



NSW DEPARTMENT OF
PRIMARY INDUSTRIES

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Procedure - Destruction of birds using lethal injection

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1. Application / Scope

- The humane destruction of birds in as short a time as practical is a key objective for the LDCC. A number of methods are available for mass destruction, including lethal injection, gassing with CO₂ and neck dislocation.
- **Euthanasia should result in death without signs of pain or distress in the minimum time to loss of consciousness, and should be reliable and repeatable.**
- The use of lethal injection to euthanase birds meets the guidelines above and can be used by a veterinarian or by a trained technician under veterinary supervision.
- The rate of kill will be limited largely by the number of lethal injectors and the ability to catch the birds. Where possible those with experience in handling & catching birds should be deployed to this task. The owners and staff of the property should be invited to assist.

2. Abbreviations / Definitions

3. Resources / Equipment

On a per team basis the following resources should be deployed:

- Destruction team (veterinarian, injectors, catchers, and collectors). A team of one injector with 2 catchers will kill about 400 birds/hour. At least 2 collectors per injector should be used to remove the dead birds to skips. **A veterinarian must be present when using lethal injection chemicals.**
- Storage & transport for items for disposal. If using steel waste skips for dead birds, eggs and other items for disposal, a 20m³ skip will hold about 5000 – 6000 layer birds (at about 2kg/bird) or about 220 boxes of eggs. A vehicle will be required to place and remove the skips. Skips should be free of drain holes or plug any present (timber plugs).
- 1 roll per skip of thick builder's plastic like that used for disposal of concrete & asbestos helps ensure holes are not punched in the plastic.
- 4 rolls of duct tape and something to cut it with eg Stanley knife.
- PPE for personnel – dust masks (2 strap), goggles, gloves (cotton for injectors, leather for catchers and collectors), shoes, suitable shirt/shorts/disposable overalls, head protection if working in area with low head clearance.
- Catching frames/hooks as needed by shed design.
- Drinking water and food for all workers.
- Wheelbarrows or alternative for moving dead birds from shed (NB. for ease of cleaning use metal rather than plastic wheelbarrows that have wheels without cleats).
- Appropriate volume of euthanasia chemical (eg Lethobarb) for the number and type of birds (eg. dose of 3ml Lethobarb/layer bird, more for larger birds like broiler breeders and roosters).
- Needles (200 x 1.5 inch x 18 gauge needles/150 birds), multi-dose syringes/injector guns (2 guns/1500 birds – guns gum up after a couple of hours), connective tubing with 14 gauge needle to attach euthanasia chemical bottle to injector gun, string bag or other suitable device to euthanasia chemical bottle over shoulder of injector, sharps containers.
- First aid kit, emergency telephone numbers, Material Safety Data Sheets for all chemicals being used on site.

4. Warnings

This operation has a number of potential OH&S risks. Training in each step should be provided to inexperienced operators before commencing the task. Therefore it is desirable to appoint a Safety Officer for the duration of the task. A first aider must be available.

- Lethobarb – this is **very toxic** and handler safety is a key concern. Personnel must take care when handling the chemical. If there is any suspicion of a person being affected by the lethobarb (eg.due to accidental injection/needle stick injury), the first aider must be requested to attend. All needles are disposed of into a sharps container. All euthanasia chemical bottles (both used and unused) are kept in a secure central storage area, are audited at the beginning and end of the operation and disposed of appropriately.
- Manual handling – birds are heavy & can be difficult to handle. Plan placement of the skip bins to minimise manual handling. Mechanical assistance (trolley, loader) should be provided where appropriate to reduce manual handling.
- Slips, trips and falls – the nature of the catching, carrying and placing of birds in the bins/skips has the potential for these accidents. Personnel should be encouraged to work within their limits, and suitable breaks taken. Personnel should be matched to the tasks at hand.
- Cuts & scratches – the operating environment will present many edges, sharps, etc that have the potential to inflict injury. This includes the birds themselves. Areas of exposed skin should be minimised, including the wearing of gloves (especially for catching birds in cages). Potential hazards should be either removed &/or protected (covered) &/or marked with a hazard warning eg hazard tape. Where the risk of injury cannot be minimised, an alternative approach should be sought eg removal of a wall. Tetanus vaccination is advisable.
- Electrical installations – farms typically have a wide standard of electrical installations. A check must be made to ensure the work area is safe for personnel. It may be necessary to isolate the supply to the work area during the task.
- Eye injuries – the flapping of wings, rapid movement of hands etc all present the possibility of foreign matter in eyes including dust particles. Eye protection should be worn by all personnel.
- Mechanical assistance – where machinery such as a forklift, crane truck or similar are involved, it is essential all personnel are aware of the requirements when working around such machinery. Only accredited/approved personnel are to operate the equipment.
- Operating environment – inside commercial sheds can be a fairly hostile working environment eg high temperature, high humidity, ammonia, dust. Efforts should be made before the commencement of the task to ensure the shed is well ventilated, and where possible cooling is operating NOTE: the use of foggers to cool a shed is likely to increase the humidity of the shed & is not recommended.
- Emotional well being – personnel will be affected differently by the experience. It is possible some personnel will be unable to be involved/complete this task. Careful selection of personnel is essential. It is essential all personnel are provided with the opportunity to access appropriate support.

5. Procedure

- Pre any activity, ensure animals not to be destroyed are securely isolated away from those to be destroyed.
- The team should be divided in the following groups:
 - Catchers – those who catch & present the birds to the injectors
 - Injectors – those who lethally inject the birds (veterinarians or trained technicians)
 - Veterinarian – use of Lethobarb requires supervision by a veterinarian
 - Collectors – those who collect the dead birds and remove them to the skip bins for disposal (must be fit).
- There may also be a need to have a group to keep the figures on numbers of animals killed. Similarly, it may be desirable to have a suitably qualified person to check the birds are being handled and killed humanely, though the veterinarian should be able to do this.
- A Site Supervisor should coordinate all activities, and take advice from the Safety Officer.
- In advance of the actual destruction;
 - develop a site plan and include consideration of best access to the birds for catchers, best access to skips for collectors, vehicles to deliver skips, etc.
 - make adjustments to shed systems to minimise bird movement during catching and provide the best operating environment for the personnel.
 - shut off feed and water systems, and if possible adjust so they allow ready movement around the shed.
 - ensure no birds can escape from the shed if they get free.
 - ensure all occupational health and safety risks have been addressed (removed, taped, covered etc).
- Setup
 - Position skips near the entry/exit of the shed for ease of access for collectors. If the skip has a lower edge this should be positioned at the side where loading will take place.
 - Line the skip with the plastic allowing extra for overlap when sealing & tape the plastic to the skip to hold it in place while loading birds.
- Destruction
 - Using catching frames if applicable, birds are caught, ensuring they are correctly handled to minimise trauma/injury to the birds and risk to the handler.
 - Place the bird on its back on a suitable surface and at a convenient height for catchers and injectors. The catcher should hold the bird to ensure good access to the injector, for example a wing and leg in each hand so the bird's legs spread sideways to open the lower abdomen to view. The injection is not given to the bird unless it is certain the bird is well restrained. Holding and injecting technique should minimise the risk of accidental injection to the bird and humans. Catchers may use the egg flaps on the front of the cage to help support layer birds during injection.
 - **Injection technique:** If a vet wishes to vary the technique from that stated in this SOP, the variation should be reasonable and justifiable and fit within the guidelines listed in bold in Section 1.0 above. Intravenous, intraperitoneal and intrahepatic injection techniques are suitable options. Birds should die “off the end of the needle”. The dosage of euthanasia chemical required will depend on the type of chemical used, size of the bird and injection technique/site. **READ THE LABEL.** As a general indicator to help determine total volume of chemical required for a farm, a lesser amount of drug is normally needed for intravenous injection (usually 1.5ml is sufficient) compared with intraperitoneal and intrahepatic injection (usually 3ml/bird should be sufficient), but more may be required for larger birds such as broiler breeders and roosters.

Intravenous injection

Inject into the jugular or wing vein (the wing vein is generally easier to find). This technique generally takes more time than the others and is not as appropriate in low light, as the vein may be difficult to find.

Intraperitoneal injection

Avoid injection into non-target sites such as the gizzard, reproductive organs of hens or the thoracic cavity. Grasp the right leg and inject into the abdomen as low as possible and as close as possible to the inside of the right leg, so that the dose is deposited into the peritoneal cavity beside the gizzard. This position should avoid injection into a full size egg in the oviduct, which compromises absorption of the drug. An alternative is to grasp the bird by the legs so the bird hangs upside down (dropping the organs) and inject at an angle of 45 degrees into the middle where the rib cage finishes.

Intrahepatic Injection

Place the needle just below the breastbone and insert at an angle of 30 degrees, injecting the dose of chemical into the liver.

- **Following lethal injection** the bird is returned to the cage or to the floor. The bird will initially enter a state of sedation followed by unconsciousness.
- **All birds must be checked by a trained technician or veterinarian prior to disposal.** If birds are still breathing they are to have their necks dislocated as per the SOP for this technique.
- Once birds are dead, they are collected (eg. into wheelbarrow) and deposited into the skip. Loading may be assisted with a ramp or step for the collectors.
- Once filled, each skip should have the plastic securely taped down to prevent access of pests. Protection from direct sunlight will slow decomposition.

6. References

- AUSVETPLAN Destruction 4.7

7. Appendices

- Material Safety Data Sheet for euthanasia chemical and any other chemicals being used eg disinfection chemicals.