



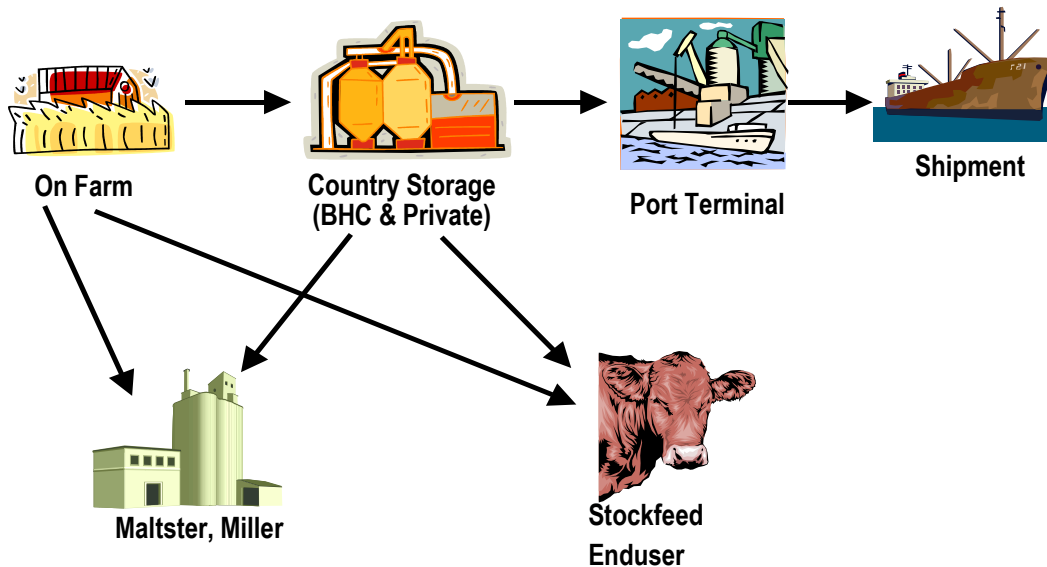
Understanding Australian industry processes that deliver customer quality

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The Australian Grain Supply Chain

- From breeders, growers, storage providers, transport operators, domestic processors and exporters
 - And various service industries in between

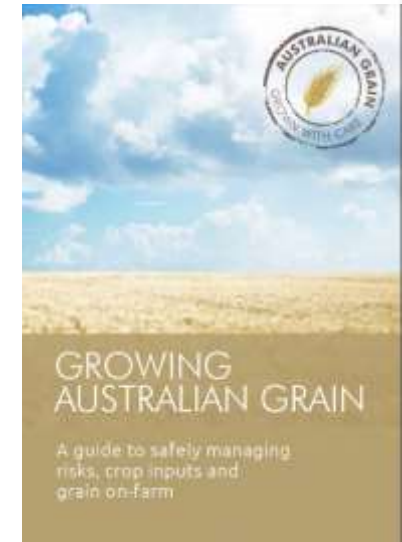


- Let's not forget the consumer.....

Pre & On-Farm Management



- Seed breeding/growing Codes of Practice
 - Receive marketing signals for quality required
 - Breed varieties based on customer requirements
- Field research conducted by various organisations
 - Main body is Grains Research & Development Corporation
- Majority of legislation covers chemical usage
 - Australian Pesticides and Veterinary Medicines Authority registers chemicals for use on farm
- Quality of grain produced driven by industry standards
- Growers follow grower information guide “Australian Grain grown with care”



It all starts with - Grain Trading Standards

- Developed by industry bodies representing all industry and supply chain sectors
- Standards developed to consider requirements of:
 - Grower ability to produce
 - Ability of supply chain to manage
 - The customer – human consumption, stockfeed, industrial
 - Regulations – domestic & export
- Industry interacts with Australian Government bodies
 - National Measurement Institute covering suitability of equipment used for grain assessment
- Accurate and objective testing at receipt is the cornerstone of the industry
 - Focus on receiving & segregating quality required by customer



The Role of Trading Standards

- Standards provide
 - Understanding of quality
 - Knowledge of pest and disease status
 - Knowledge of end-use suitability
- Segregate known quality & quantity
- Food safety – is a given grain is safe to use/eat
- All domestic & international regulations must be met





At Receipt



- Grower declaration on a range of parameters including
 - Chemical usage
 - Variety
 - GM status
- Only loads with approved chemicals and varieties received
- Sampling and testing as per documented procedures
 - Industry agreed methods for all commodities
 - Using trained samplers
- Data on quality received is captured
- Samples taken for further analysis based on market requirements
 - Samples used for Crop Report

During Storage

- Storage Operators are a mix of
 - Large Bulk Handling Companies
 - Smaller private storage operators
 - Grower co-operatives
 - Processors, container packers
- All operate under a quality system
 - Larger BHCs generally under ISO
 - Smaller BHCs under “in-house”
- Design of storage type determines complexity of
 - Maintaining grain quality
 - Maintaining grain integrity
 - Preventing contamination (insect pests, vermin)



A Range of Storage Types



During Storage and Prior to Outturn

- Grain condition monitored during storage via
 - regular sampling & visual inspection
- Grain treated to prevent insect attack
 - At approved rates set by Codex & the Importing country
 - According to market requirements outlined in industry agreed “Australian Grains Industry Post Harvest Chemical Usage Recommendations and Outturn Tolerances 2016/17”
 - Based on industry research and best practice for insect resistance management
 - Focus is on fumigation
- Samples taken and analysed for additional tests based on market requirements
- Industry body National Working Party on Grain Protection (administered by GTA) meets annually to
 - Review market requirements
 - Discuss new storage techniques



Cargo Allocation and Accumulation

- Based on receival information by ticket / running sample assessment / other sample data, grain is allocated to a market
 - Marketers allocate ports or a State for shipment
 - Only allocated & moved once quality is known
- Food Safety is a given
- Transport Codes of Practice are followed
 - Set by GTA & other transport operators
- On outturn from country storage
 - Samples are taken
 - Quality is checked to confirm no deterioration in storage



Cargo Loading



- At export terminal, assess deliveries from upcountry locations
- Allocate grain to particular cells
- All port terminals and container packer facilities are approved by Australian Government Department of Agriculture and Water Resources (DAWR)
 - Must be a Registered Establishment
 - Hygiene and various procedures must be complied with
- Empty vessels inspected for cleanliness by DAWR
- Select cells of known quality for loading
- Upon loading
 - Port operator monitors on a tonnage basis for quality
 - DAWR monitor for Import Permit quarantine listed aspects such as pests
 - Nil tolerance for live stored grain insects
 - Sampling at DAWR defined rates

Cargo Loading



- Focus is on consistency of quality
- Representative samples taken for later analysis
 - Quality & hygiene by the exporter
 - Australian Government National Residue Survey for chemical residues
- Increased use of independent inspection companies
- Same inspection process occurs for
 - Bulk Vessels
 - Containers
- Based on inspection results DAWR allows the export and then produce
 - Phytosanitary Certificate
 - Other Certificates as required by market

Post Shipment



- Export samples collected and tested for chemicals and heavy metals by the National Residue Survey
 - Australia has excellent compliance
 - 99.9% in 2014/15 for bulk
 - 98.8% in 2014/15 for containers

- Marketer analyses hatch, vessel or container composite samples for
 - Quality
 - Chemicals
 - Other contractual requirements

- Independent inspectors may be involved in certification

- Provision of results & samples to customers as required

- Customer also samples, as does quarantine authority in the importing country



Systems in the Australian Grain Industry

- Grain quality managed by industry
 - Little if any Government involvement
- Government inspects for quarantine compliance
- Industry Organisations facilitate passing market requirements to all participants along the entire supply chain
- Industry uses common processes, all outlined in the industry developed Australian Grain Industry Code of Practice, with a focus on
 - Use of Commodity Vendor Declarations
 - Knowledge of grain quality
 - Segregations based on customer requirements
 - Consistent testing processes

