



# FOXOFF

**Fox Bait &  
Econobait**  
*Protecting Australia's  
lambs and wildlife*



## The Fox

The European fox, *Vulpes vulpes*, was introduced into Australia in the early 1870s for recreational hunting purposes. The spread of the fox quickly followed the distribution of rabbits across mainland Australia.



**Today, foxes are found in most areas of the mainland south of the tropics and, unfortunately, are now also believed to have been deliberately released in Tasmania**

## Environmental Impact

Foxes cause environmental damage by preying on Australian native wildlife including ground nesting birds, small mammals and reptiles.



Foxes have significantly contributed to the extinction or endangerment of our native wildlife. This extinction pressure is a national disaster. Effective fox control has been shown to reduce this pressure to allow endangered species populations to recover.



**Exclusion fencing combined with fox and feral cat control can reverse extinction pressures**

## Agricultural Impact

Serious economic damage results from fox predation on farm livestock. In typical rural areas foxes can contribute to lamb losses of 10% - 30%. Under extreme conditions, this loss can be up to 50% of potential lamb production.



Fox predation has also been reported on calves during difficult births, deer, ostrich and emu chicks, and free-range poultry.

Foxes are also known to cause crop damage to vineyards, irrigation systems and strawberry crops.

Foxes are also known to spread weeds such as blackberries through their scats.



**Foxes cause hundreds of millions of dollars damage to agriculture annually**

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## Fox biology

An average adult fox weighs between 5 and 7kg. They have excellent sight, smell and hearing, and possess sharp canine teeth for skilled hunting. Their speed and agility (including climbing) makes them one of the world's most adaptable and successful predators.

## Diet

Nearly a third of a foxes' annual diet is from livestock and poultry if and when available, a third from other pests like rabbits and mice, and a third from wildlife including insects and reptiles. They also commonly feed on fruit ranging from olives, stone fruit, grapes, blackberries and strawberries when in season.

Fox predation does not provide effective control of other pests as unlike native animals, rabbits and mice breed faster than foxes can eat them.



***The foxes' hunting abilities makes it an enormous threat to Australia's defenceless native wildlife.***

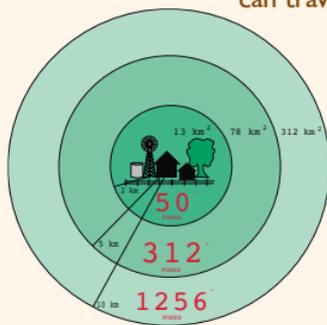


***Foxes are opportunistic predators, and if lambs are available they can make up 100% of the diet.***

## What is the true scale of the fox problem?

**Fox populations can range from <1 to 12 foxes per km<sup>2</sup>.**

Typically a fox family 'home range' is from 30 - 1,000ha but individuals can travel several kilometres in search of food.



This graph shows the numbers of foxes within a 10km radius of a central point (potentially a lambing paddock), assuming only 4 foxes per km<sup>2</sup>

***This clearly demonstrates the importance of working with neighbours in co-ordinated control programs.***

**\* Foxes**



## Breeding

Foxes breed once a year, mating in late winter with an average gestation period of 51-53 days. Breeding females wean four cubs on average but larger litters are possible.

JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY
WINTER			SPRING			SUMMER			AUTUMN		
MATING			CUBS BORN			REARING			DISPERSAL		

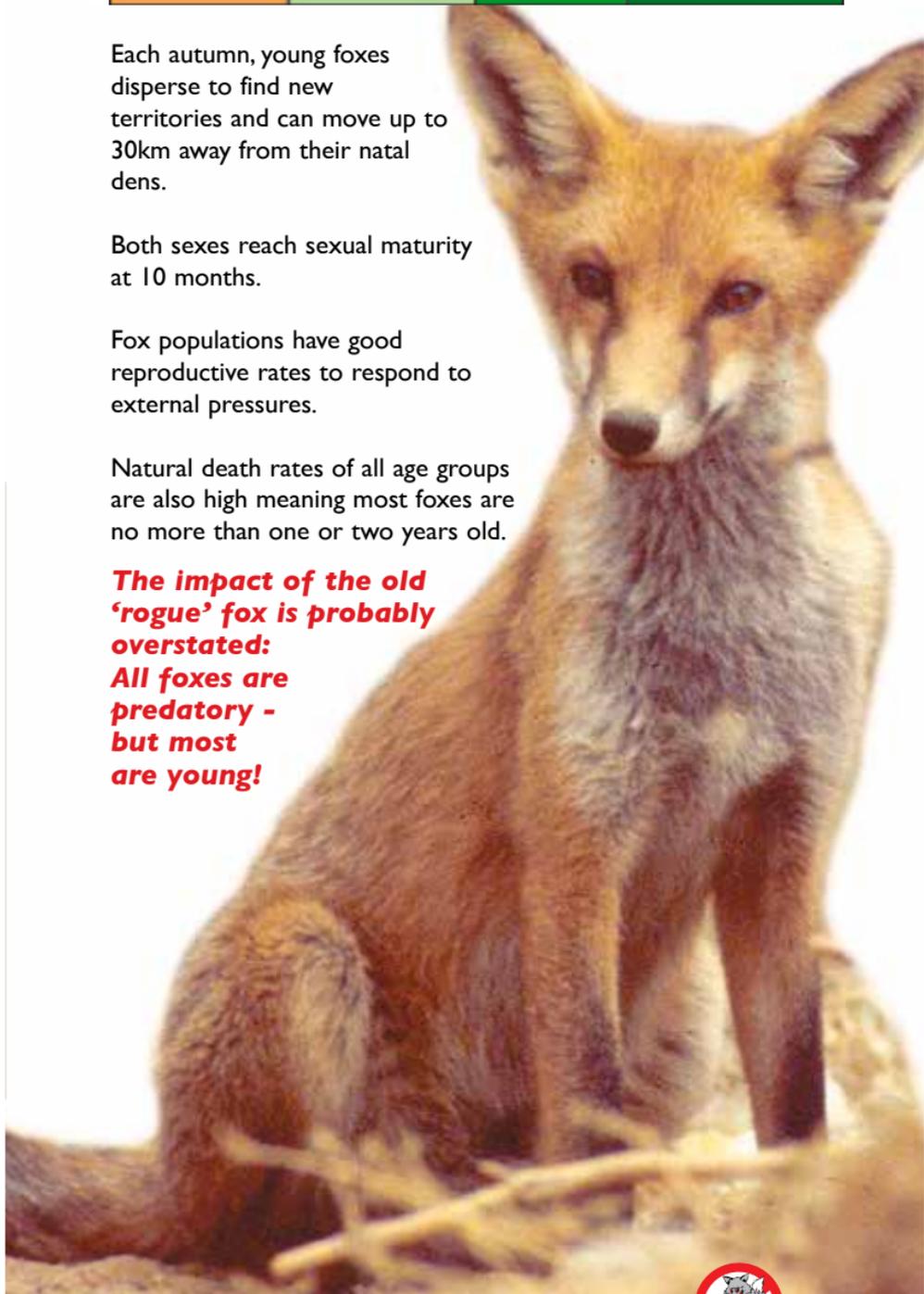
Each autumn, young foxes disperse to find new territories and can move up to 30km away from their natal dens.

Both sexes reach sexual maturity at 10 months.

Fox populations have good reproductive rates to respond to external pressures.

Natural death rates of all age groups are also high meaning most foxes are no more than one or two years old.

**The impact of the old 'rogue' fox is probably overstated:  
All foxes are predatory - but most are young!**



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## Integrated control options

As with all pest animal campaigns an integrated control program is important for achieving lasting control. This is critical in the case of foxes as they easily migrate from surrounding areas to invade previously cleared ones.



### **Three successfully proven methods of control are:**

#### **Baiting**

A baiting program using FOXOFF<sup>®</sup> Econobait twice a year, with bait replacement until the take is reduced, is an effective and environmentally conscious form of fox control in most rural areas. The critical point about baiting is to lay enough baits to account for the fox population in the area.



**Baiting will have the greatest impact on a fox population**

#### **Shooting**

Shooting foxes is helpful, but it is likely to remove a proportion of foxes, and the population will quickly replace those shot. Only easily seen foxes tend to be shot, and others learn quickly to avoid shooting. Spotlighting usually underestimates the true fox population.



**Shooting is only of limited use for long-term population control**

#### **Den fumigation**

Fumigating fox dens at breeding time with DEN-CO-FUME<sup>®</sup> carbon monoxide fumigant cartridges is a humane and highly successful method of controlling foxes, especially in some urban areas.



**Fumigating dens can remove the next generation and the vixen.**



**Cartridges are available from leading rural merchant stores or government agencies in packs of 3 or 10 cartridges.**



## Economics of a FOXOFF® Program

Below are the results of a trial conducted by the University of Adelaide using FOXOFF® baits in the Mid-Murray region of SA.

Four 5,000ha properties chosen matched sheep breed, lambing time, stocking density and other farming practices. Each farm was surrounded by several other farms to minimise the risk of fox baiting affecting fox numbers on the other trial properties.



The properties that conducted the FOXOFF® program laid baits at 500m intervals, without a lure trail, and were checked 11 times over a nine week

**A FOXOFF® Program will lift lamb marking % quickly.**

period. Baits taken were replaced until bait take stopped. A total of 730 baits were taken over the period.

The 'control' or un-baited properties received no fox control for the duration of the lambing season.

Spotlight counts were conducted before, during and after the FOXOFF® Program on both baited and control farms to estimate fox number changes pre and post baiting.

Lamb marking percentages were collated for the preceeding four years from the property owners records and then compared to the lamb marking percentage following the FOXOFF® Program.

### Results - # lambs marked/100 ewes joined

Property	Year 1	2	3	4	Baiting Year
Not Baited	90	90	95	80	78
Baited	75	80	70	70	118
Baited	70	75	85	70	98
Not Baited	85	80	90	80	82

Properties that conducted the FOXOFF® Program recorded 118 and 98% (an average 108%) compared to their four year average of 74%. This was an increase of 34% (44% and 24%). The farms that were not baited averaged 78 and 82%, a little less than their four year average of 86%. The spotlight data showed 90% drop in fox numbers on baited properties after the FOXOFF® Program.

### Budget: Incremental income per 1000 ewes

Increased lambs on previous years	340 extra
Price per lamb	\$80.00
Additional income	\$27,200.00
Cost of baits 365 baits* @ \$1.00 per bait#	\$365.00
(*730 used over 2 x 5,000ha properties # Bait price varies with pack size)	
Increased income after FOXOFF® Program	\$26,835.00

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# FOXOFF®

## Frequently

### What is FOXOFF® Econobait?

FOXOFF® is a manufactured bait, pre-poisoned with precisely 3 milligrams of sodium fluoroacetate or '1080' (the red dye in the centre of each bait indicates the position of the poison).



FOXOFF® is shelf-stable without refrigeration to allow thorough control programs over several weeks.

FOXOFF® baits have been proven for over 15 years to be highly specific for canids and are not readily taken by native animals or stock.

**FOXOFF® is available in a range of sizes including 10, 20, 40, 100 & 200 bait pails.**



**(The traditional trays of 12 or 30 baits are also still available.)**

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# asked questions



## What is 1080?

'1080' (sodium fluoroacetate) is a simple, natural substance that occurs in several species of Australian plants. Native animals that have grazed on such plants for millions of years have evolved with a degree of tolerance to its effects. It is 100% biodegradable in soil.

Introduced animals such as foxes, wild dogs, feral pigs and rabbits are highly susceptible to the poison. Pets and working dogs must be restrained, muzzled or removed from areas while fox baiting programs are underway.



*1080 poison is a leading weapon in the fight against introduced vertebrate pests in the Australian ecosystem.*

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## How does FOXOFF® work?

FOXOFF® Baits are designed to be easily found and eaten. The matrix is soft and easy to chew so it breaks down quickly releasing the poison in the stomach of the animal.

The I080 is quickly absorbed and converted to a form which blocks enzymes for energy production within the cells of the animal. After a delay of several hours, during which the fox behaves normally, death occurs quickly from the loss of energy to the brain, heart and diaphragm.

A single FOXOFF® bait is lethal to the largest fox. Due to the delayed action of I080, foxes have time to return to their dens and hence carcasses are rarely found after a baiting program.

## How long do FOXOFF® baits take to break down?

As an environmental precaution, FOXOFF® baits are designed to break down relatively quickly in the field through bacterial and mould action.

Nevertheless, as a precaution, residual baits should be retrieved at the completion of a baiting program and buried or burned.



***In extensive FOXOFF® research trials, baits in moist/wet soil conditions lost 80% of the poison after 2 weeks.***

## I have high bait takes - are FOXOFF® baits being cached?

High bait take is usually the result of not laying enough baits in a landscape full of foxes with new foxes venturing into the baiting area rather than one fox caching (hiding) baits. **Remember four foxes per km<sup>2</sup> equates to over 1,200 foxes within a 10km radius of your farm.**

It is true that a fox may take a number of baits and cache one or two prior to eating one, but foxes are routinely searching for caches meaning a cached bait may most likely be taken by a different fox (See FOXOFF® Video).

Caching or the burying of food is a survival strategy for the fox providing for itself a food source when the night's hunting is poor, or when food needs to be brought back to cubs.

***Your poison baiting program mimics this caching behaviour and can achieve success in killing large numbers of foxes. Check bait sites regularly and replace taken baits until bait takes stop.***



## Should I run a lure trail?

**NO.** Lure trails confuse foxes more than help them find the baits. FOXOFF® has been proven over many years to be effective without the use of lures. In some circumstances **FeralMone™ Spray Attractant** has been used at bait and trap sites (but not as a trail) to assist in bringing foxes (and more so dogs) to these sites.

## Will FOXOFF® Baits kill my dog?

**YES.** FOXOFF® contains 1080 and is lethal to dogs. Working dogs and domestic pets should be restrained and/or muzzled for the duration of a baiting program.

## How many FOXOFF® Baits to kill a fox?

One FOXOFF® bait contains 3mg of 1080 - enough to kill the largest fox. Often more than one fox can be visiting a bait site, therefore taken baits should be replaced until bait take stops.

## Do foxes only eat dead lambs?

**NO.** This is a myth. Foxes prey heavily on live or dead lambs and are one of the leading factors in native species extinction in Australia.

## How to use FOXOFF® Baits?

The directions for use and legislative requirements of fox baits containing 1080 vary between states and territories. For the correct directions for use in your situation visit our website:

**[www.animalcontrol.com.au](http://www.animalcontrol.com.au)**

## How do I purchase FOXOFF® Baits?

The purchase requirements of baits containing 1080 vary between states and territories.

For additional more detailed information please call ACTA on 03 9308 9688 or visit our website [www.animalcontrol.com.au/regulations](http://www.animalcontrol.com.au/regulations).

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Stocked locally by:



Other ACTA products for large-scale pest animal management available through agencies and/or leading rural merchant stores:



**FOXOFF®**  
Fox Bait

For the control of foxes



**SLUGGOFF®**  
Slug & Snail Bait

For the control of snails & slugs in the home garden



**FOXSHIELD®**  
Fox Bait

For the control of foxes



**DEN-CO-FUME®**  
Fumigation Cartridges

For the control of foxes in natal dens



**DOGGONE®**  
Wild Dog Bait

For the control of wild dogs



**RABBITAIT®**  
1080 Oat Bait

For the control of rabbits



**RABBITAIT®**  
Pindone Oat Bait

For the control of rabbits



**MOUSEOFF®**  
Zinc Phosphide Bait

For the control of mice in crops



**MOUSEOFF®**  
Bromadiolone Rodent Bait

For the control of rats and mice



**RATTOFF®**  
Zinc Phosphide Bait Sachets

For the control of rats in sugarcane crops



**RODEMISE®**  
Bromadiolone Rodent Block

For the control of mice and rats in domestic, commercial & industrial buildings



**PIGOUT®**  
Feral Pig Bait

For the control of feral pigs

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