



## **Social Licence: A Social and Environmental Responsibility**

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## Executive Summary

Agriculture plays a vital role in the well-being of rural communities, food security, employment, and societal improvement. Adopting best management practices (BMP) ensures socially responsible farming by safeguarding public health, promoting food safety, and supporting sustainable livelihoods for farmers and rural communities. These practices contribute to vibrant rural economies, enhance community resilience, and foster social cohesion, promoting a healthy and sustainable agricultural sector.<sup>1</sup>

By embracing industry BMP, farmers fulfill their social and environmental responsibilities, aligning their agricultural practices with broader goals of sustainable development, environmental stewardship, and community well-being. This primarily occurs through production-related practices and investment in natural capital improvements.

Through industry-led science-based practices and the adoption of precision agriculture methods and agritech, growers can:

- minimise soil erosion,
- enhance soil health and fertility,
- conserve water,
- reduce inputs.

Furthermore, their investments in wildlife corridors, habitat restoration, and collaborative projects with consumers and retailers can:

- improve farm biodiversity,
- preserve essential species and ecosystems,
- protect soils from wind and water erosion,
- promote on-farm biodiversity for future generations.

Globally, agriculture is both affected by – and contributes to – climate change. Embracing BMP that promotes climate-smart strategies helps reduce greenhouse gas emissions and increase soil carbon sequestration. Continuously improving practices enhance the resilience of agricultural systems by improving water management, soil

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<sup>1</sup> [Community Resilience, Wellbeing and Recovery Project Resources | Mental Health Commission of New South Wales](#)

health, and crop diversification, enabling farmers to adapt to changing climate conditions.<sup>2</sup>

Adopting industry-led BMP in agriculture ensures social responsibility, environmental sustainability, and community well-being. Farmers contribute to a more resilient agricultural sector for present and future generations by minimising negative impacts, promoting biodiversity, and addressing climate change.



**Figure 1: Adopting BMP promotes biodiversity, as seen by the author in France in 2019**

## Table of Contents

<b>Executive Summary .....</b>	<b>3</b>
<b>Table of Contents .....</b>	<b>5</b>
<b>Table of Figures .....</b>	<b>6</b>
<b>Foreword.....</b>	<b>8</b>
<b>Acknowledgments .....</b>	<b>10</b>
<b>Abbreviations .....</b>	<b>11</b>
<b>Objectives.....</b>	<b>12</b>
<b>Introduction .....</b>	<b>13</b>
<b>Chapter 1: The Research Context .....</b>	<b>15</b>
<b>Chapter 2: The Challenge of Social Licence .....</b>	<b>17</b>
<b>Barriers to adoption .....</b>	<b>18</b>
Inclusive engagement.....	18
Women as early adopters of BMP .....	19
<b>Chapter 3: Farmers Embracing Change .....</b>	<b>23</b>
<b>Case Studies.....</b>	<b>24</b>
a) River Gardens Farms .....	24
b) Lindgren Farms .....	26
c) Cooksley Farms.....	29
d) Black Fox Farms .....	30
<b>Chapter 4: Communication and Advocacy .....</b>	<b>33</b>
a) Benefits of science communication.....	33
b) Farmers sharing their story.....	36
c) Challenges of advocacy and science communication .....	38
d) Factors to adopt BMP with effective community engagement.....	40
<b>Conclusion .....</b>	<b>44</b>
<b>Recommendations .....</b>	<b>47</b>
<b>References.....</b>	<b>50</b>

## Table of Figures

Figure 1: Adopting BMP promotes biodiversity, as seen by the author in France in 2019 .....	4
Figure 2: Author with the UN's Sustainable Development Goals (SDGs) in Utrecht, Netherlands .....	9
Figure 3: Author with the "Japan Global Focus Program" group in West Virginia, 2019 .....	10
Figure 4: Cotton picking in Queensland, at the author's property.....	12
Figure 5: INRA Unit experimental farm in France .....	14
Figure 6: Author attended the Food and Agriculture Organisation CFS in Rome in October 2019.....	17
Figure 7: Author at the Food and Agriculture Organisation in Rome, 2019 .....	20
Figure 8: Visiting a large greenhouse operation in France, 2019 .....	23
Figure 9: Visiting River Garden Farms in California in 2020, who are embracing the ecological needs of the entire ecosystem .....	25
Figure 10: Author visiting River Gardens Farm in California, 2020 .....	25
Figure 11: Rob Saik (fifth from left), a leading farm business Agrologist and Consultant at Lindgren Farms in Saskatchewan .....	26
Figure 12: Author in a field of peas at Norquay, Saskatchewan.....	27
Figure 13: Harvest time at Lindgren Farms in Saskatchewan, with well-defined shelter belts .....	28
Figure 14: George and Barb Cooksley in their prairie grasslands in the sandhills of Nebraska .....	29
Figure 15: Sandhills and windmills at Cooksley Farms in Nebraska .....	30
Figure 16: John Cote, a grain, flower and fruit grower near Saskatoon, Canada .....	31
Figure 17: John and Barb Cote, Black Fox Farm and Distillery in Canada.....	31
Figure 18: Author at the Campus of University of Giessen – official name Justus Liebig University – in Germany .....	33
Figure 19: Misinformation and disinformation by consumers and farmers (anon) ....	34
Figure 20: Germany had many examples of farming systems with diversified renewable energy .....	35
Figure 21: 2019 Scholar Richard Leask studying the organic matter in a field in the USA, as part of the Global Focus Program (2019).....	37
Figure 22: The Global Focus Program in Indonesia, hosted by Scholar Mick Sheehy .....	38
Figure 23: An example of agriculture and communication and persuasiveness messaging, as seen in Cologne, Germany .....	39

Figure 24: Aaron Kiely and Ellie Amory storytelling to schoolchildren at Emerald, Queensland ..... 40

Figure 25: Visiting a dairy farm in West Virginia GFP (author on left) ..... 42

Figure 26: Example of Australian Cotton Industry Leadership. All scholars above are cotton industry leaders, thanks to the investment by the cotton industry to personal growth and leadership (Brisbane, 2019) Author in the middle. .... 44

## Foreword

*I envision a world where social, environmental, and economic sustainability is the standard for agricultural businesses. I expect a future where farmers embrace and implement demonstrable positive practices that benefit the environment and the people and generate widespread community support for agriculture.*

In this vision, agricultural businesses are deeply responsible for social and environmental issues. These businesses go beyond mere compliance with regulations and actively seek innovative solutions to address environmental and profitability challenges. They prioritise sustainable farming practices that minimise their ecological footprint, conserve natural resources, and protect on-farm biodiversity and biosecurity while maximising efficiencies and productivity, ensuring they can produce more with less.

I see a future where the agriculture industry recognises the interdependence between social and economic factors. They strive to create equitable opportunities for all participants, including farmers, workers, and local communities. By providing safe working conditions and fostering diversity and inclusive growth, agriculture will contribute to society's overall well-being and future sustainability.

Moving towards this vision will have a gain spiral effect. By leading the way in sustainable practices, these farmers, through peer-to-peer learning, inspire others to follow suit. They act as catalysts for change, encouraging widespread adoption of positive practices throughout the agricultural sector. As a result, community support for agriculture grows, and the public recognises the vital role of evidence-based sustainable farming in ensuring a healthy environment, food security, resilient communities and low-carbon adaptive farming systems.

Ultimately, my vision is to ensure social, environmental, and economic sustainability become ingrained into the very fabric of Australian agriculture, leading to a thriving sector that enjoys broad community support and contributes to a more sustainable future for the next generations.





Figure 2: Author with the UN’s Sustainable Development Goals (SDGs) in Utrecht, Netherlands

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**Figure 3: Author with the “Japan Global Focus Program” group in West Virginia, 2019**

I would like to pay my respect and acknowledge that I am on the land of the Gayiri people, surrounded by a sense of belonging, both ancient and contemporary, of the world’s oldest living culture. In doing so, I value and respect Indigenous knowledge systems as a vital part of shared knowledge of Australia and within our agricultural and farming systems.

I recognise the strength, resilience and capacity of the Aboriginal community and pay my respects to the Elders past, present and future.

## **Abbreviations**

BMP - Best Management Practices

CA - Cotton Australia

CRDC - Cotton Research Development Corporation

SDGs – Sustainable Development Goals (UN)

NGOs - Non-Governmental Organisations

## Objectives

My research project explores the adoption of best management practices (BMP), the communication of those improved farming practices, community engagement (in-person and online), and how that influences the agricultural industries' social licence.

The project had the following objectives:

- Identify the factors driving the successful adoption of BMP and effective community engagement.
- Identify and understand the barriers to the adoption of BMP.
- Explore the role that industry and farmer advocates, including Nuffield Scholars, can play in addressing the challenges of BMP adoption and community engagement.

Through literature review, producer and industry interviews and surveys, the project aimed to shed light on the critical drivers for successful BMP adoption and community engagement. It sought to identify and understand the barriers that impede the widespread adoption of BMP. Additionally, the project aimed to investigate the potential role farmer advocates, including Nuffield Scholars, can play in addressing the challenges associated with BMP adoption and community engagement. By comparing experiences in best practice management and leadership in engagement within the cotton industry to other sectors and jurisdictions, the project aimed to extract valuable insights and lessons applicable across various contexts.



Figure 4: Cotton picking in Queensland, at the author's property



## Introduction

The successful adoption of BMP and effective community engagement in Australian agriculture, relies on several key factors. By implementing BMP, growers can achieve their sustainability goals, which are crucial for maintaining their social license and garnering public support and public trust.

Community engagement plays a vital role in promoting the adoption of BMP in agriculture. Engaging with local consumers, industry representatives, policymakers, and environmental groups encourages understanding, collaboration, and trust. This sharing of knowledge and experiences enables better-informed decision-making and developing practices that align with community needs and expectations.

Effective community engagement also helps address conflicts and misconceptions regarding agricultural practices. Involving the community in discussions and decision-making demonstrates transparency, sustainability, and a shared interest in environmental stewardship. Open dialogue allows for information sharing, addressing concerns, and finding common ground to ensure the effectiveness and support of BMP among the broader community.<sup>2</sup>

Availability of resources and support is another critical factor for successful BMP adoption and community engagement. Providing farmers with adequate training, education, and technical assistance enables them to implement and sustain BMP on their farms. Supporting farmers demonstrates a commitment to their success and encourages the widespread adoption of sustainable practices.<sup>3</sup>

Collaboration among farmers, researchers, industry organisations, and government agencies is crucial. These diverse group of collaborators can share knowledge, leverage expertise, and develop innovative solutions to agricultural challenges by working together. This collaborative approach ensures that BMP is based on scientific research, industry best practices, and local knowledge, enhancing its credibility and effectiveness in achieving sustainability goals.

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<sup>2</sup> [Conceptual framework for increasing legitimacy and trust of sustainability governance - PMC](#)

<sup>3</sup> [Factors Influencing Farmers' Adoption of Best Management Practices: A Review and Synthesis - PMC](#)

Promoting the economic benefits of BMP also enhances community engagement and support. Demonstrating how sustainable farming practices improve resilience, sustainability, adaptability, safety, productivity and profitability, and long-term viability garners acceptance and approval from the agricultural community and the wider public. Economic incentives, such as grants or subsidies, motivate farmers to adopt BMP and invest in sustainable agriculture.



**Figure 5: INRA Unit experimental farm in France**

In summary, successful BMP adoption and community engagement in Australian agriculture depends on engaging with the community, investing in and providing resources and support for farmers, fostering collaboration, and highlighting the economic benefits of sustainable practices. Considering these factors, Australian agriculture can thrive, address environmental and social challenges, and ensure a sustainable future.

## **Chapter 1: The Research Context**

This research is based on positive experiences and personal strengths in environmental and communications leadership as a certified BMP grower for over 23 years. In addition, it is based on previous experience in BMP auditing, as well as observations of the challenges and obstacles to effective adoption of environmental improvements and community engagement while assisting growers through the cotton myBMP program. There are also observations relating to the challenges or roadblocks to the effective adoption of environmental improvements and community engagement, especially in online engagement through social media.

Urban and rural communities are keenly focused on environmental issues alongside animal welfare. Perceptions of environmental harm (e.g., pesticides, nutrient runoff, water use, illegal activities including illegal land clearing and water theft) represent key concerns that drive consumer purchasing decisions, and the pressures communities exert on policy change and supply chains.

However, it requires more than focusing on communication alone. Serious environmental, human and social challenges are real, and, in some cases, these concerns and pressures are justified. In other cases, they are created by misinformation and a lack of access to credible farmer voices or government data that recognise challenges and demonstrate the benefits of modern agriculture.

Agricultural industries and governments recognise the importance of demanding high standards in agricultural production. There is considerable focus on BMP programs to optimise management and achieve economic, social, and environmental outcomes. These groups seek to utilise on-farm programmes to drive productivity and profitable outcomes, demonstrate ecological and natural resource stewardship, mitigate biosecurity risks, and support other activities that benefit the landholder.

Farmers want to be confident that their management is both profitable and sustainable, resilient to climate change risks and meets both workforce's human and social needs. Certainty of water availability, affordable energy, access to markets, and the ability to keep farming in areas close to towns or environmental areas of significance, such as the Great Barrier Reef, is essential in ensuring the long-term sustainability of agricultural production. There is a common understanding that farmers must continually improve and innovate to minimise their social and environmental impact - sometimes going beyond the norms in their sector.

Across best management programs, many successes can be shown, which have been personally experienced in the cotton industry – driving a high uptake of BMP programmes in the Fitzroy Basin reef catchment and seeing the tangible changes on the ground in how farmers think and work. These benefits are often 'win-win' for farmers, who see the gains from reduced inputs, attraction and retention of long-term employees, better tracking of wastage, and meeting their personal values about social and environmental stewardship. However, significant challenges remain in both extension delivery, adoption, and communication.

In addition, the communication of these changes needs to be done in a practical, grounded, and relatable way, building on but going beyond the industry message to help farmers develop a voice and establish mechanisms to participate in the dialogue. It refers to aligning core values of public expectations and addressing their concerns about our agricultural practices.

These strategies require a set of practices and approaches that connect with growers and upskill growers into sharing with others - to speak with the community and not just among themselves. It must also recognise external stressors and barriers (often outside growers' control) that can impact their capacity to engage, effectively learn and listen to crucial messaging (such as floods and droughts).

This drives my research question: What role can I play, as a Nuffield Scholar, that draws upon experience in best practice management and leadership in engagement, to help address the dual challenges of BMP adoption and community engagement? What drives successful BMP adoption and community engagement?

The project sought to address these questions through three strategies:

- Tapping into knowledge from looking across countries and sectors at the relationships and practices around BMPs, including strengths and shortcomings.
- Building farmer capabilities and confidence in online and interpersonal communication, including generating 'communities of practice.'
- Making the connections between practices, communication, social licence and economic value generation for farmers and industry - showing the triple bottom line.



## Chapter 2: The Challenge of Social Licence

*"The people who will make the most difference are not those who have the most connections within agriculture; they are the people who have the most connections with those outside of agriculture."* Vance Crowe.

Vance is the CEO of [Articulate Ventures](#) LLC, a world-renowned communications consultant, and former Director of Millennial Engagement for Monsanto.

This research project addresses the challenge of obtaining a social licence for farming, which refers to the broader community's acceptance and support of agricultural practices. The project recognises that the agricultural industry sometimes faces difficulties in gaining social acceptance due to concerns related to human, social and environmental impacts, sustainability, and practical and empathetic community engagement.



**Figure 6: Author attended the Food and Agriculture Organisation CFS in Rome in October 2019**

Setting global expectations that inform social licence. The United Nations developed the 17 Sustainable Development Goals (SDGs) to tackle pressing international issues and create a better world for all. The SDGs provide a framework for countries, organisations, and individuals to work together towards a more just, resilient, and sustainable future. They address various challenges, including poverty, inequality, climate change, and environmental degradation, to promote economic prosperity, social well-being, and ecological sustainability.

In agriculture, aligning core industry sustainability goals against the SDGs will ensure we continue to work towards improving our sustainable farming systems that allow for food security and a future that is diverse and inclusive of everyone.

These global standards will become key drivers in practice change, such as managing climate resilience and environmental management. They provide a comprehensive framework for addressing social, economic, and environmental challenges and advancing sustainable development worldwide.

Integrating the principles and targets of the SDGs into agricultural policies, research, and on-the-ground practices can help address climate resilience, environmental concerns, and social equity in the agriculture sector. It promotes a big-picture thinking approach that recognises the interconnectedness of sustainable agriculture's human, social, economic, and environmental dimensions. Farmers, policymakers, and participants in the wider agricultural industry can contribute to a more sustainable future by aligning agricultural practices and key BMP with the SDGs.

## **Barriers to adoption**

Key barriers or facilitators to adoption can include:

- a) Inclusive engagement and governance practices.
- b) Recognition of women as early adopters of best practice management.

## **Inclusive engagement**

A future goal for social sustainability and responsibilities in agriculture extends beyond on-farm activities. It includes promoting responsible social behaviour, environmental practices, and social norms among all key beneficiaries, including leaders, industries, scientists, seed and chemical companies, supply chain actors and consumers.

When striving for equitable social sustainability goals, all participants must be able to express their opinions and have their voices heard. This allows for a broader range of ideas, experiences, and concerns to be considered, leading to more comprehensive and well-rounded solutions to some of our biggest challenges.

It is essential to recognise that providing an opportunity for all diverse groups of people to express their opinions does not mean that all views will be equally weighted or that every demand or request will be met. The decision-making process should still consider scientific evidence, feasibility, and the overall public interest. However, ensuring that all can express their opinions and have their voices heard is a fundamental aspect of inclusive and equitable governance.

While fostering inclusivity and open dialogue is essential, there may be instances where certain opinions should not be given a platform or actively promoted. This

typically pertains to views encouraging hate speech, discrimination, or harm towards others. In such cases, shutting down and not amplifying these opinions helps maintain a respectful and inclusive environment that upholds ethical standards and protects the rights of all individuals. It is crucial to prioritise the well-being, safety, and dignity of individuals and communities, and preventing the spread of harmful ideologies will require substantial and direct leadership from within agriculture to address those in the industry who use platforms to share these harmful and hateful ideologies.

*"Diversity is having a seat at the table, inclusion is having a voice, and belonging is having that voice be heard."* Australian agriculture needs to embrace this perspective and ensure that all people within and outside the industry are included as we strive for equitable social sustainability goals; it is crucial to create an inclusive and participatory decision-making process.

### **Women as early adopters of BMP**

In Australia, women comprise over one-third of all agriculture employees and 28 per cent of farmers and farm managers. In Queensland expressly, women represent over one-third of the agriculture workforce and one-third of Business Owner Managers (BOMs) in regional areas.<sup>4</sup>

Highlighting women's vital role in sustainable farming businesses and supporting rural economies. Women's paid and unpaid activities, including off-farm income, contribute to about half of the total value of output attributed to farming communities. Their contribution extends beyond their direct involvement in farming activities.

Women's expertise and farm work is critical in adopting BMP and maintaining and developing agricultural businesses and regional communities. While they have historically been underrepresented and their contributions often overlooked, women play a significant role in the farming and agriculture sector. Research has shown that when women are economically empowered through agriculture, it has positive ripple effects on their families and communities.<sup>5</sup> Women tend to invest more in education, healthcare, and nutrition, benefiting themselves and future generations.

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<sup>4</sup> [QUEENSLAND FARM BUSINESSWOMEN: THE LONG ROAD TO LEADERSHIP Final Report](#)

<sup>5</sup> [Facts and Figures: Economic Empowerment | UN Women – Headquarters](#)



**Figure 7: Author at the Food and Agriculture Organisation in Rome, 2019**

Diversifying the agricultural workforce by including women brings different perspectives, skills, and knowledge to the sector. This diversity fosters innovation, resilience, and adaptation to changing agricultural and environmental conditions.

Efforts to include women in agriculture require addressing various barriers, such as inflexible work hours, inadequate policies, laws, and institutions that promote gender equality in the sector. These barriers can manifest in limited access to credit and financial services tailored to women's needs and a need for essential support systems like childcare facilities and supportive infrastructure, including toilets, in rural areas. We can create an enabling environment that encourages women's participation and empowerment in agriculture by minimising these barriers.

Addressing barriers to inclusive participation in agriculture requires a multi-faceted approach involving education and awareness programs, financial support and incentives, technical assistance and capacity-building initiatives, improved access to information and extension services, and policy reforms that facilitate adopting BMP. By overcoming these barriers, farmers can embrace diverse, resilient, sustainable, and environmentally responsible farming businesses more effectively.

However, implementing these multi-faceted strategies to overcome barriers to BMP adoption and community engagement holds significant challenges. One I consistently witnessed during my scholarship travels was limited access to quality research and

extension services, particularly in regions with lower education and science literacy levels in developing countries. This knowledge gap prevented farmers from accessing the latest advancements and implementing effective practices on their farms. It made it clear how crucial it is to prioritise knowledge dissemination and improve accessibility to research and extension services.

Another challenge that can be overlooked is the psychosocial experience of shame, stigma, and pride, which also acts as barriers, preventing some individuals from reaching out and engaging with others outside their immediate farming business.<sup>6</sup>

Creating a supportive and non-judgmental environment where farmers feel comfortable seeking help and sharing experiences is crucial. Without this, the fear of being perceived as not adhering to the best practices deters them from seeking advice and assistance in overcoming constraints that could be quickly addressed or managed. Research consistently shows that peer-to-peer learning among like-minded individuals is one of the most effective ways to engage farmers and encourage adopting BMP.<sup>7</sup> We can foster a supportive environment that promotes continuous improvement by facilitating opportunities for farmers to connect, share experiences, and learn from each other.

Historical legislation has also posed challenges for traditional farms looking to diversify their operations beyond essential commodities to promote biodiversity and resilience. This was evident in cases like Japan, where restrictions on diversification limit farmers' ability to implement rotational systems. Addressing these legislative barriers and creating pathways for diversification can contribute to more sustainable and resilient farming practices.

Public-private partnerships and funding programmes play a significant role in supporting farmers in their transition to sustainable practices. While financial incentives may only sometimes be the primary driver for farmers adopting BMP, collective investments and support from external working parties can expedite the realisation of sustainability goals. When individuals and organisations outside the farming business provide resources, expertise, and financial aid, it can facilitate the implementation of

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<sup>6</sup> [Mind the Gap: Why do people act environmentally and what are the barriers to pro-environmental behavior?](#)

<sup>7</sup> [Peer to peer learning in farming communities. - Soils For Life](#)

sustainable practices and accelerate progress towards a more resilient and environmentally friendly agricultural sector.

In agriculture, other barriers to adopting BMP can vary but include the following:

- Lack of awareness and knowledge about BMPs
- Financial constraints and upfront investments
- Limited access to resources like water and inputs
- Inadequate technical support and training
- Risk perception and uncertainty about outcomes
- Regulatory and policy barriers
- Social and cultural factors influencing adoption
- Differences based on farm size and scale

To address these barriers, targeted strategies such as education and awareness programs, financial incentives, improved access to resources, enhanced technical support, policy revisions, and community engagement can promote the widespread adoption of sustainable farming practices for Australian agriculture.



## Chapter 3: Farmers Embracing Change

During this research, visiting 15 countries and 120 farms, valuable observations were backed by grower and industry interviews and research surveys. Sustainable agriculture is not solely defined by the farming system in place. The research included visits to a diverse range of farming operations, including conventional, regenerative, organic, permaculture, biodynamic, and green housing farms (Figure 8) worldwide. It was clear that each could have a role in progressing a more sustainable agricultural industry.



**Figure 8: Visiting a large greenhouse operation in France, 2019**

It became apparent that sustainability in agriculture results from a combination of vital evidence-based practices tailored to the specific region, along with the implementation of biodiverse systems that enhanced the overall resilience and productivity of the farms.

Sustainable practices were not exclusive to any particular farming system. Instead, it was observed that, regardless of the farming system they employed, farmers who had adopted BMP and participated in certification programs had identified and could clearly articulate their sustainability goals. These goals encompassed various aspects, such as producing high-quality food and fibre, maintaining soil health, ensuring water quality, and fostering safe and ethical work practices.

The common thread among these farmers was their commitment to implementing practices that considered the long-term impacts on the environment, society, and the economic viability of their operations. They recognised the importance of preserving natural resources, mitigating environmental risks, and fostering a harmonious relationship between agriculture and the surrounding ecosystem.

These farmers achieved sustainable outcomes by embracing the big-picture approach and drawing from various practices that suited their specific context. Their success demonstrated that sustainability in agriculture goes beyond the label of a farming system. While it can encompass a diversity of best practices, it consistently requires (a) a deep understanding of the local environment, (b) a willingness to adapt and innovate, and a commitment to continuous improvement.

The author gained a profound appreciation for the diversity of approaches to sustainable agriculture and the collective effort of worldwide farmers working towards a more sustainable and resilient future for food and fibre production systems. These are further elaborated on in the three case studies of (a) River Garden Farms, (b) Lindgren Farms, (c) Black Fox Farms and (d) Cooksley Farms.

## **Case Studies**

### **a) River Gardens Farms**

River Garden Farms, located in the Sacramento Valley of California, demonstrates a proactive approach to addressing environmental goals and risks in their farming business. They produce a wide variety of crops, including walnuts and rice.

Collaborating with various contributors, including The University of California Davis, California Trout, and state and federal agencies, they have developed a comprehensive partnership that brings together ecologists, environmental scientists, and local natural resource management groups to improve biodiversity on their farm.

One of the critical aspects of River Garden Farms' sustainability efforts is their focus on providing habitat and support for various species, including fish, birds, snakes, and native bees. By implementing sustainable practices, they have created an environment that offers breeding sites, shelters, and food sources for these organisms. This holistic approach considers the ecological needs of the entire ecosystem, aiming to foster biodiversity and promote the health of native species.





**Figure 9: Visiting River Garden Farms in California in 2020, who are embracing the ecological needs of the entire ecosystem**

The research conducted by River Garden Farms on the migration patterns of birds has led to valuable insights and subsequent adjustments to their post-harvest flooding practices in rice fields. This adaptation has positively impacted millions of migratory birds that visit the region. By transforming their rice fields into wetlands, they have created a habitat that provides a food source, such as plankton, and a safe environment for these birds. The targeted conservation practices implemented by River Garden Farms have improved water use efficiencies and reduced the need for fertilisers.



**Figure 10: Author visiting River Gardens Farm in California, 2020**

This research-driven approach exemplifies the farm's commitment to empowering its employees to be part of the discussions and decisions on sustainable land and water management. By integrating scientific knowledge and conservation practices into their operations, River Garden Farms has successfully achieved a balance between agricultural production and environmental stewardship and successful employee mentorship. Their efforts are an inspiring example of how proactive engagement with

research and collaborative partnerships can lead to meaningful outcomes for the farming business, their employees and the surrounding ecosystem.

## **b) Lindgren Farms**

Using peer groups to drive performance in BMP is a strategy used by Jordan & Jennifer from Lindgren Farms Norquay, Saskatchewan.

Adopting BMP for Lindgren farms is facilitated by psychologically safe peer-to-peer groups that offer a localised and contextualised support network. Given the variations in farming practices across the region due to geography, climate, and crop types, peer groups provide a valuable platform for farmers to address region-specific challenges.



**Figure 11: Rob Saik (fifth from left), a leading farm business Agrologist and Consultant at Lindgren Farms in Saskatchewan**

By participating in sustainability focus groups, the farmers can engage in discussions and knowledge sharing about BMP relevant to their region. They can exchange insights on strategies that work effectively in their local context and learn from the experiences of their peers who face similar conditions.

The discussions within these peer groups encompass various aspects, such as optimising irrigation techniques, managing pests and diseases specific to the region, adapting to local climate patterns, and exploring market opportunities within the local agricultural sector. Farmers can develop region-specific approaches to sustainable agriculture through collaboration and collective learning.

Furthermore, peer groups can serve as a platform for initiating and implementing regional initiatives focused on sustainable agriculture. Farmers can identify shared goals, pool resources, and implement practices that promote environmental

stewardship, soil health, water conservation, and biodiversity conservation within their region by working together.

In addition, these peer groups provide diversity, inclusion, and learning opportunities for all farm staff. They create an environment where different perspectives and experiences are valued, creating a more inclusive and productive farming community.



**Figure 12: Author in a field of peas at Norquay, Saskatchewan**

Overall, peer groups in Western Canada are vital in supporting the adoption of BMP. These localised networks allow farmers to address region-specific challenges, exchange knowledge, promote diversity and inclusion, and collaborate on initiatives that contribute to the sustainability and resilience of the agricultural sector in their respective areas.

The benefits of peer groups extend beyond knowledge sharing. They also provide friendship and support, as the farmers can relate to and empathise with the experiences of their peers. The support and encouragement from fellow farmers can be instrumental in overcoming obstacles and staying motivated to implement changes and adopt innovative approaches.





**Figure 13: Harvest time at Lindgren Farms in Saskatchewan, with well-defined shelter belts**

Agricultural organisations, government agencies, or industry associations often facilitate farmer-led groups. They may involve regular meetings, farm visits, educational events, or even online forums for continuous communication and collaboration. Some peer groups also engage industry experts or consultants to provide guidance and expertise in specific areas. These experts can offer valuable insights and support to farmers, helping them navigate challenges and implement BMP effectively. The involvement of industry experts enhances the knowledge-sharing process and promotes the adoption of innovative and sustainable approaches within the peer groups.

By leveraging their peers' collective wisdom and experiences, farmers can enhance their decision-making, implement effective practices, and achieve higher levels of performance and sustainability in their farming operations.

### **c) Cooksley Farms**

George and Barb Cooksley from Cooksley Farms run beef cattle on 650 hectares using regenerative agriculture practices on prairie grasses in the sandhills of Nebraska. They promote sustainable farming practices that prioritise soil health, biodiversity, and environmental conservation with best practice systems that aim to restore and improve the natural resources and ecological balance of their systems. They have an emphasis on the importance of holistic land management approaches with the use of cover crops, crop rotation, reduced tillage, and the integration of livestock to enhance soil health, increase organic matter, and improve water retention. By implementing these practices, they have achieved higher yields, reduced reliance on synthetic inputs.



**Figure 14: George and Barb Cooksley in their prairie grasslands in the sandhills of Nebraska**

By rotating the native grass pastures through the year and providing supplemental hay and alfalfa during snow ensures that cattle have access to forage year-round. The installation of solar wells, in addition to existing windmills, provides flexible grazing opportunities and a reliable water source. Cooksley Farms graze around 800 cows with calves and over 50 bulls for servicing cows with a purebred and commercial Red Angus program focusing on breeding and genetics.

Their approach to grazing management and using renewable energy sources demonstrate a commitment to sustainable agriculture practices and the long-term well-being of their livestock and land.

Barb Cooksley plays an active role in educating and raising awareness about regenerative agriculture, conducting workshops, seminars, and field days to share her knowledge with farmers, industry professionals and wider community. She aims to

inspire and empower others to transition to more sustainable and regenerative farming practices. Cooksley Farms have collaborated and partnered with organisations, researchers, and policymakers to drive the adoption of regenerative agriculture at a broader scale by actively engaging in discussions and initiatives aimed at developing policies and programs that support regenerative farming practices, addressing barriers to adoption, and promoting economic viability of sustainable agriculture. Their dedication and leadership inspire farmers and key participants seeking to create more resilient, environmentally friendly, and socially responsible farming systems.



Figure 15: Sandhills and windmills at Cooksley Farms in Nebraska

#### **d) Black Fox Farms**

John and Barb Cote, the founders of Black Fox Farm and Distillery in Canada, have created a diverse and sustainable farming system based on evidence-based best practices. In 2010, they transitioned from grain farming to distilling, utilising their knowledge of growing wheat, barley, and rye; established in 2010, it has become one of the largest craft distilleries in the country. Using evidenced based sustainable practices, they grow grain, flowers, and fruit on their 80-acre farm outside Saskatoon. This allows them to produce high-quality gin, whiskey, and liqueurs shipped worldwide.





**Figure 16: John Cote, a grain, flower and fruit grower near Saskatoon, Canada**

The couple decided to shift their focus after pausing and reflecting on the future of large-scale grain farming. They saw the potential in distilling grain into spirits and recognised the niche market opportunity it presented. They wanted to be closer to the customer and better understand where their products ended.

With their passion for learning and continuous education, John and Barb embarked on a journey to master the art of distilling. They studied through the Institute of Brewing and Distilling in the UK, honing their skills in the craft.



**Figure 17: John and Barb Cote, Black Fox Farm and Distillery in Canada**

While turning grain into award-winning whiskey came relatively quickly, marketing their products proved a more significant challenge. They realised the importance of

educating consumers about their commitment to environmental stewardship, crop rotation, integrated pest management, and other sustainable farming practices.

Quality and authenticity are critical to Black Fox Farm and Distillery. They take pride in producing everything on their farm, from grain to finished spirits, and they communicate this story to their customers and utilise social media platforms to connect with their audience and promote their brand.

John and Barb emphasise the importance of good communication and transparency. They acknowledge that their farming practices are a work in progress but are committed to continual improvement. Their success stems from their dedication to sustainable farming, quality products, and building a solid connection with their customers.



## Chapter 4: Communication and Advocacy

### a) Benefits of science communication

Science communication and industry-led advocacy play a crucial role in promoting the adoption of BMP in agriculture while ensuring the achievement of human, social, environmental, and economic goals, contributing to social licence.

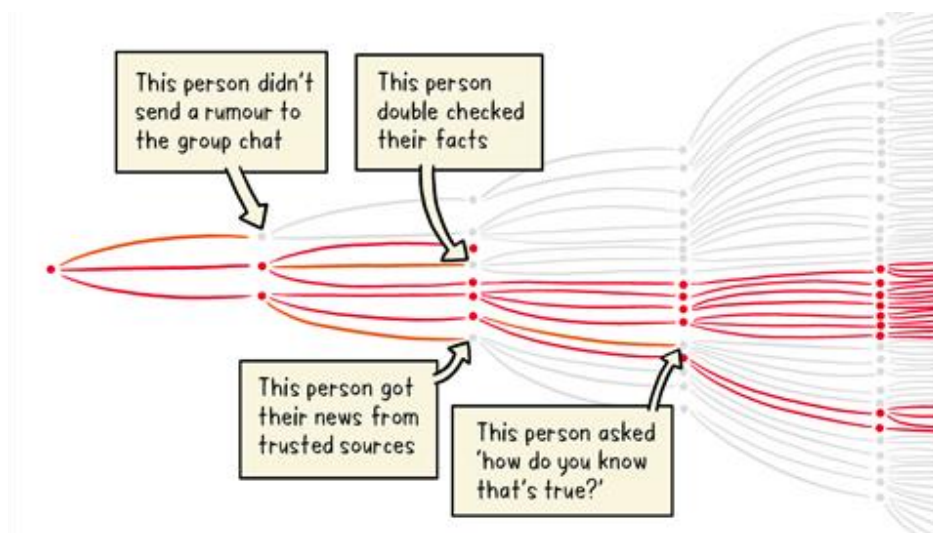
By effectively communicating scientific findings and evidence-based information, science communication helps farmers stay informed about the latest advancements and make informed decisions that align with their industry sustainability goals. This communication also establishes trust and credibility by presenting information in a transparent and accessible manner.



**Figure 18: Author at the Campus of University of Giessen – official name Justus Liebig University – in Germany**

Addressing misinformation and disinformation is essential, as it can create confusion and hinder the adoption of BMP. Science communication and advocacy are crucial in countering these challenges by providing accurate and reliable information, debunking myths, and addressing misconceptions (Figure 19).

Engagement and collaboration among various interested participants, including farmers, researchers, industry representatives, policymakers, and the public, are facilitated through robust communication efforts. This collaboration enhances the effectiveness of BMP and contributes to better outcomes regarding agriculture's human, social, environmental, and economic aspects.



**Figure 19: Misinformation and disinformation by consumers and farmers (anon)**

Furthermore, science communication and advocacy can influence policy and decision-making processes by effectively communicating the benefits of BMP and their alignment with sustainability goals. Advocacy efforts ensure that policies and regulations consider farmers' diverse needs and challenges while promoting sustainable practices.<sup>8</sup>

Maintaining a social licence, which involves public acceptance and support of agricultural practices, is crucial. Communication and advocacy foster transparency, engagement, and understanding between farmers and the public by effectively communicating the positive impacts of BMP on various aspects of society.

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<sup>8</sup> [Using evidence to influence policy: Oxfam's experience | Humanities and Social Sciences Communications](#)



**Figure 20: Germany had many examples of farming systems with diversified renewable energy**

Science communication and advocacy play a vital role in disseminating knowledge, building trust, countering misinformation, promoting collaboration, influencing policy, and maintaining social licence. These efforts contribute to adopting BMP in agriculture and help sustainably achieve industry goals.

Senator Elizabeth Warren once said, "*If you don't have a seat at the table, then you're probably on the menu.*" Industry and farmers must be robust and present in shaping policies, regulations, and online discussions by ensuring that the farming community's voice is heard and valued.

Shifting focus from crisis management-driven adoption to proactive measures is a priority. Education plays a transformative role in people's lives, so identifying gaps, investing in formal and informal learning opportunities, and upskilling within industries are essential.

Achieving a social licence, which involves gaining public acceptance and support, requires ongoing commitment and collective effort. It is crucial to involve all working parties and ensure their inclusion in decision-making processes.

Moving forward, it is vital to prioritise investments in people at all levels of agriculture. This includes investing in research and extension services and fostering collaborative partnerships across primary industries and other sectors to achieve common goals.

Supporting farmers with adequate training and resources is essential to facilitate the adoption of sustainable practices. Best management programmes should involve

industry, research, and government input, with regular external evaluation and validation to ensure their effectiveness and trustworthiness.

Lastly, farmers themselves should actively share their positive farming stories. Each farmer has a valuable story to tell, and it is essential to share those stories to promote understanding and appreciation of the industry. Farmers can shape public perception and counteract misinformation by showcasing the positive aspects of agriculture.

### **b) Farmers sharing their story**

Teaching farmers to share their stories and encouraging community support can be done in various ways, including:

1. Workshops or training sessions specifically designed to enhance farmers' communication skills and storytelling abilities. Guide how to effectively convey their experiences, challenges, and successes relatable and engagingly leveraging digital platforms such as social media, blogs, or websites to share their stories. The industry has a developed network of expert communicators guiding using these platforms effectively and responsibly, using visuals, videos, and compelling narratives to capture the audience's attention.
2. Events where farmers interact with the community, such as The Australian Cotton Industry, Teach the Teacher events, school career days, field days, or open farm days. These events allow farmers to directly engage with the public, share their stories, and answer questions. Encourage farmers to showcase their practices, explain the benefits, and address concerns of misconceptions.
3. Collaborations with grower groups, community groups, schools, or media outlets to create platforms for farmers to share their stories. This can include interviews, articles, podcasts, or guest speaking opportunities. These partnerships can amplify the farmers' message and reach a wider audience.



**Figure 21: 2019 Scholar Richard Leask studying the organic matter in a field in the USA, as part of the Global Focus Program (2019)**

4. Peer to peer networks create opportunities for farmers to connect and learn from each other and fosters a supportive environment where farmers can gain confidence in sharing their stories and receive feedback and encouragement from others. Encourage the formation of farmer networks or discussion groups where they can share their experiences and insights, which provides a positive impact of community support on the farming industry and the local economy. as well as showing how community support leads to increased awareness, market demand, and ultimately the sustainability of local agriculture, by highlighting the value of the farmer-consumer relationship and the importance of community involvement in shaping agricultural practices.
5. Resources, toolkits, or guidelines to help growers effectively communicate their stories. These may include templates for blog posts or social media posts, public speaking tips, or media interview guidelines. Empower farmers with the necessary tools and knowledge to confidently share their experiences.





**Figure 22: The Global Focus Program in Indonesia, hosted by Scholar Mick Sheehy**

Building community support is an ongoing process that requires consistent efforts and open communication. Encourage farmers to be authentic, transparent, and responsive to community feedback and concerns. Farmers can foster understanding, build trust, and cultivate strong community support by sharing their stories and engaging with the community.

### **c) Challenges of advocacy and science communication**

Engagement and advocacy in agriculture can be complex and individuals face various challenges, leading to inconsistent experiences and outcomes. Factors such as social media, gender dynamics, differences between farmers and non-farmers, diverse advocacy approaches, tension between accuracy and compelling messaging, spin, challenges in science communication, and power of storytelling all impact agriculture's BMP and social license.

Social media platforms have become influential channels for engagement and advocacy in agriculture. However, the dynamic nature of social media can result in varying experiences. Farmers and non-farmers often hold different perspectives and engage in discussions influenced by their backgrounds, beliefs, and values. This diversity can lead to contrasting interpretations of agricultural practices and what constitutes BMP on farms.

Understanding and perceptions of agriculture can differ between farmers and non-farmers. Non-farmers lack direct experience and knowledge of farming practices, resulting in misunderstandings or misconceptions. Additionally, regional variations in farming conditions and practices can confuse those outside the industry, emphasising the need for clear and targeted messages.

Bridging this gap requires effective communication, education, and engagement to foster understanding and collaboration. Different actors within the agriculture industry employ diverse strategies and messages to advocate for their perspectives. These differences in approaches can contribute to inconsistent experiences in engagement and advocacy, as each group may prioritise different goals, target different audiences, or use other communication tactics (Figure 23).



**Figure 23: An example of agriculture and communication and persuasiveness messaging, as seen in Cologne, Germany**

Balancing accuracy and compelling messaging is a challenge in agricultural communication. While it is crucial to communicate information accurately, capturing attention and conveying persuasive messages is also important. Striking a balance that maintains integrity and trust while effectively communicating the benefits and importance of BMP is essential.

The use of spin in advocacy can further contribute to negative and distrustful experiences. Spin involves selectively emphasising certain aspects or framing information to shape public perception. Biased narratives and one-sided views can hinder constructive engagement and advocacy efforts.

Communicating agriculture-related scientific information to the general public, policymakers, and interested parties can be challenging. Scientific concepts are often

complex and require careful translation into accessible language. Varying levels of effectiveness, accessibility, and interpretation of scientific information can lead to different experiences in science communication.

Storytelling by farmers and industry can be a powerful tool for engagement and advocacy. It allows for emotional connections and helps people relate to farming experiences. However, the selection and presentation of stories can be subjective and may not encompass the full spectrum of perspectives or outcomes in agriculture.

Open and constructive dialogue, effective communication strategies, transparency, and a commitment to understanding diverse perspectives within the agricultural community and society are crucial to overcoming these challenges (Figure 24).



Figure 24: Aaron Kiely and Ellie Amory storytelling to schoolchildren at Emerald, Queensland

#### **d) Factors to adopt BMP with effective community engagement**

Agricultural industries already use some of these factors to implement their BMP environmental stewardship programs; increased focus and investment will improve uptake by producers.<sup>9</sup>

Building knowledge and understanding among growers alongside industry collaboration encourages their adoption of BMP. In the Australian cotton industry, Cotton Australia Regional managers, Cottoninfo Regional development officers and industry publications providing comprehensive education and awareness programs to growers about the benefits and importance of BMP is crucial—information

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<sup>9</sup> [About — Project Cane Changer](#).



dissemination on evidence-based sustainable farming techniques, resource conservation, and environmental stewardship. These regional extension services bridge the gap between research institutions and farmers, facilitating the transfer of knowledge and technologies from the research stage to practical implementation on the ground and disseminating research findings, best practices, and relevant information to farmers and other partners.

Continuous industry-specific research and innovation in the cotton industry are vital in developing improved best practices. Collaborative efforts between growers, industry participants, researchers, natural resource management groups and government working together facilitate the identification of innovative methods that optimise productivity while minimising environmental impact. The availability of successful evidence-based solutions on neighbouring properties also motivates farmers to adopt best practices. Research helps to generate new knowledge, technologies, and practices that address current and emerging challenges in the industry. as well as providing insights into improving productivity, enhancing resource efficiency, developing sustainable farming systems, and mitigating the impact of climate change. By investing in research, we can foster innovation, drive competitiveness, and ensure the long-term viability and sustainability of agriculture.

It requires strong leadership from within agriculture, including industry peak bodies, grower associations, research development corporations and influential farmers, to promote the adoption of sustainable farming systems. When leaders actively advocate and practice sustainable practices, invest in programs that have high-user functionality features that are quickly accessible on the farm (including on their smartphones and tablets) and provide support, guidance, and resources to farmers, it enhances the willingness of farmers to engage with and implement change.

Recognising and accepting environmental and social responsibilities and cultural ideologies are essential for BMP adoption. When farmers understand the significance of their role in sustainable agriculture and their responsibility towards the environment and their communities, they are more likely to adopt best practices voluntarily. They are more motivated and committed to implementing and continuously improving their agricultural practices.

Agriculture is a complex and dynamic field, and growers face numerous challenges in adopting new practices or making changes. By providing platforms and opportunities for open dialogue and peer-to-peer learning, growers can learn from each other's

experiences and gain insights into overcoming specific challenges. Growers can draw inspiration and practical lessons from others who have successfully implemented change and adapt those learnings to their contexts. Sharing success stories without fearing tall poppy syndrome (i.e., resentment towards successful individuals) creates an environment that encourages innovation, experimentation, and continuous improvement.



**Figure 25: Visiting a dairy farm in West Virginia GFP (author on left)**

Creating a psychologically safe environment means allowing individuals to feel comfortable expressing their ideas, sharing their experiences, and asking questions without fear of ridicule, shame, or adverse consequences. This safe space encourages open and honest dialogue, promotes trust, and nurtures a supportive community. When growers, researchers, and community members feel psychologically safe, they are more willing to participate, contribute, and engage in discussions and knowledge sharing.

Field days, sharing case studies, and leveraging online platforms (such as closed groups or forums) with demonstration videos and photos effectively showcase successful practices and foster knowledge sharing. Field days allow growers to see the implementation of BMP and interact with experts and peers. Case studies offer detailed accounts of successful experiences and lessons learned, providing practical insights that others can apply. Online platforms allow for ongoing communication,

collaboration, and the sharing of resources and information, even when physical interactions are limited. They provide a convenient and accessible space for growers to seek advice, ask questions, and share their experiences.

Financial incentives, including government grants, cost-share programs, and premiums for certified products, can effectively drive some growers to adopt practice change. While they may not be the sole or primary motivator, these incentives can support and encourage farmers to implement best practices.

Implementing new practices or adopting changes in agricultural operations can incur additional costs. Farmers may need to invest in equipment, infrastructure, training, or specialised inputs. Financial incentives help alleviate some of the financial burdens associated with these changes by providing financial support or cost-sharing arrangements. By reducing the upfront costs, incentives make it more economically feasible for farmers to adopt new practices and overcome financial barriers.

Financial incentives can contribute to increased profitability for farmers. For example, premiums for certified products through initiatives like the Better Cotton Initiative for myBMP-certified cotton bales can incentivise growers to adopt sustainable and accredited practices. These premiums can offset the costs of implementing and maintaining those practices, making them more financially attractive.

They can also serve as a form of risk management for farmers. They provide financial security and stability, particularly in the face of uncertainties associated with adopting new practices. Lastly, incentives tied to certification programs or sustainable practices can enhance market access and recognition for growers.

Consumers and buyers increasingly demand sustainably produced products, and premiums or price differentials for certified or sustainable goods can create market advantages for growers. These incentives not only provide economic benefits but also contribute to the reputation and market competitiveness of farmers.

## Conclusion

People are at the heart of agriculture, and investing in them is crucial for the success and long-term sustainability of the industry (Figure 26).

Investing in education, training, and skills development programs equips farmers, farm workers, and agricultural professionals with the knowledge and expertise to adopt best practices, improve productivity, and adapt to changing market demands. Continuous learning and professional development opportunities enable individuals to stay updated with technological advancements, techniques, and research, contributing to agricultural growth and innovation.



**Figure 26: Example of Australian Cotton Industry Leadership. All scholars above are cotton industry leaders, thanks to the investment by the cotton industry to personal growth and leadership (Brisbane, 2019) Author in the middle.**

Providing individuals with the necessary resources, support, and decision-making capacity cultivates a sense of ownership and fosters a culture of engagement and collaboration. When people feel valued and empowered, they are more motivated to contribute their ideas, expertise, and efforts towards improving agricultural practices and driving positive change.

Investing in the well-being of farmers and agricultural workers promotes their physical and mental health, ensuring they can perform their tasks effectively and sustainably. Agriculture can be physically demanding and mentally challenging with multiple compounding external pressures, and providing access to healthcare, work-life balance, safety measures, and supportive working environments is crucial for the overall well-being and resilience of the workforce. When people are healthy and supported, they are equipped to overcome challenges and navigate the uncertainties of agriculture.

We ensure agricultural businesses' continuity and long-term viability by fostering leadership skills and encouraging knowledge transfer between experienced and young farmers. Investing in leadership development programs and mentoring opportunities prepares the next generation of agricultural leaders and facilitates smooth transitions in management succession. Investing in people at all stages of their careers creates a strong foundation for future agricultural success.

Agriculture is deeply connected to communities, and investing in people positively impacts the social fabric of rural areas. Investing in people at every level creates a ripple effect, fostering social cohesion, cultural preservation, and sustainable rural development. By supporting agricultural education, training, and employment opportunities, we strengthen local economies, reduce rural migration, and contribute to rural communities' overall well-being and development.<sup>10</sup>

Investing in people lays the foundation for a thriving and sustainable agricultural sector that can meet current and future challenges.

Developing effective and trusted BMP in agriculture requires the active involvement of industry, research institutions, and government, along with regular external evaluation and validation.

Industry participants, including farmers, industry organisations, and agribusinesses, play a vital role in developing BMPs. Their practical knowledge and on-the-ground experience provide valuable insights into the realities and challenges of agricultural practices. By engaging industry representatives throughout the process, BMP can be

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<sup>10</sup> [FPJ1202C, Nettle, R \(2015\), More Than Workforce Shortages: How Farm Human Resources Management Strategies Will Shape Australia's Agricultural Future](#)



tailored to address specific needs, promote adoption, and ensure practicality and feasibility.

Research institutions bring scientific expertise and evidence-based knowledge to the development of BMP. Their studies and findings help identify best practices, assess their effectiveness, and understand their environmental and social impacts. Collaboration with researchers ensures that BMP is based on sound scientific principles, enhance sustainability, and are adaptable to changing circumstances and emerging challenges.

Government involvement is crucial for creating an enabling environment for BMP adoption. Government agencies provide regulatory frameworks, policy support, and financial resources that facilitate the implementation of BMP. Their support helps establish standards, guidelines, and incentives incentivising farmers to adopt sustainable practices. Collaboration with government entities ensures alignment with national goals and enhances the scalability and long-term sustainability of BMP.

Regular external evaluation and validation of BMP are essential to maintain trust and confidence in their effectiveness. External evaluations provide transparency, accountability, and opportunities for continuous improvement, strengthening the credibility and impact of BMP. Independent assessments and audits help verify that BMP deliver desired outcomes, meet environmental and social standards, and stay updated with evolving knowledge and practices.

A collaborative and inclusive approach is established by actively involving industry, research institutions, and government entities in developing, implementing, and evaluating BMP. This multi-stakeholder engagement ensures that BMP are practical, evidence-based, and aligned with broader goals of sustainability and responsible agricultural practices. It fosters shared responsibility, knowledge exchange, and innovation, leading to effective and trusted BMP that drive positive change in the agricultural sector.

Social license in agriculture requires lifelong commitment and collective effort. Engage all parties, address concerns, and foster trust. Adapt to changing expectations, seek feedback, and develop sustainable practices together.

## Recommendations

These areas foster public trust, enhance industry reputation and contribute to the sustainability of Australian agriculture. Key recommendations to industry include:

- **Transparency:** Promote openness and clear communication about farming operations, practices, and their impacts. This includes sharing information about production methods, sourcing, and supply chain processes.
- **Accountability:** Take responsibility for actions and consequences, demonstrating a commitment to ethical conduct. This involves being accountable for environmental stewardship, fair labour practices, and adherence to regulations and standards.
- **Sustainability:** Showcase a long-term commitment to the well-being of humans, society, the environment, and the economy. This includes adopting sustainable farming practices, minimising resource use, promoting biodiversity, addressing climate change, and prioritising the well-being of farmers and rural communities.
- **Stakeholder engagement:** Actively involve and listen to the concerns and perspectives of all relevant participants, including farmers, communities, consumers, and industry representatives. This fosters dialogue, understanding, and collaboration in decision-making processes, ensuring the well-being of all working partners.
- **Ethical practices:** Uphold moral standards and ethical behaviour throughout agricultural businesses and supply chains. This involves treating animals humanely, ensuring fair working conditions, promoting fair trade practices, and prioritising the well-being of all individuals involved.
- **Community involvement:** Engage with and support local communities through partnerships, initiatives, and collaboration. This includes investing in community development projects, supporting local businesses, addressing community needs, and promoting the overall well-being of rural communities.
- **Environmental stewardship:** Demonstrate a commitment to protecting and preserving the environment. This involves implementing sustainable farming practices, conserving natural resources, reducing pollution, promoting evidence-based agriculture, and ensuring the well-being of ecosystems and habitats.
- **Social responsibility:** Engage in activities that benefit society and contribute positively to the community. This can include supporting education and training

programmes, promoting health and nutrition, addressing social issues in rural areas, and prioritising society's overall well-being.

- **Impact assessment:** Conduct rigorous and thorough evaluations of the human, social, environmental, and economic impacts of agricultural practices and supply chains. This helps identify areas for improvement, ensures accountability, and safeguards the well-being of all participants.
- **Collaboration:** Work effectively with key industry partners and participants, including communities, non-governmental organisations (NGOs), and government bodies, to address shared challenges and find sustainable solutions. Collaboration enables knowledge-sharing, innovation, and collective action towards promoting the well-being of individuals and communities.



By prioritising these areas, Australian agriculture can build public trust, foster sustainable practices, and contribute to the well-being of individuals, communities, the environment, and the agricultural industry.

Finally, as farmers, we possess invaluable insights that can truly make a difference. To maximise our impact, we need to connect with those who view the world through different lenses. By bridging the gap between diverse perspectives, we can infuse our work and research with a sense of excitement and purpose. Ultimately, this enables us to create meaningful change for the people who are most directly affected by our farming activities. Let us embrace collaboration, share our knowledge, and together, cultivate a brighter and more sustainable future for all.



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