Bulk grain imports

Information session

25 February 2019
Agenda

• Regulating stockfeed imports—*Lyn O’Connell, Deputy Secretary, Department of Agriculture and Water Resources*

• Managing biosecurity risks on import pathways—*Lois Ransom*

• Biosecurity risks of imported bulk grains—*Dr Mahmood Nasir / Dr Jonathan Early*

• Regulating the biosecurity risks of imported bulk grains—*Craig Scheibel*

• Questions?
Regulating stockfeed imports

Lyn O’Connell, Deputy Secretary
25 February 2019
Importing bulk grains: Applying pathway risk management

Lois Ransom
25 February 2019
Regulatory system

Pest risk analysis → Measures → Policy → Conditions → Publish → Assess and verify → Release

Phytosanitary outcome

ALOP

Department of Agriculture and Water Resources

Lois Ransom

25 February 2019
A story about controlling risks...

✓ Production risks
✓ Financial risks
✓ Export risks
✓ Import risks

➢ To achieve an appropriate level of protection (ALOP) – which is very low but not zero

*(Biosecurity Act 2015)*
Our approach using critical control points...

- A number of control points contribute to achieving ALOP
- We have confidence that they work
- We demand evidence that they have been applied
- We can monitor to verify that they are effective
- We avoid a single point of failure
- The majority of biosecurity risk is addressed offshore
Grain production pathway - offshore

- Good agricultural practice – clean seed, crop rotation, weed control, pest management, irrigation
- Yield and quality at harvest - $$$$
- Handling, grading, storage, transport, shipping - $$$$
Bulk grain import pathway

BIOSECURITY RISKS

Exporting country

Pre-export
- Grain Testing
- Sourcing grain from pest free areas
- Cleaning of transportation units
- Approved export pathway
- Approved grain specification

Export
- Grain Inspection
- Ship inspection and certification
- Phytosanitary Certification

Document Assessment
- Verify pre-export conditions are met

Inspection
- On-ship sampling and inspection
- Pest ID and management
- Permission to discharge

Transport
- Conveyance standards
- Approved transport operators
- Recovery procedures
- Cleaning and decommissioning

Storage
- Secure storage and handling
- Dust management during receipt and dispatch
- Biosecurity waste management
- Cleaning and decommissioning

Processing
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- Cleaning and decommissioning

Release
- Regulatory step or requirement
- Verification
- Surveillance

Audit and inspections of import pathway

Department of Agriculture and Water Resources
Imported grains
Lois Ransom
25 February 2019
Imported grain biosecurity system

- Biosecurity Act 2015
- Evidence of offshore risk management measures
- Inspection for biosecurity risks – insects, contaminants
- Containment, dust, diversion
- Processing
- Release from biosecurity control
Bulk grain import pathway

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Processing (Class 3.1 AA)
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- Processing by a department approved method
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Audit and inspections of import pathway

Department of Agriculture and Water Resources
Imported grains
Lois Ransom
25 February 2019
Thank you!
Biosecurity risks of imported bulk grain (plant)

Dr Mahmood Nasir
Biosecurity Plant Division
25 February 2019
Farm production and harvesting of grain (best management practice for weed, insect and disease control)

Production

Transportation

Stage 1

On-farm storage

Export

Export Terminal

Stage 3

Department of Agriculture and Water Resources

Biosecurity risks of imported bulk grain
Dr Mahmood Nasir

25 February 2019

Stage 2

Industry storage

Stage 2

Ship
Biosecurity risks of imported bulk grain

Inherent risks associated with bulk grain imports include:

• **Seed-borne pathogens**: potential introduction and establishment of exotic seed-borne pathogens through importation of viable grain.

• **Stored grain pests**: bulk grain may be infested during or after harvest by pests already present in combine harvesters, trucks, or storage facilities, or elevators.

• **Weed seeds**: bulk grain will normally contain a small percentage of contaminant seeds derived from other plants intermixed with the crop, a number of which are weeds.

• **Biosecurity risk material**: vessels, containers, spilled grains, airborne spores and contaminants
Pathogens of biosecurity concern: maize

- **Bacterial pathogens:** *Clavibacter michiganensis* subsp. *nebraskensis* (Goss’s bacterial wilt; *Pantoea stewartii* subsp. *stewartii* (Stewart’s wilt))

- **Fungal pathogens:** *Harpophora maydis* (Late wilt); *Peronosclerospora heteropogoni* (downy mildew); *P. philippinensis* (Philippines downy mildew); *P. sacchari* (sugarcane downy mildew); *P. sorghi* (Sorghum downy mildew)
Pathogens of biosecurity concern: maize (cont.)

- **Fungal pathogens:** *Peronosclerospora spontanea* (Spontaneum downy mildew); *Rhizoctonia solani f.sp. sasakii* (Banded leaf and Sheath blight); *Sclerophthora rayssiae var. zeae* (Brown stripe downy mildew)

- **Viral pathogens:** *Maize chlorotic mottle virus* (MCMV); *Maize dwarf mosaic virus* (MDMV)
Pathogens of biosecurity concern: sorghum

- **Fungal pathogens:** *Claviceps sorghi* (sorghum ergot); *Claviceps sorghicola* (sorghum ergot); *Peronosclerospora sorghi* (sorghum downy mildew); *Sporisorium cruentum* (Loose kernel smut); *Tolyposporium ehrenbergii* (Long smut of sorghum)
Pathogens of biosecurity concern: wheat

- **Fungal pathogens:** *Alternaria triticina* (Leaf blight of wheat); *Cephalosporium germanium* (Cephalosporium stripe); *Magnaporthe oryzae–Triticum pathotype* (wheat blast); *Puccinia graminis–strain Ug 99* (stem rust); *Tilletia controversa* (Dwarf bunt); *Tilletia indica* (Karnal bunt)
Stored grain pests of biosecurity concern: all grains

- **Beetles:** Cryptolestes turcicus (flat grain beetle); Cynaeus angustus (Large black flour beetle); Glischrochilus fasciatus (Picnic beetle); Glischrochilus quadrisignatus (Four-spotted sap beetle); Tribolium audax (American black flour beetle); Tribolium brevicornis (Flour beetle); Tribolium destructor (Large flour beetle); Tribolium madens (Black flour beetle); Trogoderma glabrum (Glabrous cabinet beetle); Trogoderma granarium (Khapra beetle); Trogoderma inclusum (Large cabinet beetle); Trogoderma ornatum (Ornate cabinet beetle); Zabrotes subfasciatus (Mexican bean beetle)
Stored grain pests of biosecurity concern: all grains (cont.)

- **Borer:** *Prostephanus truncatus* (Larger grain borer)
- **Moth:** *Cathartus quadricollis* (Tropical warehouse moth)
- **Weevils:** *Callosobruchus chinensis* (Cowpea weevil); *Caulophilus oryzae* (Broad nosed grain weevil); *Pharaxanotha kirschi* (Mexican grain weevil)
Weeds of biosecurity concern

• **Exotic species:** *Camelina microcarpa* (Small seeded false flax); *Dracocephalum parviflorum* (Dragonhead); *Euphorbia serpyllifolia* (Themseleaf sandmat); *Galeopsis tetrahit* (Common hemp nettle); *Galium mollugo* (smooth bedstraw); *Kochia scoparia* (Kochia); *Lolium persicum* (Persian ryegrass); *Salsola kali* (Russian thistle); *Salsola pestifer* (Russian thistle)
Weeds of biosecurity concern (cont.)

- **Restricted species** *Avena sativa* (oats); *Glycine max* (Soybean); *Helianthus annuus* (Sunflower); *Hordeum vulgare* (Barley); *Lens culinaris* (Lentils); *Linum usitatissimum* (Flax); *Medicago sativa* (Lucerne); *Secale cereal* (Rye); *Setaria glauca* (Yellow foxtail); *Setaria italic* (Foxtail millet); *Setaria pumila* (Yellow foxtail); *Setaria viridis* (Green foxtail)
Department’s framework to import bulk grain: key elements

- **Sourcing from low risk areas:**
  minimises the chance of contamination of grain with quarantine pathogen (pathogens capable of producing air dispersal spores such as bunts, smuts, rusts etc.)

<table>
<thead>
<tr>
<th>Scientific names</th>
<th>Status in</th>
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<tr>
<td><strong>Alternaria triticina</strong></td>
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<td><strong>Cephalosporium gramineum</strong></td>
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<td><strong>Magnaporthe oryzae–Triticum pathotype</strong></td>
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Department’s framework to import bulk grain: key elements (cont.)

- **Required grain grade**: ensures that imported wheat has a low levels of foreign material including other seeds, animal excreta, soil etc.

- **Assurance (NPPO certification)**: ensures that the consignment meet Australia’s import requirements outlined on the import permit.

- **Processing imported grains under an Approved Arrangement**: addresses any residual biosecurity risk.
Biosecurity risks of imported bulk grain

Thank you
Biosecurity risks of imported bulk grains (animal)

Dr Jonathan Early
Biosecurity Animal Division

25 February 2019
Pathogens of animal biosecurity concern

Exotic to Australia and present in the United States and/or Canada:

- Chronic wasting disease
- Porcine epidemic diarrhoea
- Transmissible gastroenteritis
- Bovine tuberculosis
- Bovine brucellosis
- Newcastle disease
- Infectious bursal disease
- High-pathogenicity avian influenza
- Maedi-visna
- Scrapie
Animal biosecurity risks

Associated with the production and import of bulk whole grain from the United States and Canada.

- Production methods on farm
- Contamination
- Feral animals
- Processing controls
- Storage

- Transport
  - Rail
  - Road
  - River
  - Sea
- End use
Animal biosecurity risk management considerations

To meet Australia’s Appropriate Level of Protection of very low, but not zero.

- Low animal pathogen risk status
- Types of whole grain
- Production methods
- Transport
  - Contamination
  - Segregation
- Oversight
  - Competent authority
  - 3rd party auditors
- Storage controls
- Thermal processing
- End use
Regulating the biosecurity risks of imported bulk grains

Craig Scheibel
Biosecurity Plant Division

25 February 2019
Bulk Grain Import with critical controls points for managing biosecurity risk

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Audit and Inspections of import pathway
Further Information

You can find more information on our website:


- **Guidance documents and templates**

- **Approved Arrangements**
Questions?