

Code of Practice

Aerial and Hand Broadcast
Application of Pestoff[®]
Rodent Bait 20R for the Intended
Eradication of Rodents from
Specified Areas of New Zealand

Prepared for:

New Zealand Food Safety Authority

Wellington

June 2006 Revision

FOREWORD AND ACKNOWLEDGEMENT

Pestoff® Rodent Bait 20R is a Vertebrate Toxic Agent registered under the ACVM Act 1997 to Animal Control Products Ltd of Wanganui, New Zealand.

The product was originally registered in August 1997 under the Pesticides Act 1979, for the purpose of providing a tool for the Department of Conservation (DoC) to eradicate rodents on offshore islands. In this respect, the product has served and continues to serve its purpose well.

The establishment of predator-fenced "mainland island" sanctuaries is a relatively new phenomenon involving the removal of exotic mammalian pests from land in both private and public ownership; the ultimate aim being to establish ecologically restored areas which might eventually become strongholds where New Zealand's native biota might re-establish, thrive and re-colonise other areas. This applies equally to offshore islands under private ownership, which might benefit significantly from rodent eradication.

This Code of Practice is therefore a product of vision and pro-active conservation having entered the private domain. The opportunity to apply similar practices and principles to those which have been used successfully by DoC, on privately owned offshore islands as well as predator-proofed mainland islands and peninsulas, defines the purpose of this Code of Practice.

Key advocates and contributors to the establishment of the Code of Practice have been David Wallace and other members of the Maungatautari Ecological Island Trust; the staff of Auckland Regional Council; Roger Lorigan and the staff of EPRO Ltd; Roger McGibbon, Tim Day and the staff of Xcluder® Pest Proof Fencing Company; Jo Ritchie of Natural Logic Ltd; and Paul Craddock, Keith Broome, Alistair Fairweather and other staff of the Department of Conservation. The sponsor gratefully acknowledges the substantial contribution these people and organisations have made.

Special thanks however go to EPRO Ltd's operations manager Cam Speedy who has spent many, many hours drafting, editing and re-drafting the original texts and collating contributions from all quarters to come up with what is now a valuable document guiding the use of Pestoff® Rodent Bait 20R outside of DoC's offshore islands.

Bill Simmons
Animal Control Products Ltd
26 June 2006

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1 Introduction

This document describes the Code of Practice to be observed by any organisation or agency involved in the aerial and / or hand broadcast application of brodifacoum baits¹ within Specified Areas of New Zealand, including the mainland. This method is only to be used in one-off attempts to eradicate rodents from areas where livestock are excluded and the ability of pests to reinvade the Specified Area is precluded by the fact that the Specified Area is an island, or where the Specified Area has been protected by effective pest proof fencing.

The aerial application of brodifacoum baits has proved to be an extremely effective method of eradicating rodents from un-stocked offshore islands. While brodifacoum baits are extensively laid within bait stations on the New Zealand mainland, aerial and / or hand broadcast application poses a number of additional risks which must be carefully managed. Application of Pestoff® Rodent Bait 20R in specific areas contained within effective pest proof fences has been identified as a method that will greatly reduce the likelihood of humans or livestock coming into contact with brodifacoum. Adherence to a strict code of practice will minimise, to acceptable levels, the risk of brodifacoum entering the human food chain from this source. The ecological benefits of this management approach make it an important tool for preserving biota at risk on the mainland. Other ecological or commercial reasons to utilise this technique may also evolve over time.

The aerial application of brodifacoum is generally subject to resource consent requirements for the aerial discharge of contaminants on to land and water under the Resource Management Act (1991) which serves as a key driver for iwi and wider public consultation on a specific operation by operation basis.

This Code of Practice has been written in accordance with the Agricultural Compounds and Veterinary Medicines Act (1997), Agricultural Compounds and Veterinary Medicines Standard 11.1 for Codes of Practice, in order to comply with Section 28 of the Act.

1.1 Scope

This Code of Practice shall cover all rodent eradication attempts involving the aerial and / or hand broadcast application of Pestoff® Rodent Bait 20R over Specified Areas excluding non-stocked offshore islands managed by the Department of Conservation. The application of Pestoff® Rodent Bait 20R with Specified Areas must occur only where the eradication of rodents is the objective, where all practicable steps are taken to prevent rodent reinvansion and where livestock are excluded. Barriers to rodent reinvansion and to livestock which may consist of a pest proof fence or a large body of water, or both. Specified Areas may therefore include “mainland islands”, peninsulas or islands.

¹ Pestoff® Rodent Bait 20R.

1.2 Sponsor

This Code of Practice has been developed and prepared by Epro Ltd, in association with staff from the Maungatautari Ecological Island Trust, Auckland Regional Council and Xcluder® Pest Proof Fencing Company. The contact details for Epro Ltd are as follows.

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The sponsor of this Code of Practice in terms of the Agricultural Compounds and Veterinary Medicines Standard 11.1 for Codes of Practice is as follows.

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1.3 Purpose

This Code of Practice is designed to ensure that:

- ▼ aerial and / or hand broadcast application of Pestoff® Rodent Bait 20R is available as a management tool within specified areas of New Zealand to protect threatened biota that would otherwise not survive in situ or for other ecological or commercial reasons that may develop in the future
- ▼ any organisation or agency involved with the aerial and / or hand broadcast application of Pestoff® Rodent Bait 20R within specified areas of New Zealand adheres to all relevant statutes and regulations, and to strict guidelines when planning and conducting such operations
- ▼ residues in livestock, food and animal products, sourced from the aerial and/or hand broadcast bait application in specified situations must comply with the regulatory thresholds..

1.4 Code of Practice Outcomes

This Code of Practice seeks to achieve the following specified outcomes.

- ▼ The safe utilisation of Pestoff® Rodent Bait 20R within specified areas of New Zealand to enhance the long term survival of threatened biota or for other ecological or commercial reasons that may develop in the future.
- ▼ The containment of brodifacoum following aerial and / or hand broadcast application of PestOff® Rodent Bait 20R within the operational boundaries of any Specified Area.
- ▼ Brodifacoum residues in meat or food products sourced from livestock farmed on land either inside the operational area or adjoining any Specified Area as a result of the aerial and / or hand broadcast application of Pestoff® Rodent Bait 20R comply with the regulatory thresholds (see NZFSA website for these prescribed limits).
- ▼ The potential for any health risk to humans, arising as a result of the aerial or hand broadcast of Pestoff® Rodent Bait 20R, is eliminated.

1.5 Legislation

The Code of Practice must comply with the Agricultural Compounds and Veterinary Medicines Act (1997) and the Hazardous Substances and New Organisms Act (1996).

Responsibility for the provisions of the Agricultural Compounds and Veterinary Medicines Act lies with the Agricultural Compounds and Veterinary Medicines Group of the New Zealand Food Safety Authority.

The responsibility for the provisions of the Hazardous Substances and New Organisms regulations lies with the Environmental Risk Management Authority (ERMA). The provisions of the Hazardous Substances and New Organisms regulations are still being formulated. New controls on the use of brodifacoum products came into effect on 1 November 2004.

The aerial application of brodifacoum is generally subject to resource consent requirements for the aerial discharge of contaminants on to land and water under the Resource Management Act (1991).

1.6 Pesticide Registration Issues

The registration of Pestoff® Rodent Bait 20R limits its use to aerial and / or hand broadcast application on non-stocked off-shore islands, or within areas enclosed by an effective pest proof fence where bait application complies with this Code of Practice. Label instructions appear as referred to in Appendix 3.1. Supply and use limitations mean Pestoff® Rodent Bait 20R must only be supplied to the Department of Conservation (DoC) or to persons operating in accordance with this approved Code of Practice.

1.7 Approval

This Code of Practice has been approved by the New Zealand Food Safety Authority under Section 28 of the Agricultural Compounds and Veterinary Medicines Act (1997).

1.8 Maintenance and Review

This Code of Practice will be reviewed by the sponsor at least annually for the first three years of operation, and when any significant new information as a result of operating the Code comes to light after this time.

Reviews in the first three years will involve Project Managers, Operators and appropriate operations staff from all projects where the Code has been used, and any other relevant persons with an interest in the outcomes of the Code.

Where reviews result in improvements to the Code, the Code of Practice will be updated in accordance with the maintenance specifications set out in the Agricultural Compounds and Veterinary Medicines Standard 11.1 for Codes of Practice. Any amendments will be notified to the New Zealand Food Safety Authority.

1.9 Accountabilities and Responsibilities

Two critical roles have been identified in terms of complying with this Code of Practice, the Project Manager and the Operator. Both have defined roles and responsibilities during operations where this Code of Practice will apply. In some cases, these two roles may be fulfilled by the same person.

Project Manager

The Project Manager's role is to manage the whole project on behalf of the client² and to ensure that all requirements of the Code of Practice for the aerial and / or hand broadcast application of Pestoff® Rodent Bait 20R are implemented and documented, and all relevant performance standards met.

The Project Manager will be responsible for the day to day running of the project, including communication and consultation, statutory compliance; appropriate fence design and construction; and the employment / engagement of fencing contractors, Pestoff® Rodent Bait 20R application operators and other pest control contractors that have the technical capability and experience to ensure the successful completion of the project to all specified standards.

The Project Manager shall ensure the following:

- ▼ a formal plan for the pest eradication proposal is prepared
- ▼ the preparation and / or implementation of an Operational Plan consistent with this Code of Practice
- ▼ a full Assessment of Environmental Effects (AEE) is prepared
- ▼ all statutory toxin approvals have been obtained from regional councils, district health boards and DoC for the aerial application of brodifacoum in a timely manner
- ▼ communication and public relations strategies are coordinated with the approvals process, including the notification of neighbouring landowners, nearby schools, veterinarians, doctors, hospital and police prior to aerial application of toxic bait
- ▼ that relevant local, regional and central government agencies are notified of the project and that all applicable permissions, consents, approvals and permits are obtained
- ▼ that all landowners within or immediately adjoining the operational area are notified and that all applicable consents and approvals are attained
- ▼ coordinate a documented public relations strategy
- ▼ prepare pest eradication contract specifications that clearly specify the requirements, standards and purpose of this Code of Practice to ensure the specified outcomes are achieved
- ▼ that the operational work is carried out by an appropriately qualified vertebrate pest control operator who has the technical capability and experience to implement the operation to a standard that will meet the requirements of this Code of Practice.

² See Definitions in Appendix 3.2.

- ▼ all necessary resources are available to complete the project safely and within the requirements of this Code of Practice
- ▼ prepare a Code of Practice Compliance Checklist³ prior to operational implementation
- ▼ meet all reporting requirements of this Code of Practice.

While it is the responsibility of the Project Manager to ensure these specified tasks are undertaken, the Project Manager may delegate these, in writing, to the Operator if the Operator has the appropriate expertise and experience. Where this occurs, acceptance of delegation must be signed for by the Operator. The Project Manager remains accountable at all times for the performance of the Operator in terms of compliance with this Code of Practice.

Operator

The role of the Operator is to undertake the aerial and / or hand broadcast application of Pestoff® Rodent Bait 20R for the eradication of rodents within specified areas in accordance with this Code of Practice.

The Operator will ensure this by implementing an appropriate operational plan that will meet the requirements, standards and purpose of this Code of Practice to ensure all specified outcomes are achieved.

The Operator shall:

- ▼ have proven experience in the aerial and / or hand broadcast application of toxic baits used for vertebrate pest control
- ▼ have all necessary equipment to undertake the bait application in a manner that will meet the requirements, standards and purpose of this Code of Practice
- ▼ coordinate all operational planning necessary to meet the requirements, standards and purpose of this Code of Practice to ensure all specified outcomes are achieved, including the peer review process⁴ prior to bait application
- ▼ develop and implement an appropriate Health and Safety Plan that covers both staff and the general public
- ▼ direct all operational staff involved in an operation and ensure that they comply with all relevant legislation
- ▼ meet all reporting requirements of this Code of Practice.

³ See Appendix 3.3.

⁴ See Section 2.4.2 (a).

1.10 Pest Proof Fencing

The application of Pestoff® Rodent Bait 20R under this Code of Practice may involve three types of Specified Area:

- **Islands** which are encircled by a water body sufficiently large that there is little likelihood of reinvasion by rodents coming from other islands or from adjacent mainland area. Livestock will not be present on these islands.
- **Peninsulas** which, in part, will have a boundary adjoining a large water body which acts as a barrier to rodent reinvasion, and where the peninsula joins the main land mass, a pest proof fence which effectively prevents reinvasion of the Specified Area and which excludes all livestock. Additional stock fences may be necessary to prevent stock passing around the fence ends and intensive, on-going pest control measures may be required up to 1 kilometre inland from the fence ends (recommended) in order to reduce pest density and therefore reduce the likelihood of rodent reinvasion.
- **Mainland Islands** encircled by an effective pest proof fence which prevents reinvasion by rodents from areas outside the Specified Area and which excludes all livestock.

Pest proof fences must be of a design and construction which has been tested and proven to be fully effective in preventing access to the Specified Area by all farm livestock and target pests present. Such fences must be able to be maintained in a pest proof state.

Where a pest proof fence is to be used, the Project Manager shall:

- ▼ be responsible for appointing an experienced pest proof fencing contractor
- ▼ approve only pest proof fence designs that have been scientifically tested and shown to be effective against all livestock and target pests found at the site
- ▼ employ a consultant experienced in pest proof fence design and construction to inspect the completed fence to verify it as being fully effective as a barrier to mammalian pests and livestock⁵ prior to bait application
- ▼ ensure a fence maintenance plan that provides the resources and mechanisms by which the fence will be maintained in a fully effective condition is produced.

All permanently flowing streams and ephemeral channels entering or exiting the Specified Area -must be secured from pest invasion with proven pest exclusion structures. These structures should also serve to screen out any whole baits that may land in the water column during bait application and otherwise be carried out of the Specified Area or must be temporarily modified during bait application to achieve this purpose.

⁵ Inspection and verification must take place within four weeks prior to bait application.

2 Operational Requirements and Performance Standards

2.1 Accountabilities and Responsibilities

2.1.1 Code of Practice Requirements

- 1.1 All operations will have an appointed Project Manager and Operator.
- 1.2 The Project Manager will be responsible for the project complying with all requirements of this Code of Practice.
- 1.3 The client⁶ will remain accountable for the overall project complying with the requirements of this Code of Practice.

2.1.2 Performance Standards

The following details will be notified to the bait supplier prior to any operation commencing:

- (a) name and location of project
- (b) name, address and contact details of client
- (c) name, address and contact details of Project Manager
- (d) name, address and contact details of Operator
- (e) name, address and contact details of consultant (fence inspector)
- (f) quantity of bait required
- (g) date bait required
- (h) delivery destination
- (i) a declaration to be signed by the project manager stating that the above information is true and correct and that the bait to be supplied will be used only in the Specified Area stated and in accordance with the Code of Practice.

This information will be made available to the New Zealand Food Safety Authority upon request.

2.2 Pest Proof Fencing

2.2.1 Code of Practice Requirements

Where an operation involves application of Pestoff® Rodent Bait 20R within a Specified Area enclosed or protected by a pest proof fence, all pest proof fencing shall meet the specifications described in section 1.10.

⁶ Refer to Definitions in Appendix 3.2.

2.2.2 Performance Standards

- (a) All non-island Specified Areas will be fenced to prevent pest and unintentional livestock re-entry.
- (b) Copies of the pest proof fence design used plus scientific information providing evidence that the fence is effective at excluding target mammalian pests and livestock, will be held by the Project Manager and made available to relevant agencies and authorities upon request.
- (c) Copies of the report prepared by the independent consultant experienced in pest proof fence design and construction stating that the fence and all stream and waterway crossings are pest proof will be held by the Project Manager and made available to relevant agencies and authorities upon request.

2.3 Records

2.3.1 Code of Practice Requirements

Detailed records of all correspondence, messages, faxes, orders, instructions and reports, in chronological order, will be kept for each and every operation.

2.3.2 Performance Standards

Copies of operational files shall be made available to relevant agencies and organisations by the Project Manager on request.

2.4 Planning and Approvals

2.4.1 Code of Practice Requirements

- (a) A full AEE shall be prepared for each operation.
- (b) In most cases there will be a requirement for permissions, consents and agreements to be obtained in writing before the application of Pestoff® Rodent Bait 20R under this Code of Practice.
 - If the Specified Area includes land administered or managed by the Department of Conservation permission must be obtained under section 95A of the HSNO Act. ERMA has delegated this authority to DoC.
 - In all other cases, the owners or occupiers of land within the Specified Area must give permission for the application of any poison bait on their properties.
 - Where legal roads (either formed or unformed) occur within the Specified Area, permission must be obtained from the local territorial authority to apply baits on these roads.

- If baits are to be applied by aerial application, a resource consent must be obtained from the regional council whose jurisdiction covers the Specified Area. Resource consent conditions may require Project Managers to obtain additional permissions, undertake consultation or obtain agreements. Aerial bait applications must also comply with Clause 6 of Schedule 2 of the Hazardous Substances (VTA) Transfer Notice 2004 in respect of drinking water supplies, decontamination of aircraft and the fencing and signposting of loading areas.
- No legal requirement exists under the HSNO Act for the permission of the Medical Officer of Health to be obtained where brodifacoum baits are to be laid. It is therefore established as a requirement under this Code of Practice that where a risk to public health may be created by the application of baits containing brodifacoum in a Specified Area, the Medical Officer of Health must be provided with details of the proposed operation prior to the application of bait, and any reasonable recommendation subsequently made by the MOH which is intended to reduce or eliminate a risk to public health, shall be complied with by the Project Manager.
- Where it is intended that baits will be aerially sown on the boundary of the Specified Area, the Project Manager shall seek written agreement from landowners whose paddocks adjoin the Specified Area that these paddocks will be grazed out and de-stocked prior to the bait application/s and remain free of stock for a period following the last application of bait which ensures stock cannot be exposed to viable brodifacoum baits as a consequence of any undetected overfly. Where such agreement with adjoining owners cannot be reached, the adjacent boundary of the Specified Area will be treated by hand application only.

2.4.2 Performance Standards

- (a) All operational planning documents shall be subject to independent peer review before the operation commences. The peer review will be carried out by a person or agency experienced in animal pest management and ecological restoration.
- (b) The purpose of the peer review is to provide a qualified written critique of the project plan and to provide advice to the Project Manager on strategies or tactics which could reduce the risk of failure and reduce the likelihood of any unforeseen or unintended adverse outcomes on the environment or on communities; both within and surrounding the Specified Area.
- (c) The peer review shall provide a written assessment of all planning documentation in relation to both the specified outcomes required by this Code of Practice and the risks of failure to eradicate.
- (d) Peer review group comments shall be forwarded to consent authorities by the Project Manager together with documentation of how the Project Manager and / or Operator has dealt with issues raised by the peer review group.

- (e) The peer review group does not have authority to veto an operation but will make recommendations for changes which the Project Manager may or may not choose to adopt.

2.5 Public Notification and Warning

2.5.1 Code of Practice Requirements

- (a) All operations involving the aerial and / or hand broadcast application of Pestoff® Rodent Bait 20R under this Code of Practice must have a specific public relations strategy. Where relevant, issues of closing the operational area to the public and the length of closure will be addressed in this public relations strategy.
- (b) Public warning signs shall be erected and must remain in place for the period specified by Schedule 2 of the Hazardous Substances (VTA) Transfer Notice. If the Specified Area is one to which members of the public ordinarily have uncontrolled access, signs must be posted at every known point of entry to the Specified Area and must remain for a period of 12 months after the last application of bait within the Specified Area.
- (c) Before applying Pestoff® Rodent Bait 20R by aircraft, the general public shall be notified by newspaper advertisements, placed in all local newspapers, two weeks prior to the earliest start date of bait application.

2.5.2 Performance Standards

A copy of the Public Relations Strategy and all notification correspondence shall be made available to relevant agencies and authorities by the Project Manager upon request.

2.6 Bait Application

2.6.1 Code of Practice Requirements

- (a) The only brodifacoum bait to be used for aerial and / or hand broadcast application under this Code of Practice is Pestoff® Rodent Bait 20R.
- (b) Only an Operator who is experienced in the aerial and / or hand broadcast application of toxic bait will be engaged by the Project Manager.
- (c) Only helicopters shall be used for aerial application of Pestoff® Rodent Bait 20R under this Code of Practice. The helicopter operator shall have a proven history and experience in the aerial application of toxic baits used for vertebrate pest control.
- (d) Differential Global Positioning System (DGPS) navigational guidance equipment shall be used on all helicopters applying Pestoff® Rodent Bait 20R under this Code of Practice.
- (e) All sowing buckets and equipment must be tested by a competent agency which has experience in spreader-bucket calibration. Buckets must be certified by the testing agency as being able to meet specific swathe width and bait sowing rates within the range required.
- (f) Covers must be fitted to helicopter buckets where sensitive boundaries exist.

- (g) The Operator shall account for all bait transported from the bait manufacturing point to the Specified Area, applied to the Specified Area, and any bait remaining after treatment is complete.
- (h) All operational plans shall detail measures to be taken to ensure bait, and any contaminated equipment after bait application, are secure at all times and how and where decontamination of any contaminated equipment will occur. These measures will give effect to the requirements of Schedule 3 of the Hazardous Substances (VTA) Transfer Notice 2004.
- (i) Operations should only be carried out in the months May to October or where local rainfall records show an expectation of 200 millimetres of rain within 90 days of bait application.

2.6.2 Performance Standards

- (a) Documented evidence of previous experience in the aerial and / or hand broadcast application of toxic bait will be provided by the Operator.
- (b) Details of the DGPS navigational guidance and aerial baiting equipment to be used including certification details shall be provided to the Project Manager by the Operator.
- (c) A copy of the Operational Plan shall be made available to relevant agencies and authorities upon request by the Operator.
- (d) Bait records shall be kept by the Operator of bait purchased, delivered to the operational site, applied to the Specified Area and remaining upon completion of the operation, and these shall be supplied to relevant agencies and authorities upon request.
- (e) The method of disposal of any excess bait shall be specified in the operational record.
- (f) Rainfall records shall be produced to support the selected timing of the operation.

2.7 Operational Boundaries

2.7.1 Code of Practice Requirements

- (a) Where aerial application of Pestoff® Rodent Bait 20R is to occur under this Code of Practice, all operational boundaries shall be physically flown, logged and recorded by the on-board DGPS navigational guidance equipment of each helicopter to be used for bait application. The use of electronic shape files as the exclusive means of recording boundaries is not permitted.

In operations that involve the application of Pestoff® Rodent Bait 20R within an area enclosed or protected by a pest proof fence.

- (b) Bait application may only occur within the perimeter of an effective pest proof fence which has been thoroughly inspected to ensure its integrity immediately prior to bait application.

- (c) All treatment areas within 25 metres of the boundary fence will be treated with boundary buckets that have a certified swathe width of less than 10 metres.
- (d) All boundary areas where the fences are obscured from the air, have sharp angles or pose a risk in terms of stock access to bait for any other reason shall be treated by hand application only.
- (e) No bait shall be applied in winds exceeding 20 kilometres per hour near stocked boundaries.
- (f) Paddocks adjoining the Specified Area will be de-stocked prior to the application of toxic baits containing brodifacoum; or where de-stocking cannot be achieved, adjoining boundaries of the Specified Area shall be treated hand application only.
- (g) As far as possible, where the boundaries of the Specified Area are to be treated by aerial application, adjacent paddocks will be grazed out immediately prior to de-stocking and bait application, in order to remove forage and enhance the detection of any overflies.
- (h) Operations staff shall physically inspect all operational boundaries within 24 hours prior to bait application to ensure the fence is secure and that no stock are present in boundary paddocks, flight paths or loading sites where loading sites occur outside the Specified Area.

2.7.2 Performance Standards

- (a) Copies of aerial application areas showing operational boundaries and aerial exclusion zones will be made available to relevant agencies and authorities by the Operator upon request.
- (b) Copies of flight line print outs showing areas treated by aerial application will be made available to relevant agencies and authorities by the Operator upon request.
- (c) Copies of a pre-operational boundary inspection report will be made available to relevant agencies and authorities by the Project Manager upon request.
- (d) Copies of weather forecasts covering aerial application days will be made available to relevant agencies and authorities by the Operator upon request.
- (e) In any case where an overfly is detected, refer to section 2.11.1(b).
- (f) Copies of post-operational boundary inspection reports shall be made available to relevant agencies and authorities upon request by the Project Manager.

2.8 Exclusion of Livestock

2.8.1 Code of Practice Requirements

- (a) Where aerial application of Pestoff[®] Rodent Bait 20R is to occur in areas where livestock are ordinarily grazed, all livestock are to be removed prior to the application of baits containing brodifacoum. Measurements of bait breakdown will be taken for up to 120 days following the last application of hand or aerially broadcast baits to ensure that stock are not returned to pasture until bait condition scores have reached at least five or six⁷.
- (b) If brodifacoum baits are aerially sown on grazed areas or pasture as a consequence of an overfly, all baits are far as possible will be removed and the New Zealand Food Safety Authority consulted.
- (c) Stock will not be returned to any area where complete baits are present (baits with condition score four or less).
- (d) Livestock will be withheld from aerially treated areas for a minimum of 60 days and longer where bait breakdown is slower⁷, unless alternative outcomes satisfactory to the landowner and New Zealand Food Safety Authority can be negotiated.
- (e) No hay or grass products are to be taken off the operational area for livestock feed purposes during an appropriate withholding period as in 2.8.1(d) above, after the operation.
- (f) The New Zealand Food Safety Authority will be notified immediately in all cases where livestock have been or are suspected to have been exposed to viable baits containing brodifacoum, arising from bait application within or adjacent to the Specified Area.

2.8.2 Performance Standards

The operational plan shall include measures to ensure livestock are removed from the Specified Area and other operational areas prior to the application of Pestoff[®] Rodent Bait 20R and that livestock re-entry does not occur to any area where bait or bait residue may be present before the appropriate withholding period⁸ has elapsed.

2.9 Helipad Site Selection

2.9.1 Code of Practice Requirements

- (a) Helipads shall, where practicable be located within the Specified Area.
- (b) In any case where a helipad cannot be located within the Specified Area, transit flight paths shall only be across un-stocked or de-stocked land, and clearly shown on the operational map.

⁷ Refer to Appendix 3.4.

⁸ Refer to Appendix 3.2.

- (c) Where helicopter loading sites are located outside the Specified Area, the loading site and all associated flight pathways will be inspected for bait within 24 hours of bait application and any bait will be removed and recorded. Loading sites and any areas where bait is found will be fenced off to a stock-proof standard, sign posted and de-stocked for the appropriate withholding period, as in 2.8.1(d), after the operation.

2.9.2 Performance Standards

- (a) All flight paths while carrying bait will be over un-stocked or de-stocked land. These flight paths will be logged and a copy of the flight line print out will be made available to relevant agencies and authorities by the Operator upon request.
- (b) All loading sites and flight paths will be fenced to a stock-proof standard.
- (c) A report on the post operational inspection of all loading sites, flight paths, and boundaries, will be made available to relevant agencies and authorities by the Operator upon request.

2.10 Exclusion of Water Sources

Extensive water sampling results from four streams, forwarded to Environment Waikato following Pestoff® Rodent Bait 20R application on Maungatautari in September and October 2004 at 15 kilograms per hectare and eight kilograms per hectare respectively, showed no trace of brodifacoum in stream water at pH 5.9 where sampling occurred: one hour, two hours, three hours, six hours, nine hours, 12 hours, 24 hours, 48 hours, 72 hours, two weeks, three months and following the first significant rain event, after bait application. Nevertheless, the following requirements to protect domestic or stock water sources will apply under this Code of Practice.

2.10.1 Code of Practice Requirements

- (a) Brodifacoum baits must not enter any water supply intake within the operational area, whether it is for stock water or human consumption.
- (b) All house / building down-pipes located within the operational area are to be disconnected prior to aerial drops.
- (c) Water supply intakes downstream of the operational area will also be disconnected during bait application should this be required by the owner(s) or user(s) of any such supply.
- (d) All stock water troughs within the operational area are to be emptied and / or covered prior to aerial drops.
- (e) Prior to reconnection of down-pipes and the use of troughs, all are to be checked for absence of contamination.

- (f) Water supply intakes will be disconnected and alternative water supplied where requested by any person who draws water from catchment areas within any Specified Area subject to application of Pestoff® Rodent Bait 20R under this Code of Practice, or where required by any consent authority.
- (g) In accordance with Schedule 3 of the Hazardous Substances (VTA) Transfer Notice 2004, an aircraft used for bait application must not, when flying to or from the area where the hazardous substance is applied, fly over a public drinking water supply or any waterway that is less than 100 metres upstream of a point of extraction for a domestic drinking water supply.

2.10.2 Performance Standards

A post operational report which includes details of all actions undertaken and outcomes achieved in relation to water supplies within the operational area will be prepared by the Project Manager following application of Pestoff® Rodent Bait 20R.

2.11 Risk Management

2.11.1 Code of Practice Requirements

- (a) An AEE detailing risks to non-target species shall be prepared for each operation. This AEE shall provide clear evidence that all non-target risks have been considered and that any necessary mitigations are in place before the operation commences.

In operations that involve the application of Pestoff® Rodent Bait 20R within an area enclosed or protected by a pest proof fence:

- (b) Where toxic bait is accidentally applied outside the operational area by an aircraft over flying a boundary, the following procedures shall be carried out immediately:
 - the area will be thoroughly searched and all baits found picked up for safe disposal
 - if the pasture area involved is only a relatively small area, it may be fenced off to a specification that effectively excludes the type of livestock farmed on the property, to allow stock back onto parts of a particular paddock unaffected by the overfly
 - the area involved will remain de-stocked for the appropriate withholding period, as in 2.8.1(d) above, after the operation unless alternative outcomes satisfactory to the landowner and New Zealand Food Safety Authority can be negotiated
 - if livestock access bait for any reason, the Project Manager will immediately notify the New Zealand Food Safety Authority and provide advice on the quantity of baits consumed, number of animals affected and other relevant information.
 - The New Zealand Food Safety Authority will provide directions on the appropriate management of any livestock which may have consumed brodifacoum baits.
- (c) Where toxic bait is accidentally applied to any grazing area outside the operational area for any other reason, the following procedures shall be carried out immediately:
 - the land owner or occupier shall be notified immediately

- the spill area will be thoroughly searched and all baits found picked up for safe disposal
- the spill area shall be enclosed with a stock proof fence of sufficient standard to prevent any farmed stock on the property from gaining access until an appropriate withholding periods, as in 2.8.1 (d), after the operation unless alternative outcomes satisfactory to the landowner and New Zealand Food Safety Authority can be negotiated
- if livestock access bait for any reason, the Project Manager will immediately notify the New Zealand Food Safety Authority and provide advice on the quantity of baits consumed, number of animals affected and other relevant information.
- The New Zealand Food Safety Authority's Approvals and ACVM Groups will provide directions on the appropriate management of any livestock which may have consumed brodifacoum baits.

2.11.2 Performance Standards

- (a) The AEE shall be subject to independent peer review before the operation commences. Peer review comments shall be forwarded to consent authorities.
- (b) Landowner and New Zealand Food Safety Authority notification shall occur immediately following any incident.
- (c) An incident report shall be forwarded to relevant agencies and authorities by the Operator within 30 days of occurrence detailing the nature of the incident and the actions taken.

3 Appendices

3.1 Pestoff® Rodent Bait 20R Label Instructions

HARMFUL. KEEP OUT OF REACH OF CHILDREN. ECOTOXIC

**HSNO CLASSES
6.9B, 9.1D**

PESTOFF[®]
...Simply Smarter

Rodent Bait 20R

For the control of rodents on non-stocked off-shore islands or for rodent control carried out in accordance with the Code of Practice approved for this product. Contains 0.02 g/kg of brodifacoum in the form of a bait.

PRECAUTIONS

Harmful substance: Repeated oral exposure may cause toxin to accumulate in internal organs and may affect the clotting ability of the blood. Wear gloves when handling open containers or baits. Do not breathe dust. **Toxic to terrestrial vertebrates:** Take measures to prevent domestic animals and pets being exposed to the toxin either through eating baits or through eating the carcasses of poisoned animals.

Storage: Store in original container, tightly closed and away from feed or foodstuffs. Keep out of reach of children and domestic animals. Do not store in direct or diffused sunlight. Avoid cyclic heating and cooling.

Handling: Wear overalls and rubber or PVC gloves when laying pellets. When handling this product in open bags particularly around aircraft, avoid inhalation of bait dust by wearing an appropriate dust mask. Avoid contact by mouth and do not smoke, drink or eat while using. Wash hands and exposed skin areas before meals, smoking and after any contact. Prevent access to baits by children and domestic animals. Avoid pollution of any water supply with chemical or used container. Any dead rodents found should be buried.

Residue Warning: Brodifacoum, the active ingredient is a potent second generation anticoagulant poison which can accumulate particularly in the liver, kidneys and fat of poisoned animals. Do not feed rodents killed with brodifacoum baits to dogs or cats.

EMERGENCY MANAGEMENT

First Aid: Brodifacoum is an anti-coagulant toxin. In the event of this product being swallowed, seek medical advice. Do not induce vomiting. The symptoms of anti-coagulant poisoning may take several days to appear. Symptoms may include pale gums, passing of blood in urine or faeces, and the appearance of bruising. Always seek medical advice in the event of suspected human poisoning.

Treatment of domestic animals accidentally poisoned: Vitamin K₁ is an effective antidote against accidental poisoning of domestic animals by Pestoff Rodent Bait 20R. Veterinarians are familiar with the information on Vitamin K₁ therapy and should be consulted.

Spillage: In the event of a spill, isolate the spill area and take all practicable steps to manage any harmful effects of a spillage including preventing baits from entering streams or waterways. Scoop spilled baits into secure containers. Recover any undamaged bait for later use by placing in appropriately labelled containers and dispose of spoiled bait as directed below. Use a broom to collect fine material and wash down the spill area with copious water only after all spilled bait has been removed.

Disposal: Product which is surplus or spoiled should be disposed of by burying with other organic material on the active tip face of an appropriately managed landfill or buried within the biologically active layer of soil elsewhere within a secure area. Ensure that a good covering of earth is applied over the bait immediately to prevent access by scavenging birds. Alternatively, burn unwanted bait material in a suitably constructed and appropriately located incinerator and bury any residues as above. Treating the baits through a sewage oxidation facility or other chemical treatment facility is also an acceptable means of disposing of unwanted bait material. Dispose of empty containers by burning if conditions, especially wind direction permit, otherwise bury in an approved landfill. Do not use empty container for any other purpose.

DIRECTIONS FOR USE

Apply in bait stations, by hand broadcasting or by using aircraft fitted with bait spreading equipment. Apply bait at a rate of approximately 10 kg to 15 kg per hectare. Pre-feeding is not required when using Pestoff Rodent Bait 20R.

LEGAL OBLIGATIONS

Sale: This product may be supplied only to the Department of Conservation or to authorised persons appointed and operating in accordance with the Code of Practice approved for this product.

Limitations on Use: A Code of Practice entitled Aerial and Hand Broadcast Application of Pestoff Rodent Bait 20R for the Intended Eradication of Rodents from Specified Areas of New Zealand has been approved for this product and very person (other than a person authorised by the Department of Conservation) when they are using this product must, at all times, follow the Code of Practice. Persons authorised by the Department of Conservation must only use this product (a) on off-shore islands where no livestock are present at any time or (b) in accordance with the Code of Practice referred to above. Any person who, when using this product, knowingly fails to follow the above conditions, commits an offence and may be liable to prosecution.

Signage: If baits are applied in areas to which the public has right of access, it is a legal requirement that signs must be posted to notify the public that this product has been applied in the area. Signs must state that brodifacoum has been used, that feral animals may contain residues and that they should not be taken for food. Signs must remain for a period of 12 months after the last application of bait. This product must only be used as specified in the label.

GENERAL INFORMATION

Shelf life: The shelf life of this product may vary according to the suitability of storage conditions. As a guide, it is recommended that the product be used within 3 months of date of manufacture as studies have shown that the palatability of bait may progressively decline after that time. Any product held after the expiry date shown on the bag should be disposed of according to label directions.

Livestock: It is important to prevent access to baits by domestic livestock and pets. Stock must be kept off the treatment area until baits have been washed out by rain, removed or destroyed. Dogs and cats are at risk from scavenging poisoned animal carcasses and pet owners in the immediate vicinity should be notified of this risk. Collect poisoned animal carcasses where practicable for burning or burying at least 600 mm below ground, otherwise limit access to the treatment area until poisoned animal carcasses are unlikely to be eaten or to contain residues.

Conditions of sale: As no control can be exercised over the methods or conditions under which this product is used, no responsibility or claim, other than those required by statute, will be accepted for any damage or injury whatsoever arising from the storage, handling, application, use or disposal of this product.

Transport information: This product does not have a Dangerous Goods Classification and can be transported by road, rail, sea or air without the need for placarding or Dangerous Goods documentation.

Registered to and Manufactured by:

Animal Control Products Ltd, 408 Heads Road, Wanganui, New Zealand Ph 64 (0)6 344 5302 and
Animal Control Products Ltd, 10 Hayes Street, Waimate, New Zealand Ph 64 (0)3 689 8367

For safety data sheet go to <http://www.pestoff.co.nz/msdpage.htm>

Registered pursuant to the ACVM Act 1997, No. V9014
See <http://www.nzfsa.govt.nz/acvm> for conditions of registration

Pack No.:

PRF No./Manuf. date:	See
Lure/Size:	attached
Expiry Date:	sticker

Batch No.:

NET CONTENTS

25 kg



3.2 Definitions

Brodifacoum Bait or Bait	Pestoff® Rodent Bait 20R.
Client	The owner, administrator, agency or organisation that has engaged a project manager to undertake a project involving the aerial and / or hand broadcast application of Pestoff® Rodent Bait 20R over a Specified Area.
Domestic	In relation to a water supply, domestic means water which is used for human consumption.
Effective Pest proof Fence	A fence design that has a proven ability to effectively exclude all target mammalian pests and farm livestock in and adjoining the Specified Area.
Livestock	Any animal farmed with the intention of being slaughtered for human consumption.
Operation	Any operation involving the aerial and / or hand broadcast of Pestoff® Rodent Bait 20R under this code of practice, whether on off-shore islands or within a specified area enclosed or protected by an effective pest proof fence.
Operational Plan	A document that details how Pestoff® Rodent Bait 20R will be applied to a proposed Specified Area and the risk management actions to be undertaken, in accordance with this Code of Practice, to ensure brodifacoum residues in humans or livestock do not result.
Operations Staff	Any person working under the direction of the Operator.
Operational Area	The Specified Area and all land immediately adjoining (within one helicopter sowing bucket swathe width of the fenced boundary of) the Specified Area; and all associated helicopter loading sites and flight paths outside the Specified Area.
Overfly	The accidental application of toxic bait outside the Specified Area.
Operator	Appointed manager of the aerial and / or hand broadcast application of Pestoff® Rodent Bait 20R in a specified area of New Zealand.
Peer Review	A process of review by a suitably qualified person or persons, independent of a project where application of Pestoff® Rodent Bait 20R is proposed, who has / have relevant expertise in pest eradication and ecological restoration.
Poison	Vertebrate Toxic Agent – a trade name product used to kill or reduce the viability of vertebrate animals. It does not include attractant or repellent substances that are not toxic.
Project	A management proposal that involves the aerial and / or hand broadcast application of Pestoff® Rodent Bait 20R over a Specified Area whether on off-shore islands or enclosed or protected by an effective pest proof fence.
Project Manager	Appointed manager of a project that involves the aerial and / or hand broadcast application of Pestoff® Rodent Bait 20R over a Specified Area whether on off-shore islands or enclosed or protected by an effective pest proof fence.
Specified Area	The area of the project where Pestoff® Rodent Bait 20R is to be applied (also referred to in the product label as the treatment area)
Stock-Proof Standard	A fence that will reasonably exclude all types of livestock farmed on the land in question.
Swathe Width	The total distance either side of the helicopter that baits are thrown by the spinner on

	the sowing bucket used to aerially apply bait.
Toxin	Same as vertebrate toxic agent.
Toxic	Containing toxin.
Treatment Area	The area of the project where Pestoff® Rodent Bait 20R is to be applied (also referred to as the Specified Area).
Withholding Period	A period of not less than 60 days, or longer where bait monitoring determines that bait of Condition Score 4 or less may be available for consumption by livestock. (See Appendix 3.4 and Section 2.8.1 (a) and (d)).

3.3 Code of Practice Compliance Checklist

Performance Standard	Explanation	Means of Compliance	Responsibility for Compliance	Status
2.1.1	Project Manager			
	Operator			
	Client			
2.2.1	Pest proof fence design			
	Report on inspection / effectiveness of pest proof fence			
2.3.1	Detailed records of operation.			
2.4.1	Planning and approval requirements.			
2.4.2	Peer review of planning documents			
2.5.1	Public notification and warning requirements			
2.6.1	Bait application requirements			
2.7.1	Bait application in boundary areas			
2.8.1	Removal of stock from the Specified Area			
2.9.1	Helipad site selection			
2.10.1	Exclusion of water sources			
2.11.1	Risk management			

3.4 Bait Condition Scoring

- **Condition 1:** Fresh Pellets/Pellets not discernable from fresh bait.
- **Condition 2:** Soft pellets. <50% of pellet matrix is or has been soft or moist. Bait is still recognisable as a distinct cylindrical pellet, however cylinder may have lost its smooth sides. <50% of bait may have mould. Bait has lost little or no volume.
- **Condition 3:** Mushy Pellet. >50% of bait matrix is or has been soft or moist. <50% of pellet has lost its distinct cylindrical shape. >50% of bait may have mould. Bait may have lost some volume.
- **Condition 4:** Pile of Mush. 100% of bait matrix is or has been soft or moist. Pellet has lost distinct cylindrical shape and resembles a pile of mush with some of the grain particles in the bait matrix showing distinct separation from the main pile. >50% of bait may have mould. Bait has lost some volume.
- **Condition 5:** Disintegrating Pile of Mush: 100% of bait matrix is or has been soft or moist. Pellet has completely lost distinct cylindrical shape and resembles a pile of mush with >50% of the grain particles in the bait matrix showing distinct separation from each other and the main pile. >50% of bait may have mould. Bait has definitely lost a significant amount of volume.
- **Condition 6:** Bait Gone: Bait is gone or is recognisable as only a few separated particles of grain or wax flakes.

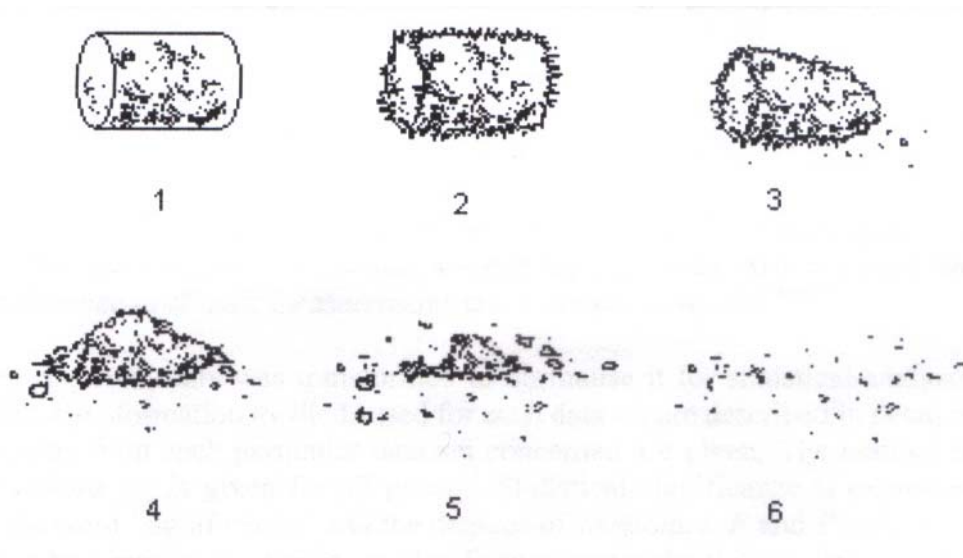


Illustration of typical bait condition at each ordinal score used in the trial
(figure reproduced from Craddock, 2004)