Food and Agriculture Organization of the United Nations

# Fall Armyworm (FAW) in Africa: Key Messages
## FAO
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- FAW has arrived in Africa from the Americas and is here to stay. The pest will not be eradicated.
- FAW can feed on over 80 crop plants, but prefers maize.
- FAW has quickly spread across the continent and will likely soon be present in all of Africa and then possibly continue its spread.
- There are tens of millions of smallholder maize farmers across Africa who must learn to manage the pest, in the context of their cropping systems.
- Key to helping farmers manage FAW will be to help them and extension agents to learn key concepts of FAWs biology and ecology and best practices for its management. Massive roll-out of a learning, training, and communications programme will be necessary, principally through village meetings, Farmer Field Schools, Plant Health Clinics, national extension programmes and mass communication campaigns.
- Farmers and researchers have been managing and researching FAW in the Americas for many decades. Their experience is being harnessed to help develop sustainable management options for smallholder family farmers suitable to their cropping systems.
- In the Americas, FAW is attacked by a significant number and diversity of natural enemies. These naturally-occurring predators (ants, earwigs, wasps, etc.), parasitoids (small wasps), and pathogens (bacteria, virus & fungi) can cause up to 50% natural mortality of FAW in the field.
- Spraying insecticides early in the crop cycle will kill off the natural enemies and may not be economical.
- FAW mostly causes indirect damage – feeding on leaves. Occasionally it attacks the cobs or burrows into the stem. While very dramatic looking, leaf damage can be compensated for by a well-fed and watered maize plant. Leaf feeding by FAW can cause some yield reduction, but the damage may look far worse than the impact on yield. Even with high levels of FAW infestation at certain periods, maize plants are capable of compensating for the damage and not significantly reducing yield. Farmers should not panic at the sign of FAW in the field.

- Some pesticides don't work against FAW, because the pest has developed resistance to the pesticides.

- Some pesticides being used against FAW are very toxic to humans and cause environmental contamination.

- Effectiveness of insecticides against FAW also greatly depends on the application technique, dose and formulation. Once the FAW is down in the whorl, the insecticides must reach them there.

- Spraying with backpack sprayers without delivering material directly into the whorl is often ineffective. In addition, farmers in Africa rarely use personal protective equipment due to their cost and lack of adaptation to local conditions, and have little information on the risks of different pesticides.

- The vast majority of maize smallholder farmers in Sub-Saharan Africa don't use pesticides in their maize. Farmers consume a part of the maize they produce, and those who sell maize to markets often receive a low price.

- Spraying insecticides several times can dramatically increase the costs of production, making the maize economically unviable.

- Some governments are giving away pesticides to maize farmers to combat FAW. Some of the insecticides are acutely toxic to humans, some have been banned in other countries for health concerns, some are ineffective, and most will destroy natural enemies which can provide natural pest control. This policy may be starting smallholder maize farmers on a pesticide treadmill that may well have negative impacts.

- Botanical insecticides (e.g. neem) and pathogens (virus, bacteria and fungi) can be effective against FAW.

- Some smallholder farmers in the Americas report sprinkling ash, sand or dirt into whorls. Ash and sand may desiccate young larvae. Dirt may contain entomopathogenic nematodes or Nuclear Polyhedrosis Virus (NPV) that can kill FAW larvae.

- Local, small-scale production of the *Trichogramma* egg parasitoid, FAW virus (NPV), and *Bacillus thuringiensis* bacteria (Bt) have shown to be effective in Brazil and Cuba. Cuba has developed local, small-scale production facilities of natural enemies and bio-pesticides.

- Farmers must enter their fields often, be able to identify FAW life stages and damage and natural enemies. Squashing egg masses and young larvae is a very effective tactic for smallholder maize farmers.

- Plant diversity (intercropping other crops with maize, use of varietal mixtures and use of certain species in border-rows) can help to: 1. Reduce oviposition by FAW on maize, and 2. Maintain populations of natural enemies.

- Longer-term solutions of resistant or tolerant maize varieties have potential, but are several years off.

- Unlike FAW in the Americas, or the African Armyworm, FAW in Sub-Saharan Africa may not develop a migratory pattern. Most likely the populations will be resident, surviving on weeds and other plants during periods without maize.

- The utility of pheromone lures and traps needs to be determined. They may be useful in detection of population movement patterns. They may be useful at a local level to alert community members and farmers about higher adult populations.