PESTS COST US ALL

Best Practice Feral Deer Management

Insert Presenter Name
Insert Presentation Date
Introduction

This module is part of a series of modules in the Pests Cost Us All project.

The project aims to improve and update landholder knowledge in pest animal management and weed management across South Australia.

This will be achieved through provision of training and awareness sessions and demonstration sites.

The Pests Cost Us All project is part of the Australian Government’s Agricultural Competitiveness White Paper, the government’s plan for stronger farmers and a stronger economy.
Learning outcomes from this module

- Understand the different feral deer species and their management
- Understand potential impacts of feral deer
- Understand the importance of working as part of a group for successful feral deer management
- Develop objectives and a plan for feral deer management
- Understand legal requirements for feral deer management
- Select appropriate management techniques, with regard to animal welfare
- Employ correct timing of feral deer management techniques (create a feral deer management calendar)
- Assess the effectiveness of feral deer management activities
Before we start – your issues

What other issues would you like to address in relation to feral deer management?

We will record these and refer to this list throughout the session.
Best practice feral deer management - key steps

1. Define the problem
2. Determine objectives
3. Develop plan
4. Implement plan
5. Monitor, evaluate and revise plan
Step 1. Define the problem

- **Feral deer** - all deer in Family *Cervidae*, that are not confined by fences and that do not belong to a registered herd under the *Livestock Regulations 2013*.

Fallow
Red
Chital  Most common species in SA
Hog
Rusa
Sambar
Fallow deer (*Dama dama*) identification

- Medium sized deer (40 - 90kg)
- Males (bucks) have palmate, multi-point antlers, females without antlers
- Bucks have a prominent Adam’s apple
- Variety of colours, from white, to light brown (most common) to dark brown/black, often with white spots and dark tail.
Fallow deer (*Dama dama*)

- Prefer to bed in dense cover during the day
- Graze from dusk until dawn on grasses and forbs, will also browse on trees/shrubs
- In small groups or larger herds, dominated by single female
- Breed once per year (April), gestation 8 months, single fawn
Red Deer (*Cervus elaphus*) identification

- Large deer (120 – 240 kg)
- Red-brown coat and cream underbelly
- Cream rump patch which extends onto back
- Favour undulating wooded country with water courses.
- Grazers and browsers, feeding dusk to dawn on grasses, sedges, forbs and trees/shrubs.
Red Deer (*Cervus elaphus*)

- Social animals in herds dominated by single female.
- Stags territorial during mating season.
- Seasonal breeders, mating in March/April.
- Gestation period 8-9 months with single offspring
- Both sexes mature at 16 months.
Chital Deer (Axis axis) identification

• Similar size to Fallow Deer
• Striking white upper throat
• Dark brown/black muzzle
• Reddish to chestnut brown coat with white spots
• Prefers living in woodlands, forests and clearings near waterways.
• Grazes afternoon into night until dawn on native and improved pastures.
Chital Deer (*Axis axis*)

- Large herds of females and young with 2-3 stags.
- Breeding non-seasonal (any time of year)
- 8 month gestation
- Twins and triplets can be common
Hog Deer (**Axis porcinus**)

- Smallest deer species in Australia (30 - 50 kg)
- Upward sloping back to a high rump
- Mostly live as an individual. Strongly territorial
- Breeding activity throughout the year
- Found in coastal shrublands, tea tree swamps, grazing on native grasses, sedges and improved pastures.
- Feeds late afternoon to early morning.
Rusa Deer (*Cervus timorensis*) identification

- Medium sized deer, slightly larger than Fallow Deer (60 - 135 kg)
- Line of dark hair runs down the chest and between the forelegs
- Semi-nocturnal, preferring cover/shelter during the day.
- Grazes on a diet of grasses and improved pastures.
Rusa Deer (*Cervus timorensis*)

- Gregarious, forming herds.
- Rutting any time but peaking from June to October.
- Most fawns born March and April.
- Gestation - 8-9 months, single calf, occasionally twins.
Sambar (Cervus unicolor)

- Very large deer (180 – 300 kg)
- Body fur uniform in colour, varying from pale brown to black
- Tail black above and paler grey below
- Breeding throughout the year, peaking in August/September.
- Gestation - 9 months, usually a single calf.
- Live in dense forests/scrub.
- Nocturnal feeder, both browser and grazer
- Eats a variety of grasses, forbs, shrubs and trees.
(Step 1). Feral Deer Impacts

Agricultural

• Competition with stock for pasture
• Potential vector for livestock diseases
• Ring-barking trees and destroying saplings, particularly during the rut
• Trampling and grazing of agricultural crops
• Damage to vineyards
• Soil compaction
• Damage to fences
(Step 1). Feral Deer Impacts

Environmental

- Changes to bushland through trampling, grazing and ring-barking vegetation
- Soil erosion and compaction in areas of high use such as trails, pastures and creek lines
- Weed dispersal
- Fouling of waterholes
- Spread of plant diseases such as *Phytophthora cinnamomi*
- Disturbing native fauna by damaging habitat e.g. trampling mallee fowl mounds
Step 1. Define the Problem

- Determine the specific impacts or threats
- Identify areas that may be hotspots for activity
- Assess habitat conditions and food abundance (are they suitable?)
- Identify signs of presence and damage
- Map the information gathered
(Step 1). Identify presence of feral deer

- Feral deer tracks are used to determine if deer are present in an area and how many are there.
- Tracks can tell you:
  - the sex of the deer.
  - the direction the deer was travelling.
  - the time of the day the deer passed.
  - the size and age of the animal.
(Step 1). Property Mapping

Identify potential activity sites and assets

- Public road
- Forested area for cover
- High value asset – crops
(Step 1). Property Mapping

Know your property – map your problem

○ = signs of deer damage

● = deer sighting
Step 2. Determine Objectives

What do you plan to achieve and what should your objectives be?

- Measurable Objectives
- How much effort should you put in?
- Focus on reducing damage from feral deer, not just numbers
Step 2. Determine Objectives

- Are you trying to protect your livestock, native fauna, water sources or other infrastructure?
- Are you planning to undertake broad scale control for population reduction?
- Are you planning to conduct proactive control to maintain and limit impacts in the future?
Step 3. Develop a feral deer management plan

- Scale and approach of the control program
- Identify and understand relevant: Legislation, Work, Health and Safety considerations and animal welfare requirements
- Identify and evaluate suitable control options
- Plan – what will be done and when
Step 3. Develop a feral deer management plan

• Determine management levels – property, local, regional
• Integrated plan/co-ordinated approach - long term
• Choose your strategy – feasibility/cost effectiveness, current distribution and persistence
Step 3. Develop a feral deer management plan

Include:
• Where you will do the control
• What tools you will use
• When will you do the control
• How you will monitor for success
• Record keeping
(Step 3). Legal considerations

- Natural Resources Management Act 2004 (SA)
  - Section 7(3)
  - Section 179 (1)
  - Section 181 (1)

- NRM Regulations 2005, Part 6, sections 26-28
- Animal Welfare Act 1985
- Other Acts
(Step 3). Work Health and Safety

- Work Health and Safety Act 2012
- You have a duty of care to employees and people working on your property
- YOUR welfare is also important
- Risks of working with firearms
- COPs and SOPs
(Step 3). Timing of control

• Shooting programs should not be undertaken when females are calving/fawning

• Timing will vary depending upon the species of deer
(Step 3). Management Options

- Limited control techniques available
- No poisons registered in Australia
- Trapping and shooting only options
- Ground or aerial shooting most practical, cost effective options
- Vital to follow animal welfare codes of practice
(Step 3). Benefits of working together

• Co-ordinated control with neighbouring landholders most effective control option
• Useful contacts (regional programs and officers)
• Any other benefits?
• Local plans/projects – what is happening in the region?
Shooting

• Suitable for most areas provided safety considerations are met
• Carried out by experienced, skilled shooters with suitable calibre
• Spotlighting at night;
  • good quality spotlight with red filter and firearm with a scope
• Farmer assist website to connect with Sporting Shooters Association
• Talk to NRM about coordinated government programs
Animal Welfare

• The humaneness of shooting depends on the skill and judgement of the shooter

• If incorrectly carried out, shooting can result in wounding causing considerable pain/suffering

• Must be conducted with appropriate firearms and ammunition
  • .243 (100 grain)- Fallow and Hog
  • .270 (130 grain)- Red, Rusa, Chital, Wapiti
  • .308 (150 grain)- Sambar

• Animal must be clearly visible, able to be killed with a single shot to the heart/lung area or head
Step 4. Implement Plan

- Use your plan and implement actions
- Communicate with neighbours and work together
Step 5. Monitor, Evaluate and revise plan

Measure outcomes:
- Assess feral deer damage
- Determine feral deer abundance/activity
- Costs of plan implementation

Evaluate your plan:
- Is it working?
- Do I need to do more/something different?
- How do I stop future impacts?
- Discuss with neighbours

Regularly review the plan (and mapping) and update when needed
Step 5. Monitoring methods

- Catch per unit effort (during control programs)
- Pellet counts
- Aerial surveys
- Passive detection
Further Information

PestSmart

Biosecurity SA Feral Deer
http://www.pir.sa.gov.au/biosecurity/weeds_and_pest_animals/animal_pests_in_south_australia/established_pest_animals/feral_deer

Feral deer control advice
Natural Resources (Department for Environment, Water and Natural Resources)  www.naturalresources.sa.gov.au
Review - key messages

• Understand the problem - biology, ecology, impacts
• Work with others
• Set objectives and develop plan
• Know your legal responsibilities
• Select appropriate techniques
• Monitor, evaluate and adapt
Are there any issues that were recorded earlier that were not addressed?

What ideas and plans do you have for managing feral deer in your area?

Any other questions?
FEEDBACK AND EVALUATION

Please take some time to give us your feedback so we can improve this module for future delivery.

Thank you for your participation