



# NSWROD SOP3

## Trapping of rodents

### Background

Trapping is used to minimise the impact of the introduced house mouse (*Mus musculus*), brown rat (*Rattus norvegicus*), black rat (*Rattus rattus*), and Oriental rat (*R. tanezumii*) in commercial and domestic premises and on agricultural production. Because of the low efficacy and high labour cost of trapping rats and mice for broad-scale population reduction, the use of traps is generally limited to small-scale infestations rather than rodent plagues.

All traps have the potential to cause injury and some degree of suffering and distress. Traps that contain an animal (live traps) cause fewer injuries than traps that restrain an animal. Traps that are designed to kill extremely rapidly (break-back/snap traps, electrocution traps) are considered to be among the most humane methods of rodent control if they are well-designed and set and monitored appropriately.

This standard operating procedure (SOP) is a guide only; it does not replace or override the relevant legislation that applies in NSW. The SOP should only be used subject to the applicable legal requirements (including WHS) operating in the relevant jurisdiction.

Individual SOPs should be read in conjunction with the overarching Code of Practice for that species to help ensure that the most appropriate control techniques are selected and that they are deployed in a strategic way, usually in combination with other control techniques, to achieve rapid and sustained reduction of pest animal populations and impacts.

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### Application

- Trapping is labour intensive and is an inefficient method for large-scale rodent control. It has little impact when population numbers are high or in a plague situation.
- Trapping is used as part of an early intervention strategy to quickly reduce small populations of rodents, and prevent a build-up in numbers. Rodent-proofing, habitat modification and good hygiene (e.g., keeping grass cut, stubble management, keeping rubbish around buildings to a minimum) can then be used to reduce the potential population capacity and slow re-colonisation.
- There are a variety of trap types available. Some types of traps are designed to kill extremely rapidly (break-back/snap traps, electrocution traps), whereas others are designed to contain or restrain (live traps).

- Traps have the potential to cause significant injuries, suffering and distress; some designs more so than others. Selection of appropriate traps and trap sites will maximise the chance of capture and minimise the distress caused to target and non-target animals.
- Every effort must be made to avoid target and non-target deaths from factors such as exposure, shock, dehydration, starvation, exhaustion and predation.
- Traps must be used in accordance with the *Prevention of Cruelty to Animals Act 1979*.
- Traps can only be used for the control of native rodents under special permits (Users should refer to NPWS for information on [licenses to harm native animals](#) in NSW).
- Rodents that are not killed instantly by the trap should be euthanased by manually applied blunt force trauma to the head.

## Animal welfare implications

### Target animals

- All traps have the potential to cause injury and some degree of suffering and distress. The humaneness of any trap depends on the length of time the animal remains trapped and on the manner of death.

### Break-back/snap traps

- Are designed to kill rapidly using a descending bar to hit the animal either on the back of the head or in the upper cervical area, usually causing irreversible loss of consciousness within one minute.
- If badly designed, not set properly or poorly baited can result in animals being injured rather than killed thus causing prolonged pain and distress.
- Traps with spikes or serrations on the jaws should not be used.
- Should be checked at least daily to minimise the suffering of any injured animals.

### Stretched rubber ring traps

- Utilise a stretched rubber ring which is released onto the rodent when it enters the baited tunnel trap to cause crushing and suffocation.
- Are designed to kill instantly with 100% efficacy.
- Can potentially trap and kill small non-target animals.

### Electrocution traps

- Are designed to kill quickly, with the time to death being less than 2 minutes.
- Usually consist of a box structure with an opening for entry. The rodent is enticed to stand on two plates, which act as terminals, to receive an electric shock transmitted via the feet.
- May or may not cause unconsciousness in the animal due to shock before it experiences the pain of severe muscle constriction, ventricular fibrillation and respiratory distress caused by this type of death.

- Can potentially cause non-lethal shocks which cause animals to experience muscle weakness or loss of function for a short-period but they are not left with any permanent injury or burns.

### **Gas traps**

- Enclose the mouse when it enters the trap and releases a measured dose of carbon dioxide.
- Cause loss of consciousness in less than 30 secs and death within around 2 min when gas concentration is sufficient.
- Are likely to cause dyspnoea (breathing discomfort or 'air hunger'), anxiety and fear in rodents prior to unconsciousness.

### **Glueboard traps**

- Make use of a highly adhesive glue to restrain any rodents that come in contact.
- Cause trapped animals to become stuck by the feet and fur and suffer from instant and prolonged pain and distress.
- Cause suffering and trauma depending on the period of entrapment, including dehydration, hunger, forceful hair removal, torn skin, and broken limbs, and sometimes self-mutilation.
- Are considered unacceptable and inhumane due to the length of time the animal remains trapped and the manner of death, and as such will not be discussed further in this SOP.

### **Live traps using box or cage traps**

- Should be placed in a suitable area protected from extremes of weather.
- Should be set in the evening and checked in the morning.
- Can cause animals to be at risk of exposure, thirst, starvation, shock, capture myopathy and predation, although they are not likely to experience significant injuries unless they make frantic attempts to escape.
- Should be approached carefully to minimise panic, further stress and risk of injury of the trapped animal.
- Introduced species of rodents that are live trapped should be euthanased promptly by manually applied blunt force trauma to the head. Other methods of euthanasia in domestic situations may include euthanasia at a veterinary premise. Translocation to an unfamiliar area can raise potential welfare issues and is not permitted under NSW environmental legislation.
- There are welfare implications of trapping while females have dependent young as they will be left to starve to death. If lactating females are trapped, reasonable efforts should be made to find and humanely kill dependent young; otherwise they will die a slow death from starvation.

## Non-target animals

- Traps are not always target specific, so a wide range of non-target species may be caught.
- Small non-target animals will suffer similar distress, injuries or death as the targeted rodents.
- Larger non-target animals are unlikely to come to any harm; however, slight suffering and injury may occur if they trigger a break back/snap trap.
- Live non-target animals caught in traps must be examined for injuries and signs of illness or distress (or taken to a veterinarian if there is a lack in competency) and dealt with as follows:
  - Animals which are unharmed or have only minimal injuries should be immediately released at the site of capture only, as translocation to an unfamiliar area can raise potential welfare issues.
  - Animals which have more severe injuries but may respond to veterinary treatment, should receive appropriate attention from a qualified carer or veterinarian.
  - Severely injured non-target animals which are untreatable should be destroyed humanely, using a technique that is suitable for the species. For more information on euthanasia techniques refer to *GEN001 Methods of euthanasia*.
- To minimise the risks to non-target animals, the following strategies are recommended:
  - Use of live traps – allows an assessment of what non-target animals are in the area.
  - Placement of traps – place traps in sheltered areas, inaccessible to non-targets and potential predators (e.g., in tunnels), in areas where rodent activity is obvious, such as active nests, along runs, under rubbish or where droppings are observed.
  - Timing of trapping – rodents are mostly active at night; therefore, set traps in the late afternoon / evening and check in the morning.
  - Check traps regularly – traps should be checked at least once a day, preferably twice, to minimise suffering of trapped live animals.

## Workplace health and safety considerations

- Care must be taken when handling rodents as they may carry diseases such as leptospirosis, toxoplasmosis and salmonellosis that can affect humans and other animals. Routinely wash hand and other skin surfaces contaminated with faeces, blood and other body fluids.
- Operators must be protected by tetanus immunisation in case of infection of scratches and bites when handling trapped or injured animals.
- Operators should also be wary of the risks of injury when placing and setting traps, and handling wild animals. Protective clothes may help prevent the operator from being scratched and bitten. Leather gloves may help prevent finger injuries from live and break-back/snap traps.

## Equipment required

### Traps

- Traps are commercially available from retail merchants such as supermarkets, hardware stores and specialised suppliers.
- Traps should be supplied with instructions for use (including any limitations on the operation of the trap), maintenance, service and safety operation. These instructions should be adhered to by the operator.
- Traps should be mechanically robust, free from imperfections and defects. The design should incorporate adequate strength and rigidity to prevent breakages or permanent deformation which would reduce their effectiveness, humaneness and safety. Trap material, as well as bonding or welding, should comply with applicable international, or national standards. Replacement parts should meet the same specifications as the original parts.
- Traps should incorporate a means of securing them to prevent displacement before or after capture. Pegs should be used to tether traps when used outdoors.
- Characteristics of a good break-back/snap trap include a strong bar and spring, and a large trigger platform. The point of impact should be in the head or upper neck area.
- Kill traps should effectively kill the target animal quickly. Break-back/snap traps are considered to have an *acceptable* welfare impact if they cause irreversible unconsciousness in at least 80% of animals (minimum of 12 animals tested) in  $\leq 60$  seconds for mice and  $\leq 90$  seconds for rats. Traps with better welfare will be quicker ( $\leq 30$ s for mice and  $\leq 45$ s for rats) – refer to Schlötelburg et al. (2021) NoCheRo-Guidance for the Evaluation of Rodent Traps for further details.
- Live-trapping is conducted using box/cage traps which are usually rectangular and constructed from wire mesh. They have a mesh or sheet metal trap door which is held open until the trap is triggered either by a rodent standing on a treadle or taking bait from a trigger inside the trap. When the trap is triggered, the door is closed (usually by a spring) and the animal is retained in the trap.
- Restraining traps should effectively hold the animal without causing excessive trauma. NAWAC humane guidelines recommend that trapped animals should not suffer with trauma more severe than mild at least 70% of the time, and trauma more severe than moderate at least 80% of the time. Traps that result in moderately severe to severe trauma are not acceptable.

### Other equipment

- Heavy metal or wooden blunt implement for killing live rodents.
- Pegs for tethering outdoor traps.
- Tunnels for protecting non-target animals from injury (where suitable).
- Personal protective equipment (including waterproof gloves).

## Procedures

### Laying of traps

- The placement of traps is critical to achieve maximum effectiveness. Traps should be placed in areas where rodent activity is obvious, such as active nests, along runs, under rubbish or where droppings are observed.
- Before setting each trap, ensure that it is functioning properly.
- If a bait is required to lure the rodent in the trap, use a food which is more tempting (at least a different smell) to the animal than other food-stuffs which may be available.
- Set the trap according to the manufacturer's instructions and place in its final position. When placed outdoors, live box traps and break-back/snap traps should be firmly anchored in the treatment area.
- Keep records of when and where traps are set.

### Checking of traps

- Traps should be checked at least once a day, between sunrise and sunset. To minimise the suffering of trapped animals that are still alive, it is preferable to check traps twice per day in the morning or evening and whenever the trap is thought to be sprung.
- Remove dead rodents and humanely kill any trapped rodents that are still alive.
- Re-set the trap and continue trapping until rodent activity ceases. Traps may need to be moved to different locations.

### Euthanasia of live rodents

- Live-trapped rodents and rodents that have not been successfully killed in break-back/snap traps or other types of trap must be euthanased as soon as possible after capture. The most appropriate technique is manually applied blunt force trauma to the head to destroy the brain.
- Animals caught in live traps should be gently transferred from the box/cage trap to a bag or hessian sack prior to euthanasia. Encourage the rodent into a corner of the sack and prevent it from moving. Locate the head and strike it accurately and strongly with a suitable heavy and blunt instrument.
- Death of the animal should always be confirmed by observing a combination of the following:
  - no heartbeat
  - no breathing
  - no corneal reflex (no blinking when the eyeball is touched)
  - no response to a toe pinch (a firm squeeze of the pad on the large toe)
- If there is any doubt that the animal is dead then repeat the method.

### Disposal of dead rodents

Rodent carcasses must be disposed of carefully and hygienically.

## Procedural notes

Users of traps must always refer to the relevant Commonwealth and State legislation for more detailed and up-to-date information on conditions of use.

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