

## Ceratipack

Use in mass trapping for the management of the Mediterranean fruit fly *Ceratitis capitata*

The Mediterranean fruit fly, *Ceratitis capitata* Wiedeman (Diptera: Tephritidae) is one of the most destructive fruit pests in the world, causing important damage in several fruit crops.

Adults start to emerge in late spring. Around 3 days after mating, females start to lay eggs under the fruit skin attracted by the colour and the smell of the fruits. An average of 300-400 eggs can be laid by a single female throughout her lifetime. Eggs hatch in two to four days if conditions are suitable. Larvae feed on fruit pulp and pass through three instars until pupation, which takes place in the soil. The life cycle of this species can be completed in 20-30 days. Therefore, there can be up to seven generations per year, depending on weather conditions. Damage is caused by ovipositing and larvae pulp feeding which may suppose decomposition of the fruit by the invasion of microorganisms.



***Ceratitis capitata***  
**Wiedeman**  
Diptera:  
Tephritidae

### CONTROL MANAGEMENT

The control of the medfly has been carried out by the application of contact insecticides to the entire tree or partial treatments with a mixture of insecticide and food attractant.

Since most of the damage occurs close to the harvest, the application of chemical insecticides is not convenient due to the risk of residues in the fruit, which may be higher than the levels permitted. For this reason, and also for the efficacy, the technique proposed to manage this species is mass trapping. This procedure consists of attracting medfly adults to a trap baited with an attractant, where insects die due to the contact with an insecticide.



### FORMULATION

The product CERATIPACK comprises a dispenser which contains attractants specific for this fly and the trap. The lid of the trap is impregnated with a contact insecticide (deltamethrin) to kill the flies that enter the trap.

The effectiveness of CERATIPACK depends on temperature, air and relative humidity. Under normal conditions it can be around 180 days, which may be reduced at high temperatures and/or strong winds.



### APPLICATION

- Each dispenser has to be placed inside the trap when CERATIPACK is unmounted. If it is ready to use the product should be used directly.
- The number of CERATIPACK recommended depends on the fruit crop. 50 CERATIPACK/ha for citrus, pome fruits and pepper. 80 per hectare for stone fruits,

table grape and mango. In case citrus crop variety is very sensitive to the attack of this fly, it is advisable to increase the number of CERATIPACK from 50 to 80 per ha.

- Each CERATIPACK should be hung in a tree branch at a height of 1.40-1.80 m on the Southern side of the tree.
  - The corresponding number of CERATIPACK should be placed 40 days before fruit colour change or at least 50-60 days before harvest.
  - It is recommended to check some of the traps periodically in order to know the level of flies in the orchard.
  - Once the fruit has changed of colour, it is recommended to do some assessments to see the level of damage and decide if a supplementary chemical treatment is needed.
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## HANDLING AND STORAGE

The product CERATIPACK is supplied in packs with the proper number of units, which can vary depending on the assembly of the different parts that this product is composed of.

CERATIPACK ready to use (mounted) is generally packed in bags of 20 units in a big box of 240 units.

CERATIPACK unmounted in boxes of 100 units.

The packaging material is impermeable to the vapors of the different products. It is recommended to keep the product in its original packaging, unopened, until use, preferably in a cool place. Under these conditions the product can be stored for two years.

In the case of CERATIPACK unmounted, it is advisable the use of gloves in the handling of the dispensers. Furthermore, it is recommended to avoid contact with the inside part of the lid.

The dispensers, the lids and the packaging have to be managed according to the current local law for residues disposal.



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