

Agricultural Competitiveness Issue Paper

Agricultural Competitiveness White Paper Submission - IP216
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Submission

Thinking big, thinking differently,

“Changing the Agri-food game”

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Worldasone: *Strategic Agri-food insights*

About the submission author

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He has managed the Victorian Government Science and Technology Initiative, Our Rural Landscapes for the Victorian Department of Primary Industries, the Naturally Victorian Initiative along with research and development programs with annual budgets in excess of \$3 mill.

He was also Executive Manager of the international multiparty joint venture Vitalvegetables aimed at developing a new category of nutritionally enhanced vegetables.

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Issue Paper Question 4.

Increasing the competitiveness of the Agri-food sector and its value chains?

4.1 Agri-food Competitiveness Model

For some time conventional wisdom has dictated that increased efficiency (lower cost) and productivity has been the central paradigm for improving competitiveness of the agriculture sectors. The other common dictum has been get big or get out. These are last century thinking and an outdated paradigms.

The fundamental competitiveness of an Agri-food industry is based on its capacity and capability in three dimensions:

1. **Market demand for products.** *Capacity to satisfy the market quality expectation at a price the market is prepared to pay.*
2. **Competitive production systems base.** *Capacity and capability to efficiently deliver products to market specifications preferably based upon competitive advantages with the production base system.*
3. **Efficient supply chain.** *Supply chain system which links market to production base and contribute some competitive advantage.*

As consumers become more affluent and sophisticated they are searching and demanding products with attributes which fulfil a broader range of credence values and stretch further up Maslow's Hierarchy of needs beyond food to satisfy hunger.

Industry competitiveness is strongly associated with the ability to differentiate its products and provide points of difference; otherwise they are trapped in the commodity segment competing for market share based on cost competitiveness or "everyday lowest price".

There are two basic types of credence values:

Defensive credence values; products must have these attributes (values) otherwise the market will not consider purchasing the product, food safety is an example. These attributes vary between markets and depend upon the socio economic profile of customers/consumers and relate to Maslow's Hierarchy of needs. In third world countries where starvation is a major problem credence values barely raise a mention while in more developed countries, food safety, environmental responsibility, animal welfare and worker social responsibility are must have attributes and influence consumers decision to purchase or not.

Offensive credence values (attacking values) provide a point of difference and are attribute sought by consumers, associated higher up Maslow's Hierarchy of needs and can provide a point of competitive advantage for the early movers who are prepared to invest in development and commercialisation of supporting technology and systems. These are beyond safety and are often associated with sophisticated needs such as utilities of flavour, texture, aroma, eating quality, eating experience and less commonly recognised health and wellbeing attributes.

One inescapable fact is that product quality is a function of product composition and is an emerging opportunity for creating stronger points of difference. This is based on a sound scientific

understanding of the interaction of genetic, environmental and management factors on the composition of agriculture products key biomarkers and how they relate to attribute strongly sought after by consumers. Modelling the interaction of these factors and using real time non-destructive sensing technologies to monitor the performance of products within the systems is revolutionizing the Agri-food systems. The convergence of these technologies is a game changer.

There is a strong rationale for government investment to more accurately define the key biomarkers and in understanding the interaction of factors which influence them in agriculture product which leave the farm production systems. The emergence of non destructive sensing technologies, when aligned with robotics technology and the capacity to monitor and model the systems makes the capacity to manage the whole system, predict the marketable yield and quality outcomes highly strategic. This is a strategic platform opportunity which can create a competitive advantage for Australian agriculture systems if they are also carefully and strategically commercialised to optimise the benefit to Australia.

Jolly et al (2007) in exploring in the knowledge economy, identified that the productivity growth in the agriculture sector was greater than any other sector of the Australia economy primarily based upon the sectors ability to converge technologies such as; molecular, information, communication, chemical analytical and sensing.

Agriculture is a highly sophisticated example of a knowledge dependent systems and economy.

4.2 Agriculture sector sensitivity analysis

The Victorian Agri-food sector is under continuous pressure to adapt and keep costs competitive on domestic and export markets. This is driving product innovation and consolidation, in order to manage risk and remain competitive Sully and Sexton 2008.

In recent years, rural Victoria has been in the grip of severe and prolonged drought. Many parts of the state have experienced rainfall significantly below long term averages over the past 10 years and the consequence, run off into our rivers and water storages has been seriously reduced. For the first time drought declarations currently cover all of Victoria's agricultural land. The drought has raised awareness of climate change across all sectors of the community with dry seasonal conditions projected to become increasingly frequent, more severe and of longer duration.

The agriculture, fisheries and forestry sectors are considered particularly vulnerable to changing climate conditions. DPI engaged a contractor to model, and conduct an analysis of the impact and implications of:

1. Movements in the cost and availability of key inputs used in production for Victorian agriculture industries.
2. Movements of product prices on the future viability of agriculture industries.

This project also involved undertaking the industry analysis and reporting, on the impact of the analysis to DPI to inform its development and implementation of policy, research, development and practice change industry adaptation and development projects.

The business model enabled analysis of each sector including, dairy, beef cattle, sheep meat, grain, citrus, wine grapes, Pome fruit, stone fruit, vegetables, almonds and farm forestry viability at Full Cost of Production (FCP) and Marginal Cost of Production (MCP). The difference between FCP and

MCP is a viability indicator for each industry. Based on this analysis the top three concerns for each industry are identified in table 1.

Table1. Summaries the priority concerns for each agriculture industry

Industry	Concern 1	Concern 2	Concern 3
Dairy	Brought feed	Carbon price	Water
Sheep meat	Carbon price	Fuel	Bought in feed
Beef	Carbon price	Fuel	Land price
Grain	Fuel	Fertiliser	Chemicals
Citrus	Paid labour	Water	Fuel
Wine grapes	Paid labour	Water	Land value
Pome fruit	Paid labour	Fuel	Repairs & maintenance
Stone fruit	Paid labour	Fuel	Fertiliser
Vegetables	Paid labour	Carbon price	Fuel
Almonds	Paid labour	Fuel	Contractors/consultants
Forestry	Timber harvest	Transport cost	Land value and carbon credit are potentially lucrative

Note: *There are a number of limitations of the study (reported by Sully and Sexton 2008) which need to be kept in mind when interpreting the results.*

The results identified the highest priority factor impact upon viability and provide a valuable source of data for further scenario analysis to inform research, development practice change and policy development priorities.

These findings highlight the merit of a dual approach in striving for increased productivity, and increasing the market demand and value of agriculture products as the platform for increasing agriculture competitiveness, cost reduction alone cannot deliver increased competitiveness. It is critical to address both sides of the supply and demand equation by improving product quality/value to increase demand and drive up returns.

4.3 Agriculture Evolution, Transition and Adjustment

The food industry is grappling with the impact of globalisation of world markets and the competition which comes from that. The industry is facing a revolution not dissimilar to the industrial revolution experienced by our predecessors over a century ago. The evolution of technologies like biotechnology, real time non-destructive sensing, data processing and communication technology, and the speed of communication have accelerated the pace of change.

The productivity growth in agriculture and horticulture in recent years is due to the ability to converge these technologies into systems that deliver productivity gains for these industries like no other sector of the economy.

Forty years ago the catch cry in agriculture was get big or get out. This is now an outdated paradigm. The new paradigm is to innovate and create points of difference to distinguish product from the pack. With globalisation it has now become competition for market share, reflected by competition between supply chains which can take business into new, unexplored markets through strategic collaboration and partnerships. The question becomes what does each organisation bring to the partnership to create competitive advantage in the supply chain to offer the consumer value which no one else can?

The reality is that the agriculture and horticulture industries are facing a major restructure with the imperative to find new, more efficient and innovative ways of bringing products to market that are different and satisfy ever changing consumer preferences. It requires an innovative, integrated, complex system response through the complete value and supply chain.

In the 1990's Victoria had a dynamic broccoli export industry to Asia, along with a range of other vegetables. By the mid 1990's it was feeling the pressure from low cost vegetables coming out of China. Austrade market research found the industry would not be able to compete on price alone, even though the products were of better quality. Product innovation and differentiation was needed to create points of difference, as the platform of a new competitive advantage paradigm.

4.4 Case study: Vitalvegetables®

Vitalvegetables® was a program to develop a new category of nutritionally enhanced vegetables knowledge. Research and development led to integrated management systems for enhancing the phytonutrient content of vegetables to make a naturally good product even better, while being good to eat and retaining freshness. At the outset, this was to be done as naturally as possible, so genetically modified organisms were ruled out due to consumer resistance by the market research.

Vitalvegetables® aimed at understanding the influence of genetic, management and environmental factors on vegetable composition specifically antioxidants which have evidence of their benefits in disease prevention and wellbeing.

This was the impetus for Vitalvegetables®, a joint venture between researchers in Australia and New Zealand along with two leading international vegetable breeders, the Australia and New Zealand industries, with funding from Horticulture Australia Limited, Department of Primary Industries Victoria, and Plant and Food Research NZ.

The purpose was to build a new competitiveness platform for the vegetable industries by creating a new category of nutritionally enhanced, higher value vegetables. The intent was to deliver benefits to consumers and participants in the production and marketing chain.

This approach brought together research and development capability with strategic commercial partners including international vegetable breeders and vegetable production and marketing companies, aimed to create a sophisticated and innovative research, development, production, commercialisation and marketing platform (CIE 2008). The result was a strategic yet fragile, tri-party joint venture with a competitive advantage.

Modelling by the Centre for International Economics (CIE, 2008) highlighted the significant growth potential for the horticultural industries through increasing market demand for products by

development of: novel products, improved quality and consistency, improved commercialisation platforms and synergies via collaboration. Chasing productivity improvements alone is a challenge as improvements tend to plateau, however improvements in product demand tend to be open-ended.

The modelling suggested that big payoffs come in the following order from: the commercial/marketing platform, novel products, consumer satisfaction and productivity (in order of declining returns).

The main indicative capability contributions are from, breeding and genetic, taste and perception science, cool chain and quality management, farming and systems productivity (CIE per com).

The barriers to successful commercialisation of Vitalvegetables turned out to be a combination of insufficient protectable Intellectual Property and the commercialisation partners lacked the capability and capacity to successfully commercialise the technology, brands and products within the Australian market as a platform for international commercialisation.

4.5 Smart Foods: Enhancing food composition

There are two fundamental ways to enhance or alter the composition and nutritional content of plant or animal based food.

1. **Fortification:** is the process of putting ingredients in or extracting ingredients in a factory, much as we see with high calcium, low fat milk for example and processed foods.
2. **Biofortification:** is the process of manipulating the composition or nutritional content of food during the production process on the farm. This works by optimising the genetic attributes for the desired composition ingredients and understanding how management and environment factors interact to alter food composition. Biofortification is an entirely natural process and has the additional benefits that ingredients which are enhanced by this approach are more bio-available. That is availability to consumers is high because they are in a form found in natural food, and they are more bio-effective than the ingredients in fortified product as a rule. The output of the Biofortification approach is “Smart foods”.

4.6 Relationship between profit, quality and composition

Food Profitability \$ = (Product volume sold x (\$ Price ≈ quality)) - less \$ Costs

Food price is influenced by quality and value as perceived by consumer. Traditionally quality has been determined by visual and physical attributes: size, colour, shape, weight etc. However, as consumers become more sophisticated and discerning they are looking for more from food beyond satisfying their hunger. They are looking for, and demanding other benefits and experiences which include; acceptable taste, interesting flavour and texture, enhanced nutritional, lifestyle, illness prevention, and health and wellbeing benefits. This brings into focus food composition related attributes; total fat, type of fatty acids (e.g. Omega-3 or 6), types of oils plant or animal, carbohydrates, Glycaemic Index (GI), proteins, amino acids, fibre, minerals, antioxidants, vitamins etc. These attributes are higher up Maslow’s Hierarchy of needs.

Incidentally, the post farm storage and processing performance of most agriculture products are influenced by the composition at the farm gate. Sheep fed pasture have higher levels of Omega-3

and Vitamin K than grain feed sheep. The meat from these sheep has a longer shelf life and is better nutritionally.

*Food quality is a function of the composition and the factors which influence it, which include the complex interaction between genetic, management and environment factors. The interaction of these factors also influences yield. **The relationship of these factors to profitability is the game.***

There is broad recognition that food is a major factor in lifestyle related illness e.g. diabetes, cardiovascular and heart disease, cancer etc. Food composition can play a pivotal role in disease prevention along with a healthy active lifestyle. In particular phytonutrients in fruit and vegetables such as antioxidants have been found to play a major role in disease prevention and wellbeing.

Market Trends: These Mega trends are driving food innovation and differentiation, Vitalvegetables®, an example of a new food category. The linkage between these trends and Maslow’s Hierarchy of needs is apparent.

Agri-food Mega Trends							
Health & Wellbeing		Premiumisation		Convenience		Ethical	
Basic General Health	Specific Functional Holistic Body & Mind	Trading Up	Increased Value	Portability	Ease & Simplicity	Human	Environmental
Segmentation by age is a key opportunity for development of innovative products							

4.7 Moving Up Maslow Hierarchy of needs: Differentiation & valued added

Credence Values offensive vs. defensive. Products transition from offensive to defensive as part of the product lifecycle where “me too copycat products” lead to the gradual evolution of products credence values become behave like commodity values. Unless there is continual innovation and development products which were once highly differentiated become commodities.

Once a product become a commodity it is trapped in the cycle to become lowest cost most productive, where economies of scale and increasing efficiencies are key determinate of viability. Because of Australia cost structures it is increasingly difficult to be competitive in the commodity market and there is a real question as to whether this is the best use of our limited natural resources. Offensive credence values create an opportunity to compete of attributes other than lowest price. Biofortification creates a strategic technology platform to support points of differentiation through development of Smart foods which deliver benefit at the farm level through increased demand, higher prices and returns.

Smart food can utilise offensive credence values higher up Maslow’s hierarchy of needs as there basis for point of difference.

4.8 Strategic Industry Development Corporations

The National R. D & E framework provides an excellent starting point for the establishment of a single national entity responsible for increasing the competitiveness of the agriculture sector and its value chains. These already comprise the lead industry bodies, Rural Research and Development Corporation, the lead national R.D&E funder responsible for the management of the industry levies and Commonwealth Government matching funds, the lead R.D&E providers who also co-invest, with strong links to peak industry bodies and industry advisory committees.

The Industry Development Corporation (IDC) would have a skills based board to oversee strategy and policy direction of the corporation and would report to the key investors in addition to industry. The cost of the IDC activities would be capped at 10% of the levy and matched funds annual pool. It would be accountable for development and implementation of the 10-15 year industry development strategy to guide the 3-5 year operational plans which cover all areas for which the IDC is responsible in respect to industry performance. This plan must identify the logical sequence of investments so that progress can be systematically monitored so that projected outcomes are achieved within reasonable time and cost parameters.

The innovation pipeline framework help define the roles and responsibilities of the key partners and stakeholders. Government has role to invest at the strategic end of the innovation pipeline to develop strategic platform technologies, where there is a market failure and reluctance by industry to invest. It is industries and commercial partner's role to invest in the customisation of platform technologies to specific industry or value chain applications, i.e. more applied research, development and commercialisation.

The Industry Development Corporation would have specific industry and product portfolio focus leading the national development through: strategic, applied, research and development, product development, technology/knowledge adoption and commercialisation through the value chain with a role in strategic market/trade development, market access, industry skill, capability development and infrastructure priority forecasting.

Comments (C) on Questions for consideration by Competitive Issue Paper

1. Ensuring food security in Australia and globally

- What opportunities exist to expand agricultural production in Australia and how can we take advantage of them? (C) *There should be a paradigm shift away from a sole focus on low cost commodities towards more differentiated (higher) value added products. These products need to be supported by sophisticated production and marketing systems linked to strong branding, quality control and franchised production/supply chains systems and processes. The starting point needs to be robust strategically focused market research. As part of this approach there should be a clear 7-10 year strategic plan developed for each industry with a clear definition and delineation between investment in strategic R&D into platform technology, applied technology and commercialisation of that technology and customisation to the commercial value chain systems. This is where there should be strategic partnerships between public and private partners along the “innovation pipeline” consistent with Role of Government Principles of investment.*
- How can farm businesses, food manufacturers and the retail sector be more responsive to domestic and global food demand and better integrate into domestic and global supply chains? (C) *Form strong collaborative investment partnerships based upon role of government principles which guide investment at various segments of the innovation pipeline. I.e. public investment in development of platform technology, industry commercial investment in customisation of that technology (non-exclusively) to their production supply chain systems which can then be owned/controlled by franchise.*
- Do farmers have access to timely, relevant and accurate information to fully inform production decisions to meet domestic and global food demands? (C) *It varies and sometime they do not have adequate incentives to invest in the systems and processes to respond to those signals and produce the new product specifications. It is an area of market failure where market signals to farmers are often fragment, confused and even distorted by vested interests. Risk and rewards need to be aligned and shared equitably between all parties along the value chain.*
- What opportunities exist for exporting Australian agricultural technology, marketing skills and expertise to improve global food security outcomes? (C) *There are opportunities but are there any incentives? Vitalvegetables® was establishing a commercialisation platform which would have enable export of technology and production and marketing systems brands etc but identification of suitable commercialisation partners prepared to be proactive and invest was the limiting steps. Global food security is likely to be heavily compromised by the impact of climate change and could be a source of global conflict.*

2. Farmer decisions for improving farm gate returns

- What are the drivers and constraints to farmers adopting alternative business structures, innovations or practices that will assist them in improving farm-gate returns? (C) *Poor alignment of risk and rewards, as farmers often feel that they bear a lot of the risk, where those further along the supply chain take the rewards with minimal risk. There can also be a lack of business and technical skills, capital, and appropriate return on investments to drive innovation.*
- What tools, skills and advice do farmers need to effectively adapt and respond to the risks they face? (C) *They need a clear understanding of the: - i. Business goals, ii. Principles of farm and business profitability/viability, iii. Knowledge/skills of how to implement the key elements of complex biological, economic, social, business systems. (This was the basis of Farm\$mart the Victorian Property Management Program aimed at improving farmers business skills and to become self reliant in managing risk like drought conducted in the early 1990's)*
- What alternative actions or measures by governments, farmers or others would result in improved financial performance at the farm gate? (C) ***Better understanding of the principles of how the business works, so if circumstances change they understand and know what and how to make appropriate adjustments to responds to the new circumstances/market conditions.***

- What approaches could be used to encourage improved drought preparedness? (C) *Improved understanding of the principles/mechanism of how the business works and what is key to it being viable in the industry/region/ structure it operates within, along with improved risk management skills and risk management plans embedded into the business operations on a daily basis.*
- During drought, what measures are most effective in supporting long term resilience? (C) *Going into a drought knowing the business has a sound, appropriately resourced plan developed in advance of the drought which is embedded into business practice so the business has been living it so it understands. Drought is a foreseeable stress event in Australian Agriculture; it is not an unexpected natural disaster.*
- How can new farmers be attracted to agriculture and how can they succeed? (C) *Create robust, responsible well planned and run corporate business that are successful, have career pathways and deliver “quality of life” for those involved, need to offer “more than lifestyle”.*

3. Enhancing access to finance

- How do we better attract private capital into farm investment? (C) *Farms need to perform as a viable business with appropriate rewards for the risks on a sound financial footing free from distorted market signals, which then provide adequate return on investment.*
- What examples are there of innovative financing models that could be used across the industry? (C) *A lot of farms are bound by the paradigm that they need to do and own everything themselves. There should be greater thought given to what actually needs to be owned or done by the business and what can be outsourced or contracted. Sometimes this requires strong collaboration, i.e. timing of product delivery to market/processors so that economies of scale can be achieved by using contractors for critical harvesting operations etc. It is a whole of chain solution.*
- What would encourage uptake of new financing models? (C) *Whole of chain approach to production, post harvest handling, processing, marketing, i.e. a franchise branded model where risk and rewards are shared along the chain and there are incentives for best practice and innovation.*
- What alternative business structures could be developed for farming that also retains ownership with farm families? (C) *The farm family lease the property and asserts to an investment/commercial partners, the farm family then may manage the day to day operations with oversight from specialist, contractors advisers being employed/owned by the parent company which the farm family has an equity shareholding in, in addition to drawing and incentive based performance salary.*
- How can foreign investment best contribute to the financing and productivity growth of Australian agriculture? (C) *Joint ventures structured in a way that they help draw products into the OS markets and the business structured so that it is in the best interests of all parties to make it work and do a good job through a mixture of local and international ownership. Barriers to market access are easier to deal with when entities within the market have a vested interest in market access.*

4. Increasing the competitiveness of the agricultural (Agri-food) sector and its value chains

- How might existing laws and regulations be changed to address any market power imbalances in the agricultural supply chain, without limiting prospects for global-scale firms developing in Australia? (C) *The disconnection between state regulatory bodies creates unnecessary barriers and impediments to trade and collaboration. National laws, regulations in tune with international laws and regulations make sense.*
- How can the agriculture sector improve its competitiveness relative to other sectors in the economy? (C) *Smart Foods: Agriculture has been cursed by Atomistic competition since its inception. The catch cry for many years has been “...get big or get out”. The focus need to be “get competitive or get out”. Competitiveness is made up of three primary guiding principles: i. is*

there is market demand? ii. Have we got an efficient and or competitive production base aligned with the market? iii. Is there an efficient value chain that links the production base to the market. The new paradigm for agriculture should be on differentiated value added products, delivered through sophisticated, integrated production and value chain systems. The key science underpinning differentiated quality products, is an understanding of how genetic, management and environment factors interact to influence yield and composition, as quality is a direct function of composition of agricultural products. There is a whole new market of **“Smart foods”** waiting to be tapped into by Australian Agriculture. These products need to be supported by clever branding with integrated production, supply chain and marketing approaches.

- Which examples of overseas approaches to improving agricultural competitiveness have relevance for Australia? (C) *Vital vegetables, Kiwi fruit, wine, large lean lamb.*

5. Enhancing agriculture’s contribution to regional communities

- What impact does the growth of populations in regional centres and the decline in more rural or remote townships have on farming businesses and the agriculture sector? (C) *Difficulty in accessing skilled labour, farm business support services, social and community activities, health services, financial, educational.*
- How can the agriculture sector best contribute to growth in jobs and boost investment in regional communities, including indigenous communities? (C) *Explore the sharing of employees between farms, sharing service providers, explore remote access model via internet then coordinated scheduled visit by specialist expertise, entertainers etc and schedule joint visits out of region to areas of common interest as groups. If they want local service then need to look at ways of buying locally. Electronic communication is changing our lives in many ways and there may be opportunities for remote communities to use this technology to their advantage. NBN could be a key enabler.*
- What community and policy responses are needed in rural and regional communities to adapt and change to new pressures and opportunities in the agriculture sector? (C) *A clear shared vision of what future is desired as individuals, industry, community and willingness to have ago. The Govt role is to provide enabling technology, platforms and then to support the community to customise the technology to serve their joint needs. Enabling community cohesion is critical and education is a key tool in this process.*
- How do we attract the next generation of farmers? (C) *Values higher up Maslow’s Hierarchy of needs to be satisfied, it is not only about money. They need to be confident there is a worthwhile future in farming. Knowing that they are valued and rewarded for doing a good creative, innovative, complex job, not a crap job. It must not be an arm chair ride for those who are not up to it, it must be challenging yet rewarding and they need role models who are smart and intelligent who deliver. They must not be seen as free loaders complaining when things are tough and seen to be looking for hand outs, that is agriculture live with it.*

6. Improving the competitiveness of inputs to the supply chain

- How can land, water and other farm inputs be more effectively deployed to better drive agriculture sector productivity, while maintaining or enhancing the natural resource base? (C) *The cost of production and supply to each user must be based on the true cost in a free market context and not be cross subsidised. This is a significant challenge as the market for land to build a house is not the same market as land for food production and yet farmers some time are in competition for land with home owners. This implies high value agriculture land should be zoned for that purpose which is very sensitive politically as even farmers cannot agree on this approach as they see the opportunity to realise a significant capital gain.*
- (C) *A fundamental reality is that although Australia has much land, a relatively small amount with reliable rainfall and naturally fertile. Agriculture in Australia is very reliant on Phosphate along with other fertilizers e.g. N, K and many soils are poorly structured with low pH (acidic).*

- *(C) The tension is between maintaining the natural resource base while trying to run viable agricultural enterprises, short term pressure tend to favour a profit at the expense of “mining the natural resource base”.*
- *What skills including specialised skills and training, will be required in the future and how can these be delivered and uptake encouraged? (C) Agriculturalist needs to know and understand how to manage complex biological (plant and animal) systems and how they interact with complex business systems and practice. They must understand the fundamental of their relevant biological systems, with technology to measure and monitor performance in real time non destructively so that they can manage the system to cost-efficiently product products with known composition to satisfy market quality specifications. Animal and plant physiology is critical so they can manage the interaction between genetic, inputs and environmental factors, along with astute business skills.*
- *How can we attract workers to agriculture – particularly in remote areas? (C) They need to see rewards and benefits from working in these areas and be valued for doing it. It must provide self actualisation, social and cultural rewards not just monetary. The whole experience needs to be an enriching one.*
- *How can we promote career pathways for the agriculture sector, including models to enable younger farm workers to gain broader industry experience? (C) It needs to be a whole enriching lifetime or chunk of life experience.*
- *How can rural industries and governments better identify, prioritise and fund research, development and extension? (C) Sound long term 7-10 year strategic plans for development of the industry with a road map which identifies the logical sequence various activists need to occur in as part of a logical step wise process that clearly intergrades all activities: strategic R&D, applied R&D, commercialisation, extension, education, training, marketing, market research. A Stage and Gate process can be used to retain a robust monitoring and over view of the outcomes intended and the progress being made.*
- *What irrigation, transport, storage and distribution infrastructure are required to support the food and fibre production systems of the future and how should this be funded? (C) Should come out of the industry development strategic vision and plans.*

7. Reducing ineffective regulations

- *How well do regulations affecting the industry meet their policy objectives?*
- *What opportunities are there to reduce ineffective or inefficient regulation?*
- *Which regulations are disproportionate to the risks they are supposed to address?*
- *How do we coordinate across governments to reduce regulations whose costs exceed their benefits?*
- *(A) Regulations should have very clear outcomes they are addressing and need to have a robust scientific basis which is mindful of the market implication. They should with a sound rational base be adapted to better align with market conditions if they are causing distortions and inefficiencies. In some circumstance regulation can be left to the market if the market is efficient and there is adequate transparency so that the market can make rational informed choice. For it to work customers need to be experienced and well informed about the product critical attributes. Market feedback mechanism need to be efficient and customers need to have sufficient choice so that price signal operate and perform the role better than regulation could.*

8. Enhancing agricultural exports

- *How can industries and government respond to the key challenges and opportunities to increase or enhance exports? (C) Forming strong mutually respectful international relationships at multi level of society between Australia and key trading partners. Two way visits, joint ventures, shared*

education, cultural and trade experience. Understanding and respecting each culture and society is critical. (Tell me and I'll forget, show me and I may remember, involve me and I will understand. Confucius).

- How can the government take best advantage of multilateral and bilateral trade negotiations (including through the World Trade Organization and through free trade agreements (FTAs)) to advance the interests of the sector? *(C) Use industry specialists to advise on issues which impact on trade opportunities with the target country and conduct what if modelling to explore the implications and search for unintended impacts on the whole trade portfolio, and impacted Australian industries. It must be conscious of economic, social and environmental implication and potential positive and negative spin-offs for sectors not necessarily part of trade negotiation. The exit of car manufacturing is likely to have long term unforeseen implications for other industries which are not yet immediately oblivious. It frees up resources but what about maintenance of manufacturing capacity and capability for the food industry, transport etc. (C) Harmonise the free trade agreements so that the approach is similar across market therefore reducing the complexity for business and **reducing the Red Tape Costs**.*
- How can engagement between industry and government on market access priorities for Australian agricultural products be improved, including informing negotiations on FTAs? *(C) There needs to be targets engagements at a number of levels in each sector as part of taking them along with negotiation and being ready/primed to respond as agreement is reached. Involve them and they will understand.*
- What changes could be made to Biosecurity arrangements, both in Australia and in other countries that would enhance global trade in agricultural products? *(C) Harmonise phytosaintry regulations across Australia, making them based on sound science, while conscious of market realities. Ensure that export protocols have a sound disease basis consistent with protecting the shelf life, product integrity and quality is fit for consumer.*
- How do we provide the appropriate Biosecurity controls at minimum cost? *(C) Move towards Accredited Quality Control/Assurance Systems with responsibility in the hands of trained experts within the export value chain, overseen by independent auditing.*

9. Assessing the effectiveness of incentives for investment and job creation (NC)

- How well is the current set of government programmes and incentives directed at the agriculture sector meeting their objectives, in terms of both effectiveness and efficiency?
- Are government visa arrangements and programmes like relocation assistance, the Seasonal Worker Programme and Harvest Labour Services effective at channelling workers into the agriculture sector and what other approaches should be considered?
- What have other countries done to inspire agricultural investment?
- What has Australia done in the past that has had best effect?