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## CRC FINAL REPORT

### CS38L - SOFTWARE ENGINEERING OF SIRATAC

CSIRO Division of Plant Industry, Cotton Research Unit, Narrabri.

Supervisor: A. B. Hearn.

This CRC project was for the year 1986/87, but formed part of a much larger project which ran from 1985 to 1989.

The aim of the project was to develop SIRATAC Plus by reimplementing SIRATAC to professional software engineering standards using current technology developed in knowledge engineering and data base management. The original SIRATAC code was written in FORTRAN over a period of 12 years and had become intractable, and having been patched and repatched many times, had reached the end of its useful product life.

This grant provided approximately one third of the initial estimate of the cost of SIRATAC Plus of \$100,000, which increased to 10 times that amount before the project was terminated. Most of the funds came from CSIRO Division of Information Technology and Digital Equipment Corporation.

The project was abandoned in 1989 before completion, having blown out in both cost and time. The delay resulted in the product becoming obsolete before completion, in terms of market requirement, software, hardware and biological content. During the project a number decisions were made which seemed right at the time but subsequently proved to be bad. The size and thus cost of the project were grossly underestimated. Unsuitable software packages were chosen. The biology of the system changed. The market changed and SIRATAC Ltd., the target marketing channel, went into voluntary liquidation. Many valuable lessons were learnt. A third generation of decision support software was planned, from which *hydroLOGIC* and *entomoLOGIC* have emerged.