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POTATO

Potato Bin Hygiene

Key Points:

- ◆ Bins and bags are widely used in the potato industry to transport and store potatoes.
- ◆ Dirty foreign bins CAN transfer diseases, nematodes and weeds onto your farm.

Wooden bins

Traditional stackable wooden boxes provide a cost advantage for storage of seed but are difficult to clean if they are heavily soiled.

Bins make better use of expensive cool-store space and have a lower OH&S handling risk than bulk bags.

Use special SEED ONLY bins that have been cleaned since their previous use. These SEED ONLY bins are sent to certified seed potato grower with a bin cleanliness declaration, filled with seed and taken to the cool store.

Half-tonne, One -tonne and 1200 kg wooden seed bins are available.

Make sure your washer/packer/processor has a bin control system to make sure your bins are no used by other growers and no waste is stored or transported in them.



Clean & sanitise wooden bins for seed storage



Plastic bins are used by many potato growers

Plastic bins

Plastic hire bins are widely used by many horticultural industries.

To reduce the risk of disease spread, make sure the bins you hire have been thoroughly washed using high-pressure water and detergent. Check the honeycomb pattern on the base of the bins for soil.

Plastic bins are impervious to moisture, which reduces the risk of bacterial or fungal growth and are ideal for early generation seed.

Having no nails and broken timber boards further reduces the risk of product damage and related OH&S concerns.

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Bin Hygiene Strategies

Simple ways to reduce the risk of transmitting plant pests and diseases.



Bulk Bags

Bulk bags containing 1200kg potatoes are commonly used to transfer potatoes to packing sheds and certified seed to districts with restrictions on bin movement.

The reuse of bulk bags that have previously been used with potatoes, presents a risk of transferring potato pests and diseases and should be limited to transfers between secured sites.

Bulk bags are single use items, which pose a difficult disposal problem for the buyer. Given their low cost, it is not economical to clean and disinfect used bulk bags.

Only new bulk bags are used for certified seed potatoes. The seed is then transferred into bins for more space-efficient storage.

Transferring potatoes from bulk bags into bins is an awkward process requiring an assessment of potential OH&S risks.

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The following sources have been used in the preparation of this factsheet.

WAQIS (2003) "Soil Borne Diseases in Horticulture" FarmNote 79/1990, www.agric.wa.gov.au

ViCSPA (2005) "Seed Potato Hygiene Protocol", www.vicspa.org.au

Eyes On Potatoes (1998, March) Vol 3, pg 11

Eyes On Potatoes (2000, June) Vol 10, pg 13

Eyes On Potatoes (2001, December) Vol 14, pg 8

Cleaning & Sanitising Wooden Bins John Lopresti

1. Porous surfaces such as rough-sawn wooden bins are difficult to clean, potatoes are best stored in smooth walled bins.
2. Prevent the base of bins from coming into contact with soil in the field using bin trailers.
3. Clean heavily soiled bins **before** using a sanitiser. Contact with soil or crop waste will exhaust most sanitisers.
4. Wash bins with high-pressure water above **70°C**.
5. Adequate cleaning can be achieved at water pressures up to of 1,000 psi and at a distance of **10-50 cm (4 to 20 inches)**.
6. Pressure washing closer than 10 cm can **scuff wood fibres** that may splinter when dry increasing the risk of tuber injury and disease.
7. More pathogens are removed at smaller nozzle spray angles. **Use a nozzle angle of 15° for pressure washing.**
8. The washing rate across a bin surface is not as important when sanitising bins as operating pressure and nozzle angle.
9. **Flat fan nozzles** have a higher flow rate and produce a greater impact force than other types of nozzle.

Notes taken from research published in "New approaches to the control of postharvest rots and scald in pome fruit – Automated bin disinfestation",

J. Lopresti et al. (1997),
Horticulture Australia Project # AP440

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