

1. Introduction

Since 1991 CRDC has supported the development of micro-computer based decision support systems, entomoLOGIC and hydroLOGIC. EntomoLOGIC has replaced SIRATAC for insect pest management and has also broadened the user base to include many private consultants. It is being continually updated to incorporate the latest pest management research and practices.

The first release of entomoLOGIC, for the 1990/91 season, was a prototype developed on the Apple Macintosh. A revised prototype was developed for the 1991/92 season and included many additional features, including the *Heliocoverpa* development model from Siratac.

The IBM compatible version of entomoLOGIC was developed in 1992. A widespread release prior to the 1992/93 season included a display at the ACGRA Cotton Conference and presentations to consultants at various chemical conferences. This was followed by a series of 10 1-day workshops in all of the major growing regions, which were well attended by both growers and consultants.

EntomoLOGIC was field tested by over 100 growers and consultants in the 1992/93 season¹. At the same time a series of commercial-scale field trials of entomoLOGIC was conducted by CSIRO in the Namoi Valley. These trials, covering 4 sites in 1992/93, aimed to evaluate a soft approach using only selective chemicals (eg Bt and Chlorfluazuron) and also to demonstrate the value of entomoLOGIC as an aid to decision making. The trials were visited by large groups on field days and aroused considerable interest. Warwick Madden is conducting an expanded series of large scale trials in the 1993/94 season, covering 5 sites in the Lower Namoi, Upper Namoi and dryland (Edgeroi).

The hydroLOGIC program² was also released commercially for the 1992/93 season. This program has always aroused considerable interest in the industry, particularly among consultants, with its what-if simulation capabilities. Sales of hydroLOGIC were initially slow, but there are now around 100 registered users after CSIRO assumed full responsibility for its distribution.

EntomoLOGIC versions 1.5 and 1.6 were released for the 1993/94 season and contained a much greater range of features including the *Heliocoverpa* development model, previously only in the Macintosh version. It also incorporates a new sampling system and management thresholds for mites developed over the last 6 years by Lewis Wilson at Narrabri. Aspects of the new insecticide resistance management strategy for summer crops have also been incorporated, including support for the *Heliocoverpa* speciation kit, developed by CSIRO Division of Entomology.