



# RatAbate<sup>®</sup> low residue highly palatable effective bait for rodent control for community and professional users

Charles Eason, Andrew Jenks, Duncan MacMorran, Mark Burroughs and Shaun Ogilvie.

Friends of Puketoki, Tauranga, Bay of Plenty; Lincoln University, PO Box 84, Lincoln; and Connovation Ltd, PO Box 58 613, Auckland.

## Background

- Effective less persistent anticoagulants were sought when repeated use of brodifacoum led to bioaccumulation.

## What is Diphacinone?

- It is an effective anticoagulant rodenticide.
- It inhibits the formation of vitamin K-dependent clotting factors
- RatAbate<sup>®</sup> is a cereal based paste bait containing diphacinone.

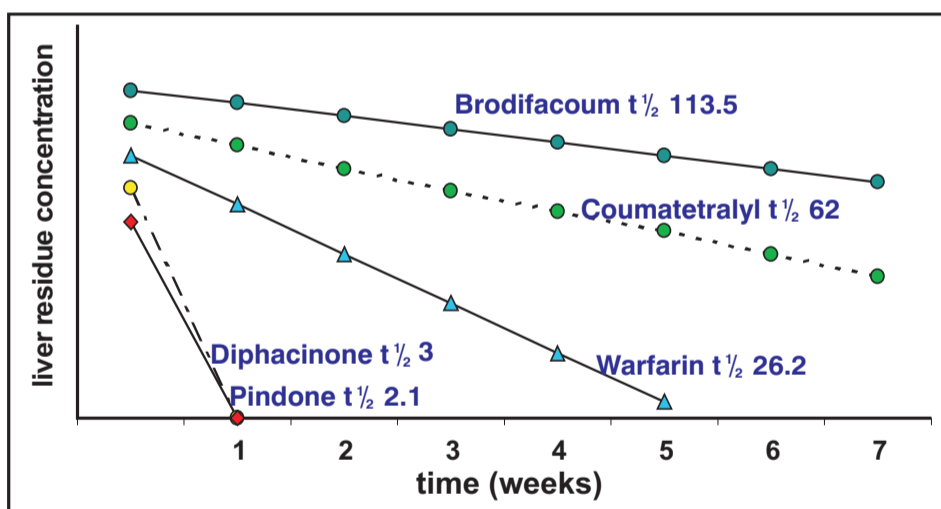
## Key Criteria for Baits Containing Alternatives to Brodifacoum and Pindone

- Alternative must lack persistence in animals.
- Toxin must be more potent than pindone.
- Baits must be very palatable to rodents.

## Comparative Persistence (See Figure 1)

- Diphacinone is not persistent and will not contaminate food-webs.

Figure 1 Persistence of diphacinone vs. other anticoagulants in liver of sub-lethally exposed animals (adapted from Fisher et al 2003)



## Bibliography

Fisher, P., O'Connor, C.E., Wright, G., Eason, C.T. 2003 Persistence of four anticoagulant rodenticides in the livers of laboratory rats. DOC Science Internal Series 139 pp 19.

## Comparative Effectiveness

- Diphacinone at 3 mg/kg will kill and rodents are susceptible to repeated lower doses.

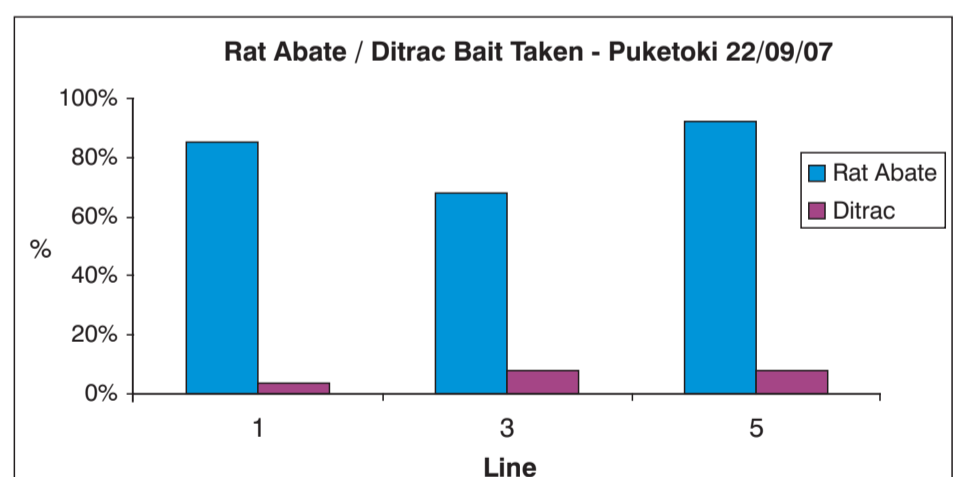
Table 1 LD 50 data in mg / kg

Compound	Rats
<b>COUMARINS</b>	
Brodifacoum	0.24
Coumatetralyl	0.3 over 5 days
Warfarin	1.0 over 5 days
<b>INDANDIONES</b>	
Pindone	5.0 x 5 days
Diphacinone	3 or 0.2 over 5 days

## Comparative Palatability (See Figure 2)

- Volunteers protecting 40 hectare native bush were baiting with Ditrac<sup>®</sup>.
- They were looking for more effective baits and measured comparative palatability of 2 baits.
- After 2 months of baiting with both bait types RatAbate<sup>®</sup> was 89% more palatable than Ditrac<sup>®</sup>.

Figure 2



## Conclusions

- RatAbate<sup>®</sup> contains diphacinone, an anticoagulant which is not persistent.
- Diphacinone is more potent than pindone and has similar potency to coumatetralyl.
- It is highly palatable and used alongside Feratox<sup>®</sup> and /or Feracol<sup>®</sup> will provide excellent cost effective control of possums as well as rodents with low risk of secondary poisoning and no residues.

## Acknowledgement

The DoC support in clarifying low residue anticoagulants and FRST.