Submission to the Senate Inquiry into

Operational issues arising in the export grain storage, transport, handling and shipping network

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Terms of Reference

Operational issues arising in the export grain storage, transport, handling and shipping network, with particular reference to:

a) *any risks of natural, virtual or other monopolies discouraging or impeding competition in the export grain storage, transport, handling and shipping net-work, and any implications for open and fair access to essential grains infrastructure;*

b) *the degree of transparency in storage and handling of grain and the appropriateness of any consequent marketing advantages;*

c) *equitable access to the lowest cost route to market, including transport options;*

d) *competition issues arising from the redelivery of grain;*

e) *the absence of uniform receipt, testing and classification standards and practices and any implications for growers and/or for Australia's reputation as a quality supplier;*

f) *equitable and efficient access to the shipping stem; and*

g) *any other related matters.*

Structure of this submission

GrainCorp will address the terms of reference in the order in which they appear above.

As a number of the matters addressed in the Terms relate directly to matters that have been or are currently under examination by the ACCC, relevant submissions are appended to this submission.

Executive summary

Matter A

- No evidence has been presented to support a view that GrainCorp has not provided fair and open access on commercial terms to parties seeking access to GrainCorp's grain storage, handling, or port elevator infrastructure.
- Several enquires have confirmed that GrainCorp does not have monopoly advantage at its country network, including the recent Productivity Commission review.

Matter B

- For a deregulated market to operate effectively there has to be a balance between the information held by one sector of the industry and another, in a manner that doesn't confer upon one sector unreasonable market power.
- Calls for the release of previously unpublished information on grain receivals, and grower warehouse stocks by site and by grade, represent an attempt by grain traders to reverse the shift in market power back to growers that has occurred since the removal of the 'single desk'.

Matter C

- Rail and road transportation of grain from storage (ex a bulk-handling network or ex-farm) is available to all grain traders and buyers on a commercial basis.
- Access to transport capacity is primarily determined by the willingness of a participant to commit to contracts with transport providers on a commercial basis, or to manage the risk associated with purchasing transport (rail or road) on an ad hoc, 'spot' basis.

Matter D

- GrainCorp actively seeks the delivery of grain from third party storages or ex-farm storages into the company's bulk-handling network.

Matter E

- Uniform grain standards are applied in the form of grade standards agreed by industry through the Grain Trade Australia (GTA), Australian Oilseeds Federation (AOF) and Pulse Australia (PA) Standards Committees.
- The wide variation in grain quality means that grade standards are set and applied in a manner that will ensure that grain can be received, stored and out-turned to meet the requirements of grain consumers.
- Since the removal of the bulk wheat export monopoly, there have claims about a 'decline' in the quality of wheat exports has been made. No data has been provided to substantiate these claims.

Matter F

- No evidence has been presented to substantiate any claim that GrainCorp has denied access to any party seeking commercial access to its port elevator network. The system of booking and allocating elevation capacity at GrainCorp ports is fair, transparent and minimises the price inflation effect of booking speculation that would be a component of any booking system that permitted transfer and trading of elevation capacity.

Responses to matters raised

Matter A

> *(a) any risks of natural, virtual or other monopolies discouraging or impeding competition in the export grain storage, transport, handling and shipping network, and any implications for open and fair access to essential grains infrastructure.*

Provision of access to the GrainCorp storage and handling network

No evidence has been presented to support a view that GrainCorp has not provided fair and open access on commercial terms to grain buyers and growers seeking access to GrainCorp's grain storage, handling, or port elevator infrastructure.

This year[1]GrainCorp received 14.6 million tonnes of grain from the record >22 million tonne crop eastern Australia winter harvest, providing grain storage and handling services to;

- >8,000 grain growers who delivered grain into warehousing,
- >100 buyers who offered prices to growers for the purchase of grain at GrainCorp site for cash, pools or direct contract (before harvest or from warehousing), and
- 17 port elevator customers who exported grain through GrainCorp port elevators.

In an average year, GrainCorp owns <25% of the grain that is handled through the company's storage and handling network. As a consequence of this, the company is reliant upon a range of grain traders, exporters, and domestic customers using the network.

GrainCorp has a commercial incentive to provide 'open access' to its entire infrastructure, to ensure its sites remain a 'grain market place' with multiple buyers, as the company is;

- Not in a position to purchase all of the grain received and handled within the company's network,
- Not willing to assume the risk associated with owing or trading this quantity of grain, and
- Relies on gross tonnage handled to generate revenue. Thus the greater the number of purchasers of grain operating within GrainCorp's network, the higher the likelihood is that growers will chose to deliver their grain to their local GrainCorp site, as they will be attracted by the range and competitiveness of bids / prices on offer.

Should GrainCorp restrict access, to its country or port elevators, there will be a decline in the attractiveness of delivering to the GrainCorp network, and as a consequence, company earnings will be affected.

Several enquires have confirmed that GrainCorp does not have monopoly advantage at its country network, including the recent Productivity Commission review[2];

> *"The recent increase in on-farm storage (particularly on the east coast) and development of large scale up-country facilities by non-bulk handlers suggests that storage can be duplicated. Therefore, it is unlikely that up-country receival sites have natural monopoly characteristics. A similar sentiment was expressed by the Allen Consulting Group; 'While some scale of economies exist in up-country*

[1] In the context of this submission, a 'year' is defined as the period between 1 October and 30 September of the following calendar year, a period that encompasses the GrainCorp financial year, and the annual grain harvest in eastern Australia.

[2] p268 Wheat Export Marketing Arrangements, Productivity Commission Inquiry Report, No. 51, 1 July 2010

grain receival sites, it is unlikelythat these facilities would meet the principles for access regulation. In particular, it is unlikely that it would be found that such infrastructure represented natural monopoly 'bottle-neck' facilities that were uneconomic to replicate. The emergence of AWB subsidiary AWB Grainflow as a significant provider of storage and handling services inNew South Wales and Victoria supports such a conclusion."

Port elevators as 'essential infrastructure'

The National Competition Council has the role of assessing if infrastructure is 'of national significance', and should thus be declared 'essential'.

GrainCorp country and port elevators have not been classified as, or declared, 'essential infrastructure. For the purposes of this Inquiry, grain export elevators should not be assumed to be 'essential', as they have not been subject to the appropriate examination.[3]

The Victorian Essential Services Commission in 2009[4] made the following observations in relation to competition in the grain market, in its decision to deregulate GrainCorp's port elevators in Victoria:

"The conclusions in this Review are broadly similar to those previous conclusions, which do not present a strong case that access to prescribed services at a particular terminal would be 'essential' for market participants given the degree of substitutability between alternative options:

- *the MPT had established itself as a major participant in the industry, enabling at least the larger marketers (but perhaps not smaller marketers to the same extent) to substitute between terminals, i.e., access to a particular terminal may not to be essential*
- *although the increased degree of integration of the grain supply chain has assumed increased importance, and is coupled with wheat market deregulation which lessens the countervailing power of grain marketers, this has blurred the degree to which the grain terminals themselves are to be considered bottleneck facilities, and to what extent integrated supply chains form the relevant bottlenecks*
- *other supply chain options such as containerisation may provide viable alternative options for marketers of some minor grains.*

Given this degree of substitutability between terminal services or supply chains, in the Commission's assessment:

- *several factors highlighted by the Commission in its 2006 inquiry and in the present review suggest that obtaining access to prescribed services at a particular terminal may not be necessary to permit effective competition in an upstream or downstream market*
- *the existence of more than one unaffiliated facility and a significant degree ofsubstitutability between services provided by them may constitute an effectiveduplication of the services.*

These conclusions tend to indicate that the Victorian export grain terminals are nolonger "significant infrastructure facilities" within the meaning of s.16 of the GHSA."

[3] http://www.ncc.gov.au/index.php/making-an-application/declaration

[4] Essential Service Commission, Review of Victorian Grain Handling and Storage Access Regime – Final Report May 2009

Provision of access to the GrainCorp port elevator network

With respect to the provision of access to grain export elevators, access is currently regulated by the Australian Competition and Consumer Commission (ACCC) through access Undertakings under the Competition and Consumer Act (Cth) (CCA) 2010.

GrainCorp, as an accredited bulk wheat exporter under the Wheat Export Marketing Act (WEMA) 2008, is required to have in place an access Undertaking. That Undertaking requires GrainCorp to provide access seekers with access to the company's port elevators on a non-discriminatory basis. **No evidence** has been presented to the regulator that would substantiate any claim that GrainCorp has denied access to any party seeking commercial access to its port elevator network.

Matter B

(b) the degree of transparency in storage and handling of grain and the appropriateness of any consequent marketing advantages;

Eastern Australia grain market

Eastern Australian grain production is variable, ranging from 8 to 22 million tonnes, with average grain production of ~17 million tonnes. This grain is sold into 3 sectors;

a) Domestic consumption of ~10 million tonnes (57%), includes human and stockfeed end-users

b) Container exports of ~2.5 million tonnes (14%)

c) Bulk exports of ~5 million tonnes (29%), is the residual market for grain not consumed domestically or exported in containers

The eastern Australian grain market is serviced by a large and competitive range of storage options, with a total capacity of 40 million tonnes, including;

a) GrainCorp - 20 million tonne of capacity

b) On-farm - ~11 million tonnes of capacity

c) Other bulk handlers - ~4 million of capacity

d) Merchant and domestic end-user storage - ~5 million of capacity

While GrainCorp in an average year receives ~55% of grain production in eastern Australia, there is sufficient storage outside of the GrainCorp grain storage network to receive and handle 100% of an average crop and on farm storage is able handle 60% of an average crop.

Grains market structure

In eastern Australia, the grain market is highly competitive, with multiple players competing to buy and sell grain for supply to domestic and export grain processors.

Values for Australian grain are transparent and set through the combination of;

- International market conditions setting an 'export parity' price, and
- Domestic / regional grain supply and demand factors.

As a result of this transparency, and the wide availability of information pertaining to both the domestic Australian and international markets, and now that the 'single desk' has been removed, it is not possible for one single market player to 'dominate' or manipulate grain values.

Significant public information is available

Significant public information is available in the grain industry from a large range of public and private sources that facilitate an efficient market for growers and buyers, this information includes;

- Grain production forecasts by region, provided by regular government reports (ABARES) and regular private reports (Australian Crop Forecasters),
- Grain pricing information, provided by a large range of sources such as silo cash prices, CLEAR bids and offers, broker and market reports and ASX futures. This information is provided real time through the internet and email update,
- Grain stock information, provided by regular government reports (ABS),
- Grain export information, provided by bulk handler shipping stem reports.

Efficient market operation

For a deregulated market to operate effectively there has to be a balance between the information held by one sector of the industry and another, in a manner that doesn't confer upon one sector unreasonable market power.

Since removal of the single desk, there has been a significant shift of market power *back* to grain growers, as they are no longer forced to sell to a particular buyer within a timeframe set by that buyer.

- Grain suppliers (growers) derive market power from being able to remain 'opaque' and entering the market when they chose to do so,
- Grain traders balance a range of supply and demand information to form a view of the manner in which values will move, and then price their bids to the market accordingly,
- Grain consumers, knowing what demand is likely to be, also form a view on values and price their market participation accordingly.

Calls for the release of previously unpublished information on grain receivals, and grower warehouse stocks by site and by grade, represent an attempt by grain traders to reverse the shift in market power back to growers mentioned above.

Should bulk-handling companies be forced to publish stock information on a daily or weekly basis by site and by grade, and disclose grower warehousing positions, the following factors will adversely affect the future of the sector;

- Growers may seek to avoid 'compulsory' reporting of their stock position and store more grain on farm, which will reduce net returns to growers,
- This will reduce grain quality and increase grain losses and increase the cost of export grain cargo accumulation, as ex-farm deliveries will increase reliance on road transport, and
- This in turn will lead to a reduction in the size of the bulk handling systems and associated rail network, and reduce the commercial attractiveness of investing in measures to increase grain handling efficiency.

The balance of market power in the Australian grains market today is now appropriate, and the market is working in a balanced and rational manner.

Is grain stock information 'proprietary'?

GrainCorp believes that the information pertaining to the stock position of each individual customer (grower, trader or end-user) is proprietary to both the customer and the storage service provider, and thus without the express permission of each customer, that information should not be publicly released.

GrainCorp believes that parties with ownership of grain within bulk handling systems *should have the right to choose if they wish information about their individual holding or stock position is made public*.

Currently in the GrainCorp storage and handling network, growers can list their delivery 'tickets' on the CLEAR online grain exchange.[5]

Alternatively, growers and other stock holders can remain 'opaque' until they choose to enter the market and sell their grain.

Under the single desk regime, growers did not have this type of option available to them, as they were forced to sell grain according to a timetable set by AWB.

GrainCorp notes that traders, and lobbyists working on their behalf, are not advocating equivalent transparency relating to the stocks of grain held by them, either in the bulk handling networks, or in their own private storages.

Vertical integration in the Australian grain supply chain

The matter of vertical integration in the Australian grain supply chain, and the advantages that may or may not accrue to infrastructure owners, has been dealt with by the ACCC, and the Productivity Commission, on a number of occasions over the last decade.

The ACCC has assessed the effect on the grains market of vertical integration in respect of;

- The purchase of Milling Australia by GrainCorp and Cargill Australia in 2002 (Appendix 1)
- The proposed purchase of Ridley Corporation by GrainCorp in 2008 (Appendix 2)
- The acquisition of ABB Grain by Viterra in 2009 (Appendix 3)
- The acquisition of AWB by Cargill from Agrium in 2011 (Appendix 4)

In all instances cited above, the ACCC found that vertical integration of the entities being merged or acquired would not substantially lessen competition nor confer upon the vertically integrated entity any unfair advantage in the market. (See Appendix 1).

> *"The Commission found that there were strong constraints on GrainCorp's ability to discriminate against particular users of its storage and handling facilities:*
>
> - *The main constraint was that the ownership of grain within GrainCorp's facilities was not fixed and millers could, and did, buy and sell large amounts of grain within GrainCorp's storage system. This means that GrainCorp would not be able to target grain within its system because the ownership of that grain could change;*
> - *In terms of access to storage, a large amount of grain entered GrainCorp's system in the name of growers or traders and was then purchased by millers. Therefore GrainCorp would not know who the grain was destined for when it entered GrainCorp's storage facilities;*

[5] https://www.cleargrain.com.au/

- *In terms of raising rival millers' storage costs, the Commission considered that millers' ability to contract for traders to hold grain on their behalf, thereby defeating a price rise, would deter GrainCorp from attempting to raise charges;*
- *In terms of GrainCorp using knowledge of millers' stocks to identify their shortages of particular types of wheat and bidding up the prices of those stocks, the Commission found that GrainCorp did not have complete information of millers' stocks either because millers used some storage other than GrainCorp's, or because wheat was held for millers by traders in the traders' names, effectively disguising the wheat's ownership; and*
- *In terms of GrainCorp blending differing qualities of grain, within a defined band, known in the industry as "co-mingling", to disadvantage millers, the Commission found that co-mingling was a current practice in the industry and would be unlikely to be used to any greater extent against rival millers in the future."*

Matter C

(c) equitable access to the lowest cost route to market, including transport options;

Rail and road transportation of grain from storage (ex a bulk-handling network or ex-farm) is available to all grain traders and buyers on a commercial basis, from a number of transport providers.

Thus, 'access' to transport capacity is primarily determined by the willingness of a participant to commit to contracts with transport providers on a commercial basis, or to manage the risk associated with purchasing transport (rail or road) on an ad hoc, 'spot' basis.

The contestability of transport was noted in the Productivity Commission review[6]:

> *"Notwithstanding regional differences, overall there is increasing contestability in both transport and storage and handling, allowing growers or traders to deliver wheat to ports using their own transport and storage options. There are no regulatory impediments stopping users from by-passing the up-country supply chains of bulk handlers to deliver grain direct to port (except perhaps in Western Australia because of Grain Express), and the Commission considers that any further regulation is not necessary."*

In the case where grain is sold and purchased through the GrainCorp storage and handling network, grain traders, domestic buyers and grain exporters are responsible for organising their own transport, as GrainCorp does not provide a 'bundled' grain storage – handling – transportation service.

Rail transport

Grain traders and buyers are able to enter into commercial contracts with rail service providers for provision of rail capacity on a take-or-pay / forward contract, or through the purchase of 'spot' capacity.

GrainCorp manages its rail transport risk through significant take-or-pay commitments, and the ownership of rail assets. GrainCorp's current annual rail commitment is ~$40 million PA in the form of;

a) Ownership of branch line locomotives and wagons in NSW, and the provision of 'open access' rail services on that network under an agreement with the NSW Government.

[6] p273 Wheat Export Marketing Arrangements, Productivity Commission Inquiry Report, No. 51, 1 July 2010

b) A contract with Pacific National (PNL) for the provision of ~2.5 million tonnes of annual main line rail capacity in NSW and Victoria.

c) A contract with the Australia Railroad Group (ARG) for the provision of ~1 million tonnes of annual main line rail capacity in Queensland.

GrainCorp's rail capacity is contracted for use by;

1. GrainCorp's own grain trading and exporting operations, and
2. Customers that have entered into forward rail contracts with GrainCorp.

Where spare rail capacity exists, GrainCorp will sell this on a 'spot' basis.

Matter D

(d) competition issues arising from the redelivery of grain;

Definition of 'redelivery' of grain

GrainCorp takes 'redelivery' of grain to mean the delivery of grain into the GrainCorp storage and handling network, or into GrainCorp port elevators, from 'third party' grain storages, including from on-farm storage.

Competition issues related to 'redelivery'

GrainCorp actively seeks the delivery of grain from third party storages or ex-farm storages into the company's bulk-handling network, where:

- No additional receival or handling fees are applied at country storages, and
- An additional receival fee of $1.54/T is applied at the port terminal

The port fee is applied to manage the additional risks posed to the efficient operation of the port elevators from receipt of grain that has not been previously assessed by GrainCorp as meeting relevant quality standards.

Where grain is received at port that is contaminated or otherwise unsuitable for export, considerable inefficiencies in grain storage and handling within the port can be experienced, and this is a cost liability to which GrainCorp is exposed, a liability mitigated by the fee applied.

Matter E

(e) the absence of uniform receipt, testing and classification standards and practices and any implications for growers and/or for Australia's reputation as a quality supplier;

Grain receival standards

Uniform grain standards[7]are applied in the form of grade standards agreed by industry through the Grain Trade Australia (GTA), Australian Oilseeds Federation (AOF) and Pulse Australia (PA) Standards Committees. (Appendix 5)

These standards, and the related Explanatory Memorandum (Appendix 6), form the basis for grading grain received into the GrainCorp storage and handling network.

[7] http://www.graintrade.org.au/commodity_standards

Provision of grain storage and handling services

GrainCorp (and other bulk handlers) provide grain storage and handling services that include;

- Receipt, assessment, warehousing and outturn of grain, and
- A 'marketplace' at storage sites where grain can be sold by growers and grain traders, and purchased for supply to the domestic or export markets.

Growers are not forced to deliver grain into the GrainCorp storage and handling network, nor are buyers forced to buy grain out of the GrainCorp network. In eastern Australia in an average year, GrainCorp will only handle ~55% of the grain harvested, and ~65% of the grain exported.

GrainCorp uses the industry standards for receiving and grading grain as they are a 'common' language describing grain and grain quality, and form a common language that can be used to facilitate the trade of grain between parties.

It should be noted that GrainCorp, as a storage provider, is contractually responsible to outturn grain at its received standard (that is the grade a grower is able to sell to another party).

- This involves a substantial risk, of up to $100 per tonne, if the grain is out-loaded at a lower grade.
- This exceeds the fees GrainCorp receives for undertaking this task.

GrainCorp has no recourse to the grower (or buyer) for compensation if it incorrectly grades grain.

A grower is not obliged to accept the grade assigned by GrainCorp at the sampling stand, and is free to take his or her grain to another receiver or back to on-farm storage for cleaning or blending and sale at a later date.

The need for flexibility in assessing grain

The classification of grain received during harvest is subject to harvest conditions, and market drivers, and thus requires a complex and dynamic approach.

The primary determinants of the manner in which grain standards and the applicable grades are set and applied are;

a) The prevailing harvest conditions, and the effect those conditions have on grain quality and the supply of particular grades, and

b) In the context of the quality of grain being received, the feedback provided by grain consumers during harvest about the introduction of seasonal grades that they are willing to accept.

While grade standards are proscriptive, and many can be assessed by instrumentation, the manner in which grain is assessed against some of those standards is subjective, due to;

- The manner in which growing conditions, soil fertility, variety, and harvest weather conditions influence grain quality,
- The statistical variability inherent in the random sampling of trucks, and
- In the absence of applicable instrumentation, the requirement for visual assessment by samplers of a number of quality characteristics.

To manage the inherent variability of grain assessments, GrainCorp takes continuous running samples of grain received for offsite laboratory testing. The results of these laboratory tests are used to monitor and recalibrate the grain assessment process where required.

The wide variation in grain quality means that grade standards are set and applied in a manner that will ensure that grain can be received, stored and out-turned to **meet the requirements of grain consumers** such flour millers, starch and gluten manufacturers, stockfeed millers, biofuel producers and maltsters, in both the domestic and international markets.

Where harvest conditions are affecting grain quality, and this in turn has an effect on the supply of particular grades, grain consumers and producers will provide clear instructions to the market (and thus to GrainCorp) that they are willing to accept variations to the published GTA, AOF and PA standards. GrainCorp issues new standards in response to this feedback.

For example, a flour miller may increase the tolerance for screenings in a year when the supply of wheat with low screenings is short. Or a maltster may allow barley with a higher degree of fungal staining, or lower germinative energy, to be graded as 'malt', in a year when supply of malting barley is tight. Seasonal grades reflect these variations.

Experience from the 2010/11 harvest

The 2010/11 harvest was both the largest and wettest harvest on record in eastern Australia, and as such, a range of grain quality problems arose during harvest.

During the 2010/11 harvest, GrainCorp introduced more than 70 seasonal grades to accommodate the receival of grower deliveries, which applied to individual, or multiple sites, and were created for single or multiple buyers. (Appendix 7)

Three of the most significant problems addressed by flexible application of grade variations related to the presence of elevated numbers of 'white grains'[8] in wheat in southern Queensland, NSW and Victoria, high levels of sprouting in canola seed, and germination in wheat.

Example 1.

In the case of 'white grain', as quantities of grain with elevated white grain levels began to appear at GrainCorp sites, the company was able to work with domestic grain consumers and grain traders to;

- Created the wheat grade (FED3) that allowed for an increase in the presence of white grain from 40 per sample, up to 400 per sample.
- Open a pool for this grade of wheat for sale into the domestic and export markets.

These measures allowed the receipt and successful sale of ~50,000 tonnes of wheat that would otherwise have not been able to be sold, or would have been sold at a heavy discount.

See Appendix 8 and 9.

Example 2.

The amount of rain received during harvest had a dramatic effect on the canola crop; with rates of 'shot'(germinated) grain received exceeding any level previously experienced.

In response to increasing levels of shot canola failing to meet the normal grade, GrainCorp worked with oilseed crushers and stockfeed manufactures to create six new canola grades that allowed for various levels

[8]Caused by the presence of Botryosphaeria and Fusarium fungi species.

of sprouting above the normal 5% tolerance. This allowed growers to sell canola that would have otherwise been unsaleable.

Example 3.

When rain affects wheat up to and during harvest, causing it to germinate, damage to the starch content of the grain from the production of alpha amylase and protease occurs. The amount of 'starch damage' effects the baking quality of bread made from flour milled from germinated wheat. (See Appendix 10).

Wheat is visually assessed to determine if it has started to germinate. Where shot grain is visually detected, a falling number (FN) test can be used to determine the extent of changes in the physical properties of the starch portion of the wheat kernel. If the extent of starch damage cannot be determined, the wheat will be unsuitable for bread making, and must be graded as feed.

While the use of the FN machine to assess all affected wheat samples is preferable, there are limitations totheir effective use including;

- A limited number of machines available at any one time,[9]
- The test is time consuming at up to 10 minutes per test, creating receival delays

This year's harvest was particularly difficult given the large crop and large quantity of weather-damaged wheat, and the large geographic spread of this damage.

To enhance the effectiveness of assessment of this wheat, and efficiently receive the large crop, GrainCorp adopted the following approach this harvest:

- Maximise the spread of FN machines across operating sites.
    - GrainCorp purchased an additional 26 falling number machines in 2010 at a total cost of ~$900,000
    - The total number of machines in use>150.
    - GrainCorp tested 186,434 loads representing 5,300,087 tonnes of wheat and barley for Falling Number.
- Undertook continuous running sample tests at our laboratories to ensure 'stack average' falling number met the relevant grade standard.

Training of grain assessment staff

GrainCorp provides grain assessment training to all sample stand staff prior to harvest. Our training courses cover all aspects of grain assessment, including instrument operation, interpretation of standards, visual assessment and dispute resolution.

This training has until recently been accredited under the relevant Australian Quality Training Framework (AQTF) Conditions and Standards, under which all staff assessing grain were formally competency assessed to Certificate 3 level.

Due to a lack of interest from buyers, and lack of uptake by our competitors, the formal certification under GrainCorp's Registered Training Organisation registration was recently discontinued, but the courses and assessment have not changed, and the certification could easily be reintroduced.

[9] Falling Number machines cost ~$35,000 each.

Certification of testing equipment

GrainCorp complies with Commonwealth regulatory requirements for the use of testing equipment for trade under the National Measurement Institute (NIM).[10]

Regulated tests, which are verifiable by trade measurement officials, exist for many of the assessments carried out during grain receival and outturn. These tests have the same regulatory supervision as weighbridges, meat and seafood, fruit and vegetables, bread and bakery products, alcohol, petrol pumps, etc.

Many other tests are before the NMI awaiting pattern approval[11] and verification methods. Trade measurement standards currently exist for wheat and barley protein and test weight.[12]

Subjective assessments, like visual identification of defects, smell etc., are currently outside trade measurement jurisdiction, as it is difficult to regulate subjective analysis methods where experience and opinions are a component of the decision making process.

Grain testing and assessment during harvest

The fact that grain quality variations occur, combined with the lack of familiarity among growers with the manner in which grain is assessed, can account for many of the claims that sample stand staff are 'not experienced', are 'poorly trained' or are 'disadvantaging growers'.

It is unfortunate that there is an extremely low level of industry familiarity with both the grain standards and the manner in which harvest conditions and market feedback drive the assessment of grain during harvest. This leads to growers not understanding why grain is sometimes graded differently at different sites

It should be noted that GrainCorp allows growers to request retesting of their load, should they disagree with the sample stand assessment.

If a grower is not happy with a resample, they can request that a representative sample be assessed at one of GrainCorp's NATA[13] accredited laboratories.

The following data from the 2010/11 harvest on complaints and retesting clearly indicates that both the level of requests for resampling, and the sample stand error rate, are extremely low.

Tonnes of grain received since 1 October 2010	14.7 mmt
Number of loads of grain received	~531,000
Number of samples sent for testing at a GrainCorp labs	0
Number of loads regraded as a result of sample stand error	1004
Sample stand error rate as a percentage of loads received	0.19%

[10] National Measurement Institute http://www.measurement.gov.au/Pages/default.aspx

[11] http://www.measurement.gov.au/Publications/PAguidelines/Pages/default.aspx

[12] http://www.measurement.gov.au/Services/PAexamination/Pages/default.aspx

[13] National Association of Testing Authorities www.**nata**.asn.au/

Export grain quality

Since the removal of the bulk wheat export monopoly, there have claims about a 'decline' in the quality of wheat exports has been made. No data has been provided to substantiate these claims.

It should be noted that grain is not usually exported against the assessed received grade(s), but is exported against the grain specification in the sale contract, principally determined by the buyer of the grain.

Export contract specification will almost always require quality parameters that *differ in some degree from the grades used to classify grain on receival into the storage and handling network.* Thus each export parcel usually requires a blend of different grades to meet the minimum contracted standard.

As previously noted, harvest conditions play a significant role in determining grain quality in any season. Over the last three years, GrainCorp has produced a harvest report containing a range of wheat flour and dough quality measurements.

Aside from normal seasonal variations, the quality of grain received since the 2009/10 harvest has not declined. (See Appendix 11 and Appendix 12).

Matter F

(f) equitable and efficient access to the shipping stem;

Regulation of port access

As mentioned earlier in this submission, the ACCC currently regulates access to GrainCorp's port elevators.

GrainCorp reiterates that **no evidence** has been presented to the regulator that would substantiate any claim that GrainCorp has denied access to any party seeking commercial access to its port elevator network. On the contrary the ACCC has stated;

> *"The ACCC considers that GrainCorp's 2009 Undertaking appears to have worked relatively well and GrainCorp has successfully negotiated access agreements with all of its customers. No bulk wheat exporter has raised a dispute with the ACCC under the provisions of the 2009 Undertaking. Further, there is evidence that the existence of the dispute resolution provisions has facilitated customer agreements."*[14]

However, it is evident that that a number of port elevator users (accredited bulk wheat exporters) have used GrainCorp's access Undertaking renewal, a 'six-month' process which has been on foot since 22 September 2010, to seek the imposition of regulatory provisions on port infrastructure owners, who compete with them as grain traders, as a means of commercially disadvantaging them.

The 'gaming' of the regulatory process by these parties has placed a significant financial burden, equivalent to thousands of man-hours, and millions of dollars of costs on port infrastructure owners.

This has led to increased administrative costs, and decreased service delivery efficiency, which ultimately mean that additional costs are incurred and then passed back to grain growers.

[14] ACCC Draft Decision, 24 March 20110,p 1

Booking of elevation capacity at GrainCorp ports

The system of booking and allocating elevation capacity at GrainCorp ports is fair, transparent and minimises the price inflation effect of booking speculation that would be a component of any booking system that permitted transfer and trading of elevation capacity.

The current GrainCorp system is 'first come, first served', and as such doesn't discriminate in favour of GrainCorp's own trading operations or any other potential grain exporter, nor does it discriminate against small grain exporters, as prices are both transparent and constant throughout the year. (See Appendix 13).

It is important to note that while much comment is made publicly and privately about the system for making port elevator bookings, little comment is being made about the real grain export bottleneck;

1. The reduced availability of road transport across eastern Australia,
2. The reduced rail capacity in Queensland, NSW and Victoria,
3. The poor or under resourced state of rail infrastructure, and the effect this has on the cost of rail services and rail productivity,
4. The unwillingness of many grain exporters to forward contract sufficient rail capacity to:
    a. match the quantity of port capacity booked, and
    b. allow rail service providers sufficient commercial incentive to invest in rolling stock capacity.

Exports this year

The 2010/11 grain harvest in eastern Australia was the largest on record. This has placed significant strain on not only the bulk storage and handling network, but on the export supply chain.

Average grain receivals - ~9 mmt	Grain receivals YTD - ~14.6 mmt	+60%
Average bulk grain exports handled - ~4.5 mmt	Est. bulk grain exports to 30 Sept – 7.5 mmt	+60%

The successive years of drought in southern NSW and across Victoria leading up to 2010 forced;

- Many road transport service providers out of the sector,
- Pacific National to exit the independent provision of main line grain transport in late 2007, and
- Pacific National and ARG scaled down rail resources after 2008.

Removal of Government support for transportation of grain by rail

The removal of State Government support in Queensland, NSW, and Victoria for the carriage of grain by rail, and the transfer of the underlying cost of providing base-load rail capacity to the private sector, has contributed to a significant decline in base-load capacity, and surge 'peak' capacity. This has in turn increased the reliance on road transport, at a time when the total pool of available road transport has decreased.

This year, both the storage network and the supply chain are stretched well beyond average demand levels, and the supply of rail and road transport is not capable of meeting the peak demand.

Appendix 1

Acquirer: GrainCorp Services Ltd (NSW Grain Corporation), Cargill Australia Ltd; Target: Milling Australia[1]

Summary	A GrainCorp / Cargill joint venture proposed to acquire "Milling Australia" from Goodman Fielder. Milling Australia is a flour milling and mixing operation.
Outcome	Not Opposed
Date completed	16th August 2002
Merger type	Vertical
Guidelines thresholds	Crossed
Imports about 10%	No
Market definition	The relevant markets are for grain storage and handling services in New South Wales and Victoria, and for flour milling and mixing in New South Wales and south eastern Australia.
Competition analysis	The Commission found that there were strong constraints on GrainCorp's ability to discriminate against particular users of its storage and handling facilities: - The main constraint was that the ownership of grain within GrainCorp's facilities was not fixed and millers could, and did, buy and sell large amounts of grain within GrainCorp's storage system. This means that GrainCorp would not be able to target grain within its system because the ownership of that grain could change; - In terms of access to storage, a large amount of grain entered GrainCorp's system in the name of growers or traders and was then purchased by millers. Therefore GrainCorp would not know who the grain was destined for when it entered GrainCorp's storage facilities; - In terms of raising rival millers' storage costs, the Commission considered that millers' ability to contract for traders to hold grain on their behalf, thereby defeating a price rise, would deter GrainCorp from attempting to raise charges; - In terms of GrainCorp using knowledge of millers' stocks to identify their shortages of particular types of wheat and bidding up the prices of those stocks, the Commission found that GrainCorp did not have complete information of millers' stocks either because millers used some storage other than GrainCorp's, or because wheat was held for millers by traders in the traders' names, effectively disguising the wheat's ownership; and - In terms of GrainCorp blending differing qualities of grain, within a defined band, known in the industry as "co-mingling", to disadvantage millers, the Commission found that co-mingling was a current practice in the industry and would be unlikely to be used to any greater extent against rival millers in the future. On this basis, the Commission concluded that the proposed acquisition would be unlikely to lead to a substantial lessening of competition in the market for flour milling and mixing in New South Wales, and south eastern Australia.
Date raised	2nd May 2002
Initiation	Parties
ANZSIC code	2151

[1] http://www.accc.gov.au/content/index.phtml/itemId/476569/fromItemId/751043

Appendix 2

GrainCorp Limited - proposed acquisition of Ridley Corporation Limited[2]

Type of assessment	Informal Review
Reference	32140
Acquirer(s)	GrainCorp Limited
Target(s)	Ridley Corporation Limited
Industry	Grain
Summary	GrainCorp Ltd proposes to acquire Ridley Corporation Ltd.
Outcome of assessment	Not opposed
Total review days *	25
Commenced public review	20th May 2008
Date completed	1st July 2008
Market definition	For the purposes of this competition assessment, the key relevant markets were the state based markets for the production and supply of stockfeed in each of Queensland, New South Wales and Victoria. The markets for grain services (storing, handling and trading) and protein meal were also relevant to an examination of whether GrainCorp would be likely to have the ability and incentive to leverage its position in these markets into the stockfeed or flour milling markets.
Competition analysis	The proposed acquisition would increase the level of vertical integration of GrainCorp by adding Ridley's stockfeed business, which uses grain products as an input. The ACCC formed the view that the proposed acquisition was unlikely to substantially lessen competition in any of the relevant markets. In particular, the ACCC considered that GrainCorp would be unlikely to have the ability and incentive to leverage its position in grain related markets into stockfeed or flour milling markets, largely due to the presence of alternative suppliers. In addition, the ACCC considered that GrainCorp was unlikely to have the ability to discriminate against competitors given the difficulties GrainCorp would face in identifying with certainty the end-user of any parcel of grain.
Review timeline	**Date** — **Event** 20th May 2008 — ACCC commenced review under the Merger Review Process Guidelines. 3rd June 2008 — Closing date for submissions from interested parties. 13th June 2008 — ACCC requested further information from Graincorp. ACCC timeline suspended. 20th June 2008 — ACCC received further information from Graincorp. ACCC timeline recommenced. 1st July 2008 — ACCC announced it would not oppose the proposed acquisition.

[2] http://www.accc.gov.au/content/index.phtml/itemId/833894/fromItemId/751043

Appendix 3

Viterra Inc - proposed acquisition of ABB Grain Ltd[3]

Type of assessment	Informal Review
Reference	37549
Acquirer(s)	Viterra Inc
Target(s)	ABB Grain Ltd
Industry	Agri-food products and processing
Summary	Viterra proposed to acquire ABB through a scheme of arrangement.
Outcome of assessment	Not opposed
Total review days *	11
Commenced public review	19th May 2009
Date completed	2nd June 2009
Market definition	The ACCC did not consider it necessary to reach a definitive view on market definition in this matter.
Competition analysis	The ACCC found that as Viterra did not have any interests in Australia and therefore did not overlap horizontally with ABB in any relevant market, the proposed acquisition would have no impact on market concentration in any Australian market. On the vertical side, the ACCC found that the proposed acquisition would not alter ABB's existing level of vertical integration and therefore was unlikely to increase or enhance the merged firm's ability or incentive to foreclose rivals' access to storage and handling at South Australian port terminals. The ACCC's assessment also noted the existing and proposed access undertakings covering third party access to these facilities and services. Accordingly, the ACCC formed the view that the proposed acquisition was unlikely to substantially lessen competition in any Australian market in breach of section 50.
Review timeline	**Date** — **Event** 19th May 2009 — ACCC commenced review under the Merger Review Process Guidelines. 29th May 2009 — Closing date for submissions from interested parties. 2nd June 2009 — ACCC announced it would not oppose the proposed acquisition.

[3] http://www.accc.gov.au/content/index.phtml/itemId/875037/fromItemId/751043

Appendix 4

Cargill Incorporated - proposed acquisition of the commodity management businesses of AWB Limited (owned by Agrium)[4]

Type of assessment	Informal Review
Reference	44555
Acquirer(s)	Cargill Incorporated
Target(s)	the commodity management businesses of AWB Limited (owned by Agrium)
Industry	Grain
Summary	Cargill Incorporated proposed to acquire the commodity management businesses of AWB Limited (owned by Agrium Inc).
Outcome of assessment	Not opposed
Total review days *	49
Commenced public review	23rd December 2010
Date completed	17th March 2011
Market definition	While the ACCC did not consider it necessary to form a concluded view in relation to market definition for the purpose of analysing the proposed acquisition, the ACCC considered the likely impact on competition in respect of: - grain marketing and trading - grain storage and handling - flour milling - oilseed processing
Competition analysis	The ACCC noted that Cargill was a relatively small competitor at the various stages of the grain supply chain in Australia. In relation to grain trading and marketing, the merged entity would continue to face competition from a number of other grain traders and marketers. The ACCC observed that in recent years, following deregulation of the market, smaller grain traders and marketers had grown and AWB had lost market share. The ACCC considered that the proposed acquisition would be unlikely to enable Cargill to either depress the price paid to growers of grain or raise the price of grain sold to customers due to the competition it would continue to face from other grain traders and marketers. In relation to grain storage and handling, Cargill had a very small existing presence in the market with an interest in just three storage and handling sites in NSW. AWB had a more significant presence in the market with an interest in ten storage and handling sites in NSW. The merged entity would continue to face competition from GrainCorp which has over 150 storage sites in NSW as well as a small number of other storage providers. The ACCC also noted that there was generally overcapacity of storage in NSW which would be likely to drive competition between storage owners. Cargill and GrainCorp are joint venture owners of Allied Mills, a major flour producer in Australia. The

[4] http://www.accc.gov.au/content/index.phtml/itemId/978281/fromItemId/751043

GrainCorp

	ACCC considered whether the proposed acquisition would be likely to result in Cargill and/or GrainCorp raising input costs for rival flour millers. Overall, the ACCC considered that the presence of remaining suppliers of wheat - including the remaining grain traders and direct supplies from growers - would make it unlikely that Cargill and/or GrainCorp could raise the input costs of their competitors. In relation to storage and handling, the ACCC considered it unlikely to be practical or profitable for Cargill and/or GrainCorp to foreclose access to storage by rival flour millers. In relation to oilseed processing, the ACCC considered that the merged entity would continue to face competition from rival acquirers of oilseed and rival oilseed processors.
Related media releases	• ACCC not to oppose grain acquisition The ACCC announced today it does not intend to oppose Cargill Incorporated's proposed acquisition... Issued: 17th March 2011 Release # NR 051/11
Review timeline	**Date** — **Event** 23rd December 2010 — ACCC commenced review under the Merger Review Process Guidelines. 25th January 2011 — Closing date for submissions from interested parties. 14th February 2011 — ACCC timeline suspended to allow merger parties to provide further information. Former proposed decision date of 24 February delayed. 28th February 2011 — ACCC received further information from merger parties. ACCC timeline recommenced. 17th March 2011 — ACCC announced it would not oppose the proposed acquisition.

Appendix 5

Grain Trade Australia Grain Standards Guide 2010/2011

GRAIN TRADE AUSTRALIA

Guide to the
GTA GRAIN STANDARDS 2010/2011 SEASON

A Project of

GRAIN TRADE AUSTRALIA

Thirteenth Edition 2010

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DISCLAIMER

Grain Trade Australia (GTA) believes that the material contained in this Manual (and all associated documents referred to in this Manual) are correct at time of printing.

GTA does not represent or warrant that the Manual is free from errors or deletions that may have a material impact on readers' commercial activities.

Users of this GTA Manual should obtain their own independent advice as to the applicability of this information to their needs.

Users of this Manual do so on the basis that (to the extent lawfully possible) they assume all responsibility for any resulting direct or indirect loss, damage or consequences.

Nothing contained in this Manual should be construed as advice.

Standards Setting Processes

Introduction

Grain Trade Australia, previously NACMA, was formed in 1991 to increase the facilitation of trade across the Australian grain industry. The grains industry was deregulating and there was increasing involvement of private trading operations alongside the existing statutory boards.

This increase in commercial activity was hampered by the lack of clarity on the varying grain standards that each state had developed. Questions arose as to the grain standard to be used and the other major issue was what where the contract terms.

GTA developed Grain Standards (Standards) as its first priority and then in 1999 GTA released the GTA Trade Rules.

The Australian Oilseeds Federation produces the Oilseeds Standards with Pulse Australia producing the Pulse Standards for use across the country. GTA produce the Cereal Standards that are used by industry for domestic trading and for export shipments.

Various other Standards relating to other commodities are produced by the major participants in that industry where there are no industry organisations relevant to that commodity.

The Standards are reviewed yearly by the GTA Standards Committee and presented to industry at the GTA Common Interest Forum where all members are able to place their final comments to the Standards Committee before the Standards are adopted for the applicable season.

Whilst there are many fiercely competing organisations vying for the grain producers tonne of grain either to store or trade or both, when it comes to Standards it is critical that there is a uniform approach by all grain industry participants to ensure the quality and therefore the price competitiveness of the Australian crop is not compromised.

Unfortunately there are often different interpretation of the meaning of the Standards, due to a lack of training and mis-interpretation.

It is critical that anyone who becomes a party to a contract that refers to GTA Standards has a clear understanding of what the Standards mean in practical and theoretical terms and how to apply those Standards.

Users of this Grain Standards Manual (Manual) should have a thorough understanding of the Standards and their implications to commercial trading activities.

All industry and users of this Manual are encouraged to actively participate in their industry and advise GTA of any issues of concern with Standards or any suggested changes to those Standards.

One word of warning: Standards are dynamic due to the ongoing changes to the commercial arrangements within the grains industry. Whilst the information in this Manual and all associated documents referred to in this Manual is current at time of publication, these Standards are reviewed annually. Additionally, due to the change over of seasons from old to new seasons grain, new Standards may apply to grain traded even though the grain was harvested and stored in a previous season.

Whilst the information in this Manual is current at time of publication, you will need to monitor the GTA Member Updates and the GTA website to ensure that you are aware of the changes to the Standards and importantly you will need to determine how these changes impact on your trading arrangements.

All the best in ensuring the quality of Australian grain in one of the most competitive trading environments in the world!

GTA Standards Committee

The GTA Standards Committee (Committee) is a committee under GTA responsible for generation of all Standards and related issues.

The Committee is charged with the following activities:

- Review of and recommendations for updates of commodity Standards in cooperation with Pulse Australia, Australian Oilseeds Federation and other industry participants
- Review of issues relating to quality assurance and recommendations on action for GTA
- Development of protocols for accreditation of laboratories involved in testing to support GTA contracts
- Development of industry Codes of Practice

Other related activities include:

- Advise on the effective adoption and implementation of the GTA Standards by individuals and by the relevant sectors of the industry
- Foster communication between the GTA Board, Management and the Standards Committee on industry matters that relate to GTA Standards
- Report and make recommendations to the industry at the Common Interest Forum on all matters of relevance addressed by the Standards Committee

Upon development of the Standards, recommendations are made to the GTA Board for adoption.

The members of the Committee come from a range of industry organisations and membership is reviewed annually according to GTA policy.

Purpose & Intent of Standards

The Standards that apply to grain tendered for delivery are developed for each commodity based on a range of factors. These include but are not limited to:

- Customer contract
- Importing country Government regulations for quality or quarantine
- Relevant food safety laws
- Requirement to improve quality of grain supplies
- Competitor grades and quality
- Available quality of grain given restrictions of varieties, growing and harvesting conditions, pest and disease resistance of the crop
- International protocols such as those developed by Cartagena and Codex Alimentarius Commission
- Ability of the storage system to segregate or commingle grain
- Land protection & Quarantine laws

In addition each Standard may be used as a Receival Standard or as a Standard that may be applied for grain traded by various supply chain participants. As can be seen from the above the Standards are developed based on a range of factors over time, learning from experiences in the past and from changing market forces.

Within each grain type there may be a number of different Standards reflecting the various grades for that commodity, such as No.1 milling, No.2 milling, Feed. Not all grain types have the same range of grades.

There are generally two types of grain quality set within commodity Standards, being milling grades or Feed/off-grades:

- Milling grades are generally higher priced grades producing grain suitable for the high quality end of the market. Frequently the grain or processed product is destined for the human consumption market.
- Feed or off-grades are traditionally created as a poorer quality segregation due to a defect or contamination issue associated with a milling grade. However while these grades may be created, feed users may require a higher quality than these off-grades. In some cases many of the quality specifications are equal to the main milling grade. Thus Feed grades can either be comprised of grain that did not meet the milling grade specifications, or are grades destined for the stockfeed or other industrial use industries. Increasingly Feed grade grains are being bred or designed specifically to create a quality suited for the feed market.

Thus different uses of grain create market forces that create different prices based on the end use of the grain. In some scenarios the feed grade may be a higher price than the milling grade.

As outlined above, the Standards are set by grain type (commodity) or within grain types there may be separate grades based on quality or varieties. All Standards are based on a range of quality parameters, be they physical properties, defective characteristics or on contaminants present in the grain.

Standards are applied to all commodities received for that applicable season. There are set dates that are applied by GTA when the season switches over and the new season Standards are to apply. Buyers of grain should be aware that industry sectors may request old season grain to be reclassified as per the new season Standards and thus be deemed new seasons grain. In general the following dates apply:

- Winter crop – 1 August
- Summer Crop – 1 October

For some commodities, the Standard to apply at receival does not apply at outturn of the grain to the marketplace. The differences may be related to the inability to maintain the quality during storage or the potential for contamination of the grain during the storage and transport process. For many of the pulse crops such as faba beans there is a Receival Standard and an Export Standard due to the tendency of these grains to split during storage and thus have a higher defective grain count on outturn than at Receival.

Whatever Standards are applied either at Receival or Export, the tolerances for each quality parameter have been set based on experience of the market forces at play. It is important that the Standards are complied with to ensure not only that growers are paid correctly, but also to enable successful marketing of that commodity.

Objectives of GTA Setting Standards

There are several objectives of GTA developing Standards on behalf of industry. These include:

- Industry inclusive – formulation and use of Standards with input from all sectors of the industry including plant breeders, producers, receival agents, domestic consumers, traders and exporters
- Dissemination of Standards – provide a mechanism for all sectors of the industry to have free and ready access to the Standards
- Simplification – formulation of Standards which are easy to interpret and to apply
- Commonality across grains – provision of Standards which can be applied across all sectors of the industry

- Meet needs of commercial trade – provision of Standards which meet the changing requirements of the trade, including changing customer requirements, State and Commonwealth regulatory requirements
- Maximize objective testing – provide Standards which facilitate adoption of new technologies

Procedure for Standards Development

The Standards are developed each year and apply for the full 12 month period. In specific cases, other industry associations may develop Standards and in these instances, the Standards are simply published by GTA.

Note that while specific timeframes may exist, significant issues raised by industry and agreed major changes to Standards may require further industry consultation and a lead-time prior to inclusion in Standards.

Capture of Industry Views

- All industry is encouraged to have input into Standards through a feedback form on the GTA website
- Feedback from industry is welcomed for the entire 12 months

Development of Draft

- The Committee meets in mid to late February following compilation of issues raised to GTA
- Following the initial Committee meeting, GTA is to develop draft Standards for the current season by early – mid March

Provision to Industry

- During development of the draft Standards, any major issues of significance or changes etc are included in a Covering Note to the Standards
- Standards, along with the Covering Note, are forwarded to key industry stakeholders and also made available on the GTA website
- Industry is encouraged to provide comment by late March to mid-April via the feedback form on the GTA website

Development of Final Standards

- The Committee considers industry feedback in determining any revisions to Standards
- All industry submissions are tabled at the Common Interest Forum
- Following presentation of the Standards and receipt of any final comments from industry at the Common Interest forum, the Standards are finalised by 31 July for signoff by the GTA Board
- Standards are placed on the GTA website with a summary of changes from the previous year and a summary of issues raised by industry from the previous year

Note that for Standards developed by other organisations such as the oilseeds Standards, these are simply presented to the Committee and if they comply with the Terms of Reference of the Committee, are accepted in full without alteration.

GTA Grain Standards - Contents

The GTA Standards has 12 Sections, being:

Section 1 GUIDE TO THE GTA GRAIN STANDARDS

This Section provides a general overview of the reason for Standards, the Standards setting process and role of the GTA Standards Committee and industry in development of Standards.

Section 2 GRAINS

This Section provides the Standards for the following cereals:

- Barley
- Maize
- Oats
- Rye (Cereal)
- Sorghum
- Triticale
- Wheat

For barley and wheat, Reference Booklets have been developed. Included in these Booklets is the following information:

- Definitions for all major quality parameters
- Grain Quality Standards in table format for each grade
- Varietal Classification System information
- Methods of Analysis
- Classification & Associated Procedures
- Reference Materials

For all cereal commodities other than wheat and barley, only Grain Quality Standards exist at this stage. Each Standard is available as a stand alone document. The Committee will over time develop Booklets containing the above information for each grain type as outlined for barley and wheat. A timeframe for completion of this task is not yet available.

Section 3 OILSEEDS

This Section provides the Standards of oilseed grains, vegetable oils and oilseed meals and hulls (vegetable protein) as adopted by the Australian Oilseeds Federation.

Included in these Standards are:

- Definitions of all major terms used in the Standards
- Oilseed grain, oil, meal and hull Quality Standards
- Dispute resolution procedures
- Methods to determine payment for various quality parameters
- Various Codes of Practice relating to storage and transport of oilseeds
- Typical analysis of oils, meals and fats for a range of quality parameters
- Details of the canola Test Check program used to determine laboratory proficiency

Section 4 PULSES

This Section provides the Standards of pulses as adopted by Pulse Australia.

Included in these Standards are:

- Definitions of all major terms used in the Standards
- General procedures for sampling and assessment
- Pulse Grain Quality Standards

Section 5 FODDER

This Section provides the Standards of fodder as adopted by the Australian Fodder Industry Association.

Included in these Standards are:

- Hay and Silage Quality Standards
- Fodder Vendor Declaration Form
- Fodder Sampling Protocol

Section 6 BIRD SEEDS

Specifications for the commodities produced for the bird seed market are recorded in this section.

Included in these Standards are:

- General descriptions of terms of trade
- Bird seed grains Receival and Domestic/Export Quality Standards

Section 7 PROTEINS

Proteins of animal and vegetable origin for livestock feeding are contained in this section.

Included in these Standards are:

- Animal proteins and Meals Quality Standards

Section 8 ORGANICS

This section is devoted to organic and biodynamic produce.

Included in these Standards are:

- General definitions used for organic and biodynamic produce
- Requirements related to production, processing, transport and marketing of organic and biodynamic product

Section 9 BY-PRODUCTS

Included in these Standards are the Quality Standards for by-products such as molasses and meals produced from biscuits.

Section 10 FATS AND OILS

This section deals with commodities of both animal and vegetable origin used in stockfeed manufacture.

Included in these Standards are:

- Oils produced from animal products, various milk powders and tallow/grease Quality Standards

Section 11 PROBLEM IDENTIFICATION

This Section is for use in identifying weed seeds and insect pests.

Included in this Section are:

- Colour photographs of common weed seeds found in grain
- Colour photographs of common stored grain insects found in grain

It should be emphasised a range of other Reference Material is available for industry that is not directly published by GTA nor included in this section. This material includes a range of photographic charts of various defects for different commodities. These charts are produced on behalf of particular industry sectors (Pulse Australia etc) or by individual industry participants.

Section 12 BEST PRACTICE

This Section deals with a range of grain related issues.

Included in this Section are:

- A description of traceability and identity preservation
- A description of Plant Breeders Rights
- Definitions related to biotechnology
- General Procedures related to Dispute Resolution
- Common Definitions and Terms relevant to all grains
- Issues to consider when receiving and segregating grain

Appendix 6

GTA Grain Standards Explanatory Memorandum 2010/2011

GRAIN TRADE AUSTRALIA

Explanatory Memorandum
GTA GRAIN STANDARDS
2010/2011 Season

Table of Contents

1. Background

GTA Member Update No.8 of 10 and No.12 of 10 sought feedback from industry on potential changes to grain standards for the coming season. Feedback was received from a range of industry sectors on the proposed changes and a range of other issues.

The GTA Standards committee met on several occasions and reviewed feedback from industry. The committee recommended changes to the GTA Board and the Board has adopted recommendations where warranted.

This document lists changes to all Standards for implementation in 2010/11 and those issues where changes were not accepted. Also listed are issues potentially to be addressed in the 2011/12 Standards and beyond.

2. Process for Implementation

As the 2010/11 Standards have been adopted by the GTA Board the final Standards have been published on the GTA website at www.graintrade.org.au and are now available for industry use.

3. Changes to the 2010/11 GTA Standards

3.1 All Cereals (Section 2)

A number of formatting changes have been made to all cereal Standards. The changes have been for clarification only and have not affected the previously applied Standards or tolerances for quality parameters within those Standards except where listed below.

Cereals Standards refer all grades of the following commodities:

- Wheat
- Barley
- Maize
- Cereal Rye
- Oats
- Triticale
- Sorghum

Clarification
The following summarises the major points of clarification either made on the cereal Standards charts or in the Booklets produced associated with those charts – it should be noted that Booklets are only currently available for wheat and barley however the references in those Booklets to definitions of quality parameters, methods etc apply equally to other cereal grains:

3.1.1 Revision to the terminology used throughout all Standards to refer to Standards rather than Trading Standards or Receival Standards.
3.1.2 Insects that are included under the term Field Insects – Large and Field Insects – Small
3.1.3 Included a reference to "chemicals in excess of the MRL" in the definition of "Chemicals not Approved"
3.1.4 Clarified the categories related to small pieces of contaminants such as dead stored grain insects, pieces of sticks and snails
3.1.5 Clarified that the Standards relate to any sample assessed according to the Standards, not just loads tendered for delivery
3.1.6 Updated references to National Measurement Institute legislation and General Certificates in relation to testing equipment for moisture, protein and test weight
3.1.7 For all cereals, remove the reference to specific pieces of equipment in the comments section of the charts
3.1.8 Include a Definition for Maximum Residue Limit and the National Residue Survey
3.1.9 Insect tolerances – All Cereals

The categories of insects and the assessment of these categories in all cereals were altered for simplification of understanding the definition and the assessment process. The following tolerances now apply to all cereals except gritting maize:

New Standard	Limit/0.5L	Comment
Stored Grain Insects & Pea Weevil – Live	Nil	Entire load
Insects – Large, dead or alive	3	Includes Rutherglen bugs, ladybirds, grasshoppers and wood bugs, whole or parts thereof
Insects – Small, dead or alive	10	Includes all species of aphid, mites & stored grain insects (dead only)

For Gritting Maize (CSG-44) a nil tolerance for all insects will continue to apply.

3.2 Wheat (Section 2)

Clarification:
In addition to the points outlined in 3.1 above that apply to all cereals, the following points of clarification were made to the Wheat Standards only:

3.2.1 Clarified the definition for Unmillable Material above the Screen and Other non-Objectionable Material

Altered Tolerances or Standards
In addition to the points outlined in 3.1 above that apply to all cereals, the following changes were made to wheat Standards only:

3.2.2 Create the APH1 grade

Created this grade given it has been segregated in the northern cropping area of Australia in prior seasons.

3.2.3 Western Australia SFT2 grade specifications - Wheat

Changes were made to screenings and protein of SFT2 in Western Australia to reflect the previously introduced SFT3 grade. In addition, a proposal was accepted for a further change to SFT2 to reflect all specifications of the previously introduced regionally based SFT3 grade in Western Australia.

The Standard for SFT2 in Western Australia (CSG-145) is as follows:

Quality Parameter	Previous SFT2 Standard	New SFT2 Standard
Protein (%) max	9.5	10.5
Screenings (%) max	10	8
Unmillable Material Above the Screen (%) max	1.2	0.6
Falling Number (secs) min	250	300
Small Foreign Seeds (%) max	1.2	0.6

3.2.4 Introduce the APWN grade

A recent decision of the Wheat Classification Council (WCC) to alter the classification requirements of AH and APW in Western Australia by removing the high starch paste viscosity target quality lead to this new grade being developed. This decision was made on the basis of bringing the requirements for WA in line with the classification requirements in other regions of Australia thereby, making it more efficient for wheat breeders in WA and potentially giving WA wheat growers access to higher yielding varieties that previously may not have been classified due to the high starch paste viscosity requirement.

The intent is that as a result of the removal of the starch paste viscosity target, the previous PWT class is to be replaced by a new Class APWN in order to capture approx 1 million tonnes per annum of high starch paste viscosity hard wheat to be used in the Japanese and Korean noodle markets.

While sufficient advance notice had not been provided to industry in order to remove the PWT grade this season, it was recognised APWN would be segregated this season in Western Australia and PWT would be segregated if required. PWT could be removed in future seasons, potentially 2011/12.

The Standards for APWN are as per the existing PWT grade except for the following:

- The protein limits be altered as follows:
  PWT – 9.5% to 11.5%
  APWN – 10.0% to 11.5%
- The existing PWT varieties are permitted to be received into APWN. The Varietal Master List has been updated to reflect these changes.
- Cascading rules apply as follows:

AH varieties - H1/H2/APWN/APW2/ASW1/AUH2/AGP1/AUW1/FED1
APW varieties - APW2/APWN/ASW1/AGP1/AUW1/FED1

3.2.5 Altered the Varietal Master List

Changes to the Varietal Master List have been made as per deliberations of the Wheat Classification Council.

No further changes will occur to the list for the 2010/11 season.

3.3 Barley (Section 2)

Clarification:
In addition to the points outlined in 3.1 above that apply to all cereals, the following points of clarification were made to the barley Standards only:

3.3.1 Dark Tipping refers to grains that exhibit a distinct light to dark brown to black discolouration
3.3.2 Field Fungi is defined as grains where coverage is greater than 1/8th of the entire grain surface
3.3.3 The reference method to assess Germinative Energy is measured using a 72 hour period rather than the previously listed 24 hour period
3.3.4 The definition of Side or Back Skinning applies to grains where part of the husk has been removed from the side or back of the grain, on the two thirds of the grain closest to the germ end

3.3.5 Shot grains are where the husk has a distinct pin hole at the germ end or has "tramlines" where the husk has begun to lift on each side of the back of the grain at the germ end. Noting that the tramlines must be on both sides
3.3.6 Removed all decimal places for recording Defective grains and Germinative Energy, as all results are recorded to the nearest whole number except for broken grains which is recorded to the nearest 0.1%
3.3.7 Accredited Feed varieties as listed by Barley Australia include any two row variety with a White Aleurone Layer
3.3.8 Protein is converted to "as is" by multiplying barley nitrogen by 6.25%
3.3.9 Revised the definition of Broken to refer to "any damage to the germ".
3.3.10 Clarified that as a separate tolerance exists for Broken, the previous inclusion of Chipped in the definition of Skinnings was not warranted.

Altered Tolerances or Standards
In addition to the points outlined in 3.1 above that apply to all cereals, the following changes were made to barley Standards only:

3.3.9 Alter the definition of Shot/Sprouted and use of Falling Number & RVA units

The previous definition and wording for Sprouted/Shot and the applicability of the Falling Number and Rapid Visco Analyser units versus a visual tolerance was unclear. It was agreed that the interpretation and use of methods such as the Falling Number and RVA should be altered in barley as per wheat.

Previously the barley standards did not permit the RVA/FN to override the visual shot/sprouted assessment. This has been altered to allow the RVA/FN to override the visual shot/sprouted assessment.

3.4 Sorghum (Section 2)

Altered Tolerances or Standards
In addition to the points outlined in 3.1 above that apply to all cereals, the following changes were made to sorghum Standards only:

3.4.1 Development of a Reference Booklet for Sorghum

As with the prior development of the Wheat and Barley Booklets, an overwhelming majority of industry submissions agreed with this proposal. The Booklet will be available for the ensuing harvest.

3.4.2 Trash and Split/Broken – Sorghum

Industry noted that while this quality parameter was noted in contracts, it was not assessed as per the Standards chart. Rather it was assessed as part of the screenings content. On that basis, it was agreed to delete this quality parameter from the Standards for the next season.

3.5 Triticale (Section 2)

Altered Tolerances or Standards
In addition to the points outlined in 3.1 above that apply to all cereals, the following changes were made to triticale Standards only:

3.5.1 Separate the category of Dry Green, Sappy & Frost Damaged

Changes to these quality parameters were made to make this commodity consistent with other cereals. The following now applies:

Dry Green, Sappy max 2% (% by count, 300 grain sample)
Frost Damaged max 2% (% by count, 300 grain sample)

3.6 Oilseeds (Section 3)

The GTA Standards Committee agreed to adopt fully the Australian Oilseeds Federation Standards for 2010/11. Major changes have been highlighted in that Standards document.

3.7 Pulses (Section 4)

The Committee decided to adopt fully the Pulse Australia Standards for 2010/11. The major changes include:

3.7.1 Further refine wording for clarification in the areas of:

- The need to de-hull for kernel poor colour assessment
- Sampling guidelines
- Sub-sampling is recommended using a mechanical device
- Assessment of Unmillable & Foreign Material categories
- There is no time limit for the assessment process
- Included NRS and MRL definitions

3.7.2 Review the tolerance for field insects, including grasshoppers for the 2011/12 season

3.8 Meat and bone Meal (Section 7)

3.8.1 Size definition for Meat and Bone Meal

Standards CSPA1-CSPA7 have been altered to include a reference to the requirement for 100% to pass through a 5.00mm screen. The following now applies:

Texture - minimum 98% to pass through a 2.00mm (US Mesh No. 10 sieve) and 100% shall pass through a 5.00mm screen.

3.9 Dried Distillers Grain (Section 9)

3.9.1 Developed Standards for Dried Distillers Grain

Ethanol co-product standards have been added for the following:

Sorghum Wet Distillers Grains	CSBP – 10
Sorghum Wet Distillers Grains With Solubles	CSBP - 11
Sorghum Condensed Distillers Solubles	CSBP – 12
Sorghum Dried Distillers Grain	CSBP – 13
Wheat Condensed Distillers Solubles	CSBP – 14
Wheat Dried Distillers Grain	CSBP – 15

4. Issues Considered but Not Approved

The following issues will not be re-considered by the Standards Committee unless a further submission is received from industry. Industry is free to provide their original submission or further information to support their views should they wish for any of these issues to be considered by the Standards Committee in developing the 2011/12 or future Standards.

4.1 General

4.1.1 *Rejected:* Seed removal from seed pods

It was noted that different interpretations to the removal of seeds from seed pods were being applied by industry based on the type of commodity being assessed. A proposal to develop a uniform procedure across all commodities for the removal of seeds and counting individual seeds would have significantly altered some existing tolerances for specific weed seeds.

Given there is currently a review of all weed seed categories, the Committee rejected the proposed change and agreed to await the outcome of the weed seed review prior to making any changes to the assessment of weed seeds in seed pods.

4.1.2 *Rejected:* Nil Tolerance

The Committee re-iterated that Standards deal with technical and not commercial issues. Industry is free to vary the Standards for their own commercial reasons and apply a "tolerance for nil". Therefore the Committee agreed with its previous determination that a tolerance and revised definition for "nil" would not be included in the Standards.

4.1.3 *Rejected:* Test Weight Assessment

While a sector of industry requested that there only be one methods of assessment of Test Weight in the field, the Committee agreed with its previous determination that industry is free to use any method for assessment in the field provided it is sufficiently accurate, is equivalent to the reference method and adheres to regulatory requirements.

Industry is reminded it is the policy of GTA that any equipment may be used in the assessment process of any quality parameter in the Standards on the understanding that those field units provide results equivalent to the Reference Method(s) and adhere to any regulatory requirements.

4.1.4 *Rejected:* Machine Dressed Standards

A submission was received requesting a Machine Dressed Standard for wheat, barley and sorghum. The Committee rejected this proposal as generally Machine Dressed Standards have specifications determined commercially between the buyer and seller on a case by case basis. Thus it was not appropriate to develop industry-wide Standards.

4.2 Wheat (Section 2)

4.2.1 *Rejected:* Alter ANW2 screenings

A proposal had been received to increase the screenings level from 5% to 10%. The submitter of this proposal subsequently withdrew this request. While some submissions from industry supported the original proposal, the Committee decided to reject the proposed change given there was not a sufficient reason for the change.

4.3 Barley (Section 2)

4.3.1 *Rejected:* Frost in Feed1 and Feed2

A submission was received requesting the Frost Damaged limit in Feed1 and Feed2 be altered to "no limit". The Committee rejected this proposal on the basis that there were no marketing reasons for the change and the existing levels were not causing market failure.

4.3.2 *Rejected:* Earth in Feed1 and Feed2

A submission was received requesting the definition of "Earth" to only include a clod of earth remaining above either screen. The Committee rejected this proposal on the basis that earth present anywhere in the sample at export may be rejected by AQIS as it is a quarantinable item.

4.4 Oats (Section 2)

4.4.1 *Rejected:* Alter the screen slot size

The majority of industry submissions did not support the proposal to alter the screen slot size for oat assessment. It was noted by the Committee that industry could provide no evidence of market failures as a consequence of the existing screen specifications. Based on industry feedback, the Committee agreed to maintain the existing screen slot size of 2.00mm x 12.7mm.

4.5 Cereal Rye (Section 2)

4.5.1 *Rejected:* "Variations" Weed Seed Category

While industry in general supported the proposed change, the Committee rejected the proposed change to the weed seed category "Variations" for cereal rye pending the outcome of the current weed seed review.

5. Potential Changes to the 2011/12 & Beyond Standards

The following highlights potential changes for 2011/12 and beyond Standards or highlights issues where further information and input from industry is required. Industry is encouraged to provide submissions on any of the following points, or any other issues, at any time by providing a detailed written response to GTA. GTA will formally seek submissions on the issues below and any other matters of interest early in 2011.

5.1 General

A number of potential changes to Standards in general were proposed by the Committee in the Member Updates provided to industry during the 2010/11 season. Industry provided various responses which the Committee considered. In summary these included:

5.1.1 *Proposed Change:* Weed Seed Review

The majority of submissions on this topic agreed with the intent of the Committee to simplify the Standards. Industry will be consulted with proposed changes for adoption as they are developed by the Committee. It is expected some changes will occur for the 2011/12 season although there may be further changes beyond that season as further research is conducted.

5.1.2 *Proposed Change:* Sticks, Unmillable & Foreign Material

As per responses to the weed seed review, industry agreed Standards should be simplified in the area of assessment of contaminants. The Committee discussed the implication of the weed seed review on this topic and both items will be addressed concurrently.

It is the intent of the Committee to remove many of the sub-categories within the Contaminants area and develop where required a category for Foreign Material where many of these quality parameters may be included.

5.1.3 *Proposed Change:* Reference Method for Screenings

The majority of industry submissions agreed there is a need to develop specifications for reference screens to be used in situations such as an official dispute. While it is desirable to develop these specifications as soon as possible, the Committee has developed a list of research issues that require addressing in the coming years, of which this topic is included.

All research issues will be prioritised and the Committee will advise industry of the priority and potential timeframe for resolution during the development of the 2011/12 Standards.

In the interim, industry is encouraged to provide any topics where they consider research is required and a suggested method of addressing that research.

5.1.4 *Proposed Change:* Develop Reference Booklets for Other Cereals

Industry agreed that the production of further Reference Booklets for the remainder of the cereals was useful. The Committee will develop the remainder either in 2011/12 or the following year.

5.1.5 *Proposed Change:* Problem Identification & Best Practice

Industry considered these two documents were a useful guide to industry on the application of Standards. The Committee will review the documents and determine what changes are recommended and advise industry for 2011/12.

Note that a submission was received from industry relating to the rejection of durum due to Pink Stained grain. Industry advised that pink stained grains were detected in durum loads tendered for delivery in South Australia in 2009/10. The potential existed for mycotoxins to be present on that grain and based on commercial implications some of that grain tendered for delivery was rejected. The Committee acknowledged that industry was free to choose how they implemented the Standards when issues of food safety were involved based on their perceived risk.

The committee agreed there was the potential for inclusion of how to address this and similar issues in the Standards in the Section on Best Practice.

5.1.6 *Proposed Change:* Definition of Grasshoppers

The current definition of grasshoppers makes assessment difficult “For grasshoppers, six legs, three body parts and two wings or part thereof, constitutes one insect. More than one of the same body part constitutes greater than one insect.”

Both the definition and tolerance for grasshoppers, including pieces of grasshoppers, will be reviewed.

5.2 Wheat

5.2 *Proposed Change 2013/14:* Test Weight increase in all Milling Wheat Grades

The Committee received a number of submissions both for and against an increase, with a range of timeframes for a change from immediate to "changes in future with sufficient advance notice". While industry provided some new issues to be considered under this topic, the majority of issues raised in submissions had been previously noted by GTA in the paper provided to industry as part of the Standards review process entitled "Test Weight of Australian Wheat – 2010 and Beyond".

The Committee deliberated on all feedback recently received and received in previous seasons.

Following recommendations from the Standards Committee, the GTA Board resolved that:

- *The implementation date of the GTA Board Policy for an increase in test weight in milling grades of wheat be extended to no later than 2013/2014. Test weight will be reviewed annually with the intention to implement the 76 kg/hl test weight in milling grades at an earlier date if justified.*

- *Plant breeders (including AGT, Intergrain and Longreach) are contacted to determine realistic timelines for the availability of varieties with a propensity for higher Test Weight to determine the potential for existing and new varieties to meet this requirement. This discussion and analysis would involve interactions with the WCC and the National Variety Trials. NVT data would need to be analysed upon receipt.*

- *The Wheat Classification Council be approached to include a Test Weight Standard in their process of assessing and classifying varieties.*

- *Individual Grades be reviewed with a view to increasing Test Weight in the most appropriate grades first rather than a blanket all milling grades.*

- *An annual review of this decision is conducted to analyse all relevant data re: availability of varieties, current crop quality, market opportunities / requirements.*

- *GTA produce a paper for distribution across Industry to outline the outcomes from the GTA Board decision with regard to changes in Test Weight limits.*

- *A proforma for industry submissions be developed that outlines the minimum information required in submissions.*

Appendix 7

Seasonal Grades introduced by GrainCorp in addition to standard grades during the 2010/11 Harvest

Grade	Commodity	Segregt'n	Grade	Area
AGPG	Wheat	Single	Special	Sunshine Terminal
AH9	Wheat	Multi	Major	All
ANWH	Soft Wheat	.		Where Segregated
ASW3	Wheat	Multi	Special	Noondoo,Thallon
BULP	Barley	Multi	Major	Victoria
CAG3	Canola	Multi	Major	All
CAN3	Canola	Multi	Major	All
CAN4	Canola	Single	Special	Manildra
CAWB	Canola	Single	Special	Geelong Terminal
CHK2	Chickpeas	Multi	Major	NNSW
CHKF	Chickpeas			QLD, NSW
CHPX	Chickpeas	Multi		Thallon - Warehousing
CKJK	Chickpeas	Single	Special	Mackay Terminal
CMS	Canola	Single	Special	Manildra
CNSP	Canola	Single	Special	Henty West
CNTW	Canola	Multi	Special	SNSW
COAT	Oats	Single	Major	Geelong Terminal
DR4	Durum	Multi	Special	NNSW
DR9	Durum	Multi	Special	NNSW
EMAZ	Maize	Single	Special	Emerald
F1D	Barley	Single	Special	Delungra
FED2	Wheat	Multi	Major	All
FED3	Wheat	Multi	Special	SQLD, NNSW & VIC
FEDB	Wheat	Single	Special	Sunshine Terminal
FEDH	Wheat	Multi	Major	CNSW
FX	Barley	Multi	Major	SQLD/NNSW/CNSW
GA1D, CO1D, FT1D, GR1D	Barley	.	Major	NNSW
GA1P	Barley	Single	Special	Geelong Terminal

GA3B	Barley	Multi	Special	Gunningbland
GA4	Barley	Multi	Major	Boggabilla
GAA (Crowe & Weal)	Barley	Single	Major	Warialda,Crooble,Boggabilla
GAB (Crowe & Weal)	Barley	Single	Major	Warialda,Crooble,Boggabilla
GABW (Crowe & Weal)	Barley	Single	Major	Crooble
GAC (Crowe & Weal)	Barley	Single	Major	Warialda,Crooble,Boggabilla
GALP	Barley	Multi	Major	Murtoa & NWVIC if advised
GL9H	Wheat	Single	Special	Sunshine Terminal
GRMG (Greentree M'bone Grading)	Wheat	Single	Special	Merrywinebone,Bellata
GS12	Barley	Single	Special	Geelong Terminal
H1G, H2G	Wheat	.		Yarrawonga,Dookie
HBM1, HBM2, HBM3	Barley	.		Moree Haddad's
HBMF	Barley	Single		Moree Haddad's
HIND	Barley	.		
HOGZ	Non-Grain/Other	.		Moree Haddad's
HPS2	Wheat	Multi	Major	Miles,Meandarra
HWBX	Non-Grain/Other	Single		Moree Haddad's
IBA1	Barley	Single	Special	Geelong Terminal
KASW,KAPW,KH2,KAUH2,KAPH	Wheat	.		NNSW
LUP	Lupins	Single	Special	Panyitya
MAZ2	Other	Single	Special	Emerald
MOAT (Revision)	Oats	Single	Major	Dunolly
MOAT,MTKA,GSF Oats Standards Chart	Oats	.		Dunolly

MOCU	Oats	Single	Special	Dunolly, Willaura
MOTU	Oats	Single	Special	Dunolly, Willaura
MTKA	Oats	Single	Special	Dunolly
RYEC, RYE2, RYE3	Cereal Rye	Single	Special	Manangatang
SFW1	Wheat	Multi	Major	All
SFWM	Wheat	Single	Special	Port Kembla Terminal
SGF	Soft Wheat	Multi	Special	CNSW, SNSW
SGP1, SGP2	Soft Wheat	Multi	Special	Soft Wheat Sites
SGP3	Soft Wheat	Multi	Special	Soft Wheat Sites
SOR4	Sorghum	Multi	Special	Moura
SORX	Sorghum	Multi	Major	QLD
WBA1, WBU1, WF1	Barley	Single	Special	Youngareen
WFAB	Faba Beans	.		Goondiwindi West
YIN	Soft Wheat	Single	Special	Narromine
YIN2	Soft Wheat	Single	Special	Narromine

Appendix 8

GrainCorp Harvest Bulletin – 2 December 2010

Fusarium Head Blight and White Grain Disease in Wheat and Durum

GrainCorp Harvest Bulletin

2 December 2010

Fusarium Head Blight and White Grain Disease in Wheat and Durum

Current Situation - Southern Queensland, Northern NSW, and the Liverpool Plains

Elevated numbers of 'white grains' are being found in wheat and durum, indicating the presence of the fungal diseases Fusarium Head Blight (FHB) (*Fusarium graminearum),* and / or Botryosphaeria White Grain Disease.

Symptoms

It is not possible to determine visually which of these fungus species causes 'white grain'.

Grain infected by FHB, or Botryosphaeria, has a chalky white appearance, and is usually shrivelled and light weight. Infected grains may also be covered by a light pink mycelial growth, or if infected late in grain development, be of normal size and colour.

Why is the presence of 'white grain' a quality concern?

Fusarium graminearum can produce the vomitoxin *deoxynivalenol* or DON, which is known to cause reduced feed intake in livestock, and gastrointestinal irritation.

In Australia, there is currently no regulation for levels of DON in human or animal food, but many grain cargos exported from Australia specify the United States Food and Drug Administration restriction on the presence of DON in grain of 1 part per million (ppm).

It is not possible to determine visually if DON is present, nor is it possible to determine the concentration of DON from the number of white grains present in a sample.

Botryosphaeria White Grain Disease has minimal effect on the nutritional value or starch content of wheat, and there are no known toxic effects if infected wheat is included in pig diets.

How is FHB or White Grain Disease formed?

Both fungal diseases can form during prolonged periods of rainfall and high humidity at flowering and early grain fill.

How common is FHB or White Grain Disease?

In the northern hemisphere, FHB is regularly found in wheat and barley.

In eastern Australia, both *F. graminearum* or *Botryosphaeria spp.* are common, and appear where agronomic practices host their presence, or when growing conditions encourage growth and distribution of their spores.

Is GrainCorp testing for DON?

Yes. We have increased our quality surveillance to ensure that all grain received containing white or pink grain does not contain undesirable levels of DON.

If high levels of DON are detected, this grain is unsuitable for use as stockfeed, or for processing into food.

What are the relevant GTA standards for white grains? (Field fungi – FFUN)

APH2	H1	H2	APW1	ASW1	AUH2	AGP1	HPS1	FED1	FED3	DR1	DR2	DR3
10	10	10	10	10	20	20	40	40	100	10	10	10

Is GrainCorp accepting wheat with more white grains than the GTA standard?

GrainCorp has opened a FED3 segregation at Miles and Malu in Queensland.

This segregation will accept up to 400 white grains / half litre.

Other FED3 segregations may be opened if demand exists, and if DON levels in FED3 (if detected) remain at a level acceptable to potential buyers.

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Appendix 9

GrainCorp Harvest Bulletin – 20 December 2010

Results of Testing White Grain in Wheat and Durum

GrainCorp Harvest Bulletin

20 December 2010

Results of Testing White Grain in Wheat and Durum

Current Situation

Wheat and durum containing 'white grains' being received in Queensland, NSW and Victoria continues to be tested to determine if Fusarium Head Blight (FHB) (*Fusarium graminearum),* and/or *Botryosphaeria* 'White Grain Disorder' is present.

- Fusarium Head Blight can produce a mycotoxin, *deoxynivalenol* (DON), which is known to cause reduced feed intake in livestock and gastrointestinal irritation. DON is also known as 'vomitoxin'.
- *Botryosphaeria*, or White Grain Disorder, has minimal effect on the nutritional value of flour production from wheat, and there are no known toxic effects from consumption of products produced from effected grain.

Southern Queensland, Northern NSW, and Victoria

- White grain found in southern Queensland is caused by *Botryosphaeria* and/or FHB
- In central and southern NSW, and Victoria, FHB and/or DON have not been detected
- In northern Victoria, white grain has been identified as *Botryosphaeria.* (A FED3 grade has been opened at selected Victorian sites to receive effected wheat)

Liverpool Plains

Initial results from tests on wheat and durum from this region indicate that 'white grain' is more likely to be linked to the presence of Fusarium Head Blight, rather than White Grain Disorder. The identification of 'pink stained' grains in the region, particularly in durum, is an indicator of the presence of FHB. The level of testing for DON has been increased as a result.

Testing Outcomes

The FED3 grade, containing up to 400 'white grains' (count per half litre), is on the basis of the analysis conducted to date, safe for feeding to both ruminant and monogastric livestock.

Test Data

To date, GrainCorp has tested 138 samples of wheat and durum containing 'white grain'.

Level of DON	Samples tested
Less than 1 ppm	132
1 – 5 ppm	4
5 - 10 ppm	1
Greater than 10 ppm	1

The two DON detections at or above 5 ppm were identified in samples from the Darling Downs and the Liverpool Plains.

Outturn Monitoring

In Australia, there is no regulation pertaining to levels of DON in human or animal food, but many export grain buyers, and domestic end users, specify a contractual restriction on DON presence in grain of 1 part per million (ppm).

GrainCorp will continue to monitor receivals of wheat and durum containing 'white grains' for the presence of DON, to ensure that food and feed safety is maintained.

Appendix 10

GrainCorp Harvest Bulletin – 20 December 2010

Explaining the Falling Number Test

Explaining the Falling Number Test

What does falling number measure?

The falling number test gives an indication of the activity of enzymes called alpha amylase and protease in wheat.

The test doesn't directly measure the level of enzyme activity, instead it measures the changes in the physical properties of the starch portion of the wheat kernel caused by alpha amylase and protease.

What do these enzymes do?

The presence of alpha amylase and protease are an indication that changes, linked to germination or sprouting, are beginning to occur in the grain.

Alpha amylase breaks down large starch molecules into smaller sugars, making them readily available to the germinating seedling as an energy source. Protease breaks down proteins in the grain.

Therefore, grains that have begun to germinate contain starch and proteins that are 'damaged', making them unsuitable for the production of products like bread and pasta.

Why does the falling number test take so long?

The test measures the number of seconds it takes for a plunger to fall through a paste of ground wheat and water.

To meet GTA standards, wheat has to have a minimum falling number value of 350 seconds, or about six minutes for APH2, and 300 seconds, about five minutes, for H1, H2, APW, and ASW grades.

As the test has to run for up to six minutes, and time is required to prepare the sample to be tested, it can take up to 10 minutes to run a falling number test.

Why is falling number important?

As falling number indicates the presence of 'damaged' starches and proteins in wheat, the falling number value is directly related to the dough quality, or its 'strength'.

Having flour that will produce dough with the correct 'strength' is essential for millers. Wheat with a low falling number makes 'weak' dough, and as such is unsuitable for many baking applications.

Thus, there is a direct link between falling number and the final quality of bread, in particular loaf volume, crumb quality and shelf life. Bread baked from wheat with a low falling number may have a very dark crust, be 'sticky' inside, and may be full of air pockets, or even hollow.

Pasta manufactured from wheat with a low falling number can have reduced shelf life, it may lose starch to cooking water, and become unacceptably soft or fragile when cooked.

If I store grain on farm, will the falling number increase?

The falling number value of grain stored for long periods *may* improve, but there are many variables to consider, particularly the quality of the wheat when it is stored, and the conditions under which the grain is stored.

Wheat with a low falling number is highly unlikely to improve enough in storage to satisfy milling grade requirements (300 seconds or higher).

Can I blend to improve my falling number average?

No. By blending low and high falling number wheat, you run the risk of **lowering** the overall falling number value of all of the wheat blended.

Appendix 11

GrainCorp Harvest Report 2009/10

GrainCorp

Harvest Report 09/10

CONTENTS

GRAINCORP AT A GLANCE

OUR HISTORY

GrainCorp was founded in 1916, and was originally part of the NSW Government's Department of Agriculture.

GrainCorp led the development of Australia's bulk grain handling system. Our first bulk grain elevator was built at Peak Hill, NSW, in 1918, and Australia's first bulk grain export terminal was located in Sydney and was commissioned in 1922.

In 1992 GrainCorp became one of the first Government organisations in Australia to be privatised, and in 1996 was the first Australian bulk handler to trade grain in the Australian domestic market.

GrainCorp was listed on the Australian Stock Exchange in 1998, and acquired Victorian-based Vicgrain in 2000, Allied Mills in a joint venture with Cargill Australia in 2002 and Queensland based Grainco in 2003.

OUR GRAIN STORAGE, LOGISTICS, AND PORTS NETWORK

GrainCorp operates at all points along the grain supply chain, from country storage sites, through to export terminals and supplying grain to the domestic market.

GrainCorp has more than 250 country elevators with a total grain storage capacity of up to 20 million tonnes, spread across a 2,700 km footprint, from Mackay in Queensland, to Portland in Victoria.

We operate seven bulk grain export terminals that are serviced by 17 contracted trains with the capability of hauling up to three million tonnes of grain annually. GrainCorp also manages more than one million tonnes of road transport each year.

GrainCorp ports elevate an average of five million tonnes of grain, and up to 1.5 million tonnes of non-grain commodities per year.

ALLIED MILLS

GrainCorp owns 60% of Allied Mills, Australia's largest supplier of flour and bakery pre-mixes to hot bread shops, in-store supermarket bakeries and the industrial food service sector.

Allied operates flour mills in all states, a pre-mix plant in Sydney, and a specialty dough factory at Yatala in Queensland that produces frozen dough products for the food service and retail sectors.

LOCATION OF ALLIED MILLS FLOUR AND SOY MILLS, PREMIX PLANTS

GRAINCORP MALT

GrainCorp is now the fourth largest commercial malt producer in the world, with operations in Canada (Canada Malting Company), the United States (Great Western Malting), the United Kingdom (Bairds Malt) and Australia (Barrett Burston Malting).

GrainCorp's 15 malt houses produce over 1 million tonnes of high quality and specialty malts per year for some of the world's leading domestic and international brewers and distillers.

GRAINCORP TRADING

GrainCorp Trading buys and sells more than 3.5 million tonnes of wheat, barley, sorghum, canola and protein meals per year, servicing both domestic and overseas customers.

GrainCorp Trading buys grain from growers through the cash market, using contracts and through grain pools.

Over the past 13 years, GrainCorp has established a reputation as a competitive and trustworthy buyer of grain from growers and supplier of wheat, barley, sorghum and canola to domestic and export customers.

GrainCorp Trading, through the acquisition of Hunter Grain in 2007, is also Australia's largest importer and distributor of soybean meal, for the Australian stock feed sector.

GRAINCORP INTERNATIONAL GRAIN MARKETING

The removal of the Australian wheat export monopoly in July 2008 enabled GrainCorp to begin offering international customers bulk wheat supplies.

In our first year as a bulk wheat exporter, GrainCorp shipped more than 1.3 million tonnes of bulk wheat and durum that was sold to flour millers in the South Pacific, Asia, Europe, and the Middle East.

GrainCorp offers international customers a highly competitive service for the supply of malting and feed barley, canola, sorghum and other specialty grains, in bulk and container form.

GrainCorp International Sales and Marketing can provide high level technical support, access to an international information network and a range of pricing options to help customers maximise value from the purchase of Australian grain.

We are also able to call upon our own supply chain and cargo accumulation expertise which, when combined with our network of more than 250 grain accumulation sites, rail and road transport and bulk export terminals, means GrainCorp customers receive consistent quality and the correct specification at the right time for their milling, malting and crushing needs.

SAMPLES ANALYSED FOR THIS REPORT

GRAINCORP QUALITY CAPABILITY

GrainCorp has a network of five technical laboratories that provide a range of advanced grain and oilseed quality testing services.

Tests performed include protein, moisture, test weight, screenings, falling number, oil content, seed germination, seed purity and GM canola status.

The GrainCorp Technical Services labs can test against a range of overseas standards, including USDA methods, and are NATA certified (ISO17025, ISO9001-2008) and are Guide 31 accredited for the production of Certified Reference Materials for wheat protein.

All wheat samples have been tested and milled, and the flour produced has been analysed, in accordance with practices set out by the AACC International.

The wheat crop in eastern Australia was harvested earlier than normal. As a result the testing was conducted early and thus it should be noted that there will be changes in some flour properties due to natural grain ageing and respiration processes.

AUSTRALIAN PRIME HARD (APH)

APH	MACKAY	GLADSTONE	BRISBANE	NEWCASTLE	PORT KEMBLA
WHEAT					
Wheat Protein(11% Mb) (%)	13.7	13.6	13.9	13.5	13.7
Test Weight (kg/hL)	81.7	82.8	83.5	82.2	80.4
Falling Number (secs)	377	419	401	439	482
Screenings (2.00mm) (%)	2.60	2.98	1.54	3.33	3.05
Foreign Material (%)	0.24	0.13	0.13	0.16	0.28
1000 Kernel Weight (g)	34.9	32.4	34.1	35.1	33.2
Grain Hardness (PSI)	11	11	14	13	13
Ash (11% mb) (%)	1.56	1.58	1.36	1.46	1.41
Flour					
Extraction Rate (%)	75.7	74.8	75.5	75.1	71.5
Flour Protein(14%Mb) (%)	12.9	12.5	13.1	12.7	12.8
Flour Ash (14% mb) (%)	0.51	0.53	0.47	0.47	0.45
Diastatic Activity (mg/ 10g)	195	225	207	182	176
Wet Gluten (%)	34.8	32.6	33.6	34.6	33.9
Gluten Index (%)	92	97	97	96	92
Minolta L	92.61	92.98	92.97	92.94	92.93
Minolta a	-1.33	-1.45	-1.27	-1.36	-1.71
Minolta b	9.74	9.43	9.33	9.65	10.69
Farinograph - WA (%)	63.5	63.4	62.6	64.7	62.6
- DT	7.8	6.7	7.0	8.4	7.7
- Stab	11.5	>15.0	>15.0	>15.0	>15.0
EXTENSOGRAPH					
45'Extensibility (cm)	24.8	22.6	25.0	22.9	19.4
Maximum Height (BU)	385	365	420	390	435
Area (cm2)	135	117	148	126	119
135'Extensibility (cm)	23.0	21.9	24.4	20.7	19.5
Maximum Height (BU)	460	455	470	445	550
Area (cm2)	147	139	160	127	147
ALVEOGRAPH					
P - (mm H2O)	110	114	79	115	114
L - (mm)	163	151	187	154	127
W - (10^-4 J)	482	497	388	494	440
P/L Ratio	0.67	0.75	0.42	0.75	0.90
Amylograph Peak (BU)	780	800	580	560	490
END PRODUCTS					
STRAIGHT DOUGH BAKING TEST					
Loaf Volume (cm3)	895	885	900	925	995
Bread Score (%)	86.60	85.45	89.87	88.25	92.04
YELLOW ALKALINE NOODLE - MINOLTA COLOUR TESTS					
RAW NOODLE					
L - value (0.5hr)	78.72	79.24	78.68	78.75	79.45
a - value (0.5hr)	-1.28	-1.35	-0.87	-0.92	-1.04
b - value (0.5hr)	24.77	24.96	25.18	24.74	26.90
L - value (24hr)	67.21	68.69	68.46	68.55	70.90
a - value (24hr)	-0.26	-0.31	0.11	0.15	0.07
b - value (24hr)	23.87	24.09	24.41	24.91	26.81
Cooked Noodle					
L value	71.40	71.38	72.29	70.69	71.90
a value	-2.50	-2.83	-2.76	-2.78	-3.03
b value	25.68	26.03	26.67	26.07	27.62

AUSTRALIAN PRIME HARD

- A high protein (above 13%) milling grade wheat
- Accounted for 24% of the 2009 – 2010 eastern Australian crop
- Is made up of prime hard grained white wheat varieties
- Is suitable for blending with lower protein, lower quality wheat types
- Is suitable for a broad range of end products either as a blend or as a standalone –
    - Yellow Alkaline Noodles
    - Fresh Ramen Noodles
    - Wonton skins
    - European high volume breads

The physical quality of 2009/2010 APH is excellent.

Grain size across all growing areas is good and protein levels are higher than those of the previous season.

This year's APH has High Test Weights and is bright and vitreous in appearance, with good hardness.

The grain is low in Moisture and Screenings, offering genuine value to millers.

Milling quality is very good, with high flour Extraction levels, low Ash and good colour grade values.

Wet Gluten levels across all of the growing regions are high, in line with the high protein levels.

Farinograph Water Absorption levels are high white dough development times and stabilities are consistent with this Grade.

Extensograph extensibility and resistance are good, with a better than expected Area demonstrating a good, strong but balanced, dough.

The Alveograph results replicate the Extensograph results.

AUSTRALIAN HARD (AH)

AH	MACKAY	GLADSTONE	BRISBANE	NEWCASTLE	PORT KEMBLA	GEELONG	PORTLAND
WHEAT							
Wheat Protein (11% Mb) (%)	11.9	12.0	12.4	12.1	12.3	12.2	12.2
Test Weight (kg/hL)	84.1	83.5	84.0	82.8	80.1	81.3	76.4
Falling Number (secs)	386	415	413	429	528	404	431
Screenings (2.00mm) (%)	2.30	1.88	1.78	3.62	2.45	2.35	2.25
Foreign Material (%)	0.18	0.05	0.07	0.50	0.30	0.47	0.55
1000 Kernel Weight (g)	35.1	35.4	36.7	34.9	33.9	41.5	36.1
Grain Hardness (PSI)	11	11	13	13	11	13	11
Ash (11% mb) (%)	1.41	1.54	1.37	1.41	1.44	1.39	1.47
FLOUR							
Extraction Rate (%)	75.6	75.1	76.3	76.0	70.9	72.8	71.4
Flour Protein(14%Mb) (%)	11.0	11.0	11.6	11.4	11.4	11.3	11.3
Flour Ash (14% mb) (%)	0.48	0.49	0.47	0.45	0.46	0.45	0.43
Diastatic Activity (mg/ 10g)	231	257	225	231	188	244	188
Wet Gluten (%)	28.8	27.6	30.6	31.8	30.0	28.8	29.3
Gluten Index (%)	95	98	96	95	93	92	90
Minolta L	93.01	93.04	93.06	91.39	93.01	93.05	93.23
Minolta a	-1.42	-1.44	-1.35	-1.35	-1.59	-1.68	-1.81
Minolta b	9.44	9.03	9.25	9.41	10.21	9.62	10.07
Farinograph - WA (%)	62.8	63.5	63.0	63.2	61.5	63.0	60.5
- DT	4.2	5.0	5.7	5.0	3.5	5.1	5.5
- Stab	9.9	10.8	8.4	8.5	>15.0	9.6	12.3
EXTENSOGRAPH							
45' Extensibility (cm)	20.5	20.8	21.6	19.6	17.7	18.0	16.3
Maximum Height (BU)	300	395	400	425	465	410	425
Area (cm2)	87	115	120	115	113	102	97
135' Extensibility (cm)	19.2	19.8	21.5	19.2	17.0	15.9	15.9
Maximum Height (BU)	360	445	445	465	570	545	470
Area (cm2)	95	122	134	123	131	117	103
ALVEOGRAPH							
P - (mm H2O)	99	121	97	102	118	114	99
L - (mm)	133	121	106	129	121	106	108
W - (10^-4 J)	336	433	308	380	421	361	326
P/L Ratio	0.74	1.00	0.92	0.79	0.98	1.08	0.92
Amylograph Peak (BU)	590	710	540	590	540	360	450
BAKING TEST							
Loaf Volume (cm3)	910	860	870	850	835	900	870
Bread Score (%)	89.40	86.63	84.82	82.06	80.26	87.26	82.51
YELLOW ALKALINE NOODLE - MINOLTA COLOUR TESTS							
RAW NOODLE							
L - value (0.5hr)	81.06	81.25	80.26	80.42	80.92	81.58	78.19
a - value (0.5hr)	-1.65	-1.65	-1.22	-1.35	-1.29	-1.51	-1.24
b - value (0.5hr)	24.52	23.31	24.20	24.97	25.44	23.63	26.39
L - value (24hr)	70.73	71.63	70.64	70.82	71.79	73.01	67.81
a - value (24hr)	-0.65	-0.61	0.22	-0.32	0.00	-0.41	0.54
b - value (24hr)	24.81	23.13	24.51	25.51	25.65	25.15	24.94
COOKED NOODLE							
L value	71.61	70.96	71.68	71.58	72.16	72.38	69.15
a value	-2.97	-2.80	-2.69	-3.06	-2.95	-2.73	-2.75
b value	27.59	27.21	27.54	28.51	27.25	27.73	25.15

AUSTRALIAN HARD

- A quality medium protein (above 11.5%), hard grained milling wheat grade
- Accounted for 32% of the 2009 – 2010 eastern Australian crop
- Made up of hard grained white varieties
- Grown in all eastern Australian port zones
- Suitable for blending with other wheat types for the manufacture of quality flour
- Suitable for the production of an extensive range of end products –
  - European breads
  - Middle Eastern flat breads (esp. Tanoor breads)
  - Yellow alkaline noodles
  - Steamed breads
  - White salted noodles
  - Instant noodles

The overall quality of the 2009/2010 AH crop is excellent, with significantly higher wheat protein levels and lower moistures.

Grain size is generally good, indicated by high Thousand Kernel Weight and High Test Weight values.

Falling Number values are higher, indicating sound grain, while the ash content is low.

Grain Hardness is good and is highlighted by the high flour Extraction rates achieved in test milling.

Wet Gluten levels match the protein levels and the Gluten Index values are high.

Water absorption and stability values are equal to average. Extensograph values indicate good extensibility and high dough strengths reflected in the Alveograph values.

Starch pasting viscosity, measured by the Viscograph, are good, especially in grain from NSW.

AUSTRALIAN PREMIUM WHITE (APW)

APW	MACKAY	BRISBANE	NEWCASTLE	PORT KEMBLA	GEELONG	PORTLAND
WHEAT						
Wheat Protein(11% Mb) (%)	10.7	10.9	10.6	11.1	11.3	11.1
Test Weight (kg/hL)	83.9	84.6	82.8	82.2	81.8	78.3
Falling Number (secs)	411	390	422	398	420	425
Screenings (2.00mm) (%)	3.16	2.70	3.67	2.24	2.13	3.21
Foreign Material (%)	0.10	0.23	0.48	0.28	0.50	0.62
1000 Kernel Weight (g)	32.7	36.1	37.7	41.8	40.1	34.7
Grain Hardness (PSI)	12	11	11	9	12	11
Ash (11% mb) (%)	1.37	1.42	1.43	1.52	1.39	1.45
FLOUR						
Extraction Rate (%)	76.2	75.9	75.8	74.6	71.1	73.8
Flour Protein(14%Mb) (%)	9.7	10.1	10.0	10.1	10.2	10.2
Flour Ash (14% mb) (%)	0.46	0.49	0.46	0.47	0.41	0.53
Diastatic Activity (mg/ 10g)	244	251	231	276	201	213
Wet Gluten (%)	23.4	25.1	24.6	27.2	25.8	25.7
Gluten Index (%)	99	98	99	94	92	93
Minolta 'L'	93.37	93.07	93.16	93.06	93.22	93.37
'a'	-1.63	-1.43	-1.54	-1.49	-1.80	-1.76
'b'	9.28	9.46	9.86	9.27	9.90	9.72
Farinograph - WA (%)	60.8	62.0	61.8	63.3	62.0	61.9
- DT	4.1	4.7	3.5	4.5	4.5	3.8
- Stab	7.1	8.5	8.3	7.7	10.4	7.9
EXTENSOGRAPH						
45' Extensibility (cm)	20.8	19.2	19.6	15.8	18.0	16.3
Maximum Height (BU)	360	375	380	310	370	335
Area (cm2)	106	101	105	71	93	79
135' Extensibility (cm)	18.6	16.5	17.5	15.0	15.3	13.7
Maximum Height (BU)	465	460	480	400	460	390
Area (cm2)	116	103	113	84	96	75
ALVEOGRAPH						
P - (mm H2O)	107	107	100	107	109	105
L - (mm)	93	96	108	90	92	83
W - (10^-4 J)	308	316	316	283	306	275
P/L Ratio	1.15	1.11	0.93	1.19	1.18	1.27
Amylograph Peak (BU)	750	560	550	570	390	400
BAKING TEST						
Loaf Volume (cm^3)	825	765	770	675	855	720
Bread Score (%)	80.59	75.24	70.25	61.73	78.85	63.02
YELLOW ALKALINE NOODLE - MINOLTA COLOUR TESTS						
RAW NOODLE						
L - value (0.5hr)	81.50	81.82	81.25	82.57	82.65	80.14
a - value (0.5hr)	-1.69	-1.57	-1.63	-1.94	-1.79	-1.56
b - value (0.5hr)	25.89	23.91	25.15	21.18	23.62	25.16
L - value (24hr)	74.22	73.47	72.49	72.30	74.57	70.15
a - value (24hr)	0.75	-0.54	-0.55	-0.68	-0.64	0.07
b - value (24hr)	26.85	24.21	25.35	20.53	24.52	25.31
Cooked Noodle						
L value	72.10	71.02	71.34	69.40	72.79	69.32
a value	-3.31	-2.74	-3.19	-2.55	-2.98	-2.43
b value	29.12	28.48	29.03	26.96	28.59	26.38

AUSTRALIAN PREMIUM WHITE

- A premium, moderate protein (above 10.5%) hard grained milling wheat grade
- Accounted for 12% of the 2009 – 2010 eastern Australian crop
- Made up of 100% hard grained white varieties
- Grown in all east coast port zones
- Suitable for blending with other wheat grades for the manufacture of quality flour
- Suitable for the production of a large range of end products –
    - White salted noodles
    - Steamed breads
    - Instant noodles
    - Lower protein European bread types
    - Middle Eastern flat breads
    - Sub-Continent chapattis

APW harvested in 2009/2010 is of exceptional quality, with significant increases in grain protein, particularly in Victoria.

Grain size is quite high in the southern regions, and northern zones have high test weights.

Grain moisture, screenings and foreign material are all at low levels in all growing regions.

Falling numbers are all high, and ash values are generally quite low.

The grain is very hard, which will enhance milling performance.

Test milling of APW from NSW and Queensland indicated high flour extraction rates, while the Victorian grain milled at average levels.

Flour measured against the Minolta Colour values was quite white and bright, as indicated by low ash values.

Wet Gluten was high in the southern regions, and the Gluten Index values were very high across all regions.

Water absorption values were slightly lower, but are still at typical levels for APW.

Farinograph stability increased in Victoria and are at average levels in grain from NSW and Queensland.

The Extensograph extensibility and resistance values are good across all regions, providing dough of reasonable strength and good balance.

The Alveograph indicates good, well balanced dough, especially for the protein level available.

AUSTRALIAN STANDARD WHITE (ASW)

ASW	GLADSTONE	BRISBANE	NEWCASTLE	PORT KEMBLA	GEELONG	PORTLAND
WHEAT						
Wheat Protein(11% Mb) (%)	10.3	10.2	9.8	10.7	10.1	9.4
Test Weight (kg/hL)	85.0	84.2	84.0	82.0	79.7	77.6
Falling Number (secs)	375	396	394	417	414	413
Screenings (2.00mm) (%)	1.94	1.86	2.64	1.60	1.79	2.15
Foreign Material (%)	0.07	0.08	0.29	0.22	0.37	0.44
1000 Kernel Weight (g)	37.5	38.5	40.8	37.8	37.5	36.2
Grain Hardness (PSI)	11	12	12	11	13	13
Ash (11% mb) (%)	1.43	1.45	1.50	1.51	1.39	1.48
FLOUR						
Extraction Rate (%)	74.3	75.8	74.9	73.6	71.2	72.2
Flour Protein(14%Mb) (%)	9.2	9.5	8.9	9.9	9.1	8.4
Flour Ash (14% mb) (%)	0.48	0.49	0.48	0.51	0.47	0.51
Diastatic Activity (mg/ 10g)	251	251	264	237	207	182
Wet Gluten (%)	22.4	23.4	23.8	25.2	21.1	18.0
Gluten Index (%)	98	98	96	92	94	99
Minolta L	93.31	93.32	93.18	92.93	93.42	93.49
Minolta a	-1.53	-1.38	-1.60	-1.75	-1.81	-1.83
Minolta b	8.85	9.02	9.70	10.78	9.80	9.81
Farinograph - WA (%)	61.9	61.9	62.2	63.3	58.0	56.3
- DT	2.6	2.3	3.0	4.0	2.5	1.8
- Stab	8.2	7.4	6.6	8.7	8.9	7.9
EXTENSOGRAPH						
45' Extensibility (cm)	18.1	17.0	16.2	14.7	14.1	13.7
Maximum Height (BU)	360	385	330	330	390	360
Area (cm2)	91	91	76	70	78	71
135' Extensibility (cm)	>26	16.3	14.6	14.2	12.9	12.5
Maximum Height (BU)	435	450	390	390	570	475
Area (cm2)	98	99	79	78	99	82
ALVEOGRAPH						
P - (mm H2O)	122	108	107	110	98	82
L - (mm)	77	99	83	75	83	86
G - Swelling Index	19.5	22.1	20.3	19.3	20.3	20.6
W - (10^-4 J)	307	325	271	250	254	215
P/L Ratio	1.58	1.09	1.29	1.47	1.18	0.95
Amylograph Peak (BU)	570	440	400	510	360	440
BAKING TEST						
Loaf Volume (cm^3)	730	745	690	615	750	710
Bread Score (%)	67.63	69.92	62.71	57.28	65.76	63.42

AUSTRALIAN STANDARD WHITE

- A lower protein, intermediate grained, white milling wheat
- Accounts for 9% of the 2009 – 2010 eastern Australian crop
- The grade does not have any protein restrictions
- Grown in all east coast port zones
- Extremely suitable as a filler style milling grade blending with other wheat types to achieve a lower cost flour but still retaining a quality flour
- Suitable for the production of a large range of end products –
  - White salted noodles
  - Steamed breads
  - Instant noodles
  - Middle Eastern flat breads
  - Sub-continent chapattis
  - Many household products

ASW harvested in 2009/2010 is very good quality, with low moisture. High test weights characterise grain from northern regions.

Protein is high across all growing regions while screenings and foreign material are at average levels.

Grain size indicated by Thousand Kernel Weight is higher across all regions compared to last season.

Grain hardness is quite high, resulting in higher flour yields than last year.

Wet Gluten values are in line with the higher protein levels, while the Gluten Index values are all high to very high.

Flour milled from grain from all regions is generally quite white and bright according to the Minolta L* and b* values.

Farinograph water absorption is good in grain from NSW and Queensland and slightly lower in Victoria. The Farinograph dough development times are acceptable, while the stability results are slightly higher than last year.

Extensograph values are excellent in grain from NSW and Queensland, with extensibility and resistance values better than average. This results in a higher overall dough strength.

Starch paste viscosity properties are good across all regions.

The fermented bake test results indicate good bread volumes and bread scores, mainly due to the reasonably well-balanced dough properties.

AUSTRALIAN DURUM (ADR)

ADR	NEWCASTLE
DURUM	
Wheat Protein (11% Mb) (%)	14.0
Test Weight (kg/hL)	80.7
Falling Number (secs)	466
Screenings (2.00mm) (%)	3.87
Foreign Material (%)	0.53
1000 Kernel Weight (g)	39.8
Grain Hardness (PSI)	7
Ash (11% mb) (%)	1.51
Vitreous Kernels	97.7
Semolina	
Extraction Rate (%)	59.1
Semolina Protein @ 14%Mb	13.1
Semolina Ash @ 14% mb	0.78
Wet Gluten (%)	34.8
Gluten Index (%)	70
Yellow Pigment	13.4
Minolta L (sieved)	87.87
Minolta a (sieved)	-4.36
Minolta b (sieved)	29.91
Minolta L	85.25
Minolta a	-3.86
Minolta b	32.45
ALVEOGRAPH	
P - (mm H2O)	92
L - (mm)	95
W - (10^-4 J)	232
P/L Ratio	0.97

AUSTRALIAN DURUM

- An amber coloured, high protein (above 13.0%), high vitreous Durum
- Accounts for 5% of the eastern Australian crop
- Grown along the NSW/Queensland border
- Easy milling, high yielding, producing semolina with a strong yellow pigment
- Suitable for pasta, couscous and other similar products

Durum from the 2009/2010 harvest is quite exceptional, with low moisture, high protein and a very hard grain with extremely high vitreousness.

The grain has a very bright and yellow appearance, with excellent milling properties, a high test weight, high Thousand Kernel Weight, high Falling Number and low Ash content.

Semolina extraction obtained from a modified Buhler MLU 202 test mill is above average.

The semolina has a very high yellow colour indicated by the Yellow Pigment and Minolta ‘b’ values.

The Wet Gluten and Gluten Index values are at or above average, while the Alveograph results are indicating very good, well balanced dough, with above average strength.

RAMEN NOODLE WHEAT

RAMEN	MACKAY	GLADSTONE	BRISBANE	NEWCASTLE	PORT KEMBLA
WHEAT					
Wheat Protein(Nx5.7)(11% Mb) (%)	13.7	13.6	13.9	13.5	13.7
Test Weight (kg/hL)	81.7	82.8	83.5	82.2	80.4
Falling Number (secs)	377	419	401	439	482
Screenings (2.00mm) (%)	2.60	2.98	1.54	3.33	3.05
Foreign Material (%)	0.24	0.13	0.13	0.16	0.28
1000 Kernel Weight (g)	34.9	32.4	34.1	35.1	33.2
Grain Hardness (PSI)	11	11	14	13	13
Ash (11% mb) (%)	1.56	1.58	1.36	1.46	1.41
FLOUR					
Extraction Rate (%)	60	60	60.0	60.0	60.0
Flour Protein(Nx5.7)(14%Mb) (%)	12.7	12.4	12.8	12.5	12.8
Flour Ash (14% mb) (%)	0.43	0.46	0.40	0.40	0.41
Diastatic Activity (mg/ 10g)	213	213	182	182	201
Wet Gluten (%)	34.3	30.8	34.3	34.0	34.4
Gluten Index (%)	96	98	97	96	91
Minolta L	93.18	93.20	93.28	93.23	92.97
Minolta a	-1.48	-1.44	-1.33	-1.41	-1.59
Minolta b	9.31	9.57	9.14	9.46	10.47
FARINOGRAPH					
Water Absorption (%)	63.8	62.4	62.0	63.8	65.6
Development Time (min)	7.3	6.8	8.0	8.5	7.0
Stability (min)	>15.0	>15.0	>15.0	>15.0	>15.0
EXTENSOGRAPH					
45' Extensibility (cm)	24.6	24.5	23.5	24.3	20.6
Maximum Height (BU)	440	430	470	460	425
Area (cm2)	151	147	150	156	122
135' Extensibility (cm)	22.9	23.2	23.5	20.5	19.0
Maximum Height (BU)	545	535	535	560	550
Area (cm2)	170	164	170	154	143
Amylograph - Peak (BU)	800	870	650	620	550
- Gelatinisation Time (min)	34	32	32	26	33
- Gelatinisation Temp. (°C)	81.0	78.0	78.0	69.0	79.5
- Breakdown (BU)	150	140	60	60	30
RAW NOODLE					
L - value (0.5hr)	80.75	81.20	82.70	80.31	81.02
a - value (0.5hr)	-1.31	-1.40	-0.98	-0.82	-1.17
b - value (0.5hr)	24.34	24.49	21.93	24.01	25.28
L - value (24hr)	71.01	71.48	70.83	71.32	72.35
a - value (24hr)	-0.26	-0.24	-0.21	-0.01	-0.31
b - value (24hr)	23.36	24.01	23.60	23.98	25.48
COOKED NOODLE					
L value	74.13	74.03	73.83	71.90	71.06
a value	-3.25	-3.51	-3.35	-3.38	-3.11
b value	27.65	27.24	26.32	25.60	28.19

RAMEN NOODLE WHEAT

Ramen noodle flour is milled from high protein Australian Prime Hard at an extraction rate of 60.0%.

The ash level is at or near 0.40% which ensures a very clean flour that is bright and white in colour, but is still able to provide a light creaminess as indicated by the Minolta 'b' result.

The water absorption is good and stability values are all above 15 minutes.

Extensograph results are very good across all eastern Australian APH growing regions, producing a good, well balanced dough and excellent dough strength.

Flour viscosity in APH from northern Queensland is very high and from other regions is at average levels.

All dough tested showed a lack of stickiness, with very stable colour over time, producing a cooked noodle that was quite bright and creamy.

FEED AND MALTING BARLEY

THE 2009 EASTERN AUSTRALIAN BARLEY CROP

The 2009 malt barley growing season started well in Queensland and northern NSW, with good planting rain and soil moisture.

Planting conditions in southern NSW and Victoria were not as good, but rain in Victoria post planting allowed the crop to develop.

In the September pre-harvest period, unexpectely hot conditions prevailed across all growing areas. This led to reduced yield but produced good coloured barley with exceptionally low moisture content.

Some later crops harvested in southernmost areas of Victoria received late rains, causing some crops to be downgraded to feed grade.

FEED BARLEY

The protein in most of the feed barley harvested during 2009 was high. Moisture content was desirably low.

Overall there was an adequate supply of feed barley in most regions; with limited supply in southern NSW.

QUALITY AVERAGE DATA FOR FEED BARLEY F1 GRADE 09/10 SEASON

REGION	GRADE	PROTEIN	MOISTURE	TEST WT	< 2.2MM
QUEENSLAND	F1	13.2	10.1	68.9	5.4
NORTHERN NSW	F1	12.5	9.6	68.4	4.8
CENTRAL NSW	F1	13.1	9.0	68.1	9.1
SOUTHERN NSW	F1	13.3	8.7	68.5	9.6
VICTORIA	F1	11.1	9.2	67.6	6.5

MALTING BARLEY

Overall the ratio of malt to feed barley produced reflected the good overall growing conditions during 2009. There was adequate supply in most regions of northern NSW, Queensland, and Victoria, with limited supply in southern NSW.

The particularly low barley moisture content, some 1-2% lower than most seasons, has received praise from domestic and international customers, as malt barley of this standard provides an advantageous conversion factor for malt production, by lowering moisture weight losses (in converting barley into malt).

A wide range of malt barley protein was measured throughout the GrainCorp receival system.

Barley protein above 12% and under 9% was downgraded to feed classification in accordance with the national standards.

Most of the barley varieties sown in eastern Australia were malting barley types.

The most popular variety was Gairdner, followed by Schooner, Sloop and other newer malting varieties such as Buloke and Baudin.

MEAN QUALITY DATA BY VARIETY

VARIETY	PROTEIN	MOISTURE	TEST WT	> 2.5MM	< 2.2MM
BAUDIN	10.8	8.8	70.5	76.7	4.8
BULOKE	10.5	9.3	68.9	81.3	3.7
COMMANDER	9.8	10.7	69.3	92.8	2.0
FLAGSHIP	10.2	7.9	72.2	72.8	4.1
FITZROY	10.9	9.9	66.8	78.4	3.8
GAIRDNER	10.2	9.4	69.5	80.1	3.4
GRIMMETT	10.6	10.3	69.8	82.7	2.9
HINDMARSH*	10.2	9.1	70.2	84.8	3.1
SCHOONER	10.7	8.6	70.1	81.4	3.2
SLOOP	10.8	8.4	69.6	85.4	3.2

*A new variety, Hindmarsh, will undergo commercial malting and brewing assessment as a potential malting line during 2010. A decision by Barley Australia on its malting status is expected in early 2011. Interest in Hindmarsh from malting barley export buyers continues to build, and some exports of this variety have already been made.

CANOLA

After a promising start to the season across northern and central NSW, and Victoria, hot and dry conditions in September and October reduced yield potential. Production in southern NSW was hampered by continued drought conditions.

The moisture level of canola harvested in all areas was low due to the warm finish to the season, average oil content was in the low 40% range, test weights were good and foreign material (impurities) levels were low.

Free Fatty Acid levels are expected to be very low, as this is directly linked to low moisture levels, making this canola ideal for crushing.

Protein levels are elevated, bringing significant interest from stockfeed users for canola meal.

Overall there was an adequate supply of canola to meet the domestic Australian demand, with exportable surpluses available from Victoria.

CONVENTIONAL CANOLA VARIETIES

REGION	TEST WEIGHT	OIL %	MOISTURE %	PROTEIN %	ADMIX %
NORTHERN NSW	65.3	40.0	5.1	23.4	1.7
CENTRAL NSW	67.1	39.7	4.8	25.4	1.7
SOUTHERN NSW	67.0	39.6	5.0	26.2	1.7
NORTH WESTERN VICTORIA	66.2	42.0	5.0	21.2	1.4
SOUTH EASTERN VICTORIA	65.9	41.2	4.8	22.0	1.5

GM CANOLA VARIETIES

REGION	TEST WEIGHT	OIL %	MOISTURE %	PROTEIN %	ADMIX %
CENTRAL NSW	67.4	39.4	5.3	27.5	2.0
SOUTHERN NSW	66.5	40.1	4.5	25.2	1.6
NORTH WESTERN VICTORIA	65.6	42.9	4.7	21.1	1.2
SOUTH EASTERN VICTORIA	65.8	42.0	4.6	23.3	1.4

WHEAT
TEST METHODS

Alveograph is a test conducted according to AACC International methods.

It provides information relating to the rheological properties of dough, which supplements the results obtained using the farinograph and extensograph, and provides an alternative perspective of the dough-forming properties of flour.

The Alveograph curve provides a record over time of the pressure inside a bubble formed by inflating a dough test piece to the point of rupture.

No dough recorder is used during the mixing process as the dough is not mixed to a fixed consistency.

Rather, the ratio of flour to water is maintained constant by taking 250 grams of flour and adding a fixed volume of 2.5 percent salt solution according to the flour moisture.

The dough is mixed for eight minutes (one minute resting) and is then extruded and sheeted prior to circular dough test pieces being cut.

The test pieces are incubated and then stretched (or inflated) on the alveograph 28 minutes after the start of mixing. The alveograph test parameters are detailed below:

- ***Deformation energy*** (W) is proportional to the area under the alveograph curve and represents the energy necessary to inflate the dough bubble to the point of rupture.

  Deformation energy is expressed in units of joules x 10^{-4} and provides a measure of dough strength. It is also referred to as the 'baking strength value'.

- ***Length*** (L) is the average abscissa at rupture, determined in millimetres from the origin to the point of rupture of the dough bubble. This provides a measure of dough extensibility.

- ***Overpressure*** (P) is a measure of the maximum pressure required to deform the test piece in the process of inflating the dough bubble, expressed in millimetres of water.

  The overpressure is obtained by multiplying the maximum height of the alveogram by a factor of 1.1 and is related to the resistance of the dough to deformation. This provides a measure of dough stability.

- ***Configuration ratio*** (P/L) is the ratio of curve height to length and indicates dough strength and extensibility.

Ash content of wheat and flour is the mineral residue remaining after incineration of the sample. Ash is determined according to AACC International methods and is expressed as a percentage of the sample on an 11 percent moisture basis for wheat and a 14 percent moisture basis for flour. Flour ash is related to the milling extraction and is used both as a measure of flour quality and as an indication of milling efficiency.

Baking is conducted using a fermented dough procedure with a bromate free formulation according to methodology developed by Agrifood Technology. Test loaves are scored for volume (maximum 36 points), external appearance (maximum 20 points), crumb texture (maximum 30 points) and crumb colour (maximum 14 points). Reporting is then expressed as a total bread score (percentage).

The loaf volume is measured by canola seed displacement. Crumb colour is measured using the Minolta Chroma Meter, with the results converted to point scores using an empirically derived formula. External appearance and crumb texture are visually assessed by a trained judging panel.

Diastatic activity provides a measure of the susceptibility of starch to degradation by the naturally occurring amylase enzymes. Diastatic activity is determined according to AACC International methods and is expressed in milligrams of maltose produced per 10 grams of flour per hour. Diastatic activity is related to starch damage and enzyme concentration and varies with the grain hardness in sound wheat.

Extensogram is a uniaxial load extension curve, recorded by an extensograph, for a dough test piece which has been subjected to controlled stretching to breaking point.

Dough test pieces are prepared in the farinograph by adding the required volume of distilled water, a known amount of salt to pre-weighed flour (corrected to a 14 percent moisture basis), and mixing for a fixed time to a dough consistency of 500 BU. The extensograph is adjusted to record 80 BU for every 100 gram load.

The dough is scaled, moulded and incubated for 45 minutes prior to the first stretching operation. The rounding, moulding and incubation steps are repeated between subsequent stretching operations.

Measurements taken from the extensogram curve are the extensibility (centimetres), the maximum height or ‘resistance to extension’ (BU) and the area beneath the curve or energy value (cm^2).

Extensograph results are particularly useful for evaluating dough strength and observing changes in dough properties over an extended timeframe and for characterising different flour and wheat types.

Falling number is measured on a sample of wheat meal obtained by grinding the sample using a Falling Number 3100 mill. The test is conducted according to AACC International and ICC standard methods, but without moisture adjustment.

The falling number is expressed in seconds and provides a measure of alpha amylase enzyme activity in the grain. A high falling number indicates low enzyme activity, while a low falling number indicates high enzyme activity, which commonly occurs due to weather damage.

Farinogram is a dough mixing curve, recorded by a farinograph, that enables variations in dough consistency over time to be observed and measured.

Dough mixing parameters determined from the farinogram are useful in characterising different flour types and provide a guide to expected end product quality. They may also be used to predict certain processing requirements of a flour.

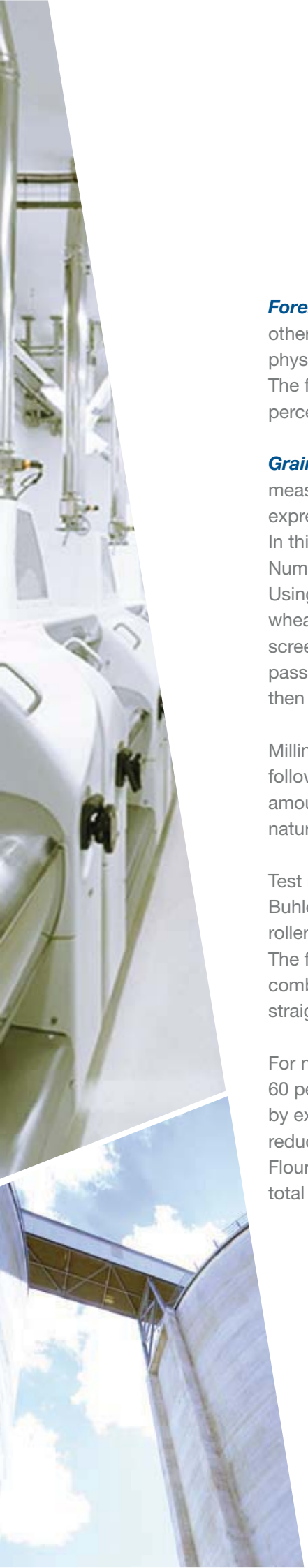
The farinograph test is conducted according to AACC International methods, using the 'constant flour weight' procedure, in which the flour weight is adjusted on a 14 percent moisture basis.

The farinograph test parameters reported are detailed below:

- ***Water absorption*** measures the amount of distilled water required to be added to the flour to produce a dough consistency of 500 BU at peak dough development. Water absorption is expressed as a percentage of the flour weight on 14 percent moisture basis.

- ***Development time*** is the time in minutes required for the dough to reach maximum consistency. The development time provides a measure of dough strength.

- ***Stability*** is the time in minutes during which the farinogram shades the 500 BU line. The stability provides a measure of the mixing tolerance of the dough and is also related to the dough strength.



Foreign material is defined as all matter other than wheat grain which may be physically separated from the sample. The foreign material is expressed as a percentage by weight of the total sample.

Grain hardness is determined by measuring wheatmeal granularity, expressed as the Particle Size Index (PSI). In this test, wheat is ground in a Falling Number 3303 Mill set at its finest setting. Using a Rotary Sifter, 10 grams of ground wheat is sieved over a number 15 nylon screen for five minutes. The material passing through the screen is measured, then expressed to give a PSI value.

Milling wheat is conditioned for 24 hours following the addition of a calculated amount of water, as determined by the natural grain moisture and the PSI value.

Test milling is then conducted on a Buhler Laboratory Mill, using appropriate roller mill settings and sieve covers. The flour is usually obtained by combining all flour streams and the straight run flour extraction is reported.

For noodle quality assessment, a 60 percent extraction flour is produced by excluding a calculated quantity of reduction flour from the final product. Flour extractions are calculated on a total milled products basis.

Minolta colour values are measured using a Minolta CR300 Series Chroma Meter. The Minolta L-value indicates whiteness and brightness on a scale of 0 to 100 the whitest flours having the highest L-values. Minolta b-values indicate yellow hue on a scale of 0 to 60 with yellower flour having higher b-values.

Noodle sheet colour is determined using a Minolta CR310 Series Chroma Meter fitted with a 50 millimetre diameter measuring aperture. Measurements are taken at 30 minutes, and at 24 hours, after sheeting the dough. The colour of cooked noodles is also measured, with the Minolta readings taken directly on the noodles immediately after they have been cooked and rinsed in cold water.

Protein is measured using the Infratec Grain Analyser for whole grain and Leco for flour. A nitrogen conversion factor of N x 5.7 is used for wheat and flour.

Protein is expressed as a percentage of the sample on an 11 percent moisture basis for wheat and a 14 percent moisture basis for flour. Protein content is a very important consideration when assessing the suitability of wheat for different end products.

Screenings is the total material passing through a two millimetre slotted screen using 40 shakes of the sieve and is expressed as a percentage by weight of the total sample.

Test weight is obtained by weighing a fixed volume of grain using a chondrometer and is expressed in units of kilograms/hectolitre (kg/hl). Test weight provides a measure of the bulk density of the grain. It is also useful as a guide to grain soundness and potential milling yield.

Thousand kernel weight is the weight in grams of 1,000 kernels of wheat and provides a measure of grain size and density. The thousand kernel weight is independent of some factors that influence the measurement of bulk density; therefore, it is sometimes preferred to Test Weight as a measure of grain quality.

Viscogram is a recording of the variations in starch paste viscosity of a flour and water mixture over a fixed time/temperature profile.

In this test, the measured amount of flour (adjusted to 14 percent moisture basis) is combined with distilled water. The thoroughly mixed slurry is then transferred to the Viscograph bowl which rotates at a speed of 75rpm. The test is started at a temperature of 30°C and the temperature is then increased to 92°C at a rate of 1.5°C per minute. The viscosity is recorded in Brabender units, using a pin sensor with a 250cmg sensitivity cartridge.

The maximum (or peak) starch paste viscosity is recorded. For noodle quality assessment, the starch gelatinisation temperature, time to starch gelatinisation, and the starch gel breakdown from peak viscosity are also measured and reported.

Wet gluten is determined using a Glutomatic Gluten Washing Unit. The test is conducted according to AACC International and ICC standard methods, with wet gluten being expressed as a percentage of the sample weight. Gluten forming proteins are primarily responsible for the functional properties of wheat flour and the wet gluten test provides a quantitative measure of these proteins.

Yellow pigment is extracted in water saturated n-butanol and allowed to stand for 16 to 18 hours. The resultant solution is filtered and the extract is analysed on a UV-visible spectrophotometer at 440nm against a calibration curve of tertiary standards to give a result in micrograms per gram. This test is conducted according to AACC International Method 14-50.

METHODS CITED - AACC International refers to the Approved Methods of the American Association of Cereal Chemists (tenth edition 2000, plus annual updates).

ICC refers to the Standard Methods of the International Association for Cereal Science and Technology.

TESTING METHODS were kindly provided by Agrifood Technology, Werribee, Victoria.

NB: All grain and oilseed quality data in this harvest report has been reported from the analysis of composite samples taken directly from farmer harvest receivals and should therefore be used as a guide only. Certain quality results may alter on outturn due to environmental and biochemical factors such as natural grain maturing; site selections; and through normal storage and handling practices.

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Appendix 12

GrainCorp Harvest Report 2010/11

GrainCorp

Harvest Report

10/11

Contents

Foreword

Welcome to GrainCorp's quality review of the 2010/11 eastern Australian grain crop.

This harvest report provides a range of quality data that will help flour millers, feed millers, malt producers and oilseed crushers make the most of grain purchased from and handled through GrainCorp's storage and handling network.

Alison Watkins, CEO GrainCorp

GrainCorp at a Glance

Our History

Founded in 1916, GrainCorp was originally part of the NSW Government's Department of Agriculture, and has been a leader in the development of Australia's bulk grain handling system.

Its first country elevator was built at Peak Hill, NSW, in 1918, and Australia's first bulk grain export terminal, located in Sydney, was commissioned in 1922.

In 1992 GrainCorp became one of the first Government organisations in Australia to be privatised, and in 1996 was the first Australian bulk handler to trade grain in the Australian domestic market.

GrainCorp was listed on the Australian Stock Exchange in 1998, and has acquired a number of value adding businesses over the years: Victoria-based Vicgrain in 2000; Allied Mills in a joint venture with Cargill Australia in 2002; Queensland-based Grainco in 2003; and Bairds Malt, Great Western Malting, Barrett Burston Malting, and Canada Malting Company in 2009. GrainCorp also purchased Kirin Australia in 2011, adding to its Malt portfolio and creating a firm presence in the Western Australian market.

GrainCorp operates at all points along the grain supply chain, from country storage sites through to export terminals and supplying grain to the domestic market.

It has more than 280 country elevators with a total grain storage capacity of up to 20 million tonnes, spread across a 2,700 km footprint from Mackay in Queensland to Portland in Victoria.

It operates seven bulk grain export terminals that are serviced by rail with the capability of hauling up to three million tonnes of grain annually. GrainCorp also manages more than one million tonnes of road transport each year and operates three container packing facilities.

Allied Mills

GrainCorp owns 60% of Allied Mills, Australia's largest supplier of flour and bakery pre-mixes to hot bread shops, in-store supermarket bakeries and the industrial food service sector. Allied operates flour mills in all states, a pre-mix plant in Sydney, and a specialty dough factory at Yatala in Queensland that produces frozen dough products for the food service and retail sectors.

GrainCorp Malt

GrainCorp is now one of the largest commercial malt producers in the world, with operations in Canada (Canada Malting Company), the United States (Great Western Malting), the United Kingdom (Bairds Malt) and Australia (Barrett Burston Malting).

GrainCorp's malt houses produce over 1 million tonnes of high quality and specialty malts per year for some of the world's leading brewers and distillers.

GrainCorp Trading

GrainCorp Trading buys and sells more than 4.5 million tonnes of wheat, barley, sorghum, canola and protein meals per year, servicing both domestic and overseas customers.

Buying grain from growers through the cash market and grain pools, GrainCorp Trading has established a reputation as a competitive and trustworthy buyer of grain from growers and is a supplier of wheat, barley, sorghum, canola and pulses to domestic and export customers.

GrainCorp International Grain Marketing

The removal of the Australian wheat export monopoly in July 2008 enabled GrainCorp to begin offering international customers bulk wheat supplies.

GrainCorp now ships more than 2 million tonnes of bulk wheat and durum sold to flour millers in the South Pacific, Asia, Europe, and the Middle East making it the largest grain exporter from the eastern states of Australia.

GrainCorp offers international customers a highly competitive service for the supply of malting and feed barley, canola, sorghum and other specialty grains, in bulk and container form. GrainCorp Trading services the world's markets through its international trading office based in Hamburg, as well as from liaison offices in Beijing and Singapore.

GrainCorp International Sales and Marketing provides high level technical support, access to an international information network and a range of pricing options to help customers maximise value from the purchase of Australian grain.

The 2010/11 Growing Season

After a number of years of drought, growing conditions in eastern Australia were very good for the majority of the season. Very high rainfall during the October – January period resulted in significant downgrading of the crop and a later than usual harvest. The sound grain was successfully segregated from rain damaged grain at receival as evidenced by the harvest quality data contained in this report.

Total wheat production in the eastern states is estimated at 15.9 million tonnes (ABARES, 15/2/2011), which is 165% of the previous season.

GrainCorp Quality Capability

GrainCorp has a network of five technical laboratories that provide a range of advanced grain and oilseed quality testing services.

Tests performed include protein, moisture, test weight, screenings, falling number, oil content, seed germination, seed purity and GM canola status.

The GrainCorp Technical Services laboratories can test against a range of overseas standards, including USDA methods, and are NATA certified (ISO17025, ISO90012008), GAFTA accredited and Guide 31 accredited for the production of Certified Reference Materials for wheat protein.

Samples Analysed for this Report

All wheat samples have been tested and milled, and the flour produced has been analysed in accordance with practices set out by AACC International, RACI Cereal Chemistry Division and the International Association for Cereal Science and Technology.

Australian Prime Hard

- A high protein (above 13%) milling grade wheat
- Accounted for 2% of the 2010/2011 eastern Australian crop into the GrainCorp network
- Is made up of prime hard grained white wheat varieties
- Is suitable for blending with lower protein, lower quality wheat types
- Is suitable for a broad range of end products either as a blend or as a standalone –
    - Yellow Alkaline Noodles
    - Fresh Ramen Noodles
    - Wonton skins
    - European high volume hearth and pan breads
    - Dry white salted noodles

Seasonal conditions in 2010/11 have resulted in lower screenings levels, larger grain size lower test weights and higher moisture contents than last year. Falling number values, although lower this year, indicate that the grain is sound for food processing end uses. Grain protein levels are similar to 2009/10 in Queensland, although there was a small decrease in NSW. Wet gluten levels are generally in accord with the protein content, although gluten indexes are generally lower than last year.

The milling quality is good, with low flour ash and low levels of yellowness.

Farinograph water absorptions are lower in some instances due to softer grain and seasonal conditions. With the exception of Gladstone, dough development times have decreased, as have Farinograph stabilities, indicating more moderate dough properties this year after many years of drought. This is confirmed by lower Extensograph resistances in southern Queensland and NSW and lower Alveograph W. Extensibilities have decreased, but are still good. Flour pasting properties are lower than last year, but still considered adequate for the grade.

Straight dough baking quality is similar to last year, but with higher loaf volume and score being reported at Gladstone. Sponge and dough baking test results have been reported for the first time this year. The Mackay sample baked particularly well in the sponge and dough process.

Yellow alkaline noodle sheets show similar brightness values to last year, although yellowness has decreased in line with the decrease in flour yellowness. Cooked noodle brightness is marginally lower than last year.

The APH samples were also milled to 60% flour extraction and the results are shown later in this report.

Major varieties in APH (% of receivals)

	Queensland	Northern NSW	Southern NSW
Baxter	29	9	
Cunningham			8
EGA Gregory	8	17	
Ellison			12
Janz			20
Kennedy	9		
Lang			
LPB Crusader	9		8
Sunbri		10	
Sunco		12	
Sunstate			29
Sunvale	21	31	13

Australian Prime Hard (APH)

APH	Mackay	Gladstone	Brisbane	Newcastle	Port Kembla
Wheat					
Test weight (kg/hL)	77.2	83.4	80.7	78.8	80.3
1000 kernel weight (g)	36.4	39.5	36.5	34.6	37.7
Grain hardness (PSI)	14	15	14	13	15
Protein (Nx5.7, 11% mb)	13.7	14.4	13.3	13.3	13.2
Ash (% (11% mb)	1.66	1.50	1.55	1.59	1.36
Falling number (sec)	389	417	383	370	375
Screenings, 2mm (%)	2.0	1.7	2.6	3.6	2.5
Foreign material (%)	0.3	0.5	0.2	0.2	0.4
Flour extraction (%)	73.8	73.2	76.5	74.1	74.9
Flour					
Protein (Nx5.7, 14% mb)	12.6	13.4	12.3	12.0	12.0
Diastatic activity (mg/10g)	188	182	201	182	237
Starch damage (%)	6.6	7.4	7.4	6.1	8.1
Wet gluten (%)	34.6	38.2	34.8	33.8	32.0
Gluten index (%)	92	86	87	81	90
Flour ash (%)	0.50	0.46	0.45	0.46	0.41
Colour grade	0.0	-0.6	-0.9	-0.8	-0.7
Minolta flour L - brightness	92.6	92.8	93.0	92.9	93.1
Minolta flour a - red/green	-1.2	-1.2	-1.3	-1.4	-1.5
Minolta flour b - yellowness	8.7	8.7	8.8	9.1	8.4
Farinogram					
Water absorption (%)	61.8	63.2	63.1	61.0	63.6
Development time (min)	6.9	7.2	5.6	5.7	6.5
Stability (min)	9.6	12.2	7.2	9.5	9.3
Extensogram					
Extensibility (cm) 45 min pull	22.6	20.2	23.8	22.2	22.2
Maximum height (BU) 45 min pull	400	505	300	375	350
Area (cm^2) 45 min pull	128	144	102	119	111
Extensibility (cm) 135 min pull	22.8	18.7	24.1	21.6	20.4
Maximum height (BU) 135 min pull	425	525	310	390	365
Area (cm^2) 135 min pull	135	137	109	118	105
Alveograph					
P (mm)	71	90	76	70	88
L (mm)	191	156	170	167	136
W (joules x 10^{-4})	352	418	322	311	351
P/L	0.37	0.58	0.45	0.42	0.65
Viscogram					
Peak viscosity (BU)	320	640	300	360	260
Baking test (straight dough)					
Volume (cm^3)	985	1000	905	910	845
Score (%)	96	97	87	88	82
Baking test (Sponge and dough)					
Volume (cm^3)	1500	1360	1400	1350	1300
Score (%)	83	77	74	71	69
Yellow alkaline noodle test - colour					
Raw noodle sheet					
Minolta L (T=30min)	78.6	78.4	78.4	78.3	78.0
Minolta a (T=30min)	-0.9	-0.5	-0.9	-0.9	-1.0
Minolta b (T=30min)	21.6	21.7	23.0	23.2	23.5
Minolta L (T=24 hour)	67.3	67.7	66.6	67.7	68.8
Minolta a (T=24 hour)	0.0	0.3	0.3	0.1	0.2
Minolta b (T=24 hour)	21.9	22.3	23.0	23.5	24.5
Colour stability	14.6	13.8	15.2	13.4	12.3
Cooked noodle					
Minolta L	68.2	68.6	70.2	69.8	71.6
Minolta a	-2.3	-2.3	-2.3	-2.6	-2.2
Minolta b	21.0	22.5	23.9	23.8	25.3

Australian Hard

- A quality medium protein (above 11.5%), hard grained milling wheat grade
- Accounted for 11% of the 2010/2011 eastern Australian crop into the GrainCorp network
- Made up of hard grained white varieties
- Grown in all eastern Australian port zones
- Suitable for blending with other wheat types for the manufacture of quality flour
- Suitable for the production of an extensive range of end products –
  - European breads
  - Middle Eastern flat breads (especially Tandoor breads)
  - Yellow alkaline noodles
  - Steamed breads
  - White salted noodles
  - Instant noodles

Australian Hard wheat from the 2010/11 season exhibits large grain size, generally low screenings and higher moisture content than the previous season. Test weights are a little lower than last year, but are still in excess of 79 kg/hL, which is very high. Grain is softer than last year, as demonstrated by higher PSI values. Wheat protein content is similar to last year. Falling number values are mostly lower than last year, but the grain is still sound and suitable for all food uses.

Flour extractions are within the normal range for the grade, with low flour ash, bright and white flours and lower than normal flour yellowness. Wet gluten levels are similar to last year, with a slight decrease in gluten index, Mackay being the exception with an excellent gluten index.

Farinograph water absorptions are reduced this year, as a result of softer grain. Dough development times are similar to last year, some decreases in dough stabilities.

There is a range of Extensograph resistances across the grade, with strong dough properties displayed at Mackay and Portland. All are within the normal range for AH. Extensibilities are generally similar to last year, with improvements at Port Kembla, Geelong and Portland. These findings are confirmed by the Alveograph results.

Straight dough baking quality shows all samples except Portland have good volume and score, and are similar to last year. The Portland sample, while still of acceptable baking quality, had good loaf appearance and texture, although it scored lower in volume than the 2009/10 sample.

The yellow alkaline noodle sheets are similar in brightness to last year, although there has been a slight decrease in yellowness in most port zones. Cooked noodle colour is slightly lower for all samples except Portland, which shows a slight improvement on last year.

Major varieties in AH (% of receivals)

	Queensland	Northern NSW	Southern NSW	Victoria
Baxter	30	6		
Correll				16
Derrimut				9
EGA Gregory	19	29	8	
EGA Wylie	5			
Ellison			7	
Janz			11	7
Livingstone			13	
LPB Crusader	5			
Strzelecki	5			
Sunbri	5			
Sunco		11		
Sunlin		4		
Sunstate		4	9	
Sunvale	9	20		
Ventura			22	10
Yitpi				35

Australian Hard (AH)

	Mackay	Brisbane	Newcastle	Port Kembla	Geelong	Portland
Wheat						
Test weight (kg/hL)	83.6	80.3	80.6	80.4	79.6	78.9
1000 kernel weight (g)	38.6	35.3	37.3	42.0	40.2	40.3
Grain hardness (PSI)	13	14	15	15	14	14
Protein (Nx5.7, 11% mb)	12.0	12.2	12.3	12.1	11.8	12.0
Ash (% (11% mb)	1.38	1.54	1.56	1.38	1.33	1.32
Falling number (sec)	450	377	368	336	339	362
Screenings, 2mm (%)	2.3	3.7	3.1	2.0	2.0	2.1
Foreign material (%)	0.4	0.4	0.3	0.2	0.2	0.3
Flour extraction (%)	73.6	76.4	74.5	73.4	74.4	74.2
Flour						
Protein (Nx5.7, 14% mb)	11.0	11.2	11.1	10.9	10.7	10.9
Diastatic activity (mg/10g)	195	218	195	213	225	161
Starch damage (%)	7.9	7.5	6.9	7.4	7.0	6.1
Wet gluten (%)	29.0	31.1	30.6	30.4	28.4	29.2
Gluten index (%)	97	93	95	90	95	92
Flour ash (%)	0.44	0.48	0.45	0.39	0.44	0.38
Colour grade	-1.4	-0.9	-1.0	-1.2	-1.0	-1.0
Minolta Flour L - brightness	93.3	93.1	93.1	93.3	93.9	93.3
Minolta Flour a - red/green	-1.3	-1.3	-1.4	-1.4	-1.7	-1.6
Minolta Flour b - yellowness	8.7	8.8	9.0	8.5	8.7	9.1
Farinogram						
Water absorption (%)	61.0	62.3	60.5	61.3	61.2	58.5
Development time (min)	5.0	5.7	5.3	5.5	4.8	6.0
Stability (min)	9.6	6.7	7.7	9.2	8.5	9.6
Extensogram						
Extensibility (cm) 45 min pull	19.1	21.3	20.1	20.6	20.5	21.1
Maximum height (BU) 45 min pull	515	335	345	415	390	445
Area (cm^2) 45 min pull	138	103	99	121	113	132
Extensibility (cm) 135 min pull	19.0	21.6	19.9	19.5	19.5	18.7
Maximum height (BU) 135 min pull	555	360	380	465	440	580
Area (cm^2) 135 min pull	146	110	108	124	118	147
Alveograph						
P (mm)	83	72	69	84	83	72
L (mm)	145	156	146	122	130	154
W (joules x 10^{-4})	330	289	274	290	318	315
P/L	0.57	0.46	0.47	0.69	0.64	0.47
Viscogram						
Peak viscosity (BU)	640	320	350	280	200	340
Baking test (straight dough)						
Volume (cm^3)	885	905	875	850	840	800
Score (%)	85	87	87	82	81	76
Yellow alkaline noodle test - colour						
Raw noodle sheet						
Minolta L (T=30min)	80.7	80.2	79.6	80.5	80.8	79.7
Minolta a (T=30min)	-1.2	-1.3	-1.2	-1.3	-1.4	-1.4
Minolta b (T=30min)	22.4	23.1	23.9	22.1	22.7	24.1
Minolta L (T=24 hour)	71.8	69.4	70.1	71.5	72.9	71.0
Minolta a (T=24 hour)	-0.5	-0.1	-0.1	-0.2	-0.2	-0.3
Minolta b (T=24 hour)	24.0	23.8	24.4	23.6	24.8	25.7
Colour stability	11.4	13.8	12.3	12.0	10.8	11.6
Cooked noodle						
Minolta L	70.7	70.6	70.3	70.6	71.2	71.5
Minolta a	-2.7	-2.7	-2.7	-2.5	-2.6	-3.0
Minolta b	24.3	25.1	25.0	24.9	26.7	26.1

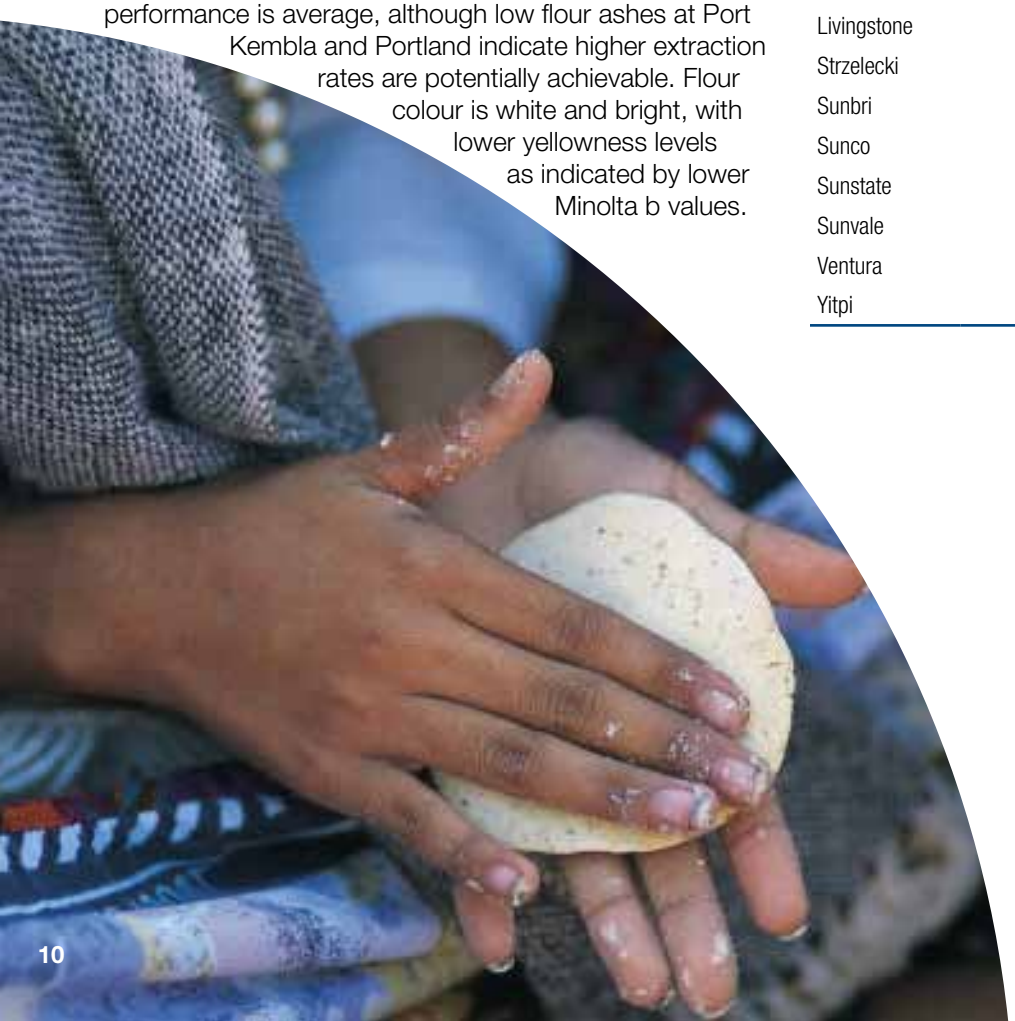
Australian Premium White (APW)

- A premium, moderate protein (above 10.5%) hard grained milling wheat grade
- Accounted for 8% of the 2010/2011 eastern Australian crop into the GrainCorp network
- Made up of 100% hard grained white varieties
- Grown in all east coast port zones
- Suitable for blending with other wheat grades for the manufacture of quality flour
- Suitable for the production of a large range of end products –
  - White salted noodles
  - Steamed breads
  - Instant noodles
  - Lower protein European bread types
  - Middle Eastern flat breads
  - Indian sub-continent chapattis

The 2010/11 APW wheat shows exceptionally large grain size and excellent low screenings levels across all regions. Test weight is similar to, or slightly lower than last year and grain is softer. Wheat ash is within the normal range for the grade. Moisture contents are higher than normal, due to the season. Falling numbers are lower than last season in the southern regions, but grain is still sound.

Grain protein contents are higher in central Queensland, and otherwise are almost identical with last year's results. Wet gluten contents are also higher in central Queensland, in line with the higher protein contents, and gluten indexes are generally high.

Milling performance is good with high flour extraction rates in all Queensland regions. NSW and Victorian milling performance is average, although low flour ashes at Port Kembla and Portland indicate higher extraction rates are potentially achievable. Flour colour is white and bright, with lower yellowness levels as indicated by lower Minolta b values.



Farinograph water absorptions are lower this year, due to softer grain and are at the lower end of the normal range for APW wheat. Dough development times and dough stabilities are similar to last year. Extensograph maximum resistance has decreased at Mackay and increased at Port Kembla and Portland. In the remaining regions, dough strength is similar to 2010/11 and is typical of APW.

Extensibilities are more consistent across regions this year, with improvements at Port Kembla and Portland resulting in more balanced dough properties. This is reflected in the higher Alveograph L values.

Baking quality using the straight dough method shows improved volume and score across most regions.

As with AH, yellow alkaline sheet noodle results show similar trends, with a decrease in yellowness across raw noodle measurement times and slightly lower cooked noodle brightness.

Major varieties in APW (% of receivals)

	Queensland	Northern NSW	Southern NSW	Victoria
Baxter	31	5		
Correll				15
Derrimut				10
EGA Gregory	26	34	8	
EGA Wedgetail			5	
Frame				5
Hartog	6			
Janz			18	5
Livingstone			8	
Strzelecki	8	5		
Sunbri		6		
Sunco		10		
Sunstate			5	
Sunvale	8	13	5	
Ventura			21	5
Yitpi				40

Australian Premium White (APW)

	Mackay	Gladstone	Brisbane	Newcastle	Port Kembla	Geelong	Portland
Wheat							
Test weight (kg/hL)	81.8	82.2	81.5	80.6	81.2	77.1	78.3
1000 kernel weight (g)	41.0	45.3	40.8	38.1	41.1	42.0	41.3
Grain hardness (PSI)	14	14	13	13	15	15	14
Protein (Nx5.7, 11% mb)	11.4	11.4	10.8	10.7	11.0	11.5	10.9
Ash (% (11% mb)	1.42	1.51	1.57	1.56	1.36	1.37	1.34
Falling number (sec)	400	414	364	380	338	326	368
Screenings, 2mm (%)	2.2	1.5	1.9	2.6	2.0	2.1	1.9
Foreign material (%)	0.2	0.1	0.2	0.2	0.3	0.6	0.3
Flour extraction (%)	75.5	75.5	76.1	74.6	72.9	73.2	74.2
Flour							
Protein (Nx5.7, 14% mb)	10.2	10.3	9.8	9.6	9.7	10.1	9.7
Diastatic activity (mg/10g)	218	218	231	195	213	207	182
Starch damage (%)	8.0	8.2	7.5	6.6	7.2	6.7	6.4
Wet gluten (%)	26.2	28.0	25.5	25.2	26.0	27.6	25.6
Gluten index (%)	98	89	97	92	95	86	97
Flour ash (%)	0.47	0.48	0.49	0.48	0.43	0.43	0.41
Colour grade	-1.4	0.9	-1.1	-1.1	-1.8	-1.1	-0.8
Minolta flour L - brightness	93.3	92.4	93.3	93.2	93.4	93.7	93.5
Minolta flour a - red/green	-1.4	-1.5	-1.4	-1.5	-1.5	-1.8	-1.7
Minolta flour b - yellowness	8.7	8.9	9.0	9.1	8.6	9.1	8.8
Farinogram							
Water absorption (%)	60.8	60.6	60.8	59.1	60.4	59.6	57.9
Development time (min)	4.2	5.3	4.2	5.0	4.7	5.0	4.4
Stability (min)	6.9	8.2	7.0	7.1	9.3	8.2	8.4
Extensogram							
Extensibility (cm) 45 min pull	19.3	17.4	18.2	18.4	18.7	18.3	19.0
Maximum height (BU) 45 min pull	305	430	350	385	390	360	410
Area (cm^2) 45 min pull	86	107	92	99	104	94	109
Extensibility (cm) 135 min pull	19.5	17.1	18.0	16.7	17.4	18.6	17.8
Maximum height (BU) 135 min pull	350	470	375	420	445	475	560
Area (cm^2) 135 min pull	97	112	97	99	108	120	135
Alveograph							
P (mm)	73	79	73	72	89	77	70
L (mm)	138	124	127	126	113	122	133
W (joules x 10^{-4})	267	269	242	255	294	277	267
P/L	0.53	0.64	0.57	0.57	0.79	0.63	0.53
Viscogram							
Peak viscosity (BU)	310	660	370	400	280	260	330
Baking test (straight dough)							
Volume (cm^3)	830	785	800	800	760	805	745
Score (%)	80	73	76	75	70	77	69
Yellow alkaline noodle test - colour							
Raw noodle sheet							
Minolta L (T=30min)	80.7	79.2	81.4	82.0	82.4	81.2	80.9
Minolta a (T=30min)	-1.5	-1.1	-1.6	-1.6	-1.7	-1.6	-1.7
Minolta b (T=30min)	23.0	20.7	22.5	22.7	21.3	22.8	23.4
Minolta L (T=24 hour)	72.8	72.0	71.9	73.5	74.4	73.0	72.7
Minolta a (T=24 hour)	-0.6	-0.2	-0.4	-0.6	-0.6	-0.4	-0.6
Minolta b (T=24 hour)	24.2	23.8	23.3	24.4	22.9	25.0	25.5
Colour stability	10.9	10.4	12.6	11.0	10.8	11.0	10.9
Cooked noodle							
Minolta L	69.7	66.5	69.8	70.5	71.2	69.1	70.4
Minolta a	-2.9	-2.5	-2.7	-2.8	-2.9	-2.8	-3.2
Minolta b	24.3	23.1	26.4	26.1	25.7	25.7	26.0

Australian Standard White

- A lower protein, white milling wheat
- Accounts for 8% of the 2010/2011 eastern Australian crop into the GrainCorp network
- The grade does not have any protein restrictions
- Grown in all east coast port zones
- Extremely suitable as a filler-style milling grade, blending with other wheat types to achieve a lower cost flour but still retaining quality
- Multipurpose, suitable for the production of a large range of end products –
  - White salted noodles
  - Steamed breads
  - Instant noodles
  - Middle Eastern flat breads
  - Indian sub-continent chapattis
  - Many household products

ASW wheat from the 2010/11 season has large grain size, low screenings and northern regions have higher moisture contents than usual. Test weights are lower than last year. Higher PSI values indicate that grain is softer than in 2009/10. Protein contents are similar to last year, although decreases are noted for Port Kembla and Geelong. In line with the harvest conditions, falling numbers in southern NSW and Victoria are lower than normal.

Milling performance is slightly reduced from last year at Mackay, and similar in Brisbane and NSW. Extraction rates have improved in Victoria. Flours are white and bright. Wet gluten levels generally follow the trends in protein, and gluten indexes are all high.

Farinograph water absorptions are lower in Queensland and NSW this year, due to the softer grain. Dough development times and dough stabilities are within the normal range for ASW, with higher stability at Mackay.

Extensograph maximum resistances show a range of values, with Brisbane, Newcastle and Port Kembla zones similar to last year. Dough extensibilities have improved at Port Kembla, Geelong and Portland, despite lower protein contents.

Flour pasting characteristics are lower this year in southern NSW and Victoria, consistent with the lower falling number results.

Straight dough baking quality has improved at Newcastle and Port Kembla, with higher volumes and total scores than last year. Other results are within the normal range for the grade.

Major varieties in ASW (% of receivals)

	Queensland	Northern NSW	Southern NSW	Victoria
Baxter	25	4		
Correll				14
Cunningham			6	
Derrimut				9
EGA Gregory	31	37	9	
Frame				6
Hartog	5			
Janz			17	2
Livingstone			6	
Strzelecki	11			
Sunco		10		
Sunstate		4		
Sunvale	13	12		
Ventura			18	
Yitpi				53

Australian Standard White (ASW)

	Mackay	Brisbane	Newcastle	Port Kembla	Geelong	Portland
Wheat						
Test weight (kg/hL)	83.9	82.4	81.0	79.8	79.4	77.4
1000 kernel weight (g)	35.5	38.7	39.7	40.0	42.3	42.0
Grain hardness (PSI)	12	13	13	15	14	17
Protein (Nx5.7, 11% mb)	10.6	10.0	9.8	10.0	9.7	9.5
Ash (% (11% mb)	1.37	1.56	1.52	1.39	1.34	1.33
Falling number (sec)	571	374	387	339	320	339
Screenings, 2mm (%)	2.8	2.8	2.4	2.4	2.0	2.1
Foreign material (%)	0.1	0.3	0.4	0.3	0.3	0.3
Flour extraction (%)	73.1	76.2	73.7	72.9	72.6	74.5
Flour						
Protein (Nx5.7, 14% mb)	9.5	9.1	8.8	8.9	8.4	8.4
Diastatic activity (mg/10g)	195	244	195	213	213	244
Starch damage (%)	7.2	8.3	8.1	7.4	7.2	8.2
Wet gluten (%)	24.4	23.1	22.6	23.8	20.6	19.2
Gluten index (%)	99	97	94	95	97	98
Flour ash (%)	0.46	0.50	0.45	0.43	0.41	0.44
Colour Grade	-1.7	-0.8	-1.3	-1.5	-1.5	-0.9
Minolta Flour L - Brightness	93.5	93.4	93.4	93.5	93.8	93.8
Minolta Flour a - red/green	-1.5	-1.5	-1.5	-1.5	-1.7	-1.6
Minolta Flour b - yellowness	8.9	9.1	9.1	8.6	8.7	8.3
Farinogram						
Water Absorption (%)	59.0	60.8	58.4	60.0	57.7	58.9
Development time (min)	3.8	2.9	2.7	3.0	2.0	2.5
Stability (min)	12.6	6.5	7.9	6.3	6.8	5.9
Extensogram						
Extensibility (cm) 45 min pull	16.6	17.1	16.8	16.5	16.7	14.9
Maximum height (BU) 45 min pull	470	340	345	320	440	375
Area (cm^2) 45 min pull	112	84	84	75	105	81
Extensibility (cm) 135 min pull	16.0	17.4	16.4	15.8	14.4	14.9
Maximum Height (BU) 135 min pull	655	385	425	365	580	495
Area (cm^2) 135 min pull	143	95	97	83	113	102
Alveograph						
P (mm)	91	77	75	79	78	56
L (mm)	107	110	106	102	94	108
W (joules x 10^{-4})	303	233	228	233	230	247
P/L	0.85	0.70	0.71	0.77	0.83	0.52
Viscogram						
Peak viscosity (BU)	830	410	460	260	280	180
Baking test (straight dough)						
Volume (cm^3)	785	725	755	705	720	725
Score (%)	70	66	69	67	65	65

Australian General Purpose

- Wheat that is generally below major milling grade receival standards and has a general purpose use
- Medium - high protein hard wheat varieties
- Higher than normal production in all eastern Australian port zones due to seasonal conditions
- Accounted for 14% of the eastern Australian crop into the GrainCorp network in the 2010/11 season
- Cost effective component of a milling wheat grist
- Suitable for blending, all purpose flours and production of some breads

As with the other milling grades, Australian General Purpose wheat from the 2010/11 season exhibits large grain size, low screenings levels and higher moisture contents than normal seasons. Test weights are generally lower than equivalent AH and APW grades. Wheat protein contents are mostly within the range 10.4 – 12.4%. Falling numbers are in excess of the grade receival standard of 200 secs.

Milling quality is generally quite good, with low flour ash and bright white flours. Wet gluten is in line with protein content, with high gluten indexes.

As with the other milling grades, Farinograph water absorptions are lower than normal. This is due to softer wheats in 2010/11 as indicated by lower than usual PSI results. Dough development time and stability values are lower than for the equivalent AH port zones.

As seen from the data below, there is a range of dough strengths depending on the port zone, with stronger dough properties in NSW and Victoria. Extensibilities are reasonably uniform across the port zones, despite differences in protein content and maximum resistance.

Straight dough baking quality is good for the higher protein wheats in Queensland, with baking volumes and scores consistent with protein contents.

Australian General Purpose (AGP)

	Mackay	Gladstone	Brisbane	Newcastle	Port Kembla	Geelong	Portland
Wheat							
Test weight (kg/hL)	79.0	78.7	78.1	78.4	76.5	77.2	76.9
1000 kernel weight (g)	39.3	38.9	39.4	38.4	39.0	43.1	41.3
Grain hardness (PSI)	14	14	15	14	17	15	14
Protein (Nx5.7, 11% mb)	11.7	12.4	11.6	11.3	11.2	10.4	10.4
Ash (% (11% mb)	1.50	1.49	1.56	1.58	1.39	1.39	1.33
Falling number (sec)	260	246	284	231	236	242	249
Screenings, 2mm (%)	2.8	1.9	2.8	3.5	2.7	2.4	2.5
Foreign material (%)	0.2	0.2	0.5	0.3	0.3	0.3	0.4
Flour extraction (%)	75.9	75.4	75.4	74.8	73.9	73.3	73.3
Flour							
Protein (Nx5.7, 14% mb)	10.5	11.3	10.1	10.2	9.8	9.0	8.9
Diastatic activity (mg/10g)	213	225	237	244	251	225	207
Starch damage (%)	7.9	7.1	8.1	7.2	8.4	6.6	6.7
Wet gluten (%)	28.6	32.2	27.2	27.8	26.9	23.0	23.3
Gluten index (%)	98	88	99	86	95	95	95
Flour ash (%)	0.53	0.48	0.48	0.46	0.40	0.40	0.41
Colour grade	-0.1	0.0	-0.7	-0.7	-0.7	-0.9	-1.2
Minolta flour L - brightness	92.9	92.8	93.3	93.2	93.3	93.6	93.6
Minolta flour a - red/green	-1.3	-1.3	-1.4	-1.4	-1.5	-1.5	-1.6
Minolta flour b - yellowness	8.6	8.6	8.8	8.6	8.4	8.3	8.6
Farinogram							
Water absorption (%)	59.7	59.8	60.8	58.5	58.2	57.7	56.7
Development time (min)	4.0	4.8	3.8	3.5	3.2	2.8	3.4
Stability (min)	4.3	7.5	6.4	5.8	5.9	5.4	7.1
Extensogram							
Extensibility (cm) 45 min pull	20.6	20.6	20.8	19.2	19.9	19.2	18.3
Maximum height (BU) 45 min pull	325	400	305	405	375	405	465
Area (cm^2) 45 min pull	97	118	92	110	106	109	119
Extensibility (cm) 135 min pull	19.8	20.5	21.2	19.0	19.6	17.3	16.9
Maximum height (BU) 135 min pull	335	385	300	420	430	510	575
Area (cm^2) 135 min pull	96	112	92	110	114	120	131
Alveograph							
P (mm)	60	69	71	58	63	69	65
L (mm)	149	167	154	150	159	96	129
W (joules x 10^{-4})	222	298	269	218	266	211	241
P/L	0.40	0.41	0.46	0.39	0.40	0.72	0.50
Viscogram							
Peak viscosity (BU)	210	220	150	80	80	120	160
Baking test (straight dough)							
Volume (cm^3)	850	900	790	775	770	735	745
Score (%)	81	89	72	72	73	68	67

Ramen Noodle Wheat

The ramen noodle flour was milled from Australian Prime Hard wheat at 60% flour extraction, producing flour with a low ash content and good whiteness and brightness. Flour yellowness is below average across all port zones.

Farinograph water absorptions are lower at Mackay and Newcastle, but are higher at Gladstone compared with last year. As with straight-run flour results, development times, stabilities and extensibilities are lower than the high values of 2009/10. Extensograph maximum resistances have also decreased in Brisbane and NSW, indicating lower dough strength.

Flour pasting properties are lower this year, consistent with seasonal conditions.

With the exception of Newcastle, yellow alkaline noodle sheets and cooked are slightly less bright and less creamy than last year. However, colour stabilities are within the normal range for the grade, with best results at Newcastle and Port Kembla. Processing and sheeting qualities are all good, with no dough stickiness noted.

For the purposes of comparison, grain and straight-run milling quality data are shown earlier in this report.

Ramen Noodle Wheat

	Mackay	Gladstone	Brisbane	Newcastle	Port Kembla
Wheat					
Test weight (kg/hL)	77.2	83.4	80.7	78.8	80.3
1000 kernel weight (g)	36.4	39.5	36.5	34.6	37.7
Grain hardness (PSI)	14	15	14	13	15
Protein (Nx5.7, 11% mb)	13.7	14.4	13.3	13.3	13.2
Ash (% (11% mb)	1.66	1.50	1.55	1.59	1.36
Falling number (sec)	389	417	383	370	375
Screenings, 2mm (%)	2.0	1.7	2.6	3.6	2.5
Foreign material (%)	0.3	0.5	0.2	0.2	0.4
Flour extraction (%)	60	60	60	60	60
Flour					
Protein (Nx5.7, 14% mb)	12.5	13.3	12.0	12.0	11.9
Diastatic activity (mg/10g)	182	176	188	182	218
Starch damage (%)	6.3	6.9	7.0	5.9	7.7
Wet gluten (%)	34.7	38.6	35.2	33.6	33.5
Gluten index (%)	95	82	92	92	83
Flour ash (%)	0.45	0.42	0.39	0.41	0.37
Colour Grade	-0.4	-1.1	-1.5	-1.5	-1.6
Minolta Flour L - Brightness	92.9	93.1	93.4	93.2	93.4
Minolta Flour a - red/green	-1.3	-1.3	-1.2	-1.4	-1.5
Minolta Flour b - yellowness	8.6	8.7	8.5	8.9	8.3
Farinogram					
Water Absorption (%)	61.5	63.5	62.6	61.0	62.8
Development time (min)	7.5	8.0	6.0	6.5	6.5
Stability (min)	12.8	12.9	10.8	10.2	>15.0
Extensogram					
Extensibility (cm) 45 min pull	22.5	20.9	22.0	21.9	20.9
Maximum height (BU) 45 min pull	440	520	385	410	405
Area (cm^2) 45 min pull	141	154	120	128	116
Extensibility (cm) 135 min pull	22.2	20.5	21.7	21.0	18.7
Maximum Height (BU) 135 min pull	485	565	410	475	455
Area (cm^2) 135 min pull	151	160	125	137	117
Viscogram					
Peak viscosity (BU)	470	690	370	410	320
Gelatinisation time (min)	27	27	33	30	28
Gelatinisation temp (° C)	71	71	80	75	72
Breakdown (BU)	150	190	60	80	80
Yellow alkaline noodle test - colour					
Raw noodle sheet					
Minolta L (T=30min)	79.3	79.3	80.7	79.0	80.3
Minolta a (T=30min)	-0.9	-0.5	-1.0	-1.1	-1.2
Minolta b (T=30min)	20.6	21.5	21.7	24.0	22.3
Minolta L (T=24 hour)	69.3	69.7	70.8	70.9	72.2
Minolta a (T=24 hour)	-0.2	0.1	0.0	-0.2	-0.2
Minolta b (T=24 hour)	21.4	22.5	22.6	24.2	24.1
Colour stability	13.2	12.8	12.8	11.4	10.7
Cooked noodle					
Minolta L	69.2	69.8	69.7	72.8	70.5
Minolta a	-2.6	-2.5	-3.0	-3.3	-2.8
Minolta b	20.6	22.8	22.6	25.8	24.8

Australian Feed Wheat

During the 2010/11 season, feed wheat grades accounted for approximately 50% of the eastern Australian wheat crop delivered into the GrainCorp network. Feed wheat this season has test weights above 68 kg/hL and has low screenings levels. Proteins are in ideal ranges for feeding purposes.

Apparent metabolisable energy is greater than 12.4%, cattle metabolisable energy is greater than 11.8% on a dry matter basis; and sheep metabolisable energy is in the range 12.6 – 13.1 MJ/kg on a dry matter basis. These are within the normal range for wheat and represent excellent value for feed and stockfeed manufacture.

Aflatoxin and mycotoxin levels are below the limits of detection for the relevant tests.

Quality Average Data for Feed Wheat 2010/11 Season

	FED1	SFW1	AH9	FED1	SFW1	AH9	FED1	SFW1	AH9	FED1	AH9	FED1	FED1
	Newcastle	Newcastle	Newcastle	Geelong	Geelong	Geelong	Port Kembla	Port Kembla	Port Kembla	Brisbane	Brisbane	Mackay	Gladstone
Bulk density (kg/hL)	69.8	68.4	72.8	74.2	74.8	75.1	72.6	73.1	72.0	75.6	69.6	77.1	76.2
Screenings (%)	2.8	2.4	2.5	2.2	2.3	2.1	2.8	2.6	2.5	3.5	2.5	1.7	1.4
Dry matter (%)	88.2	88.4	88.4	88.4	88.7	88.5	88.0	88.6	88.0	87.9	86.7	88.1	87.7
Moisture (%)	11.8	11.6	11.6	11.6	11.3	11.5	12.0	11.4	12.0	12.1	13.3	11.9	12.3
Crude protein (Nx6.25) (% DM)	13.6	13.7	14.9	12.5	12.8	14.4	12.6	12.5	14.2	15.8	14.3	14.9	14.4
Crude fibre (% DM)	3.8	3.0	3.8	3.1	3.5	3.0	3.7	3.5	3.2	3.5	3.3	3.9	4.0
ADF (% DM)	4.0	3.5	3.8	4.1	3.9	3.7	3.7	3.6	4.0	4.8	4.3	3.8	4.2
Englyst NDF (% DM)	16.4	18.0	16.8	15.4	14.6	16.3	15.4	15.7	17.2	18.1	16.6	15.9	16.1
Total starch (% DM)	67.4	66.9	68.0	72.4	72.1	70.5	70.4	71.7	68.5	67.2	66.6	68.9	68.9
Total insoluble NSP (% DM)	7.7	7.7	3.9	6.3	6.9	6.9	7.0	7.1	8.1	8.4	6.8	7.6	7.9
Total soluble NSP (% DM)	1.4	1.1	1.4	0.3	0.8	0.4	1.2	1.2	0.9	0.5	0.9	0.9	1.0
Insoluble Arabinoxylans (% DM)	4.6	5.2	4.2	4.0	4.1	4.9	4.2	4.3	5.7	6.5	5.6	4.6	4.9
Beta Glucans (% DM)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Hydration capacity (%)	27.4	31.4	29.3	27.7	24.6	26.7	24.0	24.5	29.3	28.3	27.0	24.2	26.9
Faecal DE (MJ/kg)	13.9	13.8	14.0	13.8	13.9	13.9	13.8	13.8	13.9	13.8	13.9	14.0	13.9
Ileal DE (MJ/kg)	12.4	12.1	12.5	12.4	12.8	12.5	12.4	12.5	12.2	12.4	12.4	12.8	12.7
Apparent ME (MJ/kg)	12.7	12.4	12.8	12.6	12.7	12.5	12.7	12.6	12.4	12.5	12.6	12.8	12.8
Estimated ME Cattle (MJ/kg DM)	11.9	11.9	11.8	12.0	12.1	12.1	12.1	12.2	12.1	11.9	11.6	12.1	12.0
Estimated ME Sheep (MJ/kg DM)	12.7	13.0	12.6	13.1	12.8	13.1	12.7	12.8	13.1	13.0	12.8	12.8	12.6
Mycotoxins													
Aflatoxin B1 (mg/kg)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Aflatoxin B2 (mg/kg)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Aflatoxin G1 (mg/kg)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Aflatoxin G2 (mg/kg)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Zearelenone (mg/kg)	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
Nivalenol (mg/kg)	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Deoxynivalenol (mg/kg)	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Trichothene HT2 (mg/kg)	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Trichothene T2 (mg/kg)	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10

Feed and Malting Barley

The 2010/11 Eastern Australian Barley Crop

The 2010/11 malt barley growing season started well, with good planting rain and soil moisture. However, very heavy rainfall in the October – January period resulted in significant downgrading and a later than usual harvest.

Feed Barley

The protein content of the feed barley harvested during 2010/11 was lower than the previous season. Moisture content was higher than last year due to climatic conditions. Overall, there was an abundant supply of feed barley in all regions.

Quality Average Data for Feed Barley 2010/11 Season

Region	Grade	Protein (%)	Moisture (%)	Test wt (kg/hL)	<2.2 mm
Queensland	F1	11.2	12.0	64.8	6.5
Northern NSW	F1	11.0	11.5	65.0	6.2
Central NSW	F1	10.9	11.3	64.9	4.8
Southern NSW	F1	11.7	11.0	64.3	3.2
Victoria	F1	10.5	10.4	64.8	2.9

Malting Barley

Overall, there was a low ratio of malting barley to feed barley produced due to the harvest weather conditions. There was, therefore, only a limited supply of malting barley in most regions of NSW, Queensland and Victoria.

Moisture contents are higher this year due to seasonal conditions.

Barley protein contents are lower than for the 2009/10 season and are generally within the range 9.5 – 10.5%. Farmer deliveries with barley proteins above 12% and under 9% were downgraded to feed classification in accordance with the national standards.

Most of the barley varieties sown in eastern Australia were malting barley types.
The most popular variety was Gairdner, followed by Schooner and other newer malting varieties such as Buloke and Baudin. Hindmarsh, Australia's most recent food barley has become very popular with growers due to its high yield.

Quality Average Data for Malting Barley by Variety 2010/11 Season

	Protein (%)	Moisture (%)	Test wt (kg/hL)	>2.5 mm	<2.2 mm
Baudin	10.6	11.0	66.5	92.0	2.0
Buloke	10.6	11.0	65.9	86.5	3.0
Commander	10.3	11.8	66.5	89.9	3.4
Flagship	9.4	11.3	68.2	91.3	2.0
Fitzroy	10.5	11.8	65.7	86.5	3.8
Gairdner	10.1	11.1	66.7	86.7	3.3
Grimmett	10.8	12.2	68.9	82.2	3.4
Schooner	10.4	10.9	66.5	88.4	2.6
Sloop	10.3	11.0	66.2	89.9	2.6

Quality Average Data for Hindmarsh Food Barley 2010/11 Season

	Protein (%)	Moisture (%)	Test wt (kg/hL)	>2.5 mm	<2.2 mm
Hindmarsh	10.4	10.7	67.0	89.9	2.4

Canola

After a promising start to the season, adequate rainfall provided a large canola production. In some areas, untimely heavy rainfall at harvest resulted in the downgrading of some canola crops.

The moisture level of canola harvested in all areas was average and oil content was above average. Admixture levels were low, with test weights generally lower than for the 2009/10 season.

Protein levels are average and seed size is large.

Overall, there is a large supply of canola to meet the Australian and export demands, with most exportable surpluses available from Southern NSW and Victoria.

Quality Average Data for Conventional Canola 2010/11 Season

Region	Test weight kg/hL	Oil %	Moisture %	Protein %	Admix %
Northern NSW	65.5	43.1	6.0	20.7	1.2
Central NSW	65.3	42.9	6.0	22.2	1.3
Southern NSW	64.2	43.6	5.6	22.0	1.4
North Western Victoria	64.5	44.1	5.4	20.3	1.0
South Eastern Victoria	64.4	44.5	5.5	19.8	1.3

Quality Average Data for GM Canola 2010/11 Season

	Test weight kg/hL	Oil %	Moisture %	Protein %	Admix %
Southern NSW	64.5	42.6	4.9	21.4	1.9
South Eastern Victoria	64.4	44.6	5.9	21.3	1.5

Wheat Test Methods

All grain and oilseed quality data in this harvest report has been reported from the analysis of composite samples taken directly from farmer harvest receivals and should therefore be used as a guide only.

Results should not be taken as minimum shipping standards. Certain quality results may alter on outturn due to environmental and biochemical factors such as natural grain maturing; site selections; and through normal storage and handling practices.

The Alveograph test is conducted according to AACC method 54-30A. It provides information relating to the rheological properties of dough. Unlike the farinograph and extensograph, a constant amount of water is added to form a dough in the Alveograph mixer. The Alveograph curve provides a record over time of the pressure inside a bubble formed by inflating a dough test piece to the point of rupture.

The alveograph test results are detailed below:

- Deformation energy (W) is the area under the alveograph curve and represents the energy necessary to inflate the dough bubble to the point of rupture. Deformation energy is expressed in joules x 10^{-4} and provides a measure of dough strength. It is also referred to as the 'baking strength value'.
- Length (L) is determined in millimetres from the origin to the point of rupture of the dough bubble. This provides a measure of the extensibility of the dough.
- Overpressure (P) is a measure of the maximum pressure required to deform the test piece in the process of inflating the dough bubble. It is obtained by multiplying the maximum height of the alveogram by a factor of 1.1. This provides a measure of dough stability.
- Configuration ratio (P/L) is the ratio of the curve height to length and indicates the balance between dough strength and extensibility.

Ash content of wheat and flour is the mineral residue remaining after incineration of the sample according to AACC method 08-01. It is expressed on an 11% moisture basis for wheat and a 14% moisture basis for flour. Flour ash is related to the milling performance and is used both as a measure of flour purity as it indicates the level of non-endosperm material present in the flour.

The Baking test is conducted using a fermented dough procedure with a bromate-free formulation according to methodology developed by Agrifood Technology. Test loaves are scored for volume (maximum 36 points), external appearance (maximum 20 points), crumb texture (maximum 30 points) and crumb colour (maximum 14 points). Results are expressed as a percentage of the total bread score. The loaf volume is measured by canola seed displacement. Crumb colour is measured using the Minolta Chroma Meter, with the results converted to point scores using an empirically derived formula. External appearance and crumb texture are visually assessed by a trained judging panel. The sponge and dough baking test is conducted according AACC method 10-11 with modifications.

Diastatic activity provides a measure of starch degradation by the naturally occurring amylase enzymes. It is determined according to AACC method 22-15 and is expressed in milligrams of maltose produced per 10 grams of flour per hour. Diastatic activity is related to starch damage and enzyme concentration and varies with grain hardness in sound wheat.

The Extensogram is a force-time curve, recorded by an extensograph instrument, as a dough test piece is subjected to controlled stretching to breaking point. The test is carried out according to AACC method 54-10 and RACI method 06-01, with the extensograph adjusted to record 80 BU for every 100 gram load. Dough test pieces are prepared in the farinograph by adding the required volume of distilled water, a known amount of salt to pre-weighed flour (corrected to a 14% moisture basis), and mixing for a fixed time to a dough consistency of 500 BU. The dough is scaled, moulded and proofed for 45 minutes prior to the first stretching operation. The rounding, moulding and incubation steps are repeated between subsequent stretching operations. Results are reported at 45 and 135 minutes.

Measurements taken from the extensogram curve are the extensibility (cm), the maximum height or 'resistance to extension' (BU) and the area beneath the curve or energy value (cm^2).

Extensograph results are particularly useful for evaluating dough strength and observing changes in dough properties over an extended timeframe and for characterising the dough strength and extensibility of different flour types.

Falling number is measured on a sample of wheat which has been ground using a Falling Number 3100 mill. The test is conducted according to ICC method 107/1, but without moisture adjustment. The falling number provides a measure of alpha amylase enzyme activity in the grain. A high falling number indicates low enzyme activity, while a low falling number indicates high enzyme activity, which commonly occurs due to weather damage.

The Farinograph is a recording dough mixer that measures the water absorption and resistance to the mixing of a dough under standard conditions. Dough mixing parameters determined from the farinogram or mixing curve are useful in characterising different flour types and provide a guide to dough strength. They may also be used to predict certain processing requirements of a flour. The farinograph test is conducted according to AACC method 54-21 and RACI method 06-02, using the 'constant flour weight' procedure, in which the flour weight is adjusted on a 14% moisture basis.

The farinograph test results reported are:

- Water absorption, which is the amount of water required to be added to the flour to produce a dough consistency of 500 BU at peak dough development. Water absorption is expressed as a percentage of the flour weight on 14% moisture basis.
- Development time is the time in minutes required for the dough to reach maximum consistency centred on the 500 BU line. The development time is an indication of dough strength.
- Stability is the time in minutes during which the farinogram shades the 500 BU line. The stability provides a measure of the mixing tolerance of the dough and is also related to the dough strength.

Foreign material is defined as all matter other than wheat grains which may be physically separated from the sample. The foreign material is expressed as a percentage by weight of the total sample.

Grain hardness is determined by measuring wheatmeal granularity, expressed as the Particle Size Index (PSI). In this test, wheat is ground in a Falling Number 3303 Mill set at its finest setting. Using a rotary sifter, 10 grams of ground wheat is sieved over a number 15 nylon screen for five minutes. The material passing through the screen is measured, and then expressed as a PSI value.

MillingTest. Wheat is conditioned for 24 hours prior to milling, following the addition of a calculated amount of water as determined by the natural grain moisture and the grain hardness determined as PSI. Test milling is carried out on a Buhler Laboratory Mill, using appropriate roller mill settings and sieve covers. The flour obtained by combining all flour streams is reported as straight run flour extraction. For noodle quality assessment, 60% extraction flour is produced by excluding a calculated quantity of reduction flour from the final product. Flour extractions are expressed on a total milled products basis.

Minolta colour values are measured using a Minolta CR300 Series Chroma Meter calibrated according to the manufacturer's instructions. The Minolta L-value indicates whiteness and brightness on a scale of 0 to 100 the whitest flours having the highest L-values. Minolta a-values indicate green/red, on a scale of -60 to +60, with positive values having increased red colour. Minolta b-values indicate yellow hue on a scale of 0 to 60 with yellower flour having higher b-values.

Noodle sheet colour is determined using a Minolta CR310 Series Chroma Meter fitted with a 50 mm diameter measuring aperture. Noodle sheets are prepared and measured according to RACI method 07-06. Measurements are reported at 30 minutes and at 24 hours after sheeting the dough. The colour of cooked noodles is also measured. Colour stability is the difference in brightness of the noodle sheet readings taken at 0 and 24 hours.

Protein is measured using NIT for whole grain and NIR for flour. Protein content is an important consideration when assessing the suitability of wheat for different end products. It is expressed on an 11% moisture basis for wheat and a 14% moisture basis for flour. A nitrogen conversion factor of N x 5.7 is used for wheat and flour.

Screenings is the total material passing through a 2mm slotted screen using 40 shakes of the sieve and is expressed as a percentage by weight of the total sample.

Starch damage is measured according to AACC method 76-30A, and is an indication of the mechanical damage to starch during the milling process. Damaged starch is more susceptible to enzyme attack and absorbs more water than undamaged starch.

Test weight is obtained by weighing a fixed volume of grain using a chondrometer and is expressed in units of kilograms/hectolitre (kg/hL). Test weight provides a measure of the bulk density of the grain. It is also useful as a guide to grain soundness and potential milling yield.

Thousand kernel weight is the weight in grams of 1,000 kernels of wheat and provides a measure of grain size and density. The thousand kernel weight is independent of some factors that influence the measurement of bulk density; therefore, it is sometimes preferred to test weight as a measure of grain quality.

The **Viscogram** is a recording of the variation in starch paste viscosity of a flour and water mixture over a fixed time/temperature profile. In this test, the measured amount of flour (adjusted to 14% moisture basis) is combined with distilled water. The Viscograph is fitted with a pin sensor and a 250 cmg sensitivity cartridge. The viscosity is recorded in Brabender units, as the temperature is raised from 30 to 92°C at a rate of 1.5°C per minute. The test is conducted according to RACI method 06-03.

The peak starch paste viscosity is reported. For noodle quality assessment, the starch gelatinisation temperature, time to starch gelatinisation, and the starch gel breakdown from peak viscosity are also reported.

Wet gluten is determined using a Glutomatic Gluten Washing Unit model 2200. The test is conducted according to AACC method 38-12A and ICC method 137/1, with wet gluten being expressed as a percentage of the sample weight. Gluten forming proteins are primarily responsible for the functional properties of wheat flour and the wet gluten test provides a quantitative measure of these proteins. The gluten index is an indication of gluten quality.

Yellow pigment is extracted in water saturated butan-1-ol. This test is conducted according to AACC method 14-50.

Methods Cited

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ICC (2003), Standard Methods of the International Association for Cereal Science and Technology (ICC), Vienna, Austria.

RACI (2003), Official Testing Methods of the Cereal Chemistry Division, 4th edition. North Melbourne, Australia, Royal Australian Chemical Institute.

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Testing Methods were kindly provided by Agrifood Technology, Werribee, Victoria.

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Appendix 13

GrainCorp Submission to the ACCC in response to the Submissions by Emerald Group Australia, AWB Limited, Port of Portland P/L, Victorian Freight Logistics Council, Goodman Fielder Limited, Australian Grain Exporters Association and to the Summary of Confidential Submissions provided by the ACCC – 6 May 2011

For Public Register

Submission to the ACCC

In response to the Submissions by

Emerald Group Australia

AWB Limited

Port of Portland P/L

Victorian Freight Logistics Council

Goodman Fielder Limited

Australian Grain Exporters Association

and to the Summary of Confidential Submissions provided by the ACCC

6 May 2011

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GrainCorp

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GrainCorp

Submission to the ACCC in response to submissions by

Emerald Group Australia, AWB Limited, Port of Portland P/L, Victorian Freight Logistics Council, Goodman Fielder Limited, Australian Grain Exporters Association and to the summary of confidential submissions prepared by the ACCC

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1. Structure and purpose of this submission

On 23 March 2011, the ACCC sought comments on its draft decision in relation to GrainCorp's proposed 2011 Undertaking that was submitted on 22 September 2010. The ACCC sought comments by 22 April 2011. In particular, the ACCC sought comments on the potential operation of a vessel loading transfer system. GrainCorp provides the following comments in response to the submissions to the ACCC that have been provided to GrainCorp by;

- Emerald Group Australia – 6 April 2011
- AWB Limited – 15 April 2011
- Port of Portland P/L – 21 April 2011
- Victorian Freight Logistics Council – 21 April 2011
- Goodman Fielder Limited – 27 April 2011
- Australian Grain Exporters Association – received 2 May 2011

The ACCC has also put on its web site a summary of what GrainCorp understands are two confidential submissions ("Confidential Submission Summary"). GrainCorp has responded to that summary in section 4 of this submission.

Where section numbers, or headings, are referred to, they relate to sections and headings in those submissions.

This submission should be read in conjunction to those made by GrainCorp on 7 and 18 April 2011.

2. Executive Summary

GrainCorp's response to the range and nature of the submissions highlights the following:

1. **Trading of elevation capacity will lead to speculation and increased costs:** The key consistent message coming through from the submissions is that the introduction of a capacity trading system will create an environment of potential "gaming" and “speculation” in the system and the potential for increased costs which will be passed back to grain growers.

   Both of these outcomes are inconsistent with the objectives of the Wheat Export Marketing Act 2008 (WEMA).

2. **The transfer of elevation capacity will also lead to trading of elevation of capacity:** Some proponents (including the confidential submissions) propose the option of allowing the transfer of capacity to other counterparties plus the ability to transfer between different ports and timeframes.

   The transfer of elevation capacity will lead to trading of elevation, as export traders will inevitably receive and pay consideration for transferred elevation capacity.

3. **There is no workable model for the trading or transfer of elevation:** There are no consistent views as to how best to operate a vessel loading transfer system. Some submissions support auctions, but some suggest existing loading fees are already too high, and some suggest booking fees are too low and they do not create sufficient disincentives to overbook vessel loading slots.

   Some suggest new formal "business" rules for an "informal" system and some suggest that the management of vessel slots should be provided to an independent body to manage the process, presumably this seems to also include GrainCorp's own export supply task.

   GrainCorp believes this divergence highlights the complexity in developing such a system and its potential operating risks, and the time and delay that result in attempting to develop a system.

Request for continuation of the current approach

In relation to delay and commercial uncertainty that is arising from this regulatory process, as well as the time and cost involved, GrainCorp wishes to note the following.

The 2011 Undertaking was submitted on 22 September 2010. GrainCorp submits that at this late stage, some 9 months after initial submission, it is not appropriate for GrainCorp to be required to include a capacity transfer / trading system for its port elevators, given that no consensus has arisen as to how such a transfer / trading system should in fact operate, as opposed to a "wish list" of permissible and often contradictory criteria.

Accordingly, in these circumstances, rather than impose risks to the export supply task, and unintended consequences for Australian growers, GrainCorp submits that GrainCorp's 2011 Undertaking (as revised in material provided to the ACCC) should apply for the next 3 years in accordance with its terms.

Finally, GrainCorp wish to raise with the ACCC the actual practical evidence of the operation of the auction systems that have been put forward in the coal industry for coal loading at terminals in New South Wales in 2004.

There was a tremendous amount of work by consultants over a period of approximately one year from our understanding and while that auction system was authorised by the ACCC the auction process was abandoned at great cost and expense as it proved ineffective among some of the world's largest and most sophisticated coal exporters: see the 2005, the ACCC authorised the Port Waratah Coal Services Limited Medium Term Capacity Balancing System. Despite an auction system being developed and authorised, it ultimately was never conducted due to a lack of participation by coal producers.

In these circumstances, having regard to both the CBH example, and the coal industry experience in the Hunter Valley, GrainCorp believes that any trading or transfer systems, in practice, will be costly and inefficient for Australian grain exporters, and would operate to the detriment of grain growers.

3. Response to matters raised by parties in response to the draft decision

In order to assist the ACCC, GrainCorp now goes through each of the submissions made by third parties in the latest round of consultation. GrainCorp note that there is some duplication but responds in this manner as it seems that would be most helpful and constructive for the ACCC given how the ACCC writes its decisions.

Emerald Group Australia – 6 April 2011

Trading of vessel loading slots(elevation capacity)

In highlighting the disadvantages inherent in introducing trading of vessel loading slots, Emerald Group have raised three major points in their submission.[1]

In Point 1, Emerald claim that *"…allowing trading of booked slots…"* would encourage 'hoarding' of elevator capacity by GrainCorp, and that this behaviour would *"…undermine the philosophy of the access regime…"*.

GrainCorp agrees that the introduction of trading of elevation capacity would bring into question the 'fair access' to all principle of the Undertaking, but does not agree that GrainCorp would be encouraged to 'hoard' capacity.

As the ACCC has previously found, GrainCorp has no commercial incentive to discourage the use of its port elevators. The company profits from the handling of grain at port elevators, and hoarding of capacity would actually reduce GrainCorp's port related income.

Nonetheless, as GrainCorp has emphasised in other submissions to the ACCC,[2] trading of elevation capacity would encourage other grain exporters, particularly those with significant financial resources to make speculative bookings, and to potentially hoard that capacity and manipulate the market for speculative gain. This point is raised by Emerald in Point 2.

In Point 3, Emerald refers to the effect of trading *"…driving up the costs of exporting…"*, also, a point made by GrainCorp in submissions to the ACCC.

Proposed controls on elevation capacity trading

Emerald proposes that, should the ACCC require GrainCorp to implement a system for trading of elevation capacity, a number of measures to 'regulate' elevation capacity trading be introduced.

GrainCorp disagrees with the measures proposed by Emerald, on the basis that requiring the trading of elevation capacity will create a market that itself will create distortions in the broader grains market.

GrainCorp believes that the submission by Emerald highlights the unintended consequences of the transfer and trading of elevation capacity, and that it would add further cost and uncertainty, and affect the competitiveness of grain exports from Australia.

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[1] Headed points 1, 2, 3 on page 1.

[2] 7 and 18 April 2001.

AWB Limited – 15 April 2011

Other establishment provisions of the Undertaking (3.3.3)

GrainCorp maintains that, given the company submitted its application for renewal of the Undertaking on 22 September 2010, finalisation of the renewal process by mid-May, some 8 months later is required to ensure that;

- The terms (indicative services agreement) under which it will provide port elevation services for the 2011/12 shipping year are clear to both the service provider and the customer,
- The rules (Port Protocols) under which elevation services are provided are clear, and
- There is transparency to ensure that no party seeking access is disadvantaged.

Given that GrainCorp must have its 2011 Undertaking approved by the ACCC as soon as possible to provide certainty to its customers and in order to renew its wheat export accreditation and having regard to the ACCC's statutory timetable, it is not feasible to delay the finalisation of the 2011 Undertaking as appears to be suggested by AWB

Indicative agreement (4.3.3)

Service price differentials

The matter of differential fees has been dealt with in other submissions to the ACCC in relation to GrainCorp's 2009 Port Terminal Services Undertaking over the past two or more years.

GrainCorp believes that the differential charging regime is justified based on the risks present. As the ACCC is aware, GrainCorp is;

- Liable for all costs associated with elevator block-outs related to the presentation of grain that is not suitable for export, and
- Required by AQIS to ensure that all grain received at port and presented for export meets relevant Australian and importing market quarantine and phytosanitary requirements.

Detailed information on this issue was provided to the ACCC by GrainCorp in its submission dated 3 September 2009 (Pg 19)in relation to the 2009 Undertaking.

Dispatch - demurrage arrangements

GrainCorp has dealt with this matter on previous occasions and in detail in past submissions to the ACCC. GrainCorp believe that dispatch – demurrage arrangements are not appropriate or required given the nature of how export elevation services are provided.

AWB has cited examples of the application of dispatch – demurrage arrangements in the United States that are not applicable or appropriate in Australia.

Under the integrated operating model[3] in the United States, export elevators can manage dispatch and demurrage as the owner of the elevator normally owns all the grain it handles and manages all the inbound supply chain.

GrainCorp operates a separated (open access) business model for its export elevators, where it does not own the majority of the grain or manage an inbound supply chain, and therefore is not in a position to manage the resultant demurrage-dispatch risk.

Force Majeure

AWB has not specified the 'events' it envisages to which force majeure provisions would apply to the port elevator services.

There is a danger in seeking to link matters that effect cargo accumulation in other parts of the supply chain, to port elevator services, as the port elevators services are provided under a separate contract to other supply chain services, and to do so is going beyond the terms of the legislation.

For example, GrainCorp is aware of an incident in early 2011 where AWB had contracted to ship a cargo of grain from a particular port (Carrington), but sought to claim force majeure under the terms of the contract with their customer, citing an inability to load grain up-country due to rain.

Publication of information (4.3.6)

The process of allocating Assigned Load Dates(**ALDs**) is transparent and does not require as AWB suggests "auditing". The relevant process is outlined in Clause 16 of the GrainCorp Port Protocols ('Protocols').

The information available on the GrainCorp shipping stem contains all of information required to make the ALD allocation process as transparent as it can be, given that the context in which an ALD is assigned includes;

- The nomination of a vessel Estimated Time of Arrival ('ETA') *by a customer* (Cl. 15 of the Protocols),
- The existence of other bookings on the shipping stem, and
- The need to ensure efficient elevator operation.

The call by AWB for *"…auditing on a regular basis."* of the ALD process is not supported by any evidence that would warrant such an increase in regulatory intervention, and does not take into account the;

- Additional costs of such audits and which party would pay, and
- Effect that additional compliance would have on the provision of an efficient port elevator service.

[3]This is a business model where shippers do not have ownership of grain in the supply chain, and are purchasing *both* grain and elevation at port.

Publication of performance indicators (4.3.7)

Under the terms of its Undertaking, GrainCorp is required to provide a monthly report on port performance indicators. This report is published on the GrainCorp web site.

With respect to the individual points raised by AWB;

Indicator	Response
Vessels failing survey	Reported monthly and available on the shipping stem under vessel 'Status'
Average daily receival rate	Reported monthly. Increasing the reporting of this figure to a weekly average may be of academic interest, but will have little effect on the rate at which grain is received by road at port and will increase compliance costs
Cargo Nomination Advice (CNA) rejected	Reported monthly. Since the opening of the shipping stem for the current shipping year, GrainCorp has; • Accepted - 208 • Rejected - 0 • CNA's declined by customers – 3 This data clearly shows that the frequency of CNA rejection obviates the need to increase the frequency of reporting
Assigned Load Date	This information is updated daily on the *existing* shipping stem
Monthly tonnage shipped	Reported monthly
Port block out	Since the opening of this shipping year (1 October 2010) there has been one (1) port block out in approximately 140 days, or 950 operational days across 7 elevators. On the basis of this evidence, the frequency of block outs obviates the need for daily reporting
Average CNA assessment times	Reported monthly

GrainCorp believe that the current reporting requirements, when combined with the daily shipping stem and the daily Elevation Capacity Available[4] email sent to all customers, is sufficient information to meet the objectives of Part IIIA of the Competition & Consumer Act (2010) (**CCA**) as set out in s 44AA.

Additional reporting compliance, and a shortening of the reporting time line as proposed by AWB, would have the effect of;

- Increasing the administrative burden without any evidence that it would assist exporters,
- Increasing administration and compliance costs on all parties,
- Diverting GrainCorp resources away from the provision of port elevator services in an efficient manner for customers,
- Neither increasing port elevator efficiency nor adding any additional value to customers.

[4] Refer to page 9 of GrainCorp's 18 April 2011 to the ACCC.

Substance of the PTSP in the proposed 2011 Undertaking (5.3.2)

AWB refers to *"…significant number of new processes GrainCorp is proposing to introduce in the 2011 Undertaking (REP/CEP and the operational rules regarding CNA and AOA's)"*.

GrainCorp notes that the proposed 2011 Undertaking is substantially carried over from the Undertaking currently in place.

AWB further submits*"…the majority of GrainCorp's customers want a rigid framework…"* that would define the manner in which port elevator services are to be delivered, but contradicts this position by also stating that within the 'rigid framework' *"…exporters are seeking as much operational flexibility…"* as possible.

GrainCorp submits that the current Protocols provide a good balance in providing significant flexibility, such as the ability to move elevation bookings both temporally and geographically, and that is it highly contradictory to demand a set of service delivery rules that are a 'rigid framework' while simultaneously providing 'operational flexibility'.

ACCC staff directed the structure of the current Protocols during their development, with a close focus on removing areas where GrainCorp could exercise 'discretion'. For example;

- GrainCorp is not able to exercise judgement as to the capability of an exporter to successfully complete cargo accumulation using an assessment of the customers transport capability when assessing a CNA. Having sufficient transport capability is essential for the accumulation of export cargos in a timely manner, and has a major effect on port elevator efficiency,
- GrainCorp previously carried out a 'risk assessment' that considered an exporters transport capability, and this was the subject of complaint to the ACCC by parties that did not agree with GrainCorp's assessment, and
- The ACCC required GrainCorp to remove this area of risk analysis from assessment of CNA's, as the ACCC considered that GrainCorp was required to exercise judgement that could be discriminatory.

Auctioning elevation capacity

For the reasons set out previously in GrainCorp's submissions, GrainCorp is opposed to the introduction of any system of transfer or trading of elevator capacity bookings because GrainCorp believe, as it will have significant unintended consequences and will increase costs for growers. GrainCorp has outlined reasons in Section 5 (page 13) of the 18 April 2011 submission to the ACCC and the 7 April 2011 submission to the ACCC.

GrainCorp reiterates that;

- A system of 'transferring' booked elevation capacity will be a proxy for trading capacity bookings and creation of a secondary market for those bookings. This in turn will then lead to the valuation or auctioning of capacity between parties,

- A secondary market would drive speculative behaviour on the part of capacity bookers, and thus increase the quantum of unexecuted bookings. This in turn will lead to attention being diverted from trading and exporting grain, to trading elevation capacity bookings as a new line of business,
- Bookings will require advance payment for elevation capacity and the introduction of complex arrangements at all of GrainCorp's elevators for *all* grains, not just the regulated grain, bulk wheat,
- Adding an additional layer of complexity to exporting grain will increase uncertainty for customers seeking supply of grain from eastern Australia. This in turn could damage export markets and create inefficiencies in the export supply chain, and
- Development of a transfer and trading system will be complex, costly and time consuming and will increase the cost of executing export sales. These higher costs will be passed back to growers in the form of lower grain prices.

There is no evidence of current inefficiencies in the allocation of elevator capacity on the East Coast that would support the proposition to introduce an auction system for capacity.

However, evidence does exist to demonstrate that the current system is efficient, as year to date, *no bookings* have gone unexecuted.

Relevant experience from Western Australia does not support AWB's contentions

It is important to note that in their submission to the ACCC dated 1 April 2011, CBH which has been conducting an elevation capacity auction for the last two shipping years, conceded that their system had failed to meet expectations, stating that[5];

- *The auction system is both complex and costly,*
- *There are significant supply chain inefficiencies caused by the uncertainty in the market, and*
- *The complexity and the additional execution cost associated with both the auction and secondary market was causing exporters and customers to seek supply of grain from other regions.*

AWB's submission that an auction for elevation capacity would bring a range of benefits (detailed in their submission) is *directly contradicted* by CBH's submission.

Additionally, AWB claim that an auction for elevation capacity would *"Reduce the incentive for speculative purchasing of slots…"*.

This statement cannot be justified based on experience with any auction or system that allows secondary trading of a commodity. By their very nature, markets that allow buying and selling of a commodity facilitate speculation, as this is a cornerstone of any market.

Thus, based on the only available evidence and the views of the system operator (CBH) that the system has failed to meet expectations, the view that an auction for elevator capacity would be beneficial to the grain export sector in eastern Australia cannot be substantiated.

[5] Page 13, CBH submission 1 April 2011

AWB do not address any of the shortcomings of the auction system identified by CBH in their submission to the ACCC, and do not acknowledge that;

a) The added administrative costs will have to be passed on (principally to growers),

b) That an auction is likely to significantly inflate the cost of execution at peak times as a result of competition bidding up booking values, again a cost that will be passed back to growers,

c) The experience in WA indicates that an auction system adds significant additional uncertainty, and that customers have elected to buy grain from other sources of supply.

GrainCorp also highlights the auction systems that were previously put forward in the coal industry, for coal loading at terminals in New South Wales, ultimately proved ineffective, and were not used by the coal industry.

There was a tremendous amount of work by consultants over a period that GrainCorp understands was approximately one year to establish an auction system and while authorised by the ACCC the auction process was abandoned at great cost and expense, as it proved ineffective among some of the world's largest coal exporters.

The ACCC's 2005 final determination authorising the Port Waratah Coal Services Limited Medium Term Capacity Balancing System notes the result that despite an auction system being developed and authorised, it ultimately was never conducted due to a lack of participation by coal producers.

Other mechanisms that obviate slot transfers

When providing commentary on FOB sales, AWB did not acknowledge the important role such sales play in grain trading internationally.

Speculation / hoarding of elevator capacity

The GrainCorp submission to the ACCC dated 18 April 2011 deals with the matter of booking speculation.

On the matter of 'hoarding', AWB does not explain why GrainCorp, which derives significant income from handling grain through its port elevators, would wish to restrict the tonnage it handles and deprive itself of revenue.

Under the current GrainCorp booking system, risk is shared between the exporter (booker) and GrainCorp (service provider). The booking fee of $5/T, provides a level of discipline against speculation, as it is a non-refundable and non-transferable, sharing risk equitably between the booker and service provider.

The effectiveness of this system is demonstrated in the fact that forward elevation bookings are, in the third year of operation of the system, now largely equivalent to estimated actual grain exports.

- In 2008/09 the initial elevator booked tonnes was over 10 million, by the end of the year, around 5.2 mmt had been shipped.
- In 2009/10, approximately 7.5 mmt of elevation capacity was booked at about 3.5 mmt was shipped.
- In 2010/11, forward elevation capacity bookings reached 8.3 mmt, and GrainCorp projects that up to 7.5 mmt will be elevated this shipping year.

Should elevators bookings become a transferable and a tradeable commodity, exporters would make speculative bookings at particular ports at times of peak demand, as;

- The discipline related to the non-transferability of bookings will be removed,
- They will be able to 'lay off' the current shared booking risk against potential gains made from booking trading.

Changes to the PTSP (5.3.3)

AWB claim that GrainCorp has not been applying the Protocols correctly, and as such additional compliance audits are required. AWB does not provide evidence to support its claim that GrainCorp has not been applying the Protocols correctly.

Conclusion

GrainCorp rejects the claim by AWB that it has not been correctly applying the Protocols, and thus should be subject to higher levels of regulatory intervention. AWB has provided no evidence to support its view that GrainCorp's export elevators are 'essential' infrastructure.

To the contrary, in Victoria, when assessing the need for regulation of access and pricing[6], the Essential Services Commission found that grain export elevators were not essential infrastructure, and as such, they recommended that regulation of the facilities cease from 1 October 2009.

AWB's calls for uniformity across all four port elevator service providers but does not take into account the fundamental market differences that exist between eastern Australia, South Australia and Western Australia, where each region has a different:

- Domestic – export market share, where around 50% of average grain produced in eastern Australia is consumed by domestic users
- Bulk-container export market share, where around 30% of average grain exported from eastern Australia is exported in containers
- Different grain quality and different asset and supply chain capabilities.

The imposition of a 'one-size-fits-all' regulatory regime will not benefit the industry in the long term. It will discourage investment in port elevator productivity, and in the capacity of the grain supply chain. It will also stifle innovation in port elevator service provision as the needs of the local market evolve.

Port of Portland P/L – 21 April 2011

The matters raised in the Port of Portland submission, specifically GrainCorp's decision not to operate vessel loading 24 hours per day, relate to GrainCorp's day-to-day operational management of GrainCorp port elevator assets.

[6] Grain Handling Regulation Review 2008 – 09http://www.esc.vic.gov.au/public/Grain/Regulation+and+Compliance/Decisions+and+Determinations/Review+of+Grain+Access+Regime+2008-09/Grain+handling+access+regime+review+2008-09.htm

GrainCorp has in place operational processes to efficiently manage its terminal elevators and these matters should not be considered by the ACCC in the context of the 2011 Port Terminal Services Undertaking, as they are not linked *to the provision of port elevator access to access seekers under the Undertaking*.

The decision to operate the Portland elevator on day shift only is related to the following;

- The speed at which customers are able to accumulate grain at the port, where it is not efficient to berth vessels and to load them at a rate that exceeds the rate at which grain is being transferred from up-country storage and received, as vessels would be at berth for longer than is necessary.
- The quantity of grain being loaded and the conditions under which grain is to be loaded, and
- The demand for vessel loading and the cost of vessel loading.

Importantly, customers are able to request additional shifts to expedite vessel loading. As evening and night shifts are more costly to run, customers often do not elect not to request 24-hour vessel loading.

GrainCorp believes that it efficiently balances the cost of providing elevation services, a customer's ability to request additional shifts, and the efficiency of service delivery at Portland. As circumstances change, such as an increase in demand for vessel loading, GrainCorp can modify shift patterns to suit what customers request.

Victorian Freight Logistics Council – 21 April 2011

The Victorian Freight Logistics Council (VFLC) submission to the ACCC, perhaps consistent with its role, actually does not address port access, or port elevator capacity allocation. GrainCorp notes that the VFLC do refer to;

- *"…a lack of logistical capacity…"* and
- *"…supply chain issues resulting from a bumper harvest, the flood events and heavy rain towards the end of 2010 and the beginning of 2011 have further exacerbated problems in the grain supply chain."*

The VFLC are correct in linking constraints on grain exports to logistical (rail and road) capacity. GrainCorp has highlighted this issue to the ACCC in its previous submissions.

GrainCorp again submits that a trading, auctioning or transfer between parties of elevation capacity will not assist the movement of grain from country storage to port in a timely and efficient manner and will in fact hinder this important export task.

Causes of current grain export delays

Grain exports from NSW and Victoria are currently suffering temporal delays due to;

a) The size of the logistical task of moving grain from country storage to port – the 2010/2011 export season is approximately double the average grain export task,

b) The movement out of the sector by significant numbers of road transport providers following extended periods of drought and production volatility in southern NSW and Victoria,

c) The cost of investing in rail capacity and the commercial uncertainty related to rail investment:

i. increased by demand volatility (linked to production volumes) and

ii. uncertainty over funding for rail infrastructure, potential line closures, condition of rail sidings, etc.

Grain Supply Chain Logistics Group proposal

The VFLC are proposing the formation of a Grain Supply Chain Logistics Group, similar to the Hunter Valley Coal Chain Co-ordinator to address a range of concerns.

At the time of this submission, the Council has not directly approached GrainCorp to discuss their proposal, nor has any information been forthcoming detailing how such a group would resolve the unwillingness of many parties to take on board the commercial risk GrainCorp has assumed through its annual commitment to rail transport, currently costing ~$40 million PA.

The establishment of such a co-ordinating body would involve agreement between competing grain exporters in relation to the allocation of capacity, as well as agreement between competing transport service providers.

Accordingly, it is likely that, as is the case in the Hunter Valley Coal Chain, any such arrangement would require an authorisation from the ACCC under the CCA, to ensure that the participants in the grain supply chain were not exposed to the risk of breaching the competition provisions in the CCA.

While GrainCorp is of course supportive of assisting its customers in the efficient export of grain, the risks raised by the VFLCC are outside the scope of this review by the ACCC.

Goodman Fielder Limited – 27 April 2011

The submission by Goodman Fielder Limited (GFL) contains a number of suggestions that would require;

1. A substantial restructure in the manner which GrainCorp's port elevator services are delivered, and
2. A significant increase in regulatory intervention and involvement that would place operational control of GrainCorp's port elevator assets into the hands of 'an independent third party'.

GrainCorp notes that much of what GFL has suggested is outside the scope of the relevant provisions of the CCA in relation to the draft 2011 Undertaking.

Context in which Goodman Fielders proposals are made

In their submission, GFL acknowledge that they do not have *"…any contractual relationship with GrainCorp for port terminal services."* The suggestions made by GFL about the manner in which port elevation capacity should thus be read in that context. That is, GFL are not a consumer of GrainCorp' port elevators services.

Speculative vessel slot booking

GFL claim that the current elevation capacity booking system encourages "speculative" booking, as exporters are able to;

a) Book in advance of making sales, and

b) Allow bookings without having a sales contract in place.

GrainCorp believes the decision by export traders to book elevation capacity, without having firm export sales, is not unreasonably 'speculative', as export traders need certainty of elevation capacity when they make related forward decisions in their grain business necessary for grain market to work effectively, including;

- Buying grain on a forward basis from growers before and during harvest against export parity prices, or the use of derivatives and the track market (with out necessarily having sold the grain),
- Selling grain on a forward basis to customers (without necessarily having acquired the grain) against views of export parity and the use of derivative or the track market, and
- The need to procure rail (and sometimes road) transport under long-term agreements before the harvest.

GFL view that the current level of speculation or forward booking of capacity will lead to inefficient use of port infrastructure. As outlined in our previous submissions to the ACCC, GrainCorp has noted that:

- The current $5/T booking fee provides an effective price signal that militates unreasonable speculation, and data provided in previous submissions to the ACCC supports GrainCorp's position, and
- The current port elevation booking system is fair, transparent and balances the need for forward looking commitments against encouraging speculation for short term gain (which would be the outcome from allowing transfer / trading of elevation capacity)
- Year to date, that no capacity has gone unexecuted

Goodman Fielder recommendations

GFL claim there are *"…barriers inhibiting fair and open access to vessel slots and preventing port capacity being fully utilised.",* without detailing what the barriers are, what is unfair about the current system, or providing data that supports the case that port capacity is not being fully utilised.

Contract in hand

On page one of their submission, GFL state that they run two-month tenders for the supply of wheat FOB, and then require a delivery period of 21 days. The proposition to require *"…a sales contract standing behind the request for a vessel."* is likely to be based upon GFL's experience as a grain buyer and processor, not as a grain trader. This buying pattern is different to the manner in which export grain-trading operations are undertaken.

Goodman Fielder also suggest*"…an independent body oversee the process…"* of both allocating port elevation capacity and ensuring that those wishing to book elevation capacity 'have a contract in hand' would not be appropriate given:

- It is not clear how those contracts could be verified and the dispute resolution mechanisms that would deal with such disputes,

- A sale contract may not represent an obligation to export grain as most sale contracts can be changed, for example by buying grain against the contract from another port or country or washing out the contract with the buyer if the grain market has moved,
- Furthermore, as outlined above a commitment by way of a sale contract only represents one component of commitments required by an export trader, other parallel commitments include grain and transport 'ownership'.

An 'independent authority' would represent a significant increase in regulatory intervention into the business operation of export traders, which would be counter to the Commonwealth Governments express desire in removing the single desk to reduce the regulatory burden on the sector, and to allow it to commercially 'normalise'.

Furthermore, by seeking an 'independent authority' to manage the port elevation booking system, GFL are proposing that operational control of GrainCorp's port elevator assets be placed in the hands of a regulator.

This would require an intrusive degree of regulation of a privately owned asset, akin to 'nationalisation' of assets, and is far beyond what is legitimate to ensure fair and reasonable access to the GrainCorp port elevators as required by the WEMA, and is contemplated by Part IIIA of the CCA.

Trading and on-selling vessel slots as a secondary market

GFL oppose the current 'first in, first served' booking system promotes speculation, but proposes that trading of elevation capacity be allowed.

As GrainCorp has submitted to the ACCC on a number of occasions, allowing transfer and trading or elevation capacity and the creation of a secondary market, will;

- Increase speculation, and
- Encourage exporters and other access seekers who are not grain exporters to focus on profiting from trading elevation rather than on exporting grain.

In this context, the position taken by GFL is contradictory. The evidence provided by GrainCorp in its recent submissions to the ACCC demonstrates that speculative bookings of elevation capacity have reduced to a point where bookings are broadly equivalent to estimated grain exports.

Allowing transfer and trading of elevation capacity will increase the incentive for exporters to act in a speculative manner.

The experience of CBH in Western Australia, referred to in their 1 April 2011 submission to the ACCC, wherein they propose that the auction system and a secondary market for elevation capacity has negatively affected both supply chain efficiency and created significant uncertainty, does not support the benefits proposed by GFL (and others) in support of the creation of a secondary market for elevation capacity.

Opening unused vessel slots

Goodman Fielder propose that exporters *"…require the party seeking access to enter into a sales contract at the latest 12 weeks before the first day of the vessel slot spread."* This approach would significantly affect the efficient operation of the grain market given:

- It will reduce the efficacy of the operation of forward grain market, by reducing certainty for participants to forward buy and sell grain from growers and others and contract transport,
- It will reduce flexibility in the grain chain, counter to other calls from the sector for 'greater flexibility, which would lead to a decrease in both grain exports and port infrastructure use, and
- GrainCorp is also not aware of any precedent in the international grains industry where such a restriction exists.

Notification of excess capacity

In its submission, GFL calls for an obligation on GrainCorp to advise all interested parties at the same time of any excess port terminal capacity that becomes available.

It appears that GFL is not aware that GrainCorp provides a daily update on available elevation capacity to customers (refer to page 9 of GrainCorp's Submission to the ACCC 18 April 2011). This is possibly understandable, as GFL is not a customer of GrainCorp's port elevator services.[7]

Conclusion

GFL's recommendations are not consistent with views of other parties in the industry and would require;

- A significant increase in regulatory intervention,
- The imposition of intrusive regulation of GrainCorp's port elevator assets through Government regulation, far beyond that contemplated by the WEMA or the CCA,
- The imposition of onerous commercial requirements on other port elevator users,
- Significant changes to the manner in which all users of GrainCorp's port assets would conduct their grain export activities.

[7] Page 1, paragraph 5 of Goodman Fielder Submission to the ACCC Draft Decision on GrainCorp's Proposed 2011 Undertaking - 27 April 2011

Australian Grain Exporters Association (AGEA)- 1 May 2011

The AGEA submission was provided to GrainCorp by the ACCC on 2 May 2011. The submission contains a number of suggestions put to the ACCC in previous submissions.

The submission does highlight however the mixed and differing positions in the various submissions.

Objective of the access Undertaking

The AGEA submission asserts*"…the objective of port access arrangements must be to promote an efficient supply chain."*

Based on the successful operation of the current systems since the removal of the single wheat desk in 2008, and the lack of empirical evidence to the contrary in eastern Australia, GrainCorp believes that the grain supply chains in eastern Australia are operating efficiently.

In addition, there is no statutory basis for the statement as to the "objective" of the port access arrangements is to promote an efficient supply chain as opposed to promoting non-discriminatory access at export wheat terminals.

Points raised on page 1 of the AGEA submission

GrainCorp provides the following responses to the dot points raised in the Introduction section of the AGEA submission;

A transparent shipping stem

> As required by the Wheat Export Marketing Act 2008 and the terms of the access Undertaking, GrainCorp is required to publish a shipping stem on the company web site. This shipping stem contains a significant amount of detail that is updated daily, and GrainCorp fails to see how it could be more 'transparent'. (Appendix 1 – Shipping Stem).

Greater flexibility in ability to transfer shipping slots across ports, time, and counterparties

> Under the current GrainCorp Port Protocols, exporters are able to move booked elevation capacity between ports and across elevation periods. This provides customers significant flexibility, allowing them to manage their port elevation risk exposure efficiently and effectively.
>
> As GrainCorp has submitted to the ACCC in previous submissions, and in this submission, allowing the 'transfer' of elevation capacity between exporters is the same as allowing trading of elevation capacity. Should transfer of capacity be required, an 'informal auction' of that capacity will develop, in turn encouraging exporters to make capacity bookings where they seek to derive profit from speculative activity.
>
> GrainCorp believes it is not the purpose of the Undertaking to prescribe operational aspects of service delivery where they do not relate to the provision of access in a non-discriminatory manner. The manner in which elevation capacity is allocated and managed has not been either inefficient or discriminatory, and based on available experience and data, the current system should not be amended.

Consistency in key terms, conditions, and flexibility across the various port terminal operators

GrainCorp understands AGEA's desire for there to be one set of forms and terms in Australia, but does not agree with this approach as:

- This goes beyond the terms of the legislation and is also inconsistent with the principles of competition between parties. By way of analogy, AGEA members do not provide the same terms and conditions to grower customers and it would be anti-competitive to do so,
- This will create inflexibility and does not take into account the differences in the grain market in eastern Australia compared to the other states, and
- This is not within the ambit of the Undertaking and it is not appropriate to require an infrastructure owner to supply services from different infrastructure in different locations under the same terms and conditions as other service providers in other locations.

GrainCorp believe that seeking such an outcome through the Undertaking is inappropriate and would represent a significant increase in the application of the regulations.

Improved information around capacity and stocks at port

GrainCorp currently provides a daily shipping stem, a daily email to customers about available elevation capacity[8] and posts a weekly summary of stocks at port on the company web site.[9] GrainCorp believe that this level of transparency is sufficient.

Flexibility in shipping slots

The AGEA submission states "AGEA does not support tradeable slots via some form of formalised exchange/market. Rather, the AGEA position is about improving the flexibility of efficiency of the allocation and execution of slots."[10]

In their submission, the AGEA has provided no evidence to support their contention that the allocation of elevation capacity is inefficient, or that execution of booked capacity will be made more efficient by allowing 'transfer' of capacity between parties.

GrainCorp believes the allocation process is both transparent and efficient. Applications for bookings are processed in an average of 5 business days (Appendix 2 – ACCC Compliance Report 31 March 2011), and as exporters are allowed to book forward for the whole shipping year (1 October to 30 September) there is a high degree of certainty.

As GrainCorp has noted in this and previous submissions to the ACCC, requiring 'transfer' of elevation capacity will lead to trading of capacity and the formation of a secondary market. The AGEA oppose the formation of a 'formal' market, however in supporting transfer of capacity between parties, it is inevitable that an 'informal' market place will develop.

The AGEA however also propose a set of formal 'business rules' that would govern the 'informal' market by stating, "AGEA recognise that business rules need to be put around…transfer options."[11]

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[8] Refer to page 9 of GrainCorp's Submission to the ACCC 18 April 2011.

[9] GrainCorp is required to do this on a monthly basis by the Undertaking.

[10] Page 1, paragraph 8, AGEA submission to the ACCC 1 May 2011.

[11] Page 2, paragraph 2, AGEA submission to the ACCC 1 May 2011.

In making this proposal, the AGEA is acknowledging that a secondary market would emerge and acknowledges the complexity and uncertainty that a secondary market for elevation capacity would be created.

The AGEA also submit that *"There are real benefits for the port terminal operators as it would reduce the risk that capacity is lost or unused at peak times."* GrainCorp does not agree with this position, and notes that this year, a year in which demand is at peak levels, no booked elevation capacity has been 'lost or unused' year to date.

The AGEA submission does not provide any substantive guidance as to the manner in which the transfer of vessel loading slots would be managed, and indeed highlights the problematic nature of such a task, by referring to the need for business rules, but providing no details on them.

Shipping stem fees

The AGEA submit that non-infrastructure owners are placed at a disadvantage by having to compete with the trading operations of companies that own port elevators. In doing so, the AGEA is seeking to create the impression that GrainCorp is focused solely on grain trading income.

This is not correct, as GrainCorp derives ~90% of its earnings from non-grain trading activities, including the provision of port elevation services.

GrainCorp believes that it is not appropriate to consider the matters raised by the AGEA without acknowledging the considerable cost of owning and operating port elevators.

In GrainCorp's case, the annual cost of maintaining and operating the company's port elevators, regardless of the export task, is in excess of $50 million per annum.

Thus, if GrainCorp handles 2.5 million tonnes of its own export bookings, the fixed allocated cost of these bookings is >$20/T, more than four times the $5/T charged to other customers.

Additionally, if GrainCorp does not allow bookings made or potentially made by other exporters, the company will forego significant earnings potentially greater than the earnings derived from grain trading.

Thus, GrainCorp has no commercial incentive to block competing grain exporters from using GrainCorp port elevators. On the contrary, GrainCorp has every commercial incentive to maximise the use of port elevators, as to not do so denies the company significant revenue.

The AGEA proposition to create a national escrow account into which all port elevator booking fees would be deposited lacks a sound economic basis and is not realistic for a publicly listed company such as GrainCorp.

Accountability

The request by the AGEA for the inclusion of dispatch – demurrage provisions in the access Undertaking is inappropriate given the separated (open access) operating model in Australia where GrainCorp handles grain for multiple customers and does not mange the whole supply chain.

This issue was dealt with in response to the AWB submissions set out above.

Ring fencing

This matter was been dealt with by the ACCC in the Draft Decision and in relation to the 2009 Undertaking.

Other establishment provisions of the Undertaking

The access Undertaking already contains a number of processes for amendment, should factors such as changes to relevant regulations occur. No additional amendment provisions are required.

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4. Confidential Submissions

GrainCorp has been advised by the ACCC that the ACCC has received two confidential submissions on the draft decision.

GrainCorp has requested that the ACCC either;

a) Require a redacted version of these submissions to be published on the ACCC web site, or

b) Supply GrainCorp with a copy of these submissions with some form of confidentiality restriction such as only to be reviewed by our external lawyers or some other mechanism that protects any legitimate concerns that those submitting parties have, but thereby allows GrainCorp the reasonable ability to respond to any relevant matters to the ACCC .

GrainCorp does not believe that it is procedurally fair for GrainCorp to be placed in a position that it may have to respond to an amendment notice on the draft undertaking issued by the ACCC following the ACCC making a decision to issue such a notice based on material that GrainCorp has not seen.

In the absence of a response to either points a) or b), in the interests of allowing GrainCorp an opportunity to respond to those submissions and have a reasonable ability to address matters that may or may not be factual or relevant, GrainCorp believes that the content of these submissions should be disregarded or given no weight.

GrainCorp's response to issues raised in the Confidential Submissions Summary (**Confidential Submissions Summary)**, as provided by the ACCC,is set out below.

Allocation of Slots

In regard to allocation of slots, submitters have proposed the following.

- *That an independent body manages the allocation of slot bookings and receival and management of fees relating to slot bookings*.

GrainCorp does not agree that an independent body would be more suitable to manage the allocation of slots at GrainCorp's port elevator terminals and indeed it would seem this suggestion is beyond the scope of the CCA.

As stated above in response to the submission by GFL:

1. An independent body would represent an increase in regulatory intervention that is counter to the Commonwealth Government's express desire to reduce the regulatory burden on the sector, and
2. The use of an independent body is inappropriately intrusive and goes beyond what is legitimate to ensure fair and reasonable access to port elevators as required by the WEMA and as contemplated by Part IIIA of the CCA.

The introduction of a new, independent body to manage the allocation of slots is unnecessary and would only drive up costs to which would be passed back to growers.

- *That defined terms, conditions and costs of loading vessels be in place prior to bookings being made available*.

Defined terms and conditions of the allocation of slots are set out in GrainCorp's current Bulk Wheat Port Terminal Services Agreement, Bulk Grain Port Terminal Services Agreement and the Protocols which comprehensively set out the manner in which elevation capacity can be booked and executed.

- *That slot booking windows are published in an adequate and timely manner*.

As noted in response to the AGEA submission, GrainCorp updates its shipping stem which contains a significant amount of detail *daily* on the company website.

- *That appropriate anti-hoarding provisions are enforced*.

The terms and conditions which currently apply to the allocation and execution of shipping slot bookings deal effectively with any perceived risk that exporters may try to hoard capacity. GrainCorp has provided its comments above in response to the AWB submission.

Transferability of Slots

The Confidential Submission Summary contained the following "wish list" of proposals:

- That slots are able to be transferred across ports,
- That slots are able to be transferred across time frames,
- That slots are able to be transferred across counterparties,
- That counterparties must have a current Storage and Handling Agreement with GrainCorp,
- That all rights and obligations owing to the holder of the slot are transferred to the receiver.

GrainCorp does not accept the view that *"The current system requires grain exporters to make forward commitments for slots well before grain is sold, grain quality is known or even purchased from farmer"* for the following reasons:

- Grain exporters can currently book available elevation capacity at any time.
- The current port protocols provide export traders flexibility to roll forward their booked capacity or change ports.
- As outlined in this submission many export traders want to book export capacity before they sell their grain given they have grain and transport ownership.
- The transfer of elevation capacity will most likely further reduce available elevation capacity to genuine export traders, as forward shipping elevation capacity will be booked for 'trading' and 'speculative' purposes.

The transferability of booked elevation capacity would not alleviate the supply chain factors currently affecting the grain export task, rather it would lead to the formation of an informal secondary 'trading' market where elevation capacity would be sold and bought. This will create the problems, complexity and additional costs outlined in our previous submissions and in this submission.

Furthermore, the proposed transfer mechanisms for elevation capacity (in addition to the current flexible protocols) would create additional practical and logistical problems in managing the export task, which GrainCorp notes the confidential submissions have not provided any recommendations to resolve.

For example:

- **Slots are able to be transferred across counterparties.** The transfer of elevation capacity across counterparties would require new practices of indemnification and contractual arrangements. Most importantly, as GrainCorp has highlighted in earlier submissions, the transferability would:
    - Necessitate the creation of a value for the relevant loading slot at a particular time and place given differing loading demands in harvest seasons. Some submissions described this as an "informal" system, but it would very quickly become a secondary market and speculative trading of elevation capacity would occur as GrainCorp has indicated.
    - As speculators would most likely block out the most desirable shipping times (being one of the very things that export traders have feared), this would inevitably lead to an auction system being required.
- **Slots are able to be transferred across ports.** Elevation capacity bookings are based on specific sized vessels, the relevant port characteristics, and the accumulation of grain at the relevant terminal to load the vessel. There would need to be complex and rigid rules in place for this and significant disruption to the export task in the absence of those clear rules.
- **Slots are able to be transferred across timeframes.** Again there would need to be clear rules and the operation of this would need to occur a reasonably long period of time out to allow the accumulation task to match the changed vessel.

It is the inevitability of this that GrainCorp again highlights, along with the concern that grain growers and the various State and Federal Governments are not aware that requiring the transfer / trading of elevation capacity will lead to the bidding up of all elevation capacity, with consequent increased costs being passed back to all grain growers (not just relating to wheat, as the system would have to apply to all grains).

Treatment of Booking Fees/Penalties

Submitters have stated there is a "fundamental flaw" under the current conditions whereby all BHC's, including GrainCorp, have the ability to book slots with no real penalty resulting from non-performance.

The Confidential Submissions Summary includes the following proposals.

- *That agreed booking fees are paid by all participants across all GrainCorp ports into an escrow/trust account managed by the independent body.*
- *That agreed charges resulting from non-performance by an exporter (excluding GrainCorp) result in forfeiture to GrainCorp.*
- *That agreed charges resulting from non-performance by GrainCorp result in forfeiture to an agreed charity/industry goodwill recipient.*

As stated above in response to the AGEA submission:

- GrainCorp has no commercial incentive to block out other exporters from utilizing the port terminals,
- GrainCorp incurs significant costs in maintaining and operating port terminals and the fixed allocated cost of handling the bookings of its own Trading Division is much higher than the fee charged to other customers, and
- The proposition to create a national escrow account into which all port elevator booking fees would be deposited, lacks a sound or rational economic or legal basis under the CCA.

Demurrage and Dispatch

Submitters consider that appropriate demurrage/dispatch clauses need to be created and included within the GrainCorp's 2011 Port Access Undertakings in line with comparative global grain industry participants.

As noted above in response to the AGEA and AWB submissions, demurrage/dispatch provisions are **not appropriate** because they are inconsistent with the separated (open access) model that exists in Australia which is different to other jurisdictions, for example the USA, where the owner of the port elevator normally owns all the grain it handles, and manages the whole inbound supply chain.

Submitters have stated the current Undertakings have the effect of misaligning risk and control. GrainCorp is not in a position to manage demurrage/dispatch risk, as GrainCorp does not own the majority of the grain shipped from its port terminals or manage the inbound supply chain.

Ring Fencing

Submitters consider that GrainCorp's trading division has unfair access to commercial information not available to the rest of the industry, and as such have requested that ring fencing measures be put in place.

Submitters also requested that, if the ACCC maintains their position and does not enforce ring fencing provisions, information available to GrainCorp's marketing arm be made available to the industry as it comes to hand to level the playing field. The type of information the submitters have requested includes:

- *Daily harvest receival volumes and qualities.*
- *Individual exporter stock holdings by quality and location.*
- *Warehoused stocks by grower by quality and location.*
- *Quality of grain being loaded at each port.*

This matter has been dealt with by the ACCC in its Draft Decision. Significant information has been provided to the ACCC previously by GrainCorp in submission in relation to the 2009 Undertaking.

GrainCorp maintains that sufficient information is available on the shipping stem, and that GrainCorp's Trading Division has no ability to gain a competitive benefit from any information it receives which is not available on the shipping stem, published in other parts of the GrainCorp web site (such as weekly closing stocks at port), or private information sources.

These matters were also extensively explored by the recent Productivity Commission on export wheat marketing[12], which arrived at a view that ring fencing was not necessary or desirable, as summarised below:

- *In seeking to achieve competitive outcomes, ring fencing should be should be considered as more of a 'last resort' than a first option for a developing market.....*

  Further, the Commission considers that there are benefits to be gained from vertical integration in the export of bulk wheat...there is sufficient contestability in the supply chain... to suggest that the need for ring fencing is weak for vertically integrated businesses involved in bulk wheat exports. In addition most of Australia's overseas competitors are vertically integrated and to deny such benefits in the Australian context could place domestic traders at a disadvantage relative to other global players. [Page 163]

[12]Productivity Commission Inquiry Report, Wheat ExportMarketing Arrangements, No. 51, 1 July 2010

Reporting

Submitters consider that increased port loading efficiencies would result if GrainCorp was required to publish relevant performance measures and key stock at port information.

In the Confidential Submissions Summary the ACCC gives the following examples of the information requested by the submitters:

- *Weekly stock at port report by quality and volume noting excess capacity available.*
- *Port performance (i.e. average daily receival rates, assigned loading dates)*
- *Capacity versus accepted bookings versus actual tonnes shipped by month.*
- *Port congestion notifications (i.e. vessel survey failures, nominations rejected, port receival block-outs)*

GrainCorp's position in relation to the issue of reporting and the publication of key performance indicators has been dealt with in detail above in response to the AWB submission.

However, it is important to note that;

- GrainCorp currently publishes weekly stocks at port,
- Port performance statistics are currently reported on a monthly basis on the GrainCorp web site. Daily monitoring of grain receival rates at port would increase administration costs, but provide no tangible efficiency benefit. The current shipping stem provides significant information on loading performance.
- The current shipping stem provides this information.
- GrainCorp is in daily contact with customers that are in the act of accumulating cargos, or are preparing to accumulate cargos. Where port congestion occurs, this is communicated to the relevant parties. Year to date, only one port 'block out' has occurred.

5. Conclusion

The wide ranging views put forward in submissions responding to the ACCC's draft decision indicate there are *no clear views* as to how to implement a workable capacity transfer / trading system without;

- Increasing costs which will ultimately be passed back to growers,
- Increasing speculation on the part of capacity bookers, which will result in an increased in unused elevator capacity and a decrease in efficiency at GrainCorp's port elevators,
- An additional layer of complexity and therefore uncertainty for customers seeking supply of grain from eastern Australia, and
- Ultimately, damage to eastern Australia's grain export industry.

The AGEA's submission provided on 22 April 2011 to the ACCC recognises the complexity of any such transfer system by stating that it would need business rules, but does not provide any guidance on them. This highlights the practical difficulties in doing so and the fraught nature of any such regulatory intervention.

GrainCorp Operations Limited

6 May 2011

Appendix 1

GrainCorp Shipping Stem – Friday 6 May 2011

GRAINCORP SHIPPING STEM

GrainCorp Operations Ltd ABN 52003875401

SHIPPING STEM

As At Friday, 6 May 2011

									Commodity								
GC Fin Year	Month	Terminal	Assigned Load Date	Vessel Name	Exporter	Workflow reference	CNA Received	CNA Assessment Complete	Status	Wheat	Barley	Woodchip	Sorghum	Peas	Magnesium	Canola	Cottonseed	Grand Total
2010/11	5	Mackay	21/05/2011	KUNIANG	GSPL	4490	22/02/2011 7 54	22/02/2011 12 49	Accepted					13,450				13,450
			25/05/2011	MY ATLANTIC SPIRIT	GLEN	4468	21/02/2011 14 47	21/02/2011 15 17	Accepted				30,000					30,000
		Mackay Sum											**30,000**	**13,450**				**43,450**
		Gladstone	19/05/2011	TBA	QMAG	Magnesium	4/05/2011 13 53	4/05/2011 15 30	Accepted						12,000			12,000
			25/05/2011	TBA	JKIN	3244	19/11/2010 10 35	22/11/2010 8 32	Accepted					6,000				6,000
		Gladstone Sum												**6,000**	**12,000**			**18,000**
		Fisherman Islands	9/05/2011	PACIFIC FANTASY	AWB	4779	15/03/2011 11 17	15/03/2011 12 43	Accepted	6,000								6,000
			14/05/2011	CLIPPER TRADER	CBH	4102	25/01/2011 14 46	25/01/2011 16 31	Accepted	29,000								29,000
			15/05/2011	TBA	GCOP	5258	27/04/2011 19 36	28/04/2011 8 40	Accepted	23,000								23,000
			18/05/2011	LORD BYRON	GCOP	4381	14/02/2011 10 57	14/02/2011 17 19	Accepted	17,000								17,000
			23/05/2011	NINGBO PIONEER	AWB	5229	21/04/2011 9 43	27/04/2011 7 56	Accepted	22,000								22,000
			24/05/2011	TBA	AWB	5180	14/04/2011 13 47	14/04/2011 16 02	Accepted				12,000					12,000
			26/05/2011	ATLANTIC STAR	CARG	5198	15/04/2011 14 38	18/04/2011 9 10	Accepted				10,000					10,000
			27/05/2011	TBA	QCOT	2731	28/09/2010 9 05	28/09/2010 15 09	Accepted								25,000	25,000
						5040	6/04/2011 10 58	6/04/2011 16 36	Accepted								5,000	5,000
				NINGBO PIONEER	GLEN	4207	3/02/2011 18 39	4/02/2011 8 50	Accepted	20,000								20,000
		Fisherman Islands Sum								**117,000**			**22,000**				**30,000**	**169,000**
		Carrington	2/05/2011	IKAN TERBANG	CHS	5194	15/04/2011 11 44	18/04/2011 9 06	COMPLETED	4,750								4,750
					GCOP	5024	5/04/2011 8 40	6/04/2011 11 38	COMPLETED	11,820								11,820
			3/05/2011	POWHATAN	CHS	2226	23/06/2010 14 00	23/06/2010 14 17	LOADING	33,600								33,600
					GSPL	3437	8/09/2010 15 56	8/09/2010 16 47	LOADING	20,000								20,000
			4/05/2011	OCEAN PHOENIX	AWB	2125	27/10/2010 13 42	27/10/2010 16 44	Accepted	14,000								14,000
			8/05/2011	KUNIANG	ETG	3048	9/09/2010 15 41	9/09/2010 15 41	Accepted	5,000								5,000
					GCOP	2141	7/06/2010 12 34	7/06/2010 15 58	Accepted	15,000								15,000
				CHIROS TRINITY	CHS	2423	6/08/2010 16 56	9/08/2010 8 22	Accepted	28,250								28,250
			21/05/2011	LORD BYRON	GCOP	2135	7/06/2010 12 29	7/06/2010 15 52	Accepted	10,000								10,000
						2142	7/06/2010 12 36	7/06/2010 12 36	Accepted	9,600								9,600
			25/05/2011	THOR ENTERPRISE	TOUA	3949	20/01/2011 12 12	20/01/2011 14 42	Accepted	38,500								38,500
			26/05/2011	TIAN ZHU GO	CARG	3188	17/11/2010 10 10	17/11/2010 11 58	Accepted	20,000								20,000
			27/05/2011	TBA	ETG	4282	8/02/2011 13 28	9/02/2011 10 37	Accepted				10,000					10,000
					QCOT	2164	8/06/2010 11 24	8/06/2010 11 30	Accepted	14,000								14,000
				VITAPRIDE	AWB	5275	28/04/2011 13 42	29/04/2011 8 30	Accepted	40,000								40,000
			29/05/2011	TBA	CHS	5367	4/05/2011 18 04	6/05/2011 8 43	Accepted	17,000								17,000
		Carrington Sum								**281,520**			**10,000**					**291,520**
		Port Kembla	4/05/2011	SANKO GALAXY	AWB	2117	7/06/2010 12 11	7/06/2010 15 18	COMPLETED	35,000								35,000
			6/05/2011	CAROL	CBH	2569	2/09/2010 6 21	3/09/2010 8 49	Accepted							26,000		26,000
			7/05/2011	CHIROS TRINITY	GCOP	2908	20/10/2010 12 41	20/10/2010 13 28	Accepted	17,000								17,000
			8/05/2011	SPA MIRA	GLEN	2635	10/09/2010 8 36	10/09/2010 8 36	Accepted	25,000								25,000
				SURYAWATI	GCOP	5042	6/04/2011 12 21	7/04/2011 11 34	Accepted		15,000							15,000
			10/05/2011	DARYA SHREE	ETG	5038	5/04/2011 16 53	6/04/2011 11 53	Accepted							13,000		13,000
				ID TIDE	GCOP	2441	9/08/2010 18 21	11/08/2010 8 29	Accepted	40,000								40,000
			12/05/2011	MILLION TRADER 1	CARG	2807	11/10/2010 17 43	12/10/2010 11 13	Accepted	70,000								70,000
			18/05/2011	LORD BYRON	GCOP	5254	27/04/2011 19 10	28/04/2011 8 28	Accepted		20,000							20,000
			19/05/2011	LORD BYRON	GCOP	5374	4/05/2011 18 21	5/05/2011 9 26	Accepted		10,000							10,000
			21/05/2011	PALAU	AWB	2732	28/09/2010 9 37	28/09/2010 15 11	Accepted	30,000								30,000
			23/05/2011	ANNA S	CARG	2558	1/09/2010 16 13	1/09/2010 16 37	Accepted		40,000							40,000
			31/05/2011	TIAN ZHU GO	CARG	2808	11/10/2010 17 46	12/10/2010 11 11	Accepted	30,000								30,000
		Port Kembla Sum								**247,000**	**85,000**					**39,000**		**371,000**
		Geelong	3/05/2011	SURYAWATI	GCOP	2835	14/10/2010 18 02	15/10/2010 8 18	COMPLETED		40,000							40,000
			6/05/2011	YONG JAI	ETG	3047	3/11/2010 18 29	4/11/2010 8 11	Accepted		50,000							50,000
			7/05/2011	ORNAK	ETG	3128	9/11/2010 12 30	9/11/2010 12 30	Accepted							20,000		20,000
			10/05/2011	PAN BLESS	ETG	2629	9/09/2010 15 41	9/09/2010 15 41	Accepted	25,000								25,000
			13/05/2011	KEN RYU	GLEN	5112	8/04/2011 14 23	11/04/2011 8 40	Accepted		5,000							5,000
						5104	8/04/2011 11 51	11/04/2011 8 30	Accepted		4,100							4,100
			16/05/2011	FOREST HARMONY	SPEM	woodchip	5/05/2011 14 54	5/05/2011 14 55	Accepted			28,000						28,000
			18/05/2011	TORM ANTWERP	GCOP	2836	14/10/2010 18 03	15/10/2010 8 19	Accepted	35,000								35,000
			21/05/2011	VOSCO SKY	EMGA	2791	7/10/2010 17 00	7/10/2010 17 22	Accepted		30,000							30,000
			27/05/2011	TBA	GCOP	4732	9/03/2011 7 56	10/03/2011 17 44	Accepted		25,000							25,000
			28/05/2011	GRAIN HARVESTER	GLEN	4996	1/04/2011 15 53	4/04/2011 10 08	Accepted	25,000								25,000
			31/05/2011	TBA	GLEN	3091	5/11/2010 14 32	5/11/2010 14 42	Accepted		50,000							50,000
			(blank)	TBA	AWB	2694	24/09/2010 14 30	24/09/2010 16 22	Accepted	50,000								50,000
						3130	9/11/2010 12 52	9/11/2010 12 52	Accepted	25,000								25,000
					PENT	2089	7/06/2010 12 03	7/06/2010 14 19	Accepted		35,000							35,000
		Geelong Sum								**160,000**	**239,100**	**28,000**				**20,000**		**447,100**
		Portland	4/05/2011	DARYA SHREE	ETG	4988	31/03/2011 15 34	1/04/2011 9 36	Accepted							18,000		18,000
			14/05/2011	TBA	GCOP	5287	29/04/2011	2/05/2011 8 38	Accepted	10,000								10,000
			18/05/2011	AURORA LIGHT	CHHW	woodchip	6/05/2011 8 00	6/05/2011 8 27	Accepted			15,200						15,200
			21/05/2011	TORM ANTWERP	GCOP	2902	20/10/2010 12 25	20/10/2010 13 23	Accepted	15,000								15,000
			25/05/2011	ORNAK	ETG	5218	20/04/2011 12 16	21/04/2011 8 29	Accepted							12,000		12,000
			27/05/2011	TBA	QCOT	3198	17/11/2010 11 20	17/11/2010 12 07	Accepted	25,000								25,000

GrainCorp advise that the load dates shown are indicative only and are subject to change

GRAINCORP SHIPPING STEM

GrainCorp Operations Ltd ABN 52003875401

GC Fin Year	Month	Terminal	Assigned Load Date	Vessel Name	Exporter	Workflow reference	CNA Received	CNA Assessment Complete	Status	Commodity								
										Wheat	Barley	Woodchip	Sorghum	Peas	Magnesium	Canola	Cottonseed	Grand Total
2010/11	5	Portland	28/05/2011	TBA	AWB	3224	17/11/2010 15 47	17/11/2010 16 41	Accepted		28,000							28,000
		Portland Sum								**50,000**	**28,000**	**15,200**				**30,000**		**123,200**
	5 Sum									**855,520**	**352,100**	**43,200**	**62,000**	**19,450**	**12,000**	**89,000**	**30,000**	**1,463,270**
	6	Mackay	(blank)	TBA	GLEN	4469	21/02/2011 14 51	21/02/2011 15 23	Accepted				14,000					14,000
					PENT	3458	14/12/2010 13 04	14/12/2010 14 27	Accepted				25,000					25,000
		Mackay Sum											**39,000**					**39,000**
		Fisherman Islands	(blank)	TBA	AWB	2101	7/06/2010 12 05	7/06/2010 14 55	Accepted	20,000								20,000
					CBH	3506	17/12/2010 2 36	17/12/2010 9 46	Accepted	25,000								25,000
					GCOP	3651	22/12/2010 16 14	22/12/2010 17 04	Accepted	40,000								40,000
						4368	11/02/2011 18 27	14/02/2011 10 41	Accepted	23,000								23,000
						4943	24/03/2011 12 16	25/03/2011 10 49	Accepted	4,000								4,000
					PENT	2094	7/06/2010 12 02	7/06/2010 14 58	Accepted	25,000								25,000
						3317	30/11/2010 14 09	30/11/2010 14 42	Accepted	3,000								3,000
					QCOT	4230	4/02/2011 16 42	7/02/2011 8 51	Accepted	16,000								16,000
						4720	9/03/2011 18 06	10/03/2011 17 09	Accepted								30,000	30,000
						4804	24/03/2011 8 45	24/03/2011 9 01	Accepted	14,000								14,000
					Viterra	5039	6/04/2011 12 23	6/04/2011 16 37	Accepted								25,000	25,000
		Fisherman Islands Sum								**170,000**							**55,000**	**225,000**
		Carrington	(blank)	TBA	AWB	2734	28/09/2010 9 49	28/09/2010 15 14	Accepted	30,000								30,000
					CARG	2709	24/09/2010 17 16	24/09/2010 17 16	Accepted	29,000								29,000
						3189	17/11/2010 10 13	17/11/2010 11 59	Accepted	45,000								45,000
					CHS	4255	7/02/2011 13 36	8/02/2011 8 46	Accepted	7,600								7,600
					GCOP	3898	14/01/2011 5 53	17/01/2011 11 48	Accepted	18,800								18,800
						4008	21/01/2011 17 47	24/01/2011 8 37	Accepted	17,500								17,500
						4010	21/01/2011 18 00	24/01/2011 8 46	Accepted	10,000								10,000
					Viterra	2592	6/09/2010 14 56	7/09/2010 8 25	Accepted	30,000								30,000
		Carrington Sum								**187,900**								**187,900**
		Port Kembla	(blank)	TBA	AWB	2733	28/09/2010 9 47	28/09/2010 15 12	Accepted	30,000								30,000
					CBH	5295	29/04/2011	2/05/2011 8 13	Accepted							9,000		9,000
						5294	29/04/2011	2/05/2011 8 12	Accepted							5,000		5,000
					ETG	2491	19/08/2010 10 42	19/08/2010 0 57	Accepted	36,000								36,000
					GCOP	2444	9/08/2010 18 31	11/08/2010 8 25	Accepted	10,000								10,000
						2443	9/08/2010 18 28	11/08/2010 8 27	Accepted	40,000								40,000
						2435	9/08/2010 18 03	11/08/2010 8 35	Accepted		25,000							25,000
					GLEN	2577	3/09/2010 17 10	6/09/2010 12 04	Accepted		30,000							30,000
						3079	5/11/2010 11 45	5/11/2010 12 05	Accepted		55,000							55,000
						3158	12/11/2010 10 59	12/11/2010 14 35	Accepted	25,000								25,000
		Port Kembla Sum								**141,000**	**110,000**					**14,000**		**265,000**
		Geelong	(blank)	TBA	AWB	3131	9/11/2010 12 54	9/11/2010 12 54	Accepted	40,000								40,000
						3227	18/11/2010 17 23	19/11/201 06 34	Accepted	35,000								35,000
					CARG	3200	17/11/2010 11 22	17/11/2010 12 09	Accepted	40,000								40,000
					CBH	2567	2/09/2010 18 21	3/09/2010 8 46	Accepted	41,000								41,000
					EMGA	2782	7/10/2010 17 00	7/10/2010 17 22	Accepted	20,000								20,000
					GCOP	2837	14/10/2010 18 05	15/10/2010 8 20	Accepted	50,000								50,000
						3530	17/12/2010 16 54	20/12/2010 8 40	Accepted	9,000								9,000
						4929	23/03/2011 11 11	28/03/2011 9 57	Accepted	5,000								5,000
					Viterra	3067	4/11/2010 12 09	4/11/2010 14 58	Accepted	30,000								30,000
		Geelong Sum								**270,000**								**270,000**
		Portland	(blank)	TBA	AWB	2703	24/09/2010 14 56	24/09/2010 17 03	Accepted	50,000								50,000
					GCOP	2903	20/10/2010 12 28	20/10/2010 13 24	Accepted	50,000								50,000
		Portland Sum								**100,000**								**100,000**
	6 Sum									**868,900**	**110,000**		**39,000**			**14,000**	**55,000**	**1,086,900**
	7	Mackay	(blank)	TBA	GCOP	4185	1/02/2011 14 02	2/02/2011 8 42	Accepted				20,000					20,000
					GLEN	4501	22/02/2011 10 01	22/02/2011 12 57	Accepted	25,000								25,000
					PENT	3459	14/12/2010 13 08	14/12/2010 14 30	Accepted				25,000					25,000
		Mackay Sum								**25,000**			**45,000**					**70,000**
		Gladstone	(blank)	TBA	GLEN	5320	2/05/2011 16 28	3/05/2011 9 33	Accepted				30,000					30,000
		Gladstone Sum											**30,000**					**30,000**
		Fisherman Islands	(blank)	TBA	AWB	2123	7/06/2010 12 07	7/06/2010 15 21	Accepted	35,000								35,000
						2851	15/10/2010 16 13	15/10/2010 16 22	Accepted	19,000								19,000
					CBH	2661	15/09/2010 16 29	15/09/2010 16 29	Accepted	30,000								30,000
					GCOP	2137	7/06/2010 12 31	7/06/2010 15 54	Accepted	40,000								40,000
					PENT	3144	10/11/2010 10 25	10/11/2010 16 46	Accepted	25,000								25,000
					RIVB	4712	9/03/2011 13 45	9/03/2011 17 19	Accepted	5,000								5,000
					Viterra	2619	9/09/2010 12 02	9/09/2010 12 02	Accepted	19,000								19,000
		Fisherman Islands Sum								**173,000**								**173,000**
		Carrington	(blank)	TBA	AWB	2090	7/06/2010 12 01	7/06/2010 13 54	Accepted	35,000								35,000
						4054	24/01/2011 15 11	24/01/2011 16 44	Accepted	8,000								8,000
						4098	7/06/2010 12 16	7/06/2010 15 33	Accepted	16,000								16,000
					CARG	3190	17/11/2010 10 15	17/11/2010 12 00	Accepted	45,000								45,000
						4428	18/02/2011 9 36	21/02/2011 15 03	Accepted	20,000								20,000
					CHS	4923	23/03/2011 6 33	24/03/2011 18 01	Accepted	3,800								3,800

GRAINCORP SHIPPING STEM

GrainCorp Operations Ltd ABN 52003875401

									Commodity								
GC Fin Year	Month	Terminal	Assigned Load Date	Vessel Name	Exporter	Workflow reference	CNA Received	CNA Assessment Complete	Status	Wheat	Barley	Woodchip	Sorghum	Peas	Magnesium	Canola	Cottonseed	Grand Total
2010/11	7	Carrington	(blank)	TBA	ETG	5210	19/04/2011 11 42	20/04/2011 8 42	Accepted	5,000								5,000
					GCOP	2133	7/06/2010 12 25	7/06/2010 15 47	Accepted	23,750								23,750
					GSPL	4790	15/03/2011 13 35	17/03/2011 11 49	Accepted	43,000								43,000
					LDREY	2400	7/06/2010 12 00	7/06/2010 13 43	Accepted	12,000								12,000
						2402	7/06/2010 12 00	7/06/2010 13 43	Accepted	12,000								12,000
					TOUA	5361	4/05/2011 15 00	5/05/2011 9 00	Accepted	13,500								13,500
		Carrington Sum								**237,050**								**237,050**
		Port Kembla	(blank)	TBA	AWB	2735	28/09/2010 9 52	28/09/2010 15 13	Accepted	30,000								30,000
					CARG	3196	17/11/2010 11 09	17/11/2010 12 04	Accepted	50,000								50,000
					CBH	2184	11/06/2010 11 43	11/06/2010 12 34	Accepted	40,000								40,000
					GCOP	2445	9/08/2010 18 33	11/08/2010 8 24	Accepted	20,000								20,000
						2910	20/10/2010 12 45	20/10/2010 13 30	Accepted	30,000								30,000
						3473	15/12/2010 10 19	15/12/2010 10 44	Accepted	20,000								20,000
					GLEN	2576	3/09/2010 17 10	6/09/2010 12 04	Accepted	25,000								25,000
						3081	5/11/2010 11 53	5/11/2010 12 08	Accepted	55,000								55,000
		Port Kembla Sum								**270,000**								**270,000**
		Geelong	(blank)	TBA	AWB	3228	18/11/2010 17 24	19/11/2010 6 36	Accepted	40,000								40,000
					CARG	3202	17/11/2010 11 25	17/11/201 12 13	Accepted	40,000								40,000
					EMGA	3533	17/12/2010 17 22	20/12/2010 12 44	Accepted	20,000								20,000
					GCOP	2131	7/06/2010 12 23	7/06/2010 15 44	Accepted	45,000								45,000
						2134	7/06/2010 12 27	7/06/2010 15 50	Accepted	20,000								20,000
						2100	7/06/2010 12 05	7/06/2010 14 44	Accepted	7,750								7,750
						2907	20/10/2010 12 38	20/10/2010 13 27	Accepted	25,000								25,000
						3541	7/06/2010 12 03	7/06/2010 14 24	Accepted	20,000								20,000
					GLEN	2575	3/09/2010 17 10	6/09/2010 12 04	Accepted	50,000								50,000
						4898	21/03/2011 12 09	22/03/2011 11 03	Accepted	2,250								2,250
		Geelong Sum								**270,000**								**270,000**
		Portland	(blank)	TBA	CARG	3756	5/01/2011 18 35	6/01/2011 9 33	Accepted							25,000		25,000
					GCOP	5145	12/04/2011 9 54	12/04/2011 14 20	Accepted	10,000								10,000
					GLEN	4997	1/04/2011 15 59	4/04/2011 10 10	Accepted	25,000								25,000
					QCOT	2951	22/10/2010 11 41	22/10/2010 12 17	Accepted	10,000								10,000
						3201	17/11/2010 11 27	17/11/2010 12 16	Accepted	50,000								50,000
		Portland Sum								**95,000**						**25,000**		**120,000**
	7 Sum									**1,070,050**			**75,000**			**25,000**		**1,170,050**
	8	Mackay	(blank)	TBA	ETG	2492	19/08/2010 10 42	19/08/2010 0 57	Accepted	22,000								22,000
					PENT	4259	7/02/2011 15 03	8/02/2011 9 01	Accepted				25,000					25,000
		Mackay Sum								**22,000**			**25,000**					**47,000**
		Carrington	(blank)	TBA	AWB	2097	7/06/2010 12 03	7/06/2010 14 38	Accepted	45,000								45,000
					CARG	3194	17/11/2010 10 38	17/11/2010 12 01	Accepted	40,000								40,000
					CBH	2550	31/08/2010 18 30	1/09/2010 8 42	Accepted	40,200								40,200
					ETG	4448	18/02/2011 16 07	21/02/2011 10 41	Accepted	5,000								5,000
		Carrington Sum								**130,200**								**130,200**
		Port Kembla	(blank)	TBA	AWB	2737	28/09/2010 9 56	28/09/2010 15 21	Accepted	30,000								30,000
					CARG	3197	17/11/2010 11 13	17/11/2010 12 05	Accepted	50,000								50,000
					GCOP	2293	8/07/2010 12 05	8/07/2010 12 16	Accepted	25,000								25,000
						2433	9/08/2010 17 56	11/08/2010 8 40	Accepted	30,000								30,000
						2911	20/10/2010 12 48	20/10/2010 13 31	Accepted	51,000								51,000
						3532	17/12/2010 17 02	20/12/2010 8 46	Accepted	20,000								20,000
						3642	22/12/2010 15 52	22/12/2010 16 28	Accepted	9,000								9,000
					GLEN	3082	5/11/2010 11 58	5/11/2010 12 08	Accepted	55,000								55,000
		Port Kembla Sum								**270,000**								**270,000**
		Geelong	(blank)	TBA	AWB	2128	7/06/2010 12 17	7/06/2010 15 35	Accepted	10,000								10,000
						3229	18/11/2010 17 26	19/11/2010 6 36	Accepted	40,000								40,000
						4046	24/01/2011 15 05	24/01/2011 16 42	Accepted	35,000								35,000
					CARG	3203	17/11/2010 11 27	17/11/2010 12 14	Accepted	50,000								50,000
					EMGA	4091	25/01/2011 12 15	25/01/2011 13 14	Accepted		15,000							15,000
					GCOP	3670	24/12/2010 11 18	24/12/2010 11 44	Accepted	14,000								14,000
						5087	8/04/2011 9 50	11/04/2011 8 26	Accepted	8,000								8,000
					GLEN	4332	10/02/2011 16 21	11/02/2011 9 45	Accepted	36,000								36,000
						4901	21/03/2011 12 31	22/03/2011 11 03	Accepted	9,000								9,000
					TOUA	3921	17/01/2011 16 01	17/01/2011 16 27	Accepted	50,000								50,000
		Geelong Sum								**252,000**	**15,000**							**267,000**
		Portland	(blank)	TBA	GCOP	2905	20/10/2010 12 33	20/10/2010 13 25	Accepted	10,430								10,430
		Portland Sum								**10,430**								**10,430**
	8 Sum									**684,630**	**15,000**		**25,000**					**724,630**
	9	Mackay	(blank)	TBA	PENT	4260	7/02/2011 15 06	8/02/2011 9 06	Accepted				25,000					25,000
		Mackay Sum											**25,000**					**25,000**
		Port Kembla	(blank)	TBA	AWB	4290	8/02/2011 14 35	9/02/2011 10 41	Accepted	16,400								16,400
					CARG	3199	17/11/2010 11 16	17/11/2010 12 06	Accepted	55,000								55,000
					GCOP	2108	7/06/2010 12 06	7/06/2010 15 01	Accepted	15,000								15,000
						2111	7/06/2010 12 07	7/06/2010 15 06	Accepted	25,000								25,000
						2913	20/10/2010 12 54	20/10/2010 13 36	Accepted	50,000								50,000

GRAINCORP SHIPPING STEM

GrainCorp Operations Ltd ABN 52003875401

										Commodity								
GC Fin Year	Month	Terminal	Assigned Load Date	Vessel Name	Exporter	Workflow reference	CNA Received	CNA Assessment Complete	Status	Wheat	Barley	Woodchip	Sorghum	Peas	Magnesium	Canola	Cottonseed	Grand Total
2010/11	9	Port Kembla	(blank)	TBA	GCOP	2912	20/10/2010 12 52	20/10/2010 13 35	Accepted	50,000								50,000
					GLEN	4499	22/02/2011 9 58	22/02/2011 12 56	Accepted	55,000								55,000
		Port Kembla Sum								**266,400**								**266,400**
		Geelong	(blank)	TBA	AWB	3085	5/11/2010 12 37	5/11/2010 13 11	Accepted	15,000								15,000
					CARG	4630	1/03/2011 16 08	2/03/2011 16 14	Accepted	35,000								35,000
					CBH	4799	15/03/2011 16 03	16/03/2011 11 20	Accepted	24,800								24,800
					EMGA	4833	16/03/2011 19 42	17/03/2011 12 15	Accepted		5,000							5,000
					GCOP	2909	20/10/2010 12 43	20/10/2010 13 29	Accepted	30,000								30,000
						3492	16/12/2010 11 15	16/12/2010 13 47	Accepted	20,000								20,000
						4613	1/03/2011 10 30	1/03/2011 12 32	Accepted	16,900								16,900
					GLEN	2636	10/09/2010 8 39	10/09/2010 8 39	Accepted	30,000								30,000
						4208	3/02/2011 18 42	4/02/2011 8 46	Accepted	20,000								20,000
		Geelong Sum								**191,700**	**5,000**							**196,700**
	9 Sum									**458,100**	**5,000**		**25,000**					**488,100**
010/11 Total										3,937,200	482,100	43,200	226,000	19,450	12,000	128,000	85,000	4,932,950
Grand Total										3,937,200	482,100	43,200	226,000	19,450	12,000	128,000	85,000	4,932,950

Appendix 2

GrainCorp Port Services Undertaking Compliance Report – 31 March 2011

GrainCorp Shipping Statistics

TERMINAL	OCT	NOV	DEC	JAN	FEB	MAR	YTD
Total Number of new CNAs Lodged							
FISHERMAN ISLANDS	3	8	8	7	5	5	**36**
GLADSTONE	1	1	1	1	0	0	**4**
MACKAY	2	2	3	1	7	0	**15**
CARRINGTON	2	7	5	12	9	4	**39**
PORT KEMBLA	15	9	4	4	2	0	**34**
GEELONG	18	20	5	6	1	9	**59**
PORTLAND	11	6	1	0	1	2	**21**
Total	**52**	**53**	**27**	**31**	**25**	**20**	**208**
Number Of Nominations Rejected by GrainCorp							
FISHERMAN ISLANDS	0	0	0	0	0	0	**0**
GLADSTONE	0	0	0	0	0	0	**0**
MACKAY	0	0	0	0	0	0	**0**
CARRINGTON	0	0	0	0	0	0	**0**
PORT KEMBLA	0	0	0	0	0	0	**0**
GEELONG	0	0	0	0	0	0	**0**
PORTLAND	0	0	0	0	0	0	**0**
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Number of AOA's cancelled/ declined by the Client							
FISHERMAN ISLANDS	0	0	0	0	0	0	**0**
GLADSTONE	0	0	0	0	0	0	**0**
MACKAY	0	0	0	0	0	0	**0**
CARRINGTON	0	0	0	0	0	0	**0**
PORT KEMBLA	0	0	0	0	0	0	**0**
GEELONG	0	0	0	0	0	0	**0**
PORTLAND	2	1	0	0	0	0	**3**
Total	**2**	**1**	**0**	**0**	**0**	**0**	**3**
Average number of days to assess CNA's							
FISHERMAN ISLANDS	8	6	5	8	1	0	**5**
GLADSTONE	13	19	6	13	0	0	**9**
MACKAY	11	13	3	2	0	0	**5**
CARRINGTON	4	7	3	8	2	1	**4**
PORT KEMBLA	7	6	0	11	0	0	**4**
GEELONG	12	5	7	7	1	1	**5**
PORTLAND	7	5	10	0	1	0	**4**
Average	**9**	**9**	**5**	**7**	**1**	**0**	**5**
Number of vessels that failed survey							
FISHERMAN ISLANDS	0	0	0	0	1	0	**1**
GLADSTONE	0	0	2	0	0	0	**2**
MACKAY	0	0	0	0	1	0	**1**
CARRINGTON	0	2	0	1	2	1	**6**
PORT KEMBLA	0	0	0	1	1	0	**2**
GEELONG	0	1	0	1	0	1	**3**
PORTLAND	0	0	0	0	0	0	**0**
Total	**0**	**3**	**2**	**3**	**5**	**2**	**15**
Number of Port Blockouts							
FISHERMAN ISLANDS	1	0	0	0	0	0	**1**
GLADSTONE	0	0	0	0	0	0	**0**
MACKAY	0	0	0	0	0	0	**0**
CARRINGTON	0	0	0	0	0	0	**0**
PORT KEMBLA	0	0	0	0	0	0	**0**
GEELONG	0	0	0	0	0	0	**0**
PORTLAND	0	0	0	0	0	0	**0**
Total	**1**	**0**	**0**	**0**	**0**	**0**	**1**
Number of (grain) vessels loaded							
FISHERMAN ISLANDS	4	2	5	3	4	6	**24**
GLADSTONE	3	1	2	2	1	1	**10**
MACKAY	0	1	2	1	3	2	**9**
CARRINGTON	3	1	5	6	9	7	**31**
PORT KEMBLA	1	2	4	2	6	5	**20**
GEELONG	3	3	2	5	7	5	**25**
PORTLAND	1	2	0	2	2	3	**10**
Total	**15**	**12**	**20**	**21**	**32**	**29**	**129**
Tonnes exported							
FISHERMAN ISLANDS	55,229	14,556	27,000	58,143	64,715	65,034	**284,677**
GLADSTONE	44,900	13,100	9,588	50,701	26,250	36,533	**181,072**
MACKAY	NA	22,267	26,534	38,853	21,000	42,500	**151,155**
CARRINGTON	150,493	15,738	113,330	140,683	144,823	88,615	**653,681**
PORT KEMBLA	33,000	54,500	41,163	127,333	272,059	171,278	**699,333**
GEELONG	143,457	53,217	27,749	92,432	272,849	192,872	**782,576**
PORTLAND	26,974	40,408	64,209	58,131	42,500	80,900	**313,123**
Total	**454,053**	**213,786**	**309,573**	**566,277**	**844,196**	**677,732**	**3,065,617**

Measurement	Month	CARRINGTON	FISHERMAN ISLANDS	GEELONG	GLADSTONE	MACKAY	PORT KEMBLA	PORTLAND
Dail Road Receival Rate - Ave on days of Receival (mt/da	October	565	1,418	2,395	682	-	524	578
Dail Road Receival Rate - Ave on days of Receival (mt/da	November	625	514	1,195	1,255	384	283	1,006
Dail Road Receival Rate - Ave on days of Receival (mt/da	December	212	1,406	377	1,326	569	425	-

Dail Road Receival Rate - Ave on days of Receival (mt/da	January	408	1,725	4,301	1,427	421	484	1,027
Dail Road Receival Rate - Ave on days of Receival (mt/da	February	876	2,726	5,339	577	755	1,389	1,918
Dail Road Receival Rate - Ave on days of Receival (mt/da	March	572	3,547	5,212	297	651	1,562	1,618