

CONSULTANTS' VIEWS - THE RESEARCH GAP

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DARLING DOWNS/ST GEORGE

The presentation hereunder is a collation of views of consultants from the Darling Downs and the St George regions. The following points will be considered:

- (a) Are research needs being addressed by researchers?
- (b) If so, is research information being passed on to growers by consultants?
- (c) If not, is the information being passed back to researchers by consultants?
- (d) Thoughts on how to reduce the research gap - what gaps exist now.

(a) Are research needs being addressed by researchers?

We feel that researchers have done a good job of identifying and addressing areas needing attention over the last decade or so. However, there are some gaps that currently exist which will be mentioned hereunder. Research input will be needed on an on-going basis as market requirements change, agronomic practices change, new varieties become available and as the pest situation changes. Research is seen as vital to the maintenance and progress of this industry to improve upon the innovation and efficiency it has already displayed.

(b) If the needs are being addressed, is the research information being passed onto growers by consultants?

In our opinion, research information beneficial to the grower is quickly passed on by the consultants, acting as the interface between research and the grower. We believe this has been demon-

strated by rapid adoption of irrigation scheduling techniques, the adoption of soundly based pest management strategies including broad acceptance of the pyrethroid strategy, rapid acceptance of new varieties, the rapid adoption of certain agronomic strategies, e.g. growth regulators, etc. where applicable.

(c) If the needs are not being addressed, is the information being passed back to researchers through consultants?

While not generally formalized, we believe that this information does reach researchers in some form, although not always directly from consultants. Individual growers, D.P.I. staff, Siratac personnel, people involved with support industries and marketers of the crop also contribute to this information flow in various ways.

The A.C.G.R.A. is to be congratulated for the inclusion of this segment in the conference - we hope that it will be included in future conferences. We trust that the consultants' views presented today will be received positively by researchers and lead to further improvement in communication between both groups. As a further step in the direction of improved dissemination of research to consultants and growers, we suggest that a bibliography of research papers and theses, which have been produced as a result of A.C.G.R.A. and C.R.C. funding, be compiled and published as a supplement to the proceedings of this conference.

(d) What gaps currently exist in research?

(1) Soils/Land Preparation Techniques :

- the need to formulate appropriate strategies for land preparation using reduced tillage techniques which are most beneficial to soil structure

- in adopting such strategies assessing the need for ripping under permanent bed systems
- assessing the suitability of USM type machines in the medium term with respect to fertilizer introduction, and Verticillium wilt build-up.

(ii) Weed control:

- there continues to be a real gap in the area of broadleaf weed control both pre- and post- emergent. Weeds such as datura, noogoora burr, bellvine and mintweed are not readily controlled chemically and often result in high chipping costs. While this probably falls into the area of the chemical industry, and no doubt new products are continually being screened to meet this need, can researchers help here too?

(iii) Insect pests :

- further co-ordinated research into the ecology of Heliothis and mites to provide a better understanding of population dynamics, e.g.
 - very low Heliothis pest pressure at St George last year - why was this?
 - high mite populations at St George this year when almost never seen before - why is this?
 - there were extended periods of high Heliothis pressure on the Downs this season with apparent pyrethroid failures at medium to high egg populations - why was this?

- further studies and more emphasis on possible pest management techniques for Heliothis other than insecticidal methods need to be initiated. We recognize that this seems to be the direction recommended by researchers at Heliothis Ecology Workshop (Brisbane 1985) and we endorse this approach wholeheartedly.

(iv) Varieties :

- as new varieties are released, we believe it will be important to have available, where possible, information relating varietal performance to environments (particularly with respect to heat and radiation). This may give advanced warning of such problems as poor yield and low micronaire under conditions such as low minimum temperatures or cloudy weather late season.

(v) Agronomy :

- further work in optimum plant population by variety e.g. does DP90 need a higher plant population than DP61? Do insect thresholds need to change under different plant densities? Is DP90 more or less tolerant to insect damage than Siokra and does plant density alter that level of tolerance?
- identifying differences in uptake efficiency of nitrogen applied preplant vs post plant, e.g. between squaring and flowering.
- does boron have a place?
- quantification of benefits of foliar fertilizers,

(vi) Extension :

- the D.P.I. has had a somewhat lower profile in cotton than other crops, but fulfill an important role with regard to varietal screening and performance evaluation and insect pest management. A continuation of this role is important and beneficial to the industry. With regard to "tying it all together", however, we believe that the appointment of an extension specialist in cotton could be a significant benefit to the industry.
- Siratac continues to play a very significant role in the cotton industry and are generating potentially very useful historical data with regard to pest management. Its continuation within the industry is seen as being important.

