

CAROB MOTH

Ectomyelois ceratoniae (Zeller)

1 PEST PROFILE

1.1 Distribution and status

The carob moth is a minor pest and occurs throughout southern Africa. Carob moth only becomes a problem in orchards that are fairly heavily infested with mealybug or other honeydew-producing insects. Infestation may also be recorded where citrus is grown adjacent to a more favoured host, such as acorns, pomegranates or pecans. Grapefruit appear to be more badly affected than other citrus cultivars.

1.2 Description

The carob moth adult is a small inconspicuous greyish moth. Wing markings, body size and structure of the genitalia are extremely variable. Wingspan is approximately 19 to 26 mm, the forewing being light grey in colour with two faint and variable oblique stripes. The rear wing is white to light grey and fringed with long hairs. The eggs are small, oval, flattened and similar to false codling moth eggs. The larvae bore into the rind and albedo or enter through the navel, but do not penetrate into the flesh. The larvae are often pale pink in colour and can therefore be confused with false codling moth (FCM) larvae. However, experts are able to differentiate between the two species. The pupa occurs beneath a web spun over the feeding area by the mature larva.

1.3 Infestation sites on tree

Carob moth larvae tend to penetrate into fruit which are infested with mealybug (and sometimes other honeydew producing insects). They initially prey on the mealybug, and thereafter attack the fruit. Occasionally other damaged fruit are attacked, particularly navel oranges with split navel-ends. Very rarely are healthy fruit attacked.

1.4 Damage

1.4.1 Symptoms

Carob moth larval penetration holes in fruit are

usually larger than those caused by FCM, as when the carob moth larva begins to penetrate into the fruit, it is generally larger than the neonate FCM larva. Penetration into the fruit is not as deep as that by FCM and does not go beyond the albedo. However, as with FCM, granular frass can be found within penetration tunnels. Gummy exudes from the round puncture holes and infested fruit drop from the tree.

1.4.2 Seasonal occurrence

Carob moth is a sporadic summer pest. Numbers appear to decline towards winter.

2 MANAGEMENT ASPECTS

2.1 Infestation/damage assessment

2.1.1 Inspection

It will usually only be necessary to inspect for carob moth when fruit are fairly heavily infested with mealybug or other honeydew-producing insects. If dropped fruit is being evaluated for FCM infestation during summer, the presence of any carob moth larvae will also be detected. As carob moth and FCM larvae can appear similar, particular attention should be given to specific diagnostic differences.

2.1.2 Treatment threshold

As this pest is of minor importance or sporadic in nature, no thresholds have been defined for the timing of treatments.

The control of mealybug or other honeydew-producing insects should result in a reduction in any carob moth infestation.

2.2 Control options

2.2.1 Biological

Only one parasitoid of carob moth, *Phanerotoma ornatulopsis*, has been reared from infested acorns at Citrusdal.

2.2.2 Cultural

Orchard sanitation, i.e. the removal of infested fruit from the tree and dropped fruit, may assist

in reducing the level of a carob moth infestation. Removal of favoured alternative hosts from close proximity to citrus orchards should also help. This includes oaks, pecans and pomegranates.

2.2.3 Plant protection products

No plant protection products are registered for the control of carob moth. It is very rare that treatments are ever necessary for the control of this pest.