

MEALYBUGS—GRAPE MEALYBUGS (*Pseudococcus* spp.)
CITRUS MEALYBUG (*Planococcus citri*)



Grape Mealybug

Vine Mealybug
 Note lack of filaments



Ants tending vine mealybugs in early spring

Citrus Mealybug



Mealybug attacked by Mealybug Destroyer



Mealybug crawlers on vine pruning

Description

Mealybugs (MB) are a serious pest of grapes in Afghanistan. They are also common in citrus. Most species overwinter as eggs which hatch in spring; vine MB overwinters as nymphs. On hatching the nymphs are light yellow, but they soon excrete a waxy covering. There are 2-3 generations per year.

Mealy bugs suck plant sap reducing vigour and causing fruit to drop. They also contaminate bunches of grape by their presence or by the sooty mould growing on honeydew.

Monitoring

On grapes, populations must be noted during harvest for control the following year. During winter, peel back the thin bark on spurs in prunings and look for crawlers. Look also for nymphs and females under bark at graft union, in old pruning wounds in the trunk, and below the base of the spur. For raisin grapes, if 20% of spurs have crawlers, a late winter treatment is justified. For table grapes, the threshold is 10%. Ants indicate MB presence.

Control

Mealybugs have a lot of natural enemies: parasites and predators. One of the best known is *Cryptolaemus montrouzieri*, the Mealybug Destroyer, which is a type of ladybird. Its larva is similar to a mealybug but is larger and has long waxy filaments. It can be imported and introduced in early spring.

Ants must be controlled to allow natural enemies to do their job. Sowing vetch as an intercrop will attract ants away from the mealybugs.

Pruning: make sure that grape bunches hang clear of the wood. Female mealybugs cannot fly—avoid transporting mealybug from vineyard to vineyard.

Treatments are most effective against 'crawlers'. No treatments are effective against mealybugs in closed fruit bunches. Buprofezin may be applied at bud-swelling and again in early summer. Imidacloprid is highly systemic and can be applied to the soil before irrigation at bloom.

'Narrow range' horticultural summer spraying oil with chlorpyrifos can be used