

Part 1 - Summary Project Details

Final Report

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Best Management Practices Co-ordinator

Part 2 - Project Contact Details

Admin Contact:

Mr

Philip

Russell

Title (ie Mr/Ms)

First Name

Last Name

Organisation:

Cotton Australia

(Name of organisation that will be administering the funding)

Postal Address:

Level 2, 490 Crown Street

PO Box

Street

Surrey Hills

NSW

2010

Town

State

Postcode

02 93608500

02 93608555

philiprussell@cottonaustralia.co

Phone

Fax

Email

Principal Researcher:

Mr

Gavin

Inglis

Title (ie Mr/Ms)

First Name

Last Name

Organisation:

Cotton Australia

(Name of organisation that will be administering the funding)

Postal Address:

322 66 Maitland Street

PO Box

Street

Narrabri

NSW

2390

Town

State

Postcode

02 67926041

02 67926042

inglis@bigpond.com

Phone

Fax

Email

Supervisor:

Title (ie Mr/Ms)

First Name

Last Name

Organisation:

(Name of organisation that will be administering the funding)

Postal Address:

PO Box Street

Town

State

Postcode

Phone

Fax

Email

Part 3 – Final Report Format

1) Background

Best Management Practices (BMP) was launched in 1997 as a voluntary program. An industry commitment was made to have 100 percent grower adoption of BMP by the 30th June 2001. To achieve this an implementation program was developed through the Cotton Research and Development Corporation (CRDC) and involved both the former CRC for Sustainable Cotton Production and Cotton Australia.

This program was initiated at the grower association level by cotton CRC Extension Officers and former Cotton Australia Area Managers (now Grower Service Managers). They were responsible for distribution of the manuals, maintaining a record of the recipients and the delivery of training workshops for growers. The workshops were designed to show growers how to understand and use the manual. Growers were invited to an introductory meeting where trainers provided a brief introduction to the development and content of the manual and then stepped them through each section of the manual and presented worked examples to reinforce the whole process. Further meetings and farm visits were conducted when required to help growers complete the manual. These workshops were largely conducted between the 1997/98 and 1998/99 seasons.

Initial implementation of BMP by cotton growers was slow. To increase the implementation rate and to ensure the ongoing commitment of the cotton industry to BMP, it was recognised that a person dedicated to overseeing the implementation program was required. To facilitate this process, the BMP Implementation Co-ordinator position was appointed in January 1999. The main purpose of this position was to co-ordinate and facilitate the implementation and adoption of BMP by cotton growers.

Three key things had to be done:

1. Obtain more resources.
2. Increase the level of awareness and interest in BMP again.
3. Increase the number of growers implementing BMP.

2) Objective of the project

To deliver a BMP implementation program that leads to attainment of the industry commitment of having 100% of cotton growers audit ready by June 31st 2001.

To achieve this objective the project has a number of primary duties and responsibilities:

- i) To co-ordinate, facilitate and deliver regional BMP implementation activities in conjunction with all members of the BMP Management Committee as well as Cotton Australia Grower Service Managers, CRC Extension Team members and local CGA's.
 - 124 workshops (both BMP and Spray and Drift Management Plans) were delivered between May and August 1999.
 - A further 150 workshops were delivered between September 1999 and February 2000.
 - 70% of all attendees were cotton growers. The remainder were consultants, farm workers, applicators and others.
- ii) To maintain a database with relevant information on BMP.
 - A BMP database has been developed that records manual numbers and the contact details for each recipient.
 - Maintenance work to keep the database updated is ongoing.
- iii) To assist in industry linkage between the Australian cotton industry and external organizations with an interest in BMP.
 - Maintained communication to both government and non-government organizations including QDPI, NSW Ag, EPA's, DLWC and various environmental groups.
- iv) To become a member of the BMP Management Committee.
 - The BMP Implementation Co-ordinator is currently a member of the management committee.
 - Implementation reports are provided for each meeting.

The BMP Implementation Co-ordinator reports at two levels, to Cotton Australia for employment issues and to the Chairman of the BMP Management Committee for technical issues.

3) Methodology

Establishment of appropriate resources

Three fulltime BMP facilitators were appointed by Cotton Australia in May 1999.

- The facilitators were based at Dalby, Narrabri and Warren.
- Their role was to develop and deliver localised BMP programs in each area.
- Following the "Endosulfan Crisis" and the requirement for growers to develop a Spray and Drift Management Plan (SDMP), their role was expanded to include the development of a program to increase awareness among growers of the changes to the endosulfan label and to deliver SDMP workshops. The SDMP's were built around the Pesticide Application module of the BMP manual and are an important component of BMP.

Workshop resources were developed including workshop and presentation material.

Cotton CRC Extension Officers provided localised technical support.

To increase awareness and interest in BMP

A series of BMP and SDMP workshops were run for growers and other industry people between May and August 1999.

BMP Workshop:

- Growers received a copy of the BMP manual and were then shown how to use it.
- Growers were then stepped through a worked example to reinforce principles covered in the manual.

SDMP Workshop:

- Growers received a copy of the SDMP booklet.
- New endosulfan label requirements were outlined.
- Each aspect of the SDMP was discussed in detail.

Follow-up workshops and meetings were run in all areas during the 1999/2000 season to ensure growers had prepared their SDMP's.

To increase the number of growers implementing BMP

One on One grower visits

- Cotton Australia Grower Service Managers are now working with individual growers on-farm to complete their BMP manual.

Small Group meetings

- Where possible small groups of growers (mostly neighbours) meet together on a regular basis to complete the BMP manual.
- Sessions are generally 2 to 3 hours and usually include farm walks and demonstrations.

Reporting

Cotton Australia Grower Service Managers keep their own local grower databases. These databases are currently being updated so to provide accurate grower data on BMP implementation progress.

Implementation figures have been collected on a valley basis and have been separated into three different categories:

1. Growers who have either, made no progress towards implementation of BMP, or we don't know.
2. Growers who are actively progressing with implementation of BMP.
3. Growers who are audit ready.

4) Results

In excess of 97% of cotton growers have now been introduced to BMP. That is they have received a copy of the BMP manual and have attended an introductory workshop (Table 1).

Of the 1280 growers we have identified, 40% have made no progress towards implementing BMP, 41% are actively progressing towards implementation of BMP while 13% have completed the manual and are audit ready. The remainder have already been audited.

Table 1. Progression of cotton growers towards implementation of BMP as at the 30th November 2000.

Stage of Implementation	Percentage of Growers
Have been introduced to the BMP manual.	97%
Have made no progress with BMP.	40%
Are currently progressing with BMP.	41%
Are ready for an audit.	13%
Have already been audited.	7%
Have received a copy of the 2 nd edition BMP manual.	52%
Have developed Pesticide Application Management Plans.	70%

Implementation of BMP on a valley by valley basis is shown in Appendix 1. Central and South West Queensland and the border river areas are progressing particularly well towards implementation of BMP. Mungindi has 58% of growers who are now ready for an audit. Bourke, Macquarie and Lachlan Valley's are also progressing well.

The main areas for concern are in the Namoi Valley, particularly the Upper Namoi Valley and the Darling Downs. 73% of growers in the Upper Namoi Valley have made no progress towards implementing BMP.

5) Discussion of Results

In excess of 97% of growers now have a BMP manual and have attended an introductory BMP workshop.

This is an extremely good outcome and in reality is as good as we are likely to achieve. There will always be some growers who we never reach, however with improved reporting procedures and a tightening of the grower network, it may improve slightly.

The number of associated industry people also attending workshops and being trained in BMP is also pleasing.

13% of growers are currently 'Audit Ready.

In comparing this outcome to the industry objective of 100% of growers audit ready by June 30th 2001, progress to date has been disappointing. The reality is we will not achieve our objective by June 31st 2001. However, in the context of major cultural change within the industry, we are making small, but significant steps forward.

41% of growers are actively progressing towards implementation of BMP.

These growers have made the commitment to move towards implementing BMP by completing the manual, but will require time to do so. The timely release of the second edition of the BMP manual will make this job a lot easier for these growers. The confusing nature of the first edition made it difficult for growers to make a start.

A common approach taken by these growers is to complete the BMP manual on a module by module basis. This approach is much slower but it allows the grower to concentrate on specific issues that relate to one point in the crop or farming cycle. A good example is the Pesticide Application module where growers are required to develop a Pesticide Application Management Plan (PAMP). This approach also lends itself to group work where neighbours can share information and assist one another in completing the manual.

40% of growers have made no progress towards implementation of BMP.

This outcome has been particularly disappointing, although there will be a small proportion of these growers who will never adopt the BMP approach. Other growers from this group will also only adopt BMP when they absolutely have to, to either maintain access to chemicals or to take advantage of a financial incentive. For the remaining growers it is simply going to take time.

Even though these growers have yet to start working through the BMP manual, many have already adopted practices outlined within the manual. These include well developed tail-water return systems, various IPM practices, chemicals storage

facilities, use of weather monitoring equipment and keeping of spray records. These are often referred to as growers who “are already doing it anyway”. Once again the release of the second edition manual will make it easier for these growers to make a start.

The delivery of regional BMP implementation activities.

The co-ordination, facilitation and delivery of regional implementation programs have been very successful. The key has been in having the time and resources to provide growers the most appropriate assistance with their BMP. We have been able to put more human resources into workshops when required, particularly during the introductory phase. The availability of CRC extension officers has also been an invaluable resource.

Maintenance of a BMP database

The BMP database is important in keeping track of each recipient of a BMP manual. It also allows us to send information when required and is used to identify growers within the audit process. The process of managing and updating the database is very time consuming and eventually a better way of handling the information may be required.

To become a member of the BMP Management Committee.

The BMP Implementation Coordinator plays a very important role as a member of management committee. It has enhanced communication flow between Cotton Australia, CRDC and other key organizations. It has also enabled feed back from growers to be directed towards the committee.

6) Likely impact of results for the cotton industry.

As a direct result of the BMP implementation program, in excess of 97% of growers now have a BMP manual and 20% of growers are ready for, or have already been audited. Moreover the profile of BMP among growers in the industry has been significantly lifted. For a completely voluntary program these results are very encouraging.

However there are two fundamental problems with measuring outcomes of the BMP Implementation Co-ordinator project as a percentage of grower implementation. Firstly, attempting to solve environmental problems through implementation of voluntary programs such as BMP are inherently slow, particularly when the perceived benefits are going to occur a long way into the future. To have any real impact the process will inevitably take time. Secondly, the industry would gain more credibility within the wider community and from the environmental sector if we could demonstrate some real improvements in key environmental indicators. Projects such as the Central and North West Regions Water Quality Program will be important in achieving this.

7) Recommendations.

- a) That the position of BMP Implementation Co-ordinator be continued.
- b) That the BMP Management Committee revisits the long term goals for BMP and that more realistic interim targets be set.
- c) That the industry develops a set of benchmarks that will provide a measure of the industry's performance as an outcome of implementing the BMP program.
- d) That the industry database, currently being developed, be used to maintain an accurate record of BMP information.

8) Publications

Inglis, G. (2000). "BMP Implementation – A Report Card". Proceedings of the 10th Australian Cotton Conference.

Progression of cotton growers towards implementation of BMP by region.

CGA	Number of Growers	No Progress or Don't Know	Progressing	Audit Ready	Audited	2nd BMP Manual
Biloela	10	1 10%	6 60%	0 0%	3 30%	10 100%
Dawson Valley	24	2 8%	10 42%	5 21%	7 29%	24 100%
Central Highlands	78	11 14%	51 65%	7 9%	9 12%	55 71%
Darling Downs	399	215 54%	158 40%	19 5%	7 2%	180 45%
St George	36	1 3%	27 75%	5 14%	3 8%	10 28%
Dirranbandi	20	0 0%	9 45%	8 40%	3 15%	20 100%
MacIntyre	79	12 15%	31 39%	27 34%	9 11%	69 87%
Mungindi	31	2 6%	7 23%	18 58%	4 13%	28 90%
Gwydir	125	45 36%	60 48%	8 6%	12 10%	78 62%
Walgett	26	9 35%	11 42%	4 15%	2 8%	20 77%
Lower Namoi	162	84 52%	42 26%	30 19%	6 4%	81 50%
Upper Namoi	128	94 73%	25 20%	3 2%	6 5%	54 42%
Bourke	11	0 0%	5 45%	1 9%	5 45%	5 45%
Macquarie	134	31 23%	67 50%	23 17%	13 10%	35 26%
Lachlan	16	0 0%	14 88%	2 13%	0 0%	1 6%
Menindi	1	0 0%	0 0%	0 0%	1 100%	1 100%
Total	1280	507 40%	523 41%	160 13%	90 7%	671 52%