

## REPORTS BY SYMPOSIA CONVENERS

### SYMPOSIUM 1: BIOLOGICAL AND PHYSIOLOGICAL MEANS FOR PREVENTING INSECT AND MITE INFESTATIONS

Convener: D.E. Evans, Australia.

1 - In reviewing potential uses of host plant resistance Dr. Dobie stressed the fact that a small increment in resistance could make an important contribution to pest control provided that it is well integrated with other pest control measures and management practices. A multidisciplinary approach involving plant breeders and chemists besides entomologists is essential.

2 - Dr. W. McGaughey highlighted the need for an improved understanding of the toxicology of B. thuringiensis. Such an understanding is likely to be crucial in creating, through genetic engineering and identification of new strains, B. thuringiensis variants with a broader spectrum of activity and in countering recently identified resistance to B.t.

3 - In their review on the use of pheromones in Stored Product Protection in the U.K. Drs. Pinniger & Chambers indicated that there is now available a wide range of pheromones, some of which are finding their way into commercial practice. They also showed that grain odours can be useful and thereby indicated that hybrid pheromone-grain odour traps could be important sampling tools. The problems of relating trap catch to population density and the performance of the different types of traps clearly warrant attention.

4 - Dr. M. Bengston outlined recent work on IGR's and showed how these "new" insecticides could play a very useful role in the control of pests that had become resistant to conventional pesticides such as malathion and fenitrothion. Methoprene and other IGRs appeared to be very safe to use but further "feeding studies" were needed to clarify their long-term toxicological status and hence, facilitate their more widespread usage. More work in methods of application or formulation was warranted.

5 - In reviewing the manipulation of temperature and relative humidity as a means of pest control, Dr. B. Longstaff showed the power of mathematical modelling in exploring the likely outcome of manipulations aimed at permitting the use of lowered rates of insecticides the integration of fumigation and cooling, and delaying the onset of resistance.