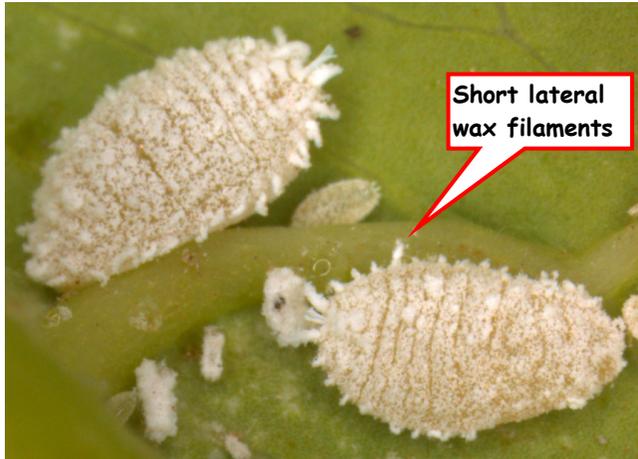


The Papaya Mealy Bug (*Paracoccus marginatus*)



Short lateral wax filaments

The adult female:

1. Body flattened between tummy and back side
2. Body is entirely covered with white wax
3. Ovisac (egg sac) develops on the adult female
4. Has 15 to 17 short lateral wax filaments on each side
5. When body is pressed gently, a yellow fluid oozes out

A wide range of host plants can be attacked:

For example **papaya**, citrus, cassava, avocado pear, teak, tomato, eggplant, **mango**, okro, cashew, cocoa, oleander etc.

Damages:

Mealy bug are most active in warm and dry weather.

Fruit: One part of the fruit ripens while the other part is immature; sooty mould on the fruits due to honey dew secretion

Leaves: Deformation of leaves at growing points; yellowing of leaves.

Plant: Stunted growth and ultimate death of the whole plant.



An adult female with an ovisac.

Sooty mould on the top side of fruits due to honey dew secretion



Deformation of leaves at growing points.



This is an adult male doing no harm.



This is not the Papaya Mealy Bug, but the Mango Mealy Bug with its long tentacles (appendages).



Biological Control of Papaya Mealy Bug

These 3 dots help to identify *Acerophagus papayae* which is only 1 mm long.



The Papaya Mealy Bug can be controlled through the parasitoid wasp

Acerophagus papayae

In Ghana, we are currently breeding *Acerophagus papayae* for release on farms. The parasitoids lay their eggs in the mealy bugs and complete part of their lifecycle inside of them. They do not sting people. The parasitoids are specific in their actions and **only lay their eggs in Papaya Mealy Bugs**.

Releasing *Acerophagus*

Usually the parasitoids are transported in a **glass test tube**. Upon arrival at the farm they are released by walking a **diagonal line** through the affected fields with the test tube opened upright or on its side, **but never shaken**. They should be released as soon as they arrive, but preferably **early in the morning**. No pesticides should have been used on the plants during the days before the release.

A test tube with about 100 *Acerophagus* wasps is sufficient to treat 12 acres.

Conditions for successful multiplication and action of parasitoids

1. No spraying of pesticides! Chemicals kill them!
2. However, sulphur and neem are compatible; but follow the general rule that applies to all pesticides: Spray in the evening to minimise damage to beneficial insects.
3. No setting of bushfires since the heat and smoke generated are harmful to parasitoids.
4. After release, observe action of parasitoids for 12 weeks. They can be spotted best early morning at the base veins on the underside of leaves close to mealy bug colonies.
5. Create an environment around the fields that is supporting beneficial insects: Plant shelterbelts with lots of flowering plants providing nectar and pollen year round.

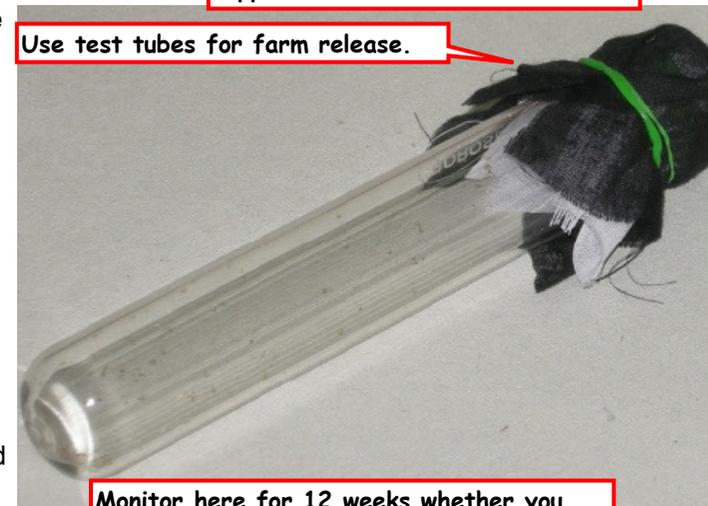
For further information, contact MoFA / PPRSD (0302-990404) or any MoFA District or Regional Office



This Bio Lab at Tropigha Farms in Kpando breeds *Acerophagus* with support of MoFA PPRSD and MOAP



Acerophagus papayae laying eggs into the Papaya Mealy Bug.



Use test tubes for farm release.

Monitor here for 12 weeks whether you find released parasitoids. Use a hand lens.

