



# Pheromones and kairomones for control of stored product moths



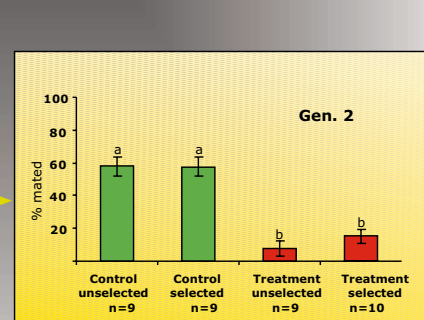
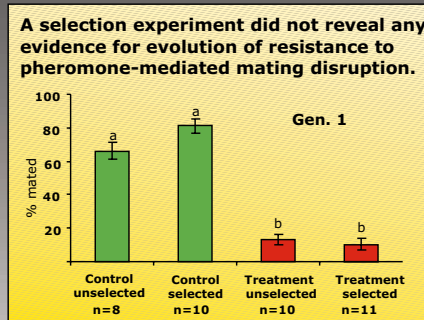
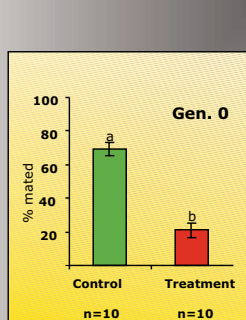
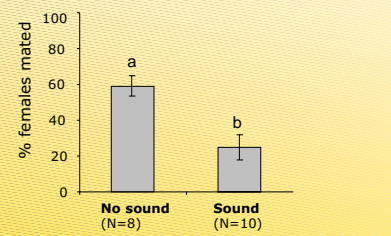
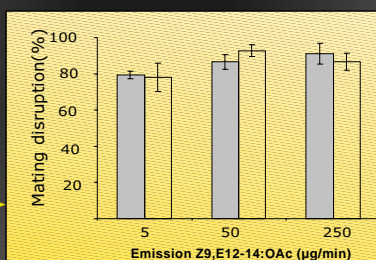
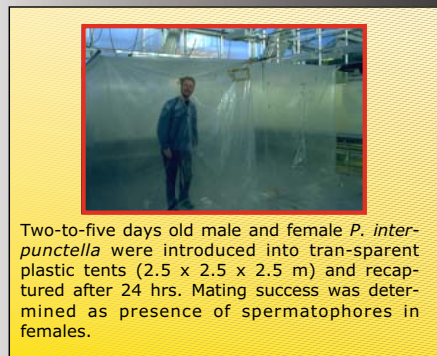
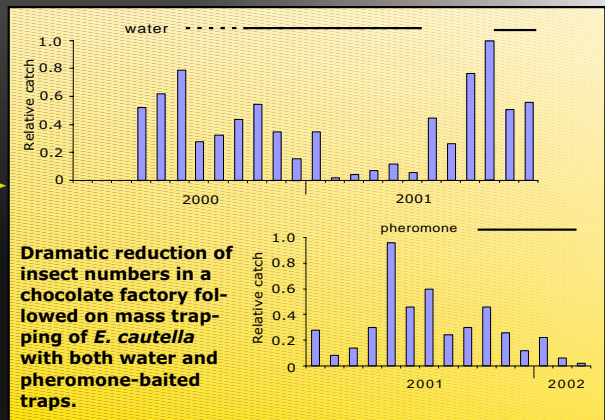
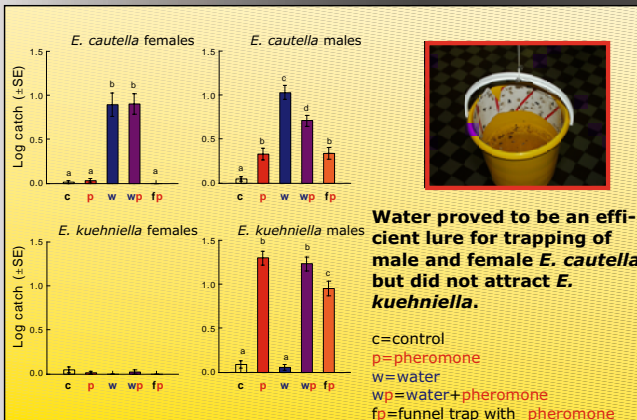
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The goal of the project is to develop biorational methods for control of pyralid moths that are worldwide pests on stored food products. The insect species in focus are the Mediterranean flour moth, *Ephestia kuehniella*, the Indian meal moth, *Plodia interpunctella*, and the Almond moth, *Ephestia (Cadra) cautella*. *Ephestia kuehniella* and *Ephestia cautella* have the same major pheromone component as *P. interpunctella*, (Z9,E12)-tetradecadienyl acetate and the same additional pheromone component candidates were identified from both *Ephestia kuehniella* and *Ephestia cautella*. We want to explore the possibilities to use pheromone-based methods in combination with other methods for direct insect control.



**A selection experiment did not reveal any evidence for evolution of resistance to pheromone-mediated mating disruption.**

## References

- Ryne, C., Svensson, G.P., and Löfstedt, C. 2001. Mating disruption of *Plodia interpunctella* in small-scale plots: effects of pheromone blend, emission rates and population density. *J. Chem. Ecol.* 27:2109-2124.
- Ryne, C., Ekeberg, M., Olsson, P.-O. C., Valeur, P.G., and Löfstedt, C. 2002. Water revisited: a powerful attractant for certain stored-product moths. *Ent exp. appl.* 103:99-103.
- Svensson, G.P., Ryne, C., and Löfstedt, C. Heritable variation of sex pheromone composition and the potential for resistance evolution to pheromone-based control of the Indian meal moth, *Plodia interpunctella*. *J. Chem. Ecol.* 28:1443-1457.
- Svensson, G. P., Skals, N. and Löfstedt, C. Disruption of the odour-mediated mating behaviour of *Plodia interpunctella* using high-frequency sound. *Ent exp. appl.* (accepted)