



AUSTRALIAN GRAIN

A quality product

Australian grain – a quality product

The Australian grain industry provides a significant contribution to the Australian economy as well as many regional communities. The grains and oilseeds industry (subject to seasonal variation) produces between 35-45 million tonnes of grain per annum from an area of more than 20 million hectares, with an annual gross value of production of around AUD\$9-13 billion.

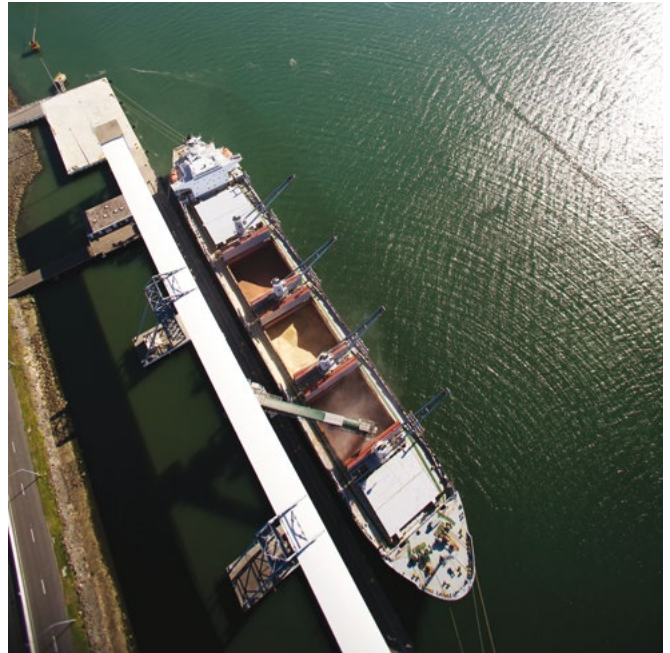
In order to be able to supply a quality product to Australian and international end users, the Australian grain industry has developed a number of specialist functions and agencies from within the private and Government sectors.

These organisations all work towards achieving one thing – supply of grain to satisfy food safety and contractual requirements.

Grain industry quality assurance programs can be classified into the following broad groups:

- ▶ **Pre-production**
- ▶ **Grain production**
- ▶ **Grain receipt and storage**
- ▶ **Grain out turn & marketing**

Overarching these categories is the **Australian Grain Industry Code of Practice** that describes practices that the grain industry use to ensure Australian grain and grain products meet domestic or export customer requirements. Australia is the only major country in the world to have developed an industry Code of Practice.



So what is quality?

To an Australian grain grower, quality may well be aligned to the protein percentage of the grain or oil content of the seed.

To the Australian government official responsible for issuing the export phytosanitary certificate, quality may mean that the grain conformed in all respects to the requirements of the importing country.

To the overseas baker using flour derived from Australian wheat, quality means a product with certain physical characteristics, i.e. did the bakery products perform as expected?

So the word “quality” has different interpretations and emphasis depending on where you are positioned in the grain supply chain.



Pre-production – where end user or customer requirements interface with science based grain breeding techniques

When one thinks of grain production you immediately imagine fields of golden wheat or possibly flowering canola. However, that image is only possible due to a myriad of individuals and organisations responsible for grain breeding and variety accreditation.

Like every other product, service or commodity for sale in the world, the Australian grain grower needs to produce grain to suit the needs of the consumer, cognisant of their own environmental constraints.

In recent times, the breeding of grain has moved from public breeding programs into privately owned and operated technology providers. This shift in ownership has resulted in breeding programs that are focussed on delivering varieties that contain those functional properties required by the eventual end user, be they a baker, noodle manufacturer or food processor.

These market requirements are channelled back to the breeders via organisations such as **Wheat Quality Australia**, **Barley Australia**, **Australian Oilseeds Federation** and **Pulse Australia**.

Much of this pre-breeding work is funded by the **Grains Research & Development Corporation**, a federal government statutory authority which collects a levy from grain growers. The purpose of this levy is to allocate and manage investment in grains research & development.

Varieties that have the potential to be commercialised are field trialled in a range of environments under programs such as the **National Variety Trials** and if judged suitable, the seed is assessed under classification guidelines established by **Wheat Quality Australia**, **Barley Australia**, **Australian Oilseeds Federation** and **Pulse Australia**.

Importantly, these guidelines are not focussed on agronomic or production issues but on the functional performance of that grain seed variety to meet the customer's requirements.

The assessed grade is then aligned to the grain trading standards that are used in grain sale contracts.

To ensure sufficient income is raised to continue breeding, Australia has legislative controls, known as **Plant Breeder's Rights** whereby the plant breeder receives a royalty from grain growers who use their seed.



Grain production – the skill and professionalism of the Australian grower sets world best practice

Pre production techniques ensure sowing seed is suitable for Australian growing conditions and it is the grain grower's role to use that sowing seed to produce grain for sale that meets the needs of end-users either in Australia or overseas.

Australian grain growers are required to comply with regulations set by various government departments covering a range of activities, such as chemical application. The **Australian Pesticides and Veterinary Medicines Authority** oversee the approval and use of chemicals applied in grain growing and grain storage.

In regards to tillage operations, a range of agronomic practices are implemented. Much of this agronomic information is provided through activities of organisations such as the **Grains Research & Development Corporation** that coordinates the national research and development effort. GRDC work in collaboration with grower based research groups, state Departments of Agriculture and the Commonwealth Science and Industry Research Organisation (CSIRO).

Demonstrating a commitment to world's best practice, Australian grain growers released the **Growing Australian Grain** guide which demonstrates the grain production sectors commitment to supplying reliable grain.



Grain receival & storage – where product measurement leads to grade determination, segregation and protection

Standards set by the **International Standards Organisation (ISO)** form the basis of quality processes adopted by grain storage operators across Australia.

These processes are supported by nationally agreed methods to sample and test grain developed by **Grain Trade Australia**. These methods are further enhanced with the requirement that equipment used to objectively assess particular characteristics such as protein is compliant with the Australian Government **National Measurement Institute** requirements.

When delivering their grain, Australian grain growers must declare the chemical regime that the grain has been exposed to, if any, and the grain variety in order to determine the royalties to be paid for that variety.

The grain trading standards published by **Grain Trade Australia** are the basis for the trade standards used by industry. Standards for a range of grain commodities are used to segregate grain in storage on the basis of its quality and end-use suitability.

Australia has a proud history of regulatory requirements in regards to chemical use. Adherence to Maximum Residue Limit, set by **CODEX** or the country of import is critical. These activities are handled by the **National Working Party on Grain Protection** which is the industry body responsible for providing management and leadership to industry in the areas of post-harvest grain storage and hygiene, chemical use, outturn tolerances, international and domestic market requirements and chemical regulations.

Grain out turn & marketing – the interface between production and the ultimate end user

Question What is a quality product?

Response One that satisfies the customers' needs.

So How does the customer of Australian grain convey their requirements to the seller?

Answer In the contract.

Within the Australian grain industry there is strict adherence to contracts which detail the buyer's requirements which are either embedded in the contract proforma or annexed in the form of a grain specification or standard. There is also a requirement to meet buyer and importing country Maximum Residue Limit (MRLs) – which is detailed in the “**Chemical Usage and Outturn Tolerances Document**”, available on the GTA website.

As the quality and chemical residue status of grain in all country storages is known, grain is sourced from particular storages and allocated for shipment on the basis of customer requirements.

Grain for export can only be shipped from Registered Export Establishments approved by the **Department of Agriculture & Water Resources**. Prior to loading, all containers or vessel holds must meet government strict phytosanitary survey requirements to ensure that the quality of grain to be loaded is not compromised.

The grain is inspected by government registered Authorised Officers to ensure it meets the quarantine requirements of the importing country which may include freedom from particular pests and diseases.

Where required, independent service providers are used to sample, test and certify that loaded grain satisfies the export customer's requirements as detailed in the contract.

Also the **National Residue Survey**, an agency of the Department of Agriculture & Water Resources tests export shipments for a wide range of chemicals as a final verification of industry practices to ensure compliance with Australian and the country of import Maximum Residue Limit.





Australian Grain Industry Code of Practice

— detailing the quality systems embedded into the Australian grain industry

To market quality grain is complex and diverse with continually evolving processes being developed to ensure compliance with regulatory and customer requirements. As market requirements continue to evolve it is critical that quality assurance systems are developed across the industry.

To evidence the activities occurring across the supply chain from pre breeding activities to the supply of the grain to an end user, **Grain Trade Australia** developed the **Australian Grain Industry Code of Practice**.

The Code details all the quality practices that the industry uses to ensure Australian grain meets domestic or export end user requirements.

As a demonstration of the desire of the industry to adopt a culture of continual improvement and to demonstrate to customers the cross sector quality processes embedded in the industry, adherence to the Code is a mandatory requirement for membership of **Grain Trade Australia**.



International alliances – it's an international effort to satisfy global grain markets

The Australian grains industry interacts with a number of international organisations to ensure continual improvement across the global grain supply chains.

The **International Maize and Grain Improvement Centre**, more commonly referred to as **CIMMYT** is based in Mexico and collaborates with national agricultural research institutions worldwide, in providing growers with the best seed, agronomy, and information needed to increase yields. The CIMMYT Board of Trustees are drawn from Australia, Great Britain, India, Mexico, the United States of America, Japan, Germany, Canada and Zimbabwe.

Are there other international examples that enable Australia to market quality grain to the world? The international development of international food standards is conducted by **CODEX** which was established by the Food and Agriculture Organisation, whilst phytosanitary standards and guidelines are established by the **International Plant Protection Convention**. As an export nation, Australia is dependent on the work of these **UN** agencies.

At a commercial level, there is international cooperation across grain trade organisations through the work of the **International Grain Trade Coalition** that is tasked by its members with ensuring the facilitation of the international trade of grain.



Quality and wheat exports – the wheat industry steps up

Given the prominence of wheat in the Australian grain industry production profile and as 70% of Australian wheat exports are destined for Asian markets it is appropriate to give an update in developments since the deregulation of the wheat export market.

Has the industry covered off on those critical functions that protect and enhance the quality reputation of the Australian wheat industry formerly conducted under a regulated process?

1. **Crop shaping activities** are now conducted by Wheat Quality Australia, a joint venture between Grains Research & Development Corporation and Grain Trade Australia and via the market signals from customers in their contractual requirements.
2. **Wheat variety classification** is conducted by Wheat Quality Australia
3. **Wheat trading standards** are developed by Grain Trade Australia
4. **Technical market support** is conducted by wheat exporting companies as part of their customer service; with the technical expertise from commercial providers.
5. **Research & development**
 - 5.1 On farm – principally coordinated and funded by the Grains Research & Development Corporation
 - 5.2 Customer – Australian Export Grain Innovation Centre (AEGIC) and GrainGrowers Limited (GGL).

6. **Trade and regulatory advocacy** conducted by trade organisations who work in conjunction with government agencies such as the Department of Agriculture & Water Resources and the Department of Foreign Affairs & Trade.



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About the Australian Government Department of Agriculture and Water Resources

The Australian Government Department of Agriculture and Water Resources develops and implements policies and programs to ensure Australia's agricultural, fisheries, food and forestry industries remain competitive, profitable and sustainable. The department also supports the sustainable and productive management and use of rivers and water resources.

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About Grain Trade Australia

GTA was formed in 1991 and is a member based organisation with 270 corporate members. GTA members trade and handled over 95% of all grain produced in Australia. The members of GTA span the supply chain from production sector to domestic end users and exporters.

The core task of GTA is to facilitate trade across the Australian grain supply chain. GTA accomplishes this task by:

- publishing grain trading standards and proforma trade contracts;
- participation in trade & market access initiatives; and
- the conduct of training & development programs.

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