



Training Workshop on Indigenous Biological Control Agents of the Fall Armyworm: Techniques in field collection, mass rearing and release

Organizers: *icipe* in collaboration with the Integrated Pest Management-Innovation Lab, Virginia Tech

Date: February 24 to March 1, 2019

Venue: *icipe*, Nairobi, Kenya

OBJECTIVE

The purpose of this workshop is to assess and learn methods in field collection, mass rearing and release of indigenous biological control agents of the fall armyworm including egg and larval parasitoids.

BACKGROUND

Fall armyworm (FAW), *Spodoptera frugiperda* (JE Smith) (Lepidoptera: Noctuidae), is native to tropical and subtropical regions of the Americas and is the key insect pest of maize in tropical regions. The occurrence of FAW was reported in Africa for the first time in late 2016 in West Africa. It has rapidly spread to different parts of the continent and currently its occurrence has been confirmed in over 40 African countries. Given the importance of maize in Africa as a main staple food crop, the recent invasion of FAW threatens food security of millions of people in the region. According to a recent estimate, in SSA, in the next year FAW can cause damage on an estimated 13.5m tons of maize (valued at US\$3,058.8m), which accounts for about 20% of the total production in the region. Currently, farmers in Africa are using high doses of insecticides to control FAW; nevertheless, relying on insecticides alone will come with several problems. The potential problems include pest resistance, pest resurgence, environmental pollution and destruction of natural enemies. Long term and sustainable solutions to FAW control should follow an integrated pest management (IPM) approach. IPM includes regular pest monitoring and use of two or more control options in compatible manner. Biological control is one of the components of the IPM approach. In 2018, five different species of larval parasitoids, four belonging to Hymenoptera and one to Diptera were reported from FAW larvae in East Africa. These include: *Cotesia icipe*, *Palexorista zonata*, *Charops ater*, *Chelonus curvimaculatus* and *Coccygidium luteum*. Recently, two egg parasitoids, *Trichogramma* and *Telenomus*, were identified. Information on the occurrence and rates of parasitism of indigenous natural enemies has a paramount importance in designing biological control of FAW either through conservation of native natural enemies or augmentative release. This training is technical and is designed for national researchers, development agents and technicians to gain practical hands-on experiences in field collection, lab mass rearing and mass release of indigenous biological control agents of the fall armyworm, including egg and larval parasitoids.

Contact: ttefera@icipe.org