Strategic Plan
2018-2023

CottonInfo is a joint initiative of

Australian Government
Cotton Research and Development Corporation

CSD COTTON SEED DISTRIBUTORS

COTTON AUSTRALIA

Best Practice

Strategic Plan

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Contents

1. About CottonInfo

CottonInfo is the Australian cotton industry's extension program: designed to deliver research and development (R&D) outcomes to cotton growers and consultants. CottonInfo is an unincorporated joint venture between three cotton industry organisations: Cotton Seed Distributors (CSD), the Cotton Research and Development Corporation (CRDC) and Cotton Australia (CA).

CottonInfo connects growers and consultants with the latest R&D outcomes to help achieve best practice. The team comprises Regional Extension Officers, Technical Leads and *my*BMP experts, who work across a broad portfolio, covering biosecurity, climate, crop nutrition, disease management, energy use efficiency, fibre quality, insect and mite management, natural resource management, pesticide input efficiency, soil health, stewardship, water management and weed control.

Ruth Redfern

2. Introduction

The Australian cotton industry has a culture of sharing information and knowledge, with growers and their consultants actively participating in industry research, development and extension. This is evidenced by the industry's world leading levels of productivity and rapid adoption of new technology. CottonInfo exists to connect growers and consultants with R&D, via extension, providing an efficient and effective pathway for the delivery of industry R&E outcomes and innovation. This is a two-way flow of information, with growers and consultants changing contexts, responses to new technology and ideas for innovation being shared with the research and development community.

CottonInfo is designed to service the commercially unmet cotton R&D information needs of growers and to support industry efforts to improve practices, productivity, competitiveness and environmental performance. In meeting these needs, CottonInfo has four key strategic Goals: successful adoption of industry R&D, future ready cotton farms with adaptive capacity, enabling successful cotton farms and industry expansion, and being prepared to respond to unplanned threats.

With the expansion of cotton production into the south and the opportunity for both new northern and dryland growing areas, it is important that CottonInfo provides a flexible extension service that caters for different levels of experience. New growers will require specific, practical information in the form of rules of thumb and 'how to' resources. As growers increase their experience, they will require more context-specific information that allows them to make more nuanced decisions in response to variability in their production environments.

Highly experienced growers and consultants will require information that helps them solve more complex problems. In some cases, that could mean providing access to the underpinning research of an issue and working collaboratively with researchers and near farm professionals to develop new solutions to challenging problems. In each case, the effectiveness of the CottonInfo program will be enhanced by trusted relationships, effective communication and extension skills, a sound technical understanding of cotton production, and effective networks.

Warwick Waters

3.   The Plan

Through the collaborative CottonInfo partnership arrangement, CSD, CRDC and CA will continue to be responsible for providing leadership of CottonInfo, and resourcing of its team members, in conjunction with research partners. While the CottonInfo Program has its own vision, goals and targets, they are informed by and complementary to the strategic plans of the partner organisations.

Change in farming systems can be driven by a range of factors including new research findings and changes in the production environment through variables like climate, resources availability, markets and policy. As such, the CottonInfo program recognises that change and innovation can come from a number of sources. A significant part of the program is networking, brokering ideas and information between stakeholders to enable innovation and change.

The goals of CottonInfo reflect three different perspectives on improving the sustainability and increasing the value of the cotton industry to the wider community.

• Looking in at the cotton production systems productivity and sustainability

• Looking out to the wider farming system and opportunity for industry expansion

• Being prepared for disruption that is unseen but possible

The enabling strategies outline what we would like extension and *my*BMP to look like in the cotton industry in five years' time. It provides the goals that will inform the teams skills and capability mix, our responsiveness in a dynamic communication and information environment, and the commitment to work collaboratively with other information and service providers in the industry.

3.1   Situation Analysis

The consultation process has identified a number of trends that are likely to shape extension in the cotton industry. On-farm technology and management trends that will be significant include artificial intelligence, embedded technology and the increasing cost of production. At a societal level, trends of increased demands to comply with social licence, traceability, water availability and the cost of energy will also shape production systems. In this environment of change, extension fundamentally aims to increase the rate, reach and effectiveness of practice change on farm that maintains successful farm businesses that are valued by the communities they operate in.

3.1.1   Extension

CottonInfo operates in an environment that provides significant opportunities from an extension perspective:

- A relatively young industry that maintains a continuous improvement attitude, run by a relatively well-educated cohort of growers

- An open attitude to sharing information and experiences, with minimal competitive constraints to sharing management practices

- Significant off farm service support, with private consultants and service industries well developed and utilised, as well as industry organisational regional representation in CA RMs and the CSD E&D team

Any extension program should be seeking to capitalise on these opportunities by working collaboratively and responsively with its target audiences. To do this, CottonInfo uses an extension planning framework that takes into account:

1   Problem/opportunity definition

2   Practice gap analysis, how big is the opportunity

3   Benefits and indicators of change, how is it measured

4   Scope and service scan, who is the target audience and who else is operating in this space

5   Strategy and deliverables

It is foundational that trusted relationships are developed between CottonInfo and our stakeholders. These relationships will be enhanced through:

- Providing information based on established research

- Providing impartial information, not influenced by commercial interests

- Listening to grower and consultant needs and responding to them

The resourcing of CottonInfo allows for flexibility in the delivery strategies used. As required, these delivery methods can include:

- Providing access to written information resources
- One on one contact with growers and consultants to address individual issues
- Group based informal and formal meetings and workshops, including peer to peer learning
- Problem solving activities
- On farm demonstrations and validation trials

As the lifecycle of a technology progresses, the factors that influence adoption change. In the early stages, traditional extension that involves engagement between researchers and end users can have a significant impact on the awareness, knowledge, skills and attitudes required to support adoption. In the mid phase, many of the end users who actively engage with research and extension have adopted, and the population dynamics of the end users start to play a more significant role. With more mature technologies, it is largely the value proposition of the technology that is driving adoption decisions.

The cotton industry has identified that it has significant opportunities for efficiency improvement with its more mature technologies, such as irrigation and nutrition management. The challenge for CottonInfo is to be aware of the drivers for change at each stage of the adoption cycle and adapt the approach accordingly. This includes using more peer-to-peer learning when population characteristics are key drivers and working on whole system value propositions for mature technologies. It also requires monitoring processes to ensure commercial conflicts of interest do not develop and CottonInfo maintains its focus on commercially unmet needs of the industry.

3.1.2   The *my*BMP system

*my*BMP is a voluntary farm and environmental management program which provides online self-assessment mechanisms, practical tools and auditing processes to ensure that Australian cotton is produced according to best practice. Through *my*BMP, all Australian cotton growers have a resource bank to access the industry's best practice standards, which are fully supported by scientific research and development, resources and technical support.

*my*BMP consists of ten management modules and delivers a number of tangible benefits to cotton growers, including:

- Access to premium global markets, including the Better Cotton Initiative (BCI)
- More efficient and more profitable cotton businesses
- Safer farm operations and safer workers
- Responsible land management
- Cutting-edge management practices

In *my*BMP best management practices are not static, rather they are continually evolving with new research, new regulations, changing customer requirements, and increasing community expectations. For example, global brands and retailers are setting higher targets for sustainability with many of these companies now sourcing 100 per cent of their cotton requirements from sustainable sources. The meaning of 'sustainability' is also evolving. Social aspects, including labour conditions in the supply chain, are now equally important as the environmental impact.

Over the next 5 years CottonInfo has a critical role in:

UPDATING
the *my*BMP standards to include management practices that prepare cotton growers for the future

INCREASING
grower participation in *my*BMP

SUPPORTING
Providing support for growers to integrate best management practices into their farming systems

3.2   Strategic Goals

The CottonInfo program has four strategic goals with supporting key focus areas:

STRATEGIC GOAL ONE: IMPROVING THE RATE AND REACH OF ADAPTATION AND ADOPTION OF RESEARCH AND DEVELOPMENT

01

a. R&D outcomes adopted to increase productivity and profitability
b. New technologies and management practices adapted and integrated into best practice in *my*BMP
c. Sustainable cotton farms with a social licence
d. Collaboration within cotton and across sectors to share knowledge and deliver extension efficiently

The cotton industry is a vibrant industry that is striving to bring significant value to Australian agriculture and to the broader community. Considerable investment in industry research and development is seeking to overcome existing limitations to productivity and discover new opportunities for improving sustainability and profitability. The outcomes of research are only effective when they result in informed decision-making and practice change in the farming system. The role of extension is to increase the rate of practice change, the reach to more growers and the effectiveness of the change implemented. This will be enhanced by greater integration of extension into the research and development process, with the objective of a more seamless research, development and extension process.

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02

STRATEGIC GOAL TWO: ENABLE SUCCESSFUL COTTON INDUSTRY EXPANSION

a. A whole of business and systems approach

b. Support the information needs of new growers and new regions

Cotton is grown as a component of a farming system, with crop rotations and adjacent land use impacting on productivity. Aspects of soil health, compaction and pest management are influenced by the wider production system. New cotton growers need to successfully fit cotton production into their farming system as well as grow a profitable cotton crop.

03

STRATEGIC GOAL THREE: PREPARED TO RESPOND TO BIOSECURITY THREATS AND ASSIST IN THE EVENT OF NATURAL DISASTERS

a. Capacity to support the industry in the event of a biosecurity incursion

The cotton industry has a long history of preparedness for unforeseen crises such as biosecurity incursions. The CottonInfo team provide a foundational asset to industry responsiveness through their established communication systems, both regional and expertise networks, and an understanding of farming systems. This plan seeks to strengthen the understanding of the role that the CottonInfo program will play in supporting the national, state and industry processes for responding to biosecurity, natural disaster or agronomic threats.

OUR ENABLING STRATEGIES: AN EFFECTIVE EXTENSION TEAM, AND A TRUSTED INFORMATION SOURCE

a. *my*BMP supports and resources industry best practice

b. Works collaboratively with other industry service providers

c. Supports innovation and adoption of new technology

d. Utilises innovative communication practices and responsive two-way communication

e. Is organisationally effective and efficient

3.3   The Role of the CottonInfo Team

CottonInfo is the principal pathway for connecting cotton growers and consultants with research outcomes. This includes supporting research providers with the development of adoption pathways for their research, working collaboratively with researchers during projects when applicable, and ensuring the outcomes of research are readily available to growers, consultants and industry service providers.

The CottonInfo team comprises three distinct sub-teams: Regional Extension Officers (the on-the-ground support team, based in the cotton growing valleys), Technical Leads (specialists in a specific research area and the point of contact to the wider cotton research community) and *my*BMP experts (team members who can help growers sign up for, and participate in, the cotton industry's best management practice program).

These three teams are coordinated by the CottonInfo Program Manager, and supported by the CottonInfo Communications Manager, the *my*BMP Manager, and the CSD Extension Team leader (who manages the REOs).

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REGIONAL EXTENSION OFFICERS (REOS) ARE RESPONSIBLE FOR:

- Working one on one with growers and consultants to develop trusted relationships
- Regionally coordinating group extension activities such as workshops and field days
- Working with local growers and consultants to support regional demonstration sites and trials
- Building networks with consultants, Cotton Grower Associations (CGAs), research organisations and the regional teams of both CSD and CA
- Supporting industry R&D projects with regional engagement

THE TECHNICAL LEADS ARE RESPONSIBLE FOR:

- Being the industry's go-to specialist in their area of expertise, including working with all relevant researchers
- Leading the extension activity within their area of expertise
- Reviewing the relevant *my*BMP modules
- Coordinating key messages for CottonInfo and to support the communications program

THE *my*BMP EXPERTS ARE RESPONSIBLE FOR:

- Supporting grower participation in *my*BMP
- Auditing, certification and reporting
- The *my*BMP system

CottonInfo will significantly contribute to cotton industry networks, with CottonInfo's REOs providing regional connections and Technical Leads linking research activity within their specialist areas. While targeting all growers and consultants, the communications network will also inform other interested parties, such as NRM bodies, government organisations and the wider service industry.

Module leads (some of whom are CottonInfo Technical Leads) will update the industry's best practice program *my*BMP with the latest research outcomes. The CottonInfo team will promote the use of and support users of *my*BMP.

The CottonInfo team will be a key industry resource in responding to emerging or emergency issues. They will provide essential support for the industry's biosecurity response and surveillance effort.
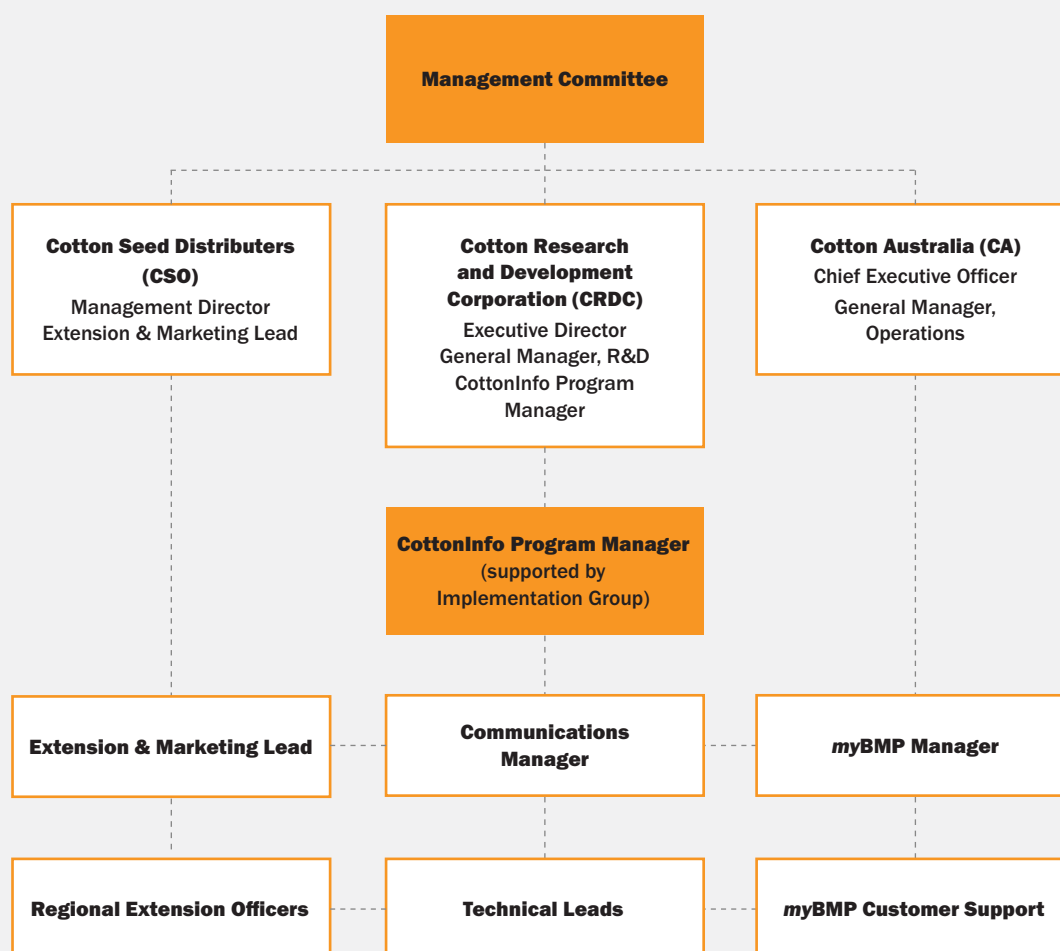
3.4   Stakeholder Engagement

At a regional level, coordination between the regional representatives of the partner organisations is essential. This will be achieved through regular interaction between the CottonInfo REOs, the Cotton Australia regional managers (RMs) and the CSD Extension and Development team (E&D team). Each organisation should have an understanding of the work plan priorities of the other, as well as identified areas where they can work collaboratively to effectively deliver outcomes. In addition, at a regional level, regular involvement with the Cotton Grower Associations (CGAs) and CCA will provide a regional sounding board for activity planning, identifying emerging issues and local priorities. Technical Leads will have a role in engaging with researchers in their technical area and to be the point of contact between relevant research organisations and the CottonInfo team.

At an industry level, CottonInfo will be informed of industry R&D needs and priorities through the CRDC and Cotton Australia RD&E identification and prioritisation process. This provides engagement at a regional level through input from the CGAs and on technical disciplines thought the farmer panels. These priorities will inform the development of the Annual Operational Plans. In addition, at an industry level, the CRDC-led Grower Survey and CRDC-supported Crop Consultants Australia Qualitative Survey provide an opportunity for our key stakeholders to communicate their extension needs.

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3.5   Measures and Targets

OUR GOALS	KEY FOCUS AREAS	OUTCOMES
01 **Improving rate and reach of adoption and adaptation of research and development**	**Adoption** of R&D outcomes to increase productivity and profitability.	Improved yield and quality. Improved input efficiencies (water productivity, nutrition, pest management and energy use efficiency).
		Increased reliability of cotton production.
		R&D projects include extension in planning and integrated in delivery.
		Growers and consultants report increased knowledge, skills and change practice.
	New technologies and management practices **adapted.**	New technologies and management practices are adapted for use in cotton.
		Cotton farms are digitally enabled.
	*my*BMP integrating best practice.	Best practice is based on science and measured impact.
	Collaboration within cotton and across sectors to deliver extension efficiently.	Relevant research from related industries are identified, adapted and utilised.
	Sustainable cotton farms with social licence.	Improved environmental footprint for cotton farms. Cotton farming is valued by Australian communities.
		Increased natural capital on cotton farms.
		Production systems enhance access to international markets.
02 **Enabling successful cotton businesses and industry expansion**	Advocate a whole of business systems approach.	Productivity, finance, social and environment factors are considered.
		Whole farm systems are considered in extension delivery.
	New growers and new growing regions are supported.	New growers are supported with the information and advice they need to successfully grow cotton.
		Growers in new areas are aware of regionally specific issues.
03 **Prepared to respond to unplanned threats**	Industry is prepared for a biosecurity incursion.	Work with biosecurity stakeholders to prepare a coordinated response to both exotic and endemic incursions.

ACTIVITIES	MEASURE & BASELINE	TARGET
Investigate and communicate the application of beneficial new technologies.	10.1 bales/ha 2016 5 year rolling average	11.6 bales/ha irrigated, 4.7 bales/ha dryland
Build adoption capacity and develop benchmarks for real time sensing, decision tools and practices to support on-farm resource efficiency decisions.	1.1 bales/ML (GPWI)	1.3 bales/ML (GPWI)
	10kg of lint/kg of nitrogen	11.5 kg of lint/kg of nitrogen
Provide advice on the social, environmental and economic viability of new farming systems.		
Create awareness of the drivers behind farming system volatility and test approaches to mitigate.	5 year average production increased, 3.4M bales	3.9M bales 5 year average production
Include adoption pathways in R&D project development.	5 projects with adoption pathways annually	10 new projects with adoption pathways that include CottonInfo annually.
Prioritise in AOP help, awareness, resource and demonstration (HARD) engagement with projects.		30 projects with HARD engagement annually
Extension and adoption activities delivered with impact on knowledge, skills and behaviour change.		200 extension activities delivered
		85% of participants report increased knowledge, skills and intention to change behaviour
Investigate and facilitate the development of beneficial new technologies, management practices and systems for cotton farms.	2 new products supported towards commercialisation	5 new products supported through testing and validation
Support strategies to develop frameworks for digital agricultural tools.	45% growers with devices linked to office	85% growers with devices linked to office
Technical Leads work closely with research partners to ensure R&D outcomes are included in *my*BMP information modules.	100% modules updated with CRDC research	100% of Modules updated with CRDC research
Participate in appropriate cross industry RRnD4P projects. Cross-sectoral opportunities assessed annual.	2 cross industry extension projects	Involvement in 3 new cross industry projects over 5 years
Undertake extension on the most significant components of the footprint for growing cotton, including water management, nitrogen management, native vegetation and soil carbon.	383 kg of CO_2e per bale	325 kg of CO_2e per bale
Increase awareness and capacity to implement best management practices for natural capital on cotton farms.	6% of farm native vegetation managed for conservation	6.6% of farm native vegetation managed for conservation
Participation in *my*BMPxs encouraged through extension activities.	70% registered, 15% accredited	Contribute to collaborative industry 80% registered, 50% accredited targets
Where appropriate extension activities include whole farm system consideration.	None	2 farming systems incorporated field days per year per region
Develop economic and environmental analysis of on farm management options and systems.		Economic partial analysis of energy, nutrition, irrigation and pest management completed
New growers are provided with tailored information that meets their particular needs. Existing industry research and knowledge is adapted to new regions to reduce replication of learning.	None	90% of new growers actively supported in their first season
Cross regional engagement of growers and consultants is supported to facilitate the sharing of experience and knowledge.		3 peer to peer activities in new regions per annum
Continue to build internal capacity in preparedness for biosecurity incursions.	Participated in 2 training exercises	Participate in 2 industry training exercises
Actively maintain awareness of stakeholders of biosecurity best practice.		
Maintain communications processes to identify issues early and network widely when required.	Farms with a documented biosecurity plan. No benchmark.	30% farms with a documented biosecurity plan

CottonInfo

3.5   Measures and Targets

CottonInfo is an effective extension team, a trusted information source	*my*BMP supports and resources industry best practice	Growers have access to:
		a convenient, user-friendly, and reliable *my*BMP system.
		premium international sustainable cotton markets.
		risk management support.
		social licence to operate.
	Working collaboratively with industry service providers	CottonInfo partnership is maintained and performance strengthened.
		Partnerships are strengthened to work collaboratively with other information service providers.
	Innovation and adoption of new technology	Use of sensing, data and artificial intelligence technology for understanding and decision making incorporated into change processes.
	Utilises innovative communication practices and responsive two-way communication	Growers and consultants are aware of R&D outcomes and extension information.
	Organisational effectiveness and efficiency	CottonInfo's progress and performance is monitored, transparent and accountable.
		The impact of the CottonInfo program is assessed and continuous improvement implemented.

	Action	Baseline	Target
	Develop and maintain a fit for purpose *my*BMP system.	Positive response to post audit surveys, Not measured	100% growers agree *my*BMP is useful and easy to use
	Ensure the *my*BMP Standard is world's best practice.	ISEAL Code of Practice – currently meets most requirements	Self-assessed to meet all ISEAL requirements
	Identify and develop opportunities to increase recognition of *my*BMP by international sustainability programs, brands and retailers.	Recognition by 3 sustainability programs	*my*BMP recognised by 5 international standards
	Support growers to meet regulatory requirements and complete a Level 1 self-assessment .	Level 1 completion – baseline 15%	50% growers completed Level 1
	Develop a database that enables industry to report positive practice change and outcomes	Capability to report *my*BMP achievements and practice change outcomes – currently poor	Database has ability to report participation, accreditation, best practice adoption, and outcomes e.g. IWUE, NUE
	Work collaboratively with JVC partners to demonstrate and communicate practical application of R&D outcomes .		CottonInfo JVC continued
	Work collaboratively for mutual benefit with private information and extension providers.		Partnerships established or strengthened with 3 significant private information providers
	Digital agriculture is used as a learning tool to drive on farm practice change.	Growers and consultants use CottonInfo to source information: Grower baseline: 86% Consultant baseline: 87%	Digital tools incorporated into 10 on farm trials
	Enact innovative, targeted communications to meet stakeholder needs.		Grower target: 90% Consultant target: 95%
	Create a range of materials to communicate R&D outcomes and extension information (in conjunction with Cotton team) and disseminate via CottonInfo communications channels.		
	Continue to build profile of CottonInfo and CottonInfo team.		
	Incorporate messages re CottonInfo as a knowledgeable and experienced information source.		
	Continue monitoring and evaluation framework and embed evaluation reporting into Annual Operation Plan management.		AOP evaluated annually.
	Assessment of the extension rate, reach and effectiveness is reviewed externally during the life of the plan.		One external review of extension effectiveness conducted by 2020.
	Impact of the strategic plan is assessed on completion.		Impact reporting delivered 2023.

CottonInfo

4. Our Guiding Principles

COMMITMENT to industry benefit
as the key outcome

PROGRESSIVE LEADERSHIP
and proactive management

CREDIBLE and trusted people,
products and performance

ACCOUNTABLE to industry and
public stakeholders

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5. Implementation Strategy

This CottonInfo Strategic Plan will be the primary guide to the allocation of resources for CottonInfo from 2018-23. Each year Cotton Australia, CSD and CRDC, through the Program Management Committee, will review the performance and achievement of the strategic goals, objectives and measures of success and approve the directions for the coming year in the form of an Annual Operational Plan (AOP). The AOP will contain annual objectives that will ensure the achievement of the strategic plan goals. These objectives will be reflected in the workplans of the REOs and milestones of the Technical Leads.

Every three years the Committee will consider the strategic importance of changes in the operating environment and whether this Strategic Plan requires review. In forming decisions, the advice of the industry research organisations will be sought through the Cotton Innovation Network.

The CottonInfo program will be implemented by a team of skilled professionals responsible for integrating, developing and extending results of industry R&D to the Australian cotton industry. The information outputs of industry R&D will be processed and packaged and delivered through campaigns utilising as appropriate, a mix of active extension activities and communication.

5.1 Resource Allocation

CA, CSD and CRDC will collectively invest up to $5 million annually in the necessary projects, personnel and operating funds to ensure the strategic goals and objectives can be achieved. This will include the employment and/or contracting of industry Technical Leads and facilitators to support R&D and *my*BMP adoption at regional locations.

5.2 Governance

The Cottoninfo program is managed in accordance with the Memorandum of Understanding (MOU) signed by the joint venture partners in 2012 and reviewed in 2018. The MOU defines the purpose of the partnership, the contribution of the partners and the structure and role of the management committee. The CottonInfo program will be governed by a Management Committee comprised of representatives of CSD, CRDC, CA and the CottonInfo Program Manager. The Committee will meet at least quarterly to:

- approve plans and guidelines
- monitor progress and performance against approved plans and guidelines
- communicate with and provide direction to the CottonInfo team through the CottonInfo Program Manager

Notes

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