Dismate PE - management of food moth by confusion

ood moths, *Plodia / Ephestia* are the most wide spread serious pests of stored food products. These pests are becoming a serious threat to the dried food processing industry worldwide. The larvae of these insects feed on stored dry fruits, cereals, chocolate, nuts, legumes and the result is a substantial economic loss to the food processing industry. Current control methods mostly rely on application of insecticides. Recently these food moths have acquired reduced susceptibility to conventional chemical pesticides. As methyl bromide has to be phased out worldwide by 2015 and restrictions are imposed on application of insecticides due to human health concerns, an alternative biorational pest management system is urgently being sought. One possible solution is the application of pheromone based mating disruption systems.

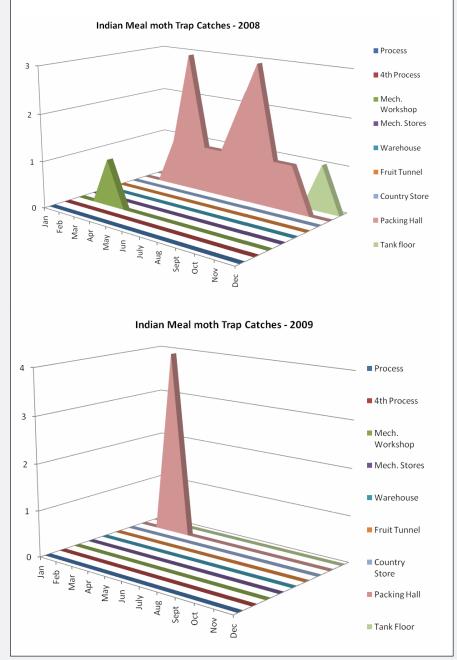
Russell IPM has developed Dismate-PE; a specially designed mating disruption system to combat the food moths *Plodia / Ephestia*. Dismate PE is a non-toxic, residue free system that can safely be used in food processing and stored product areas to eliminate the infestation of the food moths *Plodia / Ephestia*

The Dismate PE system is based on mating disruption or sexual confusion. Dismate PE dispensers release large quantity of pheromone into the air to confuse the male moths. This overwhelms the male moths' senses and prevents them from finding and mating with female moths. It results in a sharp declining population as male and female moths fail to mate. Due to the effect of Dismate PE system the life cycle of the moth is broken leading to a substantial reduction in larval emergence and infestation. Dismate PE solid pheromone dispensers have been designed to ensure a steady amount of moth sex pheromone is released for over 3 months.

Major benefits of Dismate PE mating disruption system:

- Safe, effective and environmentally sound solution.
- Dismate PE is a replacement for fumigation without downtime.
- Non-toxic and zero residues in treated areas and commodities.
- Continual preventative control strategy.
- Metal detectable dispensers.
- Colour coded Long-life dispensers.
- Release a steady amount of pheromone for over 3 months.







Dismate PE dispenser used to control Plodia / Ephestia

Dismate PE system can be used to combat the Indian Meal Moth, Mill Moth, Warehouse moth, Tropical warehouse moth and Raisin moths.

Efficacy of Dismate PE

Dismate PE performance has been proven by over 10 years of continuous trials and improvements in real life manufacturing conditions. The efficacy of the Dismate PE system has been evaluated in a breakfast cereal factory in the United Kingdom. In 2008 a very low level of *Plodia / Ephestia* moths was recorded in pheromone traps in the factory. Throughout the whole year the moth population never exceeded 3 moths / week. The factory had significantly lower levels of moths and their populations were controlled.

In 2009 at the same trial site pheromone traps showed a complete absence of moths during 10 months of the year and only one to two moths per week in the months of March and April. This is indicative that Dismate PE induces a significant disruption to the moth's mating behaviour resulting in a significantly reduced moth population.

Benefits of the application of Dismate PE

During the 10 years large scale application of Dismate PE, fumigation was deemed unnecessary resulting in significant cost savings. A zero resident insect population can be achieved after 12 months of continuous application resulting in a reduction in product wastage and customer complaints. Dismate PE is a non-toxic residue free system that can safely be used to combat food moth species in susceptible food processing premises.

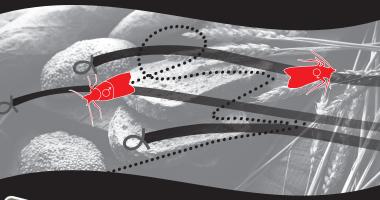
Dismate PE is designed to be applied year-round and as a part of an Integrated Pest Management (IPM) programme. Dismate-PE can only work within a strict, well thought out IPM programme. A careful study of the raw material to product flow through the operation has to be analysed. Usually food stores and factories have the inherent risk of getting a new population introduced through new raw material supplies. It is of paramount importance to monitor the process through the factory carefully to identify such an introduction as soon as it takes place. With good cleaning practice Dismate PE system can be used as a powerful tool to combat food moths without any application of chemical pesticides.

Dismate of

Management by confusion!

Sex pheromones released from strategically placed Dismate "confusers" disorientate the male moths.

The result: A declining population as male and female moths fail to mate.



Dismate is cost effective, an all year round preventative as well as curative solution to moth problems in the food industry.

- Dismate is an effective and clean replacement for fumigation and without downtime.
- Dismate's performance has been proven through 10 years of continuous trials and improvements in real life manufacturing conditions.
- Dismate "confusers" are pheromone dispensers that have been designed to release a steady amount of moth sex pheromone for over 3 months. This overwhelms the male moths' senses and prevents them from finding and mating with female moths.

Dismate truly is Management by confusion.

For more confusion visit www.confusedmoth.com









