Macadamia Protection **Programme**

MACADAMIA NUT BORER

Background Macadamia nut borer is an important pest of macadamia in South Africa with larval infestations present in all main growing regions. The species has a limited geographic distribution, reported only in South Africa and Malawi, and feeds almost exclusively on macadamia. Yield loss resulting from this pest has not been determined.

Scientific name
Thaumatotibia
batrachopa

Family
Tortricidae
Insect type
Fruit borer

Biology Female moths lay eggs on the surface of macadamia pericarps. Upon hatching, larvae bore into the pericarp and cause extensive tunneling damage. In some cases, depending on nut development, larvae may tunnel to the centre of the nut and feed on the kernel. Pupation generally occurs within the soil, although there are reports of larvae pupating within nuts. After emergence, adults seek shelter within the orchard. Adults become active during the dusk period, where they search for mates and fulfil the role of producing offspring.

Description The eggs are approx. 1 mm long, oval in shape and range from yellow to translucent white in colour. Larvae are approx. 15 mm long when fully grown. Fully grown larvae have a brown head and a creamy-white body with rows of brown spots running down the length. The pupae are brown and approx. 7 mm in length. They have 10 abdominal segments with transverse row spines. The adults are brown-grey with a body length of approx. 8 mm and a wingspan of approx. 18 mm.



MACADAMIA NUT BORER

Symptoms

- Entrance holes in pericarp
- Tunneling damage and frass inside pericarp and/or fruit
- · Premature nut drop









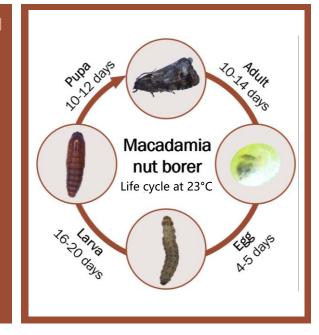
Products registered for control in South Africa

Chemical

- Allice 20
- Delegate 250
- Emma
- Orthene 75
- Vitex 50
- Wonderland 200

Pheromone

- Last Call M.N.B.
- M.N.B. PheroLure
- X-Mate[™] M.N.B.



References

de Villiers, E. A. (2001). *Cryptophlebia batrachopa* (Meyrick) macadamia nut borer. In M. A. van den Berg, E. A. de Villiers, & P. H. Joubert (Eds.), *Pests and Beneficial Arthropods of Tropical and Non-citrus Subtropical Crops in South Africa* (pp. 317-320). Nelspruit, South Africa: ARC-Institute for Tropical and Subtropical Crops.

SAMAC. (2020). Macadamias: Information on products registered under Act 36 of 1947 for specific use in South Africa. Retrieved from https://www.samac.org.za/wp-content/uploads/2020/06/Macadamia-Registered-Products-June-2020-1.pdf

Smith, A. K. (2020). Artificial rearing and life stage characterisation of *Thaumatotibia batrachopa* (Unpublished master's dissertation). University of Pretoria, Gauteng Provence, South Africa.

Timm, A. E., Geertsema, H., & Warnich, L. (2006). Analysis of population genetic structure of two closely related tortricid species of economic importance on macadamias and litchis in South Africa. *Agricultural and forest entomology*, *8*, 113-119.

Photos by: Ashleigh Smith







