MEETING THE CHALLENGES:
Managing Food Ingredients from Multiple Sources
- GRAIN HANDLERS PERSPECTIVE -

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Towards Affordable & Sustainable Food Supply – Recent Advances & Prospects

GRAINCORP

- > 20 million tonnes of storage capacity
- > 4 million tonnes rail freight capacity
- Largest bulk exporter of eastern Australian grain
- High quality assurance and 4 x NATA approved laboratories
- Over 150 active grain buyers competing in our system
- 6 million tonnes of grain sold & delivered each year to > 200 domestic and international customers across 30+ countries
- 7 bulk grain ports (eastern seaboard) - largest exporter of bulk grain from eastern Australia
- 15 million tonnes of grain export capacity

CANOLA, GM CANOLA & MONOLA

- Canola – An oilseed crop cultivated for its high quality edible oil used in products such as margarine and cooking oil.
- GM Canola (glyphosate resistant) – Genetically Modified canola which can withstand herbicide application. Stored at select sites of the network.
- Monola – A high oleic acid canola used for specific products such as deep frying oils. Stored at limited sites.
CASE STUDY: CANOLA

GM AND CONVENTIONAL SEGREGATION

PRE-HARVEST

Segregations – Movement paths – Testing systems

GM

Non-GM

PRE-HARVEST

Grower Communication – Preharvest meetings

Preharvest meetings

Varietal Changes & System Updates

Harvest Guide 2017
**PRE-HARVEST**

Employee Training, Assessment & Competence

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**HARVEST – LOAD SAMPLES**

- Every load of Canola, GM Canola & Monola
- One sample per load per delivery
- Grower must sign the top of the sample bag
- Varietal Declaration (grower / driver)
- Composite Running Sample

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**HARVEST – CERTIFIED GRAINCORP LABORATORIES**

Composite samples – ELISA strip tested
If negative then no issues

If positive then:
- Identify suspected location & hold for outload
- PCR analysis conducted
- Test all grower delivery samples represented by ELISA

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**HARVEST – CERTIFIED NATA LABORATORIES**
**Harvest: Identification**

- Grower identified
- Notify of contaminated load
- Confirm grower samples with PCR analysis
- Advise grower of results
- Determine solution based on:
  - PCR quantified results
  - Storage location
  - Market requirements

**Challenges**

- Complicated and Expensive
- Time consuming and concerning to growers
- ELISA strips very sensitive – false positives
- Background GM levels
- PCR not always predictable

**Benefits**

- Market Access
- Grower pricing and delivery options
- Zero unknown failures
- Maintain contact with new technologies

**Key Point**

Support & encourage correct grower declarations & superior farm management processes

There are no winners in an incorrect declaration