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NATSOP-HAR001 NATIONAL STANDARD OPERATING PROCEDURE: GROUND SHOOTING OF HARES (HAR001)

Endorsed by the Invasive Plants and Animals Committee 2016 with minor updates September 2017.

BACKGROUND

The introduced European Brown Hare *(Lepus capensis)* is not regarded as a major pest of agriculture and the environment. However, in localised areas it can cause damage by eating crops, destroying seedlings and gnawing the bark off trees and vines in orchards, plantations and vineyards. Shooting is the principal method of control, as hares are not susceptible to myxomatosis or rabbit haemorrhagic disease virus (RHDV), nor do they readily take poison baits. Other control methods used include exclusion fencing, use of repellents and trapping.

Shooting of hares is undertaken by government vertebrate pest control officers, landholders and professional or experienced licensed shooters. Also, recreational and commercial hunters consider hares to be a resource, so tend to shoot them opportunistically while hunting for others species such as rabbits, foxes or kangaroos. Shooting is usually done at night with the aid of a spotlight, but can also be conducted during the day.

Shooting can be a humane method of destroying hares when it is carried out by experienced, skilled and responsible shooters; the animal can be clearly seen and is within range; and the correct firearm, ammunition and shot placement is used. This National Standard Operating Procedure (NATSOP) is a guide only; it does not replace or override the legislation that applies in the relevant state or territory jurisdiction. The NATSOP should only be used subject to the applicable legal requirements (including OH&S) operating in the relevant jurisdiction.

APPLICATION

- Shooting should be used as an adjunct to other control methods such as exclusion fencing and tree-guards.
- Shooting may have limited use in controlling localised hare numbers, but the effectiveness of shooting as a control technique is unknown, as it is performed on an irregular basis, usually as a reaction to damage.
- Hares are distributed throughout southeastern Australia, preferring grasslands and open woodlands. They are often found in stubble paddocks, irrigated paddocks, orchards, vineyards and stands of newly planted trees.
- Shooting is not suitable in the vicinity of human habitation.
- Shooting of hares should only be performed by skilled operators who have the necessary experience with firearms and who hold the appropriate licences and accreditation. Storage and transportation of firearms and ammunition must comply with relevant legislative requirements.

ANIMAL WELFARE CONSIDERATIONS

Impact on target animals

- Humaneness of shooting as a control technique depends almost entirely on the skill and judgement of the shooter. If properly carried out, it is the most humane method of destroying hares. On the other hand, if inexpertly carried out, shooting can result in wounding which may cause considerable pain and suffering.
- Shooting must be conducted in a manner which aims to cause immediate insensibility and painless death. The appropriate firearms and ammunition must always be used.
- Shooters should not shoot at an animal unless it is clearly visible and they are confident of killing it with a single shot.

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- Only head (brain) or chest (heart-lung) shots must be used. Shots to the head are preferred over chest shots as they are more likely to cause instantaneous loss of consciousness. Chest shots do not render the animals instantaneously insensible and are likely to result in a higher incidence of wounding. Shooting at other parts of the body is unacceptable.
- The shooter must be certain that each animal is dead before another is targeted.
- Wounded hares must be located and killed as quickly and humanely as possible with a second shot preferably directed to the head. If left, wounded animals can suffer from the disabling effects of the injury, from sickness due to infection of the wound, and from pain created by the wound.
- If lactating females are shot, a reasonable effort should be made to find dependent leverets and kill them quickly and humanely. They may be found scattered in separate small 'forms' – a small depression in the ground among long grass or rocks.

Impact on non-target animals

- Shooting is relatively target specific and does not usually impact on other species. However, there is a risk of injuring or killing non-target animals, including livestock, if shots are taken at movement, colour, shape, sound or, when spotlighting, eye reflection ('eye shine'). Only shoot at the target animal once it has been positively identified. Also, never shoot over the top of hills or ridges as other animals or people may be out of sight beyond the hill in the danger zone.
- Shooting should be used with caution around lambing paddocks as it may disturb the lambing flock and cause mismothering. Also avoid paddocks containing sensitive livestock eg horses, deer. They are easily frightened by spotlights and gunshots and may injure themselves by running into fences and other obstacles.

HEALTH AND SAFETY CONSIDERATIONS

- Firearms are hazardous. All people should stand well behind the shooter when an animal is being shot. The line of fire must be chosen to prevent accidents or injury from stray bullets or ricochets.
- Shooting from a vehicle is potentially dangerous. An agreed safety procedure between the shooter and others in the vehicle must be in place to ensure that people do not enter the field of fire or disturb the taking of a shot.
- Firearm users must strictly observe all relevant safety guidelines relating to firearm ownership, possession and use.
- Firearms must be securely stored in a compartment that meets state legal requirements. Ammunition must be stored in a locked container separate from firearms.
- Adequate hearing protection should be worn by the shooter and others in the immediate vicinity of the shooter. Repeated exposure to firearm noise can cause permanent irreversible hearing damage. • Safety glasses are recommended to protect the eye from gases, metal fragments and other particles.
- Warm, comfortable clothing and stout footwear is recommended, especially when shooting at night.

EQUIPMENT REQUIRED

Firearms and ammunition

- For distances out to around 80 metres, small bore rifles fitted with a telescopic sight are recommended eg .22 rimfire. Centre-fire rifles eg .22 Hornet, .223 Rem, could be used in areas where long shots are required. Hollow-point or soft-nosed ammunition should be used.

- For a moving target at ranges less than 20 m, a 12-gauge shotgun with shot sizes between No. 4 and No. 6 may be used.
- The accuracy and precision of firearms should be tested against inanimate targets prior to the commencement of any shooting operation.

Other equipment

- If shooting at night, a handheld spotlight (at least 100 watt), or a helmet or headband mounted 12 volt (35 watt) spotlight
- First aid kit
- Lockable firearm box
- Lockable ammunition box

PROCEDURES

Shooting at night

- Most shooting of hares is done at night with the aid of a spotlight to locate them while they are feeding, or are away from cover. This method relies on the ability of the shooter to approach the animal until it is in shooting range.
- It is recommended that during daylight hours shooters familiarise themselves with the terrain they are to cover. Take note of potential hazards and also any landmarks that may help with navigation.
- Hares must NOT be shot from a moving vehicle or other moving platform. Bumps in the road and terrain can significantly alter the shooters' aim.
- Ensure you are in a firm, safe and stable position before taking a shot.
- Never shoot over the top of hills or ridges. People or animals may be out of sight beyond the hill in the danger zone. Remember that the spotlight only illuminates a small portion of the danger zone and only a fraction of the projectile's range.
- When illuminated by the spotlight, hares have a pink/ red eye shine, similar to rabbits, but larger.

Shooting in the day

- Hares are mostly active at night and at dawn and dusk, so shooting during the day is less effective than shooting at night with a spotlight.
- Daylight drives are sometimes used in rural areas. These involve the use of unarmed beaters, often with dogs, to drive hares into a line of people waiting with shotguns. This method requires the use of many people and only small areas can be covered.
- If dogs are used to flush hares out from concealed 'forms' among vegetation or rocks, they must be adequately controlled to prevent them from attacking hares. Dogs should only be trained to drive hares from cover, not to capture or attack them.
- Daylight drives are not selective, so there is a risk of encountering other animals, including pet cats, which can be mistaken for a hare and shot. Also, if dogs are used, they may pursue and sometimes catch nontarget animals. Capture of hares or non-target species by dogs is unacceptable on animal welfare grounds.

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Target animal and point of aim

- The objective is to fire at the closest range practicable in order to reduce the risk of non-lethal wounding. Accuracy with a single shot is important to achieve an immediate and, therefore, humane death.
- A hare should only be shot at when:
    - it can be clearly seen and recognised
    - it is within the effective range of the firearm and ammunition being used, and
    - a humane kill is probable. If in doubt, do NOT shoot.
- The shooter must aim either at the head, to destroy the major centres at the back of the brain near the spinal cord or, at the chest, to destroy the heart, lungs and great blood vessels. This can be achieved by one of the following methods (see diagrams):

Head Shot (this is the preferred point of aim)

Frontal position (front view)

The firearm is aimed at the centre of the head between the eyes.

Temporal (side view)

The firearm is aimed at a point between the eye and the base of the ear directed towards the opposite eye.

Chest Shot

Side view

The firearm is aimed horizontally slightly to the rear of the shoulder.

- When using a rifle, the target animal must be stationary and within a range that permits accurate placement of the shot. Shots to the head are preferred over chest shots.
- When using a shotgun, the target animal may be stationary or mobile, but must be no more than 20 metres from the shooter. The pattern of shot should be centred on the head or chest. It is essential that the distance to the target animal is accurately judged. To achieve adequate penetration of shot, the animal must be in range. It is recommended that shooters practice estimating distances before a shooting operation.
- The target animal should be checked to ensure it is dead before moving on to the next animal. Death of shot animals should always be confirmed by observing the following:
    - absence of rhythmic, respiratory movements
    - absence of eye protection reflex (corneal reflex) or ‘blink’
    - a fixed, glazed expression in the eyes, and
    - loss of colour in mucous membranes (become mottled and pale without refill after pressure is applied).

- If death cannot be verified, a second shot to the head should be taken immediately.

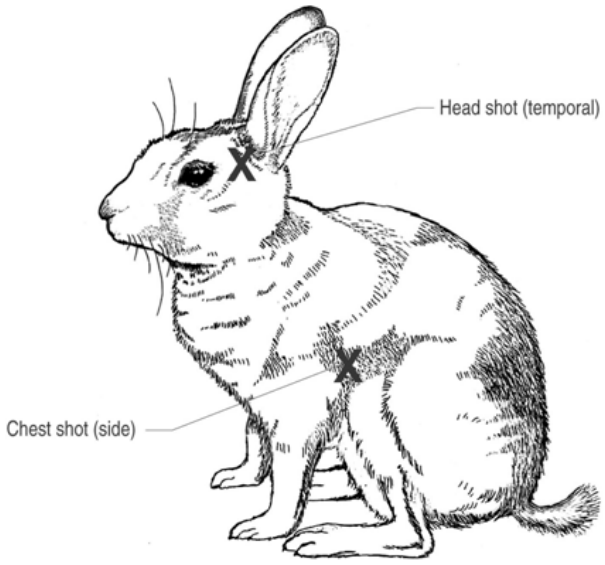

Diagram 1: Recommended shot placements for hares

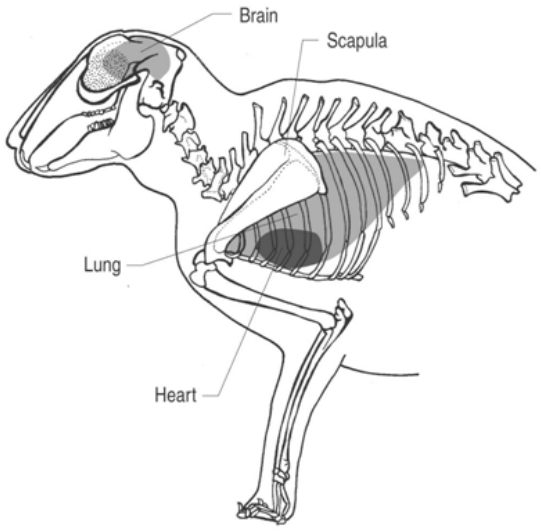

Diagram 2: Side view (skeleton)

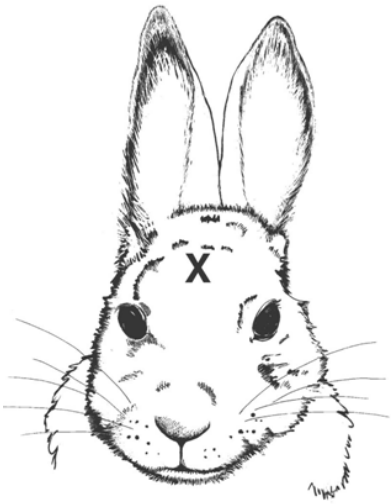

Diagram 3: Headshot (frontal)

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