

BARLEY LOGISTICS PAST, PRESENT AND FUTURE



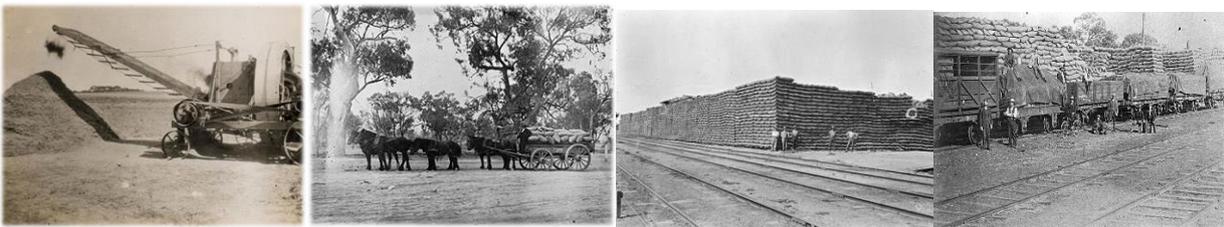
GrainCorp

The “Barley Logistics Past, Present and Future” - presentation will take you on a journey from an overview of what is agribusiness supply chain and logistics; how barley logistics has evolved over the hundred years, to the current state, finishing with barley logistics future vision.

Despite the number of publications in logistics, the agri-logistics appears to be less researched and defined. Zhang and Li (2012) defined agri-food supply chain “as a network of business enterprises that are related to food, through which the food is “moving” from production to consumption, including the activities of pre-production and consumption.” Balancing act of grain logistics is “the supply chain process that plans, implement, controls the efficient and effective flow and storage of goods, services and related information from the point of origin to the point of consumption in order to meet customers’ requirements.”

In its simplest form same as to traditional definition of logistics “Agri-Logistics is seen as an activity to get the “right product, in right quality and quantity, through the supply chain from the supply of products, warehousing and distribution to customers.

The grain logistics in 1920’s involved horses, grain bags and yes – trains. Road transport was driven by humans, horses pulling bags of grain from crop to stacker. The grain bags were stacked on railway yards ready to be stacked to trains to domestic or export destinations.



Inbound Logistics - Grain Receival - Old stacker (Michael Reed)

Outbound Logistics - Road Transport - 6 horses pulling bags of grain in Warracknabeal, Vic.ca 1905 (Museum Victoria),

Warehousing - Grain stack of 70,000 bags at Warracknabeal railway yards, Warracknabeal, Vic.Ca 1931 (Museum Victoria)

Outbound Logistics – Export - Loading a train at Sea Lake; Team of contract grain workers posed with rail trucks and wagons. Several large stacks of bagged wheat are visible behind the train. Most of the loaded wagons have been covered with tarps. Ca 1905

In the manufacturing sense from “barley to malt” a pioneer in Australian malting since the 1860s has been Barrett Burston Malting (BBM) and it continues to lead the Australian industry in terms of product quality and customer service. At present BBM has a production capacity of 264,000 tonnes and has been one of the largest Australian suppliers to domestic and Asian brewing industry for tens of years.

Over time barley logistics has become an integral part of company strategies in how to reach domestic and export customers in the most safe, reliable and lowest cost manner. The inbound and outbound logistics has transitioned over years from horse and cart to trucks and high powered locomotives.

The balancing act of grain logistics to ensure an effective flow and storage of grain from the crop to the point of consumption in order to meet customers’ requirements has become a complex task. An example of an outbound logistics task in GrainCorp; there are an average 15 customers per country silo to out-load grain, these customers have each a road supplier which have different configurations and will dictate in to how efficiently the out loading task is being completed. Furthermore asset utilisation is dependent on out and in-loading times and direct impact on transport cost. On the other hand Chain of Responsibility requirements have transformed the road transport industry to ensure e.g. mass, speed and fatigue is appropriately managed. GrainCorp has implemented a series of support processes and systems such as time slotting to manage site efficiency and safety.

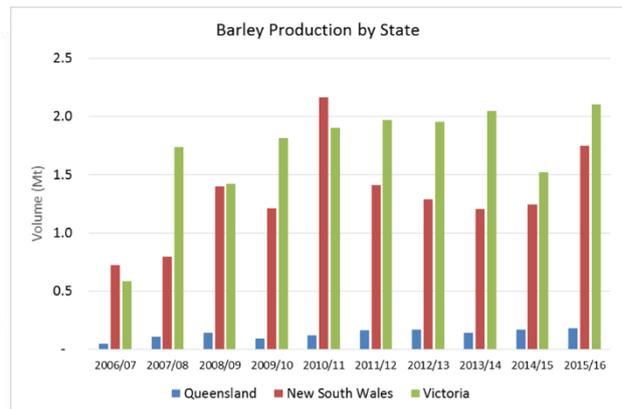
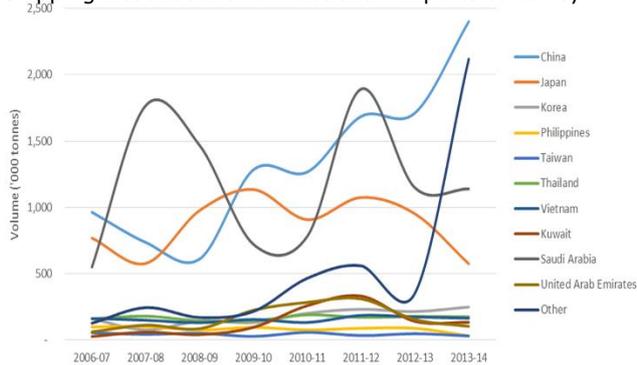
To put the truck asset complexity into perspective there are 73! Different truck codes and combinations in the grain industry (registered) to cart the grain.



The global themes in the agribusiness present and in the future are “access to supply and food security, increasing demand for food quality, ability to trace quality and increasing domestic and international competition.” GNC, Investor Day, May 2015. These global themes may lead to increase in supply chain complexity and logistics cost and impact on the future logistics company strategies.

To put in simple terms in Australia, the customer requirement to get access to a large number of varieties through traceable, flawlessly executed supply chain has contributed to an increase in complexity and hence in some areas an increase in supply chain costs in Australia. Global competition on the other hand has increased need to control costs and this has led to supply chain investment, diversification and consolidation of resources.

Shipping Destinations for Australian Exports of Barley



Sourced from: ABARES, Agricultural Commodity Statistics 2014

The companies within Australia the logistics strategy will need to address how to upgrade aging infrastructure, COR, lack of standardisation across states and different interest levels of government funding. This is why bulk handling companies such as GrainCorp have implemented strategy to invest in its infrastructure, smart systems and creating more customer responsive yet cost efficient supply chain provider. The transformation journey for GrainCorp has started in form of investing into its below and above rail infrastructure, transforming its people, processes and systems, maximising the network capability, offering bundled service offers and excellence in quality management.

GNC has announced the first tranche of \$60 million to upgrade 13 of our country sites this year. Part of a total \$200 million to be spent, which involves developing a network of 50+ high capacity country sites to support an efficient rail operation. Project Regeneration will reduce rail costs by around \$5 / tonne and return up to 1 million tonnes or 40 000 truck movements back to rail.

1. Reshape Country Network



2. Localised Cluster Operations



3. End-to-End Export Logistics



4. Rail Loading Improvements

Project Regeneration – Source GrainCorp 2015

GrainCorp is not alone in the global transformation journey to simplify and improve its logistics service. In Australia below rail infrastructure improvements will enable use of higher payload wagons. Super stackers combined with robust road capability will enable efficiency improvements. We are unlikely to see drones completing outbound or inbound logistics task in the future, however we will need to continue to innovate to increase our ability to transform from “horse-power” to more sophisticated and safe logistics equipment.

