Future Directions

for the

Department of Agriculture and Food Western Australia

AUGUST 2016

A review and position for the Minister for Agriculture and Food

DAFWA Stocktake and Future Directions Panel August 2016

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ABBREVIATIONS

AEGIC Australian Export Grains Innovation Centre

CF Consolidated Funds

DAFWA Department of Agriculture and Food Western Australia

DOW Department of Water

DRD Department of Regional Development

DSD Department of State Development

FTE Full Time Equivalent staff

GGA Grower Group Alliance

GRDC Grains Research and Development Corporation

GVAP Gross Value of Agricultural Production

MLA Meat and Livestock Australia

NRM Natural Resource Management

R&D Research and Development

RBGs Regional Biosecurity Groups

RDCs Research and Development Corporations

RfR Royalties for Regions

EXECUTIVE SUMMARY

The Western Australian agriculture and food sector currently delivers \$8.6 billion in farm gate value to the State's economy which multiplies to \$20 billion in post farm gate value through transport, processing and value added activities. The sector is a major employer across the agrifood value chain and a significant contributor to the economic and social wellbeing of regional communities.

WA's agriculture sector has demonstrated great skill in capitalising on technology, innovation and farmer-led research and collaboration to drive adoption and continuous improvement in farming systems and is regarded as the leader in farm innovation nationally. The industry has a clear focus on what it can do well and the industries it can be internationally competitive in.

The State Government invests \$160m annually in the agriculture and food sector through its budget allocation to the Department of Agriculture and Food (DAFWA). The public expects that this investment ensures oversight of policy, regulation and economic development to ensure safe, secure and sustainable food production in this State.

The industry has a reasonable expectation that this expenditure is aligned with industry priorities, that it is invested efficiently in the science that underpins production, development and productivity growth, and that it provides crucial services to defend the industry from biosecurity, economic and trade threats.

The successful WA agriculture sector of today has benefitted from a long term significant investment by the State in science and industry development, with the cumulative benefits realised over a 20-30 year timeframe. DAFWA is crucial in defending existing industries from biosecurity and other operating risks, and in facilitating development of new industries and opportunities. DAFWA provides technical and professional support, and the impartiality of its independent research and analysis is highly valued. DAFWA's role in development contributes to the economic wellbeing of rural and regional communities, and to the broader State economy. DAFWA is recognised as being critical to the sector with industry identifying the Agency's key functions as being to both *develop and defend agriculture*.

DAFWA has been through a period of budget and staff reductions, with Full Time Equivalent staff reducing from 1581 in 2007 to 965 in 2016. There has been increasing concern from industry that these cuts may have gone too far, impacting on capacity and capability to deliver core services, and that the Department is now defined by what it can no longer do, rather than what it can deliver.

This financial pressure on the Department has coincided with a period of unprecedented interest and investment, both domestic and international, in WA agriculture driven by forecast demand growth in Asian markets. The bright outlook for agriculture has also driven investment by state and federal government in projects designed to stimulate growth in the sector, including the Water for Food, Regional Development Blueprints, Regional Cities, Super Towns, Northern Australia, Regional Infrastructure Australia, and processing and export development projects.

The next decade offers both opportunities and challenges for WA agriculture including:

- Expanding trade opportunities in Asia and beyond.
- Adoption of breakthroughs in science, technology and smart farming solutions to maintain internationally competitive industries.
- Agricultural businesses adapting to the management demands of an increasingly sophisticated industry and larger more complex farm businesses, and a period of rapid generational and managerial transfer.

- Integrating supply and value chain relationships.
- Integrating the needs of the agricultural industry into all infrastructure investments e.g. roads, ports, airports, information and communication technologies.

In early 2016 the Minister for Agriculture and Food commissioned a Stocktake Review to assess the budgetary impacts on the Department, and in May the new Minister subsequently called for a wider Review with thorough stakeholder consultation to determine the Future Directions for DAFWA. A three member panel was appointed to oversee this process and this report provides an overview of the consultation feedback summarised into Key Findings (see Page 6), with a range of Recommendations provided to re-set the priority and direction for the Department (see Page 10).

The Panel's consultations with over 100 Stakeholders identified a number of key themes of concern to industry:

- 1. DAFWA's capacity and capability has been depleted in key areas with redundancies leaving gaps in both core competencies and service delivery capacity. This requires an audit and realignment of core resources.
- 2. These gaps are impacting confidence in the Agency's ability to defend/protect the sector.
- 3. There is a lack of clarity and communication for Stakeholders on the Agency's role it has exited research and evolving to a policy and regulatory Agency.
- 4. DAFWA's engagement with, and attitude towards, industry has diminished; it needs to build respect, relevance and capacity to collaborate and service its clients.

There is a view within industry that if these core issues are not addressed they will continue to undermine the effectiveness of the Agency.

The Panel has made a series of Recommendations based around two Key Principles:

- Science and innovation underpin DAFWA's capacity to develop and defend Western Australian agriculture and food.
- All activities will be done in partnership with industry.

The Panel expects DAFWA will invest in clear strategy to deliver:

- Innovative and relevant science to develop competitive and sustainable agriculture industries.
- World class biosecurity to develop and defend food provenance, integrity and brand.
- A collaborative effort across the agriculture and food sectors to deliver recognised value with a culture of excellence, integrity and service.
- Pathways and opportunities for trade and domestic and international investment.
- An environment for future leaders to reinvigorate the intellectual capital for agriculture and food.
- Advocating for the agriculture and food sectors.
- Improved understanding and respect between producers and consumers.
- Internal management capacity to integrate and align resources to deliver a client focussed approach to engagement and implementation.

Stakeholders repeatedly stressed the need for DAFWA to redefine its core functions, and the Panel has identified industry's expectations around DAFWA's role as:

Core business

- Open channels of dialogue with industry to agree on investment priorities and to establish partnerships.
- Apply management capacity to integrate and align resources to deliver a more focussed approach to industry engagement and cultural change implementation.
- Assist Government in the development of policies and the investment environment to further the success of WA agriculture.
- Furnish the Minister with clear evidence and advice to strengthen arguments, at the highest levels of Government, for investment in the agriculture and food sector.
- Collaborate and partner with funding bodies to deliver the science and analysis that underpins agricultural growth and innovation in the State interest.
- Provide the confidence that the agricultural and food sectors are protected and defended from biosecurity threats, and that natural resources are sustained for the benefit of the industry, the economy and the whole community.

Investing for the future

- Make accessible DAFWA's knowledge, data and communication services to facilitate change and opportunity within the sector.
- Invest in people and intellectual capital to enable future program continuity and to facilitate development.
- Work with industry to defend the sector's social license to produce food and take a bolder stance in providing independent scientific information on modern systems and practices that produce safe food in WA.
- Work with industry to foster its diversity and its contribution to regional development and community growth. This can be achieved through investment ready services that enhance market access where appropriate, and navigate regulatory processes for both domestic and international development projects.

To reach Government's 2025 target of doubling GVAP value will require DAFWA to lead collaborative efforts to address productivity improvements along with across-agency cooperation to attract investment and enable new enterprise development and diversification.

DAFWA needs to focus on what it is good at and where it can have influence: improving productivity, as the sector is currently more limited by production capacity rather than market access. Industry reasonably expects DAFWA to operate as an enabler for WA agriculture, and as appropriate to allow industry to complete business opportunities or fulfil a role of market access..

It should direct advocacy efforts to access government capacity, remove barriers, develop, defend and underpin protocols and markets. In reducing costs and replication it should align government programs and services to smooth the pathways for industry advancement..

DAFWA's Future Direction requires transformational cultural change to rebuild capacity and empowering staff to take the initiative to re-engage and interact to service industry. The Panel strongly recommends the Agency is resourced and supported through a change management process to achieve implementation allowing DAFWA to remain a vital part of the future success of the Australian agriculture and food sector.

KEY FINDINGS

1. The Western Australian agriculture and food sectors

The WA agriculture and food sector is attracting unprecedented interest and investment, both domestic and international, on the back of strong demand forecasts emerging from developing Asian economies. There is increasing expectation on the sector to grow its contribution to the economy, currently ~\$8.6bn per annum, to double the value of the sector by 2025. This optimism is tempered by forecast headwinds with uncertainty in major international commodity markets and climate variability impacts.

WA's agriculture sector has great skill in capitalising on technology, innovation and farmer-led research and collaboration to drive adoption. The mature industries have a clear focus on what they can do well and where they are competitive in global markets. Emerging industries are growing in importance through their diversification, exploration of new markets, promotion of 'brand WA', and contribution to regional development.

To protect the market advantages of WA's professional food industry, producing safe food sustainably with functioning environmental regulations, it is imperative the State continues to invest in the science and development activities that support and grow this 'brand' and internationally competitive advantages.

2. DAFWA's place in the agriculture and food sectors

DAFWA is recognised as being very important to the agricultural sector in developing policy, resolving production and supply chain constraints and market access issues, in protecting existing industries' clean biosecurity and food quality status, and facilitating new industries and opportunities. DAFWA's role in economic development contributes also to the wellbeing of rural and regional communities. Its current contribution to the food sector is less clear, but is increasingly becoming important.

While DAFWA is not the only government Agency involved in the sector, DAFWA is the Agency with expertise and knowledge of all the different industries across the regions. Logically, DAFWA should take the lead on facilitating agricultural industry and supply chain development, while making every effort to collaborate across government at local, state and federal levels. The Ministerial Council for agriculture, water and regional development can oversee greater coordination and alignment of effort and investment across government.

3. DAFWA's strategic direction

The current Agrifood 2025+ initiative, through which DAFWA aims to support industry to double the value of the sector by 2025, is a Government aspiration rather than an achievable outcome that DAFWA can be measured by. How this growth is measured, the commitment of industry to its realisation, and attribution to government policy and programs are not sufficiently developed and understood. It was not evident to the Panel how DAFWA's Strategic Plan elements contribute to sector growth, and how this contribution would be monitored and adapted over time.

Clearly DAFWA needs to be driven by clear objectives to support the sector to increase its value. While not specifying what DAFWA's objectives should be – that is a task for thorough strategic and corporate planning, supported by analysis – the Panel has gleaned from its consultations that to fulfil this growth and development role, DAFWA should:

- support and facilitate relationships and activities that will maximise current and future investments into the development of the sector;
- target its investment to those parts of the value chain and industry sectors that can deliver the greatest contribution;

- ensure a clear and plausible strategic logic connects each investment and activity to the target and follows the invest for impact principle;
- coordinate and facilitate research and innovation that ensures sustainable production and high quality agrifood products; and
- demonstrate a transformational approach to collaborating to a whole new level in industry led partnerships.

4. DAFWA aligning with industry priorities

Where DAFWA seeks to coordinate and complement its activities with industry, other agencies and service providers at state, national and international levels, there is concern that some DAFWA strategies seem to be at odds with the needs and aspirations of the industries they are seeking to serve. In many stakeholder's views DAFWA should not be involved in market and trade development; others see DAFWA losing its influence on the national research and policy agendas, including in biosecurity.

The question of how DAFWA best aligns its resources and activities with industry priorities is compounded by the widespread criticism that the Agency has become dis-engaged from industry, that it is not listening, that it presumes it knows best and that it does not appreciate what true partnering can be.

The Panel believes that this is a matter for transformative organisational change, and recommends a two-part strategy:

- 1. A high-level 'industry roundtable' to advise DAFWA on innovation developments, trends and opportunities for sector growth and protection: and
- 2. A bold program of re-engaging with industry, consumers and the community.

5. DAFWA re-engaging with industry, consumers and community

It is clear that a rapid response and return to alignment between industry and the Agency is an imperative at all levels: ranging from agreement across government agencies engaged in the agriculture and food sectors to internally align their respective roles; to industry engagement across agencies, R&D corporations and universities; to industry participation in policy development; and effective cooperation with Stakeholders regionally.

DAFWA's culture needs to change, to recognise who its clients and customers are, to put their interests first, to rebuild an understanding of industry, and to interact with growers, grower groups, consultants and researchers with a stronger sense of partnership. This will require deep change on many fronts — reversing the balance in partnerships with Stakeholders; devolving responsibility for implementing strategy and deciding actions; and directing Management and staff to openly re-engage.

This is a cultural change challenge and the Panel has recommended a number of actions to support successful implementation.

6. DAFWA ensuring science underpins industry

The path of innovation, R&D, adoption and enhancing profit at the farm gate has been a changing landscape with global, commercial and non-government sectors growing contributors, relative to state agencies. There is widely held criticism that DAFWA has withdrawn from R&D so abruptly that it has compromised its capacity to initiate and facilitate collaborative research in the interests of the WA agriculture sector. Industry and other Stakeholders pointed to the growing lack of capability of DAFWA staff to engage and understand their opportunities and issues. With the exception of some outstanding individuals, they see the Agency lacking credibility and relevance with industry.

There is a shared view that innovation and research are very important to agriculture sector growth, backed by validation and industry experience. Adaption and adoption of science to WA conditions is essential in optimising productive potential and growers require sound and independent validation of new science and commercial options. DAFWA is considered to be vitally important in facilitating and coordinating this. Industry perceives that DAFWA:

- has cut too far but the situation is recoverable;
- was critical to defending the sector;
- was critical to research and innovation partnerships that tackle the major production constraints and complex farming systems development; and
- should reverse the trend of exiting R&D unilaterally, and re-install science leadership as a core function.

7. DAFWA defending the sector

DAFWA has a clear industry defence role in ensuring sound management of areas such as biosecurity, natural resources, animal welfare and product integrity. It is also central to Government's ability to provide the level of confidence sought by premium markets regarding each of these areas. There was strong and widespread support from industry for DAFWA's role in biosecurity and protecting market access, and concern that this might be compromised by budget cuts.

The Panel observed the importance of DAFWA sustaining crucial biosecurity functions and also identified key inadequacies around resourcing and stakeholder engagement. The Western Australian Biosecurity Council is investigating this area and observed that DAFWA's internal review and prioritisation of biosecurity resourcing within a declining Agency budget has been rigorous and sound. However, projected funding is inadequate in some key areas: surveillance, capacity to sustain a response, specialist diagnostic skills, ongoing training for emergency responses, ongoing support for community-coordinated invasive species management, and regulatory backup.

8. DAFWA rebuilding capability

DAFWA staff have change fatigue, which is compromising their reputation, effectiveness and impact; mostly as a direct consequence of uncertain and persistent budget decline and periodic redundancies. Historically, the DAFWA environment attracted the best young graduates starting their science-based careers. This option for developing their careers and gaining grounded knowledge, has diminished.

This could be addressed by DAFWA formulating a strategy for rebuilding science capability in partnership with the agricultural industry. It should again aspire to be an employer of choice, attracting and retaining scientists who see a career across the agriculture and food sector. Stakeholders see DAFWA's future employment strategy as developing a broader industry resource, contributing talent and confidence to the sector as a whole.

9. Best use of DAFWA resources

DAFWA has considerable physical and knowledge resources, and a regional presence unmatched by any other Agency. It has been rationalising use of buildings by reducing their number in regional locations and by sharing vacated space with other entities. If DAFWA's budget is to further decline according to the 2016-17 budget outlook then further closures may be considered. The widely reported dilapidated state of DAFWA's headquarters is a tangible expression of an Agency in decline and losing the confidence of government.

Industry Stakeholders highly valued DAFWA's regional presence as a basis for 'unobstructed connectivity' across the State's agricultural sector. For DAFWA to 'get back into business'

requires re-investment on many fronts, including its physical presence. The Panel suggests several initiatives, drawing on these consultations – transition to a new headquarters; an office dedicated to investment attraction and servicing new opportunities for the agriculture and food sectors; re-purposing of regional centres as 'industry resource centres' supported by dedicated development officers; and a knowledge portal to serve inquiries on new industry and enterprise opportunities.

10. DAFWA adopting portfolio management

DAFWA, like most organisations working across disciplines and funding sources to implement government or industry initiatives, works to a project management methodology. This is a matter of efficient practice and good governance. The Panel recognises that this works well in DAFWA and it saw in Royalties for Regions funded projects meticulous application of project management tools.

There has been external criticism of management, as much to do with the plethora of projects as with the impenetrability of knowing how they contribute collectively to outcomes. This seems to be exacerbated by project clients not getting knowledge outputs tailored to their needs and inadequate liaison with Stakeholders looking for assurances there will be a dividend from their investment. The Panel also heard of DAFWA's inability to grasp challenges and opportunities, and interpret and act on them. This drew critical attention to the role of the Agency's middle managers.

The Panel attributes this to lack of understanding or commitment to 'portfolio management' as part of whole Agency management and recommends establishment of a portfolio management methodology with middle management in the role of portfolio leaders.

11. Resourcing DAFWA's 'develop and defend' role

The net cost to Government of DAFWA's services has consistently declined over the past decade and the injection of Royalties for Regions funding has not offset the net impact of the loss of Consolidated Funds. Consequently, DAFWA's capability had been 'pared to the bone' with key skills in areas such as biosecurity diagnostics now resting with single officers; and officers being directed to change their skills base - with variable results. This reduced funding is the main message relayed to the Panel by the majority of Stakeholders consulted, and it clouded any confidence that DAFWA could meaningfully facilitate and support agriculture and food sector growth.

During the Stocktake process the Panel found DAFWA Management to be disciplined, cohesive and committed to implementing Government directives and re-allocating resources to priority functions within its declining budget. Within the severe constraints of its then budget outlook from 2015-16, program managers recommended further reductions with explicit attention to retaining core functions and shifts in risk profiles. The Panel notes that the 2016-17 State Budget has restored an additional \$50m to DAFWA's forward estimates spread evenly in 2018-19 and 2019-20. However, that is booked against Royalties for Regions funds and does not address the steep decline in Consolidated Fund resourcing.

The Panel is firmly of the view that DAFWA suffers no further cut to its Consolidated Funding for 2017-18, while a new corporate plan recalibrates DAFWA's funding requirement over the 4-year outlook period.

RECOMMENDATIONS

The Panel has built a series of recommendations for the Minister based on the findings of the extensive industry consultations and the internal Stocktake review process.

The recurrent themes in the recommendations are around realignment, re-investment, collaboration and implementation! The ultimate goal is to reinvigorate productivity growth in the agriculture and food sector and to grow its contribution to the State economy and regional communities.

There is an imperative to revisit Agency funding arrangements and demonstrate the State's commitment to the sector as a valuable contributor to the State economy.

The Panel has made its recommendations based on two Key Principles:

- Science and innovation underpin DAFWA's capacity to develop and defend Western Australian agriculture and food.
- All activities will be done in partnership with industry.

The Panel expects DAFWA will invest in clear strategy to deliver:

- Innovative and relevant science to develop competitive and sustainable agriculture industries.
- World class biosecurity to develop and defend food provenance, integrity and brand.
- A collaborative effort across the agriculture and food sectors to deliver recognised value with a culture of excellence, integrity and service.
- Pathways and opportunities for trade and domestic and international investment.
- An environment for future leaders to reinvigorate the intellectual capital for agriculture and food.
- Advocating for the agriculture and food sectors.
- Improved understanding and respect between producers and consumers.
- Internal management capacity to integrate and align resources to deliver a client focussed approach to engagement and implementation.

Recommendations to deliver against the strategies:

- **1.** The Ministerial Council for agriculture development convened by the Minister for Agriculture and Food and reporting to Cabinet, includes in its functions:
 - the oversight of a whole-of-government approach to facilitating growth and development of the agriculture and food sectors, including clarification of Agency roles and responsibilities; and
 - inter-jurisdictional cooperation in enabling development through harmonised policies and government investment decisions.
- 2. DAFWA makes every effort to collaborate across government, taking the lead on facilitating agricultural industry and supply chain development for identified markets, and on advocating for the agriculture and food sector in public policy and industry support; with collaboration to include WA Open for Business and regional programs such as SuperTowns, Regional Cities Growth Program and Regional Development Commission Blueprints, where they are relevant to the agriculture and food sectors.

3. Noting DAFWA's intention to embark on a new overarching strategy, the following is recommended as guidance for how the Agency 'develops and defends' the agriculture and food sectors:

Core business

- Open channels of dialogue with industry to agree on investment priorities and to establish partnerships.
- Apply management capacity to integrate and align resources to deliver a more focussed approach to industry engagement and cultural change implementation.
- Assist Government in the development of policies and the investment environment to further the success of WA agriculture.
- Furnish the Minister with clear evidence and advice to enable arguments, at the highest levels of Government, for investment in the agriculture and food sector.
- Collaborate and partner with funding bodies to deliver the science and analysis that underpins agricultural growth and innovation in the State interest.
- Provide the confidence that the agricultural and food sectors are protected and defended from biosecurity threats, and that natural resources are sustained for the benefit of the industry, the economy and the whole community.

Investing for the future

- Make accessible DAFWA's knowledge, data and communication services to facilitate change and opportunity within the sector.
- Invest in people and intellectual capital to enable future program continuity and to facilitate development.
- Work with industry to defend the sector's social license to produce food and take a bolder stance in providing independent scientific information on modern systems and practices that produce safe food in WA.
- Work with industry to foster its diversity and its contribution to regional development and community growth. This can be achieved through investment ready services that enhance market access where appropriate, and navigate regulatory processes for both domestic and international development projects.
- 4. Formation of a high level Agriculture and Food Roundtable to raise awareness of innovative and disruptive developments, to advise on trends, public-private sector cooperation and industry start-ups, to identify the key issues for sector growth and protection, to cast forward and identify future opportunities, and to be a sounding board for priority setting. This Roundtable would have the following characteristics:
 - Sponsored by the Minister for Agriculture and Food and reporting to the Director-General of Agriculture and Food;
 - Comprising a rotating membership from the highest levels of agribusiness, producers, processors, universities and relevant government agencies (DRD, DoW and DSD);
 - Co-chaired by an eminent independent person in the commercial agriculture sector and by the Chief Scientist;
 - Providing a forum for open and frank discussion to the benefit of all participants and sectors, and issuing its deliberations as a communiqué under Chatham House Rules;
 - Meeting twice a year, timed with the annual State budget cycle; and
 - Supported administratively by DAFWA.

- **5.** DAFWA adopts a campaign to re-engage with industry; with a 'cultural change' process supported by:
 - Regular industry briefings on the DAFWA change program at State and regional levels:
 - Priority attention to identifying opportunities and issues with a customer service focus:
 - Partnering with existing groups and organisations, collaborating on new initiatives where the capability exists, rather than forming new groups;
 - Identify, support and nurture leadership across the agricultural and food sector, including industry supply chains;
 - Enabling and rewarding frontline staff for initiating, responding to and following up industry development and protection opportunities;
 - Directing middle managers (program or portfolio level) to guide frontline staff and lead by example in stakeholder engagement.
- 6. DAFWA reverse the trend of exiting research and development unilaterally. As a core function, it should re-invest in facilitating and coordinating R&D and science leadership, and co-investing where it adds essential value that no other entity can do.

Note:

The Panel supports early resolution and agreement on the proposed collaborative venture for grains R&D. Unlike other areas of the Agency, DAFWA retains significant capability and resources in grains R&D, with high calibre research scientists and facilities, and operating costs largely co-funded by GRDC. Instituting this new collaborative R&D entity will be a good outcome for the grains industry in this State, and will set a vision and build confidence that DAFWA can partner effectively in R&D programs to the benefit of other industries in the agriculture sector.

- **7.** DAFWA more explicitly links biosecurity and sustainable resource use with food provenance, integrity and brand development, in partnership with industry, to underpin Western Australia's world class brand.
 - DAFWA strike a new collaborative arrangement with NRM organisations to monitor resource condition, service landholders with sustainable NRM advice and provide regulatory back up where required.
 - Note: the WA Biosecurity Council will report separately on the adequacy of DAFWA's biosecurity resourcing and on its prioritisation of resources to biosecurity functions.
- **8.** DAFWA adopts a 10-year staff re-development strategy; prioritising areas with thin capacity, mentoring industry engagement and field experience, aligning career development with industry growth, and retraining the goal that DAFWA is seen as a priority choice for employment in the agriculture and food sectors.
- 9. The Panel notes government intentions over the years to provide new and appropriate headquarters for DAFWA. It recommends that this is considered as a matter of new priority and urgency. A new headquarters, combined with recommended transformational changes, would be important to an effective, re-engaged agency and heavily symbolic that it is 'back in business'.

- **10.** DAFWA focuses its resources, skills and infrastructure on extending and implementing the proposed WA Open for Business initiative in the agriculture and food sectors; specific initiatives to include:
 - DAFWA as the lead Agency for a "Western Australian Agriculture Development Strategy", developed and implemented in collaboration with industry and overseen by the proposed Agriculture and Food Roundtable. The strategy will focus on the most important priorities to achieve the agriculture and food sector's growth target;
 - Utilising DAFWA's agricultural expertise, and in partnership with the Department of Regional Development, create an office for attracting inbound investment and servicing new opportunity enquiries;
 - an economic analysis unit that assesses opportunities and proposals for impact on sector growth, monitors and interprets growth within the agriculture and food sectors, and applies this knowledge to DAFWA's prioritisation of internal and partnership investments;
 - a whole-of-agency information access portal drawing on and making widely accessible DAFWA's latent knowledge assets, ranging from new industry and product opportunities to technical advice, and navigating regulatory requirements;
 - re-purposing regional offices as 'industry resource centres' to facilitate knowledge access, government-to-industry cooperation, and whole-of-government support for industry and regional organisations and enterprises; and
 - staffing industry resource centres with development officers to carry out this facilitation.
- **11.** DAFWA establishes a portfolio management methodology with middle management in the role of portfolio leaders.
- **12.** In regard to future funding by the State Government:
 - DAFWA suffers no further cut to its CF funding for 2017-18, acknowledging that DAFWA is scheduled to take its resourcing case to the Cabinet Expenditure Review Committee later in 2016;
 - The new Corporate Plan recalibrates DAFWA's funding requirement for CF over the four year outlook period to meet the change agenda recommended in this report and to resource adequately ongoing core functions;
 - DAFWA as a conduit to federal and national funding programs will work with industry and across government to keep abreast of opportunities and maximise the return and input to Western Australia's agriculture and food sector.
 - DAFWA works collaboratively to re-connect with the Department of Regional Development to facilitate optimal co-funded opportunities for the agriculture and food sectors; and
 - The Royalties for Regions funding source is prioritised for transformative projects that rebuild and capitalise industry-agency partnerships, and contribute to regional industry growth.

REVIEW PROCESS

The Western Australian agriculture and food sector currently delivers \$20 billion to the State's economy through on-farm production, processing and value added activities.

The Department of Agriculture and Food of Western Australia has contributed to the long term development of the Western Australian agriculture and food sector through knowledge generation, industry collaboration and facilitation, a keen focus on solving production challenges unique to the State and on managing the 'brand' attributes of clean, green and sustainable production.

Over the past decade DAFWA has been evolving from high visibility as traditionally an onfarm focused Agency with a minimal view of the broader market needs, with the intent of becoming an economic development Agency working in step with the industry value chain to improve the sector's contribution to WA.

Concurrently, a long-term reduction in Government investment has seen the availability of resources decline, raising concerns that DAFWA's key functions to develop and defend the sector are compromised.

In this context the Minister for Agriculture and Food directed DAFWA to 'take stock' of its current role and resources, and propose how these should evolve into the future. The Minister appointed an advisory panel to participate in this stocktake and advise on DAFWA's future roles and resourcing. The terms of reference for the Stocktake, Future Directions and the Panel can be found at Appendix 1.

The Panel considered papers, presentations and additional information from 22 programs across DAFWA's business in March 2016, which spoke to future funding scenarios under further decline in the forward estimates, and their impact on Agency functions and operational risks, depending on the level of cuts.

From this information the Panel formed a series of 'positions' about the status of the Agency as a whole, and about the appropriateness of the preferred future role and resourcing of each program, without drawing final conclusions on how, or the extent to which, a program should be funded.

The DAFWA Stocktake was primarily focussed on reaching agreement internally on priorities for resourcing each program within the current Agency budget and forward estimates to June 2019. The Panel on the other hand considered DAFWA's current position and implications of its budget planning for future functions, and made its own set of observations. The Panel's key findings were presented to the Minister for Agriculture and Food as the Stocktake and Future Directions interim statement in May 2016.

The Minister considered it essential that the findings outlined in the Panel's statement were tested with industry leaders and analysts to ensure that they fairly represented the outlook for the agriculture and food sector; the relationship between Government and industry; and industry's view on future directions for DAFWA.

Further to advice from the Minister the Panel engaged with more than a 100 influential people in the agriculture and food sector who have touch points with DAFWA across all aspects of its business to determine if there was a shared or differing point of view, and a clear understanding of the roles and responsibilities of DAFWA to Western Australia. A summary of their response to the key findings can be found in Appendix 2 *Consultation Report Summary*.

MEGATRENDS IMPACTING AUSTRALIAN AGRICULTURE

To help Australia's agricultural sector anticipate and pro-actively plan for change the CSIRO conducted a strategic foresight exercise on the future of Australian agriculture. The aim was to help industries, individuals, companies and governments make informed and strategic choices to secure better outcomes. The research presents a narrative of the future for

Australia's rural industries built on a set of interconnected trends and megatrends impacting Australia over the coming 20 years as shown in the diagram opposite.

A Hungrier World - the world is getting hungrier because it needs much more food and with appropriate innovation in farm production systems, chains and governance, supply agriculture is well positioned to keep pace with growing demand. Hungrier World megatrend tells the story of a rising world population and food consumption increasing accompanied by a shrinking global agricultural land area, water scarcity and spiralling energy demand.

Meaning - improvements in productivity rely on a strong innovation system

A hungrier world Population growth will drive global demand for food and fibre A bumpier ride Globalisation, climate change A new middle income class will and enviromental change will increase food consumption, reshape the risk profile diversify diets and for agriculture eat more protein **Transformative** Choosy customers technologies Information empowered consumers of the future will Advances in digital technology, have expectations for health, genetic science and synthetics provenance, sustainability will change the way food and and ethics fiber products are made and transported

which has historically yielded high returns for agriculture with a benefit-cost ratio of 8:12 under Australian conditions. If productivity increments are to supply the majority of the increase in food production required, then continued investment in R&D is critical to ensure that 'potential' food turns into 'real' food on the ground.

A Wealthier World - outlines the impact on global commodity markets and Australia's rural industry from income growth both domestically and internationally. In the developing Asian region alone some 1.02 billion people will cross an income threshold and move out of poverty and into the middle classes. Average incomes are forecast to rise from US\$12,000 per person to US\$44,000 per person by the year 2060.

Meaning - a critical competitive advantage for Australia is to maintain and extend its reputation as a supplier of high quality products with high environmental, health and safety standards. Australian produce perceived as fresher, healthier and responsibly produced is likely to out-compete produce from other countries.

Choosy Consumers - in future will have great expectations of the food and fibre products they purchase. Today's consumer has different tastes, preferences and concerns to the consumer of 20 years ago. For example, organic certification, free range, health and fair trade logos were harder to find in the supermarket of 1985 yet in supermarkets in 2015 these labels are commonplace. Such trends are likely to continue.

Meaning - there is an opportunity for rural industries to demonstrate 'credence' characteristics, traceability and quality control using technologies including sensory and communication technologies for customer needs, to help build trust and respond to preferences in order to grow these markets and increase value.

Transformative technologies - within the fields of digital, genetics and materials science will change the way food and fibre products are created. Genetic technology will allow crop and pasture yields to improve and become more resistant to weeds, pests and climate risks. Advanced sensory systems and data analytics will permit advanced and highly integrated farm to fork supply chains. Customers will be able to readily trace food and fibre products from their origins and supermarkets will have increased tools for quality assurance.

Meaning - farmers and fishers will increasingly have sophisticated tools to assist with decision making. Big data systems and digital technologies will bring better risk management approaches to Australian agriculture; weather and yields will be much more predictable.

A Bumpier Ride - Climate change is elevating the frequency and severity of extreme weather (e.g. droughts, floods, bushfires). The globalisation of supply chains, which provide inputs (e.g. fertilisers, fuel, chemicals) critical for agriculture, increases the number of links in the production system and therefore the risk of supply chain breakdowns. A challenge is posed by increased weed and pest resistance to herbicides and pesticides which is reducing their effectiveness.

Meaning - production systems that can be designed to anticipate, prepare for and respond to these changes are essential for a growing sector. Skills and systems to effectively anticipate and manage these increasing risks are also a crucial component of the future for the sector.

Source: CSIRO 2015

What do the broader trends mean for WA agriculture and food sectors?

The Western Australian agricultural industry over the next decade will be:

- Exploiting smart **farming solutions** for decision support, optimal cost management and driving greater **productivity**.
- Preparing resilient and thriving agricultural businesses that are adapting to change.
- Focusing on world value markets.
- Integrating supply and value chain relationships.
- Integrating the needs of agricultural industries into all **infrastructure investments** e.g. roads, port, airport, information technologies.

FINDINGS

The Western Australian agriculture and food sectors are currently in a sound position, though there are some significant headwinds surrounding international competitiveness, a slowing of productivity gains, generational farm transfer demanding greater capital requirements, technology accessibility, industry leadership renovation, and impacts of a changing climate.

The current success of some of the larger and more mature industries has been generated by a concerted effort by industry to invest in all parts of the value chain to achieve productivity improvements, underpinned by adoption of new technologies and a strong investment in research and development over the past 20 years.

With productivity improvements in WA's \$5bn (farm gate value) grains industry now hovering around 1% per annum, it is imperative there is a focus on new research and innovation with additional resources and effort expended to achieve productivity gains in excess of 2%. This is critical to ensuring the industry remains internationally competitive as significant challenges are expected from developing grain exporting nations, particularly the Ukraine.

The wide range of industry leaders and influencers interviewed by the Future Directions Panel agreed that DAFWA has an integral role in facilitating industry to anticipate and manage future risks and adapt to headwinds through improving competiveness and productivity, supported by technological and farming systems changes.

However, there is significant discontent among WA growers that they are not seeing the flow of research-based technologies, practices and knowledge commensurate with their levy contributions to R&D corporations (RDCs). The criticism was greater with horticultural and livestock industries; less so with the Grains Research and Development Corporation (GRDC) which has a devolved model of RD&E partnering. Growers contribute about 1% of their earnings to R&D through levies and royalties: grain farmers provide ~\$35m per annum to GRDC via levies and a similar amount in royalties to plant breeders. This is on top of R&D costs embedded in the prices of machinery, chemicals and technologies sourced globally. Agricultural sector R&D comes under a series of commodity-specific and cross-sectoral national RD&E plans.

For these reasons there is growing industry scrutiny on the balance of their investment and the benefit returning to the State. For industry stakeholders DAFWA has a pivotal role in connecting with global research and innovation, and in national RD&E planning and priority setting to ensure technology and productivity outcomes benefit the State's producers. The Panel agrees that DAFWA has a crucial role in applied research and development and in driving innovation, with focus on those industries with strategic and significant production (e.g. grains), or with the capacity to grow and export (e.g. horticulture).

A decade ago DAFWA was the 'gold standard' for integrated research and extension across many parts of agricultural production. However, the research landscape has been changing: where innovation is sourced from (more comes from global sources with local adaptation); who does the R&D (RDCs dominant, private and tertiary sectors rising, state sector in rapid decline); who translates these and services industries (private and commercial sector, RDCs and grower groups with state sector exiting); and increasing global connectedness and funding through collaborative arrangements.

In this context, two contrasting perspectives on the challenges before DAFWA were put to the Panel:

1. DAFWA Management was disciplined, cohesive and committed to implementing Government directives and re-allocating resources to priority functions within its declining budget as identified under the Stocktake process; and

2. Stakeholders believe that DAFWA has slipped to a mere shadow of its former self, it has become dis-engaged and Stakeholders no longer understand what DAFWA's role is; only that it is saying it is exiting RD&E and is evolving to an economic development and regulatory Agency.

While the significant reduction in funding has contributed to the rapid slide in DAFWA's standing with industry, the current level of funding is not seen as the only cause of the parlous state of play between DAFWA and its Stakeholders. Two observations soundly resonate: "what other department could be cut so ruthlessly without huge public outcry?" and "why hasn't industry defended them?". Reasons for the lack of defence of DAFWA became clear to the Panel during the review process.

DAFWA's engagement with industry, especially at the senior levels, has been damaged and needs to dramatically improve, and its attitude towards industry needs to change to earn greater respect and pride in its capacity to serve its clients along the whole value chain.

There is a culture apparently driven by some within DAFWA leadership which signifies a 'we know best' attitude, which has been perceived by industry as arrogant and has shut down industry engagement on key projects. This has coincided with significant loss of key scientific and development staff across a range of industries and areas, a growing level of middle management, and inappropriate messaging to industry on what DAFWA is no longer doing, instead of what it can deliver. The Agency has not been internally cohesive, nor fully capable to partner with industry on growth and development opportunities for the sector.

There are a range of other core issues that have led to DAFWA losing its effectiveness and becoming disengaged from the industry, which are covered in the Consultation Report. If these issues are not addressed, they will continue to undermine the effectiveness of the Agency and the perception of its relevance to industry sectors.

DAFWA has been adapting to decreasing Government funding for over a decade, with this being achieved through strategic and tactical changes and increased operational efficiency. The Panel noted that changes over the past decade sought to sharpen DAFWA's focus on the critical needs of industry at the expense of many 'traditional' services, some of which are now best provided by others.

In many areas this sharpening of focus was necessary and means the Agency is in a good position to recalibrate or reset its activities in areas where DAFWA is best placed to deliver, and where other providers are not. Industry wants and needs a strong and focussed DAFWA with its applied science and innovation capacity, and its strength in biosecurity being key enablers in supporting industry to achieve a doubling of its value by 2025.

DAFWA currently leverages the \$122 million it receives from Government for front-line activities with a further \$51 million from third parties such as the national research and development corporations, with GRDC being the largest single co-investor. Co-investors typically require a degree of matched-funding from Government.

As DAFWA only seeks co-investment in areas essential to its own strategic intent, such leveraging offers considerable benefit to both Government and the sector. The Panel found that DAFWA's ability to attract co-investment is now often challenged by DAFWA being unable to demonstrate the matching investment by Government required by co-investors such as GRDC. Work undertaken by the Agency in partnership with the major R&D funding bodies is often overshadowed by a far superior effort in extension and marketing by the R&D partners, and there was recognition by Stakeholders that DAFWA doesn't promote its outcomes and involvement in joint projects well enough.

During the Stocktake process the Panel found significant evolution in the roles that each Program proposed for 2019, compared to their current function. The future budgets presented were in the main disciplined and consistent, and were generally supported by the

Panel. Some exceptions included reductions in support for key livestock and horticulture industries, which the Panel does not support given existing research and innovation gaps and the emerging international market opportunities.

The Panel noted a number of areas where DAFWA's capability had been 'pared to the bone' or where strategic capacity and capability no longer exists as a result of diminishing Government funding over the past decade, with key skills in areas such as biosecurity diagnostics now resting with single officers, and of officers being required to change their skills base - with variable results.

The Panel also noted that while DAFWA was managing a declining budget and a resultant staff decrease, it was also attempting in recent years to manage a significant increase in Royalties for Regions funding. While its capacity to manage new projects using Royalties for Regions funding came off a low base, its project management capabilities have significantly improved and outcomes are now being achieved.

DAFWA's principal resource is its staff and their related capacity and capability, which in many disciplines is nationally renowned and internationally significant. Staff numbers have declined by 38% over the past decade, from 1,581 FTEs in June 2007 to 965 currently. Without any relief, the current budget settings for DAFWA indicate this reduction will continue.

The Panel found evidence that these reductions, whilst necessary in some areas, had resulted in significant and unsustainable workloads on key members of staff across DAFWA, which threatened the quality and sustainability of DAFWA's ability to deliver on Government's priorities, in addition to having a significant and negative impact on staff morale.

The science, innovation and regulatory activities undertaken by DAFWA are critical and crucial for industry success and to deliver the related benefits enjoyed by the economy and the community. DAFWA plays a key role in supporting economic development of the State and in partnership with industry, universities, grower groups and others the Agency provides long term solutions to key problems where it is best placed to do so. The complexity of work done by DAFWA, especially in supporting biosecurity, is not well understood outside of the Agency. DAFWA's science, innovation and biosecurity capacity is essential in providing knowledge outcomes in areas such as farming systems, value chain delivery systems, and in addressing knowledge gaps that can often take several years or more to provide solutions.

Stakeholders highlighted the value of DAFWA's independent role in challenging the science and maintaining capacity in areas that are not currently funded by industry or the commercial sector, but which may underpin future production capacity. The value of the additional capacity this work brings to the State's agrifood sector is significant. Importantly, any future knowledge gap created by withdrawal of effort will not be evident for a decade and will likely impact on the next generation.

The Panel identified that the status quo of funding is not acceptable for the future success of the WA agriculture and food industry, while recognising that DAFWA has to continually demonstrate that investment in the Agency and in its science, innovation, biosecurity and other activities provides positive and strategic benefits for the State.

DAFWA has a significant future role to play facilitating industry to capture new opportunities and assisting the industry through these adjustments. The Panel is concerned that the current recital around DAFWA distracts from this purpose. The wide portrayal of budget and staff cuts, exiting R&D and retreating to a policy and regulatory Agency, must be displaced by a new trajectory of facilitating agriculture and food sector growth and sustainability, where it is the best placed Agency to do so, but with the capability and resources to achieve these outcomes.

Note: Direct interview quotes have been used throughout this Findings section to make or verify specific points.

1. The Western Australian agriculture and food sectors

Agriculture and food is a significant and growing sector with an increasing contribution to the WA economy as the table below shows, the value at the farm gate has risen from \$5.4bn to \$8.6bn or 2.6 per cent to 3.3 per cent of the WA economy in four years.

	2010/2011	2011/2012	2012/2013	2013/2014
Size of WA economy (\$billion)	210.4	233.4	234.9	256.4
Contribution of agriculture to the state economy (\$billion)	5.4	7.5	6.7	8.6

Source: DAFWA 2016

WA's agriculture sector has great skill in capitalising on technology, innovation and farmer-led research and collaboration to drive adoption. The mature industries have a clear focus on what they can do well and where they are competitive in global markets. Smaller, new and emerging industries are growing in importance through their diversification of the economy, exploration of new overseas and domestic markets, promoting the 'WA brand', and contribution to regional growth and development.

Investment by DAFWA in a series of international export opportunity reports have clearly identified that WA's competitive advantage in agrifood is built upon multiple layers. WA has a modern food industry that produces safe food from a clean and trusted environment located in the same time zone as Asia's major markets. Combining these factors with skilled people and a compelling story positions Western Australia favourably against peer competitors.

Seizing the Opportunity Royalties for Regions funded programs have investigated opportunities in the near north and developed a range of potential marketing programs. The interaction with trade delegations, introduction of Free Trade Agreements and personal linkages with DAFWA have been significant in opening doors and allowing businesses to view, access and interact with businesses in Asia.

In order to protect the market advantages of WA's modern, professional, trusted, well-regulated food industry, producing safe food from a modern country in a temperate region with functioning environmental regulations, it will be an imperative for the State to continue to invest in activities to underpin and support this 'Brand'.

2. DAFWA's place in the agriculture and food sectors

DAFWA is recognised as being very important to the agricultural sector, in resolving production and supply chain constraints and market access issues, in protecting existing industries' clean biosecurity and food quality status, and facilitating new industries and opportunities. The Department is a major source of technical and professional support, valued by industry, and the impartiality of its science and analysis can be critically important in policy advice, for industry accessing new markets and in resolving sustained issues in the commercial sector. DAFWA's role in economic development contributes also to the wellbeing of rural and regional communities. Its contribution to the food sector is less clear.

Like industry, DAFWA needs to focus on what it is good at, in delivering Government policy and meeting industry priorities, improving productivity and translation of technology for adoption, and exploiting comparative advantage in overseas markets. The sector is limited by production capacity, some quite intransigent (drying climate, soil constraints, potable water), and lacks critical mass in markets for exports and inputs. For DAFWA to contribute to growing the sector it will require collaborative efforts to address yield gaps and across-Agency cooperation to enable new enterprise development and diversification. Gains will have to be protected from threats to biosecurity and supply chain integrity. Industry will drive

innovation, technology development and practice change and the commercial sector will drive marketing.

DAFWA's future direction has to be forged in partnership with industry; to be responsive to industry needs; and to have capacity to respond, flexibility to change direction, and an ability to listen and learn from producers. There is a widespread view that DAFWA's clients no longer know what its role is, and in coping with budget and staff cuts it has been defining its future by what it is no longer doing and has retreated to a 'policy and regulatory' Agency.

Industry has a very different position. It sees no entity in the private or public sector, other than DAFWA, as being able to sustain scientific rigour behind strategies for growth and protection/defence of the sector. To quote a Stakeholder, DAFWA fosters "science underpinning agriculture".

The expectation is that DAFWA will address the areas of market failure and take leadership in areas of science and innovation where the stakes are beyond industry resources (e.g. national RD&E programs), as the commercial sector has picked up technology development and technical advice functions formerly performed by the Department. There is still a need to address the gaps beyond the self-interest and performance drivers of commercial agribusiness and research institutions.

The opportunity in today's environment is for DAFWA to outline the competitive advantages for WA agriculture and food sectors and be quite clear about their value characteristics, by investing in high quality competitive analysis.

In recent years DAFWA has portrayed itself as driving to become an economic development Agency. Many of the Stakeholders suggested that it has always been in the business of economic development. The change has been in the way it pursues outcomes, with broader activity beyond the farm gate where its impact, arguably, will not be as great.

There is important 'pre-competitive' work DAFWA can do on market access and supply chain development; for example quality standards or protocols for entering new markets. However, it must be mindful that it doesn't have the capital and commercial skills that business has, and recognise when to exit and before any one business gains a competitive advantage. The export opportunity is realised when one business does business with another. Government has no part in this transaction, it can only provide an introduction where it has experienced on ground trade officers with commercial nous.

"DAFWA should stay out of trade, it moves too fast for a government Agency and they don't have capacity, and the private sector does not want government accessing commercially sensitive information as they can't protect it."

DAFWA has had demonstrated capacity to identify issues and network across government to achieve solutions in the food sector. While the Department has significantly cut staffing in this area recently, there is still clearly a role for DAFWA in facilitating change, innovation and opportunity for WA produce through the domestic value-adding sector. Industry Stakeholders expect DAFWA to advocate for WA produce in areas of food safety, transport and infrastructure planning, labour access issues, regional developments in food processing, promotion of local produce into food service channels, food quality issues resolution, and emergency response planning such as energy and transport interruptions to key food sectors like dairy and processing. Waste management is increasingly an issue requiring cross-Agency and commercial cooperation (e.g. disposing of whey in dairy processing).

DAFWA is not the only government Agency involved in the agriculture and food sector. The Departments of State Development (DSD), Regional Development (DRD) and Water (DoW), and Regional Development Commissions (RDCs) also have a stake. Their contribution to agriculture is more prescribed (for example DSD in trade development and DoW in Water for

Food) and they have greater responsibilities outside the agriculture and food sectors. However, DAFWA is the only Agency that can speak for the sector as a whole, within Government, across agencies and jurisdictions, and in support industry's public and market presence.

DAFWA is the Agency with expertise and understanding of whole industries, distributed regionally State-wide. Inter-agency tensions can and have occurred and this frustrates external (and internal) Stakeholders. It is imperative there is a mechanism for avoiding or resolving these boundary or collaborative matters expediently, and with clarity.

Recommendation 1

The Panel is aware of the Ministerial Council for agriculture development convened by the Minister for Agriculture and Food and reporting to Cabinet. The Panel recommends it includes in its functions:

- the oversight of a whole-of-government approach to facilitating growth and development of the agriculture and food sectors, including clarification of Agency roles and responsibilities; and
- inter-jurisdictional cooperation in enabling development through harmonised policies and government investment decisions.

Recommendation 2

The Panel recommends that DAFWA makes every effort to collaborate across government, taking the lead on facilitating agricultural industry and supply chain development for identified markets, and on advocating for the agriculture and food sector in public policy and industry support; with collaboration to include WA Open for Business and regional programs such as SuperTowns, Regional Cities Growth Program and Regional Development Commission Blueprints, where they are relevant to the agriculture and food sectors.

3. DAFWA's strategic direction

The current DAFWA Strategic Plan 2014–17 is contained within the Agrifood 2025+ initiative, through which DAFWA aims to support industry to double the value of the sector by 2025. As an economic development Agency, DAFWA sees its primary purpose is to increase the sector's contribution to the WA economy; and its proposed roles are geared towards the goal of doubling the value by 2025. The pursuit of these goals is underpinned by a commitment to boost biosecurity and sustain the State's natural resources.

In the Panel's opinion, the doubling of the value of agriculture by 2025+ vision is a Government aspiration rather than an achievable outcome DAFWA can be measured by. It appears to have been a distraction, creating a perception that DAFWA will drive this outcome and industry will follow in its wake, while in fact it has taken the Agency to a point well outside its capacity and expertise.

"I would ask how they are going to do it. To increase the value you have to increase both production and price, and the quantity produced is the key to what growers can actually influence. I don't want to be disrespectful, but DAFWA has been completely stripped as a Department and the resources to help industry achieve this growth have gone elsewhere."

The Agrifood 2025+ initiative is appealing as an aspirational goal but how this growth is measured, the commitment of industry to its realisation, and attribution to government policy and programs are not sufficiently developed and understood. It was not evident to the Panel how DAFWA's Strategic Plan elements contribute to sector growth, and how this contribution

would be monitored and adapted over time. However, rigorous analysis underpinning the Agrifood 2025+ vision and addressing these questions would be valuable to the sector, and proven methodology like *Total Factor Productivity Growth* would a useful tool in the hands of industry and for DAFWA's planning, resource allocation and accountable management. It could strengthen its internal capability in this area and resource external expertise to better gauge the drivers to sector growth and to prioritise the role of government.

"We are looking for depth, KPIs that are meaningful. We are not happy with the wishy washy target for 2025. Let's get real, we are in a commercial world, we need hard targets. We need to look at the industries DAFWA can focus on, decide where we are going to go. Focus where the industries might be able to grow to. The sheep industry is an example with declining productivity; there has to be serious analysis, the market is consolidated but there is huge demand. It is worth looking into."

Industry agrees that the Agency should support growth and development in the agricultural and food sectors where appropriate, meaning there are many opportunities to use its resources and position more effectively as a facilitator rather than key developer. While the outcome for the sector might be the same, the role for DAFWA is not well defined. There is an urgent need for clarity of purpose.

"If the Department can deliver outcomes to farmers that make a difference to the way they farm and their profitability and long term success, then farmers will see a lot more value in DAFWA. They don't see DAFWA is delivering that value today. It has to start with determining the needs to make their effort relevant."

Clearly DAFWA needs to be driven by clear objectives to support the sector to increase its value. To do this it needs to understand the contribution of the agriculture and food sectors to the WA economy, the contributions of industries to sector growth, where in the value chain private and public investment might have most impact, and where DAFWA puts its effort to have the greatest effect. This attribution of DAFWA effort to sector growth requires sound metrics and analysis, so that the objective is realistic and performance is measurable.

Recognising that growth will come from productivity improvements (science and systems), and transforming the volume to value regime, there are many aspects beyond the farm gate and into the value chain that DAFWA can participate in. Initial identification of the growth areas where value can be created and extracted for industry would be the next step. An example would be the capacity to interrogate the true costs of transport and storage.

Government agency roles will change with an industry's maturity and DAFWA needs to be agile and flexible enough to recognise the respective stage and in concert with industry adjust the investment accordingly. Reducing or exiting participation in development of a 'mature' industry or a low growth potential industry, as a matter of principle, is not constructive. Instead, DAFWA should look for the market failure in specific industries and prioritise where to participate e.g. grains industry providing protein for livestock is a key identified space for development. In some cases it may be no more than funding programs, such as the Grower Group Export development grants.

While not specifying what DAFWA's objectives should be – that is a task for thorough strategic and corporate planning, supported by analysis – the Panel has gleaned from its consultations that to fulfil this growth and development role, DAFWA should:

Support and facilitate relationships and activities that will maximise the current and future investments into the development of the sector to contribute to the growth of the WA State economy, and target its investment to those value chain businesses and industries that invest resources and capital in those areas that can deliver the greatest contribution to achieving the target.

- Ensure a clear and plausible strategic logic connects each investment and activity to the target and follows the invest for impact principle.
- Coordinate and facilitate research and innovation that ensures sustainable production and high quality agrifood products.
- Demonstrate a transformational approach to collaborating and investing with industry, businesses, universities, funding bodies and other Government agencies to a whole new level through industry led partnerships.

In its industry consultations the Panel put the proposition that DAFWA has a role in developing and defending the agriculture and food sectors. There was widespread support for the 'develop and defend' concept and for DAFWA to have a critical role in working with industry and the community to defend the State's strong biosecurity and resource position and to mitigate key biosecurity and resource management threats.

The Panel also identified importance in DAFWA being driven by superior capabilities in its activities, people and relationships, and that these capabilities benefit the sector more broadly; and that DAFWA is valued by the community of Western Australia, again in the interests of the sector. These observations were accepted and agreed in the Panel's consultations.

Recommendation 3

The Panel notes DAFWA's intention to embark on a new overarching strategy, and recommends the following as guidance for how the Agency 'develops and defends' the agriculture and food sectors:

Core business

- Open channels of dialogue with industry to agree on investment priorities and to establish partnerships.
- Apply management capacity to integrate and align resources to deliver a more focussed approach to industry engagement and cultural change implementation.
- Assist Government in the development of policies and the investment environment to further the success of WA agriculture.
- Furnish the Minister with clear evidence and advice to enable arguments, at the highest levels of Government, for investment in the agriculture and food sector.
- Collaborate and partner with funding bodies to deliver the science and analysis that underpins agricultural growth and innovation in the State interest.
- Provide the confidence that the agricultural and food sectors are protected and defended from biosecurity threats, and that natural resources are sustained for the benefit of the industry, the economy and the whole community.

Investing for the future

- Make accessible DAFWA's knowledge, data and communication services to facilitate change and opportunity within the sector.
- Invest in people and intellectual capital to enable future program continuity and to facilitate development.
- Work with industry to defend the sector's social license to produce food by taking a bolder stance in providing independent scientific information on modern systems and practices that produce safe food in WA.
- Work with industry to foster its diversity and its contribution to regional development and community growth. This can be achieved through investment ready services that

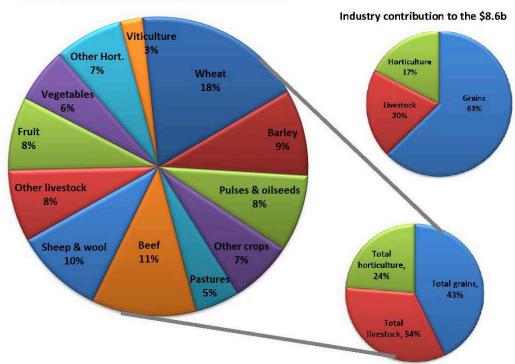
enhance market access where appropriate, and navigate regulatory processes for both domestic and international development projects.

4. DAFWA aligning with industry priorities

In 2016 there are \$173m of funds under management by DAFWA. The information provided in the charts below give an indication of how this is invested across the industries, compared to their relative contributions to the total \$8.6bn GVAP. The grains sector makes up almost two-thirds of total industry value and DAFWA's investment in that industry represents 43% of its total funding. This is as a result of significantly greater external investment levels from the GRDC.

Allocation of DAFWA Funds by Industry





DAFWA proposes to focus increasingly on those industries having the most significant growth potential and, within that, on those individual businesses having the capability and appetite to undertake a significant growth program. Inevitably, if DAFWA does this without due consideration of the net benefit of its investment, its focus shifts to the larger, mature industries.

However, DAFWA also highlights the variable and, in some cases, rapidly-evolving maturity of smaller industries; and the need to both accommodate the variability and foster the evolution. This creates a tension between those industries that are not yet on the 'maturation curve' and so need broad-based support, and those that are more advanced with government highly selective in where it participates.

"DAFWA is crucial to facilitating new industries, providing the stimulus and opening doors. However, it is a small role in proportion to its work with major industries, so wherever possible, start with low-hanging fruit i.e. greatest impacts with least expense or effort."

The majority of Stakeholders consulted agreed that it was important to understand the differences in a range of areas across the industries. It was seen that DAFWA has been

reasonably good at this, but it must be careful not to get entrenched with mature or failing industries. The current silo structure of the Agency does reduce the effectiveness of this approach.

"It will be important to understand the culture in the different industries for example there are few in the sheep industry who are looking forward but there's a significant problem with the old days culture and currently this over-rides the new ways opportunity."

Industry growth follows a pattern from a whole of industry focus and effort, to specialisation into functioning elements in transactional relationships. Facilitating this growth needs people in government who understand the growth paths, risks and complexities of emerging industries and what constitutes a functioning value chain. In the past DAFWA had the internal culture to support 'champions' who identified opportunities and played strong roles in industry start up. It appears that is now diluted with staff losses.

There are risks and rewards with the notion of 'picking winners' and supporting an industry or individual businesses. Government officers can be naïve about competitive forces in global markets. Also they can be closed to alternative enterprises that may not fit DAFWA's priorities for growing the sector, but collectively can contribute significantly to the regional economy, balancing domestic and overseas market opportunities.

"There are 4500 beef producers but just 20% are producing 80% of the value. Collectively they could deliver a hell of a lot, and the processors are complaining about supply, so you have to fix the sector problems first to be able to achieve the aspirations. We have DAFWA people visiting Asian markets and digging up the opportunities, but they are not addressing the issues around who can supply."

DAFWA currently does not have the capacity to do this effectively, and there are limitations in what public servants can do. Transacting trade opportunities should be in the hands of private enterprise, with DAFWA providing introductions and analytical support.

"We get approached by DAFWA, but they are tentative, they don't have a clear objective of what they are here for, they don't know if they are partnering and sharing, or they have a massive idea but don't know how it can be delivered. There are some serious dollars being floated, but what a waste. They asked to have a copy of our commercial business plan and expected to share it for the benefit of the industry. They are just so naïve."

It remains a sound principle to invest for impact by applying rigorous analysis to assess economic impact, match or acquire expertise to deliver against clear targets and time lines. Industry expects the Agency to concentrate on its core business and competencies, and apply commercial reality to priority setting that will deliver real GVAP growth.

External studies show the importance of supply chain efficiency in industry growth; and of all participants sharing in the benefits of that growth (i.e. establishing a 'value chain'). DAFWA is looking to work more with the post-farm components of the chain, with a corresponding decrease in on-farm activity; and to foster the transition from supply-chain to value-chain thinking. However, it was clearly stated across all industries that private sector integration in the value chain is the main driver, but DAFWA can have a role in pulling together the players in the chain, resourcing the industry and opening the doors. They need to be very clear on their role in facilitation and capacity to participate, but need to understand their time to exit.

"I don't see a strong role for the Department, post farm gate is so mature and controlled by commercial interests that the impact isn't going to be great. The focus should be on productivity and protection. Stay out of the areas you can't make an impact."

Stimulating growth across the entire value chain is liable to be increasingly difficult in many major agricultural industries in WA. Supply chains are likely to become, in some cases, more concentrated and more prone to competitive pressures. The outcome in many situations will be less transparency about the costs and returns in different segments of value chains and there are less data in the public domain about the commercial characteristics of businesses within supply chains.

"Supply chain efficiency not marketing is where DAFWA can engage. Solutions for poor supply chains, helping growers come together in cooperatives is a very powerful way to address supply chain issues. A supporting role to facilitate these is where DAFWA can assist."

There was a widespread view that DAFWA should not be in trade and market development. There is a role for initiating market access but leave the follow-up to private interests and expertise outside the Agency.

"Expertise can be drawn in, the Department doesn't need to lead trade delegations, don't replicate investment by other areas of government, find the best resources and collaborate to form an appropriate delegation.

There is a role where you connect state development and agriculture, they haven't communicated effectively in the past. I am not clear that there are opportunities for value adding in commodities, and other industries like wine will sell themselves. There is a role to define the high end of the market. We need to know our consumers, and who else is fighting to win those consumers. Perhaps there should be a role for secondment between state development and agriculture in a task force approach to addressing clear outcomes."

Where DAFWA seeks to coordinate and complement its activities with industry, other agencies and service providers at state, national and international levels, there is concern that some DAFWA strategies seem to be at odds with the needs and aspirations of the industries they are seeking to serve. The Panel was advised that DAFWA is losing its influence on the national research and policy agendas, including in biosecurity.

The question of how DAFWA best aligns its resources and activities with industry priorities is compounded by the widespread criticism that the Agency has become dis-engaged from industry, that it is not listening, that it presumes it knows best and that it does not appreciate what true partnering can be (see below).

The Panel believes there is a need for transformative organisational change, requiring a two-part strategy (which forms Recommendations 4 and 5):

- A high-level 'industry roundtable' to advise DAFWA innovation developments, trends and opportunities for sector growth and protection: and
- A bold program of re-engaging with industry, consumers and the community.

Recommendation 4

Formation of a high level Agriculture and Food Roundtable to raise awareness of innovative and disruptive developments, to advise on trends, public-private sector cooperation and industry start-ups, to identify the key issues for sector growth and protection, to cast forward and identify opportunities on the horizon, and to be a sounding board for priority setting. This Roundtable would have the following characteristics:

- Sponsored by the Minister for Agriculture and Food and reporting to the Director-General of Agriculture and Food;
- Comprising a rotating membership from the highest levels of agribusiness, producers, processors, universities and relevant government agencies (DRD, DoW and DSD);

- Co-chaired by an eminent independent person in the commercial agriculture sector and by the Chief Scientist;
- Providing a forum for open and frank discussion to the benefit of all participants and sectors, and issuing its deliberations as a communiqué under Chatham House Rules;
- Meeting twice a year, timed with the annual State budget cycle; and
- Supported administratively by DAFWA.

This roundtable was proposed by the State Government's Chief Scientist, and uses the Marine Science Roundtable as a model.

5. DAFWA re-engaging with industry, consumers and community

In the Panel's view there needs to be a radical reversal of relationships with industry, starting with senior management, to one that is built on respect for clients' needs. Without working collectively and collaboratively to deliver its core functions, DAFWA's ground support will continue to dissipate.

"Speaking from my grower group experience: the credibility of DAFWA has been damaged, there is a lack of confidence in the Agency and the role they can perform, and poor communication with Stakeholders; there has been continual decline over 15 years. With staff nobody knows what their role is going forward and that has impacted their capacity to deliver. Their role as an economic development agency, I query if that is what their role should be: the commercial sector has the experience and will deliver that role. DAFWA staff have a research background and not the commercial experience to drive investment outcomes. The feedback I get is where are they going and what are they doing?"

As stated earlier, industry provided both explicit and inferred criticism of DAFWA's senior leadership for not truly engaging or being open to new collaborations externally, and suppressing initiative internally. Senior management was seen as high-handed through the change process imposed by budget cuts, to the point that many respondents were disaffected and wondering whether the relationships could be turned around.

"There is a recurrent theme of an arrogance as an Agency that you do things on our terms. There has been a definition of what DAFWA will no longer be doing, the direction to staff from above has been what you don't do. The mindset will be a real challenge to turn around."

It is clear that a rapid response and return to alignment between industry and the Agency is an imperative at all levels; ranging from agreement across government agencies engaged in the agriculture and food sectors to internally align their respective roles, to industry engagement across agencies, R&D corporations and universities nationally, to industry participation in policy development, and effective cooperation with Stakeholders regionally.

Many respondents raised issues facing grower groups and questions about DAFWA's commitment to working with them, some saying the dis-engagement has been quite detrimental and they lack confidence in working with the Agency. Others acknowledged the contribution of locally based DAFWA officers. These groups have increasingly become self-reliant and independently minded and many, but not all, have evolved to be effective in aligning local needs with R&D conduct, and translation of R&D to practice change. However, it is acknowledged that individual grower groups are uneven in their ability to do this. There were diverse views on the importance of DAFWA re-engaging with grower groups and recognition that resourcing new relationships would be challenging.

"The grower groups have evolved into a new animal across the State. They all start for a reason, and to sustain themselves they have to have a purpose and remain relevant to their members. It is important that DAFWA is engaged with these key operators, these are the people they need to interact with. You can easily argue the value of having strong grower engagement in determining better outcomes; the grower groups have demonstrated capacity to drive productivity."

For the Panel, the feedback concerning grower groups was symptomatic of the larger disengagement issues. It heard that growers and investors in new and emerging industries found DAFWA's contact response to be more 'gate-keeping' than facilitating business case development and navigation through the complexity of government approvals. There was criticism of the Government's and DAFWA's apparent preference to set up new groups to meet policy objectives (e.g. industry liaison committees) when patiently working with existing bodies might achieve a better outcome in the longer term.

DAFWA's ability to bring together intellectual rigour and analysis with industry knowhow and field experience on important production constraints has been compromised by the budget and staff cuts. Staff on the ground should be capable of drilling down on the 'why' questions in close consultation with clients, then passing that up the line for decisions on sustained commitment. However, it was reported that they were reticent to engage outside their immediate Agency tasks.

There is a perception that the 'head' of the Agency has become detached from the 'body' through a failure of middle management to listen, recognise and translate issues and opportunities into research and policy initiatives. DAFWA's structure appears to have bulged in the middle, weighed down by internal responsibilities at the expense of external relationships and integrating activity between the key directorates.

DAFWA's culture needs to change, to recognise who its clients and customers are, to put their interests first, to reclaim an understanding of industry, and to interact with growers, grower groups, consultants and researchers in a strong sense of partnership. This will require deep change on many fronts — reversing the balance in partnerships with Stakeholders; devolving responsibility for implementing strategy and deciding actions; and directing Management and staff to openly re-engage.

This is a cultural change challenge. The Panel received advice that such change is most successfully implemented with external expertise advising the Director General, as has been done with other Government instrumentalities including the Department of Corrective Services and the Water Corporation.

Recommendation 5

The Panel recommends DAFWA adopts a campaign to re-engage with industry; with a 'cultural change' process supported by:

- Regular industry briefings on the DAFWA change program at State and regional levels;
- Priority attention to identifying opportunities and issues with a customer service focus;
- Partnering with existing groups and organisations, collaboration on new initiatives where the capability exists, rather than forming new groups;
- Identify, support and nurture leadership across the agricultural and food sector, including industry supply chains;
- Enabling and rewarding frontline staff for initiating, responding to and following up industry development and protection opportunities;
- Directing middle managers (program or portfolio level) to guide frontline staff and lead by example in stakeholder engagement.

Agriculture necessarily involves working with animals, chemicals, genetics, and increasingly, international partners and investors – images of which can evoke strong responses with consumers and communities alike. The sector's ability to grow increasingly requires all Stakeholders, especially the broader community, to see it with a greater understanding.

Many Stakeholders consulted saw DAFWA's community and consumer engagement in this area as critical to supporting the agricultural sector's social licence to provide food and an economic return to Western Australia. While food quality and safety, and promotion of products from clean and green regions are industry responsibilities, DAFWA has a supporting role advocating where appropriate and generally raising awareness. Rather than reactive damage control on contentious issues, it could partner with industry in a broader educational strategy on food. The Department needs to clarify its involvement and the priorities for supporting industry and its capacity to deliver.

"It is like a licence to continue agriculture, we need that base protection in place. There are some things that have to happen and only government can pick that up, those functions have to be performed."

"There is no future export potential without shoring up the key components of Brand WA (clean, green, safe)."

"The provenance issue is a vital one: we are high cost producers, to meet the value add to our export and domestic partners we need to be able to deliver on the point of difference with provenance. The bureaucracy and regulation can be a massive value add if it can be used as a point of difference for our supply chain."

6. DAFWA ensuring science underpins industry

The path of innovation, R&D, adoption and enhancing profit at the farm gate has been intensely studied over decades and is well understood. Typically the cycle takes 25-35 years (e.g. no till cropping), with simple technologies/practices adopted much quicker and complex farming systems more slowly. Historically DAFWA was a research organisation, with sustained funding to match this cycle with independent, production-based scientific research and results taken directly to farmers to support adoption. However, for more than a decade the research landscape has been changing, in:

- where innovation is sourced (more comes from global sources with local adaptation);
- who does the R&D (RDCs dominant, private and tertiary sectors rising, state sector in rapid decline);
- who translates these and services industries (private and commercial sector, RDCs and grower groups with state sector exiting); and
- increasing global connectedness and funding through collaborative arrangements.

Prior to this review there was wide criticism that DAFWA had dis-engaged from its R&D role, with (arguably) the exception of the grains industry. This is not to say that transition to private and industry-owned research shouldn't be the goal (e.g. Western Dairy, pork industry), but it is a question of how and when it is done, as the difficulty in agreeing on a future grains research partnership would indicate.

The industry gave the Panel a mixed response of just where DAFWA was positioned in the R&D space. However, there was a shared view that innovation and research are very important to agriculture sector growth, backed by science validation and industry experience. Application of research to agricultural production in Western Australian conditions, to drive productivity improvement and close the yield potential gap, requires sound science beyond immediate commercial interests. Many respondents, unprompted, nominated improved

seasonal forecasting capacity and its interpretation into cropping systems as a job best done by DAFWA.

"The Department has a role in guaranteeing there is sound and credible research, and over time this will become increasingly important in underpinning our social licence. It will be critical in guaranteeing our long term viability. It has to be a strategic decision to maintain a credible presence in independent research and validation of the science that underpins agricultural production in our particular systems."

DAFWA is vitally important in facilitating and coordinating research. Other participants play strong roles, but integration and translation of research and innovation of a systems nature or pertaining to complex production constraints is beyond their capability and self-interest; their performance drivers are narrower.

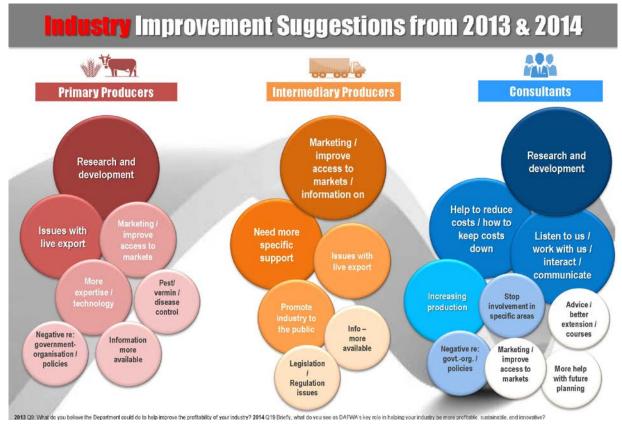
"We have fragmented the whole industry in research and extension. With universities, AEGIC, DAFWA, grower groups, consultants, commercial researchers. Agriculture has shrunk. It should be DAFWA's role to identify the model is unsustainable, and give it a good shake. Growers need scientific research not froth and bubble."

By withdrawing from R&D in the way it has, DAFWA has compromised its capacity to initiate and facilitate collaborative research arrangements including publicly funded research providers and private research across a range of industries and fields. Utilising its considerable resources, regional presence, industry and community contact and independent status as leverage, the Agency could ensure that R&D is targeted to industry needs within the State while drawing on research skills and programs within and outside the State.

However, in livestock and horticultural industries the Panel's view was confirmed that DAFWA had traded away its negotiating position for R&D in the State's interests. While the pork and dairy industries are now under industry guidance for their R&D needs, there are many strong reasons for DAFWA to seriously re-consider its role in beef, sheep and horticulture as their R&D capability is not as self-contained. The key is to determine at which point in the value chain DAFWA can add the most contribution.

The 2015 Stakeholder research conducted by Painted Dog (see diagram following), in response to the question about how the Agency could assist their profitability, identified that both primary producers and consultants resoundingly highlighted the priority on research and development. The Panel was concerned that DAFWA may have vacated, or vacated too quickly, some research areas where its involvement is still needed. Industry feedback justified those concerns, pointing to dis-engagement and weakness in science underpinning growth and development.

"The southern rangelands have struggled with morale and felt neglected with the decline of departmental resources. Productivity is vitally important with livestock. Producers in the southern rangelands want to be re-engaged. We believe there is a place for both government and private engagement. Departmental people have been too worried about losing their jobs and have been nowhere to be seen. We need commitment to reinvest. I see it is government's role to engage with the private sector to make that happen."



Source: Painted Dog – DAFWA KPI Research July 2015

Symptoms and risks of this dis-engagement bring a range of problems, which have served to alienate different sections of the industry. Producers point to a break down in the sense of partnership that had been a feature of DAFWA in the past. They have seen this build over recent years, as budget and staff cuts deepened, and felt constrained in speaking against this because the changes were put to them as a fait accompli. There was no room for negotiation.

Industry and other sector players pointed to the growing lack of capability of DAFWA staff to engage and understand their opportunities and issues. With the exception of some outstanding scientists, they see staff lacking in industry knowledge and field experience, rotated into jobs they're not suited for, with less ability to translate industry challenges back into Agency consideration and response.

These criticisms were qualified as more a systemic Agency weakness due to how budget and staff cuts were handled and redirected, rather than reflecting the endeavours of individuals. At the managerial level there is a 'we know best' attitude. At the staff level there were reports of change fatigue, distress and demotivation.

DAFWA has diminished the State's ability to direct and reap the benefits of R&D under the national frameworks that have been developed and agreed to, and to engage globally on new technologies.

This science and industry disengagement may not be as severe in biosecurity, due to good support from other entities (Plant Health Australia, Animal Health Australia and cooperative research centres), but DAFWA's frontline role needs strong engagement underpinning risk management and shared responsibility with industry.

The Panel was concerned at DAFWA's degree of deskilling and loss of capacity, with the perception emerging from Stakeholders that the Agency is largely irrelevant to them, except in policy and regulation. Their responses were that DAFWA:

- has cut too far, but the situation is recoverable;
- is critical to defending the sector;
- is critical to research and innovation partnerships that tackle the major production constraints and complex farming systems development;
- in supporting the role of government is important to credible 'opening of doors' to new markets; and
- is critical to attracting, building and retaining science capability in the sector as a whole, and bolstering industry confidence.

Given the importance placed on DAFWA to provide such roles, several suggestions to rebuild the linkages were outlined:

- An initiative in the short term to release staff to re-engage with industry on a weekly basis and report feedback to their teams and to management.
- Establish DAFWA as the 'go to' Agency for first contact on agricultural initiatives (market access, product opportunities, investment attraction etc.), backed by a whole of industry shop front and knowledge portal.
- Use DAFWA employment practices to attract and mentor scientists into the sector, with a clear succession strategy developed and understood.

Recommendation 6

The Panel recommends that DAFWA reverse the trend of exiting research and development unilaterally. As a core function, it should re-invest in facilitating and coordinating R&D and science leadership, and co-investing where it adds essential value that no other entity can do.

The Panel recognises this is a challenging task given DAFWA's resource constraints, but it is not necessary for the Agency to be actually doing the R&D unless there is a clear case to do so, but it does have clear roles essential to collaboration and industry partnering. This can only be done as the State budget and co-investment with others (RDCs, private sector) allow, and with a leadership team with the willingness to re-establish strategic relationships with DAFWA as a premier science-based Agency.

"Create an environment for innovation. Put development in the mix with research, the universities can't do development so there is a role for the Department. You have to have the scientific R&D capacity. The State has to invest in the next generation of researchers, we are struggling to attract and build capacity. The Department must have a role in developing the next generation, taking graduates from universities and developing them. It is at a critical tipping point, we have to make this a priority now."

"DAFWA should initiate and participate in R&D partnerships with industry with different models for different situations, and there are current opportunities to do that. DAFWA is the largest recipient of GRDC funds nationally, giving importance to the GrainsWest initiative. For smaller industries too, under the Agriculture Produce Commission, DAFWA can provide core capabilities that would otherwise be missing. For example, the vegetable industry can fund R&D projects but not sustain the research capability. Universities and CSIRO are important research

providers, but they have different drivers. DAFWA is uniquely placed to work with industry on identifying productivity constraints, facilitating agreement on priorities and linking industry's leading edge with collaborative R&D."

Throughout this Stocktake and Future Directions review process the Panel was aware of discussions between DAFWA and GRDC for a new grain collaborative venture, initially proposed by DAFWA as GrainsWest. The Panel was advised that work is continuing on a model suitable to both parties. The Panel was briefed on the Grains Industry Group's report and recommendations for a modified structure and delivery mode with emphasis on early business planning and partnership building, then evolving over time with more partners and research breadth under governance in a not-for-profit company structure.

The Panel supports early resolution and agreement on the proposed collaborative venture for grains R&D. Unlike other areas of the Agency, DAFWA retains significant capability and resources in grains R&D, with high calibre research scientists and facilities, and operating costs largely co-funded by GRDC. Instituting this new collaborative R&D entity will be a good outcome for the grains industry in this State, and will set a vision and build confidence that DAFWA can partner effectively in R&D programs to the benefit of other industries in the agriculture sector.

7. DAFWA defending the sector

DAFWA has a clear industry defence role in ensuring sound management of areas such as biosecurity, natural resources, animal welfare and product integrity. It is also central to Government's ability to provide the level of confidence sought by premium markets regarding each of these areas. There was strong and widespread support from industry for DAFWA's role in biosecurity and protecting market access, and concern that this might be compromised by budget cuts. Natural resource management – protecting the agricultural production base - was identified as an important departmental role by fewer respondents.

"Biosecurity is a key issue for industry. We really don't have the scientific capacity to underpin the biosecurity issues, who is going to address the scientific capacity? The Department should be the custodian, and it should be a partnership with industry and the community. The university has good people from different Departments looking at specific projects in risk areas. We are very keen to see fundamental research continue, there has been an erosion of capacity and expertise."

Maintaining WA's freedom from the many exotic pests, weeds and diseases that affect other regions and countries is vital to the profitability and sustainability of WA's agricultural and food sectors. In October 2014 DAFWA created a dedicated Biosecurity and Regulation Directorate to consolidate and strengthen leadership and consistency for biosecurity and regulatory functions. Although biosecurity has been subject to budget and staff cuts, as for the rest of the Agency, it received a \$1m boost from an internal re-allocation of resources in 2015.

Biosecurity represents a third of the resources and budget for DAFWA, and there is an attempt to strengthen the 'front end' of the spectrum of biosecurity activities with surveillance, risk assessment, detection and rapid response, and containment of incursions. Currently, most resources are at the other end of the spectrum; managing invasive species and feral pests. However, there is a change process underway as part of a national policy shift, with responsibility for management of established invasive species shared with industries and community groups.

The Western Australian Biosecurity Council has been working with DAFWA and advising the Minister and Director General on this transition. The Council has participated in the DAFWA

Stocktake as part of its work on two key questions – adequacy of resourcing and the prioritisation method used; and policy for shared responsibility in biosecurity management.

Although the Council has yet to finalise its determinations it has provided preliminary observations to this review. DAFWA's internal review and prioritisation of biosecurity resourcing within a declining Agency budget has been rigorous and sound. However, projected funding is inadequate in some key areas: surveillance, capacity to sustain a response, specialist diagnostic skills, ongoing training for emergency responses, ongoing support for community-coordinated invasive species management, and regulatory backup. This is exacerbated when Royalties for Regions projects cease over the next two years.

The Council has more work to do yet, drawing on comparative statistics in other jurisdictions, and will report in late August 2016.

"Industry wants assurance that the regulatory role of DAFWA is actually performed – treatment and testing and tracking of imported interstate fruit."

The most contentious area is in DAFWA shifting the balance of responsibility for biosecurity activity and resourcing towards industry and community groups. In the knowledge that Agency resourcing has been declining, inevitably this is seen as cost-shifting. The Biosecurity Council has reported that the principle of shared responsibility is largely accepted and that industries are prepared to invest in biosecurity that protects market access, but beyond that there is contention. The Panel is aware of dis-enchantment and criticism of how DAFWA is going about transferring costs to industry funding schemes and in establishing community-based biosecurity groups. DAFWA's 'we know best' attitude and unsatisfactory engagement with existing entities, including NRM organisations and local government, has compromised execution of the shared responsibility principle.

"It is important that DAFWA doesn't isolate biosecurity, it has to be integrated across industry, be very open to partnering opportunities and identifying new approaches and technologies, the silo approach is the risk."

While the Panel's observations on the importance of DAFWA sustaining biosecurity functions and on key inadequacies attributed to resourcing and stakeholder engagement are clear, the Biosecurity Council is better able to report more specifically how these issues might be addressed.

Natural resource management and DAFWA's role was raised with the Panel in two contexts:

- protection of the agricultural resource base for ongoing productivity improvement, and
- a broader sustainability question which is meaningful to agriculture's reputation and product integrity and brand.

The first is largely a technical support issue with DAFWA expected to retain necessary science skills to monitor resource condition, inform its policy and regulatory functions, bolster R&D and sustainable practice, and assess new industry opportunities. The second is more about how DAFWA engages with NRM Stakeholders, its place in that community, and how it integrates and connects sustainable practice with food integrity and brand.

"Natural resource management for industry productivity and for landscape protection should not be seen as a binary relationship. Capability is needed to work across these. For example, the reversion of plantation forestry to profitable farming should not repeat the mistakes of the past, yet there is no leadership from DAFWA on this point."

NRM organisations saw lack of an NRM framework for Western Australia and absence of DAFWA in a lead role as an impediment, and that opportunities to promote sustainability of agricultural practice had been lost. These organisations are shouldering that responsibility with inadequate resources to do so. Like other Stakeholders they were quite critical of

DAFWA's high-handedness, and inability to consistently engage with regional Stakeholders largely due to its lack of capacity rather than lack of willingness. There is an opportunity for DAFWA to constructively partner with NRM organisations, with DAFWA in a foundational role, in the interests of sustaining the natural resource base and the market reputation of agriculture, and NRMs delivering services that complement landholder responsibilities. However, this is held back by DAFWA's out-dated view of the NRM sector; not recognising their maturity and efficiency today.

"It falls to regional NRM organisations to fill these gaps and complement work by sectoral groups. While NRMs are happy to do this they do not have the financial resources under their Commonwealth funding model."

An area that DAFWA and government have dismissed over the past five years is the sustaining of the natural resource programs. The reliance on NRM groups, with little alignment with DAFWA and in the main funded by community and volunteers is not satisfactory and needs re-engagement. There is insufficient investment in community capacity building to solve the problem and bringing principles and alignment between production and sustainability is an imperative. This will also serve to underpin the global marketing value of WA's competitive advantage. NRM Groups do have a strong capacity to work with a range of activities and DAFWA has not given enough thought to the future architecture of regionally distributed groups, including Landcare groups, grower groups and regional biosecurity groups (RBGs).

Recommendation 7

The Panel recommends that DAFWA more explicitly links biosecurity and sustainable resource use with food provenance, integrity and brand development in partnership with industry to underpin Western Australia's world class brand.

The Panel also recommends that DAFWA strike a new collaborative arrangement with NRM organisations to monitor resource condition, service landholders with sustainable NRM advice and provide regulatory back up where required.

It must be noted that the WA Biosecurity Council will report separately on the adequacy of DAFWA's biosecurity resourcing and on its prioritisation of resources to biosecurity functions.

8. DAFWA rebuilding capability

The Panel heard that DAFWA staff have change fatigue: their reputation, effectiveness and impact is compromised by that fatigue. This is mostly a direct consequence of the uncertainty of redundancies and persistently falling real funding. Any message that staff are appreciated and are the key resource of the Department is entirely inconsistent with the persistent downsizing.

"I see an institution that the people inside have lost their mojo, the institution has lost its mojo. There is not an investment in developing capacity within DAFWA. There are a lot of consultants employed to access commercial expertise, why don't they employ that expertise?"

Up to 20 years ago DAFWA was an environment where the best young graduates wanted to start because it was a science-based career-building opportunity. Now that environment for getting a good grounded knowledge and developing people has been lost. In very recent times that has been compounded by whole-of-government staff freezes which has prevented DAFWA implementing industry-funded projects. GRDC, for example, despite knowing that DAFWA was their best option, has considered finding other ways of getting its projects underway. This is another affront to industry, which affects DAFWA's standing, but is not of its own doing.

"All of the key people that drove these developments had a long term tenure in their area of speciality, capacity, attitude, a desire to drive change for the industry and good engagement with the industry. If you lock good people up with administration and paperwork in management, you won't get the big outcomes."

"The next generation graduate has no opportunity for development within the Department. The industry should be looking now at how it can develop the resources it will require in future, as it takes around 20 years to develop expertise and experience. There needs to be a short term approach of acquiring expertise, and a long term view of developing it."

This could be addressed with DAFWA formulating a strategy for rebuilding science capability and that it does this in partnership with the agricultural industry. It should aspire to again being an employer of choice, attracting and retaining scientists who see a career across the agriculture and food sector. Stakeholders see DAFWA's employment strategy as developing a broader industry resource, contributing talent and confidence to the sector as a whole.

"Before you can leverage you have to have capacity for meaningful engagement and build respect. There are actually 20 people I'd work with in grains in a meaningful way. There are a whole lot of busy people, but there are 20 with leadership capacity to get the biggest return on investment. For direct sheep and cattle research there is one that comes to mind to work with in a meaningful way (and they are probably more extension that R&D). There are some great pastures and soils people that need to be retained in the system and given surety of tenure."

Most importantly, DAFWA can and should look beyond the immediate, to anticipating the next frontiers and positioning appropriate R&D capacity, backed by its regained science expertise and more current industry knowledge.

Recommendation 8

DAFWA adopts a 10-year staff re-development strategy; prioritising areas with thin capacity, mentoring industry engagement and field experience, aligning career development with industry growth areas, and retraining the goal that DAFWA is seen as a priority choice for employment in the agriculture and food sectors.

9. Best use of DAFWA resources

DAFWA has considerable physical and knowledge resources, and a regional presence unmatched by any other Agency. It has been rationalising use of buildings by reducing their number in regional locations and by sharing vacated space with other entities, at its headquarters (e.g. Forest Products Commission, Australian Export Grain Innovation Centre) and regional offices (e.g. Wheatbelt NRM at Northam, rented laboratory space at Albany). Currently DAFWA operates 26 offices. If DAFWA's budget is to further decline according to the 2016-17 budget outlook then further closures may be considered.

To the Panel, the widely reported dilapidated state of DAFWA's headquarters, the ongoing closure of other offices and renting space to others, is seen as a tangible expression of an Agency in decline and losing the confidence of government.

On the other hand, industry consultations recognised important roles for DAFWA – developing and defending the sector, facilitation and coordination of research and providing science underpinning industry, attracting and retaining superior talent, and access to its knowledge resources. For DAFWA to 'get back into business' requires re-investment on many fronts, including its physical presence.

The Panel sees a great opportunity to combine re-engagement with the agriculture and food sectors, with sharing of facilities, knowledge and talent. Although the Panel did not have the data before it to determine an optimum number and distribution of regional offices, it does see scope for reduction and consolidation. In part this is determined by budgets and staff preferences; some offices now have very few staff.

However, DAFWA's regional presence is highly valued and that provides the basis for 'unobstructed connectivity' across the State's agricultural sector. The function and image of regional offices can change to sites with an open door for knowledge exchange and industry collaboration. As part of 'getting back to business' this open-door initiative could be:

- Regional offices re-badged as 'industry resource centres' to facilitate knowledge access and government-industry collaboration and exchanges;
- Tailored workspaces for agribusiness tenants building on the current trend, but as part of the 'getting back to business' theme, and meeting, videoconferencing and hotdesking facilities for collaborative work; and
- Recruitment of DAFWA development officers to staff these centres, preferentially selected with industry experience, who may build capability for serving the sector in other roles.

There is an expectation that DAFWA does a better job communicating and presenting the agriculture and food sectors to consumers and the community at large. There is no shortage of relevant topics – value of the sector to the economy and community health, reinforcing industry's market advantage of 'clean and green', matters of biosecurity and food integrity, and advocacy into government circles. These would reinforce DAFWA's status, why it needs better resourcing and its own morale.

"Whoever does their PR and marketing is failing, they are not doing a good enough job of promoting what they are trying to do to attract funds for work in regional areas. It needs a whole lot better job of promoting what DAFWA can do, and if it is something like biosecurity, explain what that means to all West Australians, so they see the value in funding the functions of DAFWA."

DAFWA can reinforce its lead status with industry and community Stakeholders through activating its latent knowledge assets in a new and innovative way. The Panel supports early action on a knowledge portal, because it would facilitate but is not contingent on completing the deeper organisational changes recommended. Establishing a knowledge portal may be a \$1 million project over three years. Developing the value proposition in the first instance, with attention given to its institutional form – product development, collaborative arrangement, governance and staffing – could be resourced by DAFWA for around \$60,000.

"DAFWA's comparative advantage over all others is the huge data asset it owns. No-one else has this – but it is not being used as well as it could from what I see. By merely making this data discoverable, you are freeing it up to anyone to do research, make policies, make investment decisions, etc. This is the basis of Big Data in a nutshell – we are all now sitting on a truckload of data and we either know what we don't know (and need to make it easy for others to find the answers) or we don't know what we don't know (we need others to ask the questions AND find answers). There is no rocket science to this – find the data, identify the layers that have value and publish it in a consistent way so it's discoverable."

Recommendation 9

The Panel notes government intentions over the years to provide a new and appropriate headquarters for DAFWA. It recommends that this is considered as a matter of new priority and urgency. A new headquarters, combined with recommended transformational changes, would be important to an effective, re-engaged agency and heavily symbolic that it is 'back in business'.

Recommendation 10

DAFWA focuses its resources, skills and infrastructure on extending and implementing the proposed WA Open for Business initiative in the agriculture and food sectors; specific initiatives to include:

- DAFWA as the lead Agency for a "Western Australian Agriculture Development Strategy", developed and implemented in collaboration with industry and overseen by the proposed Agriculture and Food Roundtable. The strategy will focus on the most important priorities to achieve the agriculture and food sector's growth target;
- Utilising DAFWA's agricultural expertise, and in partnership with the Department of Regional Development, create an office for attracting inbound investment and servicing new opportunity enquiries;
- an economic analysis unit that assesses opportunities and proposals for impact on sector growth, monitors and interprets growth within the agriculture and food sectors, and applies this knowledge to DAFWA's prioritisation of internal and partnership investments;
- a whole-of-agency information access portal drawing on and making widely accessible DAFWA's latent knowledge assets, ranging from new industry and product opportunities to technical advice, and navigating regulatory requirements;
- re-purposing regional offices as 'industry resource centres' to facilitate knowledge access, government-to-industry cooperation, and whole-of-government support for industry and regional organisations and enterprises; and
- staffing industry resource centres with development officers to carry out this facilitation.

10. DAFWA adopting portfolio management

DAFWA, like most organisations working across disciplines and funding sources to implement government or industry initiatives, works to a project management methodology. This is a matter of efficient practice and good governance. Project sponsors and investors have line of sight to progress; project teams have performance measures; and there's confidence that deliverables will be achieved and benefits realised. The Panel recognises that this works well in DAFWA and saw in Royalties for Regions funded projects meticulous application of project management tools.

However, there has been external criticism more to do with the plethora of projects and the impenetrability of knowing how they contribute collectively to outcomes. This seems to be exacerbated by project clients not getting knowledge outputs tailored to their needs and inadequate liaison with Stakeholders looking for assurances there will be dividend from the totality of their investment. The Panel also heard of DAFWA's inability to grasp challenges and opportunities, and interpret and act on them. This drew critical attention to the role of the Agency's middle managers.

Knowledge generation organisations, including research investors and providers, share the challenge of how to integrate project findings to client needs and how to meld project teams to achieve a larger good than sum of project outputs. This falls to managers who are each responsible for a portfolio of projects. CSIRO calls these managers 'theme leaders'; other organisations call them program or node leaders. They sit between the top down expression of mission and strategy, the bottom up expression of needs and opportunities, and the external servicing of client needs.

Portfolio management is a methodology for joining whole-of-agency strategy and priorities with project-level deliverables and accountability. It could apply well to DAFWA because it requires external focus and relationship building to be effective. Portfolio leaders require experience and nous, external intelligence and cross-agency links, and a gift (or mandate) for managing upwards and outwards. Assisted by an administrative function to track project-level performance, they interpret Agency strategy into projects and allocate resources, and most importantly they synthesise and interpret project outputs to client needs. This requires rigorous analysis underpinning resource allocation decisions, but it is also a creative exercise because where opportunities are identified and tested, a strategy for client delivery is set and implemented.

Recommendation 11

The Panel recommends establishment of a portfolio management methodology with middle management in the role of portfolio leaders.

11. Resourcing DAFWA's 'develop and defend' role

When the Panel sat through the Stocktake presentations and following discussion it found DAFWA Management to be disciplined, cohesive and committed to implementing Government directives and re-allocating resources to priority functions within its declining budget under the Stocktake process. Within the severe constraints of its then budget from 2015-16, program managers recommended further reductions with explicit attention to retaining core functions and to shifts in risk profiles.

The Panel noted areas where DAFWA's capability had been 'pared to the bone', with key skills lost or now resting with single officers – in areas such as biosecurity diagnostics – and officers being directed to change their skills base, with variable results.

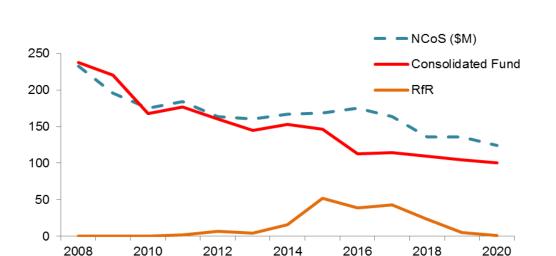


Fig 1: Real-term funding (CF and RfR) and net cost of services: 2008 – 2020 (\$m)

Government's investment in agriculture through DAFWA is channelled primarily through its Consolidated Fund (CF) and, increasingly, through the Royalties for Regions program. DAFWA also retains monies from various activities such as the sale of goods and diagnostic testing under net appropriation arrangements.

Real terms and nominal funding and, consequently, the net cost to Government of DAFWA's services have consistently declined over the past decade and the injection of Royalties for Regions funding has not offset the net impact of the loss of CF (Fig. 1).

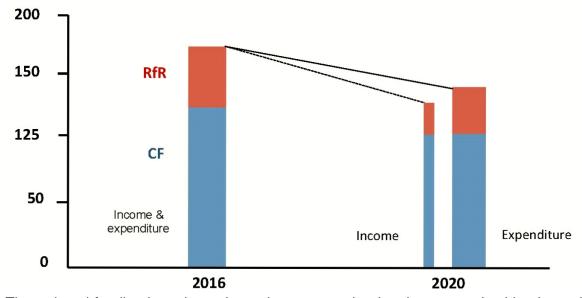
It is noted that this reduction had likely caused DAFWA to terminate, diminish and/or transfer some traditional services – such as production-based R&D – at a rate that exceeded their clients' ability to adapt.

The fact that Royalties for Regions funding has only recently emerged as a funding source and was project specific increased the risk that it could not be relied on by industry to fill the decline in CF funding.

This was exemplified by a 2015 client survey, which found that producers and agriconsultants still more commonly sought R&D products than any other single activity. Similarly, Panel members are aware that the rate at which the transfer to grower responsibility for biosecurity actions that offer primarily private benefit is causing concern to many industry members.

The rate of decline in services offered by DAFWA was necessitated by the on-going decline in government funding; and this detrimentally impacts DAFWA and Government's perceived relevance and benefit to the sector.

The figure below shows the net cost to Government of DAFWA's 2016 expenditure against its proposed expenditure in 2020 (solid line) and budget forward estimates (dashed line).



The reduced funding is perhaps the main message that has been perceived by the majority of interviewees. However, they believe reduction has now gone too far and DAFWA risks becoming irrelevant, already no longer the 'go to source' for information, and there are concerns with biosecurity risks.

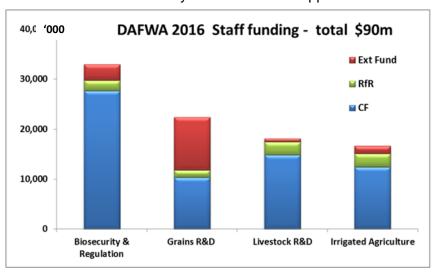
The Panel notes that the 2016-17 State Budget, released after these figures were prepared, has restored an additional \$50m to DAFWA's forward estimates spread evenly in 2018-19 and 2019-20. However, that is booked against Royalty for Regions funds and does not address the underlying challenge of sustained DAFWA resourcing.

Royalty for Regions funding is nominally for one-off investments to transform and recapitalise DAFWA functions, in programs such as Seizing the Opportunity, Boosting Grains Research and Development, Northern Beef Futures and Boosting Biosecurity Defences. In this way, the program is seen as working in the interests of regional industries and communities. However, over time this funding comes to be supplementary to DAFWA's CF account. In fact, both sources are lumped together in the 'net cost of doing business' in Treasury papers, whereas external funds from industry sources are not. The Panel agrees with feedback from Stakeholders that Royalty for Regions funds should not substitute for other sources of funding, but be prioritised for facilitating regional industry growth. The Panel received criticism that where Royalty for Regions funds administered by DAFWA were for industry co-investment, the funding rules came to them in non-negotiable ways (e.g. funding to grower groups for supply chain development).

In June 2007 DAFWA employed 1581 Full Time Equivalents (FTE). Following successive reductions in CF funding the total number is now just below 1000 FTE.

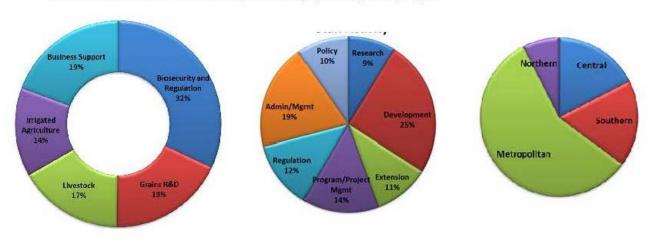
Staff represent a total of \$90m of the Department's \$160m budget, the graph following indicates the source of funds generated from CF, Royalties for Regions and External or partnership funds such as the Research and Development Corporations.

The funds are shown as divided between each of the key Directorate areas with over one third invested on biosecurity and the balance apportioned to industry sectors.



There are 968 FTE staff employed by DAFWA and the charts indicate where the work is undertaken divided between key category areas including 45% on RD&E. The break up of just where staff are located is also shown.

DAFWA allocation of staff resources by Directorate, by activity and by Region



The Panel found a misunderstanding of what resources remain with DAFWA – Stakeholders estimating between 3-400 FTE when the current number is 965 – and then surprised as to just where the staff were located or the tasks allocated.

The make up or break up of where staff resources are deployed provides no measure of effectiveness or if they are the required capacity to deliver on business requirements.

Only the planning process discussed in this report, supported by new analytic capability can determine this.

Recommendation 12

The Panel recommends that:

- DAFWA suffers no further cut to its CF funding for 2017-18, acknowledging that DAFWA is scheduled to take its resourcing case to the Cabinet Expenditure Review Committee later in 2016;
- The new Corporate Plan recalibrates DAFWA's funding requirement for CF over the four year outlook period to meet the change agenda recommended in this report and to resource adequately ongoing core functions;
- DAFWA as a conduit to federal and national funding programs will work with industry and across government to keep abreast of opportunities and maximise the return and input to Western Australia's agriculture and food sector.
- DAFWA works collaboratively to re-connect with the Department of Regional Development to facilitate optimal co-funded opportunities for the agriculture and food sectors; and
- The Royalties for Regions funding source is prioritised for transformative projects that rebuild and capitalise industry-agency partnerships, and contribute to regional industry growth.

Investing to make a difference

To focus the group interview sessions participants were asked where they would prioritise spend of \$10m to make a difference to the WA agriculture and food sector.

The key investments suggested landed clearly in the areas of technology and capacity.

Technology investment

- Technology infrastructure \$10m may not go far enough, it is a real issue giving people access to good tools to aid their decision making process. It is the most significant impediment to WA agriculture, getting access to good internet speed.
- A dependable weather forecasting system. Everywhere there is a DAFWA live weather station, put a mobile phone tower on top of it so we can actually use these fantastic new technologies.

Investment in current and future capacity

- An overarching survey of current research in the State today, and where can DAFWA better allocate their people, or drive new research opportunities.
- Identifying what research will have the biggest impact on production, and what are farmers'
 priorities. A DAFWA person delivering that information at a field day will immediately lift their
 relevance.
- A research and knowledge audit, and identifying together with grower groups that the money spent on research is as efficient as possible.
- I'd spend some of it on reviewing the people that are left, and identify efficiencies in staffing. What you save you could afford to attract a well-paid team tasked with moving the business of DAFWA ahead.
- Focus on R&D and make sure we can staff it with world experts that aren't living from grant to grant. And make sure we are investing in core functions like biosecurity with staff with capacity to deliver.
- Before you can leverage you have to have capacity for meaningful engagement and build respect. If you had the right people with the right capacity that money would already be being spent here. Think of it as positions, rather than people, and find the right people to fill these.
- Pay people what they are worth relative to the commercial sector, and buy good people to operate with a commercial brain to deliver efficiently and effectively a broader range of strengths than just research in key areas that can influence the shift required in DAFWA.
- I wouldn't spend any of it in grains if the aim is to double value of production! Within grains I would spend it on the people to support proper extension (not DAFWA), to deliver information at multiple levels to effect adoption of what has already been invested in.
- Beefing up the research effort, investment around the people, and building partnerships to bolster
 the talent with universities and ag colleges to leverage in R&D and talent. Education is key. There
 are a lot of groups trying to participate, but there needs to be coordination and alignment.
- Make sure there is a succession plan in place for intellectual capacity in agriculture, then start engaging with schools to build future capacity as a career path for the next generation.
- I'd get a good office block. I'd identify the key people we need in the future, and I'd invest to ensure we have the next generation of those people being developed.

APPENDIX 1: TERMS OF REFERENCE

The Stocktake marks an important first step in setting DAFWA's future direction, and it should be followed by a more detailed analysis of the information generated to determine how DAFWA can best contribute to the Government's Agrifood 2025+ vision.

This is required to understand critical areas for public investment in helping the agrifood sector mitigate risk, as well as identify where Government needs to work in partnership with the private sector and where it needs to get out of the way. This in turn will inform the Government's investment decisions on:

- resources and capital in areas that deliver the greatest contribution to achieving the Agrifood 2025+ vision;
- export market development for agriculture and food across Government and the private sector, and targeting Government assistance accordingly;
- using public funds to leverage industry and other investment in targeted research and development;
- co-investment in key strategic capabilities and platforms across government and industry to maximise the impact for agriculture and the State;
- · key Government policy commitments and core regulatory functions; and
- increasing the sector's profile, as well as its representation and engagement in the wider community and economy.

To underpin this advice the Minister requests the panel report on DAFWA's future roles and resourcing, including:

- 1. core roles and responsibilities that DAFWA must perform to allow the Government to deliver key agricultural policy commitments, and meet its statutory obligations to mitigate biosecurity and environmental risks;
- 2. critical science, technical and policy capabilities that DAFWA needs to undertake its core roles and responsibilities;
- **3.** current functions that could be conducted through collaborative arrangements or by others;
- **4.** funding models to support and leverage industry research and development needs across the value chain; and
- **5.** key messages to be communicated to the sector and Stakeholders about DAFWA's core roles and responsibilities.

APPENDIX 2: CONSULTATION REPORT SUMMARY

The Western Australian agriculture and food sector currently delivers \$20 billion to the State's economy through on-farm production, processing and value added activities. The Department of Agriculture and Food of Western Australia has contributed to the long term development of the WA agriculture and food sector through knowledge generation, industry collaboration and facilitation, a keen focus on solving production challenges unique to the State, and on managing the 'brand' attributes of clean, green and sustainable production.

Over the past decade DAFWA has been evolving from high visibility as traditionally an onfarm focused Agency with a minimal view of the broader market needs, to an economic development Agency working in step with the industry value chain to improve the sector's contribution to the State. Concurrently, a long-term reduction in Government investment has seen the availability of resources decline and an emerging concern that DAFWA's key functions to develop and defend the sector may be compromised.

Stocktake review validation

The consultations during the Future Directions Consultation process allowed the Panel to challenge the views determined from the initial Stocktake Review and in effect provide a 180° focus from which a range of findings, future opportunities and recommendations can be formulated for the Minister and the Department's Executive.

The high level statements derived from the Stocktake Review were generally agreed to by the Stakeholders with some qualification as outlined below.

The Review Panel found that DAFWA:

- ✓ Has evolved as an economic development Agency focused on increasing the sector's contribution to Western Australia.
 - The shared view is that DAFWA has always been and remains an economic development Agency with past examples where it has successfully facilitated industry development with activities along the supply chain, however in most cases the effort was developed from the science base.
 - Sound and credible science and research underpins agriculture's economic viability and its social licence. It is a strategic decision to maintain a credible presence in independent research and validation of the science of agricultural production under Western Australian conditions. Development of the agriculture sector will come from driving productivity improvement and closing the yield gap through sound R&D.
- ✓ Is essential to the State's ability to both develop and defend the sector.
 - Industry agrees that the Agency should both Develop and Facilitate where appropriate, meaning there are many opportunities to use its resources and position more effectively as a facilitator rather than a key developer. The goal is the same, the role could be better defined.
 - Defending the industry is seen as an imperative, an expectation and mandatory.
- ✓ Has the will and adaptability to implement the priorities of Government; and to align itself with the evolving needs of its clients and the broader community.
 - Overall the Stakeholders could neither agree nor disagree with this statement, as the
 opinion mostly relied on personal contact and interaction. Without contact, the general
 opinion revolved around what does government expect of agriculture and the Agency
 and secondly, those who do have contact with DAFWA have become disenfranchised
 because of its faltering inertia and lack of resources to implement action.

Informed respondents questioned whether DAFWA has the 'will and adaptability' other
than coping with what has been forced on it, citing instances where staff are working
outside their professional capability, no longer having the technical depth and practical
understanding to determine what is really needed, but also recognising the value of
remaining leading scientists.

May have already lost some capabilities and connections needed to undertake its current and proposed roles and to exert appropriate influence both locally and nationally.

- Generally there is considerable support for this argument, however the Panel was heartened by the response that this was not only an important role but is expected by current and potential partners. DAFWA can do a number of important things with the right skills and experience. If DAFWA is to be influential, then appointing and retaining staff with credibility and reputation is essential. It is critical that DAFWA improves the capability of its people. Lack of a critical mass of experienced people is a disincentive to approach DAFWA which undermines its influence on several fronts, including federal/interstate relations, with R&D corporations and with industry.
- There is a shared view that DAFWA's key role is as a leader and facilitator to encourage collaborative arrangements including public/private partnership research across a range of industries and fields. Utilising its financial and independent government status as leverage the Agency should ensure fair and reasonable benefit to the industries.

Will not be able to deliver on Government's priorities for the sector if the projected decline in Government investment is not stemmed.

- In general the perception is that budget cuts have significantly damaged the Agency's capacity to deliver. The external optics displayed to the Stakeholders have manifested in a loss of many staff and personal relationships as well as their contact line to the Agency, which has also impacted morale within the Department. Reduced effort on accessibility via electronic contact points (website) also visually demonstrated a less viable delivery option.
- The other funding issue raised is the propensity for industry funding partners to drive jointly funded initiatives on a 'project' basis with a defined timeframe (usually a maximum of three years) which means staff and program continuity is compromised (the co-contribution by DAFWA). Developing an ability to secure industry driven 'program' initiatives would sustain project activity and ensure continuity in expertise and research outcomes.

Does not consistently engage with industry and Stakeholders in a way that enables it to be seen as a true development partner.

- The current state of DAFWA can be attributed to a number of challenges, not least the budget cuts, exodus of personnel etc. One observation really resonated: "what other Department could be cut so ruthlessly without huge public outcry?". The reason industry hasn't defended the Agency during this time is clearly because of the breakdown in communication and sound relationships.
- There was a significant disconnect between Stakeholders and the Seizing the Opportunity funding provided by the Royalties for Regions program. Despite significant funding being made available across a range of industries, the stated poor consultation and outcomes has led to significant disenfranchisement at industry level.

Stocktake Summary Statements And Industry Responses

DAFWA's purpose: defend, develop, facilitate, advocate, invest in people for the future

A need to both develop and defend

As an economic development Agency, DAFWA sees its primary purpose is being to increase the sector's contribution to the WA economy; and its proposed roles are geared towards the goal of doubling the value of sales by 2025. DAFWA argues that government has a role both in growing the sector and in defending the value that it currently offers Western Australia.

In regard to the latter, DAFWA has a clear role in ensuring sound management of areas such as natural resources, biosecurity, animal welfare and product integrity. It is also central to Government's ability to provide the level of confidence sought by premium markets regarding each of these areas.

The Panel would like to hear your views on DAFWA's role in both 'developing and defending' the sector.

Industry agrees that the Agency should both Develop and Facilitate where appropriate, meaning there are many opportunities to use its resources and position more effectively as a facilitator than key developer. The goal is the same, the role is not well defined.

Defending the industry is seen as an imperative, an expectation and mandatory.

Some opportunities include:

- Take a greater role in engagement and leverage across government on behalf of agriculture on issues and programs where inter-governmental cooperation and solutions are required.
- It is the role of private enterprise, not government, to find and develop new markets.
 Government may open the doors for industry using a range of resources, including DAFWA.
- Work collaboratively with and through farmer operated organisations including marketing, production, sustainability and community groups to develop and defend the sectors.
- Biosecurity is a critical primary role for DAFWA but it must be demonstrably effective and maintain capacity, expertise and resources to deliver.
- Government's role extends to compliance in biosecurity and animal welfare, bringing clarity to responsibility-sharing with industry and to regional biosecurity.
- Develop and defend WA's food quality and relative freedom from threats by providing confidence in the integrity of the food products and their production systems.

Community and consumer engagement is critical

Agriculture necessarily involves working with animals, chemicals, genetics, and increasingly, international partners and investors – images of which can evoke strong responses with consumers and communities alike. The sector's ability to grow increasingly requires all Stakeholders to see it with a greater understanding.

The Panel would like to hear your views on the responsibilities of government and industry in this area; and how it can best be addressed.

While the majority of Stakeholders believe community engagement and education is critical to promote and defend the sector's social licence to produce food, there is little clarity around DAFWA's current and expected role.

Provision of basic educational services is a legitimate role for government: DAFWA can promote the science and integrity behind producing quality products from clean and green farming systems, and highlighting the high standards of WA practices. Rather than reactive damage control on contentious issues, it should take a bolder stance in providing independent information on modern industry quality systems and practices that produce safe food in this State.

Identified positions include:

- If DAFWA does not often and objectively relay the benefits of science and regulation then sound agricultural policy and the social licence to farm will increasingly be in jeopardy.
- Employment and training of science communicators and social media experts who
 can constantly convey how agriculture and related sciences are delivering
 improvements from which consumers benefit and that production processes are
 constantly improving to ensure less wastage, less degradation and better animal
 welfare outcomes for farm animals.
- Support the advocacy role of industry by facilitating them in delivering clear messages to consumers through strategy and leadership development.
- Make better use of the range of industry promotion and education efforts through formal partnerships and facilitating leadership to help manage strategic threats to the industry.
- Agriculture needs DAFWA as the first point of contact with an information portal for the agriculture and food sector.
- Buy West Eat Best was a valuable consumer-oriented initiative, yet perhaps not valued within DAFWA. Consequently it was cut severely but the legacy is still there. An opportunity to effectively engage community was lost.
- DAFWA can collaborate in co-investment by industry and health to ensure WA consumers, and young people in particular, are taught the basics of food production, nutrition and human health.

Research used as an economic-development tool

DAFWA traditionally described itself as a research organisation, focused on providing independent, production-based scientific research results to farmers. The Panel was concerned DAFWA may have vacated, or vacated too quickly, some research areas where its involvement is still needed.

The Panel would like to discuss with you the areas of research that DAFWA should retain (or return to); those it should step out of; and those where changes need to be better explained or managed.

The industry had mixed attitudes and understanding of just where DAFWA was positioned in the RD&E space. There was a clear conversation that sound and credible science and research underpins agriculture's economic viability and its social licence. It is a strategic decision to maintain a credible presence in independent research and validation of the science of agricultural production in Western Australian conditions. Development of the agriculture sector will come from driving productivity improvement and closing the yield potential gap through sound scientific R&D.

There is a shared view that DAFWA's key is as a leader and facilitator to encourage collaborative arrangements including public, private partnership research across a range of industries and fields. Utilising its financial and independent government status as leverage, the Agency should ensure fair and reasonable benefit to the industries.

The opportunities outlined included:

- Industry is now driving many elements of economic development. However, there is still a role for DAFWA where application of public funds can be justified to bring about new industry change; for example, cropping systems development and problemsolving in new, high rainfall areas or the transition out of cropping to permanent grazing on the dry margin.
- DAFWA also has a role in cross-sectoral research, beyond the limitations of industry groups (e.g. grower groups). Arguably DAFWA should be resourcing research that benefits industry but also provides landscape benefits; e.g. new fodder crops that also provide a riparian buffer.
- Manage the risk of large company funded R&D being the only work and then lacking transparency and diversity.
- A strong regional presence and understanding is still needed. This will require central R&D Station 'hubs' which can be linked via the relevant on ground landholder or grower groups.
- The case for DAFWA participation in research could be guided by the stage of an industry's development and maturity – when to support research and when to withdraw – and the identification of market failure.
- Given that DAFWA is likely to retain a comparative advantage in provision of biosecurity services and NRM monitoring and reporting, it needs to maintain an investment in the R&D services associated with those tasks. The focus of such R&D should be to identify novel ways to more cost-effectively provide these services.
- DAFWA should investigate and invest in bilateral arrangements with the each of the respective Research and Development Corporations to ensure that WA through DAFWA has the capacity to leverage funding, opportunity and investment in agriculture. (Western Dairy is a good prototype.)

A need to better engage with industry and Stakeholders

DAFWA seeks to coordinate and complement its activities with industry, other agencies and service providers at state, national and international levels. However, the Panel is concerned that some DAFWA strategies seem to be at odds with the needs and aspirations of the industries they are seeking to help develop; and that DAFWA is losing its influence on the national research and policy agendas.

The Panel would like to discuss with you how DAFWA can best improve the effectiveness of its engagement with industry and Stakeholders.

Industry provided both explicit and inferred criticism of DAFWA's senior leadership for not truly engaging or being open to new collaborations externally, and suppressing initiative internally. Recognition of the investment and contribution of industry and private sector to the direction and capability of production and integration with the supply chain was outlined in varying formats.

It is clear that a rapid response and return to alignment between industry and the Agency is an imperative. Without working collectively and collaboratively to identify the future role and investment required to deliver the core functions of DAFWA the ground support will continue to dissipate.

A concerted agreement across government Departments engaged in the agriculture and food sectors needs internal alignment about their respective roles, however in each case it is seen as critical that these associated Agencies seek and are provided with sound consultation and engagement.

Policy development, through better engagement and delivery by DAFWA, is an area that needs enhancement.

The alignment of industry engagement across industry, government, universities and federally is a very high priority with opportunities including:

Supporting your success is a great descriptive tag line but there's little evidence of delivery on the ground. Far more clarity could be evident with participation and partnership.

 DAFWA could play a stronger role facilitating State / Federal roles in overseas market development. There has been considerable staff turnover over the past 5 years impacting the effectiveness and influence on national bodies.

Far greater utilisation, investment and integration with key organisations and grower groups.

- DAFWA can do a number of important things with the right skills and experience. If DAFWA is to be influential, then appointing staff with credibility and reputation is essential. It is critical that DAFWA improves the capability of its people. Lack of experienced people is a disincentive to approach DAFWA which undermines its influence on several fronts, including federal/interstate relations, with R&D corporations and with industry.
- Provide pathways for graduates and postgraduates into the industry. Support employment and training of graduate programs to underpin the future of agriculture.
- Factional division on State agriculture has seen WAFF and PGA become progressively critical and defensive in their work and reduced policy development because both organisations have been directed to the sidelines. Re-engagement of sstructured senior meetings are seen as most important.
- Be far more engaging with the livestock and horticultural industries; though smaller in contribution to GVAP than grains, the future growth is likely to come from these sectors.
- Investigate mechanisms for DAFWA researchers to readily interact with the emerging extension providers.

Addressing growth across the entire value chain

External studies show the importance of supply chain efficiency in industry growth; and of all participants sharing in the benefits of that growth (i.e. establishing a 'value chain').

DAFWA is looking to work more with the post-farm components of the chain, with a corresponding decrease in on-farm activity; and to foster the transition from supply-chain to value-chain thinking.

The general consensus is that while DAFWA is looking to work more with the post-farm components of the value chain, it was clearly stated across all industries that private sector integration in the value chain is the main driver, but DAFWA can have a role in pulling together the players in the chain, resourcing the industry and opening the doors. They need to be very clear on the role of support, and capacity to participate but also need to understand the time to exit.

Stimulating growth across the entire value chain is liable to be increasingly difficult in many major agricultural industries in WA. Supply chains are likely to become, in some cases, more concentrated and more prone to competitive pressures. The outcome in many situations will be less transparency about the costs and returns in different segments of value chains and less data in the public domain about the commercial characteristics of businesses within supply chains.

- There needs to be clarity on where DAFWA operates, does not operate and when to withdraw. It can't resource a broad mandate a value-added test should be applied.
- There is a question of what capabilities DAFWA really has in this area, particularly for translation into regional benefit. It could work more collaboratively with Regional Development Commissions and Chambers of Commerce.
- There is market failure post farm gate where DAFWA can do good work, but currently
 this is not done well because it is so risk averse. While established companies don't
 share knowledge, DAFWA can support the entry of new players. InvestWest has
 delivered sound benefits.
- DAFWA can play a useful role with initiatives to promote new entrants into industry and new ventures.
- In order to provide insight about and review of different agricultural industries it would be useful for DAFWA to support regular statutory reviews of different industry supply and value chains in order to reveal information increasingly likely to be withheld.
- Invest in a far greater knowledge of agricultural issues and statistics, which will allow business, industry and government to access a range of information for appropriate use. Regular consultation with industry is an essential component of this to 'ground truth' results and get industry perspective.

Increasing emphasis on industries and businesses with the potential to grow

DAFWA is proposing to focus increasingly on those industries having the most significant growth potential and, within that, on those individual businesses having the capability and appetite to undertake a significant growth program.

The Panel would like to like to hear your views regarding the extent that DAFWA should focus on helping expand the sector, rather than underpinning its viability in its current form; and of focusing on businesses at the 'success' end of the spectrum more so than those at the 'struggle' end.

There are risks and rewards with the notion of 'picking winners' and supporting the industry and individuals. Government officers can be naïve about competitive forces in global markets. Also they can be closed to alternative enterprises that may not fit DAFWA's priorities for growing the sector, but collectively can contribute significantly to the regional economy, balancing domestic markets with overseas markets.

DAFWA currently does not have the capacity to do this effectively, and there are limitations in what public servants can do. The task should be in the hands of private enterprise with DAFWA providing analytical support.

It remains a sound principle to invest for impact by applying rigorous analysis to assess economic impact, match or acquire expertise to deliver against clear targets and time lines. Concentrate on core business and seek commercial reality to priority setting that will deliver real GVAP growth.

Some key observations included:

- Make sure the interface people have the right skills to understand who and what they are working with and the role they are providing.
- Size will not be the only parameter need to establish a framework for understanding and assessing new industry development.
- That hard choices have to be made is accepted. However, there can be win-wins, where assistance to a struggling industry can be part of a larger benefit in sustainability of the natural resource base or of communities.
- Focus on industries where per dollar of DAFWA funds spent there is the greatest expected dollar growth. This does not unambiguously lead to DAFWA solely supporting growth of 'big business'. Studies of broadacre farms for example show that some small farms have the greatest appetite for growth. Provided ways are found to cost-effectively identify those farms and minimise the cost of transactions in dealing with many small businesses, then facilitating investment in their growth may generate wider economic growth.

Differing and evolving maturity of individual industries

DAFWA highlighted the variable and, in some cases, rapidly-evolving maturity of individual industries; and the need to both accommodate the variability and foster the evolution.

The Panel recognises the complexity this creates, with those industries that are not yet on the 'maturation curve' needing broad-based support, while those that are more advanced needing government to get out of their way.

The Panel is keen to hear your views on how industry and government can best manage this evolving relationship.

The majority of participants consulted agreed that it was important to understand the differences in a range of areas across the industries. It was seen that DAFWA has been reasonably good at this, but it must be careful not to get entrenched with mature or failing industries. The current silo structure of the Agency did reduce the effectiveness of this approach.

Industry growth follows a pattern – from a whole of industry focus and effort, to specialisation into functioning elements in transactional relationships. Facilitating this growth needs expertise in government to understand the emerging industry and its complexity. In the past DAFWA had the internal culture to support 'champions' who identified opportunities and played strong roles in industry start up. It appears that is now in decline.

Some observations from interviewees included:

- Understand the culture in the different industries for example there are few in the sheep industry who are looking forward but there's a significant image problem with the old days culture and currently this over-rides the new ways opportunity.
- Target specific people to engage and assist in change management.
- DAFWA is crucial to facilitating new industries, providing the stimulus and opening doors. However, it is a small role in proportion to its work with major industries.
- Wherever possible, start with low-hanging fruit i.e. greatest impacts with least expense or effort.

Growth strategies are based on key drivers

DAFWA has distilled, from a range of industry and external sources, a suite of ten qualities that it believes an industry needs in order to grow and compete in international markets.

- 1. Value chain
- 2. High value market access
- 3. Access to capital
- 4. Entrepreneurial skill and network development
- 6. Industry employment
- 7. Technology
- 8. Production systems
- 9. Social licence
- 10. Policy

5. Biosecurity

The Panel is keen to discuss with you the relevance and importance of each of these 'growth drivers' to the future development of the sector.

The majority of interviewed Stakeholders agreed with the holistic nature of the drivers, however there was a deal of concern and scepticism as to which ones DAFWA should/could engage with or not. Commercial reality and understanding does not seem to be at the forefront of interaction with industry. Missing from this list are the use of technologies for economic and environmental benefits, and management and sustainable use of the natural resource base to build and retain reputation in global markets.

Overall this was seen as a list of skills for industry to consider rather than be evaluated. For DAFWA it was noted that in addition there needs to be a recognition of the importance of human capital and building capability, coupled with a sense of opportunity and excitement about entering the industry. Also legislation, the cost of compliance and profitability needed inclusion.

A repeat of the need to analyse the specific skills inside DAFWA to suit the changing needs, and not necessarily use a promotion from within to 'fill a gap' or opportunity.

Reduced funding and adaptability

The Panel noted a number of areas in which DAFWA's capability had been 'pared to the bone' as a result of diminishing Government funding, with key skills in areas such as biosecurity diagnostics now resting with single officers; and officers being directed to change their skills base - with variable results.

On the other hand, the Panel found significant evolution in DAFWA's proposed future role compared to both its past and current roles. We believe this flexibility is a key strength, enabling it to undertake the increasingly complex projects needed to support a rapidly growing and evolving sector.

The Panel is keen to hear your views on how, and to what extent, DAFWA can best 'future proof' its role and capability.

The reduced funding is perhaps the main message that has been perceived by the majority, believing the reduction was a means to an end; DAFWA would not have changed without it. However, the reduction has now gone too far and DAFWA risks becoming irrelevant, already no longer the 'go to source' for information, and concern with the biosecurity risk.

Observation is that most DAFWA staff have change fatigue. Their reputation, effectiveness and impact is marked (or marred) by that fatigue. It is mostly a direct consequence of uncertain and persistently falling real funding. The message that staff are appreciated and are the key resource of the Department is entirely inconsistent with the persistent downsizing.

The lack of understanding on just what resources remains with DAFWA was completely misunderstood (example average staff size was perceived at between 3-400 cv 960), and then surprise as to just where they were located or tasks undertaken.

Some key messages regarding the funding included:

- DAFWA would best serve industry's and its own interests by setting up as the first point of contact in the WA agriculture sector; the entry point for interested parties who are then linked to others, including other sectors of the economy, and an advocate for the agriculture sector. Talented people in communications would best serve this.
- DAFWA needs a portfolio of some specialists complemented by more generalists. The specialists are the core in-house, reputation-raising resource of DAFWA.
- The generalists are likely to be subject to greater staff turnover and are less crucial to the longer term reputation and impacts of DAFWA.
- Biosecurity is vulnerable at current resourcing levels, placing critical importance on risk assessment and management.
- It may be that significant structural re-organisation is required: and perhaps a need to reduce the mid-management tier and strengthen operational staff, particularly in regions.
- Enter into alternative delivery models with potential partners like Grower Groups, NRM groups, which could be less expensive.
- DAFWA also needs a culture of business impacts and a work environment of project teams with discipline support being available.

FUTURE DIRECTIONS PANEL

Peter Cooke - Panel Chair

Peter Cooke has had a range of roles from farmer, to agribusiness consultant and policy contributor for Federal and State government. He began his career as a broadacre farmer in the Great Southern of Western Australia in the 1970-80s, and was the CEO of the Kondinin Group in the 1980-90s.

In 1997 Peter Cooke established a consultancy Agknowledge[®] specialising in the development of agribusiness management. Agknowledge has provided consulting services across Australia from the agribusiness boardrooms and executive planning to working closely with the government departments and programs, and farming enterprises.

Peter is a Fellow of the Australian Institute of Company Directors. He spent six years as a Board member of RAFCOR, and was the Chair of the WA FarmBis program 1998-2008. He is currently a Director of Landcorp, and recently completed a term as Deputy Chair of Landgate, and Chair of the Advisory Board to Curtin University's International Institute of Agrifood Security. He has the role as Independent Chair of four family farm Boards, and was Chairman of the National Selection Panel for the Equestrian team for the past 5 Olympic Games.

Kevin Goss – Panel Member

Kevin Goss has managed agricultural and natural resource R&D programs in recent years and now is consulting in this area. He is Deputy Chair of the Rural Industries Research and Development Corporation and Deputy Chair of the Biosecurity Council of WA; was chief executive officer of the Future Farm Industries Cooperative Research Centre Ltd and the CRC for Plant-based Management of Dryland Salinity; deputy chief executive of the Murray-Darling Basin Commission; and an executive director in the Department of Agriculture and Food in the 1990s. Kevin served as the Commissioner for Soil and Land Conservation in Western Australia.

Kevin began his career as an agricultural extension officer in Albany and Northam, Western Australia, before going on to further studies in agricultural communication and on to managing information services for agriculture and conservation, then into his senior management roles. Now he consults on performance and strategy for RD&E programs across agricultural sectors. He is a member of the Australian Institute of Company Directors.

Peter Nixon - Panel Member

Peter Nixon, together with his family, farms 10,000ha between Moora and New Norcia. Before moving to Moora in 1981 he farmed with his brother at Kalannie. He is currently Chairman of the Ministerial Agricultural Advisory Committee (MAAC) and a Councillor on the Shire of Moora.

Following a Nuffield Scholarship in 1990, served on the Board of Nuffield Australia from 2001 and as Chairman 2004-2007 during a rapid expansion of the program. From 2008 to 2011 he served as Chairman of Nuffield International and oversaw and facilitated the introduction of a formal agreement between the 7 participating nations, which set a process for the further development and expansion of the scheme, including the entry of new countries.

During the 1990's he led 2 projects that processed and delivered wool tops to late stage processors, in Italy and the UK, with the aim of optimising the requirements of late stage processors. He was a member of the Executive committee of the CRC for Premium Quality Wool 1993-97. He previously served as a Councillor on the Shire of Moora 1987-93 which included a period as Deputy Shire President before resigning to take up his Nuffield Scholarship.