



Food and Agriculture
Organization of the
United Nations

FALL ARMYWORM (FAW)

Q&A



1. What is Fall Armyworm (FAW)?

Fall Armyworm (*Spodoptera frugiperda*), is an insect pest of more than 80 plant species, causing damage to economically important cultivated cereals such as maize, rice, sorghum, and also to vegetable crops and cotton. It is native to tropical and subtropical regions of the Americas. It is the larval stage of the insect that causes the damage. FAW reproduces at a rate of several generations per year, and the moth can fly up to 100 km per night.

2. What is the difference between Fall Armyworm and African Armyworm?

They are closely related, but have different behaviors and ecologies. FAW rarely displays the “armyworm” behavior of larvae massing and “marching” across fields. As a native to Africa, the African Armyworm faces a complex of natural biological enemies (predators, parasitoids, diseases). The FAW probably arrived in African unaccompanied by its natural enemies, allowing their populations to increase even more unchecked than normal.

3. Is maize affected by FAW safe to eat?

FAW mostly eats the leaves of maize. Occasionally it will infest ears as well. Usually such ears are not consumed by humans. While direct damage from FAW doesn't affect the food safety of the maize, it could make the maize more susceptible to aflatoxin presence.

4. Is the current situation going to get worse?

The adult female moth of FAW is a strong flyer and will continue to spread across the continent, and possibly beyond. Populations of FAW may continue to build, as they find more host plants to multiply on, and in the absence of the complex of natural biological enemies (general predators like ants and earwigs, specialized parasitoids) and a host of entomopathogens (virus, bacteria and fungi).



5. Is there an impact on trade?

Exports of crops that are host plants for FAW from African countries with confirmed presence of FAW will come under new scrutiny from importing countries that haven't reported FAW.

6. What can be done (by extension, agriculture department, the farmers etc.)?

There are many experiences and recommendations for managing FAW from the Americas. African farmers will need access to information and resources to sustainably manage FAW.

7. What alternative crops can farmers be advised to grow?

Maize is the crop most infested now in Africa. As a staple crop, it is unlikely that farmers and their families will want to abandon maize. There are ways of managing FAW in maize, as demonstrated in the Americas.

8. What products can be used to control FAW, and when and how should they be applied?

FAO is working with member countries from around the world to determine the recommendations for farmers' actions, including pesticides that are effective, yet with low risks to humans and the environment. These recommendations are made nationally.

9. Can FAW be eradicated from Africa?

Unfortunately no. The adult female moth of the armyworm is a strong flyer and has rapidly spread across Africa, infesting crops (maize has been the most important to date) in probably millions of hectares of crops. It is far too widespread and numerous to be eliminated.

10. If the FAW is native to the Americas, aren't there experiences and practices that can be applied in Africa?

Definitely. There is a wealth of management experience and research from the Americas that can be shared and tried in Africa. FAO is actively promoting South-South Cooperation to bring this experience and knowledge to Africa.

11. What pesticides should be used to control FAW?

Pesticides may be needed to control FAW locally. The most effective, lowest-risk, economical, accessible and easily used by smallholders (without sophisticated machinery) need to be determined within each country and across the continent. It's not just a question of the most effective pesticide in a research station, the specific recommendations (active ingredient, formulation, type and timing of application), and their costs and benefits to smallholder farmers must be determined.



12. When should pesticide applications begin in maize to protect it from FAW?

Only when justifiable. Low levels of infestation at certain stages of maize growth may not cause much yield loss. The economic or action threshold must be determined and recommended for each stage of maize growth and for each type of pesticide and application techniques. Costs can vary tremendously. To economically justify their use, the costs of pesticide use must be equal to or less than the value of the additional yield that farmers receive for taking action. The prices that farmers receive for their harvest must also be correctly valued.

13. Are aerial applications of pesticides recommended for the FAW?

No. The destructive life stage (the larva) digs deep into the whorl of maize occasionally, making aerial applications of very low efficacy, while spreading pesticides over large areas of non-target habitat.

14. Is the use of biological control a possibility for the FAW in Africa?

There are many biological organisms that can help control FAW. Some may be naturally occurring in Africa (general predators, parasitoids and some entomopathogens), and some might need to be introduced from the Americas (specialized parasitoids, predators and certain strains of entomopathogens). The use of botanicals is also an appealing option.

15. Is GMO maize the solution to FAW in Africa?

While GMO maize is already being used in South Africa, it is generally only accessible by larger commercial farmers who have access to capital, resources and stable markets for their maize. Over 98% of maize farmers in Africa are smallholders, growing maize on less than 2 ha of land and typically saving seed to plant the next crop. The use of purchased inputs, including seed, is low. Given the high cost of transgenic maize seed, the lack of adequate supply channels, and lack of economic incentives for smallholders to grow maize (due to the low and volatile prices received) there is a low probability that the technology would be used in a sustainable manner by smallholder maize farmers in Africa. Even for commercial maize farmers in Africa, the long-term benefits of transgenic maize were put into doubt when, within two years of deployment, the maize stem borer began to show resistance to Bt maize in South Africa, and was later confirmed.



16. What are the next steps for FAW work in Africa?

FAO is currently supporting the design and testing of a sustainable pest management program for smallholders in Africa. First steps are to look at experiences of farmers and researchers from the Americas. Then, the best recommended practices will be tried and adapted in the field via Farmers' Field Schools. The best recommendations will then be communicated and shared with farmers, farmers' organizations and governments across Africa.

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