

Grain Containerization





Commodities

- **Barley**
- **Malt Barley**
- **Wheat**
- **Pulses (Peas, Beans, Lentils, Chick Peas)**
- **Canary Seed**
- **Flax**
- **Mustard**
- **Canola**
- **Soya Beans**



E Economics

L Logistics

O Challenges & Opportunities



Economics – Agriculture Market

- Commodity – “Perfect” Competition
- Globalization
 - Crop Year / Yield – Canadian Prices
 - Exchange Rates
- Price Regulation – Canadian Wheat Board
 - Two Sides
 - As a collective the independent has more clout
 - An independent should be free to access whatever markets



Economics – Transportation Market

- Bulk Rates
- Container Availability
 - Source Loading
 - Transloading
- Vessel Allocation
 - Size of Vessel
 - Consistent shippers
- Inventory Costs and Storage Infrastructure



Logistics

- Daily Railcar Pipeline Report
 - Used to Identify New Orders and Trace current Cars
- Customers Send Booking Information from the Steamship Line
- A Few Days Before Railcar Arrival Containers are Released
 - Container Numbers
 - Off Dock CY containers are located



Logistics

- Truck Dispatched to Pick Up Empties
 - Key to try and Not Deadhead
 - Key to try and Maximize Chassis Configuration
 - Key for Drivers to Pre- Inspect Containers
- Containers Removed from Chassis and Prepared
 - Full Inspection
 - Grain Doors (Bulk Head)
 - Liner Bag



Logistics

- Generally 3 Ways Containers Loaded
 - Gravity Fed (Bulk Loaded)
 - Spray – Trimmer Fed (Bulk Loaded)
 - 25kg or 50kg bags (Labour Loaded)
- Bulk Loaded – Must have Receiving infrastructure
 - Tilt Deck or Vacuum
- Bags Effective to Reach Small Customers; Remote Areas; or Where Labour is not \$\$\$



Logistics

- Hopper Rail Cars Arrive and are Dumped into a Loading Pit
- Samples Taken
- Elevated into a Garner and then to a Scale
- Prepared Containers Loaded onto Tilt Chassis or Directly into Plant on a Tilt Deck
- Container End Hoisted Up and Elevated Grain Gravity Feeds from Scale into Containers
- Container Lowered, Doors Closed, Seal app.



Logistics

- Trucked to the Deep Sea Port of Discharge
- Loaded onto Container Ship
- Montreal and Vancouver
 - Montreal
 - Europe, Middle East & South America
 - Vancouver
 - Asia Pacific, India, South America
 - 30 Days Transit Time to Asia
 - 21 Days to South America



Logistics

- Bulk Containers
 - Trucked from Deep Sea Port of Arrival to Customer Location
 - Placed on Tilt Platform – Front of Container lifted
 - Doors Open and Bulk Head Slashed with Utility Knife
- Containers with 25kg or 50kg bags
 - Trucked to Cross Dock
 - Shipped LTL to Final Destination



Logistics – Advantage Container

- Smaller Order Quantities
 - Less Inventory Smaller Orders for Consumers
 - More Independence for Sellers
 - More Frequent Order Cycles
 - Bulk 3- 4 Months
 - Container 3-4 Weeks
 - Higher Grade
- Door to Door
- Less Handling
- Backhaul Rates –Major imbalance



Challenges & Opportunities

- Economic Variables Make Forecasting Difficult
- JIT Philosophy Therefore Windows are Tight
- Steamship Line Cut Offs and Releases
- Heavy Dependence on Railway Service
- Road Weights Differ From Country to Country
- Food Grade = Increased Documentation
 - Trace to Origin
 - HACCP
- Port Security = Increased Documentation
- Truck Congestion Especially at Ports = Bottlenecks



System # 1 – Malt Primary











