

Introduction

The use of pyrethroid insecticides on *Helicoverpa armigera* susceptible crops has been restricted to only 6 weeks each summer since 1983, when resistance to pyrethroids was diagnosed. The long term management of resistance in *H.armigera* is based on the hypothesis that after pyrethroid spraying ceases, resistance will decrease, partly due to dilution by susceptible immigrants from unsprayed refugia. The long term liability of the strategy will be favoured by the refugia remaining uncontaminated by resistant *H.armigera*. Success of the strategy will be enhanced if resistant individuals have a higher overwintering mortality than susceptibles.

The aims of this project were then, to test these two assumptions:

1. To determine the frequency of pyrethroid resistant *H.armigera* from areas where insecticide use is infrequent. This study was undertaken by Dr. Gunning and Mr. Forrester
2. To determine the resistance status of overwintering moths and of the first spring generation in the Namoi Valley. This work was conducted by Dr. Daly and Dr Fitt.