WHAT'S BUZZING?

News from the World of Pest Management

The Successful House Mouse

Understanding HACCP Requirements for Pest Management

What's Buzzing

June 2024 Volume 17 No. 3

What's Buzzing Contents

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FROM THE EDITOR

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Hello everyone.

In this issue I want to draw your attention to HACCP (Hazard Analysis Critical Control Points). One crucial aspect of HACCP is pest control. Pests can carry pathogens and contaminants that compromise food safety, making effective pest control essential. The article on page 12 outlines what HACCP requires from a pest controller servicing food production and storage facilities.

The seven principles of HACCP apply to most business in New Zealand, so having a good understanding of the requirements is essential in providing professional pest management.

It would appear that mice are the big talking points around the country over the last few months, so we have included a short article from Bobby Corrigan on the successful house mouse as well as a great mouse biology reminder from Liphatech in our Technical Hints section.

And of course a reminder about our upcoming conference in late August. Registrations are looking good at over 60 at the end of May, plus a full house of sponsor/exhibitors.

There is an EARLY BIRD registration draw of a $1000 Travel Voucher for one delegate – so register and pay before 30th June 2024 to go into the draw. There is also an early bird rate for members—click HERE to register now.

Warm regards

Peter


Lake Wakatipu, Queenstown

President's Pen

Maihi Cooper

Kia ora PMANZ members, suppliers, family, friends and other interested readers.

Welcome to the third edition of the PMANZ newsletter for 2024. Please enjoy and share the articles and infor-mation you will read and thank you to all who have contributed and those who con-tinue to support this newsletter.

It was with interest I read about, a home in Northern California that was infested with bird fleas, marking the first known case of this species, infesting a residence.

Meanwhile, periodical cicadas are emerging in a rare event, with both 13-year and 17-year broods emerging simultaneously, prompting scientific study of their biogeography, adaptations, and ecological significance.

Vacuuming plays a crucial role in integrated cockroach control, reducing populations, removing susceptible and resistant individuals, and lowering allergen levels.

Exotic mosquitoes, like the London Underground mosquito, were discovered at Port Nelson, with a low risk of disease transmission or population establishment, while mice on Zespri's kiwifruit shipment to Europe necessitated fruit destruction due to food safety concerns.

A recent survey found no mice trace on Stewart Island, leading the council to halt further surveys.

Envico Technologies Limited is pioneering drone and land-based technologies for conservation, incorporating Māori wisdom and merging science, engineering, and drone technology.

There's just over 12 weeks to go until our conference takes place in Auckland on the 29th and 30th August.
Registrations are looking good, and are open to all. I'm excited to see all the speakers confirmed.

I'm especially looking forward to Bill Robinson sharing his knowledge and experience with us again and we greatly appreciate the support of all the guest speakers.

The council and I are looking forward to meeting and seeing you all and please don't hesitate to contact Peter or David if you have any queries or questions.

Rodent activity, particularly mice has been prevalent throughout the country over the past two months with peaks being experienced across the country at various times in March and April.

This edition is jam packed with great information from our suppliers and experts in the field of rodent management. I encourage you to read on and speak to the suppliers and or reach out to other pest technicians to get advice if you're dealing with a tricky situation.

Please join me in welcoming the following members:

Newly joined as Qualified Technicians		
Lance	Priestley	Rentokil
Robert	Fleming	Rentokil
Jett	Estorpe	Alpeco
Luke	Dunn	Proactive Pest Control
Jayden	Kingi	Rentokil
Jack	Manuel	Rentokil
Liam	Storr	Auckland Regional-Pest Management
Jason	McDowell	JAE Taupo
Navineet	Chand	Flick
Raewyn	Lamond	Abernethy Pest Control
Hannah	Morris	Rentokil

That's all from me for now,

Ngā mihi nui,

Kind regards,

Maihi Cooper

Maihi

PMANZ President

more than a membership
IT'S A PARTNERSHIP

Controlling risk as well as pests at Mamaku Point

Controlling pests within a conservation reserve is a particularly important and sensitive job.

The whole of Stewart Island/Rakiura is a haven for kiwi and other vulnerable native species, but Mamaku Point Conservation Reserve takes their protection to the next level. A predator-proof fence across its neck generally prevents rodents, feral cats, deer and possums from getting onto the 172-hectare headland.

The reserve's conversion from partial farmland began in 2000. Decades of isolation have allowed native flora and fauna to thrive – so much so that the Reserve's General Manager Antony Simpson now has over 120 native species to protect, including 26 native birds and bats as well as invertebrates. Antony says he can never afford to take their safety for granted. "Mamaku Point is a bit of a candy store, with everything lush and flourishing. All the animals outside want to get in and the fence stops at the high tide mark, so predators can still get around the ends at low tide."

"Thermal AI cameras are set up at the fence ends to show us what does comes in. So when we see them come around the fence ends we respond with bait stations and targeted trapping."

The reserve's second line of defence is a biosecurity grid of 21 bait lines and 600 bait stations laid out in a grid of 100 metres by 50 metres. Antony says he and his team catch about 5 possums a year, but the greater threat is from rats and cats. There's a rat plague on the rest of the island every 4 or 5 years. As rat numbers go up, so do cat numbers.

Rats in the Reserve are a triple threat: they eat seeds to reduce plant growth and food for the native fauna, they eat eggs to disrupt the native birds' lifecycle, and they lure in cats.

Antony says the Reserve's pest management program has been massively strengthened since the formation of the Mamaku Point Conservation Trust in 2017.

"The place has gone from strength to strength," he says. "It was previously all locked up with the bare minimum of pest control inside the fence. Now we're giving it the A-plus treatment."

A recent further upgrade to that A-plus regime came courtesy of BASF in late 2022. Geoff Booth, BASF's Otago and Southland Territory Manager, has been a regular visitor to the island and has a background in pest control and conservation work. Impressed by what Antony is achieving, Geoff was able to arrange the donation of a large quantity of **Selontra® Soft Bait Rodenticide** to the Reserve with the valuable support of Rakiura Shipping, whose Foveaux Freighter carried the cargo free of charge.

The big advantage of using this highly palatable Selontra solution in such a sensitive environment is the limited likelihood of adverse exposure to non-target animals via secondary poisoning. Selontra works fast, quickly stops rodents feeding once they've consumed a lethal dose, thanks to its "stop-feeding effect", and – unlike anticoagulants – is neither persistent nor bio accumulative.

For Antony, the timing seemed perfect. "We were using brodifacoum, a second generation anticoagulant, but looking for alternatives because brodifacoum persists in the environment."

Antony says all the signs are that Selontra is working really well. "We've been using it for a year and a half now and it's looking good. Rats seem to like it. They've been taking the baits, and we're not catching too many in the traps or seeing many rats about. There's plenty of plant growth, which suggests the rats aren't eating all the seeds, so the birds are flourishing. It's win/win really."

As Antony points out, the property is covered in bush, so there's no way of quantifying Selontra's impact and being certain that the population density has been reduced until the next round of monitoring in August. Given the positive visual evidence, though, it seems safe to say that **Selontra has earned its place as part of Antony's 'A-plus' control program in one of the most challenging pest control environments in the country.**

The Successful House Mouse

By Robert M Corrigan, PhD

The house mouse has been dubbed by some scientists as the "second most successful mammal on Earth." It also represents the most important rodent pest in the United States (Ed: and more recently NZ). Various industry surveys have estimated that house mouse control programs alone account for about 68 percent of all rodent work performed. But despite all the money, efforts, and expertise directed toward controlling the mouse, it survives. In fact, it thrives for the following reasons:

1. Ability to Survive in a Wide Range of Habitats

The house mouse has been described as a "mammalian weed" because it is so adaptable to many different conditions and is capable of inhabiting many different areas. It has the widest distribution on the planet of any mammal second only to humans.

The house mouse occupies all the major landmasses on Earth and most of the minor ones. It inhabits cold islands near Antarctica, tropical isles in the Caribbean, open cold tundra, dry hot deserts, and salt marshes. It exists in coal mines 1,800 feet below the surface, as well as 15,000 feet above sea level, high up in the Andes Mountains. Inside urban structures, infestations have devel-oped in heating ducts in the upper stories of tall skyscrapers, as well as within frozen meat lockers at temperatures of - I 0°C.

Article continues on next page

2. Small Body Size

The mouse is able to enter buildings and rooms through small openings which larger rodents cannot fit. Once inside, it requires very little space and can occupy literally hundreds of structural spaces, equipment voids, and appliances. Its small size also enables it to be overlooked and transported inside many delivery boxes and items.

3. Specialist in Secretive Behavior

Most mice living in buildings are active when people are inactive - during the night or at other times when human activity is minimal. Moreover, when the mouse is active, it moves quickly and quietly. This "cryptobiotic" behavior combined with its small size helps explain why new infestations often go undetected until there are numerous mice.

4. High Reproductive Potential

Inside most occupied buildings, where foods may be accessible, the mouse has an impressive potential for producing a high number of offspring in a relatively short period of time. And as long as materials are available for constructing nests, mice can reproduce under seemingly impossible conditions such as within frozen meat lockers.

5. Opportunistic Feeder

The house mouse is an opportunist and will feed on a wide variety of foods found inside human dwellings. Should one food disappear, the mouse will readily switch to whatever is available.

Article continues after advert

6. Requires Little or No Water

Unlike the commensal rats and most other mammals, the house mouse has a kidney system similar to that of the desert rat. Thus, the mouse is able to conserve and/or produce its own water when free water is scarce or unavailable.

7. Small Territories

The average home range of house mice comprises a 10-30 foot radius from their nest. But when good harbourage and abundant food resources exist, the home ranges become even shorter - in some cases only a couple of feet in any direction. In warehouses and supermarkets mice may not even leave the pallet of food they are nesting in.

8. A Compulsive Explorer

The house mouse constantly explores its environment, gathering information about the location of other mice, food, water, nesting sites, and places to hide from predators. In this way, the mouse eventually can locate the best available habitat.

9. Variable Behavior

The behavior patterns of the house mouse have often been referred to as "unpredictable." Variations exist in mouse behavior according to different mouse populations and their specific environments. For example, mice in certain commercial accounts may not enter multiple catch traps or avoid dangerous surfaces such as glue traps.

10. Human Tolerance

Finally, people's attitudes toward the house mouse contribute toward its successful coexistence with humans. Walt Disney created the lovable Mickey Mouse, which is still one of the most popular children's attractions the world over. A long list of other mouse stories, children's books, and television "toons" portray mice as cute and lovable animals or heroes. Consequently, a positive (or at least a tolerant) attitude toward mice is developed by many people early in life. This attitude, in addition to the mouse's small size (i.e. "it's just a little mouse"), results in people not prioritising total mouse eradication in urban environments. The few surviving mice of extermination programs constantly replace killed mice, resulting in years of chronic mouse populations co-existing with humans in cities, towns, and farms. As a result, mice continue to thrive.

Mice require only small amounts of water to survive. When water is freely available, the mouse drinks up to 0.4oz/6ml daily. The amount taken varies according to body weight and daily diet. In buildings, rodents obtain their water from sinks, leaking utilities, condensate on pipes, or from water puddles left from cleaning operations in com-mercial buildings. When free water is not available, mice utilize the moisture present in their foods and physiologically reduce their water loss by extracting it from their urine. Consequently, mice can exist inside dry granaries, grain cars, grain elevators, bakeries, and other dry environments, as well as inside urban office complexes for prolonged periods without any sources of free water available to them although better overall health and population growth will be achieved, when free water is available. Consequently, mice respond very well to liquid baits in management program situations where water is scarce.

Printed with permission from his book:

Rodent Control — *A Practical Guide for Pest Management Professionals*
by Robert M Corrigan

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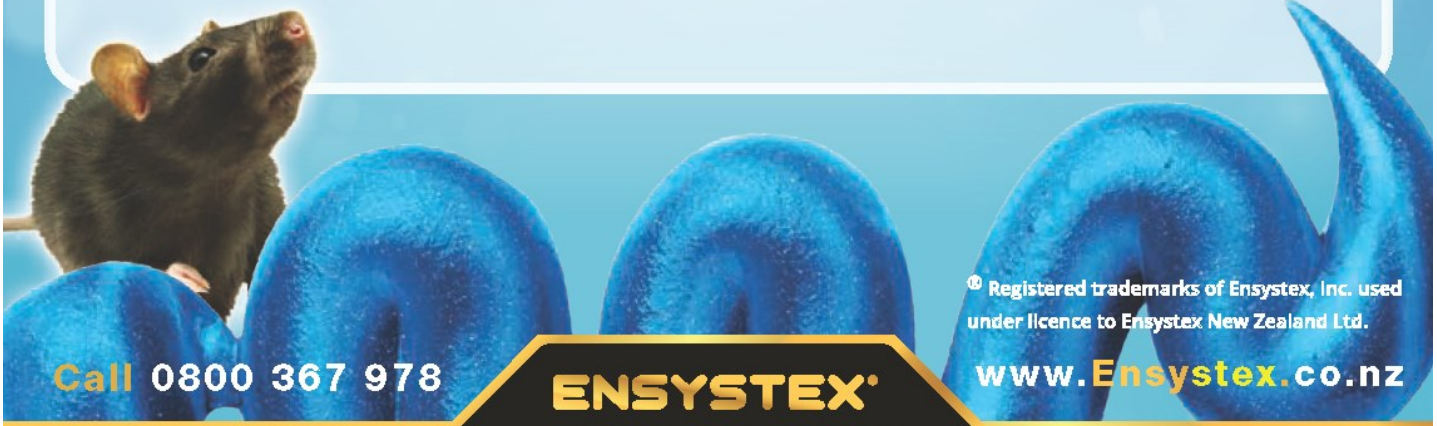

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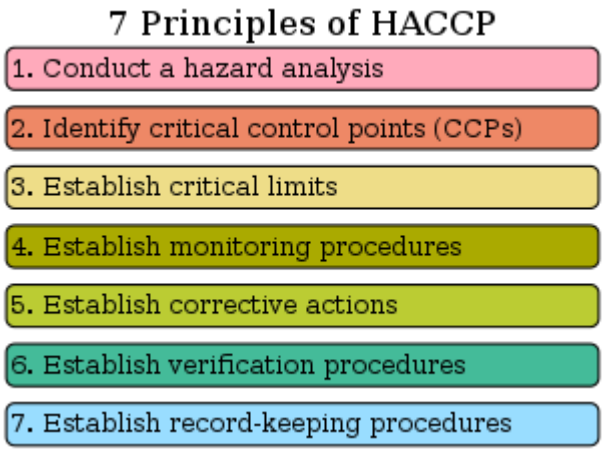
Understanding HACCP Requirements for Pest Management in Food Production and Storage Facilities

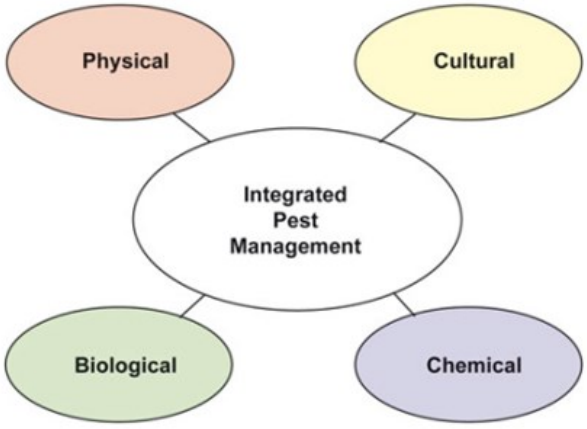
By Peter Barry

Hazard Analysis and Critical Control Points (HACCP) is a systematic approach to food safety that identifies, evaluates, and controls hazards that are significant for food safety. Implementing HACCP is a mandatory requirement in many countries, including New Zealand for food production and storage facilities.



One crucial aspect of HACCP is pest control. Pests can carry pathogens and contaminants that compromise food safety, making effective pest control essential. This article outlines what HACCP requires from a pest controller servicing food production and storage facilities.

1. Integrated Pest Management (IPM) Plan



HACCP mandates that food facilities implement an Integrated Pest Management (IPM) plan. An IPM plan focuses on long-term prevention and control of pests through a combination of techniques such as biological control, habitat manipulation, and modification of cultural practices. IPM, is a system of managing the adverse effects of pests by combining biological, mechanical, cultural, physical and chemical control methods in a way that minimizes economic, health and environmental risks.

It dictates that:

- Pests are monitored by regular and careful inspections.
- The inspections identify pests and the conditions contributing to the pest problems.
- Based on the inspection the technician then decides what actions are necessary.
- The knowledge of the pest's biology and habits will help in determining what methods or techniques would best control the pests at the lowest potential exposure possible.

Key components include:

Inspection and Monitoring: Regular inspections to identify pest activity and potential entry points.

Preventive Measures: Sealing cracks, installing screens, and maintaining cleanliness to prevent pest entry.

Control Methods: Utilizing traps, bait stations, and appropriate pesticide applications.

Article continues on next page

2. Documentation and Record Keeping

Thorough documentation and record-keeping are critical under HACCP. Pest controllers must maintain detailed records of all pest control activities, including:

Inspection Reports: Documenting findings from regular inspections.

Treatment Records: Recording all pest control treatments, including the type and quantity of pesticides used.

Monitoring Logs: Keeping logs of pest sightings, trap counts, and any actions taken.

These records provide a traceable history of pest control measures and support continuous improvement.

3. Risk Assessment

HACCP requires a risk assessment to identify potential pest-related hazards. Pest controllers should:

Identify Critical Control Points (CCPs): Areas where pests could pose a significant risk to food safety.

Evaluate Risks: Assess the likelihood and severity of pest infestation and contamination.

Implement Controls: Establish controls to minimize risks, such as regular baiting schedules and exclusion techniques.

Level	Likelihood
A	Remote
B	Unlikely
C	Likely
D	Highly Likely
E	Near Certainty

ASSESSMENT GUIDE

Likelihood	a	b	c	d	e
E	M	M	H	H	H
D	L	M	M	H	H
C	L	L	M	M	H
B	L	L	L	M	M
A	L	L	L	L	M

Consequence

RISK ASSESSMENT

High (Red)
Unacceptable. Major disruption likely. Different approach required. Priority management attention required

Moderate (Yellow)
Some disruption. Different approach may be required. Additional management attention may be needed

Low (Green)
Minimum impact. Minimum oversight needed to ensure risk remains low

Level	Schedule	and/or	Cost
a	Minimal or no impact		Minimal or no impact
b	Additional resources required; able to meet		<5%
c	Minor slip in key milestones; not able to meet need date		5-7%
d	Major slip in key milestone or critical path impacted		7-10%
e	Can't achieve key team or major program milestone		>10%

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Article continues after advert

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4. Training and Competency

Pest controllers must be adequately trained and competent to carry out their duties effectively. HACCP stipulates that personnel involved in pest control should:

Understand HACCP Principles: Have a thorough understanding of HACCP principles and how pest control integrates with food safety.

Receive Regular Training: Stay updated with the latest pest control techniques and regulatory requirements.

Demonstrate Competence: Show proficiency in identifying pests, implementing control measures, and maintaining records.

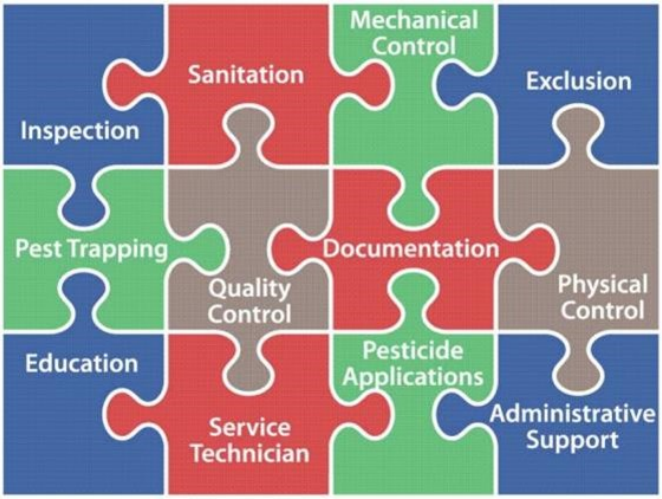
5. Sanitation and Hygiene

Good sanitation and hygiene practices are fundamental to preventing pest infestations. Pest controllers should:

Conduct Regular Cleanups: Ensure that food waste, debris, and potential pest harbourage areas are regularly cleaned.

Advise on Hygiene Practices: Provide recommendations to facility staff on maintaining high hygiene standards to deter pests.

Collaborate with Staff: Work closely with facility staff to ensure that hygiene practices are consistently applied.



6. Chemical Safety and Usage

The use of pesticides and other chemicals must be managed carefully to ensure food safety. HACCP requires:

Safe Chemical Use: Only approved pesticides should be used, following manufacturer instructions and safety guidelines.

Minimal Exposure: Pesticides should be applied in a manner that minimizes exposure to food products.

Proper Storage: Chemicals must be stored safely, away from food and food contact surfaces.

Article continues on next page

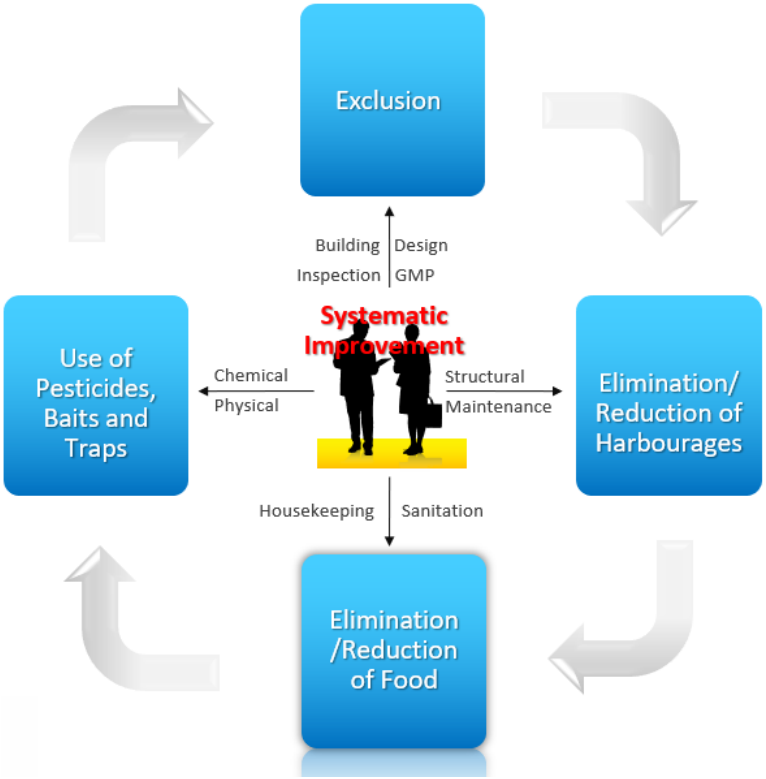
7. Continuous Improvement

HACCP is a dynamic system that requires continuous evaluation and improvement. Pest controllers should:

Review and Update Plans: Regularly review and update the IPM plan based on inspection findings and pest activity trends.

Implement New Strategies: Adopt new pest control technologies and methods as they become available.

Feedback Loop: Incorporate feedback from facility audits and inspections to enhance pest control measures.



Conclusion

Effective pest control is a vital component of HACCP in food production and storage facilities. Pest controllers play a crucial role in ensuring food safety by implementing comprehensive IPM plans, maintaining meticulous records, conducting risk assessments, ensuring proper training, promoting sanitation, using chemicals safely, and striving for continuous improvement. By adhering to HACCP requirements, pest controllers help protect the food supply from contamination and ensure the highest standards of food safety.

Editors Note: Pest management is a pre-requisite support system in a HACCP-based food safety management system, and as such, a high standard of pest management service is required for the correct functioning of a food safety system.

HACCP Australia have recently updated their standard. The scope of the standard is limited strictly to the activities of a pest management organisation that could directly impact food safety and the provision of documentation to food businesses, which is an important part of a food safety management system.

Members can read more about the standard—Click HERE

Make the most of your day by using iQ rodent control products.

Bell's iQ line, powered by Bell Sensing Technologies (BST), streamlines rodent control.

Each iQ rodent bait station and trap contains an integrated Bluetooth sensor that captures rodent activity. Once a technician arrives at an account, their smartphone or tablet connects to the devices to quickly identify rodent activity as well as which devices were visited and when. That information is transmitted to the free BST online portal, which automatically generates reports highlighting trends and areas of high rodent activity. The app and portal are completely free – no fees or subscriptions are required.

When a technician walks into an account, their smartphone communicates with iQ bait stations and traps up to 30 meters away. With iQ, there's less bending over, hunting for devices, crawling into tight spaces, and getting ladders – all of which makes service much easier. Because technicians only need to check devices with activity, the time savings quickly add up, especially at large accounts with many bait stations or traps. A time study conducted by Bell has shown that technicians can service a facility set with iQ traps approximately 80% faster than one using traditional traps.

The BST portal helps technicians invest their time where it makes the biggest impact. After servicing an account, technicians can review specialised reports on the portal. They can then use this information to pinpoint high-activity zones and strategically move their devices for maximum effectiveness.

These reports also help technicians optimise their inspection and exclusion work. Instead of doing a full sweep of an account, technicians can focus their search on areas with high rodent activity, likely where exclusion and cleanup work is needed. After inspecting the area, they may find a worn door sweep that needs to be replaced or a food source to be removed.

Another benefit of BST's automatic reports is they enable technicians to clearly show a customer the difference the rodent control program is making at the account. As iQ devices gather data, the portal presents a clear timeline showing how rodent activity has been reduced or eliminated since service began.

And in a world where "high-tech" often means more unwanted apps and extra hoops to jump through, iQ devices respect technicians' time. The setup is quick and intuitive, and the app is easy to use.

Make the most of each day with iQ rodent control products. To learn more about iQ traps and bait stations, visit BellSensing.com or contact your local Bell representative.

Pest Birds as Emerging Threat to Aviation Industry

By Partho Dhang PhD

Urban Entomologist, Consultant, Author, Editor with CABI & Technical Consultant - International Pest Control Magazine

Introduction

Cities provide abundant resources for birds to colonize. Birds are not considered pests, but at times their extraction or removal or management become necessary. Usually, city government and wildlife department need to be consulted if the problem is severe. Pest managers are capable of handling smaller and localized complains, but when doing so precaution is necessary.

The origin of problems with urban bird arises from their high activity. Birds have a higher rate of metabolism which make them very active during the day time looking for food. They eat anything from fruit, seeds, insects and worms. Scavenger birds thrive on cooked food and leftovers from human consumption. They create conflict when they come in close proximity to humans and human activities. Bird droppings from perches over warehouses, malls, avenue trees can be corrosive on vehicles parked below. Dropping are also reason for defacement of structures, such as glass windows. Droppings also carry pathogens. Birds can also be source of mites. Histoplasmosis a respiratory disease in humans caused by inhaling spores from the fungus *Histoplasma capsulatum* found in the droppings of birds

HIGH FLIERS: An Air Nelson Q300 aircraft taxis past a group of pied oystercatchers at Nelson Airport. BILL EVANS / NELSON MAIL

Pest birds in and around airfields

A common complaint from birds are birds flying across airfields, which is a serious hazard encountered in many cities around the world. Most accidents occur when a bird (or birds) collides with the windscreen or is sucked into the engine of jet aircraft. These cause annual damages that have been estimated at $400 million within the United States alone and up to $1.2 billion to commercial aircraft worldwide (Sodhi, 2002 and Allan & Orosz, 2001). As of 11 November 2019, bird strikes were determined to have caused 618 hull losses and 534 fatalities since the beginning of aviation (Avisure, 2020).

Bird strikes are regular events in aviation industry and depending on the country, average bird strike rates between 2.83 and 8.19 per 10,000 aircraft movements were reported in civil aviation for the past years (Metz et al, 2020). Data available from airport ground operation and safety division of Manila airport (NAIA) show a total of 6996 bird strikes were reported by 18 countries in the Asia-Pacific region during the period of 1996 to 2006. The International Civil Aviation Organization (ICAO) received 65,139 bird strike reports for 2011–14, and the Federal Aviation Administration in the US counted 177,269 wildlife strike reports on civil aircraft between 1990 and 2015, growing 38% in seven years from 2009 to 2015. Birds accounted for 97% of these strikes (Aviation Week, 2016).

The main types of hazard birds cause to the aircraft is in the form of direct bird strike which is in the form of bird ingestion for the engine or simply a bird hit. 500 ft). A European study concluded that even 95% of all strikes occur below 2500 ft (70% below 200 ft), when considering worldwide data. The chances of bird strikes is also dependent on seasons. Winters record the lowest in both southern and Northern hemispheres. The data obtained in South East Asia show that bird strikes occurred throughout the year with two peak periods – April/ May and September/October. The months with least reported strikes were February and July. It is estimated that if a large eagle hits an aircraft travelling at a speed of 140 Knots, the impact force is calculated to be around 13 tons. This can seriously damage the aircraft and could even result in fatal crash or expensive grounding. On other times birds can be simply be nuisance, block communication, block the way and overall cause loss of revenue.

Article continues on next page

Control and Management

Prevention of bird strikes requires long term control measures. Control also depends on species of birds as well as information if they are resident or non-resident (migratory) species. Aerodrome Safety and Environmental Management Group in the Manila airport, Philippines observed a total of 81 species of birds visiting the airfield of which 48 are migratory and rest resident.

Bird control measure come under “bird hazard reduction” category and covers critical areas including mitigation method on the ground and on the aircraft. The measures in the ground involves controlling their presence, activity and minimize their number if not eliminate them from the territory. Some of the measure even extends beyond the airfield, up to a zone where the aircraft altitude reaches over a certain height. Most reported accidents have happened below 2500 ft when considering worldwide traffic (EASA, 2009).

The most common attractants to the airport are presence of vegetation, vast stretches of open grassland, network of open drainage system, presence of natural and manmade water bodies and buildings. In addition to these, presence of garbage, trash bins, and human activity such as feeding of birds and littering are additional attractants. Combined together airports are rich in resources making birds select them for feeding and roosting.

Modifying the habitat in and around the airfield is the best method for successful and long-term bird management. These involves exclusion, creating irritation, capture, and killing at times. Constant irritation is a good way to makes birds abandon selected areas and choose other locations. These include all techniques which aim at chasing away birds which have already entered the airfield. They are auditory deterrents such as gas exploders, alarm and distress calls as well as pyrotechnics, visual repellents such as effigies, predator models, lasers, reflecting materials, lights, mirrors as well as drones, trained dogs and falconry (Matz et al, 2020).

However, all the above measure to deter birds is limited in its efficacy as birds can grow accustomed to the methods, showing reduction in effectiveness over time. Also, the range of these methods is limited within the airport boundaries rather than in the entire area of landing and take-offs.

Article continues on next page

Habitat modification, also includes making the airport grounds unattractive to birds, by removing sources for water, food and shelter or by making them inaccessible. Exclusion can also be achieved by physical devices such as wires, netting or covers. There are also a number of chemicals which are used as repellents and can effectively deter birds. These repellents are anthraquinone or methyl anthranilate which are applied using cold foggers and misting devices. It has also been observed that if frequently applied, birds tend to recognize the noise, color, or shape of the fogger, the applicator, or the white fog generated and leave the area prematurely without getting exposed to the repellent chemicals. In this case the strategies have to change until the birds leave. This is achieved by smaller droplets and decreased amounts of product which makes the fog cloud invisible. With no visible cloud the birds have no visible cue or reference except the area where they had the experience and thus, they will avoid the site. As the clouds become invisible, the exposure to the birds increases as they fly around in an agitated state to find the exit from the chemical cloud. Over time the treated birds learn to avoid these chemicals as well to recognize the area where they had the bad experience and avoid it in future.

Baiting birds to reduce population may be used provided the country authorizes mass killing. At times lethal actions are needed to keep population in check or used selectively to scare and chase the population to another area.

Structures around the airfield are places of harborage and often hold resident population of pest birds. These structures can make use of a number of exclusion devices to prevent birds perching and nesting. These devices are bird spikes which can be fixed on all areas of the building where birds perch frequently; bird nets used in areas where the birds frequently perch; bird scaring gels

which can be of many types, but one is in a gel formulation and has the property to reflect light as a sparkle in the UV-A light spectrum. This has often proven to be more effective than the rest. Birds see light in the UV-A spectrum, and to them the gel looks like a sparkle resembling a flame. This virtual 'flame shield' visually deters the birds from landing. In addition, the gel's odorous herbal extract is an additional deterrent, which works in case the bird takes a chance to land. There is also birth control baits using an active ingredient nicarbazin, which at certain dosage have shown to affect egg laying, interrupting egg laying and reducing hatchability in birds. Presently this compound on corn-based bait is being used in pigeon control in parts of Europe.

Reference

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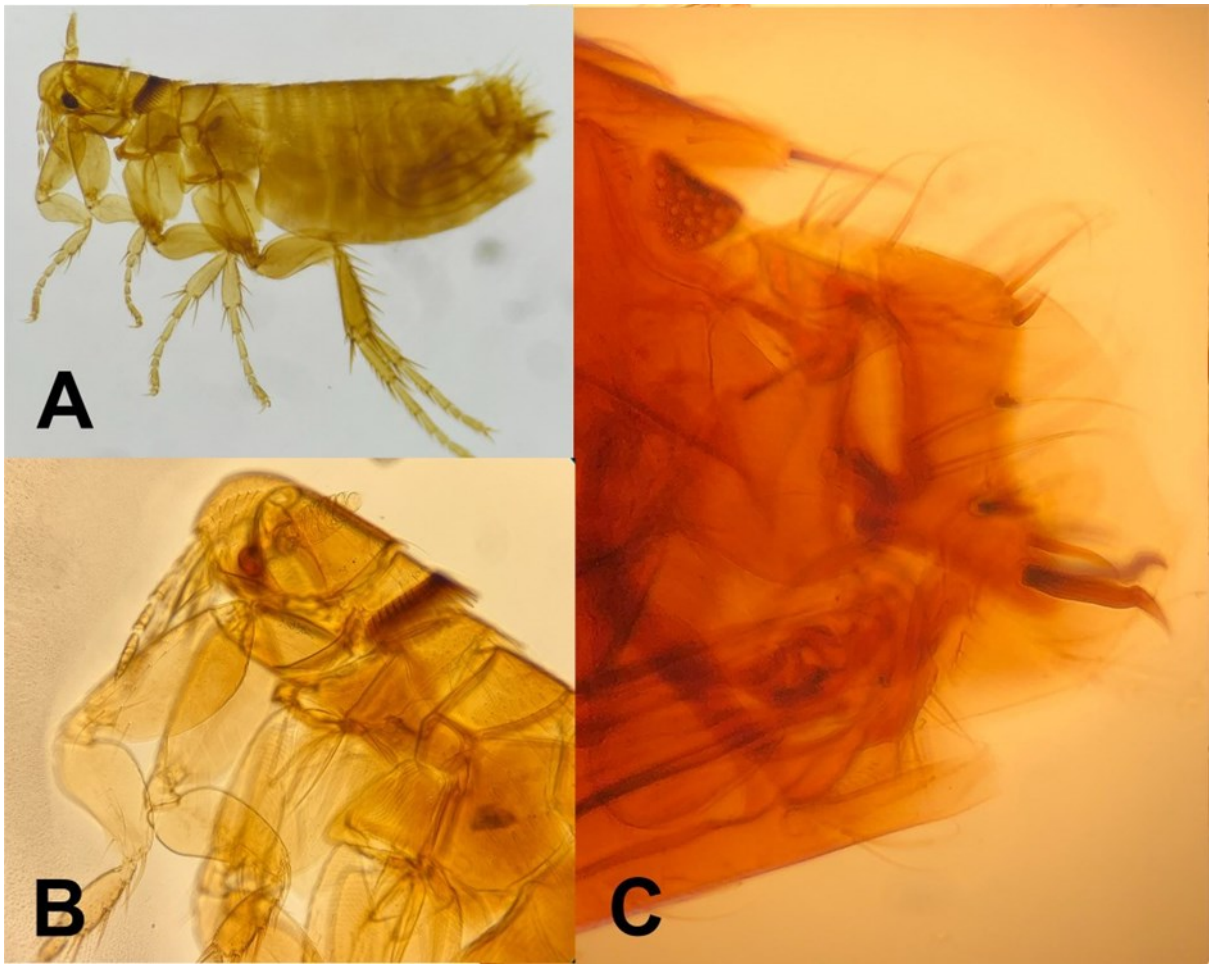
Science News

The Curious Case of Bird Fleas Infesting a Home



Responding to a call about a flea infestation in a northern California home in 2023, local public health entomologists were surprised to find the bird flea Dasypsyllus gallinulae perpinnatus—believed to be the first record of a structural infestation by the species. It is the only known subspecies of D. gallinulae found in the western coastal area of the United States and, although common, it is rarely collected by scientists and public health professionals. Shown here are D.g. perpinnatus full body (A), head and thorax (B), and male clasper (C).

Source **Entomology Today**— Read Original **HERE**

entomology today
BROUGHT TO YOU BY THE ENTOMOLOGICAL SOCIETY OF AMERICA

Science News

Periodical Cicadas, 2024: Entomologists Prepare for the Six-Week Serenade

This spring and summer, periodical cicadas are coming in hot. As adjacent 13-year and 17-year broods emerge simultaneously, they mark a rare event not witnessed since the early 19th century. The phenomenon offers scientists a unique opportunity to delve deeper into the intricate world of these enigmatic vocalists. So, experts are leaping at the chance to further unravel the mysteries of cicada biogeography, evolutionary adaptations, and the ecological significance of their cyclical emergence.

“While there are probably 5,000 to 6,000 species of cicadas, fewer than 10 are known to be periodical,” says **John Cooley**, Ph.D., associate professor-in-residence in the Department of Ecology and Evolutionary Biology at the University of Connecticut. “These emergences are something that’s unique—a natural wonder.”

Source **Entomology Today**— Read Original **HERE**

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BROUGHT TO YOU BY THE ENTOMOLOGICAL SOCIETY OF AMERICA

News Worth Sharing

A near-fully-grown native giant weri (centipede) in the heart of urban Auckland!

A friend and I luckily avoided standing on this one while walking down Basset Road near two local parks, Ayr Reserve and Newmarket Park.

Spider-eating giant centipedes grow up to around 16cm, but are a favourite food for introduced rats so are usually eaten long before they get to this size!

Although they're still found throughout the North Island, our rather cool blue legged friends usually only reach this size on predator-free offshore islands.

Finding a native giant centipede this large only 500m from Auckland Cathedral means rat numbers are low in this area. Great to see a range of native species, great and small, returning.

Source: LinkedIN - Sarah G—Senior Ecological Specialist at Auckland Council

https://www.linkedin.com/feed/update/urn:li:activity:7201127983519027200/?utm_source=share&utm_medium=member_ios

News Worth Sharing

Vacuuming an Important Part of Integrated Cockroach Management, PMPs Report

CLEVELAND – An important part of an integrated cockroach control service is vacuuming. As noted in the PCT Field Guide for the Management of Structure -Infesting Cockroaches, vacuuming provides the following benefits:

- An immediate reduction of the cockroach population.
- Reduces the reproductive potential of the population.
- Removes both susceptible and insecticide-resistant cockroaches.
- Can be accomplished without vacating the premises.
- Reduces the number of dead or dying cockroaches the customers will see.
- Reduces the level of allergens present when a HEPA filter is used on the vacuum.

Sixty-five percent of those who responded to PCT's recent poll said they vacuum as part of their cockroach control service strategy.

On PCT's LinkedIn page, veteran PMP Ed Chesiek posted: *Vacuuming is an integral part of pest management.*

News Worth Sharing

Exotic mosquitoes found at Port Nelson but health risk 'very low'

Seven confirmed London Underground mosquitoes have been found at Port Nelson. (File photo) STEPHEN DOGGETT/UNIVERSITY OF SYDNEY

Seven exotic mosquitoes have been found at Port Nelson, prompting an emergency response from public health agencies.

However, the risk of disease is considered "very low" and the risk of the particular species, known as the London Underground mosquito, establishing a population is low, according to Health New Zealand Te Whatu Ora.

The National Public Health Service (NPHS) in Nelson Marlborough confirmed in a statement to Stuff it was still investigating the potential source of the Culex molestus mosquito reported by the New Zealand Biosecure Entomology Laboratory on May 16 .

The species was identified from a routine surveillance sample originally collected by NPHS staff from one of the traps laid around Port Nelson on May 2.

Source Stuff: Read Original **HERE**

News Worth Sharing

World Pest Day 2024

Global Pest Management Coalition

Fairfax, VA – May 20, 2024 – The Global Pest Management Coalition (GPMC) is excited to announce the celebration of World Pest Day on June 6, 2024. Recognized as a global event since its inception in 2017, World Pest Day aims to raise awareness about the critical role of pest management in protecting public health, food safety, and the environment.

This year, World Pest Day will be highlighted during the Global Public Health & Food Safety Summit, which takes place from June 4-6, 2024, in Miami, Florida. The summit, presented by the Confederation of European Pest Management Associations (CEPA), the National Pest Management Association (NPMA), and the Federation of Asian and Oceania Pest Managers Associations (FAOPMA), will feature dedicated programming to honor this significant day.

The theme for this year's World Pest Day is "Global Solutions, Local Impact: Mapping Success in Pest Management." This theme underscores the importance of both global collaboration and local action in achieving successful pest management outcomes.

Read more HERE

PMANZ 2024 Biennial Conference will be Highlighting Leading Pest Management Innovators

The Pest Management Association of New Zealand (PMANZ) is excited about its upcoming biennial conference, set to take place at the Waipuna Hotel and Conference Centre in Auckland on the 29th and 30th of August 2024. This event promises to be a gathering of industry leaders, researchers, and innovators, offering a platform for knowledge sharing and professional development.

The title for the 2024 event is **'Emerging Challenges in Pest Management',** which will focus on the evolving nature of pest management and the new challenges it presents. As a technical conference, it provides an ideal opportunity for both technicians and business owners to keep their knowledge up to date to ensure they can deliver best practice urban pest control.

One of the conference's keynote speakers is **William H. Robinson**, a distinguished researcher and innovator in the field of urban pest control. With over 30 years of experience, Dr Robinson has conducted groundbreaking research on a variety of pests, including cockroaches, carpenter ants, and termites. His sessions will cover topics ranging from common pest control myths to the fascinating biology of the German cockroach.

Article continues on next page

Happy delegates at the 2022 conference

Joining Dr Robinson is **Dan Tompkins**, the Science Director at Predator Free 2050 Limited, who will provide an update on New Zealand's ambitious mission to eradicate mammal pests by 2050. **Helen Blackie**, a biosecurity consultant with extensive experience in predator ecology, will discuss the use of artificial intelligence for pest control and surveillance.

The conference will also feature **Dr Paul Craddock**, a technical consultant with a wealth of experience in commercial, residential, and environmental pest management. Dr Craddock will lead a session on continuing professional development in the pest management industry.

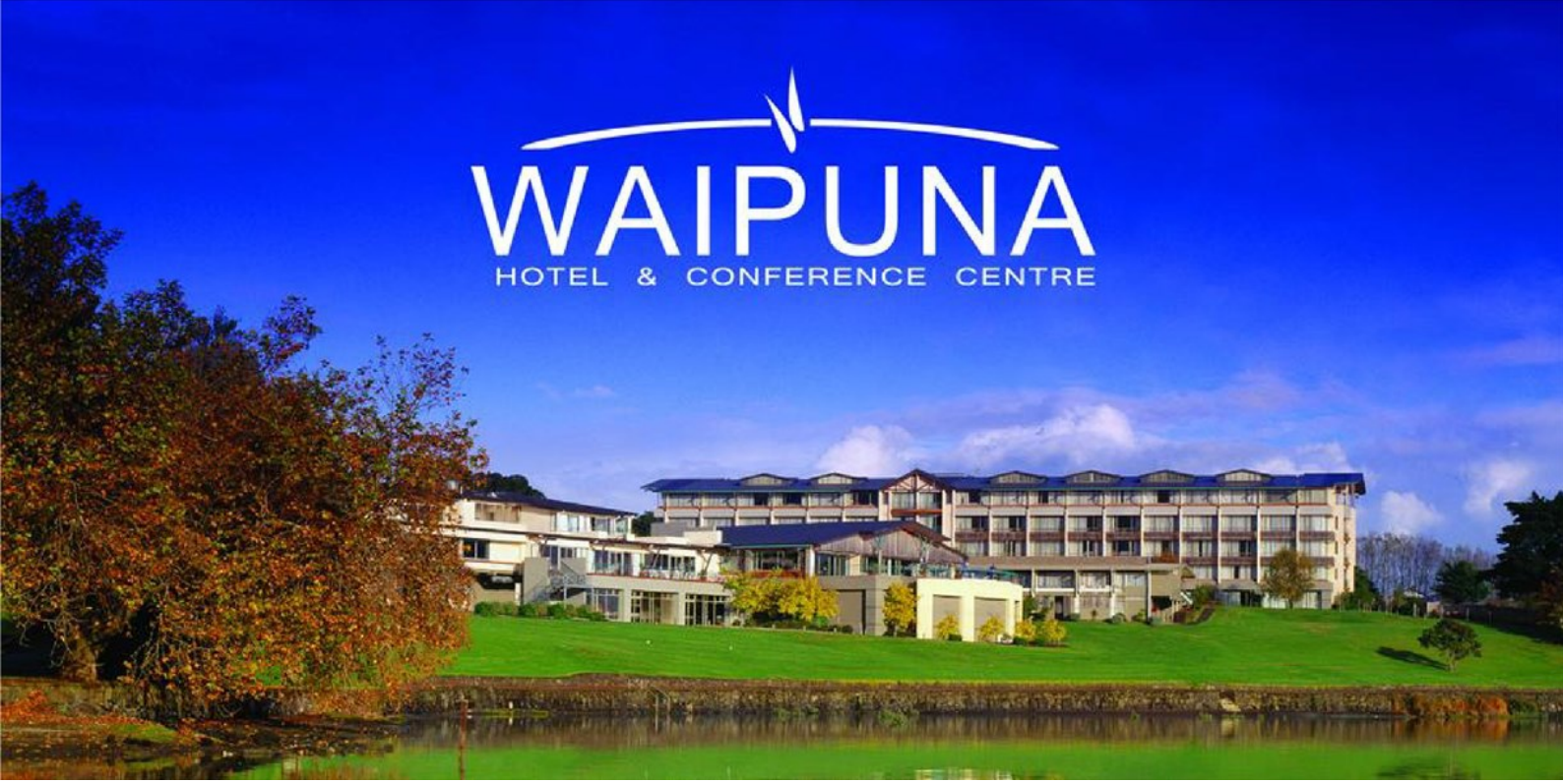
Another highlight of the event is **Peter McCarthy's** presentation on new developments in bird management. As a leader in structural bird management, Peter brings decades of experience and innovation to the table, offering valuable insights into managing pest bird populations.

Stephen Mansfield, a food quality auditor with a strong background in environmental studies and analytical laboratories, will share his expertise on leading clients to compliance with food safety standards.

In addition to these informative sessions, the conference will include panel discussions, networking opportunities, buffet dinner and an annual general meeting for PMANZ members.

The PMANZ 2024 Biennial Conference offers a unique opportunity to learn from industry experts, connect with peers, and stay up to date with the latest trends and innovations in pest management. Everyone is welcome to attend – not just from New Zealand, but pest managers from Australia and further afield are most welcome.

See details and web-links to register on the next page.



PMANZ 2024 Biennial Conference

Where: Waipuna Hotel and Conference Centre, Auckland
When: 29th and 30th August 2024

Be there. All are welcome…

See Conference Program HERE To Register Click HERE

PMANZ CONFERENCE 2024

"EMERGING CHALLENGES IN PEST MANAGEMENT"

This conference will focus on the evolving nature of pest management and the new challenges it presents. Discussions will cover the need for adaptive pest control strategies.

Thursday 29th and Friday 30th August 2024.

Mice on Zespri ship: Over a million trays of kiwifruit to be destroyed

Mice were found on Zespri's first shipment to Europe for the season last month. Photo / Alan Gibson

More than a million trays of New Zealand kiwifruit that were onboard a ship with a mice problem will be destroyed.

Mice were found on Zespri's first shipment to Europe for the season last month.

Since then the company has been sorting through the fruit to try and salvage as much as possible. Chief operating officer Jason Te Brake said Zespri had inspected 2600 (54 per cent) of the pallets.

It even sent staff to Belgium to help with the situation and engaged external food safety experts.

"It's become clear that we can't fully mitigate the potential food safety and reputational risk to the brand with enough certainty to release any fruit," he said.

"Reworking this fruit would be a substantial and complex operational undertaking requiring considerable resources and time.

"Even then, we could not be sufficiently confident we could remove the risk associated with the presence of rodents.

"Our customers have also been clear they don't want the fruit because of the potential risks associated with it."

Based on this combination of factors, Zespri has decided to dispose of the fruit. It would be turned into biofuel, Te Brake said.

The total value of the fruit plus costs associated with reprocessing and disposal was estimated to be around $34 million.

Te Brake said Zespri continued to engage with its insurance and shipping partners.

"The value of recovery will not be known until the claims process is complete - a process which will take some time.

Source: NZ Herald Read Original HERE

Council survey finds no mice on Stewart Island

While it would not undertake further surveys, the council would respond to “credible reports of mice”. Pictured, Oban, the principal settlement on Stewart Island. (File photo)

A survey conducted by Environment Southland this month found no trace of mice on Stewart Island.

An Environment Southland report released in February said staff were working with the Department of Conservation following “inconclusive mouse images” taken on trail cameras last year.

Following this, the council launched a two week survey earlier this month, in which it trapped 26 rats, but did not find mice.

Environment Southland biosecurity and biodiversity operations manager Ali Meade said most of the rats captured were Pacific rats or kiore.

“Some of them are very small, and one was caught in a mouse trap. The images captured by Predator Free Rakiura in 2023 are likely to have been of a small kiore, not of a mouse.”

The council set up bait stations, traps and cameras through contractors at eight sites, which were monitored for two weeks before being removed.

Meade said it did not plan to do further mouse surveys on Stewart Island, but it would respond to any “credible reports of mice”.

“Rats are known to be widespread across Rakiura so no further action from Environment Southland is planned.

Article continues on next page

"Visitors to the island can ensure they do not bring pests across from the mainland by checking and sealing all bags and equipment, especially foodstuffs, before loading it onto planes or boats," she said.

Its statement added that while its survey did not prove that mice weren't present on the island, "the results are very encouraging".

Mice could form huge populations quickly and wreak havoc on the ecosystem, along with other rodents.

They had been known to eat bird chicks in ground nests, and compete with native birds by eating many of the same foods like seeds and invertebrates, the council stated.

"When mice eat seeds they destroy them, whereas when birds eat fruits and seeds, the seeds usually survive through the digestive tract and are dispersed as a natural way for native trees to colonise new areas."

Source Stuff - The Southland Times

Read Original **HERE**

Supporting biodiversity success by merging mātauranga Māori and tech

The Envico team launch their Aerial Seed Pod drone

The NZ Hi-Tech Awards finalists have been named, and we are incredibly proud of the trails they are blazing!

In partnership with Poutama Trust, Callaghan Innovation is proud to once again sponsor the NZ Hi-Tech Kamupene Māori o te Tau – the Māori Company of the Year award.

Congratulations to finalists Blink Pay Global, Envico Technologies, and Kry10. All unique in their own way, and all making strides as Māori innovators to help make the world a better place.

Have you heard about the smart trap that can outsmart even the craftiest possum? Have you ever seen a drone that can wipe out an entire population of invasive rats? Or have you ever wondered how native trees can be grown in Aotearoa New Zealand's most challenging and remote terrain?

Well, look no further than Envico Technologies Limited.

Envico was founded in 2018 and develops innovative drone and land-based technologies that amplify the efforts of the conservation and reforestation sectors. Eradicating pests such as rats, defending native wildlife and fauna from destructive species like possums, and regenerating native plant ecosystems are just some of the outcomes that Envico enables. They do this by merging their expertise in drone technology, engineering, science and product ideation and commercialisation, with mātauranga Māori and their passion for conservation.

Envico's co-founder and CEO Cameron Baker and his team are focused on creating a conservation technology ecosystem that provides a full solution for biodiversity to revive and thrive.

Article continues on next page

Envico Technologies team setting a smart trap around the base of a tree

Biodiversity matters because we're losing ecosystems that provide the air we breathe, and the food we eat.

The introduction of invasive pests which kill native wildlife and decimate plant life and environments, absolutely destroy biodiversity," says Baker.

Previous solutions have only ever focused on one part of the problem, such as managing pest numbers.

"We remove invasive pests so native wildlife has a chance to revive. Then, we protect and defend those environments and support regeneration of native fauna so that endangered species and biodiversity can thrive," says Baker.

Sought after in New Zealand, Envico is also taking its Kiwi tech to the world, working with a number of highly respected global conservation organisations, such as US-based Island Conservation, which focuses on preventing extinctions.

Envico was the first company in the world to undertake an invasive pest eradication project using drones, and now the Kiwi startup is a global leader in aerial drone baiting. This was recognised recently when one of their international drone baiting projects won gold at the 2024 Asia-Pacific Stevie® Awards for Project of the Year in the Area of Nature & Biological Diversity.

The Envico team lands the drone on the barge in the Pacific while conducting an aerial drone rat eradication project

In addition to drone baiting, Envico is proud to offer smart traps that harness automation and long-life toxin delivery systems. This means the traps don't need to be reset manually every time they're triggered, ultimately allowing the device to be left unattended for up to one year, significantly reducing operational costs.

Once the pests are trapped, Envico flies in to begin tree planting. Their unique drone seed-pod technology enables the team to rapidly plant native forests across vast landscapes and difficult-to-reach areas – terrain for which Aotearoa is known and loved.. What's amazing is the Envico drones can disperse 5,000 native tree seed pods per minute.

"And that means we can regenerate native tree species for up to 95% less cost than traditional methods," says Baker.

Article continues on next page

The team at Envico Technologies standing infront of their helicopter

There's one key ingredient that allows Envico's technology to really soar.

Marrying mātauranga Māori with tech expertise and modern science is part of our secret sauce and instrumental in achieving New Zealand's predator-free goals,

"When biodiversity is thriving it has a strong mauri (spirit) and when you enable a community to restore the mauri of their whenua (land), not over decades but in just a few weeks, it fans that ember of kaitiakitanga (guardianship) that has been passed to them through generations and leads to excited collaboration for a greater purpose," says Baker.

Driven by this ethos, the Envico team work closely with Predator Free NZ, conservation groups, the Department of Conservation, Māori organisations and iwi. Despite requests to use their drone and seed-pod technology for commercial applications such as fertilising crops, Envico's team have kept their focus on the ngahere (forest), and they can see the flow-on effects.

"The heart of what we do isn't actually the drones. It's in our passion for the native species of Aotearoa and making sure we stay focused on innovating for the good of the environment," says Baker.

"We know that defending land from pests like possums reduces the risk of TB infections for dairy herds, helping our farmers to care for their animals and protecting New Zealand's reputation."

With the introduction of pest animals over the past 700 years, so many of the birds that once fed on the fruits and dispersed seeds in harmony with our forest, have been replaced by invasive mammals that kill 25 million native birds each year. This has led to the extinction of 42% of Aotearoa New Zealand's bird species with 23 species still facing imminent extinction.

"The cultural significance of our native birds is that they are our messengers – a task they continue today, with silence now being the loudest message," says Baker.

"With limited tools to enable traditional kaitiakitanga to scale, silence has been their message in our failing forest for generations. This silence has spurred collaboration, increased scalable tools and enabled people to return the birdsong to our forest in their lifetime."

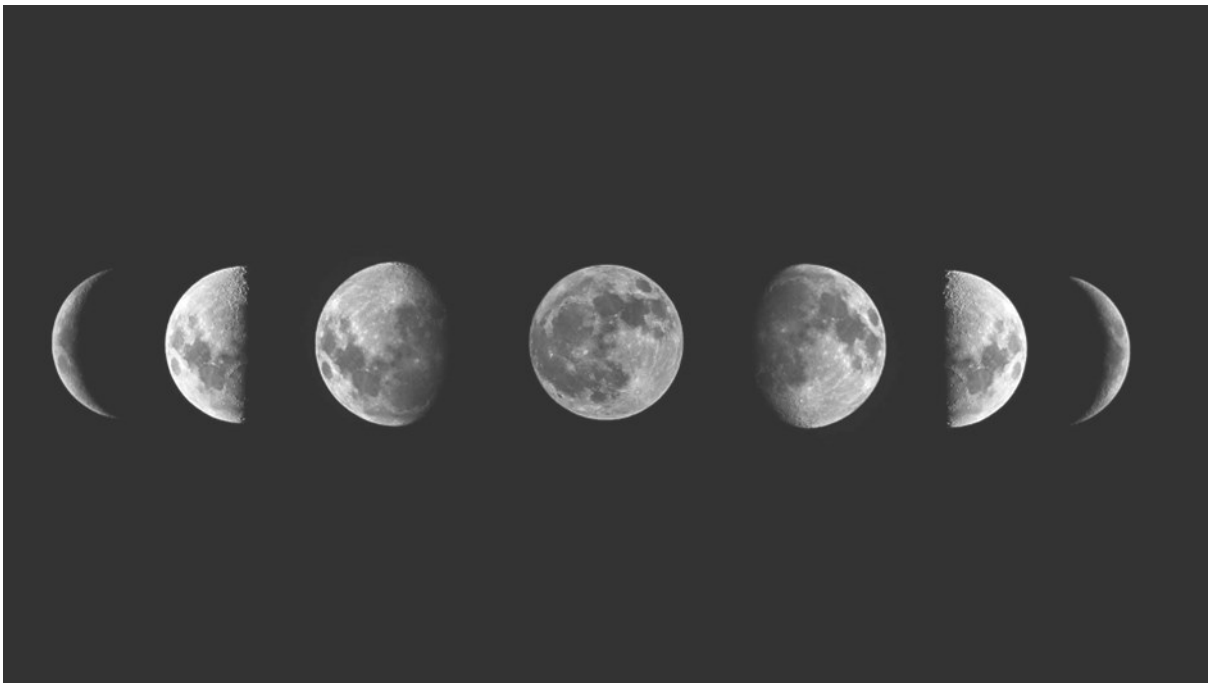
Global demand for conservation technologies is rising. The global green technology and sustainability market was valued at $10.32 billion in 2020 and is projected to reach $74.64 billion by 2030.

It is estimated that by 2030 more than $1.1 billion will be spent globally every year just to control pests. Innovative technologies are needed to bring scale, efficacy and spend optimisation to the sector. This is the impact Envico is committed to making.

"Our mission," says Baker, "is to enable conservation organisations and those who are guardians of large land holdings, to achieve greater outcomes and to become better ancestors."

Predator trapping by the moon: the influence of maramataka

By Cam Speedy
Wildlife Biologist and
Predator Control Specialist.



The Māori lunar calendar is called maramataka, which literally means the turning of the moon. It marks the phases of the moon in a lunar month. Image credit: Matthieu van de Wille

Do you plant and harvest your vegetable garden by the moon? Do you fish by the moon?

Many people do and recognise the positive influence that following the rhythms of nature can have on our outcomes. You won't be surprised to know it's the same with trapping predators.

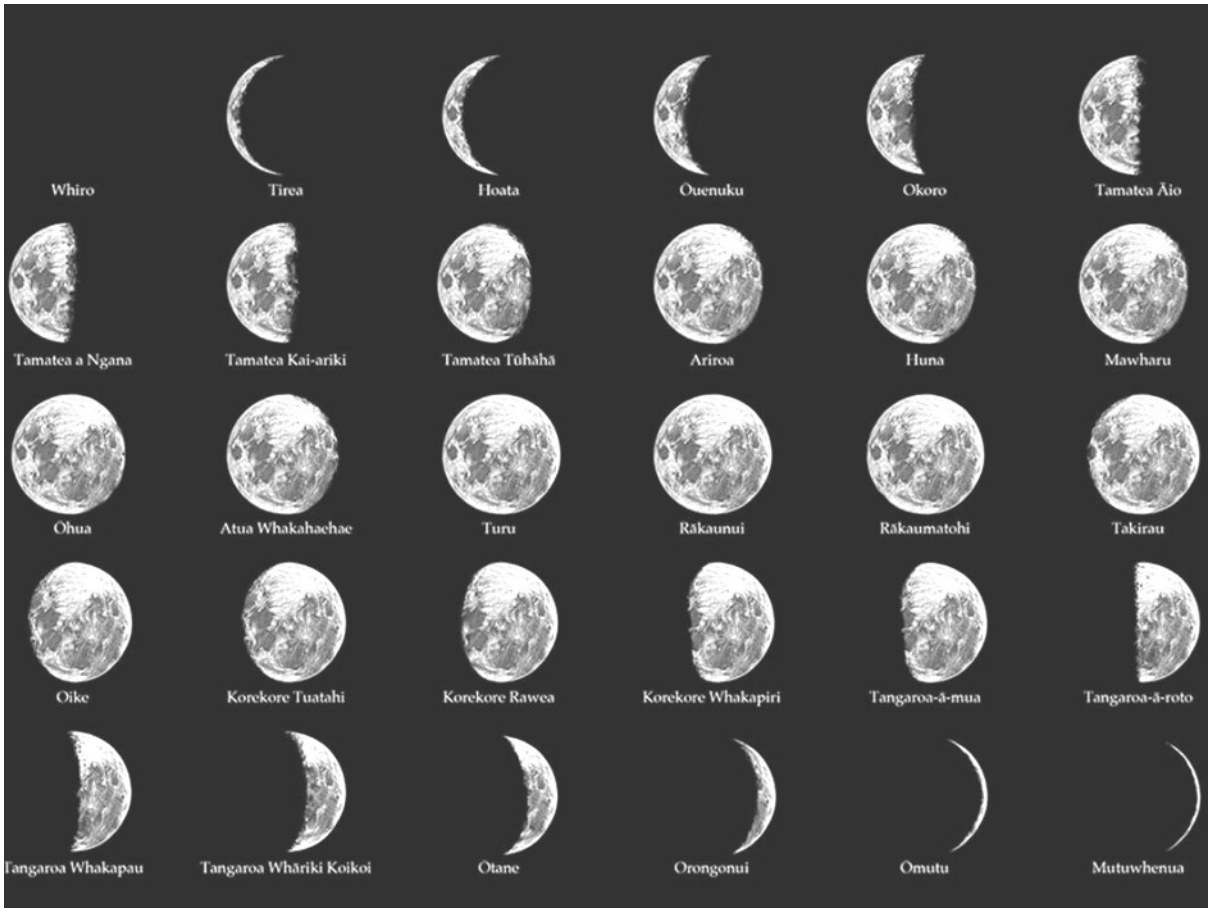
As a professional ecologist and life-long hunter-gatherer, I have watched the patterns in nature all my life, as indigenous cultures have done for aeons.

Māori culture has, over centuries, developed a detailed understanding of what they call the 'maramataka' – the lunar calendar or cycle.

They have always applied it to their māra (gardens), to fishing and eeling, to bird hunting, health and well-being, and even social interactions.

Cam Speedy has more than 40 years experience in predator control.
Image credit: PFNZ

Article continues on next page



Māori moon phases. Image credit: Living by the Stars

There are 30 phases, each with a unique energy, however, four recognisable phases are:

- New Moon – Whiro phase (lowest activity)
- Waxing Moon – Tamatea phase (unpredictable)
- Full Moon – Rākaunui phase (highest energy)
- Waning Moon – Tangaroa phase (most productive).

As a hunter, I have always recognised similar distinct patterns when night shooting. Sometimes, there is just nothing doing; other times, there are critters there, but they are very shy or just too fast. Sometimes, it's simply all on – critters everywhere that hold in the light.

It is the same with fishing – fishing is more productive at 'bite time' – when the moon is directly above, especially when that happens at dawn (Tangaroa phase) or dusk (Tamatea phase).

Deer are also more active at 'bite time'. With over 40 'deer roars' under my belt, I now plan my roar trips to coincide with the end of the third lunar quarter (start of the Tangaroa phase) – when hind cycling and stag activity is much higher – and I make sure I'm looking over hot spots at 'bite time'.

Article continues on next page

Possum. Image credit: Nga Manu

As I began applying maramataka principles to my predator trapping, my diary notes started to speak for themselves – for example, the serviced traps were fresh for the 'Tangaroa' moon phase (seven to 12 days after the full moon) and out-performed other traps.

Many of us fit trap checking into busy lives and schedules.

We can only get to our allocated trap lines in our community predator free projects once every few weeks. When we do, we often find that the dead pests are pretty manky – they are mostly caught within a few days/ nights of the last trap service when baits are fresh; scuffs beside the trap haven't been rained on and are still 'interesting' to the target species; and the lures used are still highly attractive.

I have consistently found that traps serviced a day or two before the Tangaroa phase catch more pests.

If you also start to layer in weather influences (most critters stay home during cold, wet stormy periods to re-emerge once the weather fronts clear), take note of and follow wider seasonal patterns in animal behaviour (eg., mating, breeding and dispersal) and understand seasonal diet changes, you will transform your trapping success.
A good example of this more holistic, connected-to-nature approach is what I call "possum night clubs".

Possums have a major mating period in March each year.
If you start regularly pre-feeding pending control sites during the Tamatea (Waxing) Moon phase in mid to late February, for two weeks through the high energy Full Moon phase, you will set up an incredible social communication system within your local possum population.

Article continues on next page

Sites on ridges or spurs will allow sound and scent to travel more widely across the landscape.

The number of possums coming each night increases almost exponentially as interacting possums travel to and from the site daily, leaving scent trails, scats, food cues, pheromones, and game trails to your pending control site.

After two weeks, as the Tangaroa Moon phase rolls around in early to mid-March, you will be ready to set multiple traps, night shoot (with thermals) or lay toxins and remove large numbers of possums from a significant landscape around each site.

How worn the game trails to your sites are will indicate just how much possum activity there is at each. The results (in terms of numbers) will depend on possum density, but for low-density populations, getting them to follow each other to you is actually way less effort than trying to track each one down – individually.

Social interaction is easy when using the right activity levels (governed by the moon phase) at the right time of year.

This approach has helped me put the target animal at the centre of my thinking: What is it doing, when and why?

Most importantly, this makes me focus on how to best use this understanding to maximise my contribution to protecting my local environment.

This is an ancient approach proven and used by indigenous cultures around the world – forever. It is about a deeper connection and understanding of the environments we love.

And that is a powerful thing – on so many levels.

Predator trapping by the moon – it's a game changer!

These websites will help you navigate the exact timing of the maramataka:

https://www.timeanddate.com/moon/phases/new-zealand/taupo
https://www.tepapa.govt.nz/discover-collections/read-watch-play/maori/matariki-maori-new-year/nights-maramataka-maori-lunar
https://www.maramataka.co.nz/products/maramataka-wall-planner-2024-2025

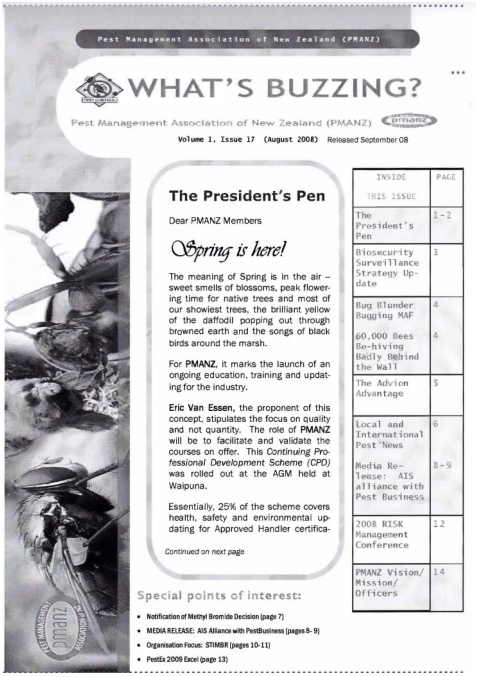
This article was originally published by Connovation and was written by Cam Speedy, a wildlife biologist and predator control specialist.

Connovation
CONSERVATION BY INNOVATION

A walk down Memory Lane

Extracted from PMANZ Newsletter of August 2008

"Attending the PMANZ Conference, training days and supplier training will gain points and it is not hard to comply."



Pest Management Association of New Zealand (PMANZ)

WHAT'S BUZZING?

Pest Management Association of New Zealand (PMANZ)

Volume 1, Issue 17 (August 2008) Released September 08

The President's Pen

Dear PMANZ Members

Spring is here!

The meaning of Spring is in the air – sweet smells of blossoms, peak flowering time for native trees and most of our showiest trees, the brilliant yellow of the daffodil popping out through browned earth and the songs of black birds around the marsh.

For **PMANZ**, it marks the launch of an ongoing education, training and updating for the industry.

Eric Van Essen, the proponent of this concept, stipulates the focus on quality and not quantity. The role of **PMANZ** will be to facilitate and validate the courses on offer. This *Continuing Professional Development Scheme (CPD)* was rolled out at the AGM held at Waipuna.

Essentially, 25% of the scheme covers health, safety and environmental updating for Approved Handler certifica-

Continued on next page

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Special points of interest:

- Notification of Methyl Bromide Decision (page 7)
- MEDIA RELEASE: AIS Alliance with PestBusiness (pages 8- 9)
- Organisation Focus: STIMBR (pages 10-11)
- PestEx 2009 Excel (page 13)

Vivienne Van Dyk, the President wrote these words back in August 2008. Although, UPM qualifications have changed, CPD is still applicable today to maintain your Master Registration!

The meaning of Spring is in the air - sweet smells of blossoms, peak flowering time for native trees and most of our showiest trees, the brilliant yellow of the daffodil popping out through browned earth and songs of Tui's around the marsh.

For PMANZ, it marks the launch of an ongoing education, training and updating for the industry.

Eric Van Essen, the proponent of this concept, stipulates the focus on quality and not quantity. The role of PMANZ will be to facilitate and validate the courses on offer. This Continuing Professional Development Scheme (CPD) was rolled out at the AGM held at Waipuna.

Essentially, 25% of the scheme covers health, safety and environmental updating for Approved Handler certification maintenance under the guidance of an ERMA warranted test certifier. The 75% balance is elective training and updating relevant to the individual's professional development.

To track the development, a points system will be instituted. Over a 5-year period, 200 points are required, with an annual target of 40 points and an annual minimum of 30 points. Points are allocated at a rate of 3 points per hour with some courses. For instance, First Aid Training has a 5-point maximum.

Attending the PMANZ Conference, AGM training days and supplier training will gain points and it is not hard to comply. A Company verified training will also attract points. As a PMANZ member, you have the benefit of hav-ing your points recorded by the association. A copy of which will be made available when Approved Handler

Certification is due for renewal. Unfortunately, non-members will have to keep their own records.

On two separate notes, the final submission of our Fumigation Code of Practice is now with ERMA and our Pest

Control Best Practice Document is also under review.

And now it is Spring, when life renews itself with hope and promise, let us also take time to participate actively in enhancing our effectiveness, team functioning and technical skills through various forms of professional development courses/training available.

Continuing Professional Development

As from the start of the 2025/2026 membership year, in order to earn or maintain Master Qualified Technician status, members are required to achieve 20 CPD points within the calendar year prior to each renewal.

CPD activities will qualify in the following combination:

- PMANZ Biennial Conference = 20 points
- PMANZ online training module, completion of quiz: each = 3 points
- Third party full day pest control training sessions: = 10 points
- Third party half day pest control training sessions: = 5 points

For example: attendance at the August 2024 PMANZ Biennial Conference will equate to the CPD required to earn or maintain Master Qualified Technician status for the 2025/2026 membership year.

CPD MODULES AND QUIZZES

The online CPD programme continues to grow. The latest module covers: Good Practice Guide: Reporting for Pest Management Professionals.
This joins the existing modules which cover:

- Cockroach Management in the Food Industry
- Effective Fly Control
- Effective Ant Control Strategies
- Why Ants?

The CPD modules – and the associated quizzes – are all in the members' area of the PMANZ website. To complete the modules, you will first need to log in to the PMANZ website home page: https://pmanz.nz/ using your normal credentials (your email address).

From here, the CPD modules are under the For Members Only tab.

At this link you will see the training modules:

1. Click to open into a new window to be viewed like a slide show.

2. Once you have finished viewing the slideshow a link will take you to the CPD Quiz Page.

3. Once at the Quiz Page you will need to open the appropriate quiz and answer a few multi-choice questions based on what you just learned in the module.

4. Successful completion of the quizzes will be recorded on your PMANZ user account.

And don't forget - Completing these modules counts towards achieving and maintaining Master Qualified Technician membership status (from April 2025).

NOTE: The modules and quizzes can be completed on both desk-top, mobile and tablet devices.

Aside from supporting you with professional development, Paul is able to provide technical support to members on a range of issues.

Paul can be contacted on paul@pmanz.nz

New Website System Updates

Thank you to all the members who have taken the time to get their businesses listed on our online Finder Facility.

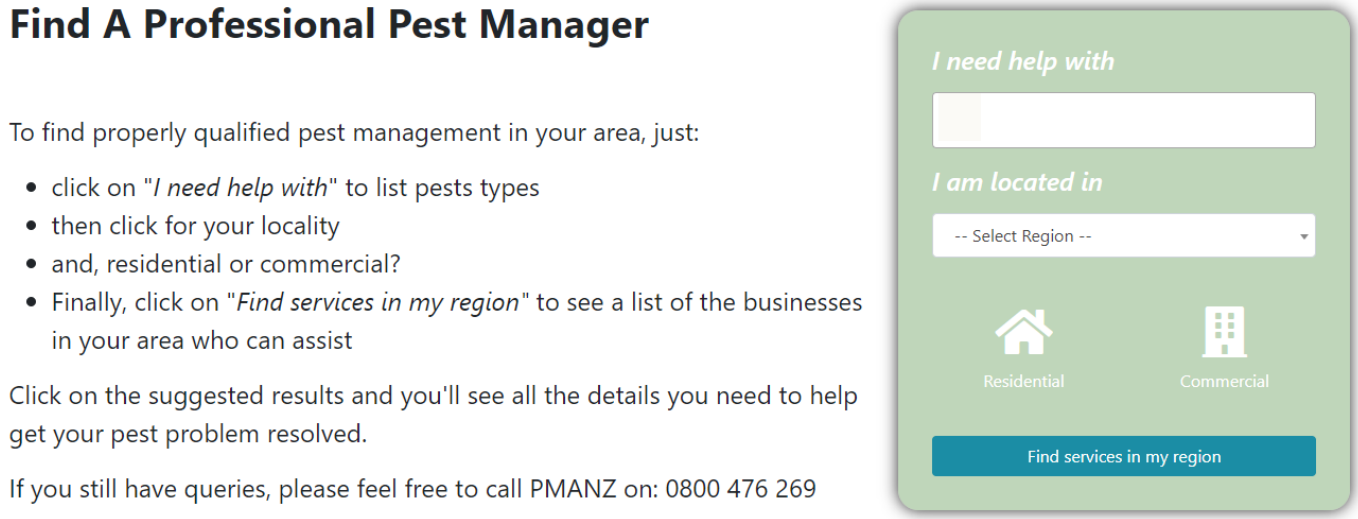
Just as a reminder, the Finder Facility allows prospective customers to search by pest type, locality and residential/commercial.

BUT….your business will NOT show to customers unless YOU populate your organisation's account with the necessary information on pest types that you service and areas that you cover. This is all done in the "Finder results" section at the foot of the Edit tab on your organisation's page. where you will need to select services for each area that your business services.

A lot of members have taken advantage of this facility and their business now shows in results for customers, BUT there are still quite a few who have yet to take the plunge.

Members who have done the work, tell us that this is really only a "five-minute job", but, if in any doubt, call **David on 0800 476 269** for any help you need.

The "Finder Facility" allows prospective customers to search by pest type, locality and residential/commercial. The search screen they will use looks like this:



Every PMANZ member has been set up as a user on our new system. If you go to the homepage: https://pmanz.nz/ you will find a button towards the right-hand side to login. Using your email address, you can create a password exclusive to yourself – the system will enable this through a "lost password" process.

Once you have done this, you will have full access to the members' area and ALSO…

… you will be able to populate your own organisation's service offering by pest type and locality and to feature when customers come looking!

Don't forget – for any help you need.

Call David on **0800 476 269** or email him on info@pmanz.nz

Find resources and tips for small business owners to help you look after yourself and your team.

If you're suffering financial-related stress and anxiety, talk to your GP. They'll be able to assess where you're at and refer you to a specialist if necessary.

You can also access trained counsellors for free by **texting or calling 1737**. Find out more at 1737.org.nz:

Call or text for free support

If you feel a bit overwhelmed, anxious or just want to talk, free services are available 24 hours a day, 7 days a week:
call or text 1737 for support from a trained counsellor

1737.org.nz(external link)

Other mental health and wellbeing support can be found at Depression.org.nz:

Depression.org.nz(external link)

Helplines(external link) — Mental Health Foundation

Sorted has free finance tools, guides and resources on its website:

Sorted.org.nz(external link)

If you want to talk to someone for support around debt or personal budget issues, you can ring the free

Money Talks helpline on 0800 345 123:

Money Talks

Lifeline 0800 543 354 or text 4357
Samaritans 0800 726 666

Source Information Provided by:

NEW ZEALAND | BUSINESS. GOVT.NZ

https://www.business.govt.nz/

MINISTRY OF BUSINESS, INNOVATION & EMPLOYMENT
HIKINA WHAKATUTUKI

Take the stress out of tax

TAX TOOLBOX
Inland Revenue
Te Tari Taake

NEED TAX GUIDANCE

Just click on the illustration to take you to the IRD Tax Toolbox

NEW ZEALAND TECHNICIANS' FORUM

Take Care when Rodent Baiting

PMANZ investigated a serious complaint from a member of the public about poisoning of their dog in March 2024.

The photographic evidence supplied by the complainant shows a flexible wire threaded through torn plastic bags (see main photo above) and the location of this wire and bags around the side of the house, and the bright green of the dog's poo.

Whilst this is not unusual for laying baits in ceiling voids it asks the question, what is this doing outside? Did the service provider perhaps put a wire bait string under the sub-floor which the dog got access to? Did the dog take it out of his bait bag?

No matter how the dog got poisoned, it left a very disgruntled and disillusioned member of the public, who complained to PMANZ that the member was not following safe practices!

If you have any concerns please email us on peter@pmanz.nz

Technical Hints: Courtesy of LIPHATECH

UNDERSTANDING RODENT BIOLOGY: THE HOUSE MOUSE (MUS MUSCULUS)

When professional pest managers take the time to gain a thorough understanding of rodent biology, it leads to improved rodent control outcomes. The correct identification of rodent species and knowledge of best practice control methods make for successful rodent management programs.

Here we take a closer look at one particular pest rodent species: the house mouse (Mus musculus).

Pest status: The house mouse has become so successful in establishing itself worldwide due to a number of factors. These include its small size and ability to live in a wide variety of habitats, its high reproductive potential, omnivorous feeding habit and a liking of new objects and food types (neophiliac behaviour).

The house mouse are known to be vectors of disease to both livestock and humans, which can occur through contact with their urine and faeces, and also through their carcasses. Rodents dribble their urine as they travel to help scent mark their territories, meaning urine is deposited everywhere, particularly along well-travelled routes.

Key behaviour: Primarily nocturnal creatures, house mice tend to spend the daytime hours in nests they have created, usually in natural hollows, shallow burrows, or cracks in dry soil. Mice only tend to be seen during the day when populations are high in number. They live in small colonies with their burrows located close to each other, with distinct runways often visible between the burrow entrances. These runways become more apparent when used frequently.

Inspection tips: When conducting a thorough site inspection, it's important to look for signs such as contact with/spoilage of human food, footprints (running tracks), damage (gnaw marks), small droppings or nests. It's crucial to take note and place bait stations or traps in these high traffic routes and locations.

HOUSE MOUSE *(Mus musculus)*

House Mouse (*Mus Musculus*) droppings

Quick Facts

Identification: Small size, with a long tail and pointed nose, large round ears, thin whiskers, narrow hind feet, short and soft fur.

Weight: 15-25 g

Body length (head and body): 6-10 cm

Total length, including tail: 18 cm

Sexual maturity: Reached in one month

Gestation period: 19 days

Number per litter: 5-6

Number of litters: average 8 per year

Daily food intake: 3 g

Life span: 15-18 months

Droppings: Around 3-6 mm, with pointed edges

Did you know?
The house mouse typically has a home radius of 1-10 metres but can extend this range following changes in food, water supply, harbourage availability and an increase in mouse populations.

Gaining control: When setting up a rodent management program, ensure enough bait stations are installed where activity is found and maintain a consistent supply of bait. Increase the frequency of bait station inspections until the rodent population is under control.

Preferred food: The house mouse is omnivorous with a varied diet including grains, seeds and nuts. It also likes foods high in fat and protein.

Recommended baits: House mice feed at multiple sites, around 20-30 different sites each day, taking a small amount of food each time. A typical mouse will consume about 3-4 g of food each day, about 20% of its body weight. As mice are more erratic feeders (than rats) and tend to feed in different places at different times, it is essential that baits are fresh and palatable. Rodent baits containing bromadiolone, discovered by Liphatech in the 1970s, continue to be popular for controlling a mouse population.

Liphatech offers its bromadiolone block bait in the form of Maki Block and Maki Wrapped. The block is milled with high grade food cereals and attractants, making it highly palatable, and the protective wrapper of Maki Wrapped makes the bait resistant to weather and non-target pests, such as slugs and snails. Liphatech recommends rotating rodent baits for best practice.

Liphatech also offers a range of difethialone baits and hardware products including the Aegis Clash multi-catch system, suitable for use on house mice.