



AEC SOP 123 Euthanasia of chickens

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Purpose

- (1) The objective of this standard operating procedure is to provide guidance to the Charles Sturt University staff on:
 - a. Humane euthanasia of chickens, either by cervical dislocation if under 7 days old or otherwise by phenobarbital injection

Scope

- (2) This procedure applies to any person who is involved in AEC approved projects involving the euthanasia of chickens.
- (3) All researchers and teaching staff using animals for scientific purposes must be competent. For definition of competency refer to Charles Sturt University's Policy on 'Animal Care Competency Training and Assessment'

Details of procedure

Safety measures:

- (4) Inadequate or inappropriate restraint can result in injuries to a bird. Care must be taken with the wings and legs of chickens when handling and restraining.
- (5) Injuries can be sustained by the operator by a bird kicking (scratching), pecking as well as wing movements. Chickens can carry pathogens and care should be taken to observe appropriate hygiene measures. Wash hands and exposed body parts thoroughly with soap and water after handling. For your own safety, make sure that all OH&S conditions are met.
- (6) At all times a chicken must be handled gently; they have fragile bones, lack a diaphragm and therefore must be able to move their keel bone (sternum) to breathe. When holding a chicken their legs should not be held together but rather the operator should have a finger in between the legs to provide support and prevent injuries.

Euthanasia:

- (7) Before performing euthanasia, weigh the bird in grams. This is essential to consider body condition and to calculate the dose of drugs to be used.

Cervical dislocation:

- (8) This method is the least traumatic for smaller birds (1-7 days old, <200g) which are too small to inject. The legs of the bird should be grasped, and the neck stretched by pulling on the head while applying a ventro-dorsal rotational force to the skull. A degree of technical skill is required to perform this procedure correctly and when used, it should result in complete dislocation of the head or brain from the spinal cord causing cardiac and respiratory arrest



AEC SOP 123 Euthanasia of chickens

and leading to death. Personnel should train and practice this procedure, such as on anaesthetised and/or dead animals, to achieve proficiency. Those responsible for the use of this method must ensure that personnel performing it have been properly trained and consistently apply it humanely and effectively.

Intravenous injection of euthanasia solution:

- (9) This is the preferred method for chickens over one week old as it does not result in tissue changes that would affect a post-mortem practice and diagnosis.
- (10) The bird must be sedated with an intramuscular injection to calm the bird and for restraint. Intramuscular induction of anaesthesia should be done with agents such as:
 - a. Tiletamine/Zolazepam (4-25mg/kg)
 - b. Midazolam/Butorphanol, (Mi) 0.2-1mg/kg + (B) 2-4mg/kg administered intramuscularly into the pectorals.
- (11) Prepare the Sodium Pentobarbital (86 mg/kg body weight) in a 2 ml syringe. Dilute the Pentobarbital with dH₂O (50:50). Restrain the bird by holding it with non-dominant hand around the base of the wing so that the middle finger and thumb almost touch. Further restrain the bird by tucking its legs under the elbow of the non-dominant arm. Pressure from the forearm will keep the bird pressed against the handlers' chest. This will expose the wing web area and keep it on a horizontal plane before injection. Pluck a minimal number of feathers over the elbow of the restrained wing to permit visualisation of the wing vein. Insert the needle into the vein and look for the dark red flashback of blood at the syringe hub indicating that needle is within the vein. Gently inject the desired amount of Pentobarbital. If the needle is in the vein, the red colour of the vein will "disappear" for almost the entire length from the injection site. Place the bird on the table and check the loss of consciousness and death. Death is confirmed by absence of heartbeat and absence of respiratory movement by observation or palpation.

Drugs, chemicals, or biological agents

- (12) Commercial Euthanasia Solution (Sodium Pentobarbital 390 mg + sodium phenytoin 50 mg/ml) (e.g., Beuthanasia®, Euthasol®, Fatal-Plus®, Somlethal®), Xylazine HCL, Tiletamine, Zolazepam, Medetomidine, Midazolam, Butorphanol.

Impact of procedure on wellbeing of animals

- (13) Chickens will be euthanised.

Animal care

- (14) Transport, handling, and caging will be conducted in accordance with the Primary Industries Standing Committee Model Code of Practice for the Welfare of Animals. Land Transport of Poultry Second Edition. PISC Report 91.



AEC SOP 123 Euthanasia of chickens

Pain relief

- (15) These procedures are not known to cause pain which requires analgesia. Euthanasia by Pentobarbital produces rapid loss of consciousness and death.

Reuse and repeated use

- (16) Each chicken will be used once.

Qualifications, experience or training necessary to perform this procedure

- (17) Demonstrators should have been trained for this procedure.
(18) If students are required to euthanise a chicken, the bird must be sedated with intramuscular injection of Xylazine HCL before euthanasia to limit the bird's movement.

Record requirements

- (19) None required

Associated documentation (including pictures if available)

- (20) None required

Glossary

- (21) None required

References and relevant links

- (22) Avian Euthanasia Policy Document, Association of Avian Veterinarians Australasian Committee, <https://www.aavac.com.au/files/AAVAC-%20Euthanasia.pdf>
- (23) AVMA Guidelines for the Euthanasia of Animals: 2013 Edition, American Veterinary Medical Association, ISBN 978-1-882691-21-0
- (24) Primary Industries Standing Committee, Model Code of Practice for the Welfare of Animals. Land Transport of Poultry. Second Edition. PISC Report 91
<https://www.publish.csiro.au/ebook/download/pdf/5391>