017 for these 23 new projects or facilities amounts to USD 6,080,000. Additional TCP funds will be allocated in the coming weeks to support more countries. An FAO OFDA-funded project of USD 944,000 has started in East African countries to support the establishment of a community based FAW monitoring, forecasting, early warning and management system. An inter-regional TCP for Sub-Saharan Africa, North Africa, and Near East is being prepared covering information sharing, monitoring and early warning, and preventive measures.
- 2. FAW Experts Meeting:** FAO organized a South-South Cooperation FAW Technical Experts' Meeting in Accra, Ghana from 18-20 July bringing together experts from the Americas, Africa and others to share and update the state of knowledge on sustainable FAW management for smallholder family farmers. The experts reviewed key areas of management, including biological control, monitoring, economic thresholds, use of bio-insecticides, and the impact of plant biodiversity on FAW ecology. A synthesis report of the meeting has been prepared and shared with partners and can be found on (<http://www.fao.org/food-chain-crisis/how-we-work/plant-protection/fall-armyworm/en/>).
- 3. Farmers Field School (FFS) Curriculum Development:** Taking advantage of the experts' meeting, FAO brought together FFS Master Trainers from across Africa to work with researchers to draft an FFS curriculum on Integrated Pest Management for FAW. This is being used to train additional FFS trainers, and roll-out the FAW component in FFS in affected African countries. Training topics cover FAW identification, life cycle and behaviour; preventative measures to reduce infestation and help plants withstand damage to minimize yield loss; early scouting; mechanical controls; use of botanical pesticides and biological control agents; pesticide risk reduction; monitoring and surveillance, and more. The curriculum consists of practical experiments, field studies and exercises that can be implemented with extension workers and farmers throughout a season-long FFS. A Training Guide for the Integrated Management of the FAW on maize in Africa has been finalized based on the Curriculum developed. Training of FFS Master Trainers is taking place in the whole of Africa: the first sub-regional training has taken place in Nigeria for Western Africa then in Malawi for Southern Africa in September 2017, and in Cameroon for Central Africa in October 2017. Training of FFS Master Trainers will be organized shortly in other sub-regions of Africa, so that FFS can be rolled out through thousands of Farmer Field Schools implemented by FAO, Governments, extension services, farmer organizations and their financial and technical partners. The curricula will also be useful for short training of agricultural advisers and for village rallies.

4. **South-South Cooperation:** Further to the Experts' meeting organized in Accra in July 2017, a letter of Agreement between FAO and EMBRAPA (Brazilian Agricultural Research Corporation) will be signed as South South Cooperation for capacity development of selected African Universities in the areas of biological control and local production of biological control agents. Experts from EMBRAPA with experience in FAW will carry out the training and capacity development.
5. **FAW technical working groups coordinated by FAO:** Ten technical working groups coordinated by FAO were formed each led by the appropriate institute/organization; biological control; bio-pesticides; synthetic chemical pesticides; monitoring and early warning; communication, awareness and knowledge management; farmer field schools, extension, plant clinics; agro-ecology; impact assessment; host plant resistance; quarantine and phytosanitary measures.
6. **FAW early warning system development:** FAO IT-Solutions is developing field tools such as a mobile phone app, databases and a web-based early warning platform. Several partners are investigating the efficacy of different pheromone traps and lures in the field. The results will be used to standardize traps and lures and facilitate their procurement. Innovative technologies are being considered to monitor FAW and damage using drones, remote sensing and Google Earth Engine.
7. **FAW impact assessment:** FAO is working closely with CIMMYT and CABI, and has taken a leading role in formulating initial actions for impact monitoring and has been supporting assessment processes in Southern Africa. FAO is now working to deepen coordination and partnership on impact monitoring with CABI and CIMMYT at the continental level.
8. **A side event** on FAW status in Africa and way forward has taken place during FAO Conference on 4 July 2017. The panel of the event gathered Ministers of Agriculture of Zimbabwe and South Africa, Deputy Minister of Ghana, Ambassador of the UK and Director of DFID Africa.
9. **An Advisory Note, Q&A and Key FAO messages on FAW** were prepared in addition to two notes on FAO position on the use of pesticides and Genetically Modified (GM) maize and widely shared within FAO HQ and Decentralized offices in Africa. All notes are posted on the FAO Food Chain Crisis website (<http://www.fao.org/food-chain-crisis/how-we-work/plant-protection/fall-armyworm/en/>).

#### **Specific actions at sub-regional level:**

**Central Africa:** A FAW training of trainers on FAW management was organized in Yaoundé 2-7 October in collaboration with IITA and gathered 40 participants coming from 8 countries in Central Africa region. Each country was represented by at least 3 experts (NARS, FFS expert, NPPO). FAO organized a workshop with stakeholders in Central Africa namely NPPO's, IAPSC, IITA, the RECs (ECCAS and CEMAC) and PRASAC, in Kinshasa, DRC, 11 to 13 July 2017.

**Eastern Africa:** Most of the countries have so far managed to control FAW through regular monitoring, pesticide application, and hand picking of FAW larvae. FAO has been facilitating information and knowledge exchange among countries within Eastern Africa and between the various sub-regions and enhancing South-South Cooperation, e.g. facilitation of the visit of Sudanese experts to Ethiopia. FAO is implementing a project funded by USAID/OFDA for a budget of USD 944,000

“Establishing an emergency community-based Fall Armyworm monitoring, forecasting, early warning and management system in eastern Africa” in collaboration with the Desert Locust Control Organization for Eastern Africa (DLCO-EA), CABI, ICIPE, and Ministries of Agriculture of Eastern African countries.

FAO conducted a sub-regional FAW training of trainers in Addis Ababa, 24-28 July 2017 to increase the skills and knowledge of national plant protection and extension experts on FAW. Nine countries from the East Africa participated. The trained will in turn train other staff and farmers on management of the pest in their respective countries.

FAO and ASARECA co-organized a Sub-regional FAW Strategy Development Meeting from 18-20 September 2017 in Entebbe, Uganda. The meeting brought together a wide range of stakeholders (RECs, relevant research and development organizations, governments, private sector, resource partners, etc.) to ensure a strong coordination of FAW management at subregional level. A sub-regional strategic plan was developed following the FAO Strategic Framework. This meeting was preceded by the USAID-CIMMYT Workshop on FAW Pest Management Field Manual Development (Sept 16-17, 2017).

**Southern Africa:** The FAW has continued to cause damage in the irrigated crop across the region. As the rain-fed season starts in early November, significant infestation and crop damage can be expected on the new crop.

FAO facilitated a USAID funded Regional Refresher Training for Farmers Field School (FFS) Master Trainers on Fall Armyworm Management, 20-27 September, 2017 in Malawi under the theme: “*Farmer Field Schools: a platform for sustainable management of Fall Armyworm Infestation in Africa*”. This training was attended by participants from 10 SADC countries, including Angola, Botswana, DR Congo, Lesotho, Malawi, Namibia, South Africa, Swaziland, Zambia and Zimbabwe. The objective of the workshop was to introduce Fall Armyworm and its management to FFS practitioners for mainstreaming into ongoing community outreach activities.

FAO in collaboration with the Agricultural Research Council, CABI and CIMMYT conducted a regional FAW Training of Trainers (ToT) in Pretoria, South Africa, 26-31 June 2017 to increase the skills and knowledge of national plant protection and extension experts on FAW. The training attracted 60 participants who will in turn train other staff and farmers on management of the pest in their respective countries. Topics covered included FAW identification and diagnosis, scouting, early warning systems, contingency planning, impact assessments and Integrated management options for the pest.

Further, a number of national ToT facilitated by FAO took place in Malawi, Namibia, Mozambique and South Africa (Stellenbosch). The main focus was to enable accurate identification of the pest and implementation at the farmer field levels integrated pest management and reduction of the use of highly hazardous pesticides. Trained national staff are already training extension workers who are in turn training farmers to effectively manage the pest. More country level ToTs are planned for Lesotho, Zambia and Madagascar. Moving forward, farmer level training will be conducted through FFS.

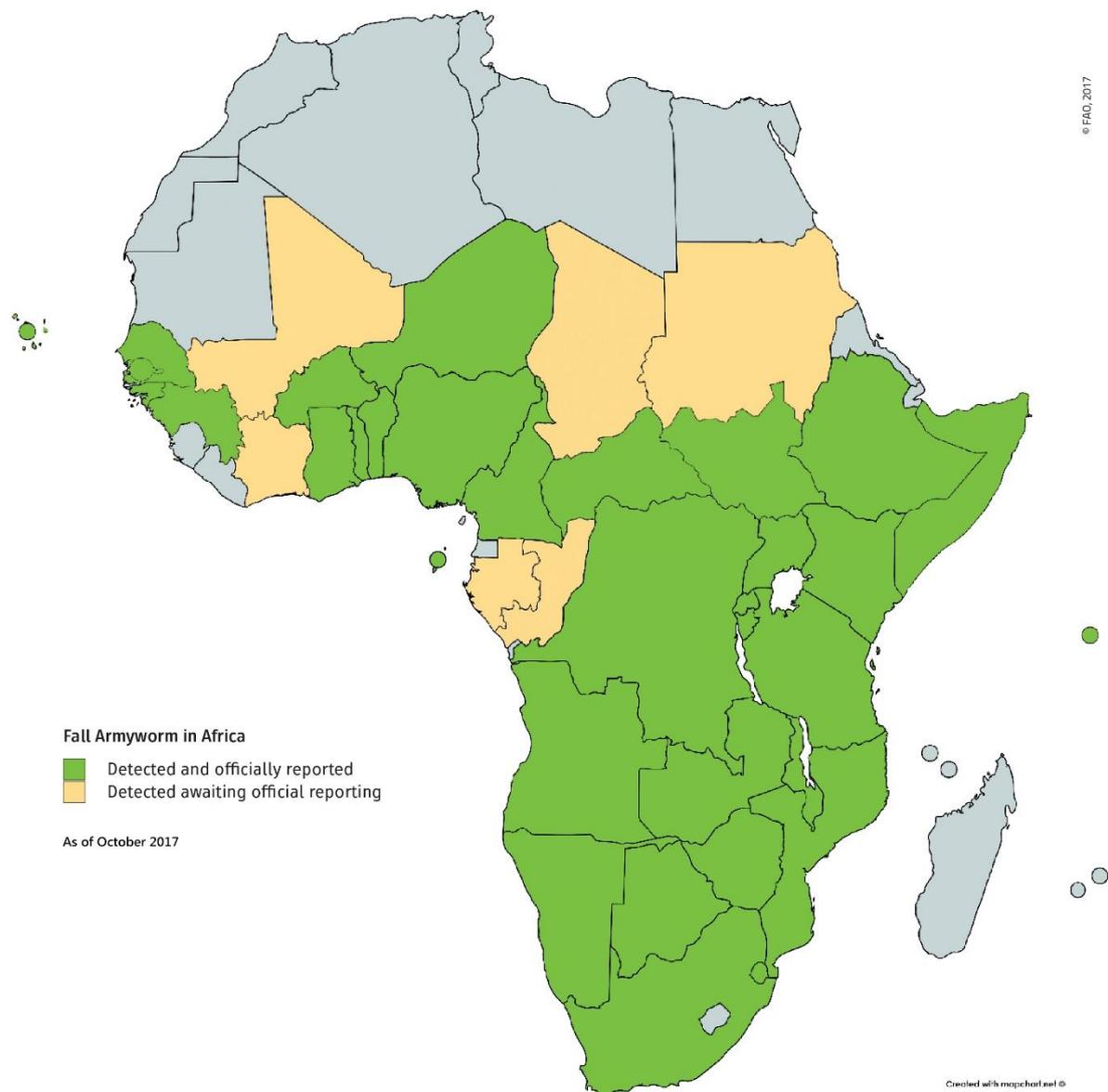
FAO has conducted case study assessments in collaboration with national Vulnerability Assessment Committees (VACs) and Ministries of Agriculture to determine FAW impacts on the food security and livelihood impact in six countries (Malawi, Mozambique, Namibia, Zambia, Zimbabwe). The assessments used

quantitative and qualitative assessment tools that were developed by FAO and shared with countries in Southern Africa.

FAO Crop Watch Africa, a service provider based in South Africa, contracted in mid-2017 to build capacity in SADC countries for a web-based FAW monitoring and early warning system using a grid of sex pheromone traps. The training has been conducted in Botswana, Lesotho, Madagascar, Malawi, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe. Countries are presently setting up and managing the traps, capture, uploading, analysis and utilization. To-date, FAO has distributed 2,600 traps to countries in the region. Plans are underway for this surveillance system to be migrated to the FAO continent wide FAW surveillance system presently under development.

**Western Africa:** FAO has conducted a sub-regional FAW ToT in Abuja, Nigeria 5-10 September 2017 to increase the skills and knowledge of national plant protection and extension experts and FFS practitioners (Master trainers and facilitators) on FAW in Western Africa. The trained will in turn train other staff and farmers on management of the pest in their respective countries. Topics covered were FAW identification and diagnosis, scouting, early warning systems, contingency planning, impact assessments and integrated management options for the pest.

## Map of areas affected by Fall Armyworm (as of 24 October 2017)



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Email: [Food-chain-crisis@fao.org](mailto:Food-chain-crisis@fao.org)

Web site: <http://www.fao.org/food-chain-crisis/how-we-work/plant-protection/fall-armyworm/en/>