

Australian Mungbean
Association
Strategic Plan
2020–2025

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2020 Strategy Conference delegation – Toowoomba City Golf Club, 11–12 February 2020

DELEGATES

Front row-left to right

Pat Weir, Chandru Hiremath, Dr Rex Williams, Chris Murphy, Karen Schmidt, Mark Schmidt, Brian Algate, Paul McIntosh, Brett McIntyre, Phill Ryan, Jillian Meppam-Mott

Middle row – left to right

Rob Evans, Kym McIntyre, Col Douglas, Rob Ayre, Hugh Briar, Phillip Burrill, Prof. Bhagirath Chauhan, Bhuvan Gandhi, James Hunt, Mal Hegarty, Ben McIntyre, Ken Cunliffe, Jayne Gentry

Top row-left to right

Meg Kummerow, Portia Baskerville, Tara Rogan, William Martin, Tim Rossignol, Connor McLaren, Dr Kylie Wenham, Steve Foran, Jess Le, Phong Le, Andrew Green, Kerry McKenzie, Jeff Stone, Lloyd Neilsen, Pat O'Hara

1. Background

1.1 About the Australian Mungbean Association

The Australian Mungbean Association (AMA) is a non-profit peak national body organisation representing all sectors of the Australian mungbean industry. Its members include plant breeders, research agronomists, grain traders, seed graders and packers, crop consultants and representatives from a range of other government agencies and private sector enterprises.

The primary objective of the AMA is to work for the improvement and development of the mungbean industry in Australia.

The AMA plays an important role as the domestic mungbean production industry's peak body responsible for the following activities:

- Represent the interests of its members.
 - o Lobby on behalf of the industry to influence government policy.
- Provide industry insights to help businesses grow and succeed.
- Understand the issues and opportunities that affect farmers, growers, traders, exporters.
 - training and development
 - research and collaboration
 - networking and connection
 - sharing stories (good and bad)
 - seeking to find answers to member's questions
 - manage mentoring programs for members
 - o arrange public relations or advertising activities to promote the industry
 - o coordinate programs to support the 5 year strategic plan
 - develop and manage the operational plans
 - o guide research reports, publications, fact sheets and more.

The AMA is committed to developing effective networks and linkages between key stakeholders within the industry and to ensuring that industry efforts and resources are maximised and aligned for the common good of the mungbean industry.

Through the dedicated efforts of the Association's Promotions, Seeds, Standards, Packer and Logistics and Research and Development committees the AMA has a strong focus on ensuring:

- Food safety and hygiene standards are maintained at a high level across the whole industry.
- Quality assurance systems are adopted that improve traceability of our produce and build market confidence in Australian mungbeans.
- Superior mungbean cultivars are developed that will achieve higher returns for producers and also meet overseas consumer demand for premium quality mungbeans.
- Mungbean producers and their advisors have ready access to the best available production, marketing and industry information.

AMA activities are supported by the following Association Committees: Promotions; Seeds; Standards; Packer and Logistics; Research and Development.

1.2 Purpose of the Strategic Plan

This Strategic Plan is the fifth developed by the Australian Mungbean Association (AMA) for the industry. The current plan commences from February 2020 and covers the five-year period to 2025. Like the previous plans, the Strategic Plan 2020–2025 is designed to respond to changing growing conditions and market environments, and create a path for industry development. It is a combined effort by all sectors of the industry who put individual interests aside for the benefit of the whole industry.

The strategic planning process and workshop is viewed as an extension of the role of the AMA:

- bringing key stakeholders together
- collaboration and ideas sharing
- gaining industry knowledge from key speakers
- networking and developing strong connections
- exploring research opportunities and
- setting important goals to deliver value to members.

The Strategic Plan 2020–2025 has several key aims, these being:

- 1. Document the achievements and results from the previous Strategic Plan.
- 2. Communicate a common understanding of the mungbean industry's potential and strategic priorities.
- 3. Develop 5-year strategic priorities and key actions for the AMA.
- 4. Provide a mechanism to strengthen relationships between key organisations and people in the Australian mungbean industry.
- 5. Provide the industry with accountability and evidence to accurately measure the success of planned actions.

The Strategic Plan will support the AMA to assist and represent the interests of the Australian Mungbean Industry.

1.3 How was the Plan developed?

The Strategic Plan was developed with input from all sectors of the Australian mungbean value chain, and from all regions producing mungbean in Australia. Four key activities were undertaken as part of the process:

1. Industry analysis

- Ibis World report Growing Grain in Australia (Report A0149)
- Reports from Member Leadership Committee
- Pulse Report data

2. Member and Stakeholder feedback and perception survey

A survey was developed, and all key stakeholders and members were invited to participate. 120 responses were taken. The online survey split respondents into distinct areas of interest including: 1. mungbean growers; 2. mungbean agronomists and advisers; 3. mungbean processors and exporters; 4. mungbean exporter only; and 5. researchers and laboratories. This provided an opportunity to gain more accurate and detailed information and responses from these distinct groups.

3. AMA Leadership Workshop

Focus HR met with AMA leadership committee on the following dates to prepare and discuss the strategic plan:

- 25/07/2019
- 12/09/2019
- 21/01/2020
- 04/02/2020

4. Two-day Strategic Planning Conference 11–12 February, Toowoomba City Golf Club

Held in Toowoomba at the City Golf Club, on the 11th and 12th of February 2020, the workshop was attended by 45 attendees, representing all sectors of the value chain and growing regions.

- 7 Notable presentations by speakers and industry leaders
- 12 Key Priorities identified for 2020-2025
- Project Plans developed for all Key Areas of Focus.

1.4 AMA Strategy Conference Speaker List

- Mark Schmidt President AMA Opening Address
- Pat Weir Member for Condamine Member, State Development, Natural Resources and Agricultural Industry Development Committee
 Opening address
- Gillian Meppam-Mott (GRDC)

Topic: GRDC and The Mungbean Industry

• **Cr Paul Antonio** (Mayor of Toowoomba)

Topic: Importance of the Ag Sector & Strength of the Region

James Hunt (Ace Exports & Woods Group)

Topic: Why Australian mungbeans are the most sought after in the world?

Dr Rex Williams & Col Douglas (DAF)

Topic: DAF and The Mungbean Industry

Peter Keyte (Port of Brisbane)

Topic: Update on Port of Brisbane results and future plans

• Paul McIntosh (Pulse Australia)

Topic: Climate Change and Australian mungbeans

2. Executive Summary

February 2020 – Strategic Plan – President's plan and Mungbean update

What a great time to be involved with mungbeans. When I look around the key stakeholders within the industry, I see a group of dedicated and passionate members for the mungbean Industry. We have a great blend of exporters, processors, senior and junior AMA members, industry personnel, agronomists and researchers.

I have now been the president for just over 3 and a half years and have been heavily involved in the AMA for 25 years, holding the positions of DAF and GRDC Liaison, Seeds and Standards chairman and Vice President.

This has given me the grounding to understand what is required to continue the momentum of the mungbean industry. We cannot forget the hard work of the previous past presidents and life members for their passionate work. This is something that I keep promoting and ensure that happens at each meeting. I would like this to always continue.

The strategic plans are a great way for us to seek out what the mungbean industry requires, but if not followed or referred back to we could see this effort wasted. All members on management have a reporting function, one of these is reporting on the strategic plan. This will help keep what we achieve over the next two days clear in our focus.

The AMA is the peak body for mungbeans and through its members voluntarily promotes the growth of this industry. Our members are directly involved with all facets of the industry from seed production through to marketing of mungbeans domestically and internationally. Our members handle over 95% of the national crop and over time members have increased storage and grading capacity to handle larger crop size of mungbeans, which is line with our strategic plan.

Some of the achievements since the last strategic plan:

- Increased attendance at AMA meetings.
- Agreement with Pulse Australia to extend our agronomy support.
- Two separate days of visits to AMA members business's including AgEtal, Mt Tyson Seeds, Kialla Pure Foods, USQ, Pope Packaging, Blue Ribbon Seed & Pulse Exporters and Brisbane Port.
- Recognition of members with 15 and 25 years of service to the Mungbean Industry at our 30th anniversary dinner.
- Release of Onyx-AU a new black gram replacement.
- New promotional banners for Onyx-AU, Technical and Mungbean Agronomy courses.
- Continued support for PhD with Halo Blight for the last 4 years.
- Continuation of the AMA field day at DAF Hermitage research facility.
- Granting life membership to Paul McIntosh and Dr Rex Williams.
- Continuation of the National Mungbean Improvement Program (NMIP).
- Participation in the 2019 International Sprout Conference.
- Technical Day for researchers to present their latest information, with 2019 the best ever.
- Continued participation in the Australian Summer Grains Conference.
- Starting the process of a 3rd party auditor for Seeds.

What are we up to next and need to do in the future:

- Laboratory training day for members.
- Finalisation of seeds manual and training day for seed producers.
- Continued accredited agronomy courses.
- Grower and advisor days.

Increase brand recognition.

As you will see we invest a significant amount of money back into the Industry, this level of support can only continue if we are the Commercial Partner of the National Mungbean Improvement Program. Without this support the AMA would not be able to continue the work and projects that we are currently involved with.

The Australian Mungbean Association started in 1986 as the new crop came to light. I am in awe of the founders of the Association and the members that started the AMA and the drive and passion that they gave to forming this great association.

I look at the past presidents and life members that have given so much we all must remember what these members have done in forging where we are today. The past presidents have been: Phil Smith, Brian Cowan, Dennis Logan, Brian Algate, Stephen Donnelly, Dale Reeves, Todd Jorgensen and Rob Anderson.

We cannot forget the efforts of past and current treasurers, secretaries and sub-committee members for their dedication.

The association was formed with the following objectives:

- Food safety of mungbeans.
- Release of new mungbean varieties.
- Creating a code of hygiene for mungbeans.
- Making mungbeans a viable option for growers.
- Export standards for mungbeans.

These objectives form a large part of what the AMA does today. We have continued to expand and improve these goals while creating more as the Industry grows.

Key outcomes from the last strategic plan

Vision – by 2019, mungbean production will grow to produce an average of 170,000 tonnes per annum through its permanent and prosperous fit in the farming system.

While we failed in the 170,000 tonnes due to seasons, I feel we have achieved in making mungbeans a 'permanent and prosperous fit in the farming system'.

The **5 key goals** were:

- 1. Investment in innovation and improvement
- 2. Strong market access
- 3. Improved on farm performance
- 4. Capacity and promotion
- 5. AMA is a credible organisation

Out of the 2020–2025 strategic plan we need to improve on what the past presidents have achieved, we need to push forward and move with the changing times.

Over the years as president I have seen the need for members to consider:

- Move to full-time or part-time staffing. Members on management volunteer their time away from their jobs to ensure the industry continues to grow.
- Legal issues with all documents past and present.
- Knowing member's obligations to the AMA.
- Rotating new members and management to allow new ideas into the Association.

- Increasing active membership, especially with packers and making sure the right people are involved.
- Increase and strengthen the AMA brand.
- Strengthen the relationships with our industry partners.

During our planning process management came up with some key objectives for consideration. Out of this strategic plan we need to come up with 5 main goals:

- 1. Maintain a focused mungbean breeding program:
 - a. Adoption of new technology (speed breeding)
 - b. Ask the question, is our approach correct (long and short season varieties).
- 2. Ensure that all processors are members of the AMA:
 - a. great promotors of mungbeans in their own growing area.
- 3. Increasing memberships and interstate members:
 - a. Geographical expansion into NSW
 - b. What other areas.
- 4. Having more members attend AMA meetings so we all know what is happening within the mungbean Industry.
- 5. Stronger structured and active committees delivering projects.
- 6. Develop and strengthen the resilience in the industry / consistent production and growth.
- 7. Trust and confidence:
 - a. What is the AMA message
 - b. Branding about improving the perception of mungbeans as a pillar crop
 - c. Mungbean fact sheet so we all are on the same page
 - d. How is the message spread.
- 8. Improve accessibility and usability of the AMA website.
- 9. A resource within AMA to manage projects (paid employee).

The mungbean industry is on the rise and we need your support to continue this growth.

Thank you for supporting the mungbean industry.

Mark Schmidt

(AMA President 2017–Present)

3. Industry Analysis

3.1 Strengths

- Superior quality product look, feel, testing
- Consistency of supply
- Able to command a higher price
- Quick transit from field to market
- Prime harvest timing

3.2 Weaknesses / Risks

- Inconsistent production need regular supply
- Exchange rates
- Grower confidence
- Consumer confidence
- Increased competition
- MRL impact (health, profitability, reputation)

3.3 Opportunities

- Raising the Pulse Report
- Promote low allergenic properties of mungbeans
- Explore opportunities as a meat alternative (research?)
- Utilise social media more effectively
- Protecting IP on the website (request for info or member only)
- Change perception from mungbeans as 'mongrel' beans to 'money' beans
- From opportunity crop to a mainstream crop
- Industry check sheets (key areas of focus)
- Increased market opportunities with practical improvements to the AMA Standards through the annual review process
- Ensure the AMA Live Standard samples are set at a reasonable level to ensure Australian mungbeans quality levels command a market premium
- Improvement to consistency in testing across the network of AMA registered laboratories, through training and auditing
- Improved compliance to Grower Vendor Declaration through compliant chemical application

3.4 Threats

- Inconsistency in the setting of live standards samples eroding the value of Australian mungbeans in the international market
- Potential for unregistered labs to participate in providing quality certificates threatens the integrity of the testing process

3.5 Trends

- Preservation of the integrity of Australian mungbeans' reputation in the international market as the premium mungbean supplier
- Significant use of the AMA Machine Dressed Mungbean Standards as an international standard
- Increased use of AMA Testing to determine mungbean quality at various stages of the supply chain
- An acceptable level of trust in the testing process

3.6 Quality assurance opportunities

- National Register (similar to other industries)
- MRLs
- Managing MRLs in mungbeans
- Strategies to increase compliance
- Grower / Vendor Declarations
- 100% compliance
- App (live capture, real time option)
- Agronomist support/involvement
- Make easier to receive
- Virus testing
- Faster test response time

3.7 Breeding opportunities

- Organic mungbeans
- Drought hardy
- Longer growing
- Disease resistant
- Regeneration ability post adverse weather
- High yield or premium quality? What is the right blend/approach?
- Weathering tolerance at maturity

3.8 Efficiency, productivity, profitability opportunities

- Post-harvest storage
- Reduce grading losses
- Understand how mungbeans fit in our farming system

3.9 Industry insights by GRDC

- Disruptive technology
- Growing global markets
- Non-animal protein meat replacement
- Low allergenic properties
- Established supply chains
- Mentality of mungbean as an opportunity crop

3.10 Review of survey data and key insights

A survey was developed and all key stakeholders and members were invited to participate. 120 responses were taken. The online survey split respondents into distinct areas of interest including: 1. mungbean growers; 2. mungbean agronomists and advisers; 3. mungbean processors and exporters; 4. mungbean exporter only; and 5. researchers and laboratories. This provided an opportunity to gain more accurate and detailed information and responses from these distinct groups.

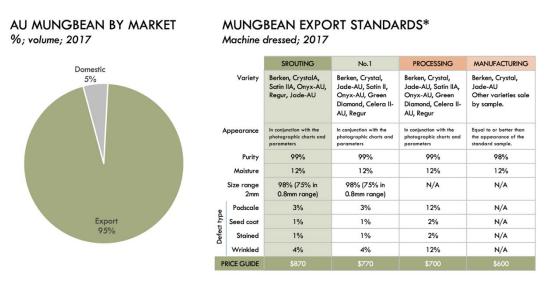
3.11 Overview of the industry

Structure of Australian mungbean industry

The mungbean supply chain in Australia is export focused. In 2017, 95% of mungbeans were exported, with most growers supplying processing and manufacturing grade mungeans (see Figure 1).

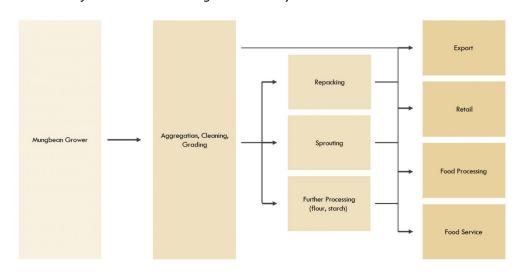
Ninety-five percent of the Australian mungbean crop is aggregated, cleaned and graded prior to export. The remaining five percent of the crop is repacked, sprouted or processed into flour and starch for the domestic market (see Figure 2).

Figure 1: Australian market segments and export standards.



Source: Coliolis report for Qld Department of Agriculture and Fisheries, "Mungbean: The \$70m diversification opportunity in North West Queensland", 2018

Figure 2: Structure of the Australian mungbean industry.



Source: Coliolis report for Qld Department of Agriculture and Fisheries, "Mungbean: The \$70m diversification opportunity in North West Queensland", 2018

Key events in the Australian mungbean history

Mungbeans were first grown commercially in Australia in the 1930s. There has been consistent investment in research and development and the release of new varieties since the 1960s (see Figure 3).

AU wild Vigna National Munabear established 2016 1996 1930s ion 20,000t/yr 2011 it's highest leve New spp. deve es 250 -125-150,000 from TAIW 2008 1975 se of 'Crystal 'Berken' and 'Requi released 2017 oduction 45,000 Onyx-AU' rele 2000 first new black gram 1969 Certified Agro since 1975 Program develope 2014 'Jade-AU' and Celera II' released

Figure 3: Mungbean industry development timeline in Australia to 2017

Source: Coliolis report for Qld Department of Agriculture and Fisheries, "Mungbean: The \$70m diversification opportunity in North West Queensland", 2018

Total value of the industry

The average total value of the mungbean industry has risen considerably since the 1990s and 2000s, and the industry has endured periods of reduced volume of production and increasing adverse climatic conditions.

Australian mungbean exports have been growing very strongly (10y CAGR 31%) since 2007 (Figure 4).

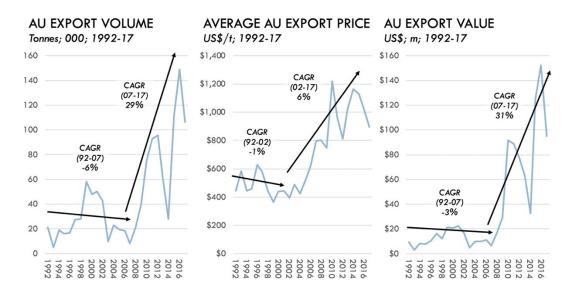


Figure 4: Historic value of Australian mungbean exports (1992 to 2017; USD).

Source: Coliolis report for Qld Department of Agriculture and Fisheries, "Mungbean: The \$70m diversification opportunity in North West Queensland", 2018

In 2020, the Australian 5-year average production was 90,000 t/yr and the industry was worth \$118 million to the Australian economy (see Figure 5).

Figure 5: 5-year average export tonnes, export value and key destination markets for Australian mungbeans.



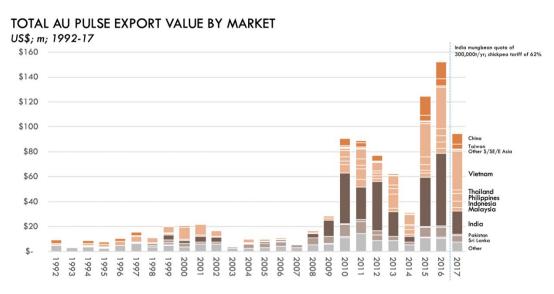
Source: Pulse Australia, 'Pulse Variety Guide', 2020

Export destinations and growth

Australian mungbeans are exported to a wide range of countries, however key export destinations remain Asia and the Indian sub-continent. Nearly 90% of Australian mungbean is marketed to these regions (Figure 6).

There is a clear shift underway to SE Asia (Figure 6) as the Indian sub-continent becomes increasingly self-sufficient and is sourcing lower cost mungbean for importation.

Figure 6: Australian Mungbean Export Value by destination (1997 to 2017; USD).



Source: Coliolis report for Qld Department of Agriculture and Fisheries, "Mungbean: The \$70m diversification opportunity in North West Queensland", 2018

It should be noted that the data detailed in the above charts represents production, domestic and export markets for past periods and is not indicative of future production or potential growth in domestic and/or export markets. Future production of Australian mungbeans will be influenced by demand; pricing; competing crop prices; varietal development; weather patterns; seasonal influences (and potential solutions) around disease and pest management; and growers' experiences/satisfaction in growing mungbeans. Similarly, the export data shown above should not be considered as indicative or used for benchmarking purposes for future exports as there are many factors (beyond the control of the Australian mungbean industry) that impact the export market and the demand for Australian mungbeans. Those factors are inclusive of global supply/demand; pricing; available production; freight rates to particular markets; and availability and pricing of competitor mungbeans.

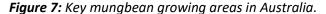
Domestic consumption

Mungbean sprouts are the most commonly consumed bean sprouts in the Australian domestic market. Unlike ripe vegetables, whose nutritional value progressively decreases after they have been harvested, bean sprouts retain their nutritional properties until consumed. Mungbean sprouts and whole mungbeans destined for do-it-yourself sprouters are sent to all states of Australia.

The value of the sprouting sector is additional to the mungbean export values shown in Figure 4, but the value and tonnage produced for the sprouting sector is not available.

Australian production and yields

Mungbeans are grown mainly in NSW and Queensland (see Figure 7). Australian mungbean production is in long term growth (Figure 8).



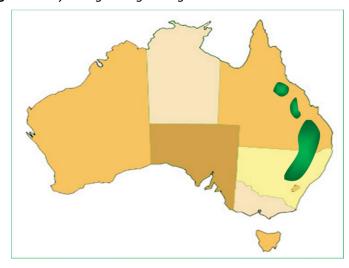
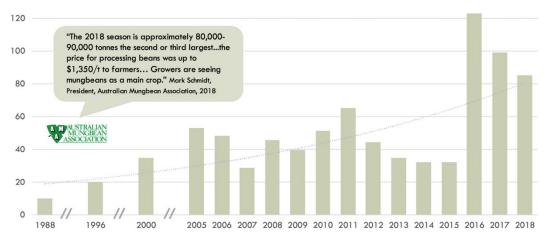


Figure 8: Historic production from 1988 to 2018 (tonnes)

PRODUCTION OF MUNGBEANS IN AUSTRALIA

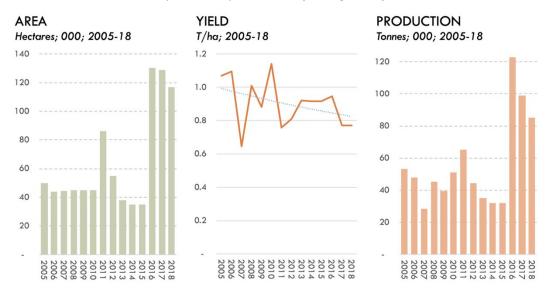
Tonnes; 000; 1988-2018



Source: Coliolis report for Qld Department of Agriculture and Fisheries, "Mungbean: The \$70m diversification opportunity in North West Queensland", 2018

In 2018, mungbeans were planted over approximately 120,000 hectares, producing around 85,000 t and yielding 0.8-0.9 t/ha (Figure 9).

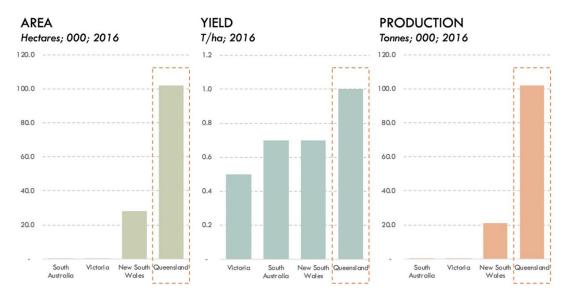
Figure 9: Australian area sown, yields and production of mungbean, from 2005 to 2018



Source: Coliolis report for Qld Department of Agriculture and Fisheries, "Mungbean: The \$70m diversification opportunity in North West Queensland", 2018

Queensland is the major producer of mungbeans in Australia and achieves higher yields on average. In 2016, Queensland dominated mungbean production as shown in Figure 10.

Figure 10: 2016 sown area, yield and production by state.



Source: Coliolis report for Qld Department of Agriculture and Fisheries, "Mungbean: The \$70m diversification opportunity in North West Queensland", 2018

More recently mungbeans have been grown in more varied regions – right down to Victoria and in the Ord River region of Western Australia. This is demonstrated by end point royalty data providing regional growing information that suggests further expansion in the Burdekin region, NSW and to a lesser extent Victoria and Western Australia. With the promotion of mungbeans to other regions and the support of good agronomic advice, GRDC-led support and the onboarding of State/Territory DPI/DAF bodies, there is good upside potential for the growth of mungbeans in these "new" regions.

4. The AMA Strategic Plan 2020–2025

4.1 Purpose

The Australian Mungbean Association (AMA) aims to improve and develop the industry through the aligned collaboration of value chain members and other key stakeholders

4.2 Primary Objective

To work for the improvement and development of mungbeans in Australia.

4.3 AMA's mungbean value proposition

- 1. Mungbean is a high protein food
- 2. Australian mungbeans have a reputation as clean and green high protein legume arain
- 3. The Australian mungbean industry has the traceability and quality systems by utilising grower declaration forms at delivery time

4.4 The competitive advantage of Australian mungbean

- 1. Australian mungbean provides a summer legume option for northern cropping systems
- 2. Growing time is less than 100 days
- 3. Exported by quality assessments that is formatted by AMA and Buyers
- 4. \$/ML is higher than other summer crops WUE
- 5. The industry is serviced by various sheds processing system not a monolith bulk handler

4.5 <u>Vision 2020–2025</u>

The AMA aims increase mungbean yield to target 200,000 t capacity in Australia and position mungbeans as the summer crop of choice. To change the perception, attitude and planning decisions around mungbean planting as a pillar crop to be seen as a profitable short rotation crop option.

This will be achieved through the delivery of 12 enabling priorities (see following page).

4.6 Key Priorities

- 1. Position mungbeans as a **Summer Crop of Choice** or Pillar crop
- Maintain and foster key relationships with GRDC and DAF to deliver the National Mungbean Improvement Program (NMIP)
- 3. Protect the reputation of the Australian mungbean industry as a producer of clean, green mungbean products through education, lobbying and the introduction of robust Vendor Declarations to ensure all export countries maximum residue levels (MRL) are met
- 4. Protect the supply chain from adverse market effects by **increasing vendor declaration compliance**
- 5. **Geographic expansion** into other growing areas to increase production
- 6. Design and implement a **Digital Imaging** tool to deliver improved testing
- 7. **Improve the AMA Website** for better utilisation and secure position as first point of contact for all stakeholders in the mungbean industry
- 8. Develop a well-rounded suite of **seed varieties** that suit geographical regions, market demands and climate
- 9. Implement **Trademarks and IP protection** to protect and add value to our Australian mungbean varieties
- 10. **Increase mungbean crop size to target 200,000t capacity** in Australia through better soil nutrition, irrigation scheduling & crop management, agronomy skills, new research, varietal improvement and increased confidence by farmers
- 11. Explore **value adding** opportunities for the AMA to provide greater value to members and industry in the areas of innovation, food alternatives and human/animal nutrition.
- 12. Recruit and engage a **paid employee within AMA** to focus on service and project delivery reducing reliance on volunteer Management Committee positions

4.7 Key Priority Briefs and Project Leads

1. Mungbeans as a Summer Crop of Choice

WHAT: Extension of mungbeans as a short rotation crop option not just an opportunity crop OBJECTIVE: To change the perception of attitude and planning decisions around mungbean planting

OUTCOMES:

- Mungbeans become part of planned cropping system profitability and sustainability
- Increased average t/ha

WHO: Paul McIntosh

PORTFOLIO: Agronomy Committee

2. National Mungbean Improvement Program (NMIP)

WHAT: Maintaining partnerships with GRDC and DAF

OBJECTIVE: To maintain, continue and grow key partnerships

OUTCOMES:

- Continued release of improved varieties to meet requirements
- Improved measurement through increased productivity
- ROI for AMA/DAF/GRDC

WHO: James Hunt

PORTFOLIO: Seed Committee

3. Maximum residue levels (MRL)

WHAT: Strong education, lobbying, processes around MRLs that protect the reputation of Australian industry for clean, green mungbeans

OBJECTIVE:

- 100% pesticide label compliance and reporting
- Accurate Vendor Dec and 100% compliance at delivery time
- Known, genuine, honest reporting/documentation (Vendor Dec) completed by growers
- Any non-compliant product does not ship (reporting and testing)
- National Residue Survey (NRS) returns nil excess notifications
- No financial penalty applied for non-compliant product (no rejected product). Only costs of repatriated product.

WHO: Ben McIntyre

PORTFOLIO: Technical Committee

4. Grower / Vendor declaration

WHAT: Improve Vendor declaration compliance

OBJECTIVE: To protect the supply chain, including growers, for market requirements by increased compliance and reporting

OUTCOMES:

- 100% accuracy & compliance
- 100% of deliveries have a vendor declaration

WHO: Ben McIntyre

PORTFOLIO: Technical Committee

5. Expansion

WHAT: Geographic expansion into other growing areas to increase production OBJECTIVE:

- Expand geographical footprint and increase production capacity
- Reduce risk from adverse weather events
- 200,000T production capacity with AMA members

WHO: Paul McIntosh - AMA Paid agronomist

PORTFOLIO: Promotions Committee

6. Digital imaging

WHAT: Digital Imaging for improved testing

OBJECTIVE:

- Develop/adopt a digital classification tool to replace the physical visual comparison test for standards
- AMA controls the Mungbean standards
- AMA control of IP

WHO: Lloyd Neilsen and Ken Cunliffe PORTFOLIO: Standards Committee

7. Website improvement

WHAT: Improve the AMA website for better utilisation

OBJECTIVE:

- To improve the AMA website as first point of contact for all stakeholders in the MB industry
- Information rich
- Ease of access and use

WHO: Brett McIntyre

PORTFOLIO: Promotions Committee

8. Varietal options

WHAT: Development of further varietal options

OBJECTIVE:

 Well-rounded suite of varieties, that suit differing geographical regions and market demands and climate extremes if possible

WHO: James Hunt

PORTFOLIO: Seed Committee

9. Trademarks and IP protection

WHAT: Implement Trademarks and IP protection

OBJECTIVE:

- To protect and add value to varieties by trademarking names
- To manage access to AMA IP website and manuals

WHO: Lloyd Neilsen and Phil Ryan PORTFOLIO: Standards Committee

10. Increasing yields

WHAT: Increase mungbean crop size to target 200,000 t capacity in Australia through nutrition, irrigation schedule and crop management, skilled agronomists, confident farmers, adoption of latest research, and improved varieties plus growing in non-traditional areas

OBJECTIVE:

- Increase yield through nutrition, irrigation schedule and crop management, research positives in disease etc
- Stabilise our markets by regular quality and supply continuance
- Increased grower and agronomist confidence

WHO: Paul McIntosh

PORTFOLIO: Agronomy Committee

11. Value adding

WHAT: Explore value adding opportunities – innovations, food, nutrition *OBJECTIVE*:

• Explore opportunities for the AMA to provide greater value to members and industry in the areas of innovation, food alternatives, nutrition, etc

WHO: Brett McIntyre

PORTFOLIO: Promotions Committee

12. Paid employee

WHAT: Engage a paid employee within AMA to focus on service and project delivery OBJECTIVE:

• Recruit and engage a paid employee to focus on service and project delivery reducing reliance on volunteer Management Committee positions

PORTFOLIO: Management Committee

Timeframe: 6 months from sign-off

4.8 Operational actions

- 1. National Register / Project List
- 2. Annual Grower / Crop Competition
- 3. Paid AMA Employee for Project Delivery Secretary
- 4. Disseminate information about biosecurity to AMA members
- 5. Link to Phil's projects to AMA members
- 6. Raising the Pulse Report
- 7. Low allergenic properties of mungbeans
- 8. Non-meat alternatives
- 9. Industry check sheets (Key areas of focus)
- 10. Online social media Facebook
- 11. Managing MRLs in mungbeans
- 12. Organic mungbeans
- 13. National register
- 14. Breed varieties that are insect tolerant / robust (drought)/ higher yielding/ temperature extreme capability
- 15. How to promote grower declaration to 100%
- 16. High yield vs premium quality?
- 17. Irrigation scheduling crop mgt guidelines (Kylie W)
- 18. App for grower decs live capturing real time
- 19. Vendor decs make it easier to receive, agronomist assistance (when does it go out?)
- 20. Website: Protect I.P request information/ member access
- 21. Weathering resistance regeneration post adverse weather
- 22. Nitrogen levels will reduce losses reply by K Mckenzie
- 23. How do mungbeans fit into our farming system Jane Gentry
- 24. Self-desiccating mungbean
- 25. Virus testing
- 26. Techniques to reduce grading losses (Mal and James) Cindy to do story
- 27. Opportunity for mungbeans in meat alternatives
- 28. Post-harvest storage (Phil Burrell)
- 29. AMA membership made up of minimum 25% growers

4.9 Idea generation by portfolio

Seeds Committee

- Hermitage Research Centre with Col Douglas to develop 5 tonne yielding mungbean
- More agronomic support Burdekin
- Selection of fields and growers
- Better planning
- Lack of local advice
- Accuracy of disease detection
- Grower confidence in seed scheme
- Lack of standards
- Lack of literature specific to seed protection
- Opportunities and threats on endpoint royalties production of seed
- Open pollinating
- Growers retaining seed
- Mother seed production
- Over the fence trading
- Policing PBR
- Trademark
- AMA Seed producing model
- Using seed producer status to buy commercial crops
- 60 day, 90 day or 120 day varieties

Agronomy Committee

- Continuous supply / summer crop ground share to mungbeans
- Big crop vs quality need higher yielding variety * need choices
- Planting window
- Geographical location
- Nitrogen requirements of mungbeans
- Nitrogen especially in low N situations
- · Variety that will not need decisions
- Variety sites suited to geographical locations
- Farmer focused BMP course network and toolbox
- NOT an opportunity crop
 - o Roadshow
 - o Pillar Crop
 - o Treat like cotton prominence
 - o Premiere
 - Primary
- · Get growers and agronomists to processing plant at better understanding
- Field walk in a shed 4pm drinks / BBQ
- NSW need processing shed or 2
 - Moree/Narrabri
 - Grower case studies
- Mungbean doesn't leave ground cover- plant into stubble if possible
- Promote positives good quick summer crop
- Vendor declaration more completed
 - With planting seed
 - With contract
- Super variety with yield and fix health issues
 - o GM ??
- Mungbean in a farming system
 - Checklist
- Retain flowers to up yield (heat and stress)
- MRL excesses continuing to reduce
 - Different for every country
- Irrigation scheduling Kylie and Jayne
- Sodicity effects

Technical Committee

- Researcher day
 - Opportunity to link with agronomy course
 - Field day too technical content heavy
 - o Structure clear guidelines for presentations
 - o TED style talks? Q&A sessions
 - Research profiles point of contact? Papers
- Potential for "fresh" plan protein
 - Higher yielding/lower grade varieties
- Longer storage potential
 - Storage technology knowledge dissemination
- MRL's and grower declarations
- Updated information for agronomy course
 - o Researchers and speakers responsible for updating
- YouTube and social media 5 minute videos
 - Timely! Agros/ industry/ researchers/ growers/ information
- Growers influencers to discuss/ talk about timely issues
- Crop competition
 - o Tech adoption/immuration
 - Not just 'best crop' or 'highest yield'
 - Ground cover
 - Rural consultant
- Halo bright/ tan spots
 - O Where to next?
- Desiccation
 - Swathing
 - o New chemicals
 - Determinate varieties
 - Weathering/ heard seededness/ heat treatment
- Expansion into new areas
 - Demo trials
- Irrigated mungbeans G x E x M x M

Promotions Committee

- Meat replacements
 - Low allergy
 - o Plant based
 - o Food science/ dietitian at meeting
 - o Recipe cards
 - Consumer change
- Social media
 - o More videos
 - More frequent posting
- Grower declaration
 - o Promote accuracy and 100% compliance submitted
 - Reasons market access
 - o Simple form to fill out
 - o Fill out at AMA course practice
 - AMA members to insist on forms at grain delivery
- Website
 - o Functionality need improvement
 - Ask agronomists what they need to find
- Promote
 - o Rotation crop sequence advantages
 - Pillar crop/ short rotation crop
- Industry check list (growers)
 - o Agronomy decision/ risks
 - Marketing
- AMA/ Mungbean industry
 - o Fact sheet (e.g. Cotton Australia)
 - Cheat sheet Promoting industry