

In any correspondence on
this subject please quote No.



THE REPUBLIC OF UGANDA

MINISTRY OF AGRICULTURE,
ANIMAL INDUSTRY AND FISHERIES
P.O BOX 102,
ENTEBBE, UGANDA

E-MAIL: ps@agriculture.go.ug
WEBSITE: www.agriculture.go.ug
TELEPHONE: 0414 320004, / 0414 320094
FAX: 256-041-321047

05th August 2021

Secretariat
International Plant Protection Convention
Viall delle Terme di Caracalle
00153 ROME – ITALY
Tel: +39-06-5705-4812
Email: ippc@fao.org

Dear Sir/Madam

FIRST REPORT OF PAPAYA MEALYBUG (*PARACOCCLUS MARNATUS*) IN UGANDA

I have the honor and privilege to report to you, the first detection of the Papaya mealybug in Uganda. The detection was supported by the survey initiated by the need to confirm the presence of Mango mealy bugs after it was reported in Rwanda from 2019

The Ministry of Agriculture Animal Industry and Fisheries (MAAIF) conducted a survey with support from Food and Agriculture Organization (FAO). The samples from various parts of the country including East, West, North and South Western Uganda were collected and sent for laboratory diagnosis.

The sample analysis report from the British Natural History Museum confirmed the presence of Papaya Mealybug (*Paracoccus marginatus*) in samples collected from Mbale district in the city centre, instead of Mango mealybug. The district where papaya mealybug has been identified in neighboring Kenya where the pest was reported in 2019.

Here attached is the detailed report and proposed mitigation measures for your consideration and further action.


Ssegawa Gyagenda Ronald

FOR: PERMANENT SECRETARY

Copy to : FAO Country Representative, Kampala

Ag. Director Crop Resources

Detection of Papaya mealybug (*Paracoccus marginatus*) in Eastern Uganda

A. Introduction

During the detection field survey for mealybugs affecting mangoes in April 2021 in Uganda. Several samples were collected from various areas at sites growing mangoes. Districts were selected in regions of Eastern, Western, North and South West Uganda. The specific sites for sampling were demarcated with their Coordinates.

B. Sample Diagnosis and Distribution

*The samples of fruits and leaves of infected mangoes were sent to Natural History Museum in the United Kingdom. One sample picked from Mbale District, in Mbale City confirmed the presence of Papaya mealybug *Paracoccus marginatus*. The location borders with Kenya where the pest has been detected in several areas especially small holder papaya farms. The infested areas is also major destination from commodities from Kenya.*

C. Host status

The *P. marginatus* is a polyphagous pest that feeds on a wide range of crops, fruits, ornamental and weed plants belonging to many plant families. Of concern in Uganda are papaya, Mango, cassava, Annona Hibiscus, Roses, eggplants Guava, beans Cowpeas, Banana, Coffee, bell Pepper, Annona (Soursop) all of which are very important crops in the country.

D. Potential for spread in the country

There is a high likelihood that the pests will spread to other areas beyond the current location. Short distance dispersal is known to occur through active walking of the crawlers from infested to uninfected plants; or passively by wind, rain,

irrigation water, birds and ants. Long-distance dispersal is mainly through human transportation of infested fresh plant materials such as pawpaw fruits and other vegetative parts from one farm to another, or one area to another. The presence of the pests in one location (Mbale district) neighboring Kenya, with restricted distribution in the Eastern part of the country implies it could have entered Uganda from Kenya.

E. Potential impact

The papaya mealy bug is most likely to impact Uganda Economically, culturally and environmentally. Papaya mealybug can have severe impact on both production and quality of the papaya and other hosts. Black sooty mould grows on the honeydew, disfiguring the plant and produce, so reducing crop yield and rendering extremely lower commercial value. Sooty mould also blocks light and air from/to the leaves, impeding gaseous exchange and photosynthesis, further reducing (severely denting) productivity. Heavy infestations make pawpaw fruits hard and bitter so that they are inedible and unsaleable; this can result into heavy serious economic losses to the affected farmers and subsequent abandonment of pawpaw farming as a whole. Other vulnerable crops are Cassava, Annona, and Hibiscus which are high value crops. However, worth noting, Cassava is a major food security and industrial crop of significant importance in Uganda and the severe effect would most likely plunge the communities' crop (Cassava) dependent regions into acute famine or malnutrition. For example other areas such as neighboring Kenya, has reported 91% loss in yield of Papaya in the affected farms. This highlights further the same potential impact most likely in small holder farms in Uganda.

The control of papaya mealybug most likely would increase pesticide usage affecting biodiversity. Socially, in mixed cultivation of fruits and vegetables at

farm level causes reduced productivity hence affecting income, farm debt while procuring pesticides, can be damaging to humans and environment.

F. Proposed intervention (Immediate, Short and Long term)

The immediate action / intervention (ranging from immediate, short and long term) will include the following;

1. Establish the extent of Spread by conducting delimiting survey
2. The scaling up inspection of fruits, vegetables, ornamentals and other hosts at entry points from Kenya and Tanzania, while taking vigilance on to the other countries.
3. Develop a rapid pest response strategy for possible eradication or containment of the pest.
4. Institute urgently appropriate mechanisms through the relevant channels to prevent or reduce further the local spread from the source of the pest infection to other locations or uninfected areas (e.g. quarantine, non-movement of suspected plant parts etc.). Vigilance on the pest further spread via inter districts, inter sub-counties or inter-villages pathways.
5. Trace the pest pathways in order to strengthen inspection and streamline cause of direction for the current and future handling of such incidences.
6. Urgently mobilize for (secure) support towards eradication, containment or management interventions depending on the pest extent of spread among others.
7. Awareness creation or alertness activation both nationally and locally to the farming communities and the District / City Local Government Extension arms for possible rapid eradication, containment or management of the pest.

Sample no. S-5: Uganda, Soroti District, Central ward, 14.28379° N, 33.36925° E, on *Mangifera indica*, 19.ii.2021.
No. specimens <10
Monophlebidae sp., negative for *Rastrococcus* (the sender's tentative identification is not confirmed).

Sample no. S-6: Uganda, Soroti District, Central ward, 14.28379° N, 33.369259° E, on *Mangifera indica* sample 2, 19.ii.2021.
No. specimens: 10+
Pseudococcidae sp., but negative for *Rastrococcus* (the sender's tentative identification is not confirmed).

Sample no. S-7: Uganda, Budaka District, Naboa, 12.9664° N, 34.14993° E, on *Citrus* sp., 17.ii.2021.
No. specimens: 8
Monophlebidae sp., negative for *Rastrococcus* (the sender's tentative identification is not confirmed).

Sample no. S-8: Uganda, Kisoro District, Central division, -1.2825° N, 29.69185° E, on *Psidium guajava*, 15.ii.2021.
No. specimens: 8
Monophlebidae sp., Pseudococcidae sp., negative for *Rastrococcus* (the sender's tentative identification is not confirmed).

Sample no. S-9: Uganda, Arua District, Ayiyuni, 3.113135° N, 30.825637° E, on *Psidium guajava*, 17.ii.2021.
No. specimens: 8
Pseudococcidae, 2 species, but negative for *Rastrococcus* (the sender's tentative identification is not confirmed).

Sample no. S-10: Uganda, Kumi District, South division, 1.292243° N, 33.56707° E, on apple,
No. specimens: 10+
Monophlebidae sp., negative for *Rastrococcus* (the sender's tentative identification is not confirmed).

Sample no. S-11: Uganda, Jinja District, Mafubira B, 2.80932° N, 33.122760° E, on *Carica papaya*, 15.ii.2021.
No. specimens: 10+
Monophlebidae sp., negative for *Rastrococcus* (the sender's tentative identification is not confirmed).

All specimens identified by Dr Gillian W. Watson, Dept Life Sciences, Natural History Museum, London (gillian.watson@nhm.ac.uk). June, 2021.