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Addressing issues of competitiveness and food security for Australian wheat

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Main points:

1. Product problems and opportunism remain major issues even after 100 years
2. Foreign investment is vital to lift international competitiveness of local wheat
3. Increased competition is required for an efficient price mechanism in WA
4. Much research and incentive are required for new final product end usages
5. Imports should be permitted to drive new product development and best practice
6. Profitability reflects efficient customer synergy and supply chain alignment
7. Antiquated bulk-handling logistics need urgent modernizing and transforming
8. Foreign companies should be welcomed into domestic wheat supply chains
9. Inefficient domestic companies should be permitted to sell to foreigners
10. Delayed selling post-harvest should be discouraged and replaced with call options
11. Continuous improvement in the industry needs to replace status-quo vested interests
12. Greater customer focus is required to find solutions to supply chain problems
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Summary

There is a misconception that the Australian Wheat Board supplied its customers with good quality all of the time. Its advantage was that it could select the required customer product from amongst thousands of silo sites across Australia. Exclusive selection of a few silo sites in some years while rejecting the majority of other silo sites in most years, and then averaging out the differences for all growers across Australia, only masked an increasing serious product problem over the 50 years of its existence (Whitwell and Sydenham, 1991). It penalized good growers, awarded poor growers who were free-riders of the averaging system, and promoted supply chain mediocrity and apathy (McColl, 1988). The selling method largely depended on international government sales, supported by international merchants rather than end users, with the whole supply chain mostly funded by grower levies (Whitwell and Sydenham, 1991). The same product problem that has existed for nearly 100 years was not addressed by merely altering the selling method, and still exists 25 years after domestic deregulation occurred.

Australian wheat currently is largely irrelevant to modern Asian food flow channels. Wheat exports mostly remain volume-driven with price taking and discounting characteristics because they compete with the product offering from most other exporters. It remains a largely generic product offering but with attribute inconsistencies and supply uncertainties. Much Australian wheat therefore becomes destined for the burgeoning industrial starch industry.

The capital investment void in the supply chain which was previous met by grower levies needs to be filled by foreign direct investment in lieu of the inadequacies of domestic private investment and the incapability of sufficient public capital expenditure. However, modernizing the handling and transport system and aligning it to modern Asian food value channels is still unlikely to dramatically improve the competitive advantage of Australian wheat. There needs to be research into new final-product innovation and development to design new end usages for wheat products. As well, imports with bio-secured risk management should be permitted to drive new plant breeding, new product technological innovation, and world-best practice.
1. Wheat supply profitability

**Problem:** Production, productivity, and supply are not sustainable without profitability. As well, conceptualization or visions of successful production expansion (Barnard, 1961) can be mutually antagonistic to profitability (Williams, McSweeney, and Salmon, 2014). Profit may be the key motivator for increased production (Knight, 1921), but profitability is the keystone for Australian dry-land farmers with high weather variability (Kingwell, 2012). Hectar expansion and new farm investment usually is a response to increased profitability that occurs either through rising prices or changing relativities with other alternate investments. Cost reduction is not always a choice for farmers when there are trade-offs in yield and production. Alternatively, production and investment will usually decrease if financial losses and unprofitability occur.

**Impact:** Profit determines the success or failure of both domestic and international food supply. Profitability directly impacts on sustainability and willingness to supply in value chain relationships and alliances, whilst underpinning investment in joint ventures. Food supply chains will inevitably fail if financial losses undermine the commitment to continue.

**Result:** Indiscriminate unprofitable land subdivision to increase agricultural production, as well as government-promoted production expansion schemes, have frequently failed in the past and caused serious financial and fiscal legacies (Whitwell and Sydenham, 1991). Expansion schemes have been usually followed by price-income stabilization schemes and production quotas.

**Solution:** Marginal agricultural production with high annual yield variability and agronomic risk makes the six components of agricultural profit (demand, price, yield, quality, cost, and investment) extremely important in Australia. The risk management of each profit contributor becomes paramount for successful outcomes (Williams, 2013). Bank agricultural lending policies and rates, as well as investment decisions, are invariably linked to farmer profitability and risk management.
2. Wheat supply chain competitiveness

**Problem:** Factors lowering Australian wheat international competitiveness include a largely generic product offering, little niche market development, commingling that destroys product differentiation, inadequate segregation of logistical systems to ensure identity preservation, little product traceability, indiscriminate product blending, inconsistent supply that is exacerbated by hoarding, many product quality problems, inadequate and variable quality control systems, variable product and attribute inconsistencies, numerous technical problems in flour manufacturing, little continuous improvement mentality, the lack of import competition to stimulate world best practice in final product offering, little research funding to improve final product development, isolated up-country dysfunctional storage-road-rail organization in lieu of efficient private local bunkering facilities, inefficient rail networks and haulage, lack of timeliness of locomotives and wagons, disjointed logistical coordination with ports, urban traffic congestion, volume-driven commodity exports that cause shipping scheduling problems, a lack of adequate food shipping containers, poor logistics management which is worsened by a lack of investment, outdated product-flow systems for containers at many ports, and uncompetitive domestic and international shipping regulations.

**Impact:** Australia wheat is made dependent on volume-driven price-taking commoditized exports usually at discounted prices to remain competitive with high shipping costs and risks.

**Result:** Much of the Australian wheat supply chain from production through to selling and exporting is very opportunistic rather than integrative. Most millers and many customers are disgruntled with inadequate and unacceptable supply chain product performances and costs.

**Solution:** International food companies that are willing and capable of investing, integrating, and transforming Australian wheat supply chains should be encouraged, supported, and promoted rather than being chastised, intimidated, and threatened.
3. Wheat supply chain development

**Problem:** Whilst a liquid spot wheat market now exists on the east coast, the lack of local merchant and domestic end-user competition in up-country SA and WA regions prevents local spot price discovery. In addition, the formation of a forward wheat market in Australia remains primitive because of the lack of standardization of warehouse carry commencement dates, the fixed determination of warehouse carry, and the lack of a warehouse market whereby carry is permitted to vary with the quantity of commercial inventory being stored (Williams, 2013). Hoarded or pooled wheat cannot be classified as ‘commercial inventory’ and therefore it is antagonistic to forward market development. The difficulty with a vast geographic dispersion of Australian wheat warehousing is now compounded by new bunkering technology (Williams, 2012) which encourages storage facility dispersion, both of which could prevent the formation of a localized liquid commercial forward market based on carry charges for surplus wheat with standardized commencement dates in definable old and new crop years (Williams, 2013).

**Impact:** The lack of any liquid up-country spot market in SA and WA compounds basis uncertainty and price confusion in those States, especially with currency exchange rate variability. As well, Australian forward wheat prices remain very dependent on up-country Chicago, Kansas, and Minneapolis forward wheat markets, which creates enormous basis determination problems due to US barge and rail freight variable differentials (Williams, 2013).

**Result:** Rural politics and farmer poverty are symbiotic (Whitwell and Sydenham, 1991), with rural political parties and declining farmer organizations being mutually dependent on the continuation of delayed wheat selling tactics and post-harvest old crop politicking.

**Solution:** Any policy or action that encourages delayed selling through hoarding or pooling, or promotes the continuation of the traditional bulk storage system which facilitates hoarding and pooling, hinders domestic forward market formation and supply chain development.
4. Wheat supply chain investment

**Problem:** Decaying domestic wheat handling and transport infrastructure in Australia is irrelevant to modern Asian food flow channels. Domestic investment managers are reluctant to fund obsolete agricultural supply chain infrastructure when there are uncertain high risk long-term financial returns with a lack of fiscal or tax incentives. Opportunities for foreign direct investment to improve inefficient domestic wheat supply chains have been largely squandered in Australia because of minority obstinacy and policy obfuscation. Integration opportunities into global food value chains are rare in a very competitive global business environment that shifts investment capital only to profitable pathways of least resistance.

**Impact:** Denying foreign direct investment can entrench supply chain inefficiency and farmer poverty, increase the global irrelevancy of domestic supply chains, and promote opportunistic behaviour through hoarding, pooling, and indiscriminate product blending, which only increases the dependency on starch manufacturing and price-taking volume-driven exports.

**Result:** Foreign direct investment capital that was destined to transform Australian wheat supply chains has been largely diverted to international competitors such as Brazil. Economic growth and development can quickly revert a country to undeveloped status with high unemployment when vital supply chain infrastructural investment opportunities are denied.

**Solution:** Opportunities from a highly mercurial global capital market should be welcomed, otherwise foreign competitors will benefit. International food supply chain specialists that have global capability and the required investment funding must be permitted to modernize Australia’s wheat supply chains. Domestic organizations that cannot modernize and become globally efficient themselves should be permitted to sell to foreign risk takers, particularly if these risk takers are international food suppliers with direct channels into the East Asian supply chains.
5. Wheat supply chain relevancy

Problem: Australian marginal agricultural production and quality uncertainty due to regular drought and irregular rainfall have alienated most wheat farmers from end users and consumers. The traditional wheat grading system that may favour bulk handlers, indiscriminate blenders, and volume-based merchants does very little for the flour miller or final consumer. Supply inconsistencies due to production variability and hoarding undermine the value chain and limit the capacity for long term commitment in relationship marketing. The traditional bulk handling system supports such exclusive opportunism through hoarding, pooling, and blending, increases farmer alienation from the food supply chain through commingled commoditization, and burdens growers with expensive post-harvest old crop financing (Williams, 2012).

Impact: The lack of product segregation with no traceability or identity preservation has decimated domestic flour industries that were struggling with small economies of scale, technical problems involved with milling unsuitable product, and export uncompetitiveness with an inferior or unwanted product. The convenience of selling wheat via government to foreign government-owned generic flour mills ended during the 1970s.

Result: There were 137 Australian flour mills in 1956, whereas currently there are only 28 mills. Thirty-six domestic millers produced highly differentiated flour and bread products in South Australia in 1939 before the formation of the Australian Wheat Board, whereas today there are only three. The outcome from languishing demand for quality milling wheat is positive price skewness, which seriously disadvantages farmers (Williams, 2013a).

Solution: The key to wheat-food security is to ensure that product irrelevancy is replaced by customer relevancy. Farmers should be dependent on final customers, rather than be dependent on government, taxpayers, or some mandatory intermediary. Food security is something more than surplus hoarding by socialist governments, which is paid for by taxpayers.
6. Wheat supply chain opportunism

**Problem:** Production variability discourages supply chain relationship integration, while low profitability encourages delayed selling through hoarding and pooling. The associated high risk opportunism invariably leads to price speculation (Williams, 2013). Examples include deferring a sale by hoarding or pooling in an attempt to achieve a higher price despite the inevitable product deterioration for flour millers or animal nutritionists, or the indiscriminate product blending to increase the grade price irrespective of subsequent loss of end-usage value.

**Impact:** Striving for increased profitability through opportunistic pricing methods to compensate for lower yield and product grade has largely determined the characteristic of many Australian domestic wheat growers since the 1830s (Dunsdorfs, 1956). This ultimately led to the mandatory commingled commoditization of wheat during much of the twentieth century, which caused even greater alienation from private flour millers and animal nutritionists, and increased dependency on overseas government-owned flour mills which were often directly subsidized by Australian wheat growers (Whitwell and Sydenham, 1991).

**Result:** Much Australian hoarded and pooled wheat is destined for industrial starch, which is a burgeoning rural industry success story. Manildra’s rise as an international conglomerate based on wheaten starch by-products is testament to the failure to secure higher value for wheat in food supply chains. This contributes little to domestic or international food security.

**Solution:** Price needs to be managed quite independently of supply chain relationships, otherwise such integration fails whenever price opportunism arises. Early product selling maintains product value in the supply chain, whilst capturing price rises through opportunistically buying call options is a substitute for hoarding or pooling. This results in both integration and flexibility. Any seemingly successful basis trading by speculative growers should be weighed against product deterioration, the cost of money, and ultimate price discounts.
7. Wheat supply chain new product development

**Problem:** Wheat is a laggard in new plant genetics as well as in new product development. In contrast, the once lowly Australian grain sorghum is currently achieving parity or even higher prices than milling wheat because of its low tannin in Chinese alcohol spirit manufacture. Barley has achieved new product innovations through malt-variety differentiation. Oilseeds are highly differentiated based on their oil type. Corn is driven by food ingredients, syrup and bourbon manufacturing, animal nutrition, as well as ethanol and starch. Wheat has failed to achieve any major product innovation in the last 100 years, other than in starch by-products. Apart from bread additive improvers and blast chillers, the last great wheat product innovations occurred with the Rohwedder bread slicing machine in 1912, and Wheat-bix in 1926. Currently, there is no research funding or incentives available for new wheat final-product development.

**Impact:** Laggardness in innovation and new product development can reduce a product to commoditization and be a source of rural politics. In consequence, many struggling farmer organizations with declining membership pin their future aspirations to the masthead of renewed wheat socialist theories that so dominated much of the 20th century.

**Result:** Australian wheat is largely irrelevant to Asian food supply chains because international wheat exporters are price competitive with most Australian exports. There is little international food supply chain integration possible with a largely generic commoditized product.

**Solution:** Taxation incentives for new wheat final-product research and development are urgently required in Australia. Domestic flour mills must be given inducements to experiment with new product design, end usages, and customer development. A domestic supply chain transformation needs to occur which will encourage product experimentation and new design. New products and end-usages could create comparative advantages and international competitiveness for Australian wheat-based product exports.
8. Wheat supply chain integration

**Problem:** There is a lack of end user and customer integration when Australian wheat exports are very opportunistically volume-driven based on competitive pricing rather than niche-market driven. In contrast, most of the small number of niche-market transactions are undertaken within Australia for domestic customers or in integrated domestic operations. The problem lies in the lack of sufficient product differentiation within the wheat supply chain, as well as the absence of any new product or niche supply chain development. These are quite separate issues to the more fundamental issues of agronomic variability and supply inconsistencies.

**Impact:** Domestic and international customers are likely to go elsewhere when product cannot be clearly differentiated from alternate suppliers, particularly when there is little segregation, and no traceability or identity preservation. This results in potential exporters becoming price-takers and undertaking competitive price discounting to achieve volume export sales.

**Result:** Volume-driven exports are very seasonal and mostly dependent on northern hemisphere old and new crop time scheduling. This can create Australian port congestion and chaotic shipping scheduling for a few months of the year, with port facilities laying idle for the rest of the year thus incurring high fixed and opportunity costs regardless of any port activity.

**Solution:** Supply chain responsiveness by farmers can be linked to product relevancy associated by its end users. There is a need for better segregation of product, in contrast to the traditional bulk handled product, which will facilitate greater product differentiation and improve supply chain integration. As well, the development of new products and new supply chains should foster the establishment of new relationships and alliances, thus furthering the integration process. Joint ventures and industry clustering which require new investment sharing are more likely to evolve from either improved product differentiation or new product development.
9. Wheat supply chain competition

**Problem:** The existence of many merchants and exporters does not ensure competition if new entrant barriers are prohibitive. New entrant rivalry is essential for competitive efficiency (Porter, 1985). Competition may drive efficiency and modernization in wheat supply chains (McColl, 1988), however overly restricting new supply chain entrants can prevent new investment, as well as hindering change and new synergies, whilst entrenching inefficiency and antiquated infrastructure. Foreign potential new entrants with much needed investment capability and knowledge-experience can be prevented by status-quo vested interests through applying political pressure on naïve farmer groups and susceptible lobbyists. Xenophobia can be used as a quasi-protection method to restrict international competitors and foreign direct investment, thus causing trade protection by stealth under the guise of ‘national interest’.

**Impact:** Singular and vested interest profligacy can occur whenever the independence of the ACCC and the Foreign Investment Review Board is threatened by intimidating tactics.

**Result:** Oligopolies and monopolies can be established when competitive rivalry is removed and where there is inadequate governance of competition. New investment can stagnate while the incentive for change and adaption to new ideas is removed. Arbitrary political processes under the guise of ‘individual merit assessment’ can lead to subjectivity and policy confusion over legal interpretation, and be unduly influenced by political lobbyists and vested interests.

**Solution:** Existing organizations regardless of their organizational type should not be allowed to erect artificial barriers to limit new entrants and the flow of foreign investment into domestic supply chains. There is a need for greater transparency and objective guidelines as to how ‘independent’ government decisions are made, especially when there are arbitrary judgments on meritoriousness without any subsequent public explanation or judgment rationale.
10. Wheat supply chain logistics

**Problem:** There is no trans-shipment advantages for any Australian port, which translates into higher shipping costs compared to some international competitors. The construction of new commingled volume-driven wheat storage and out-loading facilities at private ports in Brisbane, Newcastle, Port Kembla, Bunbury, and Albany, as well as the existing private port in Melbourne, does not by itself create efficiency if the port remains isolated from mainstream up-country logistics. Domestic end users can be penalized if they buy from port-centric systems, especially in Western Australia with a discriminatory $9.90 per tonne charge (Stretch, Carter, and Kingwell, 2014), which makes WA wheat even more export-dependent and volume-driven. The wheat container export system remains deficient in the availability of suitable food-containers, inadequate quality control management training and facilities investment, traffic chaos in nearby port areas, and inefficient ship loading gantry systems compared to Singapore.

**Impact:** Logistical inefficiencies are undermining the international competitiveness of Australia’s wheat exports, at a time when vast logistic systems improvement is occurring in East Asia, especially with rising currency exchange rates, shipping freight charges, and fuel costs. Dependence on road transport deliveries of both bulk and container wheat is likely to increase on the east coast in preference to an inefficient high cost rail system. This is causing congestion and road damage in Brisbane, Newcastle, Port Kembla, Melbourne, and Geelong.

**Result:** There is a widen investment gap between what is required, the inadequacy of public expenditure, and the unwillingness of domestic fund managers to invest in long-term infrastructure projects where uncertainty is high and risk premiums cannot be guaranteed.

**Solution:** Foreign investment into modern domestic logistical systems is urgently required. All logistic charges that discriminate against domestic merchants and end users should be removed. There needs to be a major logistics improvement in the wheat container industry.
11. Wheat supply chain imports

Problem: Undifferentiated Australian milled wheat was highly suitable to making dampers during the 19th century, especially when smell and flavour were added from smoky wood-driven ovens. The era of damper bread in Australia ended 80-90 years ago with the introduction of the standard loaf, the slicing machine, and electricity. Australian wheat relevancy has never recovered, especially in comparison to highly differentiated European flours and tasty continental breads. Statutory selling and price controls were largely a grower reaction to product irrelevancy (Whitwell and Sydenham, 1991), with domestic flour millers and increasing numbers of European migrants not wanting or liking Australian wheaten flour and bread in the standard sliced loaf. Growers also responded with import protection from imported European wheats and flour, unlike the wine industry that used international imports and global competition to drive innovativeness and creativity, which improved their local product to world-class standards, despite numerous and often significant bio-security issues.

Impact: Denying the import of specific and niche wheat varieties from Europe has prevented Australian flour millers adding and adjusting flavours and tastes to Australian flour and bread products, which could drive new exports. No international competitive advantage can be gained from a generic product, as the Australian wine industry clearly understood 40 years ago.

Result: The demise of the domestic flour milling industry over the past 80 years has been due to the lack of suitable product, inconsistency of supply, and the supply of a generic product.

Solution: The biggest pathological threat to the Australian wheat industry is human gluten intolerance, rather than bunts, smuts, and blights, which have been controlled or minimized in Europe and North America with bio-secured risk management systems. Genetic isolation only increases future risk. Niche wheat imports need to be perceived as a means to achieve international competitiveness, as well as removing the causal genes/enzymes for coeliacs.
12. Wheat supply chain efficiency

**Problem:** A liquid spot market for both milled and feed wheat now exists on the east coast, with daily price signals and grade differential quotations coordinated from at least ten different merchants. Wheat growers know their international basis difference with Chicago and Kansas by sunrise, their local basis with up-country prices by mid-morning, and their port-based freight differential by mid-afternoon. Those growers who use road transport know their exact supply chain costs dissection every day. Payment terms of 14 days by merchants are now common, there is transparency of commercial trade prices as well as depth of prices, the electronic selling-buying technology is world-best practice, and market intelligence communication is across all types of wireless technology. The problem is that while market independence and spot price discovery is assured on the east coast through competition, volume-driven arbitrage, and anonymity through commodity brokers, no such independence or spot market efficiency exists in SA or WA because of insufficient up-country merchant and end-user competition.

**Impact:** Merchants and end users are highly unlikely to become active enough in WA to establish a liquid spot market and supply chain efficiency when they are penalized through discriminatory handling charges. Few local end users increases the cost to port for export.

**Result:** Spot WA wheat prices remain static for weeks, despite the existence of a WA wheat futures contract on the ASX, and despite price volatility on global commodity exchanges. Efficient price signals to WA growers are non-existent, while local end usage is minimal.

**Solution:** Domestic end users of wheat need to be encouraged to expand and not be discriminated against. More focus on improving domestic efficiency through increased competition and investment could offset comparative export disadvantages such as no trans-shipment port benefits and high currency risk, whilst countering inherent inefficiencies such as few economies of scale which result from a small domestic population and consumer base.
13. Wheat supply chain information

**Problem:** There is no clear demarcation as to the value of government information to domestic growers, merchants, and end users, compared to the value to international competitors, especially when international governments manipulate their own information disclosures. Taxpayers cannot be expected to pay for public data collection which has dubious accuracy and timeliness with obscure objectives, especially when the beneficiaries range from hoarders, indiscriminate blenders, international merchants, and foreign competitors. Wheat growers making planting decisions have full electronic access to global supply and demand data, free historical spot price charts, free forward market information, and free technical trading advice as to future trend direction. Additionally, east coast wheat growers making selling and pricing decisions have daily information on local merchant prices, local and international basis, and port prices to enable supply chain cost dissection. Reasons have never been forthcoming as to why growers need to know already-sold commercial trade stocks at each port when local price is the efficient signal conduit, especially when the sole beneficiaries are exporters wanting to gain inside warehouse intelligence on their competitors. Hoarders may be perceived as being rather naïve, however they are unlikely to undermine their price exposure by accurately disclosing their stocks, even when they are stored by traditional bulk handlers, and particularly when there are individual proprietary ownership rules now governing commingled grain.

**Impact:** Confusion reigns and paradoxes abound with much public information collection and dissemination, especially when there are obscure objectives, a huge fiscal cost impost, and opportunities for manipulation similar to that of international governments and their agencies.

**Result:** Many wheat growers use government information solely for contrarian strategies.

**Solution:** Good governance is required to ensure that an efficient price mechanism accurately reflects local supply and demand conditions. This is more efficient than public data collection.
References


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