

Grower Responsibility for Insect Management

Geoff McIntyre¹ and Glen Fresser²
Farming Systems Institute, Department of Primary Industries Queensland, Dalby¹
Cooperative Research Centre for Sustainable Cotton Production¹
Cotton grower, Darling Downs Cotton Growers Inc, Dalby²

Introduction

There is a substantial number of cotton growers who have an active role in and take full responsibility for the pest management of their crop. They :

- Have strong knowledge of and commitment to industry strategies and goals,
- Know and understand the general principles of pest management in cotton and other crops,
- Directly manage and supervise pesticide application

Conversely, there are many more who give their consultant full responsibility for the pest management and do not provide that consultant with guidelines as to their expectations of crop performance in terms of insect pests or of their attitude to industry strategies.

Our experience from the Darling Downs Cotton Grower of the Year Awards over a number of years in which we consider the role and participation of growers in the pest management demonstrates this situation. Many, or even most growers, leave all pest management policy and decision making entirely to their consultant. Consultants consequently, can only assume by default that their client grower expects total control of insects in their crops and maximum yield ie a 'squeaky clean' crop. The consequence is, in all probability, excessive spraying because of the perceived need to err on the safe side and minimise liability.

This has had an impact this last season on the Downs during December when some consultants considering the use Larvin in Stage I outside the Insecticide Resistance Management Strategy (IRMS) guidelines. They were experiencing immense insect pressure and difficult weather conditions and needed the support of the effected growers in terms of the impact on the industry insecticide resistance management strategies. The absence of that support contributed to an extremely difficult position for the consultants. The subsequent involvement of the Darling Downs Cotton Growers Inc, which resulted in a regional resolution of the problem, demonstrates the critical benefit of growers participating and providing direction with regard to industry strategies.

This experience is well supported by discussions and comments from industry forums in recent years. A comment reported from the CRDC IPM Strategic Planning Forum at ACRI in 1995 was that:

‘Pest management decision making is ultimately the growers responsibility.’

During 1996, the Cooperative Research Centre for Sustainable Cotton Production (CRCSCP) funded a special initiatives project through which the cotton industry extension team and the Rural Extension Centre conducted focus groups meetings with growers, consultants corporate agronomists, researchers and extension officers to investigate the attitudes to Integrated Pest Management (IPM) in the cotton industry. Details of the project are reported elsewhere in these proceedings. A major recommendation from the first stage is that:

‘An extension program assisting growers to ‘take responsibility’ for management decisions and emphasising economic sustainability rather than yield should commence and be given a wide profile.’

Anecdotal evidence from the comments of cotton growers and consultants themselves has stressed the need for all growers to take greater responsibility for their pest management.

Growers’ Responsibilities

The responsibilities of growers include:

- A knowledge of and commitment to industry strategies and goals
- An understanding of the principles of pest management
- Making the final pest management decision
- Managing and supervising pesticide application

The grower needs sufficient knowledge and experience to be able to:

- Develop pre season plans for insect management in collaboration with their consultant
- Interpret and apply consultant advice
- Adopt successful tactics
- Recognise partial or total spray failures when they occur.

These responsibilities and needs do not demand a detailed knowledge of the tactics, pesticides, insect dynamics or thresholds for growers. That expertise is provided by the consultant. When growers take these responsibilities and provide clear guidelines as to their expectations, consultants are in a stronger position and better able to apply their expertise to insect management to meet the needs of the grower.

As well, when growers have a sound knowledge and understanding of pest management, consultants are relieved of the very routine issues and are able to provide quality time to focus on advanced management strategies - an opportunity which many will welcome. This again enhances the value for their time leading to a strong and productive partnership.

The successful adoption of IPM will rely on an active participation and leadership of growers in on farm strategic decisions. If consultants are going to adopt and recommend better IPM strategies, they need the support of and explicit guidelines or direction from growers, a clear position description of what is required. They need to know '*how much room they have to move*', what risk the grower is prepared to take and what cost the grower can accept if necessary in the adoption of a IPM program.

The consultant clearly has a integral role in consulting with the grower in the development of these policies and guidelines by contributing their expert knowledge and experience.

Constraints and Improvement

The primary constraint preventing growers from adopting full responsibility and participating to a greater extent in pest management decisions relates to a limited knowledge of the very complex issues associated with pest management. Many growers already do have these skills and knowledge from experience but do not have the confidence or incentive to apply them.

The CRCSCP investigation of Attitudes to Integrated Management in the Cotton Industry conducted by the Cotton Extension Group and the Rural Extension Centre identified the following key issues:

- A positive environment for the acceptance and adoption of IPM strategies in the industry,
- A lack of clarity about the current best practice IPM in a comprehensive strategy,
- Economic issues remain the chief determinants of management strategies and yields remain the primary indicator considered for a successful crop.

The recommendations from the Attitudes Investigation are:

- A comprehensive educational package which clarifies latest best practice for IPM as identified by industry experts including growers is needed.
- Economists should be contracted to develop economic links to IPM strategies with a short, medium and long term time frame.
- An extension program, including grower best management practice groups, assisting growers to 'take responsibility' for management decisions and emphasising economic sustainability rather than yield, should commence and be given a wide profile.

The Cotton CRC Industry Extension Team have adopted the recommendations which have been integrated into the extension programs with a primary focus on IPM providing information and training specifically directed to growers. This paper provides a lead in to the implementation of the programs.

Two major initiatives are currently being implemented with the appointments of:

- An extension officer as an IPM Training Coordinator to develop IPM training workshops for growers with funding from CRDC and the CRCSCP.
- An economist to conduct an economic analysis of IPM strategies in terms of both their benefit and conversely the cost to industry of a failure to adopt appropriate insect and insecticide resistance management strategies.

The immediate responsibility of growers is to participate in these programs and the industry Best Management Practice program, gain a good basic understanding of insect management and the industry strategies and to develop strong and enduring strategies in collaboration with their consultants. Growers who work closely with consultants will quickly develop their skills.

Growers are encouraged to evaluate the management practices of others and particularly those participating in the annual industry awards who have demonstrated effective partnerships with their consultants in which the grower has responsibility for insect management.

Another strategy for improving insect management is to upgrade the frequency of field checking especially at key times associated with heavy insect pressure and large egg lays, marginal larval populations or changing weather conditions when a recheck in one or two days may save a need to spray immediately. The options are for the grower or manager to conduct the additional checks or to negotiate for the consultant to include that capacity in their operation at an additional cost. It will be money well spent and is a strategy successfully developed by a number of growers involved in the industry awards.

Cotton growers should recognise that it is their industry, that they are ultimately responsible for it and heed the words of Harley Bligh some years ago when welcoming new growers:

‘Welcome to the cotton industry, welcome to the responsibilities’.

