



Australian Government
Department of Agriculture,
Water and the Environment

Australia's experience in developing treatment methodologies

2022 Quarantine Regulators Meeting

May 2022



Biosecurity Treatments



Why do we care about effective biosecurity treatments?	
Biosecurity treatments underpin international trade	Ineffective treatments risk introducing biosecurity pests and losing market access

Regulatory Framework

Scheme/arrangement

Sets out the requirements for the company to participate in the system and remain acceptable.

Example: treatment providers must be audited once every 12 months.

Treatment schedule

Sets out the treatment rate for the specific commodity and pathway.

Example: Timber packaging needs to be treated with MB at 48g/m³ for 24 hours at 21 °C or above.

Treatment methodology

Sets out the baseline requirements for the effective application of the treatment.

Example: gas concentration readings are required to be taken at the start and at the end of the fumigation.

Treatment Methodology

Why do we establish treatment methodologies?

- Ensure treatment providers understand the requirements to conduct an effective treatment
- Ensure treatments can be verified as being conducted effectively
- Ensure only the minimum necessary amount of regulatory burden
- New – promote treatment provider compliance
- Ensure treatments are conducted safely?

Given the purpose, what are the principles for writing a methodology?

The requirements must:

- Deliver an effective treatment if followed
- Be verifiable
- Be easy to understand
- Be enforceable
- Balance regulatory burden against assurance

Treatment Effectiveness Spectrum

Ineffective treatments

Occasionally effective treatments

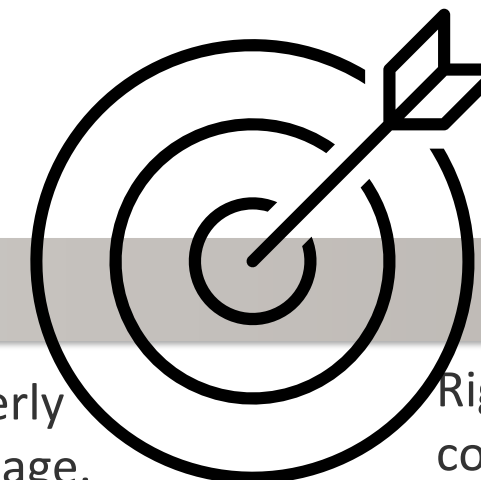
Usually effective treatments

Best practice

Example:

No requirement for making a container suitably gas tight.

Ensure door and vents are sealed properly and container is free from obvious damage.



Rigorously pressure test every container before treatment.



- ✔ Less burden and easier to comply.
- ✘ Can lead to regular treatment failures.
- ✘ Can perversely incentivise deliberate non-compliance.

- ✔ Less treatment failures.
- ✘ Cost of compliance is high.
- ✘ Can perversely incentivise deliberate non-compliance.

When to Develop a Treatment Methodology

When a treatment is complex enough to need application requirements, and;

- 1) Consistent issues are identified with the application of a previously accepted treatment
- or
- 2) A new treatment is approved that requires a methodology



More cost and time effective options



New pests or pathways



Alternatives with better efficacy

Industry request

Government led



New proprietary technique or formulation



More environmentally friendly alternatives



Pests build up resistance to existing options

Prior to Developing a Treatment Methodology

Understand the treatment

- Identify the treatment type and any similarities to existing treatments
- Is there a manufacturer for the treatment? Eg a chemical manufacturer for a fumigant
- Is the treatment a bespoke process? Eg not intended for wide use
- What does the treatment process involve? Is it mobile, fixed, in transit, etc?

Identify industry or academic experts.

Ultimately need to identify the critical treatment parameters:

Methyl Bromide

- Concentration
 - Time
- Temperature

Heat

- Temperature
 - Time

Insecticide

- Concentration
 - Spray
- Pattern/coverage

Controlled atmosphere

- Concentration
 - Time
- Temperature
 - Pressure

Australia's Steps for Developing a Treatment Methodology

Draft high level requirements – work with industry experts where possible

- Consult internal experts and stakeholders
- Consult targeted industry stakeholders

Prepare 'consultation draft' methodology

- Wide public consultation
- Information sessions

Implement, review and refine

- Ongoing, not 'set and forget'

Don't let the perfect be the enemy of the good.



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Questions?

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