

POSSUM CONTROL - USING [FERACOL](#)® IN BAIT STATIONS, BAIT BAGS OR 'STRIKERS'

MATERIALS

Bait

- [Feracol](#) is a peanut butter flavoured paste bait, highly palatable to possums [1]. The active ingredient is Cholecalciferol (vitamin D₃) in a concentrated form. This is very toxic to some animals, and possums in particular. It kills possums by elevating plasma calcium levels resulting in heart failure [1]. Feracol paste can be used in bait stations or bait bags. It is also supplied in ready-to-use '[Strikers](#)'.
- Feracol is effective in controlling rats also, so unlike Feratox, it does not require preliminary control of rats where these pests are abundant.
- Only freshly manufactured bait should be used. Bait that has previously been in the field must not be reused. Only buy as much bait as you need for the operation. This ensures high bait palatability, which has a direct influence on success. Old bait is likely to have absorbed moisture, have mould growth and be less palatable.

Bait bags

- Bags must be biodegradable, marked with a warning, and able to hold 12 - 20 g of bait.
- An example that fits these criteria is Connovation's Biobag.

Bait stations

- Key requirements are: allow possums easy access, limits access by non-targets, protects bait from the elements, limits bait spillage, holds at least 200gm of bait, easy to fill (and transport when establishing the network), be durable and designed for easy attachment to trees and fences.
- Bait stations are available through [Connovation](#), [Pest Control Research](#), and [Key Industries](#).

TECHNIQUE

The advice presented below is based on relevant research findings. Additional practical advice is available in [Connovation's best practice](#) information.

Effective use of Feracol

- Pre-feeding using [Ferafeed](#) should be carried out for at least 2 weeks. Note: May need to be extended during wet weather or if bait stations have been raised to minimise the risk to non-targets. Pre-feeding is required to achieve consistently high possum kills [2]. It takes at least 2 weeks for most possums to find the bait stations. Pre-feeding results in more toxic bait being eaten at a population level [3] and individually [4] and it reduces wariness (neophobia) of possums to toxic bait [4].
- For larger bait stations (e.g. Kilmore and Philproof), the pre-feed should consist of approximately 200 g per week. For smaller bait stations (e.g. Romark and KK), completely fill the bait station. Bait stations must be checked regularly during prefeeding to ensure they do not become empty, or the bait has degraded and become unpalatable. The aim is to ensure there is a constant supply of pre-feed in each bait station so possums learn that they are a source of food.

- Pre-feed must not be mixed with toxic bait. Remove any residual pre-feed before putting in the toxic bait. Mixing pre-feed and toxic baits can result in possums being sub-lethally poisoned and becoming bait shy.
- When putting out the toxic bait, approximately 200 g should be placed in each bait station. The quantity of toxic bait needed will depend on numbers of possums and non-target pests i.e. rats. There is a high variation in the susceptibility of possums to cholecalciferol [5]. An adequate amount of bait must be placed in each bait station to ensure all possums receive a lethal dose.
- Toxic bait should be left out for 5 - 10 nights. When pre-fed correctly, possums should take the toxic bait within the first 5 nights. If bait is left out for more than 10 nights it may go mouldy and become unpalatable.
- At the end of the operation all uneaten Feracol bait must be removed. This reduces the chance of possums being exposed to poor quality bait, which may result in bait shyness [5].

Bait station layout

- No greater than 100 m apart in forest habitats [6,7]. Average home range of male possums is 1.9ha and females is 1.3 ha [8].
- Laid out on grids by compass bearing [3,9] or, in rough terrain, placed on ridges and spurs with additional lines located on 100 m contours using an altimeter. Spacing should be established precisely using GPS. Inaccurate location of lines will cause gaps in coverage where pockets of high possum numbers can persist.
- At 50-100 m intervals along forest/pasture margins and operational boundaries. This spacing is required to expose all possums to the bait [10] and reduce reinvasion.
- When bait stations are used solely on forest/pasture margins possums will be effectively controlled 200 m into the forest [10]. Possum reinvasion at these sites may be high if the area behind the 200 m margin is not controlled [11]. Possums are known to favour these habitats and travel to pasture from over 200 m inside the forest [12].
- A good track infrastructure (e.g. well marked and maintained) is important and each bait station should be numbered. This reduces the risk of missing bait stations during checking and allows data collected to be related to individual bait stations.
- Bait stations should be attached to the dry side of trees with the opening 25 -30 cm above the ground. This optimises bait station use by possums and avoids rain and water splashing off the ground affecting bait quality.

Bait bags/Strikers layout

- Groups of bait bags or Strikers should be placed up to 20m apart along transects. The transects should be 100 m apart [6,7]. Additional bait bags should be placed around recent possum sign. The average home range of male possums is 1.9ha and females is 1.3 ha [8]. The aim is to place bait within the home range of all possums.
- Up to 3 bait bags or Strikers should be located in each group, depending on possum density. This is to ensure all possums have a chance of eating toxic bait when they encounter a group of baits.
- The transects should be laid out using GPS or, in rough terrain, placed on ridges and spurs with additional transects located on 100 m contours using an altimeter. Inaccurate location of transects will cause gaps in coverage.
- Look for sites where possums have been active, as indicated by droppings, bark biting, browsing, and runs (i.e. tracks)
- Bait bags or Strikers should be stapled to the side the possum runs up (or the dry side) of trees 30 cm to 1m above the ground. Alternatively, they can be placed in bait stations if

these are already in place. The aim is to make them easily accessible to possums, unavailable to non-targets, and to protect them from rain and water splashing from the ground as this will reduce field life of the bait/toxin.

SUSTAINING POSSUM CONTROL OVER THE LONG TERM

- Monitoring outcomes is essential to judge effectiveness of the control programme. Control operations are useless unless outcomes are achieved.
- Pre- and post-operational monitoring is essential to determine the effectiveness of the operation. A comparison of pre- and post- data gives the most robust estimate of the kill result. Post- data cannot reliably be compared between operations.
- Build into the costing a provision for replacement of lost/damaged bait stations and track maintenance.
- Alternating bait types, toxins, lures and techniques is important in ongoing control programmes. Continuous use of a single pesticide use is not recommended.
- Careful recording of the amount of bait used and retrieved can allow better estimates of future needs. Reinvasion of possums into controlled areas can be reduced by using natural boundaries e.g. waterways and pasture, and buffer zones of at least 3km wide [13].
- Feracol is best used for maintenance of low possum populations (<15% [RTCI](#)) rather than initial control of high populations.

LIMITATIONS

- Kill results have been variable, probably due to inherently variable susceptibility between possums [5].
- The method is labour intensive and relatively expensive in the first year because of initial set-up of lines and bait stations.
- Labour costs increase in difficult terrain.
- Incorrect use of cholecalciferol bait can cause bait shyness in possums [5].
- Although Feracol is intended to kill rats also can affect the success of the operation.
- Dogs are susceptible to poisoning if they eat bait containing cholecalciferol.

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