Chilotec HC

Use in mating disruption to control the rice stem borer *Chilo suppressalis*

The rice stem borer, *Chilo supressalis* (Lepidoptera: Crambidae) is an important pest of rice widely distributed in some parts of Asia, Australia and Southern Europe.



Chilo suppressalis
Lepidoptera: Crambidae

Life cycle consists usually of two generations per year but in favourable climates there can be up to six generations. In the Mediterranean area, this species has three generations a year. In this latter case pupation of overwintering larvae takes place between April and June. The adults emerging from these pupae originate the first generation of the season. These adults lay egg masses on the leaves. A few days after hatching larvae bore the stem and occupy the internal parts of the plant. Close to the base of the plant, larval development and pupation occur. All this process lasts around 48 days leading to the appearance of the second adult generation in mid-July. The development of this new generation is faster than the previous one and it lasts 28 days approximately. As a consequence, a third generation appears in mid-August. These larvae are the overwintering stage finishing their development the following spring.
Damage is different depending on the existing generation being the second one the most critical and responsible of the most economical losses. Ears turn whitish with an erect stalk differing from the green healthy ones with the petiole bent for the well-developed grains weight.







CONTROL MANAGEMENT

The fight against the rice stem borer is usually based on chemicals by means of aerial treatments. In some areas these treatments are just applied according to the control threshold and the economic injury level. Since the use of chemicals is quite limited, due to the law and also their low selectivity, mating disruption is proposed as an alternative to the chemical treatments.
This procedure consists of creating an atmosphere saturated with pheromone to confuse males and prevent mating and reproduction.





FORMULATION

Dispensers

The product CHILOTEC HC is a dispenser of pheromone vapors. The active substance consists of a blend of (Z)-11hexadecenal, (Z)-9-hexadecenal and (Z)-13-octadecenal. The dispenser is a tube of plastic material that contains the active substance absorbed. The plastic material allows the emission of the vapors of each substance at a controlled rate. At normal weather conditions the field life of CHILOTEC HC is 150 days, although it can be reduced in adverse conditions (high temperatures and strong winds).



APPLICATION

- Dispensers should be placed in canes 0.5-0.6 m or 1 m high (depending on the variety height) following a regular distribution.
- The density of dispensers recommended is 10 units per hectare placed in the borders of the plot. This dose works effectively in areas with low pest pressure or under control. In high levels of pest, probably a higher number of units/ha is needed.

▪ Dispensers and monitoring traps should be placed in the plots a few days before the first generation flight In order to know the current population of the insect, it is recommended to monitor the flight by the use of monitoring dispensers (CHILOLAB) in funnel traps. Traps should be checked periodically to establish the population of the insect.
▪ It is also advisable to do damage assessments at the end of second and third generations. In case the damage threshold is exceeded it might be recommended to do a complementary treatment.



HANDLING AND STORAGE

The dispenser CHILOTEC HC is packed in parcels with 50 units. The material of the packaging is impermeable to vapors of different products.
It is recommended to keep the product in its original packaging, unopened, in the refrigerator until ready to use. Under these conditions the product can be stored for a period of 2 years.
Avoid cutting or perforating the dispensers.
In the current use of this product there is no risk of toxicity to humans, animals or plants as the preparation is a dispenser that emits in the air vapors of the active substances at low and controlled rates.
It is recommended to use gloves in the handling of the dispensers.
The dispensers used and their packaging have to be managed according to current legislation for residues disposal.

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