

SIRATAC Database uses and Siratac Ltd. Developments

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A Brief Overview of Siratac Ltd.

Siratac Limited was originally set up with funds from the industry in general. Since 1983 Siratac Ltd. has been self supporting and is currently maintaining Technical Officers in four cotton growing regions as well as computing and administration staff. This is the first time in agriculture in Australia that a self funding organisation has been set up to extend research results to an industry. The table below shows the Hectares of cotton using the Siratac system from its inception.

Year	Hectares	Year	Hectares
1980	1100 ha	1984	42000 ha
1981	7500 ha	1985	48000 ha
1982	12500 ha	1986	32000 ha
1983	32100 ha	1987	51000 ha

The Siratac system as used by Researchers:

The Siratac system when it was originally conceived had no database system included in the workings of the system. On beginning to use the system however data which was accruing on individual management units could be seen to be of use to the industry as a whole. Staff of the CSIRO then set about constructing a database to allow access to the data stored on individual management units. Since the development of this database it has been used by researchers and Siratac staff for a number of uses which include:

Actual counts of squares and bolls on reliably counted farms are used to calibrate the fruit model for different varieties and regions. General information on sprays and mite infestation has been gathered including the effects of early season tipworm sprays.

During the season there is a program that alerts the local Technical Officer if there has been any poor results from sprays applied. These results can be observed to see if there is any pattern emerging.

Information on the generally poor effectiveness of ground rig spraying in comparison to aerial application has shown the need for improved techniques and timing of applications in this situation.

Spray efficacies are calculated each season for the different chemicals used in the cotton industry. These efficacies are checked against previous years results to see if there is any trend toward poorer results. These efficacy results are used in the updating of the program each season.

Siratac database information on the infestation levels of *Heliothis* Spp. is used by researchers, to form a picture of how *Heliothis* emerge and move. This information is combined with other information gathered by NSW Department of Agriculture on species breakdown. A picture is emerging as to what environmental effects influence our major pests. A prediction service for this pest may be the outcome.

Information contained in the database is also called upon when changes are deemed to be required in the Siratac system for example thrips thresholds and preemptive thresholds within the Siratac program have been refined using accumulated data from Siratac users. Comparisons

can also be made between regions when questions on insect infestation and damage need to be answered.

Industry Standards:

Approximately a quarter of the industry of the cotton industry now uses Siratac and 35% of the industry has used the system at one time or another. SIRATAC pest management principles are now well entrenched in the industry and the industry sees SIRATAC as a standard for good pest management practices. We do not claim that it is the best necessarily, growers with long experience may do just as well, However SIRATAC gives a basis for management decision making that the industry has not had before.

Other Siratac Ltd. Activities:

Through support of growers using the Siratac system Siratac Limited has endeavoured to fulfill industry needs such as assisting in the creation of an industry wide met station system. Accurate data is required therefore Siratac Ltd. has taken on the responsibility of calibration of the industrys meteorological stations. A CRC grant has enabled the purchase of equipment required for the task and Siratac Ltd. is providing the time and labour required to ensure the accuracy of the data.

Another project that Siratac Limited is undertaking is the prototype Video disk Cotton Encyclopedia project which will be on display at the conference.

Technology is currently rapidly changing and in the foreseeable future a device similar to a Compact Disc could be bought for use with the

household stereo for music reproduction as well as being used for storage of pictures and moving video as well as textual information.

The scope of this could include anything to do with the cotton industry from pests to machinery to soil structures in the various regions. The advantage of the system is that updates can be made comparatively cheaply compared to producing a new book. As well, the system is able to search rapidly and easily for information. Just type in key words and information on those topics can be at your fingertips.

Thanks must go again to the CRC for funding the purchase of hardware.

Siratac limited has responded to criticisms that the data handling and data entry required to use the Siratac is complex and time consuming. The development of a hand held data terminal which can taken into the field and later downloaded of its information has greatly speeded the process. This is available for commercial use this season.