Managing FAW experience in Uganda

icipe Technology Transfer Unit

www.icipe.org

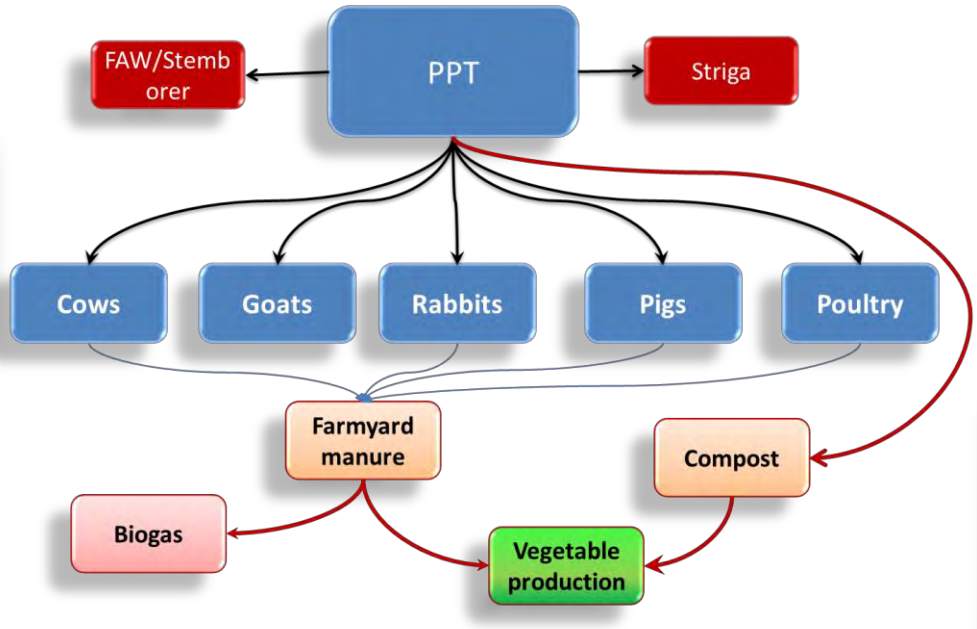
FAW invasion in Uganda

- Push-pull technology
- Maize edible legume intercropping
- FAW MSB interaction
- Planting date to create a masking and repellent effect
- CBFAMFEW
- NORAD
- Elucidation of the science and effectiveness of Local innovations for Managing FAW in Africa (LIMFA)
- Evaluating maize legume intercropping in divers agro-ecosystem to control FAW

Push-pull technology as an agro-ecological management option for FAW

- The technology is being promoted in Uganda
- Farmers willingness to invest on seeds encouraging
- Maintenance of the farm and expansion of the plot
- The use of desmodium vines and Brachiaira root splits is encouraging landscape level integration

Push-pull technology as an agro-ecological management option for FAW



Compost

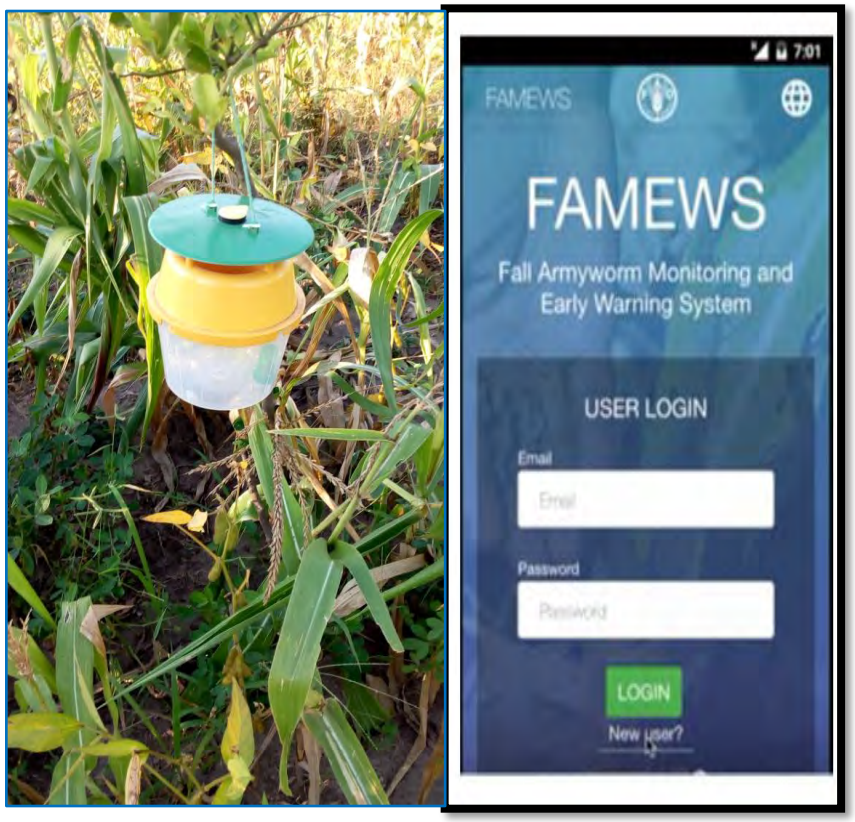
Farmyard manure

Biopesticide trials

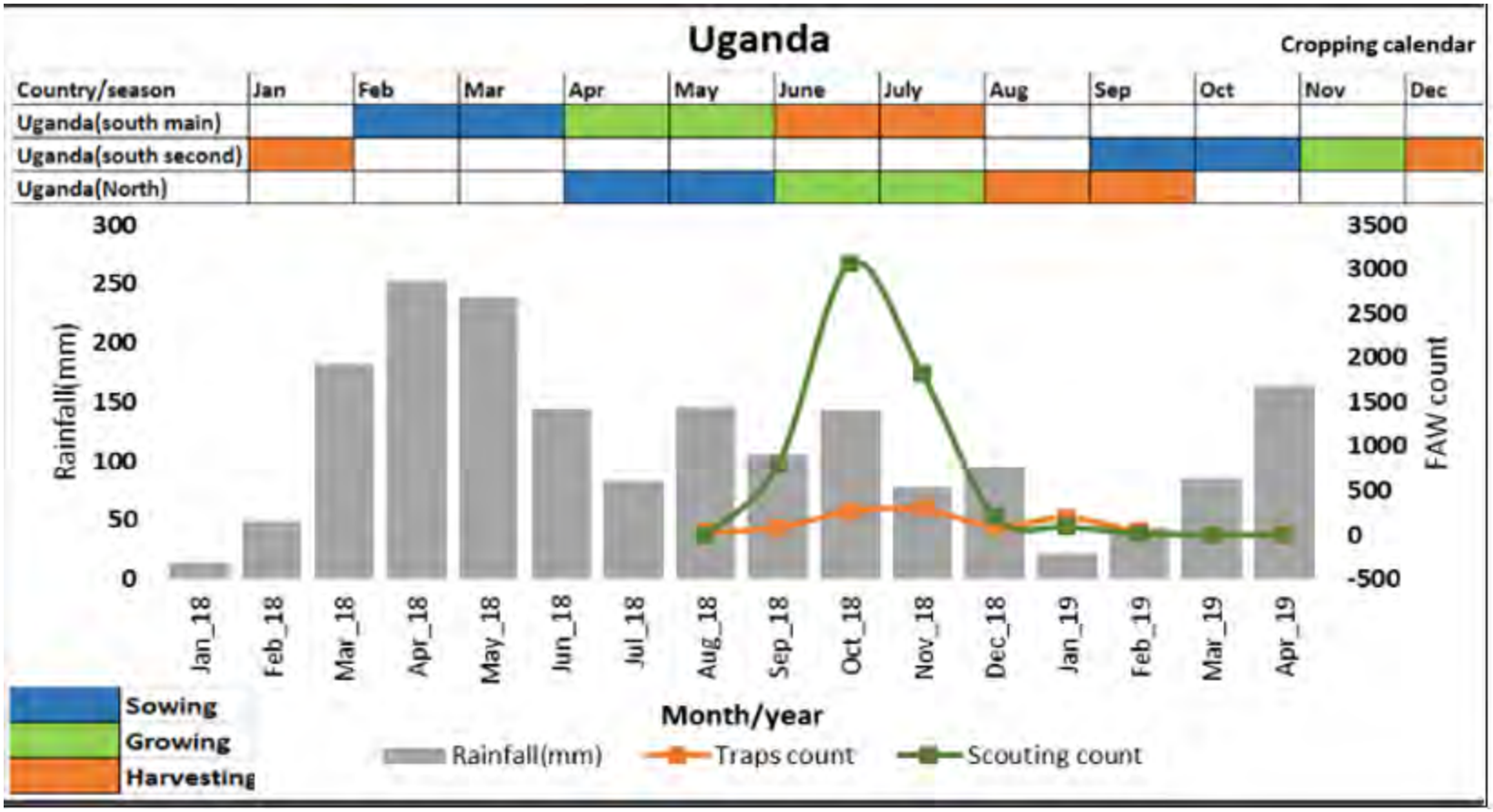
- Evaluating effectiveness of icipe 78 and icipe 7 biopesticides
- An on-farm and on-station evaluation is underway.
- Based on the findings the biopesticides will be an integral part of FAW IPM

CBFAMFEW

- USAID funded FAO led project
- CFPs empowered to monitor, scout and provide feedback to their communities and to the global database
- Agro-ecological management options are widely promoted by CFPs



Rainfall pattern and FAW abundance



Rainfall pattern and abundance of FAW from trap catch and field scouting

Evaluating the effect of maize edible legume intercropping to control FAW infestation

Agronomy Journal

Pest Interactions in Agronomic System | Open Access

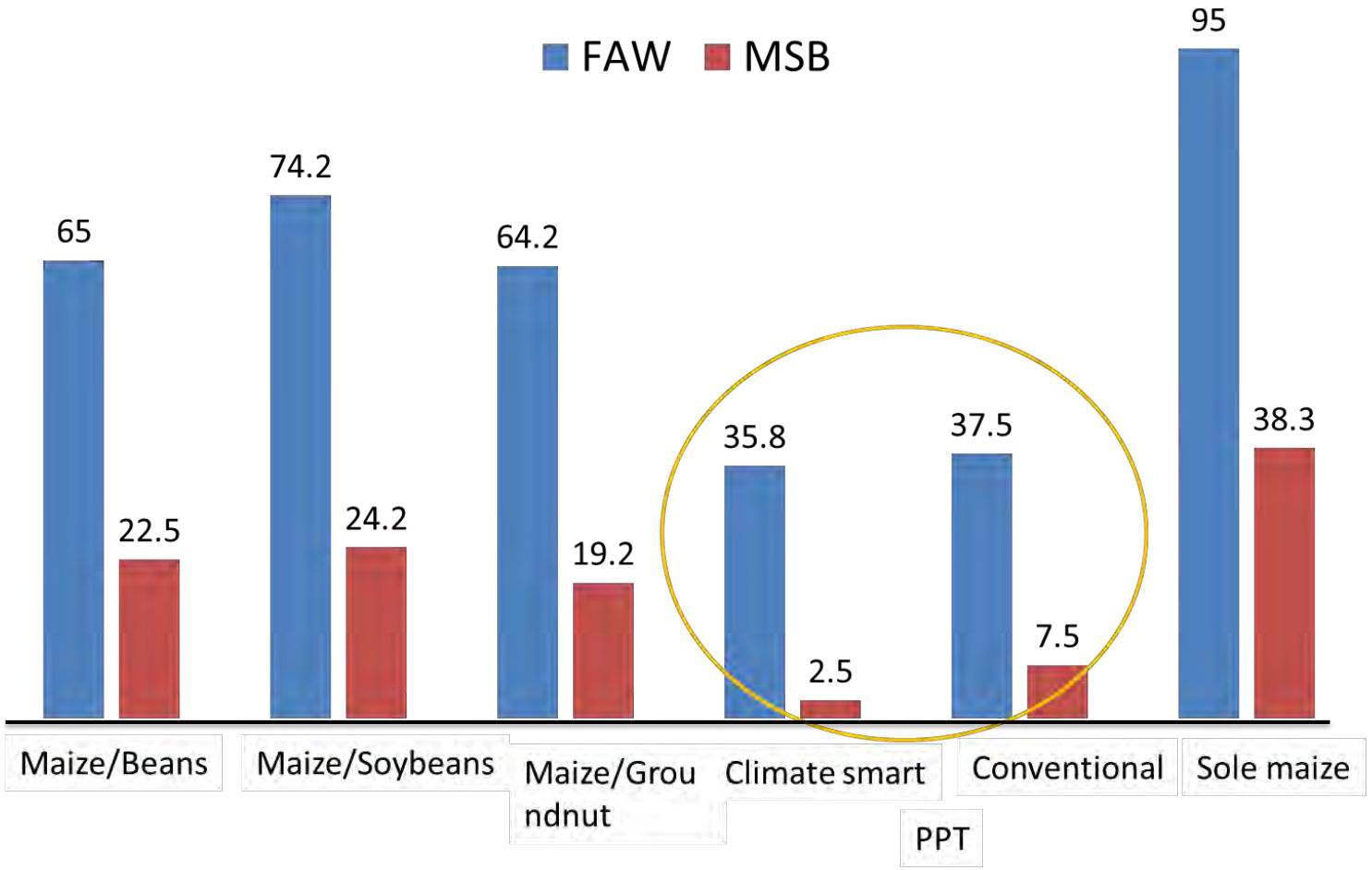
Maize–Legume Intercropping and Push–Pull for Management of Fall Armyworm, Stemborers, and Striga in Uganda

Girma Hailu, Saliou Niassy, Khan R. Zeyaur, Nathan Ochatum, Sevgan Subramanian

Maize groundnut

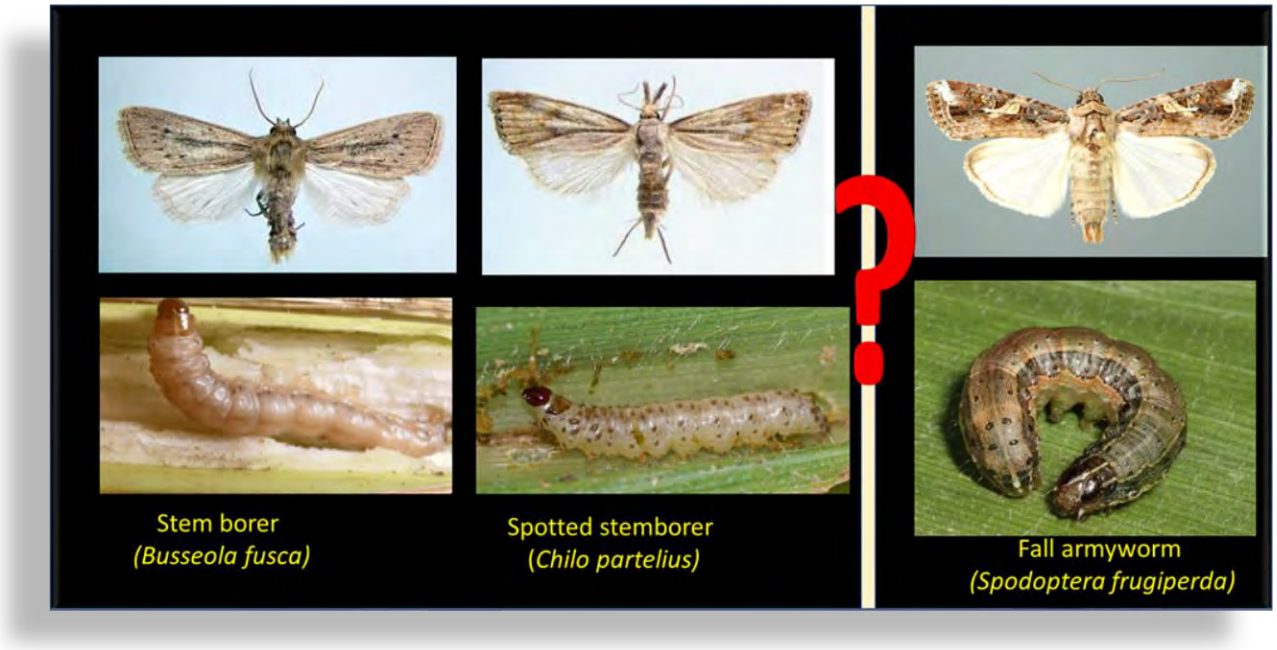
Maize soybean

Infestation (%) of maize due to FAW and cereal stemborer in different intercropping systems



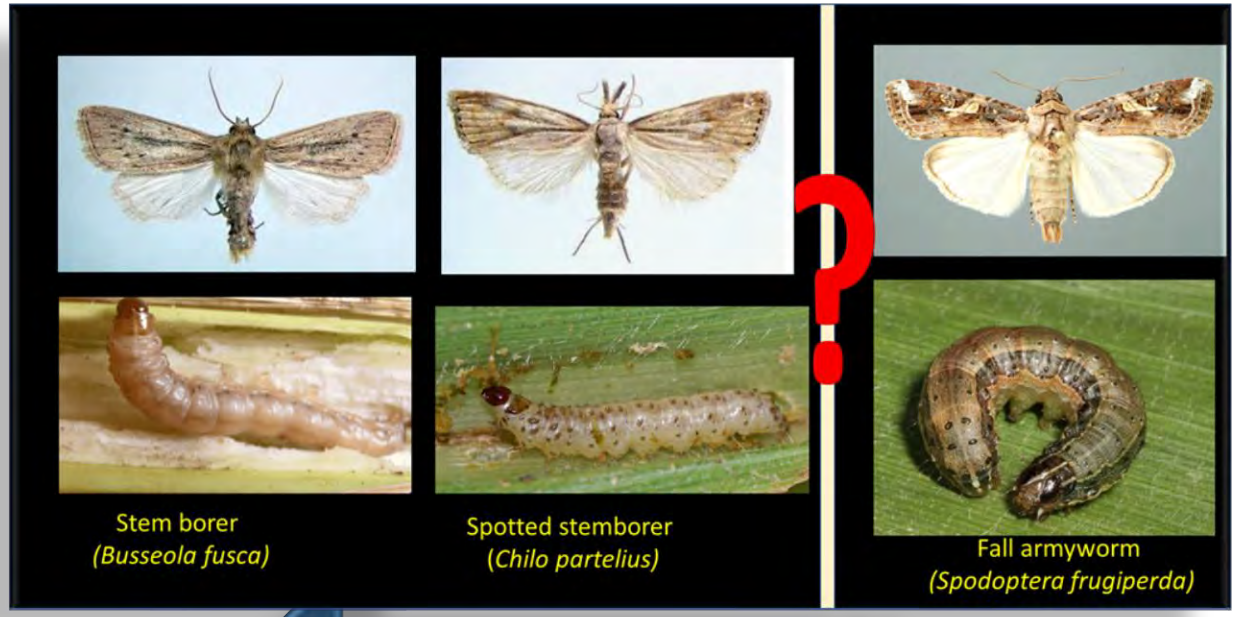
FAW and cereal stemborer interaction on maize and sorghum

- **Could fall armyworm, *Spodoptera frugiperda* (J. E. Smith) invasion in Africa being displacing cereal stemborers in maize and sorghum cropping systems?**

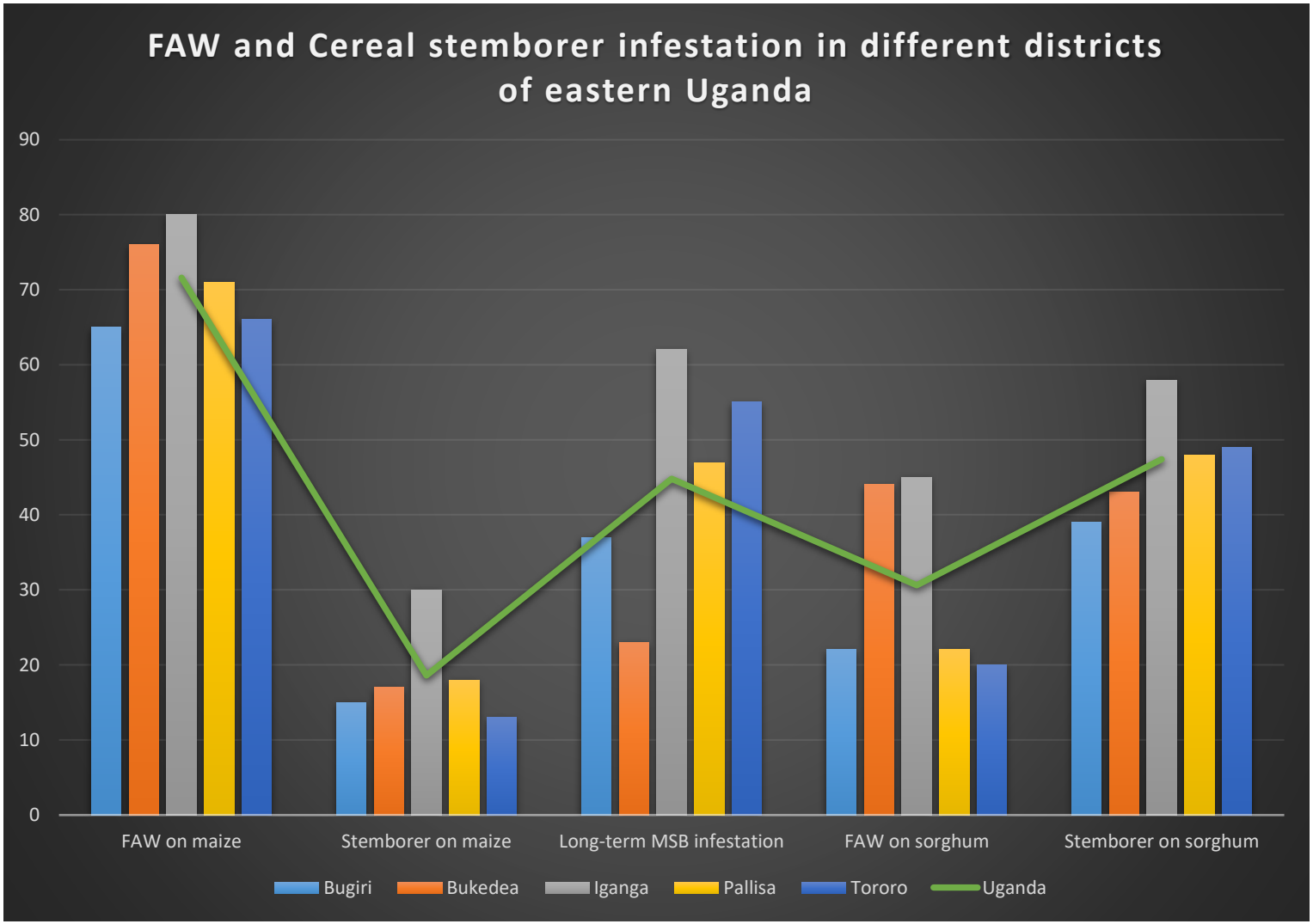


Spotted stemborer introduced from Asia displaced the indigenous *Busseola fusca*

Major maize and sorghum pests

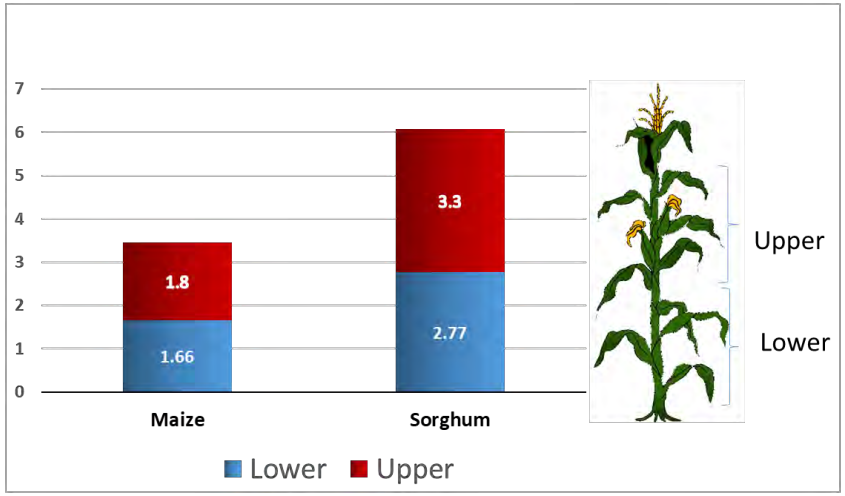


Spotted stemborer introduced from Asia displaced the indigenous *Busseola fusca*

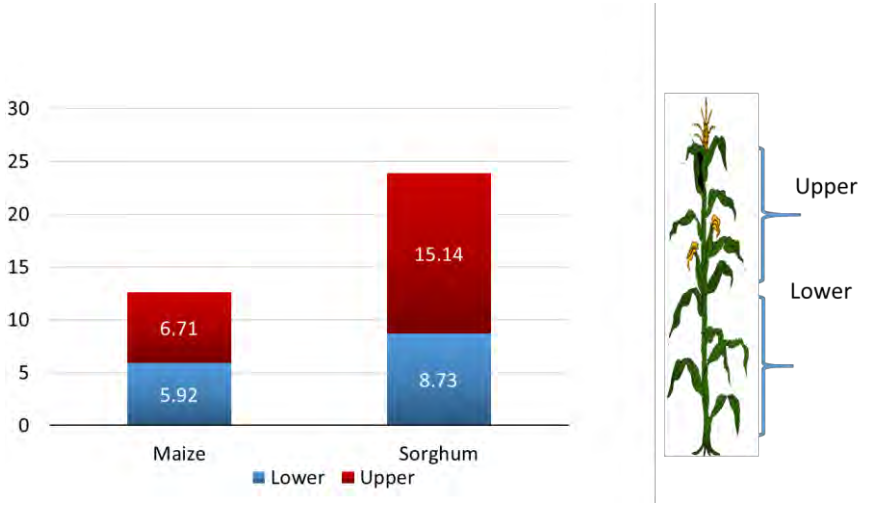

FAW and Cereal stemborer infestation in different districts of eastern Uganda
90
80
70
60
50
40
30
20
10
0
FAW on maize
Stemborer on maize
Long-term MSB infestation
FAW on sorghum
Stemborer on sorghum
Bugiri
Bukedea
Iganga
Pallisa
Tororo
Uganda

Intensity of stemborer damage on maize and sorghum

Exit holes due to stemborer infestation counted from lower and upper part of maize and sorghum stalk



Mean cavity length measured in the lower and upper part of maize and sorghum due to stemborer feeding



Elucidation of the science and effectiveness of Local innovations for Managing FAW in Africa (LIMFA)

- Farmers are heavily relying on synthetic insecticides
- Most farmers who can not afford the cost are relying on locally available materials with different levels of success
- The objective of this initiative is to look for the low-cost options which can be applied singly or in combinations for safe and effective management of FAW

Treatments

- Participatory evaluation
- Three districts were identified (Bulambuli, Kayunga and Masindi)
- Options for management may change depending on farmers interest and available material

Treatments

- Wood ash;
- Soil;
- Neem (*Azadirachta indica*) extract;
- Tephrosia (*Tephrosia vogelii*) extract;
- Detergent (Omo);
- Pesticide control (Ampligo 150 ZC); and
- Non-treated control.

ICRAF-FAO Agrobiodiversity options for FAW management

- Intercropping maize with edible legumes under different agroecological condition
- On-farm and on-station assessment of preferred by farmers legumes

Acknowledgement

Donors directly providing financial support to *icipe*

icipe@50 1970 – 2020 Insects for Life

Thank you

International Centre of Insect Physiology and Ecology

P.O. Box 30772-00100, Nairobi, Kenya
Tel: +254 (20) 8632000
E-mail: icipe@icipe.org
Website: www.icipe.org

Support *icipe*: www.icipe.org/support-icipe

facebook.com/icipe.insects/icipe

twitter.com/icipe

linkedin.com/company/icipe