



31 July 2014

Committee Secretary  
Senate Standing Committees on Rural and Regional Affairs and Transport  
PO Box 6100  
Parliament House  
Canberra ACT 2600

By email: [rrat.sen@aph.gov.au](mailto:rrat.sen@aph.gov.au)

**Re: Grain export networks, including the on and off farm storage, handling and export of Australian grain.**

GrainGrowers is Australia's only national, independent, member-based, financially sustainable, technically resourced, grain producer organisation. GrainGrowers works to make a more efficient, sustainable and profitable grains industry for all Australian grain producers. We appreciate the opportunity to provide a submission to the Senate Standing Committees on Rural and Regional Affairs and Transport on grain export networks.

Given the special characteristics of networks, especially in the context of the Australian production base, the grain export system requires attention. The system requires coordination and oversight which would deliver greater benefits to all, but will not be achieved if left to individual companies or sectors of the supply chain. The following submission outlines the economic and pragmatic principals and observations which lead to our recommendations to your review. In particular, GrainGrowers provides recommendations in relation to:

- Network pricing, investment and the role of government in coordinating an efficient network of efficient operators;
- The role of and need for information to underpin a range of industry good functions (promotion, competition, crises management); and
- Competitiveness in the international market and the role of promotion and economies of scale.

Yours sincerely,

Michael Southan  
**General Manager – Grower Interests**

## Principles and practices underpinning an efficient grain supply chain from farm-gate to port...

The grain export supply chain is a network and for it to operate efficiently from the perspective of society, it is imperative that the individual agents operate in a coordinated fashion, both internally **and** in their dealings with each other at the nodes of the system. Otherwise, there are vested interests in different processes and standards adding to the costs of the network. Therefore, there is a need for incentives to induce technical and allocative efficiency in the way the network operates.<sup>1</sup>

Technical efficiency occurs where maximum output is achieved from a combination of inputs. Allocative efficiency occurs where the choice of the respective level of inputs reflects the least cost ratio of prices. If there are barriers to achieving technical efficiency either within the operations of an agent, or where they are interacting at the nodes of the system, economic efficiency will be undermined. If price signals at the nodes are not reflective of the competitive value of goods and services, allocative efficiency will not occur, and again economic efficiency of the network will be undermined. Not only is there the physical transfer and exchange of goods and services but there is the need for coordinated transfer of information and this is particularly so when the network is no longer in the hands of a single operator. Again, there is a vested interest of multiple parties to protect and limit the transfer of information across the network.

Networks have special properties. This is not limited to the grain supply chain, but to all networks including roads, public transport, telecommunications, ports and electricity. The two key properties of networks are the existence of: **1)** nodes of linkage; and **2)** the capacity of economies of scale to deliver efficiencies and create natural monopoly players. If the nodes within the networks are not coordinated, for example, where silo receipt capacity has not kept pace with truck delivery capacity or where best practice and best technology is not used, the network will not be efficient, even though the individual agents may be as efficient as they can be within the constructs of the system. If technology enhancement (to achieve technical efficiency) does not occur at the node or the pricing (to achieve allocative efficiency) at the node does not alter to reflect changes on one side of the node or the other, then market signals are not being transferred efficiently through the network. The network is not being coordinated by the prevailing pricing.

In this case there is an opportunity for government to enhance economy wide benefits. The four broad options for involvement include: a) owning and operating key node infrastructure; b) maintaining a co-investment approach to key node infrastructure; c) managing the pricing of monopolist operators of key

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<sup>1</sup> The classic case of network coordination failure in Australia was the creation of different railway gauges in the various States. Examples showing the benefits of co-ordination include computer operating systems, telephone networks, road rules, safety standards, etc. In the grains industry trading standards, grade and variety definitions and common terminologies all provide illustrations of network effects.

node infrastructure; and/or d) ensuring data and information on pricing and network use (at least in aggregated terms) is in the public domain.<sup>2</sup>

The following key areas of the grain supply chain are symptomatic of inefficiency in the Australian grain supply chain. These areas largely highlight where the changes in technical efficiency in one part of the network are not translating to increases in technical efficiency in other parts of the network:

*At receival sites:*

- receival capacities are often inadequate and need to be improved in line with improvements that have been made in delivery capacities. The capacity of trucks, for example where B-doubles are used instead of Semis, has increased by around 30 percent over the last 10-15 years, but receival capacity has been generally static;
- efficient delivery by growers to sites is hampered by inconsistency in network infrastructure. For example efficient delivery is often hampered by Local Government Restrictions on B-doubles and road trains;
- opening hours are restrictive. To achieve on-farm efficiency, growers must be able to get grain off-farm in a timely manner. GrainCorp Parkes' receival site is a good example where extended (24 hour) opening hours has delivered efficiencies for both GrainCorp and those delivering grain; and
- incentives for post-harvest delivery are limited so that peak demand is not smoothed. Prices to reflect 'off-peak' delivery, and the associated on-farm storage costs, could smooth peak demand on infrastructure.

*From site to port:*

- outloading capacities to truck and train are sub-optimal, resulting in turnout delays;
- there are insufficient rail passing loops and sidings, resulting in further delays;
- there is insufficient investment in rail line upgrades so that speed restricted lines, equipment class restricted lines and axle load restricted lines all limit carrying capacity; and
- there is an increase in the use of road transport, due to diversified grain requirements at export and increased competition to get grain to port during peak periods; which is generally less efficient than rail transport, especially in relation to the full external costs of road transport.

*At port:*

- efficiencies could be enhanced with more options, for example via inland trains heading to northern areas (e.g. to Brisbane); and
- increased delivery of grain to port by truck is likely to be limited due to port facilities not being designed to offload from trucks.

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<sup>2</sup> It is notable how competitor countries such as the United States, Canada and the European Community provide far more extensive information in the public domain (and available to competitor countries) than is available in Australia.

For a network to operate with technical efficiency, requires:

- optimal management and operational approaches;
- investment in the most up to date technology;
- the ability to achieve economies of scale should be without restriction; and
- a method of coordinating the supply chain.

To translate technical efficiency into economic efficiency, resources must be allocated according to value (allocative efficiency) which requires:

- knowledge of prices, quantities and risk over time;
- rates of decay and depreciation in the network over time so proper replacement is considered;
- recognition and knowledge of externalities/social benefits and 'free-riding' benefit and cost flows; and
- a coordinated supply chain.

The methods for 'coordinating the supply chain' to achieve technical efficiency include pricing (the market), vertical integration (private or public) or varying degrees of regulation. Pricing is the most efficient where the characteristics of competitive markets hold (e.g. no barriers to entry, no asymmetry of information, homogenous goods and services, etc). Where these do not hold, pricing may not lead to an efficient supply chain. In these cases, consideration of alternative regulated pricing structures to induce more competitive outcomes, but also maintain the socially optimal levels of investment are needed and are often applied elsewhere (e.g. electricity, communications).

In the grain transport, storage and handling network there is difficulty in setting pricing regimes which can consistently reconcile the tension between achieving the efficiency gains delivered by concentrated ownership, and the benefits of competitive service provision. This difficulty is further exacerbated in access to individual infrastructure, because there is variance in the approaches between alternatives (e.g. road v rail), because grain industry demand for transport, storage and handling services is highly seasonal and because the demand between competing users varies considerably.

To achieve investment in network infrastructure, pricing needs to provide a return to investors. To be efficient, however, access prices need to be set with respect to the margin. There is a range of pricing approaches that can be pursued including marginal cost pricing, two part tariffs, Ramsay pricing and average pricing and they all present various challenges to achieving competitive-like outcomes in the operation of the system. Ramsay pricing<sup>3</sup> for example seeks to charge on the basis of marginal cost and

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<sup>3</sup> Given a revenue target, Ramsey prices use variable mark-ups on marginal cost to minimize efficiency losses, where the mark-up is based on the users elasticity of demand (Freebairn, J. (1998) Access Prices for Rail Infrastructure. *The Economic Record*, Vol .74 No. 226, 286-296).

also recoup a contribution to fixed costs on the basis of willingness to pay. The obvious challenge with this is the need to understand the willingness to pay of various users. Average pricing shares the burden of all costs among all users but by doing so achieves lower throughput/usage than is socially efficient. Marginal pricing achieves competitive-like throughput but does not provide a return to the investor on infrastructure or cover other overheads. Two-part-tariff pricing provides for a reasonably efficient outcome, but only where the number of users is known and they are under fixed period use-contracts.

In the case of networks, with large scale investment, the operation of elements of the network by a number of different players, with varying degrees of market power, the decisions regarding pricing, operations and investment will be driven by private performance, not supply chain or economy-wide performance. Therefore, a network requires the oversight by government to ensure a network of individually efficient operators translates to an efficient network of efficient operators. Developing and overseeing pricing which induces competition, provides returns to private investment and recognises social returns to networks, is essential.

**GrainGrowers recommends:**

- **Pricing in the grains export supply network be subject to 'soft touch regulation' in the form of pricing regulation (e.g. an IPART type arrangement);**
- **The provision of industry information to allow potential operators and potential investors to determine streams of costs and benefits, and therefore returns of potential investments, with greater certainty (stocks, price data, etc.); and**
- **Government maintain a regulatory/operational/policy presence to encourage low cost entry and exit to the provision of infrastructure (both for suppliers of infrastructure and services and users of infrastructure and services), and for government to be able contribute to recognition of the externalities/social benefits in infrastructure investment decisions (including via Public Private Partnerships).**

## Grain marketing and export arrangements and their impact on farm-gate returns...

Australian farm gate returns in the major grains industries are driven by world prices and Australian producers are price takers in the world market. Being price takers in the world market reduces the capacity of growers to influence their own business success primarily because it limits the translation of price signals which can encourage innovation with respect to quality.

The lack of comparable and consistent farm-gate price data set makes it difficult to analyse the impact of grain marketing and export arrangements on farm-gate returns. If available, analysis of such prices would investigate:

1. the volatility of prices;
2. the margin between FOB and farm-gate prices; and
3. the responsiveness of farm gate prices to international changes, pre and post deregulation.

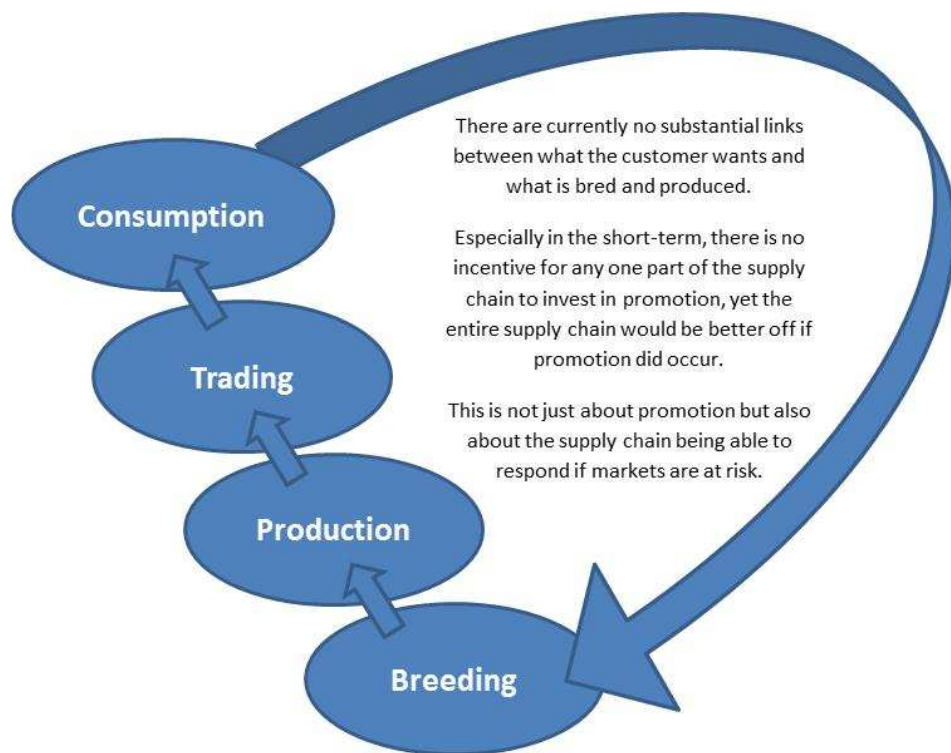
This would allow rigorous review of the effect of deregulation and current marketing and export arrangements on farm-gate returns.

Historically, Australian grain sales, especially wheat, benefited from the quality of grain and grain delivery. However, going forward there is good reason to suggest that Australian grain will require more support to maintain that positioning. In particular:

- *other grain growing regions are achieving greater productivity improvements over time.* Average world wheat yields are increasing at a rate of 3 times that of Australian wheat yields. This makes Australian wheat increasingly expensive and therefore more difficult to justify its purchase versus another origin wheat;
- *advances in milling technology may potentially be skewed to suit other lower cost wheat providers (high quality products being made from lower quality wheats); and*
- *key competitors in the market do invest in market promotion and support which undermines our competitiveness.* US Wheat Associates, with support from the US Government, for example act to promote and support the marketing of US wheat in international markets.

Since deregulation, there has been no coordinated international marketing and support for Australian wheat sales. This is a considerable missed opportunity when assessment of USDA/FAS market development spending, including for grains, has found overwhelming benefits for their international marketing and promotion. The estimated benefit cost return to USDA/market development spending is estimated to be 14.6: 1 for government expenditure and 6.7:1 for government and industry expenditure (IHS Global Insights, 2010)<sup>4</sup>. There are efforts by some private individual companies, some by BRI/GrainGrowers and some contributions by the government via Austrade, but there is no coordinated whole of supply chain effort.

**Figure 2: Supply chain dependencies**



There should be a coordinated whole of supply chain approach to supporting the international presence and reputation of Australian grains due to the market failure that prevails in the absence of coordination. If grain growers, via an organisation such as Grain Growers Ltd undertake industry marketing/international support there will be market failure: under-promotion will occur because of the significant positive externalities (benefits will accrue to the whole of supply chain and economy, not just GrainGrowers' members or just growers). This type of market failure warrants whole of supply chain coordination that would include exporters of Australian grain as well as growers of Australian grain. In the case where we have increasing internationalisation of the grain handling and marketing chain, contribution by this sector is even more important than ever. For this to happen, either sector-wide incentives are needed to overcome the disincentives for such co-ordinated action or government intervention is needed.

<sup>4</sup> IHS Global Insight (2010) *A Cost-benefit analysis of USDA's international market development programs*. Report prepared for United States Department of Agriculture, Foreign Agricultural Service, [www.wheatworld.org/wp-content/uploads/trade-global-insight-map-report-march2010-20100423.pdf](http://www.wheatworld.org/wp-content/uploads/trade-global-insight-map-report-march2010-20100423.pdf)

Two further sources of externality lead to market failure and warrant government intervention in the coordination of a supply chain approach. The first is the “halo effect” that results in benefits for other agricultural products (or Australian products more generally) that are exported internationally.<sup>5</sup>

The second is that the benefits of a more competitive/profitable grain and farming sector leads to increasing growers’ prices and therefore higher tax revenue for the government, reduced government farm-income-support payments, and improved returns for input suppliers. If these extra benefits are felt by the wider agricultural industry and Australian economy, then there is compelling public interest in supporting international marketing efforts.

**GrainGrowers recommend:**

- **there be support for the collation of actual, not unit, farm gate price series over time to facilitate analysis which reveals:**
  - **non-competitive marketing margins;**
  - **‘sticky price’ movements; and**
  - **the impact of grain marketing and export arrangements.**
  
- **options for a coordinated approach to whole of export supply chain marketing and market support be investigated, including the possibilities of collection of a marketing levy from supply chain contributors from farm gate to port to fund the approach, sector-wide incentives or an alternative form of government intervention; and**
  
- **in the case where a marketing levy is pursued, it should be legislated, collected and managed in a way similar to existing RD&E, NRS and PHA levies, with lessons from other industries where marketing and promotion is coordinated throughout the supply chain.**

It should be noted that GrainGrowers also recognise that the benefits of R&D undertaken by the production sector is shared throughout the supply chain especially where the degree of processing (as with export wheat and other grains) is small<sup>6</sup>. As such a similar coordinated arrangement across the supply chain with regard to R&D would result in greater returns to the Australian economy.

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<sup>5</sup> The “halo effect” is where because one country’s products are seen to be “good” the effect on customers will be to assume that all the products of that country will be “good”. It is a well-established idea in psychology and marketing.

<sup>6</sup> CIE (2011) Payoffs from R&D along the food value chain: Australia. Report prepared for CSIRO by the Centre for International Economics, Canberra and Sydney.



## Competition constraints on grain transport, storage and handling services...

The greatest restriction on domestic competition in the grains transport, storage and handling services is the economies of scale that can be achieved in networked systems. However, to be efficient in the delivery of grain to the world market, high value coordinated rail infrastructure with high throughput is required. With Australia's relatively small production base by world standards, concentrated ownership is required to achieve the economies of scale and hence efficiencies to be able to compete internationally.

As such there is a tension between allowing providers of grain transport, storage and handling to grow large enough to achieve the efficiency gains that come with economies of scale, and maintaining competitive operators/operations.

The competitiveness of the New Zealand dairy industry on the world stage is recognised as being a product of the New Zealand milk products monopoly, Fonterra, and a supportive government environment for that business. The supply chain has been able to grow, invest in R&D and infrastructure and promotion and achieve great increases in productivity and international competitiveness as a coordinated network under Fonterra<sup>7</sup>. Difficulties with monopoly ownership are well recognised, especially for domestic operators and consumers. However, to achieve competitiveness internationally, a coordinated network, and by corollary investment, is crucial.

*Current policy in Australia does not recognise the tension between domestic competitiveness and international competitiveness.*

However, not only does current policy not recognise the tension, it further exacerbates Australia's inability to achieve efficient grain transport, storage and handling services because of the inconsistency between conditions of investment by domestic (subject to Competition and Consumer Act legislation) and by foreign parties (subject to Foreign Acquisitions and Takeovers Act legislation).

### GrainGrowers recommend:

- **Development of consistency between regulation of the *Competition and Consumer Act* legislation and *Foreign Acquisitions and Takeovers Act* legislation;**
- **Removal of restrictions which limit economies of scale and technically efficient network infrastructure;**

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<sup>7</sup> McKinsey Australia (2014) *Compete to Prosper: Improving Australia's global competitiveness*. Report prepared for the Business Council of Australia, July 2014. Accessed at <http://www.bca.com.au/newsroom/actions-needed-to-build-australias-comparative-advantages>

- **Such removal of restrictions should only occur where coupled with ‘soft touch regulation’ in the form of pricing regulation (e.g. IPART type arrangement) to minimise abuse of market;**
- **Government maintains a regulatory/operational/policy presence to encourage low cost entry and exit barriers (both for suppliers of infrastructure and services and users of infrastructure and services); and**
- **There be support for the provision of industry data (e.g. stocks, access pricing, etc.) to allow development of industry and government policy and oversight of such arrangements, and to provide the basis for new entrants to assess investment opportunities.**

## **The extent to which transport, storage and handling arrangements are transparent and accountable...**

Due to the requirement that registered bulk handlers must publish their storage and handling agreements together with fees and charges, there is an adequate level of transparency and accountability regarding storage and handling (this is in relation to bulk handlers). GrainGrowers support the continuance of this requirement both because it provides transparency in the market with respect to large providers of storage and handling, but also for the flow-on induced behaviour in the actions of smaller providers of storage and handling.

There is a less adequate level of transparency and accountability with respect to transport costs. For example, GrainGrowers' members report having good access to transport pricing, but that pricing differentials, and increases over time, do not reflect differences in the fundamentals in supply and demand (which you would expect in a competitive market).

Symmetry of information is a key tenant of competition. In the absence of equal information, markets cannot operate in a competitive-like fashion. In networks, market information is not just commercial information, it is the basis on which competition is suppressed. In the grains industry, the performance and capacity of smaller 'fringe' providers of transport, storage and handling arrangements induces larger providers to operate competitively. In the absence of information about stocks, grades and access prices, smaller players are at a disadvantage; there is an information barrier to entry. A disadvantaged fringe of operators allows incumbents to charge higher prices and restrict output. That is, market failure occurs and government intervention is justified, on the presumption of the benefits far outweighing the cost of intervention.

In the absence of disclosure of access pricing information throughout the system, stocks by grade and zone and other data, transport, storage and handling arrangements are not as transparent and accountable as they could be and not only does this inhibit competition, it limits the capacity of government and industry to plan and manage the future of the industry. This is not only in relation to the supply chain network and required infrastructure, but also in relation to any coordinated promotion and market support that the industry may undertake as well as management of trade and biosecurity/phytosanitary crises.

### **GrainGrowers recommends:**

- **there should be monthly disclosure of stocks data by commodity, grade and state:**
- **the collation, management and disclosure of this information should be funded by government and be designated as a responsibility of the Australian Bureau of Statistics;**

- **The collection of such information should be collected under the requirements of the *Census and Statistics Act 1905* (Census Act), and in accordance with Australian Privacy Principle 3 (or APP 3) of the *Privacy Act 1988*; and**
- **Efforts should be made for this information to be electronically provided by grain handling and trading organisations.**