

Instructions: Complete the risk assessment according to the guide *Risk management for emergencies*.

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| Task | Insecticide application for locust control |
| Context (including area/site) | The application of insecticides to control locusts in NSW is restricted by label, permit and legislative requirements to protect human health and the environment. Insecticides are applied by landholders, contractors and/or government personnel. |
| Risk factors/causes | Incorrect insecticide or formulation used and/or incorrect application techniques, including inappropriate equipment, may adversely impact on human health and the environment. |
| Acceptable level of protection (ALOP) | Low |
| Specific risk | Insecticide for locust control affecting non-target species (including people) and adversely affecting the environment by ground (eg spray units) or aerial application |
| Area(s) of impact | Human health and safety Environment |
| Current risk treatments | <ol style="list-style-type: none"> 1. Comply with insecticide labels, safety data sheets (SDSs) and/or any associated permits. (Note: The permit may override and/or contradict all or part of the label.) This includes (but not limited to) application buffers, application rates, weather conditions, identification and avoidance of sensitive areas (water bodies, buildings, neighbours crops/organic status etc), withholding periods, correct selection of PPE, and appropriate resources for spills. 2. Only appropriately accredited personnel to distribute and apply insecticide. Equipment used for application to be calibrated to ensure effective and efficient delivery of insecticide. Appropriate PPE to be used. 3. Supply of misters or any other spray equipment to landholders must include an induction covering the provision of operators manual, procedure, insecticide information and instructions/demonstration on equipment use. 4. Insecticide is to be selected based on availability and area of application. Refer to chemical list for possible chemical selection. Selection criteria for insecticides to include lowest possible effects on non-target species including people, wildlife and livestock, time persisting in the environment, and equipment to be used. Refer to the product label and permit. 5. Insecticide only to be issued to land managers when an appropriate target has been confirmed, to avoid 'over spraying'. 6. Policies and procedures available for personnel applying insecticide identifying precautions to be taken and possible hazards/risks to be assessed. Refer to the NSW DPI locust and emergency management webpages. 7. Use of ground spray equipment set at height (above ground) to spray low flying swarms/bands with appropriate density (in place of aerial spraying where possible). 8. Livestock (including apiary sites) to be managed on property to avoid contact with insecticide (eg spray drift) and pastures/crop/feed/water affected by insecticide, until the appropriate withholding period has expired. Refer to the appropriate |

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| | <p>product labels and permits.</p> <p>9. Supply of biological control, Metarhizium, requires a certificate for organic property status, or a risk assessment to be conducted, which should include neighbouring properties.</p> <p>10. Identify and map areas (where possible) of known sensitive areas (e.g. protected habitats, apiary sites, organic farms).</p> <p>11. Risk assessment to be performed, and permission to spray by the landholder recorded prior to spraying.</p> <p>12. Evaluate, induct, brief and monitor ground and aerial spray contractors to ensure appropriately qualified for task, and target areas and potential hazards are clearly identified. Contractors must demonstrate compliance to their environmental and safety systems.</p> <p>13. Monitoring of application of insecticides (including investigation of complaints of effectiveness of insecticide) using Post Control Check form for a strategic evaluation of application effectiveness and potential environmental damage. Corrective actions (if required) to be identified and implemented across the response campaign.</p> <p>14. Spray records are required in accordance with the Pesticides Act.</p> <p>15. Notification of appropriate authorities (eg OEH, SafeWork NSW) if incident occurs. Refer to the NSW DPI procedures for process.</p> | | | | | |
| Current risk | Likelihood (A-E) | D (unlikely) | Consequence (1-5) | 2 (minor) | Current risk (VH, H, M, L) | Low |
| Proposed risk treatment* | | | | | | |
| Residual risk | Likelihood (A-E) | D (unlikely) | Consequence (1-5) | 2 (minor) | Residual risk (VH, H, M, L) | Low |
| Comment* | | | | | | |
| Conclusions | The overall level of risk is low when insecticide requirements are met, personnel are trained, policies and procedures are followed and application is monitored. | | | | | |
| Recommendations | Accept the low level of risk for the task. | | | | | |

*Mandatory requirement if assessed level of risk rating is VH (very high), H (high) or M (medium)

| Name/s and role/s | | | Date | |
|-------------------|-----------------------------|-----------------|-----------------|--|
| Prepared by | Emergency Management Unit | Date completed | 19 January 2018 | |
| Authorised by | State Emergency Coordinator | Date authorised | 1 February 2018 | |

Table 1 - Consequence description for areas of impact

| | Animal health & welfare Plant health | Health & safety | Environment & heritage | Governance & compliance | Industry & customer experience | Stakeholder trust / confidence | Service delivery | Value & benefits | Financial |
|-------------------------|---|---|---|---|--|---|---|---|--|
| 5. Extreme | Significant animal illness/injuries/deaths in multiple regions. Widespread animal welfare issues. Considerable plant damage/loss across multiple regions . | Multiple fatalities and/or >20 major injuries/permanent disabilities/chronic disease. | Irreversible large-scale environmental impact with loss of valued ecosystems . | Prosecution leading to imprisonment of executive(s). Significant prosecution/litigation. Loss of operating licence . | Extensive shutdowns or extended disruptions with economy-wide and national effects. Structural change or long-term industry impact. | Outrage – Material change to public perception of the organisation. Confidence and trust are severely damaged, possibly irreparably, and full recovery both questionable and costly. | Catastrophic event with potential to lead to the collapse of the organisation. | Failure to realise benefits of enterprise-wide operations or public announced portion/milestone significantly missed or final completion date significantly missed on critical path project. | >\$50m OR >25% of budget |
| 4. Major | Considerable animal illness/injuries/deaths on multiple properties across a region . Animal welfare impacted across multiple regions. Considerable plant damage/loss on multiple properties across a region. | Kill or disable Single fatality and/or 10-20 major injuries/permanent disabilities/chronic diseases. | Long-term environmental impairment in neighbouring or valued ecosystems. Extensive remediation required. | Substantial breach resulting in prosecution, fines and/or litigation. Licence or accreditation restricted or conditions affecting ability to operate. | Short duration shutdowns or substantial disruptions affecting multiple industries with state or sector-wide cascading effects. | Displeasure – Extended negative state/national media coverage. Confidence and trust are damaged but recoverable at considerable cost, time and staff effort. | Severe event which requires extensive management effort but can be survived. | Significant delays with initiative which impacts across divisions and/or significant decrease in benefits realised or public announced portion/milestone missed or final completion date missed on critical path project. | >\$5m - ≤\$50m OR 25% of budget |
| 3. Moderate | Some animal illness/injuries/deaths on multiple properties across a region . Animal welfare impacts across a region. Some plant damage/loss on multiple properties across a region. | Serious injury 1-10 major injuries requiring hospitalisation and numerous days lost or medium-term occupational illness. | Impacts external ecosystems and considerable remediation is required. | Breach resulting in enforcement action and/or prohibition notices. Substantial fine and no disruption to services. | Significant disruptions affecting operations of one industry sector or region with state-wide effects on one or more other regions or sectors. | Concern – Short-term negative state/national media coverage. Confidence and trust are diminished but are recoverable with time, staff effort and additional funding. | Significant event which can be absorbed, but substantial management effort is required. | Significant delays with initiative and/or major decrease in benefits realised or public announced portion/milestone missed or final completion date missed with demonstrable mitigating external circumstances. | >\$500k - ≤\$5m OR 10% of budget |
| 2. Minor | Limited animal illness/injuries &/or deaths on single enterprise. Limited plant damage/loss on single enterprise . | Loss-time injury Single recoverable lost time injury or illness, alternate/restricted duties injury, or short-term occupational illness. | Short-term and/or well-contained environmental effects. Minor remedial actions probably required. | Significant non-compliance . Subject to comment and monitoring from applicable regulator. Small fine and no disruption to services. | Serious disruptions affecting operation of one industry sector or region . | Disappointment – Extended negative local/state media coverage. Confidence and trust dented but are quickly recoverable at modest cost within existing budget and resources. | Minor event , the impact of which can be absorbed but much broader management effort is required. | Severe delays with initiative and/or moderate decrease in benefits realised or completion date missed for non-critical path project. | \$50k - ≤\$500k OR 5% of budget |
| 1. Insignificant | Isolated impact on animals and/or plants on a single enterprise . | Medical treatment only Illness or minor injuries requiring medical treatment. | Change from normal conditions within environmental regulatory limits & environmental effects are within site boundaries. | Minor non-compliance with legal and/or regulatory requirement or duty. Investigation and/or report to authority. | Minor disruptions affecting several industries or regions. | Unease – Series of negative articles in local/state media. Confidence remains with some minor loss of goodwill or trust. Recoverable with little effort or cost. Some continuing scrutiny/attention. | An event, the impact of which can be absorbed but some additional management effort is required. | Minor delay with initiative and/or a minor decrease in the benefits realised or minor delay on the project or another project, with no public implications. | ≤\$50k OR 1% of budget |

Table 2 - Risk rating with likelihood definition

| | | Likelihood | | | | | |
|-------------|------------------|---|--|---|---|---|-----------|
| | | E. Rare | D. Unlikely | C. Possible | B. Likely | A. Almost certain | |
| | | Would only occur under exceptional circumstances (e.g. once every 100 to 1000 years) | Could occur only in unusual circumstances (e.g. once every 10 to 100 years) | Could occur, but more than likely will not (e.g. once every 1 to 10 years) | Will probably occur (e.g. 2 - 10 times/year; could occur on a monthly/quarterly basis) | Expected to occur in most circumstances (e.g. >10 times per year; could occur on a daily/weekly basis) | |
| Consequence | 5. Extreme | Refer to Table 1 | Medium | High | High | Very high | Very high |
| | 4. Major | | Low | Medium | High | High | Very high |
| | 3. Moderate | | Low | Medium | Medium | High | High |
| | 2. Minor | | Low | Low | Medium | Medium | Medium |
| | 1. Insignificant | | Low | Low | Low | Low | Medium |

Table 3 - General risk tolerance, management guide and approval

| Risk rating | Basic tolerance | Management | Approval – Non response | Approval – Responses |
|-------------|-----------------------|---|----------------------------|---|
| Very High | Generally intolerable | Urgent attention. Must obtain Secretary/Director General approval for risks and their treatments | Secretary/Director General | Executive Emergency Management Committee |
| High | Undesirable | Intervention required. Approval of the risks, their treatments and acceptable management actions. To be escalate to Secretary/Director General as appropriate. | Deputy Director General | Executive Emergency Management Committee |
| Medium | Tolerable | Active management. Review risks and treatments, and approve acceptable management actions. | Director | Incident Controller (Local or State) |
| Low | Broadly acceptable | Ongoing monitoring. Managed through routine operations by the risk owner. Review/monitor risks and their treatments for effectiveness, reliability and any changes in the likelihood and consequences. | Director or delegate | Incident Controller, Function Officers, Operations Managers or Officers-in-Charge (OIC's) |