Best Practice Rabbit (*Oryctolagus cuniculus*) Management

PESTS CO$T US ALL

Insert Presenter Name
Insert Presentation Date

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Introduction

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

The project aims to improve and up date 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.

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Learning outcomes from this module

- Understand the problems rabbits create
- Understand the importance of working as part of a group
- Develop objectives and a plan for rabbit control on your property
- Understand legal requirements for rabbit control
- Select appropriate techniques for rabbit control
- Employ correct timing for rabbit control on your property (rabbit control calendar)
- Assess the effectiveness of your rabbit control activities

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Before we start – your issues

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

We will record these and refer to this list throughout the session.

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Best practice rabbit management - key steps

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

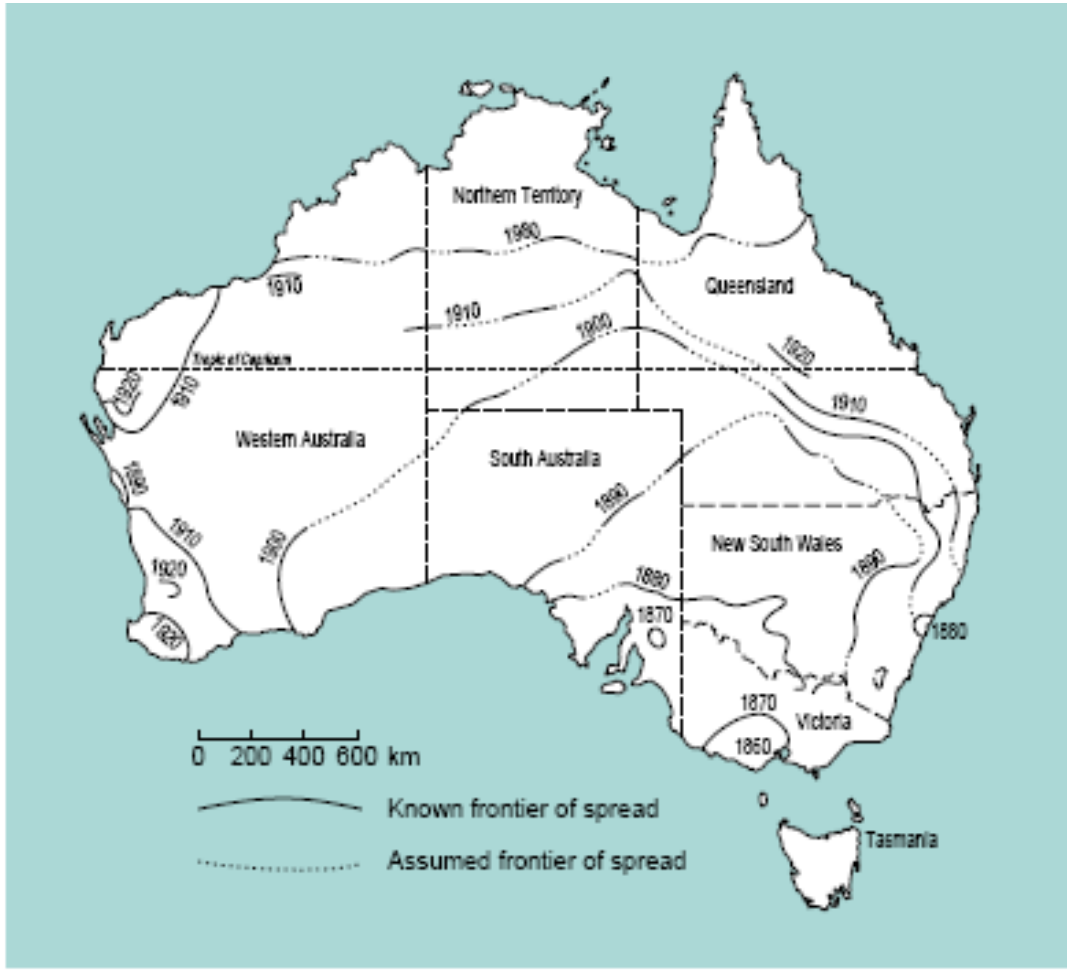
Step 1. Define the problem

Understanding the rabbits -

- Ecology/biology
- Behaviour
- Dispersal

- This information will assist you with developing a rabbit control plan.

(Step 1). Biology and Behaviour



- Origin – Spain & southern France
- Arrived with the first fleet
- 24 rabbits released from Geelong in 1859
- One of the fastest colonizing animals in the world

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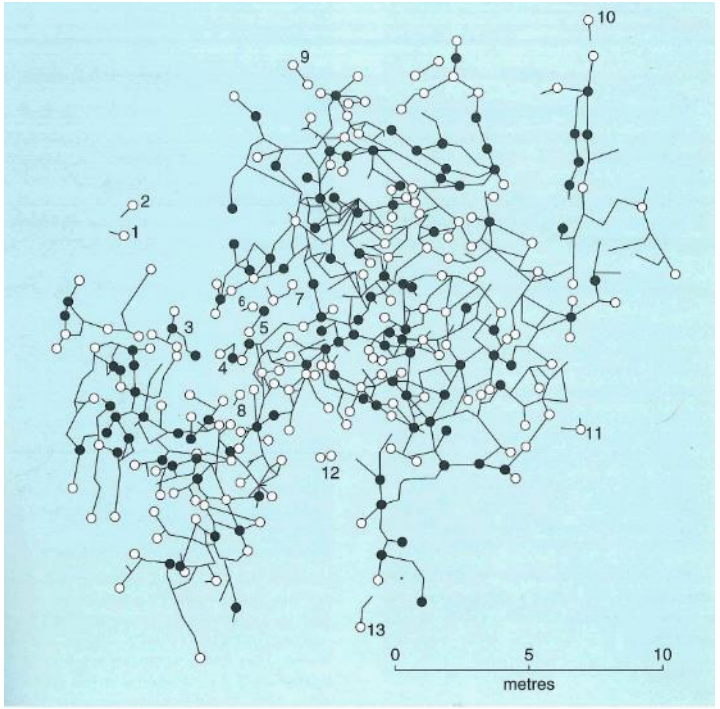
(Step 1). Identification

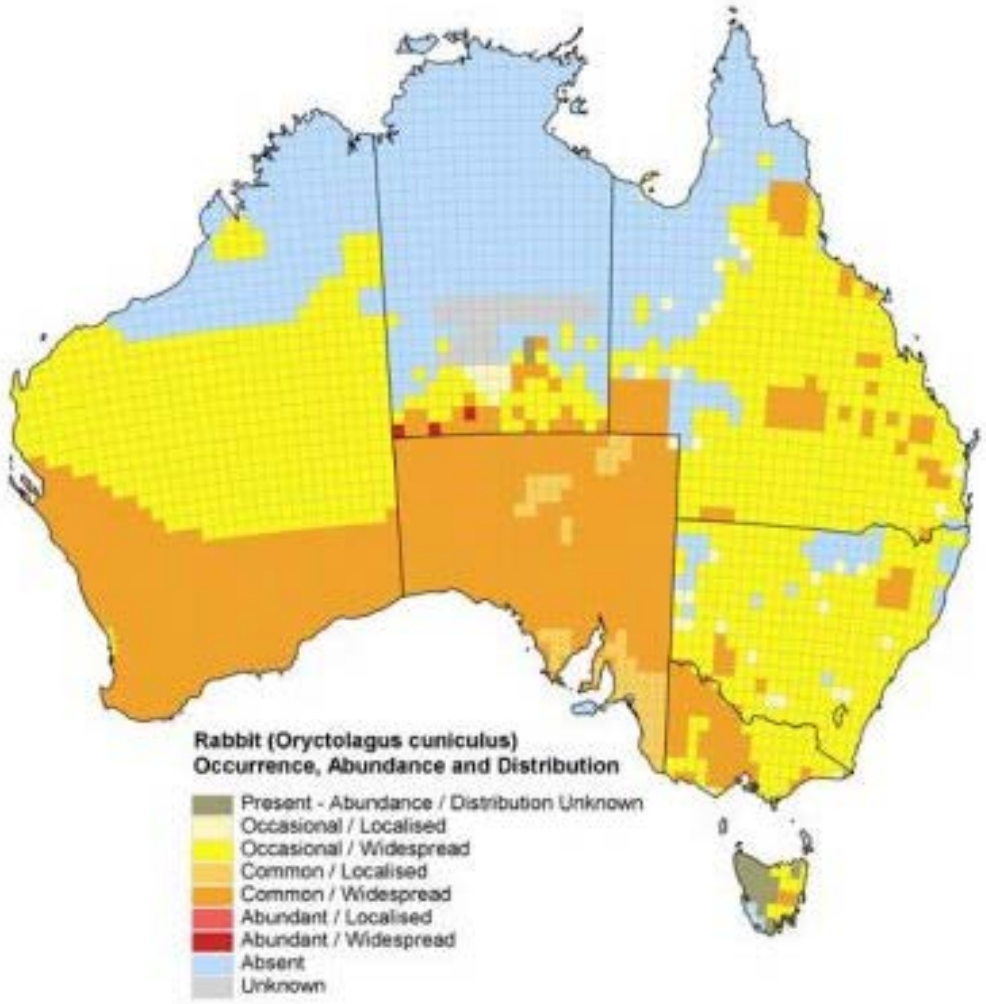
Rabbits- grey brown colour, short fluffy tail, social animals

Hares are larger, have longer ears and longer hind legs, generally solitary animals

(Step 1). Biology and Behaviour

- Warrens help rabbits survive across most of Australia





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(Step 1). Biology and Behaviour

- Lifespan – average 5 years
- They can breed at any time of year when food is in good supply
- In two years, two rabbits can become 200, and in another two years they can become 40,000 if left unchecked.

(Step 1). Biology and Behaviour

- Rabbits can get the moisture they need from the plants they eat
- In dry areas they need access to water
- Rabbits eat mainly low herbs and grasses but also dig for roots and bulbs

(Step 1). Rabbit Impacts

Agricultural

- Compete with livestock (9 rabbits =1DSE)
- Lost production (crops, pastures, and revegetation, horticultural or forestry seedlings)
- Control costs
- Soil erosion, and associated impacts on infrastructure and waters.

(Step 1). Rabbit Impacts

Environmental

- Competition for food and shelter
- Selective grazing of preferred plant species, resulting in low or nil recruitment and subsequent ecological change.

Step 1. Define the Problem

- Identify areas that may be hotspots for activity
- Assess habitat conditions and food abundance (are they suitable?)
- Identify signs of presence and damage
- Are they on roadside or property?
- Map the information gathered

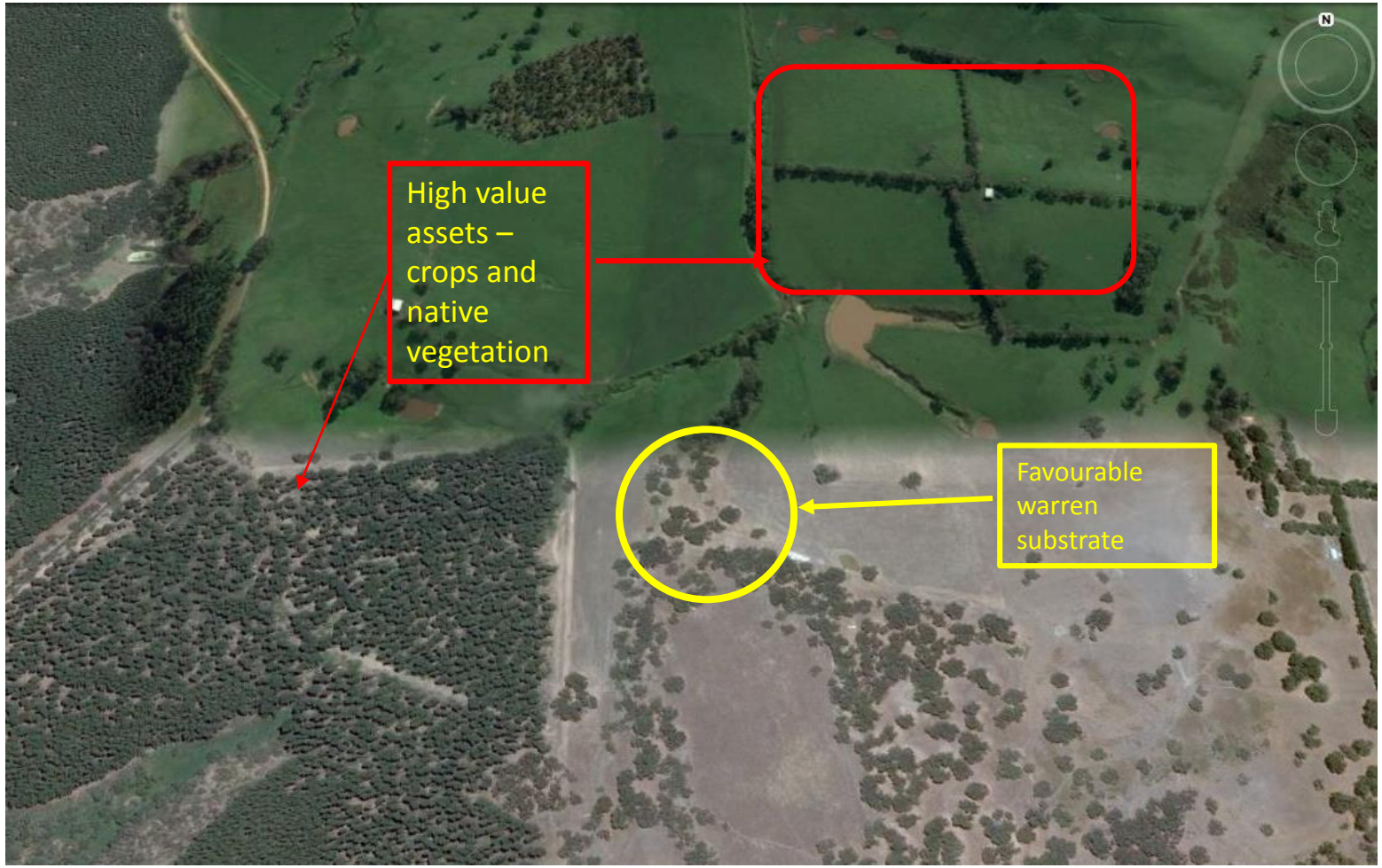
(Step 1). Identify presence of rabbits

Below left: Rabbit digging

Below: dunghill

Right: Rabbit burrow entrance

(Step 1). Property Mapping



Identify potential activity sites and assets

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 rabbits, not just rabbit 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?

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Step 3. Develop a rabbit 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 rabbit 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 rabbit 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

An integrated plan for rabbit control:
Bait (to reduce numbers)
Rip warrens
Fumigate (as follow up)
Monitor effectiveness (re-rip and re-fumigate if necessary)

(Step 3). Benefits of working together

- Co-ordinated control
- Useful contacts (regional programs and officers)
- Any other benefits?
- Local plans/projects – what is happening in the region?

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(Step 3). Legal considerations

Natural Resources Management Act 2004

- Roadside vs Property

Native Vegetation Act 1991

- Implications of native vegetation clearance

For regulation of 1080 and other poisons:

Agricultural and Veterinary Products (Control of Use) Act 2002

Controlled Substances Act 1984

Animal Welfare Act 1985

(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 machinery, chemicals
- COPs and SOPs

(Step 3). Management Options

- Exclusion - fencing
- Harbour removal
- Warren closure – destruction, fumigants
- Trapping – soft catch leg hold, funnel traps, ferreting
- Biological control myxoma & calici viruses
- Baiting – What can we use?

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(Step 3). Control Costs

Rabbit control in natural vegetation on roadsides costs about:

- $52 per hectare for 1080 poisoning using oat baits
- $40 per hectare for warren ripping for moderate infestations of rabbits
- $58 per hectare for fumigation with aluminium phosphide tablets (e.g. Phostoxin®).

Baiting

- Sodium Fluoroacetate, 1080, and Pindone are the registered poisons for rabbit control.
- Placement
- Timing
  - Advantages/ disadvantages
  - Video: Baiting with a baitlayer for rabbit control

Baiting – Rules and Regulations

- Accessing, making and using 1080 baits
- Placement and timing rules:
  - Restrictions on distances from water, dwellings, roads etc.
- Neighbour notification
- Signage

1080 POISON

Poisoned _____ baits
containing 1080 have been laid / buried
on this land to destroy _____
between ___ / ___ / ___ and ___ / ___ / ___ inclusive

DOMESTIC ANIMALS AND PETS MAY BE AT RISK

For further information contact:
Name: _____
Telephone number: _____

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Biological control

- 2 current diseases – myxoma and calici virus (now RHDV)

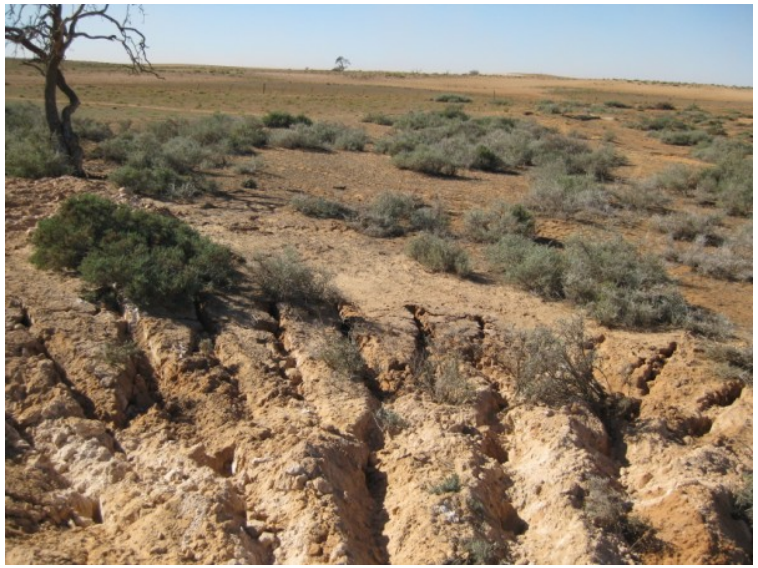
- RHDV2 is a new variant recently detected in Australia
- RHDV1 (K5) strain due for release in autumn 2017
- ***rhdv k5 national release update***

- Cumulative benefit of rabbit biocontrol to Australia's pastoral industries estimated at ~$70 billion (over 60 years)

Warren ripping

- Key action for effective rabbit control
- Total destruction of rabbit warrens using tools, heavy machinery (eg bulldozer) or explosives.

- warren-ripping-for-rabbit-control video (2 mins)



Explosives

- Used for warren destruction
- Extremely hazardous and can only be used by qualified operators
- Used to destroy warrens in areas that are inaccessible to ripping or at risk of soil erosion

Fumigation

- Carbon monoxide gas cartridges or phostoxin tablets may be used to fumigate warrens.
- This method will only control those rabbits in the warren at the time of fumigation
- Fumigation video (7 mins)

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Trapping

- Trapping is not considered an effective or efficient rabbit control technique, although it is occasionally used in areas with small isolated rabbit populations
- Soft net traps, or padded jaw traps can be used.

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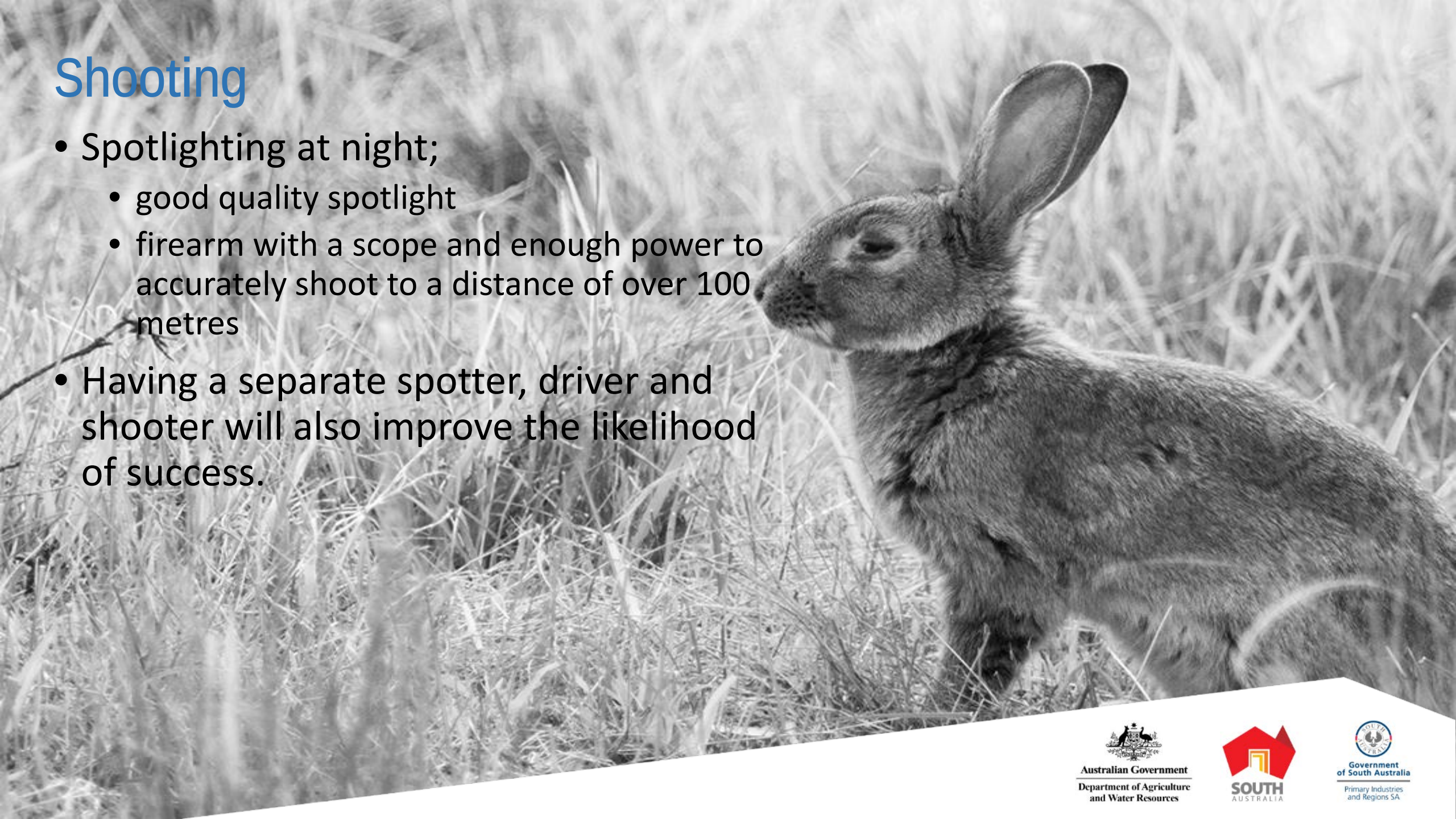
Shooting

- Spotlighting at night;
  - good quality spotlight
  - firearm with a scope and enough power to accurately shoot to a distance of over 100 metres
- Having a separate spotter, driver and shooter will also improve the likelihood of success.



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Other management techniques

- Rabbit proof fencing
- Habitat modification
- Ferreting

(Step 3.) Timing of control

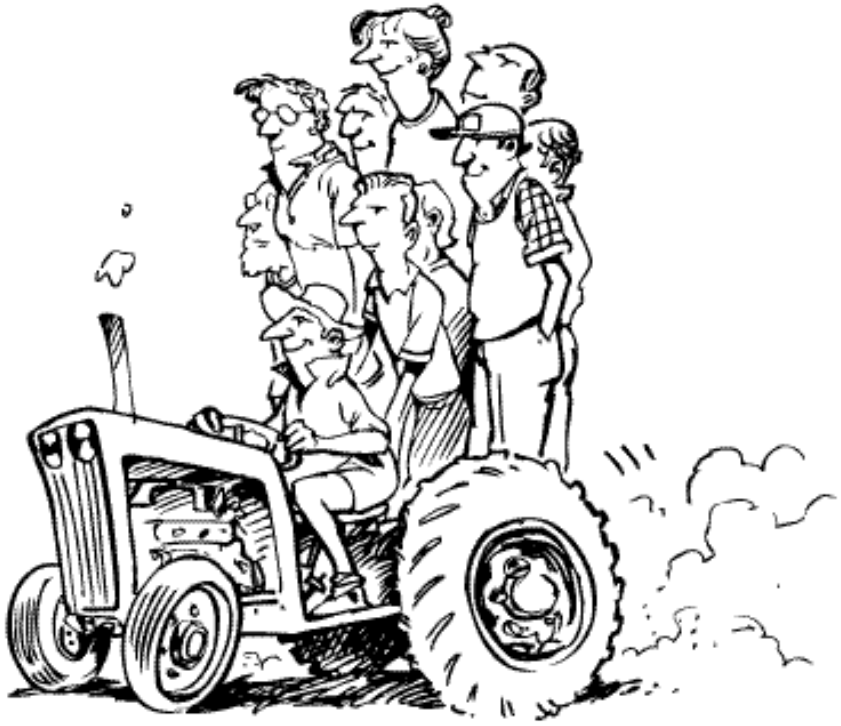
- Conduct control efforts at times when maximum effectiveness is likely.

- Timing linked predominately to;
  - Availability of resources
  - Lifecycles of the rabbit

  But also consider:
  - Protection of assets
  - Animal welfare concerns

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 rabbit damage
- Determine rabbit 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

- Impacts
  - Crop damage
  - Tree regeneration
- Abundance
  - Spotlight transect counts
  - Counts of warrens
  - Counts of active warren entrances
  - Dung counts

(Step 5). Rabbit Scan

Record rabbit activity in RabbitScan

How to use RabbitScan in 2016

RabbitScan is a free resource for landholders and the community to record and map rabbit activity, warrens, damage, and control activities in their local area. RabbitScan can also be used to record rabbit numbers and evidence of disease.

1. Register your details in RabbitScan

2. Start mapping rabbits in your local area now.

http://www.feralscan.org.au/rabbitscan

Further Information

PestSmart
http://www.pestsmart.org.au/pest-animal-species/european-rabbit/
PestSmart You Tube Channel
https://www.youtube.com/channel/UC_t45UjNqVMbSFalpZ8XicA
Biosecurity SA Rabbits
http://www.pir.sa.gov.au/biosecurity/weeds_and_pest_animals/animal_pests_in_south_australia/established_pest_animals/wild_rabbits
Natural Resources (Department for Environment, Water and Natural Resources)
Web: www.naturalresources.sa.gov.au

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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

Review

Are there any issues that were recorded earlier that were not addressed?

What ideas and plans do you have for managing rabbits 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

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