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ISSUE 136

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Bitesize...

The bedbug surge of 2023 – a warning bell or a false alarm? 06

PCN takes a brief look at the reliable information regarding reliable Cimex lectularius figures. A long-standing and reliable source of data on bedbugs is provided by the Zurich Urban Pest Advisory Service

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CAMPAIGN FOR RESPONSIBLE RODENTICIDE USE SEEKS NEW CHAIRPERSON

A new chairperson is being recruited by the Campaign for Responsible Rodenticide Use to take up the role early next year on retirement of Dr Alan Buckle, chairman since CRRU's inception in 2004.

CRRU's ultimate objective is to reduce the incidence of rodenticide residues in barns owls, the formally adopted sentinel species for all non-target wildlife. Since 2016, CRRU has operated the UK Rodenticide Stewardship Regime, reporting to an HSE-led government oversight panel.

A role description is available at thinkwildlife.org, with details of all CRRU activities on the same site. Freestyle applications including CV should be sent to info@thinkwildlife.org by midday Friday 15 December.

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†Ko, Alexander & Choe, Dong-Hwan. Development of a lateral flow test for bed bug detection. Scientific Reports, Article 13376 (2020)
*Presence or absence of bed bug residues can only be determined from thoroughly sampled surfaces. TruDetx Bed Bug Rapid Test can detect residues left from a previous infestation that is no longer active but as old as 90 days.
Documentation: TruDetx Bed Bug Rapid Test is over 90% effective at detecting residues from common bed bugs (Cimex lectularius*) and tropical bed bugs (Cimex hemipterus). Bat bugs are related insects and can produce a positive reading as can residues from black carpet beetles, (Attagenus unicolor).

The bedbug surge of 2023 – a warning bell or a false alarm?

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The bedbug media storm, originating in France, is by now well-known by most readers. PCN takes a brief look at the reliable information regarding reliable *Cimex lectularius* figures. A long-standing and reliable source of data on bedbugs is provided by the Zurich Urban Pest Advisory Service. Their extremely useful website also documents numbers of other pests and can be found here:

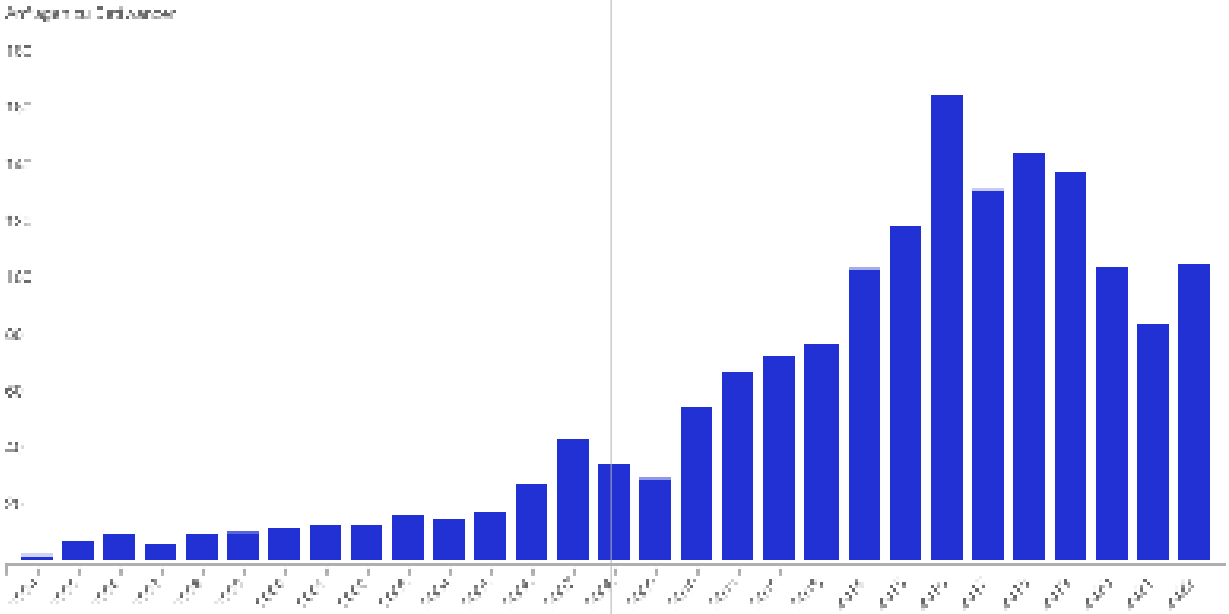
https://www.stadt-zuerich.ch/gud/de/index/gesundheitsschutz/schaedlingspraevention/schaedlingsverteilung.html

Pest prevention records around 2,000 inquiries per year in a database that dates back to 1991.

The current number, accurate as of 29th November, was 94 bedbug inquiries. With little of the year left, and the main period of media interest covered, the number doesn't particularly stand out as high versus other more recent years in the data.

These notable points are taken from a pre-print paper here https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4622585 entitled 'Public and Media Interest In Bed Bugs- Europe 2023', authored by Peter Brimblecombe (University of East Anglia) Gabi Mueller (Zurich Pest Advisory Service) and Pascal Querner (Natural History Museum, Vienna). It is an essential read for those curious about the recent media storm over bedbugs.

Bed Bug Inquiries



What is clear is that the number of inquiries about bed bugs in the city of Zurich has been increasing rapidly since 2010. The decrease in 2020 and 2021 could be due to travel restrictions due to COVID-19 measures. However, the most recent figure of 94, for the main part of 2023, doesn't reach the highs of 165, 131 144, and 147 respectively for the corresponding years of 2016, 2017, 2018 and 2019. So not much of a bedbug storm in Zurich. Reliable figures for France are hard to come by but using those of a neighbouring country is perhaps the closet we can get to a truth.

The media interest pointed to potential bedbug movement / dissemination associated with Paris Fashion Week, the Rugby World Cup, holidaymakers returning from vacation and students starting new terms, possible transfer via the Eurostar and ferries. However, bedbug movement by people and transport is not a new phenomenon. In fact, there is a post-summer rise in bedbug reports most years, likely due to movement of people. An August-October peak in bedbug infestations in hotels is documented in an ICUP paper (Boase, 2022).

A few points worth noting:

- numbers of internet searches / news stories do not correspond to actual bedbug problems
- misidentification by the public is common and the issue can be down to other insects in as high as three out of four cases
- While there are some reports from pest control companies, indicating rises in bedbug treatments, 'Such increases while seeming large are not statistically significant and seem to hint at longer term change, rather than a late summer crisis'
- Scepticism of media reports should not diminish the reality of the bedbug issue. In France it is true that 10% of households experienced a bedbug problem 2017/2022 (Anses, 2023).

The final thought of the paper is a pertinent one... 'In the absence of good and standardised data a factual vacuum allows media exploration that may promote a sense of crisis.'

Warning bell or false alarm?

Well, it perhaps doesn't really matter either way does it? What the media interest did create is a better awareness of bedbug issues. While the phones rang red-hot (just like the steam treatments that are advised!) for technical advisory services and bedbug monitoring & control products flew off the shelves of pest control suppliers, it did highlight some key points. Pest controllers that may be less familiar with bedbug work are urged to brush up on their knowledge; from attending insect workshops covering bedbug control, reading bedbug manuals from chemical suppliers, listening to bedbug-related podcasts, to improving their knowledge on the availability of aggregation pheromone-based monitors and kairomone monitors, everything is worthwhile. If we do 'sleep tight', as in keep our eyes shut on new developments, it may well be that the 'bedbugs will bite'...

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A Buzzworthy evening at PCN Dinner:

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Milton Keynes' Marshall Arena played host to an enthralling night of camaraderie, networking, and philanthropy as the Pest Control News (PCN) Annual Dinner took centre stage. The theme for the evening was "It's a Pest's life," transforming the venue into a bug-infested wonderland adorned with forest decor that left attendees buzzing with excitement.

The success of the event was not only due to the creative theme but also the generous support of sponsors, with BASF leading the charge by providing welcome drinks at the bar. The atmosphere was set for an evening of celebration, bringing together professionals from the pest control industry in a unique and vibrant setting.

One of the highlights of the night was the remarkable fundraising efforts spearheaded by a spirited raffle. Attendees had the chance to win an array of prizes, including a coveted twin air fryer, Ticketmaster gift vouchers, and a luxurious hamper, which in total raised an impressive £3940.

The generosity didn't stop there, as industry leader Killgerm made the generous decision to double the amount raised through the raffle, increasing the grand total to an £7880, showcasing the power of collaboration and shared commitment to a worthy cause.

The funds raised during the evening will undoubtedly make a meaningful impact, supporting Water for Kids, whose mission is to improve the health and well-being of children and communities in low income countries through the provision of safe water, good sanitation and other related public health measures where current provision is absent or inadequate.

We would like to thank everyone involved in making the PCN Annual Dinner success, from the sponsors to everyone that joined us on the evening. We can't wait for next year!

5 ways to **increase** your leads

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In the competitive landscape of the pest control industry, a small business seeking growth must leverage effective marketing strategies to increase leads and, ultimately, customer acquisition. As the new year unfolds, consider these five handy marketing tips to propel your pest control business to new heights.

Customer Reviews: The Power of Positive Perception

Customer reviews hold immense power in shaping the perception of your pest control business. Potential clients often rely on the experiences of others before making a decision. Encourage satisfied customers to leave positive reviews on platforms such as Google, Yelp, or your website. Showcase these testimonials prominently to build trust and credibility among potential leads.

Referral Programme: Turning Satisfied Clients into Advocates

Word of mouth remains one of the most potent forms of advertising. Implementing a referral program can turn your satisfied clients into advocates for your pest control services. Offer incentives such as discounts or free services for every successful referral. Not only does this reward loyal customers, but it also expands your reach through personal recommendations, creating a network of satisfied clients who become brand ambassadors.

Social Media: Engage, Educate, and Expand Your Reach

In the digital age, social media has become a pivotal tool for business growth. Platforms like Facebook, Instagram, and Twitter provide opportunities to engage with your audience, share valuable content, and showcase your expertise. Regularly post updates, pest prevention tips, and success stories. Consider running targeted advertising campaigns to reach potential clients within your service area, making social media a dynamic hub for lead generation.

Website: Your Digital Storefront and Information Hub

A well-optimized website serves as the digital storefront and information hub for your pest control business. Ensure that your website is user-friendly, mobile-responsive, and easy to navigate. Implement clear calls-to-action on every page, directing visitors to contact you for services. Showcase your expertise with high-quality images, compelling content, and, importantly, an active blog addressing common pest issues, prevention tips, and DIY solutions.

Email Marketing: Nurturing Leads and Fostering Client Relationships

Email marketing remains a powerful tool for nurturing leads and fostering client relationships. Build an email list and regularly send updates, promotions, and helpful tips to your subscribers. Use email campaigns to remind customers of seasonal pest issues and the importance of regular inspections. Personalized and timely communication can keep your business at the forefront of your clients' minds.

Conclusion:

This new year, small pest control businesses can thrive by adopting these practical marketing tips. From leveraging the influence of customer reviews and implementing referral programs to harnessing the reach of social media, optimizing your website, and utilising the potential of email marketing, a new approach can significantly boost leads and contribute to the sustainable growth of your business. Stay proactive, engage with your audience, and watch your pest control business flourish in the year ahead.

Win the race in the rodent control space

By Dr. Stuart Mitchell

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For busy PMPs (Pest Management Professionals), keeping pace in the rodent control space can be a challenging task. PMPs can unmask the task by setting a new pace in the rodent control space.

Learn to decern rodent concerns. Dead or alive, reasons rodents fail to thrive.

Setting a new pace in the rodent control space requires observance of live, nocturnal rodents within a diurnal space. Although, the preference is observing rodent corpses all over the place.

PMPs decern rodent concerns...

It's a given that rodents are resource driven. PMPs decern the rodent concern that where there are high population densities and insufficient food resources (whether by weight and/or nutritional quality), hierarchal, competitive diurnal rodent foraging will result. An increase in diurnal pioneering rodents results in an increase in observed live rodent moments.

It's a given that rodents are habitat driven. PMPs decern the rodent concern that if environmental factors disturb, damage, or destroy rodent habitats (whether structural or landscape oriented), then diurnal dispersal will result. Commensal becomes essential.

It's a given that rodents are fitness driven. PMPs decern the rodent concern that if diseases infect and parasites infest, then rodents are unable to regulate essential body temperature which affects behavior. Poor rodent health decreases nocturnal stealth.

It's a given that rodents are behaviorally driven. PMPs decern the rodent concern that, for rodents, paranoia is a good grasp of reality. But, if pathology changes rodent psychology, then cognition, emotion, and behavior are affected. Psychological stress factors impact the rodent immune system and general health. Rodents experiencing disorders, injury, and/or chronic pain can demonstrate reclusive, elusive, or aggressive behavior. A psychological "rat race" into the diurnal space.

Wanted dead or alive...

Wanted dead or alive. Rodents fail to thrive due to environmental factors. Sources of rodent corpses can be the increasing frequency of extreme weather events that result in heat waves, cold snaps, and severe weather flooding and wind damage.

Wanted dead or alive. Rodents fail to thrive due to predation. Sources of rodent corpses can be displaced biological predators that include humans, feral cats and dogs, raccoons, foxes, coyotes, raptors, and snakes. Man-made predators include mechano-predators, chemo-predators, and bio-predators. Within the changing urban environment, displaced predation can have a significant impact as changes in one species can affect the population dynamics of another species.

Wanted dead or alive. Rodents fail to thrive due to disease. Sources of rodent corpses can be the specter of the diseases they reservoir and vector. Disease pathogens include Arenavirus (Lymphocytic Choriomeningitis), Hantavirus (Hantavirus Pulmonary Syndrome), Leptospirosis, Plague (*Yersinia pestis*), Rat-bite fever (*Streptobacillus moniliformis*), *Salmonella enterica*, and Tularemia (*Francisella tularensis*).

Wanted dead or alive. Rodents can fail to thrive due to smart sensor devices. Sources of rodent corpses can be smart sensors that track when and where rodents travel within trapping and baiting stations. A systematic indoor and outdoor deployment of novel smart sensor technology stations with long-life battery, reliable communication, and robust interior/exterior ingress protection (IP) that accurately report nefarious rodent activity.

It's a given that rodents are pestiferous and driven. Learn to decern rodent concerns. If more rodents are dead than alive, then they fail to thrive. Win the race in the rodent control space. Use smart sensor stations and eliminate rodent surprises while assuring rodent demises.

Rats carrying resistant bacteria in animal production units

Research new for 2023 has shown that rats are carrying antibiotic resistant bacteria in sensitive environments such as livestock farms. This research, published by Dominguez *et al* (2023) in Zoonoses Public Health (2023;00:1–9), seems particularly relevant and timely considering PCN's update on the University of Reading and Killgerm Chemicals Ltd rodent research in this same issue.

Background

The Norway rat *Rattus norvegicus* and black rat *Rattus rattus* are well known as pest rodents, deemed carriers and spreaders of pathogens from animal to animal. A problem with livestock farms is the widespread use of antibiotics which can be passed into the environment where they remain at high and long-lasting levels. This may be a cause of antimicrobial resistance (AMR) occuring.

Farm environments are recognised as a source of AMR and there could be some transfer of antimicrobial resistant bacteria (and their genetic material of livestock origin) into wildlife.

Aims

This Argentinian study aimed to determine which gut bacteria (Enterobacteriaceae), sampled from rats taken at livestock farms, were carrying types of antimicrobial resistance. This information will help to work out the potential of rats as possible spreaders (vectors) of antimicrobial resistance.

Methods

A live trapping programme was undertaken on farms. There were a total of 56 rats trapped. Of these, 52 were Norway rats *R. norvegicus* and the remaining 4 were black rats *R. rattus*. The trapping programme was conducted over 11 farms. The farms were a variety, from pig to dairy, poultry and also mixed farms. All the farms studied consisted of one (dairy) or several animal sheds (as in pig and poultry farms), food storage sheds, silos, and other human buildings such as the farmers' houses, offices and/or machinery sheds. The farms were located in the centre of Argentina, with collection of rats taking place from spring 2016 to autumn 2017. OK, so while this study is Argentina and not the UK, we must read on as there could well be parallels with what may be found in the UK study from the University of Reading and Killgerm Chemicals. The world is becoming closer every day, so 'read-across' feels ever more important over the years.

Results

There were 53 strains of *E. coli (Escherichia coli)* and five strains of *Salmonella* isolated. This was taken from 50 of the *R. norvegicus* and three from *R. rattus* across 10 farms. The next steps were to determine susceptibility to antimicrobials, genotypic profiles, minimal inhibitory concentration of colistin. Also the presence of mcr-1 and genes encoding extended-spectrum β-lactamase (ESBL) were determined.

There were 58 isolates of bacteria that were not susceptible (i.e., not killed) by different types of antimicrobials. In the case of the *E. coli* strains, 28 of them were resistant to more than one 'class' of antimicrobials and were therefore categorised as 'multi-drug resistant' (MDR). Two of the *Salmonella* strains were also resistant to more than one 'class' of antimicrobials and therefore became categorised as 'multi-drug resistant' (MDR).

Two types of *Salmonella* (S. Westhampton and S. Newport) were not susceptible to (not killed by) ampicillin or to all the cephems (a commonly used group of antibiotics) tested.

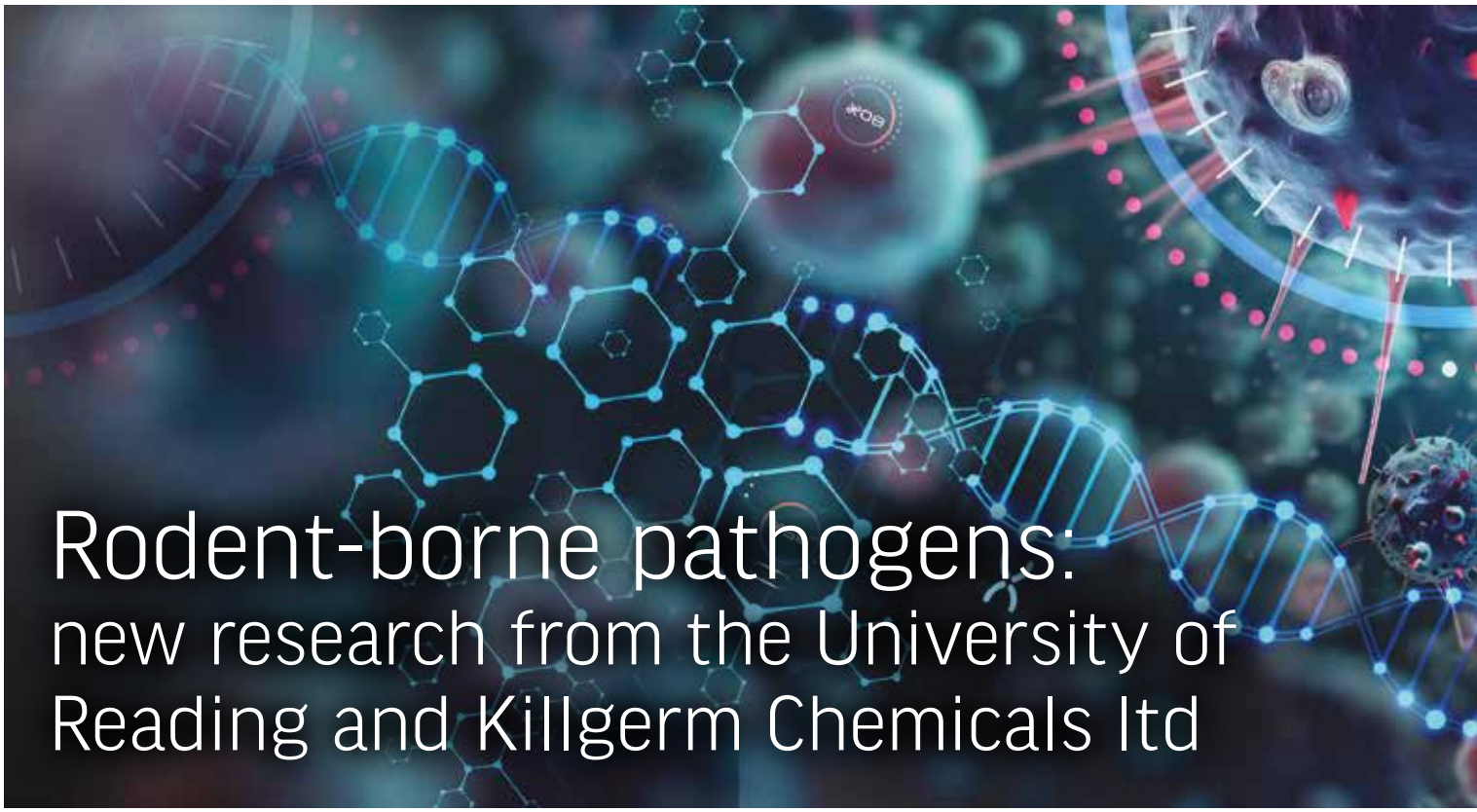
One of the *E. coli* isolated showed resistance to colistin and harboured a resistance gene called the mcr-1.

In two *Salmonella* isolated from rats, there was observed resistance even to third-generation cephalosporins.

The multi-drug resistant *E. coli* showed various differing patterns of resistance. However, some of them were the same in different rodents and different farms. With six resistance patterns, this is some evidence that strains of resistant bacteria are being spread.

Main conclusion?

The study shows that pest rat species play a potential role in the dissemination of antimicrobial-resistance between animals, humans and environmental reservoirs. It is an emerging and growing global health concern for animals, humans and the environment.



Rodent-borne pathogens: new research from the University of Reading and Killgerm Chemicals ltd

Ana Carolina-Yamakawa of the University of Reading and Dr Matthew Davies of Killgerm Chemicals Ltd have been busy communicating their research at industry events.

Dr Matt and Ana teamed up to deliver an online presentation at the Chartered Institute of Environmental Health pest control conference on the 26th September. Again, they worked together at the PestTech 2023 seminar session, held 6th November. Their first outing was the BPCA World Pest Day forum, held this summer. The hot topic: The role of rats and mice in the dissemination of pathogens.

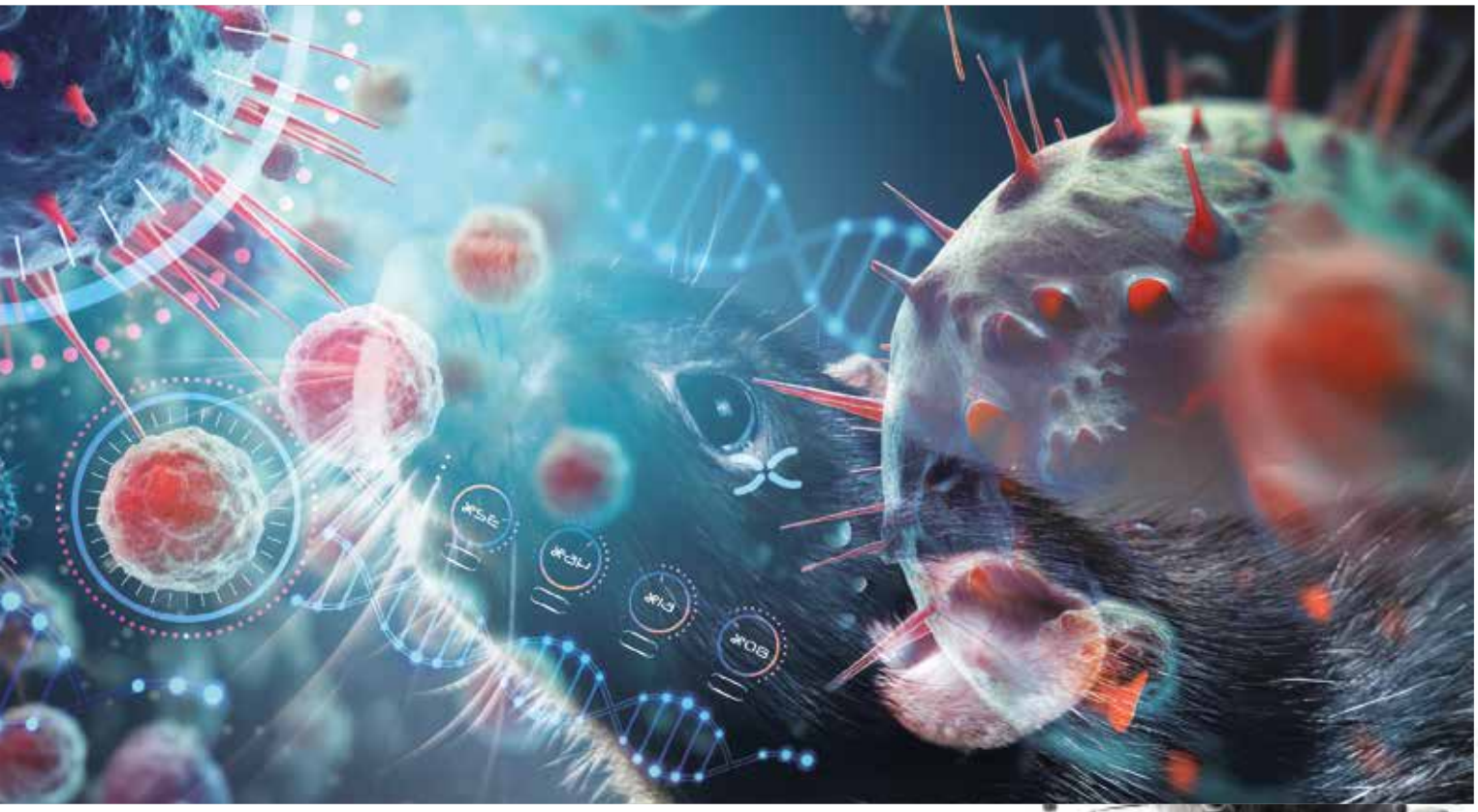
The full title of Ana's PhD research project is: The role of rats and mice in the dissemination of pathogens and antimicrobial resistance. The project is a CASE studentship, so a partnership between the University of Reading and Killgerm Chemicals as the industry partner. Dr Soon Gweon is the overall project supervisor and gives his expertise to this important research.

Here, we communicate some early methods and aims to keep the industry updated and take time to thank pest controllers who have participated so far. The basic aim so far has been to sample pest rodent droppings and examine them for the presence of pathogenic bacteria. This image summarises perfectly the aims of the project.

With many thanks to Louise Loben (technical support advisor of Killgerm), for coordinating sample collections and providing collection kits, and enthusiastic and professional pest controllers who went into the field to collect Norway rat (*Rattus norvegicus*), house mouse (*Mus musculus*) and wood mouse (*Apodemus sylvaticus*) droppings.

Collection methods

Here is what we have been doing:



Sampling areas and species:

Pest controllers collected droppings from all three rodent species mentioned before, from a variety of sites across the UK. Here we show the sampling sites for droppings from various rodent species.

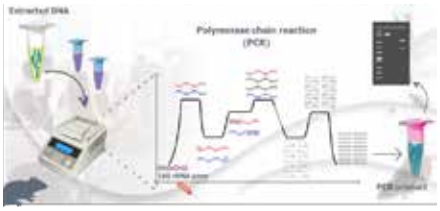
Of 100 samples collected, 64 were from Norway rats, 23 of house mice, and 13 taken from wood mice. Locations were 36 rural sites, 20 suburban, 31 urban, and we are waiting on location info for the remaining 13. Dr Matt was particularly satisfied to get such a good round number of 100 samples!

Next steps

Let's get that bacteria out of the droppings... Ana has been extremely busy extracting bacteria DNA from the rodent droppings.

We need more DNA please!

After that, the extracted bacterial DNA is amplified by a process called Polymerase Chain Reaction (PCR). A bit like CSI for rodent droppings!



How do we know what bacteria we have?

Ana's latest work has been to commence the sequencing process of the amplified DNA, which is the 'identification' part – what bacteria do we have?

Results

We do know some preliminary results! The best is yet to come, so keep an eye on future issues of Pest Control News and industry events. See you at the next one!

Grey squirrel fertility control research update – November 2023

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Latest update on the research phase of the UK Squirrel Accord's (UKSA) grey squirrel fertility control programme. The Animal and Plant Health Agency (APHA) is delivering much of this current phase. The aim is to create an effective oral contraceptive and species-specific feeding hopper to offer an effective new option for grey squirrel management (see appendix for a general overview).

Oral contraceptive

Current research is focused on more effectively protecting the immunocontraceptive to ensure that once eaten it survives the digestive tract and enters the bloodstream. APHA is working with Sporomex Ltd and the University of Strathclyde to use SpECs and bilosomes to protect the contraceptive formula. Studies are also testing the dosing and delivery mechanisms needed. Further work is needed to refine the oral contraceptive formula and will require an extension into 2024/25.

Work is being commissioned through Knoell, a leading service provider for worldwide registration and regulatory compliance. A full report is being compiled by Knoell to outline the registration process needed to market a version of the current oral contraceptive formula being tested. Part of their initial advice highlights the need for early identification of a suitable manufacturer.

Feeding hopper

Analysis is ongoing of the data collected during the field study on bait delivery and individual patterns of bait uptake by grey squirrels carried out in spring 2023. Grey squirrels were monitored across two seven-hectare woods in North Yorkshire. Results showed only a slight improvement in numbers of grey squirrels visiting feeders when three feeders per hectare were deployed compared to two feeders per hectare. Data were collected on numbers of visits to feeders and amount of bait taken per visit by male and female squirrels. This will help optimise delivery methods by informing potential contraceptive doses for delivery to grey squirrels in the field in different seasons using different feeder densities.

To enable the oral contraceptive to be deployed in areas containing both red and grey squirrels, a more complex feeder design is required than the simple weighted door mechanism. Field trials continue to collect data on red and grey squirrel body weights, adding to the data already collected in different locations and different seasons. This feeds into the specifications of a feeding hopper that uses a weighing platform connected to an electronic door opener. The settings would only allow the door to open for an animal with a specified minimum body weight. Analysis so far suggests that a minimum weight threshold of 450g would exclude all red squirrels while allowing access by over 90% of grey squirrels.

Manufacturers with experience of producing wildlife devices and/or developing novel wildlife/ environmental devices are being contacted and quotes for development and manufacture of the grey squirrel feeder designs requested. Feeder manufacture is needed for the landscape-scale fertility control field trial included in The National Heritage Lottery Fund backed Red Squirrel Recovery Network project, which is currently in its one-year development phase.

Modelling

Currently the model created can indicate how a grey squirrel management strategy might perform but not on ways to improve it. A framework is being developed to explore options and identify optimal management – balancing effort and benefit. The extended model consider and compare alternative management scenarios and pressures that may reduce grey squirrel numbers, such as pine marten predation and shooting. Work is also underway to produce a new national estimate for grey squirrel numbers, including seasonal fluctuations for pre- and post-breeding.

Next steps

A new contract will be drawn up with APHA to cover the extended research and development phase. The Fertility Control Project Board is exploring the length of the extension and the resources required. Development is underway of the large landscape-scale field trial that will start in 2025 in areas of Southern Scotland and Northern England. Discussions are underway on how to build on the initial behavioural insights research into public messaging to increase support for grey squirrel fertility control. Fundraising for the fertility control programme continues.

UKSA thanks everyone involved in supporting this fertility control research, which should greatly improve the protection of the red

squirrels, trees and woodland ecosystems of the British Isles. Please direct any questions to info@squirrelaccord.uk. Donations to support UKSA and the fertility control programme can be made online. Details available here: www.squirrelaccord.uk/donate.

Appendix

Established in 2015, UKSA is a partnership of 45 signatories working collaboratively to protect the UK's red squirrels and broadleaf trees from the negative impacts of introduced grey squirrels.

An important area of work is the development and delivery of a grey squirrel fertility control programme. UKSA and supporters are funding the research phase being conducted by the Animal and Plant Health Agency. The aim is to develop an oral contraceptive and species-specific feeding hopper. This should provide an effective, non-lethal and less labour-intensive option for managing a widespread invasive species.

The four phases of the grey squirrel fertility control programme are:

1. Research and development – 1-2 years remaining*
2. Landscape-scale trials – 2-3 years*
3. Testing for registration – 5-7 years*
4. Widespread availability of registered methods – 7-10 years*

* Please note, some phases will run simultaneously. The end goal is seven to ten years from 2023.

Contraceptive research is concentrated on developing an oral formulation of a mammal-specific immunocontraceptive based on the same principle of a currently-used successful injectable vaccine. The oral formulation must survive the digestive processes and stimulate the immune system via the gut. So far, laboratory research has shown positive results for a proof of contraceptive effect from a liquid bait, which induced a strong immune response in rats.

Development of a species-specific feeding hopper is important to ensure only grey squirrels access the bait that will eventually contain the oral contraceptive. Field trials of two designs are underway. The simplest option uses a weighted door and could be used for grey-only areas, but is not suitable for red-grey areas as larger red squirrels can open the door. The second design is based on an electronic weighing platform that only opens the door if the animal's weight is within a certain range. This could be used in areas with both squirrel species, as there is little overlap between red and grey squirrel weights.

A frequently asked questions document is available on our website. While webinar updates on the fertility control work can be viewed via our YouTube channel. Sign up to our mailing list for news.

See us inside!

By Dr. Stuart Mitchell

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Rodents perceive more than we can conceive. Through rodents' perception, we provide the direction. Rodents' keen senses can circumvent our defenses. Even though we do not abide, rodents will see us inside.

The sympathetic nervous system (SNS) or "flight and fright" and parasympathetic nervous system (PNS) or "rest and digest" have different effects on perception. The SNS enhances alertness and responsiveness to stimuli, while the PNS facilitates relaxation and deeper sensory processing. Both systems work together to regulate the physiological state and optimize perception based upon external stimulation.

Rodents demonstrate metacognition or awareness and understanding of their thought processes. As thinking and learning animals, they problem solve and use tools. Rodents demonstrate empathy or the ability to understand and share the feelings of others. Even inexperienced rodents learn about new environments by watching experienced rodents.

The rodents' environment is rich with external stimulation. Rodents are hyperesthetic animals or possess situationally increased sensitivity to sight, hearing, smell, taste, and touch. Organoleptically, and in microseconds, rodents collect sensory inputs from the environment. Inputs that enable behavioral exploitation of resources by resource dependent animals.

Rodent resource: airborne molecules

Rodents can detect and exploit airborne molecules. From a protected distance, they can sense the odors of other rodents, food, trash, compost, predators, and many others. With smell recognition in ~50 msec, airborne molecules enable rodents to move toward a reward or evade an escapade.

Rodent resource: vegetation

Rodents are attracted to and exploit poorly managed vegetation. Unintended plant life spread provides efficient cryptic travel routes, diverse nesting materials, high-quality refuge, and food sources. With senses of smell, taste, and touch (proprioception), rodents effectively navigate through dense vegetation. Vegetation enables pestiferous devastation.

Rodent resource: shadows

Rodents prefer to move within and exploit umbrae areas. With visual acuities of 20/60 to 20/2000, rodents use sensory substitution or "see" through hearing or touch. As a result, rodents function well in low light areas such as corners. Shadows provide a sense of protection and cryptic travel in behind objects or along walls where there is less visibility. Dimly lit areas become pesky and precarious.

Rodent resource: structural guidelines

Rodents exploit structures that offer guidelines for movement. Structures such as corners, walls, fences, or linear architectural features provide cryptic and efficient navigation through the environment. Rodents possess specialized vibrissae on the face, feet, and tail, which allow sensory navigation through complex environments With a clear path of movement, rodents can sweep vibrissae across surfaces at speeds of a few mm/sec to >1 m/s (2.2 mph). Following lines, rodents make good travel times.

Rodent resource: holes

Rodents can enter a structure by exploiting holes, cracks, and gaps greater than 6mm or ¼". The number one violation in 3rd party audits, holes are readily exploited by rodents. Through sensory vibrissae, efficient diastematic gnawing, flat-like skull, flexible skeleton, collapsible ribs, lack of collarbones, and flexible joints, rodents use holes without any tolls.

Rodent resource: trash

Rodents exploit poor trash-handling accumulations as a reliable supply of calorically dense food. Observed to detect odors at concentrations down to a few parts per billion (ppb), rodents are attracted to organic molecules from food and food residues in and around dumpsters. As extraordinary-rich resource sites, dumpsters provide rodents with trash that is "metabolic cash."

Rodent resource: rodent scats, urine, and sebum

Rodent scats, urine, and sebum (oily secretions) contain pheromones (Greek pherein "convey" + hormone), which provide intraspecies communication. Rodents sense pheromone excretions and secretions through smell. Pheromones convey identity, reproductive status, social hierarchy, and territorial boundaries. Rodents use pheromones to envision decisions.

PMP (Pest Management Professional) resource

Through mobile App and portal-based remote rodent sensing devices, PMPs collect sensory inputs from the environment. Inputs that enable exploitation of rodent behavior. Advanced technology remote sensing devices keep rodents out of a facility through early detection and timely, targeted interventions. When rodents are detected, devices know when and where they travel as well as record and time-stamp activity. Data collected identifies exploitable rodent resources for effective PMP recourses.

Through the combination of early detection, rapid response, and data-driven insights provided by rodent control sensing devices, rodents' keen senses cannot circumvent our defenses. We do not abide! PMPs set rodents aside!

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We create chemistry

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The **only** professional product approved for use on field mice

Find out more:

Core benefits

- **Rodents stop-feeding 24 hours after eating a lethal dose. Control is possible within as few as 7 days**
- **Balancing performance and environmental impact**
- **Stops the waste of resources**
- **Breaks the cycle of resistance**

Selontra® contains Cholecalciferol. Selontra® is a registered trademark of BASF. Use biocides safely. Always read the label and product information before use.
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We are delving into the acronyms relevant to the pest management industry and of course wider health and safety. Hopefully this should simplify all those confusing initialisms! This is part 1 of several, they just would not all fit into one article. Let's look at Awarding bodies, governing bodies, and audits first.

PCN: Pest Control News (hopefully you know this one!)

Awarding bodies

RSPH: The Royal Society for Public Health.

RSPH is a charity, dedicated to protecting human health in the United Kingdon and extending globally. The RSPH is the independent awarding body for The RSPH Level 2 in Pest Management (both certificate and Award) and the Level 3 Award in Pest Management amongst other relevant qualifications.

RSPH also has a membership scheme, allowing post nominal letters showing level of membership, used as outward recognition for the individual dedication to public health protection. Such as Associate Member (AMRSPH), Member (MRSPH) and the highest grade a Fellow (FRSPH).

CIEH: Chartered Institute of Environmental Health.

CIEH is a non-profit professional membership body, passionate about everything in the environment that can affect human health and well-being. They provide everything from conferences to updates, training, education, advice, support for the environmental health sector and access to the network of members, mentoring and policy consultation. Members can also use post nominals, examples are: Associate (ACIEH), Member (MCIEH) and Fellow (FCIEH), however there are other grades too.

IOSH: Institute of Occupational Safety and Health.

IOSH is a global chartered body for safety and health professionals. IOSH advises governments, provides education, training, qualifications, provides policy advice, facilitates research. The recently updated grading system allows recognition of experience in one progression path and a chartered (fellowship) status in another. Examples are: Associate Member (AIOSH), Technical Member (Tech IOSH), Graduate Member (Grad IOSH).

NEBOSH: The National Examination Board in Occupational Safety and Health.

A global organisation, the qualifications from which are highly recognised in the health and safety sphere and beyond. Also a Charity, NEBOSH aims to improve all lives via health and safety at work. Holders of the NEBOSH National Diploma in Occupational Health and Safety can also use "DipNEBOSH" after their name.

Governing bodies, trade associations and associated other parties

CRRU- The Campaign for Responsible Rodenticide Use

The CRRU Code promotes responsible use of rodenticides and Best Practice outlines how rodenticides are to be used to minimise exposure to wildlife.

HSE- HSE: Health and Safety Executive.

HSE are responsible for authorising biocides (rodenticides and insecticides) in the UK. Biocidal products are controlled in:

Great Britain (England, Scotland and Wales) under the GB Biocidal Products Regulation (GB BPR) Northern Ireland under the EU Biocidal Products Regulation (EU BPR)

BPCA: British Pest Control Association.

The BPCA is a trade association offering Membership, training, events, CPD scheme (keep reading acronym explanation!), and also updates, publications and advice. The association is not-for profit.

GOG- The UK Rodenticide Stewardship Government Oversight Group.

The UK Rodenticide Stewardship Government Oversight Group (GOG) is responsible for reviewing the regimes to ensure the principles set out by the UK Government continue to be met. HSE chairs the GOG and other representatives include: HSE NI. DEFRA.

IPCA: Irish Pest Control Association.

The IPCA is a trade association, providing the voice of the pest management industry for Ireland. The IPCA advocates channeling of information, updates, development from the industry to its members. They also offer technical and health and safety advice.

NPTA: National Pest Technicians Association.

A professional trade association, providing training, advice, membership, events, workshops, technical advice.

NPTA Ireland: National Pest Technicians Association Ireland.

Similar to the above for the NPTA, supporting its members, with training and assistance and channeling information and awareness through the industry and the network of members.

BASIS: This is BASIS Prompt, referring to one of the CPD registers for pest management professionals.

BASIS is a Charity, they don't just do the BASIS Prompt register for pest management professionals, but also provide many other registrations for other industries such as farming. They provide qualifications, CPD points schemes, forums, learning and informative platforms and audits. Aimed at developing professional standards and ensuring those standards are maintained, improved, and promoted.

CPD: Continuing professional development.

CPD, often as a points scheme, shows that the individual has reached the required level of learning, be able to develop and enhance their abilities. CPD points can be obtained from several different sources, from attending events, online learning, face-to face learning, reading publications such as industry magazines, attending training, completing qualifications and more.

In an unlicensed industry such as pest management membership of a CPD scheme is a valuable asset providing proof of training and competency. It is also now within the membership criteria for both BPCA and NPTA.

NRoSO: The National Register of Sprayer Operators.

The NRoSO scheme is a register. It recognises development and training, provides events, provides customer support, updates, and provides information together with networking opportunities.

BSI: British Standards Institution.

BSI was the world's very first National Standards Body. Formed in 1901, the main priority for the group now is sustainability globally, digital trust and society's wellbeing and setting standards that reflect that.

UKAS: The United Kingdom Accreditation Service.

"UKAS is the National Accreditation Body for the United Kingdom. We are appointed by government, to assess and accredit orgnisation that provide services including certification, testing, inspection, and calibration."- ukas.com

Audits, certifications

All of the below audit standards set out criteria to ensure products that are manufactured, stored, and distributed conform to certain requirements. Pest management often forms a small but crucial part of these standards, failure to comply could result in non-conformities issued to the customer. Those non-conformities could result in audit failure – something that none of us want!

BRCGS: British Retail Consortium Global Standards.

AIB: American Institute of Baking (AIB International).

FEMAS: Feed Materials Assurance Scheme.

SALSA: Safe and Local Supplier Approval.

LEAF: Linking Environment and Farming.

IFS: International Featured Standards.

CEPA: The Confederation of European Pest Management Associations.

Remember this list is not exhaustive – there are many more! But this is probably enough to keep you going for now. Use this as a reference tool or to jog your memory. As pest management professionals we are often asked for certification, usually relating to the standards, memberships or qualifications as noted above.

Syngenta has introduced its innovative SecureChoice™ remote detection system, for smart rodent monitoring, in the UK. The system will be on show live at PestTech 2023 in Milton Keynes (8 November 2023).

Digital monitoring offers a more proactive approach to tackling potential rodent problems by identifying where and when activity occurs, to enable more timely control actions to prevent outbreaks. The remote sensing technology ensures the constant surveillance of facilities for rodent activity and fully recorded provenance of a clean site.

The pioneering technology system alerts pest professionals only when there is rodent activity in a monitored area – helping to deliver targeted rodent control in any facility, according to Syngenta's PPM Digital Lead, Gary Nicholas.

"The exciting technology enables far more efficient use of the pest professionals' valuable time."

"It gives the opportunity to engage with more customers and provide a higher level of service, including time for in-depth inspection to find the root cause of infestations, faster resolution of issues and future prevention," he advised.

Where rodent control action is required, the digital monitoring dashboard directs professional operators straight to the point of pest entry, for more time efficient and cost-effective remedial action, with the minimal interference. Working with a pest control business offering digital monitoring provides an extra tier of security and confidence for effective rodent control.

Syngenta's SecureChoice is a cutting-edge plug-and-play solution that enables cost-effective rodent monitoring, 24 hours a day. It can be installed direct by facilities managers during construction and refurbishment work, or retro fitted in and around any existing facility – particularly inaccessible areas that are often difficult to monitor, but favoured by rodents.

The system can also be installed as part of a contract with a professional pest business engaged with protecting the site.

The SecureChoice hub connects wirelessly to receive and send data and alerts from any number of sensors. It is scalable to customer accounts of any size.

SecureChoice sensors can be fitted to any existing bait stations or to Syngenta bespoke monitoring points. The use of dual sensing technology, picking up both rodent motion and vibration, ensures accurate detection, allowing pest professionals to better understand the behaviour of the rodents, ensuring rodent activity is controlled efficiently and effectively.

Once rodent activity is detected, alert notifications are sent directly in real time, as well as being viewed on a digital on-line management dashboard.

SecureChoice is the world's smartest rodent detection technology, advocated Gary.

"It supplements a pest professional's experience with a level of knowledge and transparency that just isn't available by traditional pest management alone."

"The SecureChoice management dashboard gathers monitoring data at the pest professional's fingertips, with easy access from mobile devices or computer. The intuitive displays make data easy to interpret and act upon, with advanced reporting features for effective contract management and customer communication."

Data analytics includes useful features such as heat mapping rodent activity and automatic report generation for audits and review of rodent control performance. The combination of data analytics and machine learning allows for predictive analysis, which can help to identify potential pest issues before they become significant problems.

The whole system is designed to be easily maintained and kept up to date with future-proof technologies. The senor batteries, for example, have a nine-year operational life.

"Our cloud based remote detection system helps professional pest management business of any size deliver, sustainable, efficient data-driven rodent management, improving value for both pest professionals and their customers," he added.

For sustainability and stewardship SecureChoice demonstrates a pest control businesses commitment to responsible pest management and use of rodenticides. It reinforces the level of service compliance and highlights the investment in modernisation by embracing change and innovation.

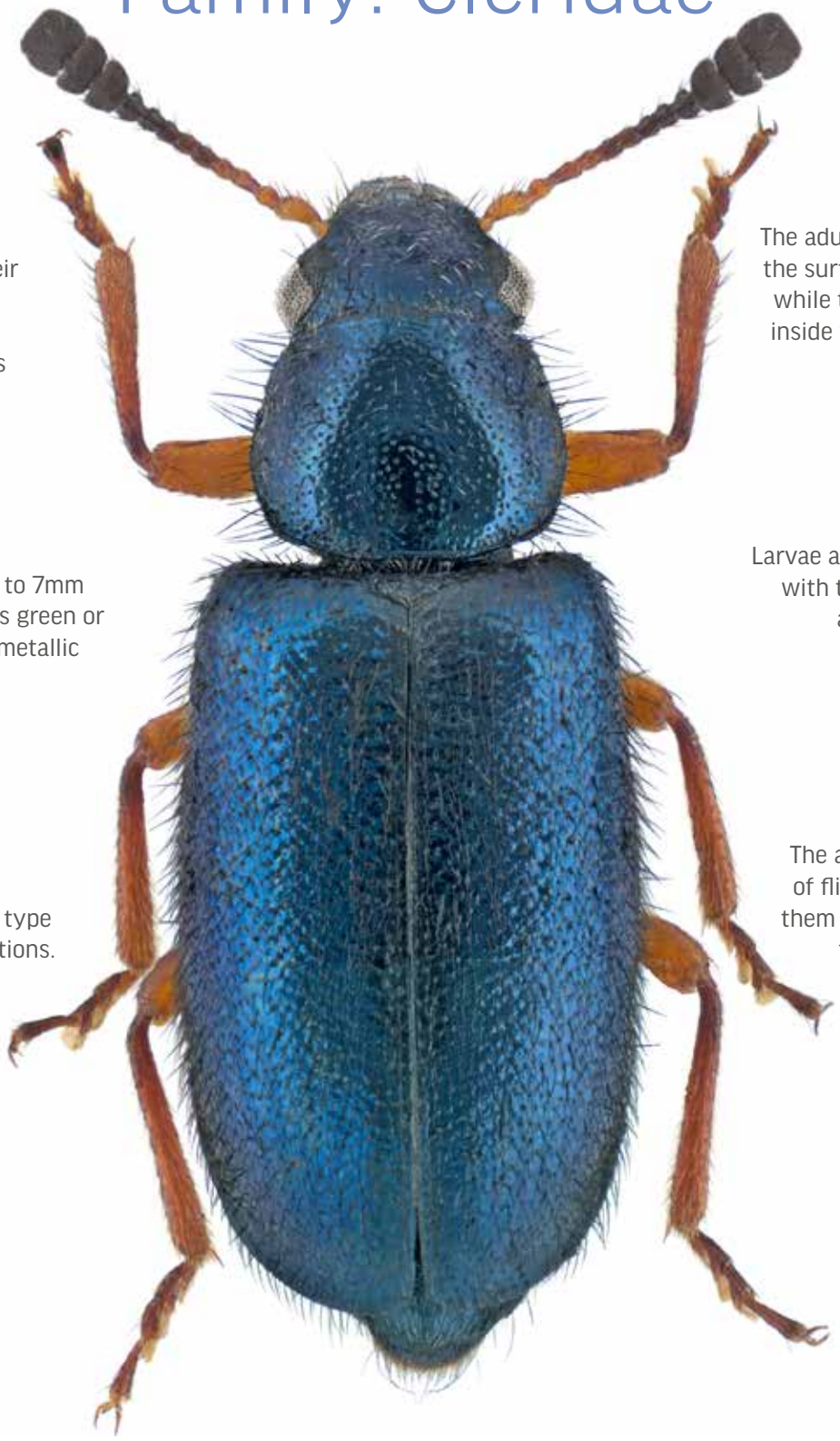
SecureChoice works in tandem with the Syngenta Pest App, to offer a comprehensive digital solution for today's professional pest control businesses.

For more information and to discuss how SecureChoice could work for you, contact Syngenta PPM Digital Solutions Lead, Gary Nicholas: gary.nicholas@syngenta.com or call 07789 943 746

Red-legged ham beetle

Necrobia rufipes

Family: Cleridae



They feed on meat, fish and their derivatives. Found in ham drying rooms and also in cemeteries.

The adult beetles feed on the surfaces of products, while the larvae burrow inside where they cause major damage.

Adult beetle is up to 7mm in length. Colour is green or blue-green shiny metallic with red legs

Larvae are greyish-brown, with three pairs of legs and slightly hairy.

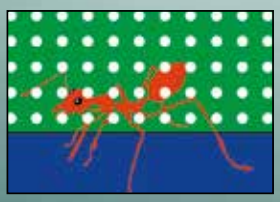
The life cycle is about 6 weeks, depending on the type of food and conditions.

The adults are capable of flight, which allows them to disperse easily to new sources of feeding

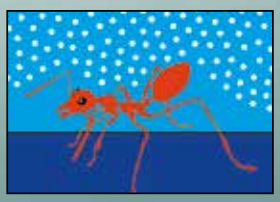
exodus®

ULV - ULTRA LOW VOLUME

What is ULV?



These droplets are small enough to be carried on air currents into small cracks and crevices that are hard to reach using conventional treatments, yet still heavy enough to settle out within an hour, so that treated areas can be re-entered with the minimum of delay.



The majority of droplets in a thermal fog are too small (less than 5 microns) to impinge upon the target (being unable to overcome the 'air curtain' around it).

Conventional sprays produce large droplets (over 80 microns) that quickly fall out of the air and carry a high concentration of liquid that often leaves an unsightly deposit or unpleasant odour.

As we head towards the festive period, be aware that digging out the decorations from the loft may disturb cluster flies *Pollenia rudis*.

Of course, an effective treatment for cluster flies is to use a ULV insecticide through the Exodus ULV machine (cold fogger). We have featured kit maintenance advice for the Exodus in the past, in issue 124. In this issue it isn't maintenance exactly, more how to use the machine properly and also a reminder on calculating volumes and application rates. Proper use of equipment could be called 'pre-maintenance' in that the more you use it correctly, the less likely maintenance is required.

Some key points:

- It is advised that all smoke detectors, fire alarms etc., are deactivated or covered during application.
- It may also be necessary to inform the fire brigade prior to the treatment being carried out.

Exodus - Vazor® ULV 500 safe system of work

a) Survey the area to be treated and confirm that treatment is necessary.

b) Read the product label and literature and familiarise yourself with safety precautions, application rates, conditions of use, etc.

c) Calculate the volume of space to be treated.

d) Appropriate protective equipment must be worn.

e) Areas requiring 5 minutes application time or less may be treated from one point.

f) The Exodus should be static and freestanding during discharge. There is no need to move the machine around or attempt to direct mist at particular areas.

g) Whenever possible the operator should be remote from application, i.e., outside the area to be treated but in control of the power supply to the unit.

h) The treated area should not be entered for a minimum of 1 hour.

i) After this time, ventilate the area.

Measure the space to be treated

Work out the space volume to be treated by multiplying the length, width and height measurements (in metres).

e.g.,: For a large living room 5 metres long, 5 metres wide and 3 metres floor to ceiling:

Volume = 5 x 5 x 3 = 75 cubic metres (m^3)

Consult the label to find out the application rate

Killgerm Vazor® ULV 500 should be dosed at 100ml (cm^3) of liquid per

1000m^3 of space to be treated.

Work out the dosage rate for the space to be treated

Volume to be treated = 75m^3

Application rate = 100ml (cm^3) per 1000m^3

Dose rate = 75 x 100 = 7.5ml (cm^3) divided by 1000

The room requires 7.5 ml of Vazor® ULV 500.

Work out the spraying time

Using an Exodus:

- Machine delivers 36 ml per 60 seconds.
- Infested space needs 7.5 ml
- Time for treatment = 7.5 x 60 divided by 36 = 12.5 seconds

Example of estimating treatment time

Vazor® ULV 500 - Exodus.

E.g.: Living Room.

Volume of room = 3m x 5m x 5m =75m^3

Dosage rate = 1000 m^3 requires 100 ml of spray.

75m^3 requires 100 of 75ml of spray divided by 1000

75m^3 requires 7.5 ml of spray.

Exodus delivers 36ml/min.

Therefore treatment time is:

60 ÷ 36 x 7.5 seconds = 12.5 seconds.

Ultra low volume applications of insecticides allow treatment of large spaces, such as warehouses, food stores and bakeries against flying and crawling insects. They are also ideal for treating difficult areas such as sub floor spaces, roof voids and chimneys. Biocide application using the ULV technique means you can give minimal risk, efficient treatment by dispensing droplets in the 15-20 micron range (the best composite range for penetration, coverage and impingement).

The insecticide cannot be applied to raw or processed food, but it can be used in areas where food is bagged or covered. The product can be applied in food factories providing machinery and food preparation surfaces are wiped down after application.

Remember to extinguish all naked flames prior to application.

A ULV treatment gives no long lasting residual activity, but is ideal when controlling insects on exposed surfaces such as carpets and ducts and also insects on the wing. Treated areas can be entered after 1 hour.

Vazor ULV 500 Contains 4.4% phenothrin, 0.8% tetramethrin, 7.5% synergist

Use biocides safely. Always read the label and product information before use.

exodus®
ULV - ULTRA LOW VOLUME

Reducing the risk of anticoagulant poisoning to non-target species

Every individual who handles rodenticides has a responsibility to protect non-target species. Put simply, rodenticides are used as a chemical pest control method and contain highly potent poisons, meaning they are toxic to all animals – not just target species named on the label, such as rats and mice. All other species are non-targets.

Despite stringent environmental management and preventative measures, many will experience issues with rodents moving into buildings, outhouses, and outdoor areas in search of food, water and harbourage. And with rats alone carrying 45 different diseases, an infestation can pose a very real, serious threat to people's health and public safety.

As such, sometimes rodenticides are an essential tool to handle an infestation quickly and effectively, but there are several things pest technicians can do to reduce the risk to non-target species. Here, Laurence Barnard, Country Business Manager, Professional and Specialty Solutions for BASF Pest Control discusses the importance of reducing the risk to non-target species, and shares some top tips to encourage responsible rodenticide usage.

Non-target primary and secondary toxicity

The first thing to understand is that there are two ways a non-target species might come be contaminated when rodenticides are being used – through either primary or secondary toxicity.

Primary toxicity is when a non-target species comes into direct contact with and consumes bait. This may occur as a result of users not storing baits properly or not baiting in a safe and secure manner, and it is often pets and livestock that suffer from primary poisoning. Wildlife can also be poisoned directly if they are able to access the rodenticide.

Secondary toxicity, on the other hand, is when a non-target species consumes a rat or mouse that has eaten the rodenticide bait. The rats and mice consumed are usually dead or dying. The more dead or dying rats and mice that are consumed, the greater the level of secondary poisoning.

More often than not, secondary poisoning can be seen in birds of prey such as barn owls or kestrels, or scavenger species such as foxes. Campaign for Responsible Rodenticide Use (CRRU) Think Wildlife reported that routine monitoring from 2016 to 2021 found anticoagulant rodenticide traces present in nearly 90 % of barn owls tested, demonstrating that more needs to be done to reduce the risk to all non-target species.

Both of these types of poisoning happen as a result of environmental exposure, and every individual who applies rodenticides has a responsibility to reduce this risk of such exposure. So, how can this be done?

Complete health and safety assessments

With the use of all pesticides, reading and following the product label is a strict requirement. With rodenticides, however, it is also essential to complete an Environmental Risk Assessment (ERA) before rodenticides are used.

The ERA must record the various pathways by which the environment, wildlife and other non-target animals may become exposed to the rodenticide. It is also vital to record details of the site survey, how much rodenticide is used, and exactly where it is placed.

Use secure baiting methods

It goes without saying that all non-target animals and humans should be prevented from accessing rodenticide as far as is possible.

The most effective way of doing so is by securing bait inside a tamper-resistant bait box, ensuring it is clearly labelled and placed in a suitable location, ideally away from any non-target species. Some rodenticides may also be applied using a covered and protected approach, using natural materials from the site such as palettes, timber or tyres, to secure and cover bait accordingly.

Consider the active substance

Second-generation anticoagulant rodenticides (SGARs) are classified as 'bioaccumulative,' which means that there is a gradual build-up or accumulation in the body. The concentration in body tissues continues to increase every time bait is eaten. This bioaccumulation can cause secondary poisoning when the bodies of rodents that have eaten the SGAR bait are then eaten by non-target species such as owls and foxes.

The non-anticoagulant active, cholecalciferol, which is used in Selontra®, is neither bioaccumulative nor persistent in the environment, therefore reducing the secondary poisoning issues described above.

The antidote for both accidental primary and secondary poisoning from anticoagulant baits, such as Storm® Ultra Secure, is Vitamin K, which should always be administered by a vet, as per the label guidance.

For accidental poisoning from cholecalciferol baits, such as Selontra®, then treat symptomatically. Treatment would include a low calcium diet, a high salt and fluid intake and avoidance of exposure to sunlight. Again, always refer to the product label for best practice.

Considering which active substance to use is an important consideration as part of a planned approach, and each site should be treated differently.

Dispose of dead rodents

Frequent searching for and disposing of dead rodents throughout the treatment programme will significantly help to prevent secondary poisoning – if there aren't any bodies for wildlife or pets to consume, then the risk will be reduced! After a riddance programme is complete, it's also important to ensure all baits are removed.

However, if you're using Selontra® it can be left down in high-risk areas, following an ERA, where it is deemed necessary under permanent baiting guidance where re-invasion is highly likely.

For all other areas, we recommend monitoring for any further signs of rodent activity by using Monitoring Paste by BASF– this non-toxic but highly palatable "bait" block will reveal early signs of activity and can be applied year-round as part of an integrated pest management (IPM) programme, without posing a risk to non-targets.

Avoid an infestation in the first place

Of course, the best way to reduce the risk to non-targets is to prevent the need for a chemical control method in the first place. This means taking measures to deter rodents from migrating onto the site.

Pest controllers should focus on adopting an integrated pest control programme, concentrating on improving hygiene, removing access to food sources and harbourage, proofing and maintenance of a site. Combined with regular site inspections and monitoring of rodent activity and proper training, the chances of an infestation can be greatly reduced.

For more expert advice on pest management, and to explore BASF's specialty rodent control solutions, visit www.pestcontrol.basf.co.uk/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THE NPTA CELEBRATED ITS 30TH BIRTHDAY IN STYLE AS PESTTECH 2023 BROKE ALL RECORDS IN MILTON KEYNES

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Three decades on from the first ever event – which had just a handful of stands when the 'Midlands Pest Technicians Association', as we were then called, launched the yearly PestTech exhibition, this year's exhibition showed exactly just how far we've come.

Thanks to our incredibly supportive members, sponsors, exhibitors and visitors, PestTech 2023 was even bigger and better yet again, with 65 stands and over 1,000 delegates joining us at Stadium:MK.

Queueing delegates flooded in when the doors opened at 9am and were rewarded with a stellar seminar line-up, more to see and do than ever and of course, plenty of 30th birthday festivities to enjoy.

Those celebrations included NPTA cupcakes, retro sweets, balloons, tins of mints, a stunning PestTech-themed birthday cake.

Managed by NPTA technical support officer Grahame Turner, the seminars kicked off nicely with John Lloyd of IPMIC delivering his talk 'Phantom Biting Insects & Solutions', before Lisk & Jones Consultants' Owen Jones took to the floor with Pheromones and Semiochemicals in Insect Pest Management.

There was standing room only for Kate Cross' Red Tractor Standards talk, before Trapeeezium's Lulu Gunter gave some fascinating insight into Social Media Marketing.

Finally, Killgerm's Matt Davies closed the show brilliantly with his seminar on Zoonoses and Public Health in Pest Control.

Reflecting on this year's spectacular event, NPTA chief operating officer Steve Hallam said: "It's been a really successful event".

"Thirty years is a momentous occasion, from where we started, with a few stands at the Nottingham University campus, to 65 stands today 30 years on, is a marvellous achievement.

"We have to thank all our founder members who started the ball rolling and here today are, John Davison and Paul Burton. This is a testament to their vision.

"We also have to thank all our exhibitors, Speakers, delegates and event partners over the years because without them, we wouldn't have such a successful event today"

"Our main supporters for this event Killgerm, BASF, Syngenta, Lodi and Pelsis were as crucial as ever to assist in delivering the event for our members and all the delegates that attended PestTech this year, Sincere thanks to all. Our partners agreed that the day was a huge success.

As ever, the bar has been set high for next year but Steve, Donna, Maxine, Grahame and the NPTA board are already working hard to ensure it will be even bigger and better. Roll on 2024.

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For information on how the Power of iQ products can enhance your rodent control service and solve problems at your accounts, contact your local Pest Control Distributor or visit www.bellsensing.com.

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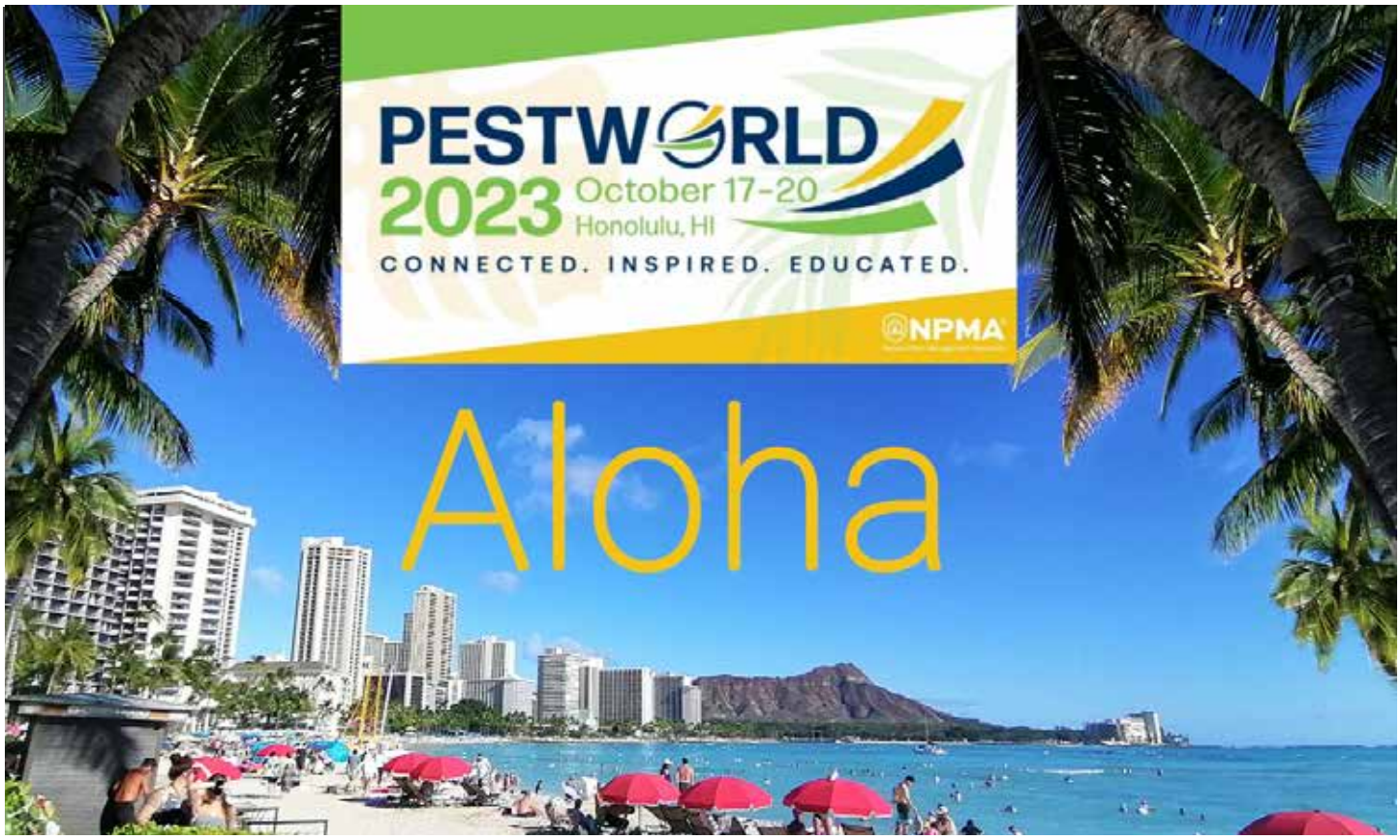

ALOHA FROM PESTWORLD IN HAWAII

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The professional pest management industry from around the globe gathered at the Hawaiian Convention Centre in the fabulous location of Honolulu for PestWorld 2023 which ran for four days from October 17 – 20.

Organised by the National Pest Management Association (NPMA), CEO Dominique Stumpf greeted guests at the opening ceremony. She explained this was a special year for NPMA as the convention celebrates its 90th anniversary. She thanked everyone for taking the time to come together as an industry saying: "We are stronger and more powerful when we share ideas and support one another."

The opening ceremony closed with a unique Hawaiian flourish with a performance from traditional fire knife dancers.

During the following three days there was plenty of opportunity for delegates to learn and share experiences. There was a choice of over 51 educational sessions delegates could attend with subjects ranging from technical issues such as new strategies for bed bug baiting to termite technology as well as more commercial topics as the growing use of AI and ChatGPT.

The exhibition is always at the heart of PestWorld events and this year it lived up to its reputation with nearly 200 exhibitors attending, not only

from the US but also from Europe and Asia. Here delegates could catch-up on all the new developments and products.

With such a large number of international delegates present, there was excellent attendance at the meeting of the Global Pest Management Coalition. The work of the four working groups covering sustainability, partnership activities with WHO along with the mosquito response plan were reviewed. The public health & food safety group announced their upcoming Global Summit to be held in Florida, US in June 2024 to coincide with World Pest day.

PestWorld attracted over 3,000 delegates, 600 of which were exhibitors. This included nearly 400 international delegates from 50 different countries from across the globe including for the first time, several representatives from Mongolia.

PestWorld events are not all work and no play as there is time for networking and the forming of long-term contacts, specially at the receptions. The international reception sponsored by Orkin always proves popular. On the final night after the four hectic days, PestWorld in Hawaii drew to a close with a celebratory party overlooking the beach.

So, make a note. Next year's PestWorld is to be held in Denver, Colorado from October 22-27 2024.

New Products

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Revolutionise your bed bug inspections
The TruDetxTM Bed Bug Rapid Test transforms how you detect bed bug infestations. With this simple, science-based test, you can find even low-level infestations and see results in minutes so you can take action. Swab. Activate. Detect.

Visit www.killgerm.com

Vazor® Smokes

Ready-to-use insecticidal smoke generator. For use against flying and crawling insects such as houseflies, clusterflies, fruitflies, mosquitoes, wasps, moths, fleas, bed bugs, ants, cockroaches and stored product insects including saw-toothed grain beetle and adult grain weevils. Rates of application: Flying insects: One generator treats up to 120m^3 (approx 4,237 cu ft). Crawling insects: Fleas, bedbugs and carpet moths. One generator treats up to 30m^3 (approx 1,060 cu ft). Ants, cockroaches etc one generator treats up to 7.5m^3 (Approx 265 cu ft).

Contains 13.5% w/w permethrin and potassium chlorate
Visit www.killgerm.com

Use biocides safely. Always read the label and product information before use.


BPCA
PestEX
13-14 March '24
ExCeL, London
The pest management show
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BPCA
British Pest Control Association

NPTA
tomorrow's association
for today's technician

Join Our Team as a Technical Support Officer

Location: Midlands, North of the UK (Hybrid Position)

Are you a passionate and driven individual looking to make a difference in the world of pest management? Do you thrive on building connections with like-minded professionals and enjoy being the face of a respected association? If so, we have an exciting opportunity for you!

ABOUT US The National Pest Technicians Association (NPTA) is the leading voice for pest management professionals in the UK. We are dedicated to advancing the pest management industry through education, networking, and advocacy. Our mission is to promote excellence and professionalism in pest management.

ABOUT THE ROLE As a Technical Support Officer, you will play a crucial role in supporting our members, who are pest management experts, across the Northern UK region. This hybrid position, based in the Midlands or the North of the UK, offers you a great opportunity to interact with and support like-minded professional pest technicians.

QUALIFICATIONS

- A strong passion for the pest management industry and a desire to make a positive impact.
- Excellent communication and interpersonal skills to engage with professionals in the field.
- Technical knowledge of pest management methods and best practices.
- Proven ability to deliver training and educational sessions.
- Self-motivated, with the ability to work independently and as part of a team.
- Willingness to travel within the Northern UK region as needed.
- Full UK driving license.

KEY RESPONSIBILITIES

- Provide technical assistance and guidance to NPTA members.
- Serve as the front-facing representative of NPTA, fostering strong relationships with members and stakeholders.
- Conduct training sessions and workshops to enhance the knowledge and skills of pest management professionals.
- Collaborate with industry experts and contribute to the development of best practices.
- Act as a resource for members, answering enquiries and providing support.
- Assist in organising and participating in association events, conferences, and networking opportunities.

WHAT WE OFFER

- Competitive salary and benefits package.
- A dynamic and supportive work environment.
- Opportunities for professional development and growth.
- The chance to be at the forefront of the pest management industry.
- Make a meaningful contribution to the success and professionalism of the sector.

If you are a dedicated pest management enthusiast with a knack for connecting with professionals and a passion for excellence in pest management, we want to hear from you! Join our team at NPTA and help us shape the future of pest management in the UK.
To apply, please submit your CV and a cover letter outlining your relevant experience and why you're the ideal candidate for this role to steve.hallam@npta.org.uk. We look forward to welcoming you to our team!

The National Pest Technicians Association is an equal opportunity employer.
We welcome applications from candidates of all backgrounds and experiences.

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Are the new luddites in town ?

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Back in the 19th century some clever business owners decided to revolutionise their working practices and developed mechanised production after General Ned Ludd or King Ludd was particularly upset presumably as his job was on the line.

The particular brand of hatred which in this case was labour saving devices gained some popularity and spread quickly from Leicestershire up north to the wool mills over a short period of time with nightly attacks on mills and framing machinery. Such was the passionate spark as ignited that it upset the system and a good few Luddites were then shot dead outside Huddersfield. A few thousand soldiers were deployed and the sympathisers were either hanged or sent Down Under after The Frame Breaking Act 1812 was enacted. The rest as thy say is history.

Whilst history does have a way of repeating itself Im not suggesting one should start to smash ones lap top and storm the local Apple shop but it is of interest that Ai is very much flavour of the month and certainly echoes of labour saving, job losses, efficiencies etc can be seen reverberating around the internet.

In the legal sector to some degree the legal landscape is being transformed as artificial intelligence and in some quarters it becomes an integral part of practices. As AI is still very new there is a lot of discussion which explores the pros, cons and the ethics of associating AI with the legal world.

AI has great potential to streamline tasks and make them more efficient, particularly in drafting/ analysis of contracts/ checking documents/ proof reading and disclosure analysis. However, like Sky Net we aren't quite rady to sign over completely to AI and there is still a huge amount of scepticism, reluctance and indeed fear of embracing this brave new world.

So to balance the zest for AI I detail below a few examples where unchecked reliance has not been a great success -

DoNotPay, which was known as the world's first robot lawyer face a lawsuit against them which accuses them of practicing law without a licence. Furthermore, as a significant legal development in terms of AI, judges in the U.S now demand the need for firms to disclose to courts regarding firms using AI – so whether the use of AI in a case is treated less favourably is yet to be seen in full.

A tutoring company paid out some $ 350 k in an employment tribunal after they their AI automatically rejectd all female applicants over the age of 55....rejecting some 200 applicants.

A lawyer used AI in his submissions to then find in court that several cases cited did not actually exist....and included false names and made up quotes. The problem being he had put his name to the submission.

Zillow ended up writing down millions due to an algorithmic error.

The list goes on.

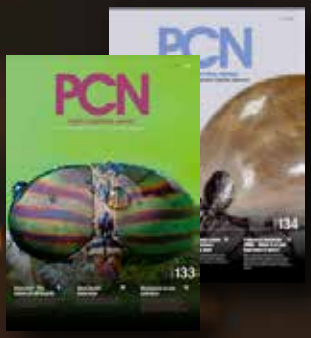
To conclude - AI is set to shift the legal and wider world for sure. Although AI seems to be adding technological innovation, it still needs to be critically analysed and should not be used instead of human expertise. Caution seems to be the main theme surrounding it.

If you have any legal issue you want to discuss please call me, Giles Ward or one of my team on 0113 245 0852 or reach out to me at giles.ward@milnerslaw.com in confidence.

PCN

PEST CONTROL NEWS®

That's it for another year! We would like to say a huge thank you to all of our readers,contributors and sponsors for another fantastic year of PCN! See you in the New Year!



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Had 1 Big Party

Raised £7880 for Water for Kids!

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Date	Venue	Cost plus VAT
BASIC PRINCIPLES OF PEST CONTROL		
Open Awards Level 2 Award in the Principles of Rodent Control		
13th Feb 2024	Ossett	* £165/£195
16th April 2024	Ossett	* £165/£195
Killgerm Principles of Insect Control		
14th & 15th Feb 2024	Ossett	* £190/£220
SPECIALIST COURSES		
Bird Guano		
21st Feb 2024	Ossett	£130 Inc lunch
Flying Insect Management		
5th March 2024	Ossett	£165 Inc lunch
Drainage Investigations & Rat Control		
29th Feb 2024	Ossett	£220 Inc lunch
PRACTICAL COURSES		
Trapping Techniques		
21st March 2024	Killamarsh	£165 Inc lunch
INSECT WORKSHOPS		
Insect Workshop 2 - Ants, Bees & Wasps		
19th March 2024	Ossett	£165 Inc lunch
Insect Workshop 1 - Bedbugs & Fleas		
20th March 2024	Ossett	£165 Inc lunch

Date	Venue	Cost plus VAT
EAST ANGLIA		
BASIC PRINCIPLES OF PEST CONTROL		
Open Awards Level 2 Award in the Principles of Rodent Control		
12th March 2024	Norwich	* £165/£195
Killgerm Principles of Insect Control		
13th & 14th March 2024	Norwich	* £190/£220

Date	Venue	Cost plus VAT
SURREY		
BASIC PRINCIPLES OF PEST CONTROL		
Open Awards Level 2 Award in the Principles of Rodent Control		
5th March 2024	Lingfield	* £165/£195
Killgerm Principles of Insect Control		
6th & 7th March 2024	Lingfield	* £190/£220

Date	Venue	Cost plus VAT
BERKSHIRE & HAMPSHIRE		
BASIC PRINCIPLES OF PEST CONTROL		
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19th March 2024	Newbury	* £165/£195
Killgerm Principles of Insect Control		
20th & 21st March 2024	Newbury	* £190/£220

Date	Venue	Cost plus VAT
BRISTOL		
SPECIALIST COURSES		
Drainage Investigations & Rat Control		
7th March 2024	Bristol	£220 Inc lunch

Date	Venue	Cost plus VAT
MIDLANDS		
BASIC PRINCIPLES OF PEST CONTROL		
Open Awards Level 2 Award in the Principles of Rodent Control		
5th March 2024	Burton on Trent	* £165/£195
Killgerm Principles of Insect Control		
6th & 7th March 2024	Burton on Trent	* £190/£220
SPECIALIST COURSES		
Drainage Investigations & Rat Control		
22nd Feb 2024	Burton on Trent	£220 Inc lunch

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Venue: Ossett	
Unit 3	Monday 22nd & Tuesday 23rd January 2024
Unit 1	Monday 29th & Tuesday 30th January 2024
Unit 2	Monday 5th & Tuesday 6th February 2024
Examination	Wednesday 7th February 2024

ROYAL SOCIETY FOR PUBLIC HEALTH LEVEL 3 AWARD IN PEST MANAGEMENT. FEE - £850 + VAT per person (includes RSPH Exam, lunch & refreshments)
Venue: TBC
Training and Information day
Core Unit examination

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Newbury	
Unit 3	Monday 12th & Tuesday 13th February 2024
Unit 1	Monday 19th & Tuesday 20th February 2024
Unit 2	Monday 26th & Tuesday 27th February 2024
Examination	Wednesday 28th February 2024

ROYAL SOCIETY FOR PUBLIC HEALTH LEVEL 3 AWARD IN PEST MANAGEMENT. FEE - £850 + VAT per person (includes RSPH Exam, lunch & refreshments)
Venue: TBC
Training and Information day
Core Unit examination

For further information on any of these training courses or to book your place, call Lisa Wales on 01924 268445

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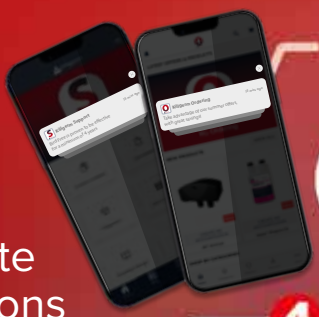

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