The development of a light-weight, long-life diphacinone rodent bait

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Abstract

Rodents introduced into mammal-free New Zealand seriously impact our vulnerable native flora and fauna. As a result, considerable research effort has focused on developing control techniques for reducing and/or eradicating rodents with excellent success in the eradication of both Norway and ship rats from many offshore islands. This control work has now created numerous pest-free sanctuaries thus enabling the translocation of many endangered native bird species. Whilst this research work has generally been positive, there are still numerous examples where control has failed to successfully eradicate mouse populations. Another problem is that there has been reliance on bait containing brodifacoum for rodent control and this can create major secondary poisoning risks for non-target predators and scavengers. Recent research has suggested that low bait palatability and/or poor bait delivery systems are the most likely reasons for unsuccessful mouse control. This purpose of this research project is to develop a novel bait for rodents involving extruded paste technology. This technology enables us to enhance the geometric shape of the bait with the emphasis on increasing attractiveness for mice. This bait has also been designed to be lightweight, easy to apply in the field and has an added advantage of a natural waterproof coating to lengthen field durability and palatability. Preliminary trials with captive mice indicate that the new bait is significantly more palatable than a standard rodent bait for both rats and mice. Weathering and toxic field trials of the new bait are currently underway and the results of this research will be presented.

Keywords: diphacinone, long-life bait, mice, rats, rodent control