Food and Agriculture Organization of the United Nations

GLOBAL ACTION FOR FALL ARMYWORM CONTROL

23 June 2021 | 14:00 CEST

Webinar series on FAW IPM

FAW monitoring and early warning systems in Africa

Speakers include experts from: Pennsylvania State University (PSU), Norwegian Institute of Bioeconomy (NIBIO) and Centre for Agriculture and Bioscience (CABI)

Register here: https://fao.zoom.us/webinar/register/WN_mo-j7Su8T1WC_j-C56kHUA

Provisional agenda

14:00–14:10	Welcome remarks • **Jingyuan XIA,** Executive Secretary, FAW Secretariat, Director, FAO Plant Production and Protection Division
14:10–14:30	Learning from Locusts - integrating satellites, AI, mobile phones and human networks to improve FAMEWS based on PlantVillage's experience with eLocust3m • **David Hughes,** Dorothy Foehr Huck and J. Lloyd Huck Chair in Global Food Security at Pennsylvania State University; founder of PlantVillage
14:30–14:50	Integrating pest models, weather data and field observations by coordination of digital systems • **Berit Nordskog,** researcher, NIBIO
14:50–15:10	Within cropping season, early warning of key pests in mixed maize systems in Africa: an overview of PRISE (Pest Risk Information SErvice), with a focus on Spodoptera frugiperda (fall armyworm) • **Bryony Taylor,** senior scientist, CABI
15:10–15:55	Q&A session • **Maged Elkahky,** FAW Secretariat
15:55–16:00	Closing remarks • **Rémi Nono Womdim,** Deputy Director, FAO Plant Production and Protection Division

The meeting will be moderated by **Maged Elkahky,** FAW Secretariat

Presentation abstracts

LEARNING FROM LOCUSTS – INTEGRATING SATELLITES, AI, MOBILE PHONES AND HUMAN NETWORKS TO IMPROVE FAMEWS BASED ON PLANTVILLAGE'S EXPERIENCE WITH ELOCUST3M

David Hughes

Dorothy Foehr Huck and J. Lloyd Huck Chair Global Food Security at Penn State University in the United States, and is founder of PlantVillage

The goal of the global monitoring program FAMEWS, which is powered by PlantVillage, is to collect data that enables accurate surveillance and monitoring that provides high-quality data to downstream activities predicting both the movement of FAW and the economic impact. In this talk, I will describe how a second engagement by PlantVillage with FAO during the locust crisis of 2020/2021 resulted in excellent lessons that we can apply to developing better monitoring of FAW. I will also discuss how combined approaches to biotic and abiotic stressors (from climate change) are critical challenges that we must address.

INTEGRATING PEST MODELS, WEATHER DATA AND FIELD OBSERVATIONS BY COORDINATION OF DIGITAL SYSTEMS

Berit Nordskog

Researcher, Norwegian Institute of Bioeconomy (NIBIO)

VIPS, an Open Source technology platform for decision-support in agriculture, is designed to initiate international collaboration and is defined as a global digital public good. Online weather data in combination with field observations serve as inputs for pest models, while model outputs can be presented in any format accustomed to end-user needs.

Examples of VIPS-related collaborations to be presented include: integration of data from VIPS with FAMEWS, development of a FAW model where outputs are returned to the Farmer Interface App (FIA) of the International Institute of Tropical Agriculture (IITA), and a new initiative for coordination of existing systems into a digital plant health service in Malawi.

EARLY WARNING OF KEY PESTS IN MIXED MAIZE SYSTEMS IN AFRICA: AN OVERVIEW OF PRISE (PEST RISK INFORMATION SERVICE), WITH A FOCUS ON SPODOPTERA FRUGIPERDA (FALL ARMYWORM)

Bryony Taylor

Senior scientist, CABI

PRISE (Pest Risk Information SErvice) is a five-year project (2017-2022) funded by the UK Space Agency's International Partnerships Programme. The project combines data feeds from Earth Observation sources with pest and disease early warning models to provide users with advanced warning of damaging pest outbreaks coupled with appropriate advice on mitigation responses. Through the project, an early warning model for fall armyworm (Spodoptera frugiperda) has been developed and validated, which utilizes aspects of degree day modelling combined with larval population density measures to provide an optimal time for action in days, based on historic and current weather data.