

**Australian Barley Industry –
Supply chain measures to supply barley
to the South Korean market**

Compiled on behalf of the Australian Grains Industry by:

Grains Industry Market Access Forum



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1. Purpose

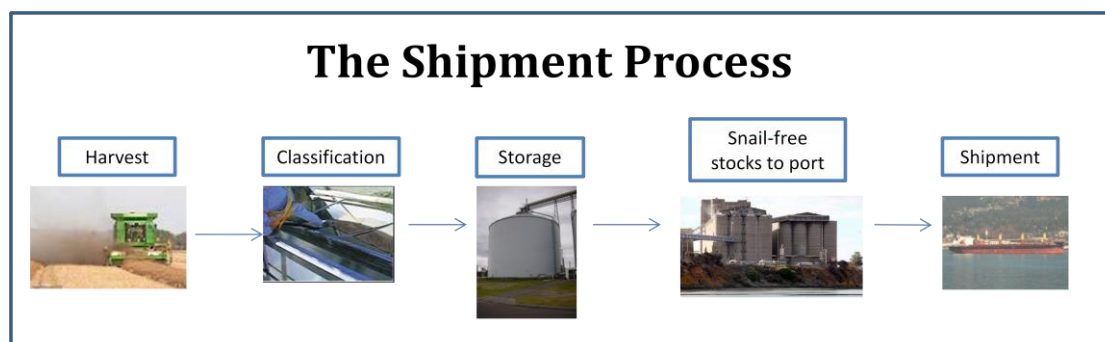
The Purpose of this document is to outline the practices that the Australian grains industry will use to ensure that future cargoes of Australian barley to South Korea meet their phytosanitary requirements. Specifically it is important that any mandatory control measures such as screening be removed from the protocol. The Australian industry may elect to undertake screening if it is deemed necessary to remove the snail species *Ceratomyxa virgata*. It should be strongly emphasised that Australian industry practices as outlined in this document, supported by the regulatory arrangements applying to the export of all grain from Australia, can provide assurance that all future shipments of Australian barley can be delivered to South Korea free of *C. virgata*. A primary tool will be stock selection from regions and receival centres with data demonstrating absence of the pest as outlined in this report.

2. Summary

This document outlines how the Australian grain industry will manage the supply of barley to South Korea free from live *C. virgata*. A quality system will be used along the entire barley supply chain to achieve this outcome. This system will also include inspection of stocks at loading by the Australian Government Department of Agriculture, Fisheries and Forestry (DAFF).

The requirement for freedom from live snails in Australian barley shipments to South Korea will be done by a range of measures including:

- Ongoing research programs to manage the impact and control *C. virgata* on-farm;
- Farm management practices to minimise the risk of *C. virgata* present in harvested barley;
- Knowledge of the prevalence of *C. virgata* in grain received and stored in the Australian barley supply chain;
- Managing the process of stock selection, by selecting only that stock for shipment to South Korea from areas where:
 - Live *C. virgata* have not been detected; and
 - The presence of *C. virgata* is a low risk;
- Stock will not be selected and allocated for shipment from areas where *C. virgata* are prevalent; and
- Verification of the stock selection process through sampling and testing that barley selected for export will meet importing country phytosanitary requirements.



Following recognition of the standards and processes as outlined in this document, the Australian barley industry requests the National Plant Quarantine Service of Korea remove the recently introduced mandatory requirement for “all barley exports from Australia to be screened through a screen with a maximum hole size of 8mm prior to being presented for export inspection”.

It is noted in this report that prior to the above requirement for screening being imposed on Australian barley, stocks may not have been actively selected from areas where there is a low risk of the presence of live *C.virgata*.

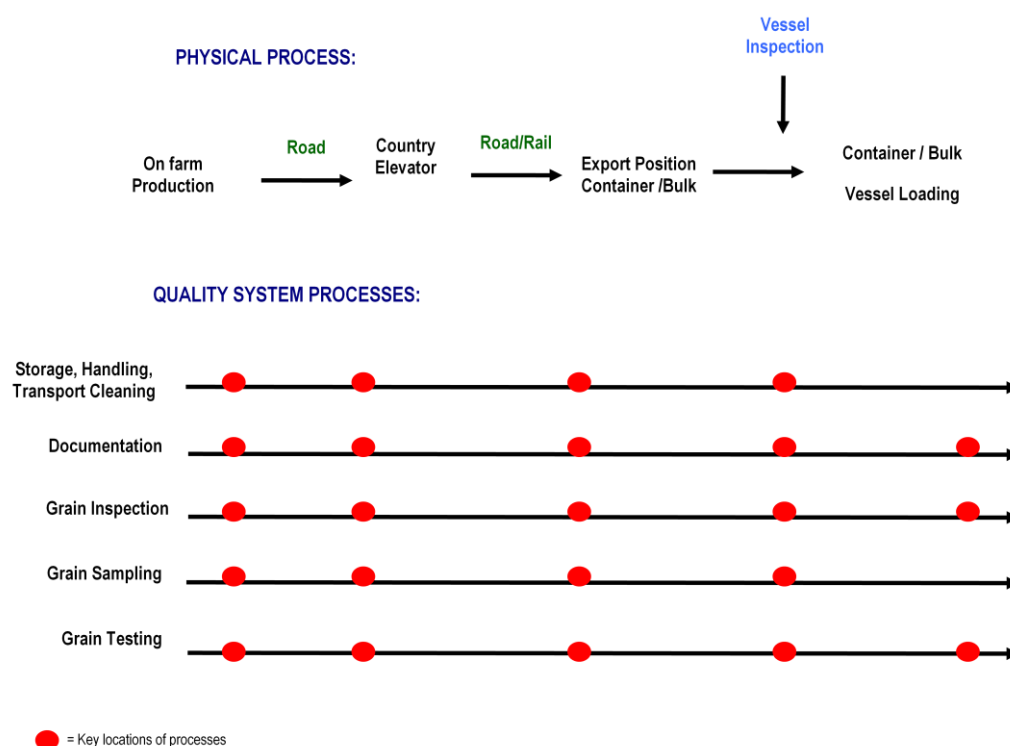
As a consequence of the recent notification that live *C.virgata* are a concern to the South Korean market, any Australian barley containing live *C.virgata* will be identified. It will not be allocated for shipment to South Korea. This negates the need for screening over an 8mm screen all barley to be exported to this market.

3. Australian Grain Industry Practices

3.1 General Supply Chain Overview

A typical supply chain in the Australian grain industry is depicted below. This applies to both container and bulk vessels.

Typical Supply Chain QA System



The barley industry uses a single set of standards for receival and outturn (available from http://www.graintrade.org.au/commodity_standards , common sampling and testing methods and a process of continuous inspection from the point of delivery from the grower to the point of export.

Industry oversight occurs in a number of ways to assist all industry to work in a cohesive manner and meet market expectations. This includes:

- Promotion and using common receival standards as developed by industry bodies such as Grain Trade Australia; and
- Leadership by the Grains Industry Market Access Forum which provides a strategic approach to assist industry to meet market requirements.

Quality control checks are carried out from the time barley is received into storage, up to the time it is placed in a container or on a shipping belt for loading into a bulk vessel.

Data on the quality and identity of grain stocks is maintained at all points of the supply chain prior to export. From the stock located in country storage, grain is selected that meets the importing country quality and phytosanitary requirements. The grain is then transported to the export facilities for loading.

Sampling, testing and documentation accompanies the grain along this supply chain, providing confidence the stock selected will be as required by the customer.

No barley is allocated to South Korea unless:

- The quality and quarantine status is known;
- The grain will meet the customer requirements; and
- The grain will meet the importing country quarantine requirements.

Should the grain not meet the importing country requirements, it is not allocated or loaded, and alternative stocks are selected.

3.2 Australian Barley Standards

3.2.1 Receival Standards

The Australian barley industry uses receival standards which are broadly similar across the country to determine the quality of barley received. These are applied to all deliveries of barley from the producer to ensure the integrity of grain consolidated meets the demands of all customers.

These receival standards are a balance between what growers can produce and deliver on one side, versus general market quality requirements and importing country quarantine regulations on the other side. Barley Standards have tolerances for a number of contaminants, including the presence of snails.

Barley not conforming to the specifications of the high quality Malt grades may be downgraded to the lesser quality grade Feed.

3.2.2 Outturn Standards

For most markets the outturn standards that apply are the receival standards unless the contract or quarantine requirements vary.

In respect to live *C.virgata*, when detected in stocks at the point of loading a container or bulk vessel, a rejection process for barley to South Korea is implemented by DAFF Biosecurity inspectors.

Since the introduction of mandatory screening of Australian barley shipments, the outturn standard of nil live *C.virgata* has been applied by industry, thus differing from tolerances permitted in the receival standard.

3.3 Sampling and Testing Activities

Obtaining representative samples of grain received, stored and outloaded is a key factor in knowing the quality of grain and providing confidence in being able to meet market requirements.

3.3.1 Grain Production

Grain growers implement a range of agronomic and management activities during the growing of the crop. The growing crop is managed based on the prevailing environmental and crop conditions in order to achieve its maximum potential. Control of weeds, diseases, pests such as snails and vermin are implemented as required.

All management is done with the end-user (customer) in mind and nothing is done to compromise the integrity of the crop.

A significant amount of research has been conducted in the past in Australia to develop a range of options to assist growers to control contamination of the crop with snails. The management options developed from the research are implemented as required and include:

- Physical control methods such as:
 - Post harvest – stubble burning, slashing, rolling, grazing to minimise the presence of snails prior to sowing of the crop
 - During harvest – grain harvester modification to prevent harvesting of snails with the crop
- Chemical control methods such as snail baiting in the field with approved chemicals prior to harvest of the crop.

This research continues in an effort to further minimise the impact of snails on Australian barley production.

3.3.2 Grower Deliveries Received at Country Storage Facilities

Each load of barley tendered for delivery is sampled and tested as per industry sampling protocols and receival standards. Based on the quality and grade determined, the barley delivery is placed into storage. There are no separate segregations for barley that may or may not contain *C.virgata* at receival. All barley meeting the receival standards for the applicable grade are placed into the one storage unit.

For each load received:

- Data on the quality is recorded in a computer based quality management system; and
- A small sub-sample is collected and compiled on a weighted basis to represent all barley delivered to that storage unit.

This sampling and data collection occurs for all storage units and at all storage sites receiving barley across Australia.

Based on this sampling and data collection, the quality of barley in each storage unit at every site is known. This quality system enables industry to identify those barley storage sites that contain live *C.virgata*. As outlined below this information is used in the stock selection process.

During the storage period quality checks are carried out:

- To confirm the integrity of the grade segregations; and
- To ensure the barley is maintained in a sound condition.

3.3.3 Cargo Allocation and Accumulation

Where the barley at a particular storage site does not meet the importing country requirements, it will not be loaded. Specifically, if records indicate that *C.virgata* species were present in barley receivals, industry will not allocate the barley in that storage unit to the South Korean market. In future, stock will only be selected where receipt records show that it is known to be free of live *C.virgata*.

As the quality of barley stored at each site is known, grain is selected and allocated for shipment according to customer requirements. This allocation process involves close liaison between the storage provider and the exporter.

The primary focus of industry will be to source barley for shipment to South Korea where it is known that there is a low risk of the presence of *C.virgata*. By using the quality systems outlined above, this translates to a low risk of contamination of barley with *C.virgata*. Barley will not be allocated from areas where from records of receivals, *C.virgata* have been found to be prevalent.

Once allocated, grain is selected for outturn from the storage to an export facility. All transport units, whether road trucks or rail wagons are inspected prior to being loaded with barley, to ensure grain quality will be maintained. On outturn from the storage into the transport unit, the barley is again visually inspected to ensure it meets customer requirements, in this case free of live *C.virgata*.

Appropriate documentation accompanies the barley as it is transported to the Registered Establishment (loading facility) for eventual loading onboard a vessel. This documentation identifies the storage site where it was loaded and a range of quality parameters of the grain.

At the Registered Establishment, prior to grain being discharged from the road truck or rail wagons, the documentation is inspected and grain is allocated for unloading into specific storage bins based on the quality requirements of the market.

On discharge from the transport unit, grain is again visually inspected and samples are taken to confirm the quality of the grain. Grain is loaded into the allocated storage unit ready for loading.

The above quality system occurs for grain to be loaded into containers at a container packer facility or at a bulk export terminal facility.

3.3.4 Loading and Post-loading

Barley may be loaded into containers at a container packing facility or at a bulk export terminal for shipment to South Korea. Each Registered Establishment implements strict hygiene controls to maintain the quality of the grain. Identity preservation ensures the quality of grain in each storage unit is known and allocated to a specific market based on its quality.

Approval for loading is granted following inspection of all containers or vessel hatches to ensure freedom from any infestible residues. During loading, grain is sampled at the rate of 2.25 litres per 33.33 tonnes, as legislated by the Australian Government. Samples are taken and inspected for two purposes:

a) Phytosanitary - DAFF Authorised Officers

Prior to presenting barley for export all exporters must provide a declaration in the form a Notice of Intention to DAFF specifying that the barley meets the phytosanitary requirements of the importing country. The exporter is liable for persecution or other regulatory control if a false or misleading statement is provided to DAFF.

All barley exported from Australia to South Korea is inspected to verify the barley meets the relevant quarantine requirements. This includes freedom from live stored grain insects and other quarantinable restrictions.

All barley shipments will continue to be inspected for the presence of live *C.virgata*. In the unlikely event that any are found the barley will not be permitted to be exported to South Korea.

On completion of loading, DAFF will provide the relevant Phytosanitary Certification attesting the barley meets the requirements of the National Plant Quarantine Service of Korea.

b) Quality – Loadport Facility Operator

The operator loading the containers or bulk vessel takes representative samples of the barley throughout the loading process to verify the quality meets the contractual requirements of the market. Samples are assessed for the various quality parameters listed in the contract. For future barley shipments to South Korea, a visual inspection to confirm freedom from live *C.virgata* will occur.

On completion of loading, representative samples of the cargo are compiled and further analysed to verify the contractual specifications were met. These samples may be compiled on a composite basis for all containers or on a hatch basis for a bulk shipment. These samples are retained and stored.

Relevant certification is provided to the exporter attesting that the cargo meets the desired quality and specifically in the case of South Korea that the

barley is free of live *C.virgata*. The documentation shows that the barley loaded was identity preserved and the samples analysed represented that stock.

4. Definitions & Abbreviations

Australian Government Department of Agriculture, Fisheries and Forestry (DAFF)

Under the Export Control Act 1982, DAFF controls grain exports. The Plant Export Operations Branch is part of DAFF and is responsible for this task.

Receival Standards

Are the standards used to measure and describe the physical and biological properties of grain at the time of inspection. They may also be the Outturn Standards that apply to the specifications of grain to be supplied to the market.

Registered Establishment

When exporting prescribed goods such as barley, they must be prepared or handled for export in a registered premise called a Registered Establishment.

Snails

In this document refers to *Cernuella virgata* – Vineyard or common white snail.

Supply Chain

The grain supply chain includes all elements of on-farm, storage and transport infrastructures.