Losing Too Much

to Wallabies and Brushtail Possums?

Quantifying losses:

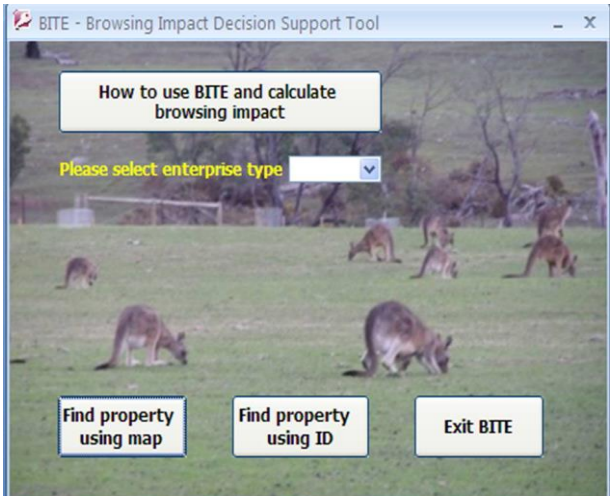
While accurate records of pasture losses to wallabies and brushtail possums are time consuming for a landholder to collect, a number of research projects have provided some data.

- A three-year trial on 16 individual sites on northern Tasmanian dairy farms showed losses to improved pastures in the first 100 metres from the bush edge averaged 67 % in north-west Tasmania and 51 % in north-east Tasmania. *(*1)*
- On King Island, where Bennett's wallaby are abundant (> 6 - 16 per ha), research identified that wallaby-proof fencing alone reduced browsing damage to improved pastures by 50 % (from an average of 51 % damage in the first 100 metres from bush margins to an average loss of 26%). When shooting and fencing were integrated these actions reduced browsing damage from an average of 51% to a very low 3%. *(*2)*
- Another trial in the Central Midlands, using exclosure cages across nine different locations (measuring damage up to 800 metres from the bush margins), recorded losses of between 17% and 100% where the pasture was not protected from wallabies, forester kangaroo, fallow deer and possums. *(*3)*

BITE - Computer program for assessing pasture losses to wallabies and possums

This computer-based software tool uses data on pasture growth/losses from research programs conducted in a range of areas across Tasmania*. This data uses catchment-level assumptions about pasture growth, wildlife impacts and pasture utilisation. Combined with the use of satellite imagery to identify areas likely to be subject to various rates of grazing by wallabies and possums plus economic data relating to specific grazing industries, BITE provides estimates of pasture mass and financial losses for individual parcels of land. Assumptions of pasture growth, pasture value and browsing intensity can be modified to match a landholder's knowledge of their own property.

*BITE data is taken from 2010 information



For BITE & advice on assessing losses, contact –

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It is typical that BITE will show, where significant browsing wildlife populations exist, about 60% pasture loss across the first 100 metres from the refuge/bush edge. A calculation of the length of the refuge/bush edge X 60% will provide a rough figure of hectares of total loss of productivity.

It is necessary to then assess the effect of this information on your farm's management and bottom line. BITE will provide detailed figures for your enterprise.

Visualising the extent of your problem:

Exclosure cages

A cage to protect a small area from all grazing, including wallabies, possums and rabbits, will give a dramatic display of what is being lost. Measurement of dry matter per hectare both inside and outside the cage will also provide figures to calculate losses. To demonstrate what is being lost, livestock must be excluded from the area around the cage.

Photo: G Blackwell

Photo: D Leguis

Assessing pasture out from the bush edge

If you are seeing a clear increase in pasture mass as you move further out from the bush edge that is a good indication that you are losing pasture productivity to wallabies and possums.

Faecal pellet counts

Counting faecal pellets will let you know the species you are dealing with and may provide a method to assess changes in browsing activity, but will not tell you how much productivity you are losing.

Mark points at each end of a line of a known distance (e.g. 20 metres), clear existing faecal pellets off the line and come back after a set number of days to count the new pellets. If numbers increase or decrease between counts, you can assess relative levels of browsing activity at that place and time but it doesn't tell you what the wallabies or possums are costing you.

Photos: K Gill

Bennett's wallaby

Pademelon (Rufous wallaby)

Brushtail possum

Direct animal counts

Research has demonstrated deficiencies in using spotlight counts to determine the number of animals on a property; or production losses to browsing wildlife. Spotlighting only counts, at the most, 50% of the animals present. Animals may flee as the spotlight approaches or they may come out at varying times in the night. On the other hand, an animal may only get part of its diet from your pasture or crop.

If using direct animal counts, standardise counts on a known area to assess changes between time and place.

Measuring what is being lost (pasture, crop or animal production) is the most effective way to comprehend the extent of your problem.

(*1) Nature and implications of browsing by native wildlife on Tasmanian Farms – T Norton, M Lace, RW Smith, M Statham, R Rawnsley, D Donaghy, A Gracie, L Burkitt – 2010

(*2) Implications of browsing by native wildlife on improved pastures and native vegetation communities on King Island, Tasmania – T Norton, N Johannsohn – 2010

(*3) Effects of wildlife grazing in the Midlands region, Tasmania – RW Smith, M Statham, TW Norton, RP Rawnsley, HL Statham, AJ Gracie, DJ Donaghy - 2012