

Managing production losses due to wildlife on farms

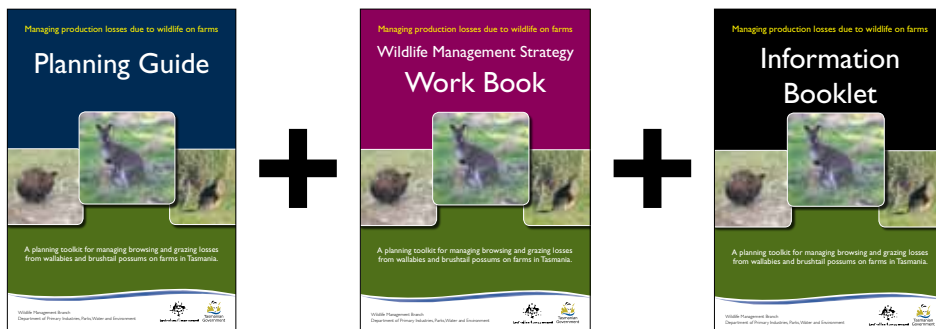
Wildlife Management Strategy Work Book



A planning toolkit for managing browsing and grazing losses from wallabies and brushtail possums on farms in Tasmania.

Table of Contents

Property Overview	3
Step 1: Define the Problem.....	4
Problem Summary Worksheets	4
Step 2: Set Objectives	8
Set Objectives Worksheets	10
Costing Control Options Worksheets	12
Step 3: Develop your Plan	16
Action Plan - Monitoring Worksheet	18
Step 4: Implement and Monitor Plan	19
Wallaby Fencing Calculator	20



This document has been designed to be used in conjunction with and as a reference when completing the Managing Production Losses due to Wildlife on Farms – Planning Guide and the Managing Production Losses due to Wildlife on Farms – Information Booklet.

Copyright © State of Tasmania, 2011.

Wildlife Management Branch, (2011), A planning toolkit for managing browsing and grazing losses from wallabies and brushtail possums on farms in Tasmania, Department of Primary Industries, Parks, Water and Environment, Launceston, Tasmania.

ISBN: 978-0-7246-6564-8

Title: Managing production losses due to wildlife on farms Planning Guide

Managing production losses due to wildlife on farms Wildlife Management Strategy Work Book

Managing production losses due to wildlife on farms Information Booklet

Author(s): Wildlife Management Branch

Publisher: Stevens Publishing Pty Ltd, Launceston

Published: 2011

Disclaimer: The material and information contained in this publication is intended as a guide only. Whilst every care has been taken to ensure the accuracy of such material and information at the time of printing, the Department of Primary Industries, Parks, Water and Environment (DPIPWE) does not guarantee this publication is without error.

The Crown in right of the State of Tasmania disclaims any liability for any loss or damage which may arise from any reliance upon any material or information contained in this publication.

Acknowledgement. This publication was produced with funding from the Australian Government Department of Agriculture, Fisheries and Forestry, Alternatives to the 1080 program.

This Wildlife Management Strategy is applicable from _____ to _____

Property Overview

Farm Location:

"_____ " is a _____ hectare property located _____

Land Uses:

The property consists of approximately:

_____ % improved pasture, _____ % natural bush / forest, _____ % native grassland and _____ % intensive agriculture.

The principal use of the property:

Grazing Cattle ____ number of head DSE requirements ____
 Sheep ____ number of head DSE requirements ____
 _____ number of head DSE requirements ____
 _____ number of head DSE requirements ____

Cropping _____ hectares dispersed throughout the property or on a designated area of the property.

Crops grown include

Crop	Area	Time of year
Crop	Area	Time of year
Crop	Area	Time of year
Crop	Area	Time of year
Crop	Area	Time of year
Crop	Area	Time of year
Crop	Area	Time of year

Forestry _____ hectares of eucalyptus nitens/radiata pines are on the property. These plantations were established in _____

Conservation Covenant _____ hectares of this property are under a conservation covenant for the purpose of _____

The management implications are _____

Other property information _____

Neighbouring properties include:

Neighbour	Location	Land use / Boundary's vegetation status
J & K Smith	West	Farming / natural bush, established gorse

Do you have current Crop Protection Permits for wallabies and brushtail possums?

Are there other species you need to obtain permits for? _____

 Legislative Information for landowners

Do you keep shooting logs? What would you rate their accuracy as being on a scale of 1 to 5?

Inaccurate, cannot be relied upon - 1 2 3 4 5 - Accurate, can be relied upon

Step I: Define the Problem

I.1 Where are the losses occurring?

Using the photocopy or print out of the map of your property shade in or draw the coloured borders around the different areas of your property where you believe browsing damage is occurring.

Understanding the losses and impacts

Next break up your property into logical management units, eg. paddocks or areas and mark these on a map, then for each management unit fill in the Problem Summary Worksheet in this workbook using the guidelines provided for in Step I 'Define the problem' 1.1 to 1.8 of the Planning Guide - page 5.

Problem Summary Worksheet

Area	Size (Ha)	I.1 Browsing Impacts	I.2 Use / Problem	I.3 \$ Estimate of Losses

Additional copies of all worksheets are available to be printed or downloaded as Excel spreadsheets from www.dpipwe.tas.gov.au/browsingmanagement

1.4 Species	1.5 Source	1.6 Current Controls	1.7 Constraints / 1.8 Neighbours

Problem Summary Worksheet

Area **Size (Ha)** **I.1 Browsing Impacts** **I.2 Use / Problem** **I.3 \$ Estimate of Losses**

Area	Size (Ha)	I.1 Browsing Impacts	I.2 Use / Problem	I.3 \$ Estimate of Losses

Step 2: Set Objectives

Set Objectives Worksheet

Area	#	Objective	Timing	

	Measure of Success

Set Objectives Worksheet

Area	#	Objective	Timing	

	Measure of Success

Costing Control Options Worksheet

	Shooting	\$ Value	Working Calculations
<i>Labour</i>	<p>Own time to conduct shooting program, including checking/euthanasing pouch young.</p> <p>Own time to set up shooting vehicle.</p> <p>Own time to regularly site and clean rifle.</p> <p>Recreational hunter's time.</p>		
<i>Vehicles</i>	<p>Use of own vehicle or ATV.</p> <p>Use of recreational hunter's vehicle.</p> <p>Travel costs for contract shooter.</p>		
<i>Materials and Contractors</i>	<p>Contract shooter's hourly rate x hours.</p> <p>Ammunition costs.</p> <p>Shooting equipment such as rifle, scope and mounts, spotlight etc.</p> <p>Vehicle set up costs.</p> <p>Firearms Licence attainment and upkeep.</p>		
<i>Comments</i>	<p>Trials conducted by the Alternatives to 1080 Program suggested that 20-25 animals an hour should be achievable by a contract shooter where there is a high wallaby population.</p> <p>If a hound crew is a regular option, some thought to upkeep of dogs and their training should be considered.</p>		
		\$	

	Fencing	\$ Value	Working Calculations
Labour	<p>Own time to construct fence.</p> <p>Own time to regularly maintain wallaby proof fence.</p> <p>Own time to prepare ground prior to fence construction.</p>		
Vehicles	<p>Use of own vehicle.</p> <p>Travel costs for fencing contractor:</p>		
Materials and Contractors	<p>Netting.</p> <p>Plain or barbed wire above the netting.</p> <p>Plain to support netting.</p> <p>High tensile plain to support base of netting.</p> <p>Posts - mix of treated pine and star pickets.</p> <p>Mesh outlayer 30cm or 60cm in width.</p> <p>Miscellaneous - strainer posts, wallaby gates, staples.</p> <p>Fencing contractor costs.</p> <p>Gates.</p>		
Comments	<p>Wallaby proof fencing will only stop wallabies, not brushtail possums or rabbits unless rabbits mesh is used.</p> <p>When calculating the cost of wallaby proof fencing the costs associated with other implemented control options required to reduce the wallaby population prior to fence construction should be included.</p> <p>The costs associated with ongoing maintenance to the fence and controlling wallaby numbers should be included.</p> <p>If a wallaby proof fence is constructed when a fenceline requires replacement, the true cost of the wallaby proof fencing is the additional costs above that of a standard stock fence.</p> <p>The cost of maintenance will vary depending on the effectiveness of the lethal control option implemented to minimise game pressure on the fence, soil type, appropriateness of materials used and animal species.</p>	\$	

	Trapping	\$ Value	Working Calculations
Labour	<p>Own time to conduct trapping operation, laying out traps, pre-feeding, setting traps, checking set traps and pouch young at least every 24 hours and disposing of carcasses.</p> <p>Movement of traps to different property areas.</p> <p>Maintenance of traps.</p>		
Vehicles	<p>Use of own vehicle to distribute and implement trapping operation.</p> <p>Travel costs for trapping contractor.</p>		
Materials and Contractors	<p>Cost of traps.</p> <p>Cost of holding device.</p> <p>Cost of hiring traps and holding device.</p> <p>Bait Costs.</p> <p>Trapping contractor's hourly rate x hours.</p> <p>Cost of a trap trailer to increase efficiency in trap deployment.</p>		
Comments	<p>The selection of trapping as a control option should indicate that the problem species are brushtail possums and Tasmanian pademelons.</p> <p>To trap a high population of pademelons atleast 15 traps per kilometre of bush edge, if not more, should be used. However, trials carried out by the Alternatives to 1080 Program suggested 50 traps per kilometre is an optimal trade off between trapping intensity and trap cost for an intensive trapping operation.</p>	\$	

	1080 Poison	\$ Value	Working Calculations
Labour	<p>Minimum shooting effort requirements 20 hours.</p> <p>Furrow preparations (optional).</p> <p>Pre feeding requirements 3-5 free feeds.</p> <p>Hours involved in preparing neighbour notification documentation 4 hours.</p> <p>Carcass pick up and disposal.</p> <p>Carrot collection or furrow fill in (burial).</p>		
Vehicles	<p>Use of vehicle during shooting effort.</p> <p>Use of vehicle during pre feeding, poisoning, pick up and disposal.</p> <p>Use of farm equipment for furrow preparation and fill in (optional).</p>		
Materials and Contractors	<p>Ammunition costs.</p> <p>Carrot costs 2x40kg bags/km of bait line.</p> <p>Independent Assessor Cost.</p> <p>Neighbour Notification Mailing Costs.</p> <p>Cost of 1080 poison \$8.80/100ml 1080 poison, \$49.50 per hour Competent Officer's time plus \$0.60 per km travel cost, \$22 admin charge, \$18.50/100ml Game Management Levy charge.</p> <p>NOTE: 1080 prices at Dec 2010.</p>		
Comments	<p>Brushtail possums can consume as much as 300 grams of poisoned carrot in one sitting. This species is relatively easy to shoot therefore making it far more cost effective to reduce brushtail possums numbers prior to embarking on a 1080 poison operation if your aim is to reduce wallaby numbers.</p> <p>Ensure that 'enough' free feed is fed out over the free feed process rather than 'too little' and take time to measure and investigate the uptake over this period. This is the most valuable exercise you can undertake in determining how much carrot will be required for you to achieve the best possible 1080 poison operation and remove as many target animals as possible.</p>		
		\$	

Step 3: Develop your Plan

Action Plan - Monitoring Worksheet

Area / Objective	Action	Who	

Step 3: Develop your Plan

Action Plan - Monitoring Worksheet

Area / Objective	Action	Who	

Step 4: Implement and Monitor Plan

	Timeframe	Cost / Effort	Measure of Success

Wallaby Fencing Calculator

A wallaby fencing calculator is available online to assist landowners to estimate the time needed to recoup the extra cost of wallaby proof fencing for individual situations with cropping or pasture. The website page displayed below is for cropping. There is a page relevant to grazing and another calculator page to enter plant, labour and fencing material costs.

This tool is available at www.dpipwe.tas.gov.au/browsingmanagement

The screenshot shows the 'Wallaby Fencing Calculator' web application. The browser title is 'DPIW - Wallaby Fencing Calculator - Mozilla Firefox'. The URL is 'http://www.dpipwe.tas.gov.au'. The page header includes 'Managing Natural Resources' and 'Department of Primary Industries, Parks, Water and Environment'. A search bar and navigation links (Home, About Us, Feedback, Help, Site Map) are present. The breadcrumb trail is: Home > Managing Our Natural Resources > Managing Wildlife Browsing & Grazing Losses > Wallaby Fencing Calculator.

The main heading is 'Wallaby Fencing Calculator' with sub-links for 'Crops', 'Livestock', and 'Calculator'. The interface includes several input fields and a dropdown menu:

- Required rate of return: 8.0%
- Funding source: 2. Loan - Principal and interest
- Crop: Enter crop name here
- Yield (t/ha): [input field]
- Price per tonne: [input field]
- Crop costs per hectare: [input field]
- Percentage loss due to wallabies: [input field]
- Paddock size (ha): [input field]
- Total length of fence (m): [input field]
- Wallaby fencing cost (per km): [input field]
- Do you need to replace fence?: Yes

On the right, there is a summary table with columns 'Unit costs' and 'Total':

	Unit costs	Total
Additional Fencing Cost	-	-
Additional Yield	-	0
Additional Income	-	-

Below this is a cash flow table with columns: Year, Additional Cash Flow, Additional Costs, Discounted Cash Flow, and Cumulative Cash Flow. The table shows values for years 1 through 15, with most cells containing dashes (-).

At the bottom, there are buttons for 'Update', 'Reset', and 'Print'. A footer note states: '* Denotes mandatory field', 'Assumptions: Assumes ongoing maintenance costs of fence absorbed within normal farming activities. Assumes no additional cropping costs per hectare after wallaby proof fencing in place. Model built by John Dawson. Acknowledgement to Stuart Bowman for original model concept in 2000'.

Further Information and Contacts

Wildlife Management Branch

Reception Phone: 03 6233 6556

Reception Fax: 03 6233 3477

Email: wildlife.enq@dpipwe.tas.gov.au

www.dpipwe.tas.gov.au/wmb

GPO Box 44, HOBART, TAS, 7001