



Adult pale cotton stainers are often seen in maturing cotton, often as mating pairs. They can damage maturing bolls. (Lewis Wilson, CSIRO)

Selecting an insecticide

As an occasional pest, there are few products registered for their control. The synthetic pyrethroids lambda-cyhalothrin (Karate Zeon, Matador) and gamma-cyhalothrin (Trojan) are registered; check the labels of these products for more information. However their status as an occasional pest is influenced by their susceptibility to insecticides used for the control of *Helicoverpa* and other pests. Cotton stainers may be incidentally controlled when carbamates such as carbaryl or organophosphates such as dimethoate are used. Any decision to use broad spectrum insecticides such as SPs should take into account their impact on beneficial insects and the subsequent risk of flaring whitefly and other secondary pests should also be considered.

Resistance profile

Worldwide there are few records of resistance to insecticides developing in the field, however cotton stainers will react to selection pressure under laboratory conditions.

Overwintering habit

As there is no resting stage in the cotton stainer's lifecycle, cultural controls between cotton seasons assist greatly in limiting population development (see below).

Alternative hosts

Fuzzy cotton seed used for stockfeed is an important alternative source of food for cotton stainers. Avoid storing fuzzy seed in exposed places where cotton stainers can access this food source over long periods. Controlling ratoon and volunteer cotton is important for limiting cotton stainer's access to alternative food source.

Further Information

Qld DAFF, Toowoomba

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Solenopsis mealybug

Phenacoccus solenopsis

The solenopsis mealybug (*Phenacoccus solenopsis*) has been found in Burdekin, Central Queensland, Burnett and most recently Darling Downs cotton crops.

Damage symptoms

Nymphs and adults can affect plant growth at all stages of crop development. When infested during early development, plants exhibit distorted terminal growth, crinkled and bunchy leaves, and in severe cases plant death will occur. On older plants, mealybug can cause shedding of leaves, squares and small bolls as well as fewer, smaller and deformed bolls, and premature crop senescence. Heavy infestations (>500 mealybug in top 8 nodes at cut out) has been found to have an 80% reduction in harvestable bolls. Honeydew excreted by the insects onto the leaves and lint can promote the development of black sooty mould.

Sampling

At low densities, mealybugs can be present anywhere on the plant. Trials on mealybug distribution within the plant revealed that they like to aggregate on the underside of leaves and inside bracts of squares or bolls within the top 10 nodes. This suggests assessment of mealybug on these plant parts may give reliable estimations in the field.

Volunteer cotton in a field can be a source of mealybug within the crop. Volunteer cotton grows earlier than cultivated cotton and therefore attracts overwintering mealybug populations in the field (on the root zone of weed hosts or under the soil) and later disperses these to nearby cotton. Checking volunteer and adjacent cotton will help to detect early infestation in the field. Crop stress, such as waterlogging, may make cotton more susceptible to mealybug, so it is important to include stressed areas when checking e.g. tail drains. Investigate patches of stunted or dead plants. As solenopsis mealybug has a very wide host range, also monitor surrounding vegetation including gardens.

If mealybugs are found, contact: Melina Miles (07) 46881369 or Moazzem Khan (07) 4688 1310 to arrange identification and to help track distribution of the species.

Thresholds

Damage thresholds have been assessed, however it is important to note that there are no insecticides registered for the control



Mealy bug predators cryptolaemus lady beetle larva (left) and lacewing larvae (right), can look very similar to mealy bugs. (Zara Hall and Paul Grundy, Qld DAFF)