Key Messages: Fall Armyworm (FAW) in Zimbabwe

- FAW is here to stay, farmers will have to learn to manage it sustainably in the context of their cropping systems.

- Key to helping farmers manage FAW is to help them and extension agents to learn key concepts of FAW’s 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.

- 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 and growth stages, 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.

- 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 farmers. This is being coupled with what we have learnt from our local context and home grown research over the past two seasons.

- 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. These natural pests are observed in Zimbabwe as well.

- Use of pesticides to control FAW should be the last resort for small holder farmers.

- Some pesticides don’t work against FAW, because the pest has developed resistance. Effectiveness of pesticides against FAW also greatly depends on the application technique, dose and formulation. Some of the pesticides are acutely toxic to humans and cause environmental contamination.

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

Conservation agriculture (CA) has proven to be effective to mitigating FAW. Early planting is strongly recommended as a measure to avoid high infestation from FAW. Farmers who practice CA are able to plant early.

Farmers must adhere to meeting all the recommended good agricultural practices (early planting, use of good quality seeds, timely weeding and adequate nutrient provision)

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, 2. Maintain populations of natural enemies, 3. increase soil moisture retention and soil fertility, 4. Suppress weeds.

Farmers should avoid staggered planting as this practice increases continuous presence of the pest. Farmers are recommended to plant maize varieties of different maturity at the same time.

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 and national levels to alert community members and farmers about higher adult populations.

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