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The Magazine for the Pest Control Industry
March 2014

Raining Rats and Bugs

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Pest Control news

March 2014 98

The leading voice within the Pest Control Industry
Published quarterly reaching over 26,000 readers.

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In order faithfully to reflect opinion within the Pest Control Industry PCN relies on information and correspondence.

News, articles, letters and editorial are always welcome!

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Barn owls and rodenticides in the UK

THE BARN OWL TRUST PETITION

The Barn Owl Trust has started a petition to Mike Penning MP, who is the Minister responsible for Pesticide Regulation, to ban permanent baiting, regulate SGARs as a last resort use only and they are asking for specific label phrases on all SGAR labels.

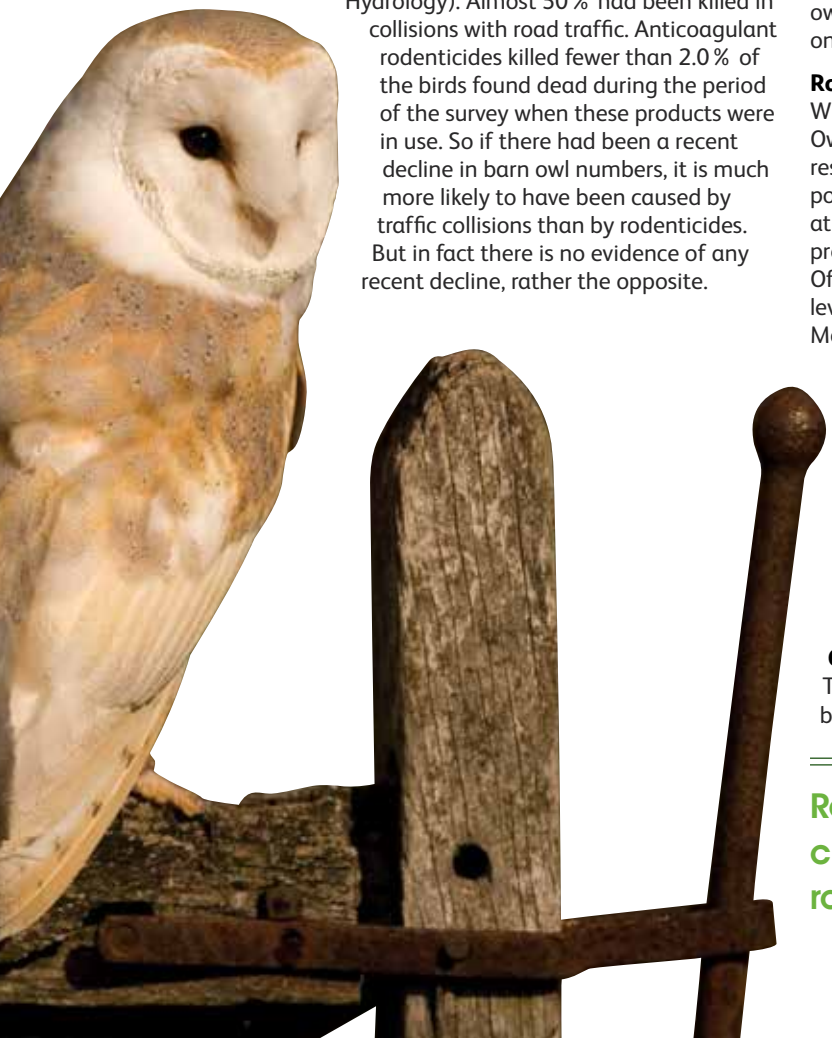
Upon learning of this petition, here is what the Campaign for Responsible Rodenticide Use UK (CRRU UK) had to say:

STATEMENT FROM THE CAMPAIGN FOR RESPONSIBLE RODENTICIDE USE UK

The objectives of the Barn Owl Trust petition are sensible and supported by the CRRU UK. Rodenticide labels should be made clearer to make it easier for users to apply rodenticides responsibly and safely. It is also correct that permanent baiting outdoors should not be a routine pest control practice and rodenticides, like all pesticides, should only be used when necessary. That much is common ground and CRRU is working towards these ends.

No decline in UK barn owl population

But any assertion that rodenticides have contributed to a decline in the UK population of barn owls has no scientific foundation. As the Barn Owl Trust says, some barn owls are indeed found dead and shown to have been killed by rodenticides. But a study of the causes of death of more than 1,000 UK barn owls[1] was conducted by the Institute of Terrestrial Ecology (now Centre for Ecology and Hydrology). Almost 50 % had been killed in collisions with road traffic. Anticoagulant rodenticides killed fewer than 2.0 % of the birds found dead during the period of the survey when these products were in use. So if there had been a recent decline in barn owl numbers, it is much more likely to have been caused by traffic collisions than by rodenticides. But in fact there is no evidence of any recent decline, rather the opposite.



During 1995 to 1997, four of the CRRU sponsoring companies worked with ornithologists of the Hawk and Owl Trust and the British Trust for Ornithology on Project Barn Owl.[2] This set out to discover how many barn owls breed in the UK. The survey, carried out annually for three years, showed that there were about 4,000 breeding pairs. Even at that time it was considered that a long-term decline in UK barn owl numbers had been halted by intensive conservation activity. The work of recording barn owl numbers is now continued by the Barn Owl Conservation Network.[3] The Network monitors barn owl nests all over the country and has estimated there to be about 9,000 breeding pairs of barn owls.[4] This estimate, and the population increase it implies, is borne out by the British Trust for Ornithology's annual Breeding Bird Survey[5] and the Trust's new UK Breeding Bird Atlas.[6] Barn Owl Conservation Network volunteers also ring up to 10,000 new barn owls every year.

Any suggestion of a recent decline in the UK barn owl population is not only incorrect but it also denies the painstaking and dedicated work of hundreds of barn owl conservation enthusiasts all over the country. Their work has halted a long-term decline in barn owl numbers, which began in the mid-19th century and continued through most of the 20th century. Thanks to the provision of 25,000 barn owl nest boxes across the UK, and other conservation measures, the historic decline has been reversed and barn owl numbers are growing again. Even so, some years are indeed catastrophic for barn owls. 2013 was one of them and breeding activity was down 45-95 % on normal levels, caused mainly by the cold, wet weather.

Rodenticide residues in barn owls

What is beyond doubt, and this is correctly highlighted by the Barn Owl Trust, is that a very high proportion of British barn owls carry residues of rodenticides in their bodies – mostly these are the more potent second-generation anticoagulants (SGARs). This means that at some stage in their lives the birds have consumed contaminated prey; probably the wild field mice and voles they habitually feed on. Of course, this brings a justifiable concern that such widespread, low-level contamination may cause effects that we cannot yet detect. More work is certainly required on this to provide much-needed reassurance. But for the time being we can say that there is no evidence that these residues, although unwanted, are causing observable adverse impacts on UK barn owl populations. A book published in January 2014 about owls, written by British Trust for Ornithology researcher Mike Toms, provides a comprehensive review of the changing status of UK barn owl populations, suggesting possible reasons for changes in both numbers and distribution. It provides no evidence that would support the assertion that there has been a significant decline in the UK barn owl population driven by rodenticide use.[7]

CRRU and the planned UK SGAR Stewardship Regime

The scope of SGAR residues carried by barn owls, assessed annually by the Predatory Bird Monitoring Scheme,[8] was one of the findings

Rodenticide labels should be made clearer to make it easier for users to apply rodenticides responsibly and safely

that led to the establishment of CRRU. The purpose of CRRU is to tell rodenticide users about these residues in barn owls and other wildlife, explain how they occur and promote rodenticide application methods that minimise non-target exposure.[9] In June 2013, CRRU was tasked by the Health and Safety Executive (HSE) with the co-ordination of a major new initiative to bring responsible use advice to all UK rodenticide users, so as to minimise wildlife contamination. The UK SGAR stewardship regime will begin in 2014, once its objectives, details of implementation and proposals for monitoring its impacts have been examined and endorsed by the Government Oversight Group consisting of HSE, DEFRA and DH (Public Health England). Among its many objectives, as requested by Barn Owl Trust, will be to improve rodenticide labels to make them clearer about how to use rodenticides without unnecessary impacts on wildlife, including barn owls, to ensure that outdoor permanent baiting is not used routinely and to make it clear that the best way to deal with rodent pests is not to have them in the first place, so avoiding the use of rodenticides when possible.

Responsible use of rodenticides

However, rodent control using rodenticides responsibly is normally required when rat and mouse infestations have become established; indeed the effective removal of rodents from infested premises is a legal obligation. Such action must be conducted to prevent transmission of rodent-borne diseases, including salmonellosis, leptospirosis and cryptosporidiosis, to people, their household pets and farm livestock, and to prevent the contamination of our foods and surroundings with rodent filth, such as urine, droppings and hair.[10] We must use rodenticides responsibly to avoid, as far as possible, any unwanted side-effects. Their use, if required, must also be timely, not 'as a last resort' to remove established rodent infestations that every day threaten our lives and livelihoods.

For references on this article please go to:
http://pestcontrolnews.com/downloads-resources/

UK BARN OWLS - CAUSES OF DEATH (1963-1996)*

	number	%
Starvation	275	25.8
Disease	35	3.3
Predation	18	1.7
Natural causes	328	30.7
Road casualties	477	44.7
Other trauma	80	7.5
Drowned	12	1.1
Electrocuted	4	0.4
Accidents	573	53.7
Poisoned	65	6.1
(among which SGARs post-1983)	(8)	(1.4)
Shot/trapped	11	1
Other human-related causes	76	7.1
Unknown causes	90	8.4
total	1067	100

*Newton, I., Wyllie, I., Dale, L. 1997. Mortality causes in British Barn Owls (Tyto alba), based on 1,101 carcasses examined during 1963-1996. In: Duncan J. R., Johnson D. H., Nicholls T. H., editors. Biology and conservation of owls in the northern hemisphere. Winnipeg, Manitoba, Canada: United States Department of Agriculture. p 299-307.

The historic decline has been reversed and barn owl numbers are growing again

PROTECTING BIRDS OF PREY BY BEING Wildlife Aware

In light of the Barn Owl Trust petition, along with the CRRU response (page 4 of this issue), it is timely to take a brief look at one of the many ways the pest control industry has been acting to help protect non-target species such as Barn Owls.

Back in 2009, the Campaign for Responsible Rodenticide Use (CRRU) began the process of launching the Wildlife Aware training course, in conjunction with BASIS, by running a 'train-the-trainer' event. The purpose of the event was to educate selected industry trainers in how to deliver the course, covering responsible rodenticide use and guidance on minimising the environmental impact of these products and wildlife exposure; all of which is particularly relevant to birds of prey (such as barn owls).

We talked to Killgerm Training about its role in the Wildlife Aware course. Killgerm's Wildlife Aware trainers, Robin Moss, Mark Butler and Matthew Davies were able to give us an insight into the course and how things began in the early days.

Robin commented, "I distinctly remember the 'train-the-trainer' event run by the CRRU Chairman, Alan Buckle, and Natural England's, Paul Butt, they were brilliant. We shared their philosophy from day one. This was way back in 2009 and we certainly recognised the need for such a course."

Mark added, "In fact, we were the first centre to run the Wildlife Aware course, we ran the first two. At first, we were covering the demand for the north half of the country and beyond, while Alan and Paul were covering the demand for the south. It's still mostly working that way, nearly five years later."

Matthew talked to us about the wider responsibilities of a training organisation, saying, "We're really proud of our work with Wildlife Aware and the success of our candidates, especially as it's a course that we don't profit from. We've been running it since the early days of 2010 to promote safe and effective rodent control to the industry." Following a spot of number crunching, Matthew told us, "To date, Killgerm Training has trained 181 delegates over 15 Wildlife Aware courses, which is a significant chunk of the total number. The BASIS website currently shows a list of 186 Wildlife Aware accredited technicians."

As a closing comment, Robin summed things up perfectly, "It's important to remember that the way we work is all about effective rodent control and protecting wildlife. The Wildlife Aware training course remains central to this."

Stewardship Regime Update

The HSE has now released the initial proposals for the Second Generation Anticoagulant Rodenticides (SGARs) stewardship regime. The document was released to all stakeholders and is now available to download from www.pestcontrolnews.com.

These are the initial proposals subject to further refinement as the stewardship regime process continues.

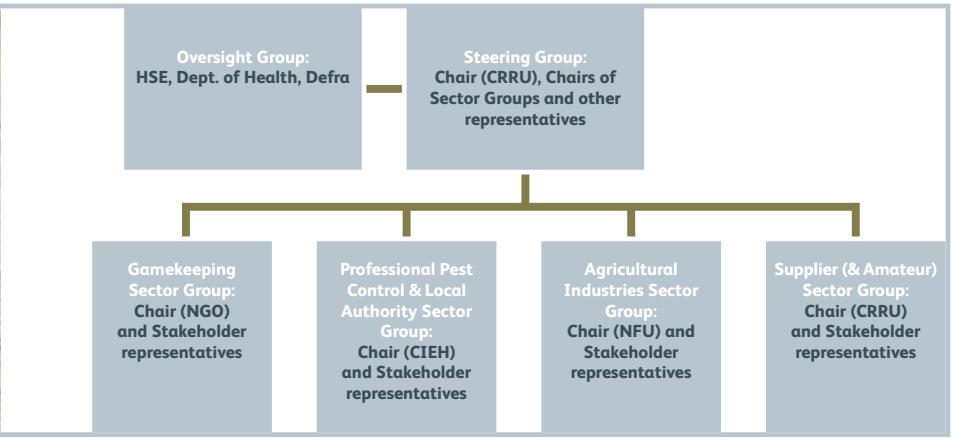
The approved structure, illustrated below, involves four Sector Groups: professional pest control (including local authorities); farming; gamekeeping; and suppliers (including amateur use). Through these groups, coordinated by the Campaign for Responsible Rodenticide Use (CRRU), the stewardship regime has been developed for presentation in March to a designated Oversight Group made up from HSE, Defra and Department of Health officials.

Each Sector Group, under its own chairperson, has drawn up plans for a range of stewardship measures and for monitoring their benefits which are contained in the proposal document.

When the proposed stewardship programme is endorsed by the Oversight Group, implementation will begin immediately.

PCN welcomes all views and comments from our readers. Please e-mail us at **info@pestcontrolnews.com.**

pestcontrolnews.com/uk-second-generation-anticoagulant-rodenticides-sgars-stewardship-regime-proposals/



WOODSTREAM EUROPE ANNOUNCEMENT

Woodstream is pleased to announce that Dawn Heptinstall-Bolton has joined Woodstream Europe, as Account Development Manager for the pest division. Dawn brings a wealth of experience to our business having worked in the pest control industry for the last seven years, selling into both professional and retail markets for Suterra. Dawn commented, "I am happy to have joined Woodstream Europe and excited to be part of a growing innovative company."

PestWest Appoint New International Sales Manger

Nicole Roemer was born in Zurich and recently moved to the UK. She loves languages and can converse in Swiss-German, German, English, French, Spanish and Italian. She has over 10 years' experience in sales, predominantly in the banking sector.

WHAT DO YOU HOPE TO ACHIEVE WORKING FOR PESTWEST?

This year I aim to gain better knowledge of the German, Austrian and Swiss markets, finding out how to meet our customers' needs and create fruitful relationships with existing and new customers.

WHAT DO YOU LIKE TO DO OUTSIDE WORK?

I like to spend time with my family and friends and experience new cultures. As a real Swiss, I love to ski as much as après ski.

WHAT DO YOU LIKE MOST ABOUT WORKING IN SALES?

Travelling to different places and meeting people in varying locations and making customers happy with tailor-made solutions.

New law for the use of Aluminium Phosphide

A new piece of legislation has now come into effect...

"The Plant Protection (sustainable use) Regulations 2012"

How are you affected by the new law?
If you are a professional person buying aluminium phosphide for the control for moles, rabbits or rats it is essential that you understand:

1. After 26th November 2015 you will no longer be able to use Phostoxin and Talunex legally without the new accredited level 2 certificate of competence.
2. Existing certificates will allow you to continue to use the product until November 2015 but after this date you must hold the new accredited qualification.
3. This affects all professionals including pest controllers, farmers, gamekeepers, amenities managers, small holders and anyone else having a professional need for the product.
4. The Poisons rules 1972 still apply, therefore you must continue to sign the completed poisons register on every occasion you make a purchase.
5. Do not wait until the last moment to take up the qualification as there will be large numbers of professionals needing to be qualified in a short period of time.
6. There now exists a network of trainers around the country to provide the necessary training and more will be available during the year.

For further details ask your distributor or visit:
www.ramps-uk.org/suppliers/

RAMPSUK
The Register of Accredited Metallic Phosphide Standards in the United Kingdom

KIT MAINTENANCE

Topex Applicator

Topex applicator maintenance is only to be carried out only by an operator trained in the use of aluminium phosphide and familiar with the precautionary measures to be observed.

The HSE guidance note 'AIS22-gassing of rabbits and vertebrate pests' should be read in conjunction with this maintenance guide.

After some considerable usage of the Topex applicator, there may be a need to either clean down or replace worn applicator parts. These notes are therefore intended to give guidance on the precautions to be taken when carrying out any maintenance.

Points 1-6 should be carried out in a restricted access area and in an outside situation. Points 1-3 should be undertaken in dry conditions.

Wear suitable protective gloves (e.g. Solvex plus nitrile gloves) during all maintenance.

The wind should always be sideways to the operator.

A water filled container large enough to accommodate the applicator barrel should be prepared before commencement of the maintenance.

1. Carefully knock out any loose dust from both ends of the applicator. This needs to be done at the time of the last period of use of the applicator.
2. Remove the securing screw of the Topex barrel - remove from the rest of the applicator and immerse the barrel in the container of water.
3. Remove the screw securing the trigger and dispensing unit. These parts should then be immersed in the container of water.
4. Leave all parts in the water for at least four (4) hours.
5. Remove Topex parts from the water filled container and with a hose, spray all parts with plenty of fresh water until clean.
6. Water from the container may be disposed of into the soil.
7. Check all parts for wear and replace as required.
8. All parts must be totally dry before re-assembly. An air assisted system such as a hair dryer may be helpful in the drying process.
9. The storage container should also be cleaned observing the above precautions, and made totally dry before re-use.

Debugging Health & Safety

HIGHLIGHTING RESPONSIBILITIES

Health and safety considerations in pest control are often focussed on pesticide use, but there are other things that pest control companies also need to think about. Lone working, manual handling, a written safety policy, working at height and even exposure to pest-borne diseases? What about a 'no smoking' sign in pest control vans? The following article is a must read for those who want to be up to speed with health and safety requirements.

All employers, self-employed and lone workers have a duty (responsibility) under the Health and Safety at Work Act 1974 (HSAWA) and the Management of Health and Safety Regulations 1999 to comply with legislation and regulation expectations. Health and safety law states that organisations must:

- Assess risks to employees, customers, partners and any other people who could be affected by their activities
- Arrange for the effective planning, organisation, control, monitoring and review of preventive and protective measures
- Have a written health and safety policy if they employ five or more people
- Ensure they have access to competent health and safety advice
- Consult employees about their risks at work and current preventive and protective measures in order to comply

Failure to comply with these requirements can have serious consequences for both organisations and individuals. Penalties include fines, imprisonment and disqualification. Owners, directors and managers can be held responsible for failures to control health and safety.

THE SAFETY POLICY

As a manager/competent person, you are expected to assess any reasonably foreseeable risks such as the use of specific chemicals, PPE and use of ladders etc. and put in place control measures to reduce the risk so far as is reasonably practicable. (The cost in terms of time, money or convenience associated with risk control does not outweigh the benefits of risk reduction).

The safety policy is a document/process explaining how health and safety will be managed in the business. This lets staff and others who come into contact with working activities, know the company's commitment to health and safety compliance.

Safety policy requirements are:

- A safety policy only needs to be in writing if there are five or more employees; however, it shows good practice to keep a written record
- A safety policy does not/is not expected to be complicated and time consuming (just cover relevant areas of your business in order to comply with legislation)
- A policy statement will only be effective if it is followed, reviewed and updated regularly

Involving employees in the design and updating of the policy statements (or on matters that affect their health and safety) is a legal requirement for the Health and Safety (consultation with employees) Regulations 1996. This consultation with employees helps to provide a two-way communication process and generates a positive health and safety culture.

Safety policy examples and templates can be found at: **http://www.hse.gov.uk/simple-health-safety/write.htm**

CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH (COSHH)

The COSHH regulations require EVERY employer and self-employed person to carry out an assessment of "risk to health" created by any activity likely to expose anyone (employees, customers, members of the public etc.) to substances hazardous to health, before any work starts.

Assessments of risk to health under COSHH enable decisions to be made regarding measures necessary to control a substance that is hazardous to health. It also enables an employer/self-employed person to demonstrate judgement based upon factors relatable to their work. The assessment would be expected to cover:

- An assessment of the risks to health arising from all operations involving a substance. This should be based principally on the product and its label requirements/ instruction on the packaging
- What steps are to be taken in order to achieve adequate control of exposure
- Identify ANY actions necessary to ensure control (prevention of risk to health):
  - o Training
  - o Instruction of operation
  - o Health surveillance
  - o Monitoring of activities

Before a COSHH assessment is carried out, sufficient and relevant information should be collected regarding substances. A COSHH

Owners, directors and managers can be held responsible for failures to control health and safety

assessment should be in context to the nature of the work and risks arising from the complexity and variability of the job at hand and the substance being used.

More information on COSHH can be found at: **http://www.hse.gov.uk/coshh/basics/assessment.htm**

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Using PPE can prevent harm to people who come into contact with a hazard. However, PPE should not be considered a first choice control measure (except in exceptional circumstances or where stated on labels and/or as product use advice). PPE will only succeed in its achievement to 'protect' if used correctly by the person wearing/using it. It is important to bear in mind that some PPE is specific to an individual and would need to be suited (fitted/sized) to the wearer, such as masks, eye protection (prescription), ear protection (moulded) and even helmets.

More information on PPE can be found at: **http://www.hse.gov.uk/pubns/indg174.pdf**

WORKING AT HEIGHT (BIRD/WASP WORK, USE OF LADDER)

Falls from heights are one of the biggest causes of workplace fatalities and major injury in the UK. The purpose of the Work at Height Regulations 2005 (WAHR) is to prevent these unnecessary deaths and injuries caused by falls from heights. Employers and those in control of any work at height activity (facilities managers and/or building owners who contract others to work at height) must ensure that work is properly planned, supervised and carried out by competent people.

Employees also have general duties to take reasonable care of themselves and others who may be affected by their working at height activity and actions. Employees are also expected to cooperate with their employer's health and safety requirements (the safety policy) and ensure they are complied with.

More information on working at height can be found at: **http://www.hse.gov.uk/pubns/indg401.pdf** and **http://www.hse.gov.uk/falls/ladders.htm**

REPORTING OF INJURIES, DISEASES AND DANGEROUS OCCURRENCES REGULATIONS 1995 (RIDDOR) (REVISED 2013)

RIDDOR is a law that requires all employers and other people in charge of work premises to report and keep a record of all work-related accidents/incidents/activities that cause:

- Deaths
- Certain serious injuries
- Diagnosed cases of certain industrial diseases (inc. Leptospirosis)
- Dangerous occurrences (incidents with the potential to cause harm)

From 1st October 2013 the revised Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013 came into force.

- **Every day in the UK at least one person is killed in a work-related accident**
- **Over 6,000 people are injured each day in the UK, related to work activities.**
- **Every year 750,000 people take time off work because of a 'believed to be' work-related illness**
- **25 people in 2012/13 died from preventable falls from heights**

(HSE Statistics for 2012/2013)

MANUAL HANDLING

The Manual Handling Operations Regulations 1992, as amended in 2002 apply to a wide range of manual handling activities, including lifting, lowering, carrying, pushing and pulling (including the use of trollies). These activities are a major cause of musculoskeletal disorders (MSDs) such as lower back pain, joint injuries and repetitive strain injuries.

More information on manual handing can be found at: **http://www.hse.gov.uk/pubns/indg143.pdf**

NOISE (INSPECTING NOISY FACTORIES/ ENVIRONMENTS)

The Control of Noise at Work Regulations 2005 aim to ensure that workers' hearing is protected from excessive noise at their place of work. There are two main causes of hearing damage, long and short-term exposure.

- Long-term exposure: The slow effects of working in a loud/noisy or continual noise environment
- Short-term exposure: Exposure to a loud bang or sudden extreme noise that may cause deterioration in hearing.

More information on noise control can be found at: **http://www.hse.gov.uk/pubns/indg362.htm**

SMOKING AT WORK (GET YOUR VAN A 'NO SMOKING' SIGN)

Smoking in public places and the work place is a public health matter within the UK. The HSE is not responsible for enforcing the legislation surrounding smoking but does fully support local authority offices by raising employers' awareness of their responsibilities.

Employers, managers and those in control of premises will need to display no-smoking notices and take reasonable steps to ensure that staff, customers, members and visitors are aware of the new law and do not smoke in buildings. Vehicles used for business purposes are also affected by the new law where a 'no smoking' sign needs to be displayed and the same controls for premises followed.

More information on smoking at work can be found at: **http://www.hse.gov.uk/contact/faqs/smoking.htm**

Preventing accidents and ill health, so far as is reasonably practicable, caused by work-related actives should be a key priority for everyone within a work environment. All employees are entitled to work in an environment where risks to their health and safety are properly controlled. Under Health and Safety Law the primary responsibility for these controls are down to the employer. However, employees have a duty of care for their own health and safety and that of the health and safety of others who may be affected by their actions relating to a work activity.

It is important to highlight that an owner, director, manager or self-employed persons are ultimately responsible for the health and safety of employee's, contractors and members of the public who come into contact with work activities. Beyond the required legal minimum standard of the employer, involvement in health and safety initiatives include the full participation of the workforce in order to achieve a high standards in the management of health and safety for all.

If you require any further Health and Safety at work information not covered in this article, please visit the HSE Website at, **www.hse.gov.uk**

Pest Control Waste and Lower Tier Carrier Registration

If you transport any kind of waste regularly, as part of your business, then you need to register as a lower tier waste carrier; for pest controllers this includes spent rodenticide bait, aerosol cans, empty packaging, redundant stock and florescent tubes. All of these waste products should be disposed of at a suitably licensed waste transfer station or other disposal site.

Pest controllers have a legal duty of care to check that any transfer station or other waste disposal site, which they may use, has the proper licenses in place. These may include;

- An environmental permit
- A waste exemption certificate
- A hazardous waste producer registration

In addition the activity must be under the control of a person holding a current WAMITAB (Waste Management Industry Training and Advisory Board) continuing competence certificate.

Registration as a lower tier carrier is free of charge if you are just transporting your own organisations waste. If you do not register you could be fined up to £5,000. Registration lasts indefinitely and your name will appear on the public register of waste carriers. The Environment Agency has now put in place a simplified form to allow companies to register as waste carriers in England and Wales and can be found here: **https://www.gov.uk/waste-carrier-or-broker-registration.**

CONSIGNEE RETURNS

You must complete consignee returns every quarter (three months) to the Environment Agency reporting what hazardous waste has been received at your premises.

You must provide a return, reporting your activities for each quarter, within one month at the end of that quarter:

Quarter 1 - 1 January to 31 March - provide by 30 April
Quarter 2 - 1 April to 30 June - provide by 31 July
Quarter 3 - 1 July to 30 September - provide by 31 October
Quarter 4 - 1 October to 31 December - provide by 31 January

It is recommended that you keep records of your returns for six years.

For more information on consignment notes and how to complete the forms go to: **http://www.environment-agency.gov.uk/business/topics/waste/32194.aspx**

Registration as a lower tier carrier is free of charge if you are just transporting your own organisations waste. If you do not register you could be fined up to £5,000

REGULATORY POSITION STATEMENT

A Regulatory Position Statement was issued by the Environment Agency in January 2014 (MWRP RPS 135 Version 3) allowing certain relaxation of reporting requirements for specified hazardous wastes. Spent rodenticide bait and other articles fall in to this derogation and it allows for a reduction in the charge imposed by the Environment Agency on the returns. See the position statement for further details.

CONSIGNMENT NOTES

A consignment note must be completed to accompany hazardous waste when moved from any premises. Consignment notes should be kept for a period of three years.

Step-by-step advice on how to complete each section of the consignment note for standard and multiple collections can be found here: **http://www.environment-agency.gov.uk/business/topics/waste/32196.aspx**

INSECTICIDE WITHDRAWALS & SUITABLE ALTERNATIVES

PCN has become aware of insecticide withdrawals via details on the Health and Safety Executive (HSE) website. Readers can find HSE confirmation of withdrawal dates on the HSE website.

Despite the doom and gloom that often surrounds product withdrawals, there are some excellent alternatives.

Despite the doom and gloom that often surrounds product withdrawals, there are some excellent alternatives.

PRODUCTS BASED ON LAMBDA-CYHALOTHRIN

Oxyfly (HSE 7811), the lamba-cyhalothrin based, microencapsulated residual surface spray for the control of nuisance flies and other insects in farm buildings, is being withdrawn.

Novartis, the manufacturers of Oxyfly, have confirmed that the final supply date will be 30th March 2014. The final use date is the 30th September 2014, after which it will be illegal to use or store Oxyfly, so it should be fully used or disposed of by then.

Thankfully, there are still a number of products approved for fly control on farms, such as the larvicides Neporex (based on cyromazine, manufactured by Novartis) and Dimilin Flo (based on diflubenzuron, manufactured by Certis). Adulticides include the paint-on bait, Quick Bayt (based on imidacloprid, manufactured by Bayer) and residual sprays based on synthetic pyrethroids such as Stingray (approved for 'animal rearing facilities' and manufactured by Pelgar) and Alphamax Plus (Killgerm Chemicals). ULV 500 (Killgerm Chemicals) can also be used as a cold fogging application to knockdown flies.

The same withdrawal dates also apply to GAT Lambda, manufactured by Hockley International Ltd and based on lambda-cyhalothrin. GAT Lambda (HSE 9243) has a final supply date of 30th March 2014. The final use date is the 30th September 2014, after which it will be illegal to use or store GAT Lambda, so it should be fully used or disposed of by then.

The situation regarding alternatives to GAT Lambda is straightforward. The obvious choice for a microencapsulated residual surface spray based on lambda-cyhalothrin is Demand CS, manufactured by Syngenta. Syngenta have confirmed that Demand CS is continuing to be supported. With a residual effect of up to 12 weeks, it is an important part of a pest controller's armoury.

PRODUCTS BASED ON DELTAMETHRIN

K-Othrine 1 % SC (HSE 5097) is going. The final supply date is 30th March 2014. The final use date is the 30th September 2014, after which it will be illegal to use or store K-Othrine 1 % SC, so it should be fully used or disposed of by then. However, there is a perfect alternative – the other version of K-Othrine, which is K-Othrine WG250. Still based on deltamethrin, but available as a modern wettable granule formulation, which has some advantages over K-Othrine 1 % SC that is formulated as a suspension concentrate. There are numerous advantages, the main ones being;

- K-Othrine WG250 is more cost-effective per job than K-Othrine 1 % SC
- Minimal operator exposure, the dry granules of K-Othrine WG250 are safer for the operator than mixing a liquid concentrate
- K-Othrine WG250 is one of only two products that can be applied to mattresses (Ficam W is the other). This application is essential for bedbug control

K-Othrine WG250 is also the alternative to other deltamethrin based products that are being withdrawn (according to the same dates as above, as listed on the HSE website), which are GAT Daleth and Deltamost products (Hockley International Ltd).

http://pestcontrolnews.com/bayer-withdraw-k-othrine-1-sc-market/

So, a message from PCN to pest controllers, be aware of the above withdrawal dates to make sure you are operating legally and take note of the suitable alternatives!

Development of a replacement for **anti-coagulant rodenticides**

Aston University

The need for rodent management is unequivocal; it is estimated that over a million undernourished people world wide would benefit from the crops saved by preventing rodent damage. However, current methods of rodent control are becoming less and less efficient.

Scientists at Aston University, in conjunction with the Pied Piper consortium, and funded by the European Union, have developed an alternative to anti-coagulant rodenticides with global implications.

THE PIED PIPER CONSORTIUM HAS DEVELOPED A NOVEL RODENTICIDE FORMULATION, AND DEVICE, WHICH ALLOWS THE DELIVERY OF THE POISON THROUGH A RAT'S SKIN

The rat is marked with a liquid line down its back having visited the pest control device.

For over half a century the main tool for rodent management has been anti-coagulants such as Warfarin. Global instances of anti-coagulant resistance (a genetic mutation making rodents more resilient to the effects of anti-coagulants) have steadily increased since the first observation of this phenomenon was published in Nature during the 1960s. Concerns for the effects the large amount of rodenticides distributed around the countryside are increasing.

The Pied Piper consortium has developed a novel rodenticide formulation, and device, which allows the delivery of the poison through a rat's skin. The formulation uses cholecalciferol (Vitamin D3), which is naturally synthesised in the skin of many mammalian species, negating the problems associated with anti-coagulant rodenticide resistance.

The rodenticide is sprayed on to the back of the animal when entering a pest control device. Rodents simply don't know they have been dosed counteracting another common problem with existing rodenticides, that of 'bait shyness'. Rodents are cautious mammals they typically wont approach poisoned baits if more familiar food sources are available. The system resolves the problem allowing control of a population to be initiated as soon as the device is sited. A pressurised can is able to dose hundreds of rodents individually while remaining unnoticed and in full control of the poison.

Academic results are being released through the literature which began earlier this month with the filing of the key patents.

Commercialisation steps are still to be taken, with an expectation the product will be on the market within two years.

Aston University's School of Pharmacy has a long and successful history of projects that have demonstrated impact alongside private and public organisations. Expertise can be accessed in many ways including collaborative research, student projects and placements.

Dr Ingham is the undergraduate pharmacy programme director at Aston University. Specialising in areas of formulation storage and compatibility he has completed a series of projects related to delivery through the skin (transdermal). He is the CEO of two small biotechnology companies where he continues his interests in drug device technologies alongside the university.

THE PCN INTERVIEW

Down at the Farm

PCN's latest interview involved a long drive into the countryside and twelve horses, two goats, six sheep, two dogs, three cats, fifteen chickens and six ducks. Intrigued? Read on...

Tina and Denny Maclean live in Leicestershire. The profits from Maclean Environmental, run by Denny, help fund and support Brolay Care Farm, run by Tina.

A pest control business and a care farm for vulnerable adults may seem worlds apart, but in fact frequently cross paths as Denny manages the administration for the farm and Tina occasionally fills in as a technician for Maclean Environmental. The off-grid, solar-powered farm has also been their home for the past 15 years.

How did you get into Pest Control?

Tina: I started out working in washroom services and ended up in pest control. The company I worked for went out of business and I started Maclean Environmental in 1990 to continue to provide a service to their customers.

Denny: I joined the business in 1992 after doing my pest control training. Before that I ran a garage and drove HGVs. Eventually I took over the business as Tina wanted to go back to working in the care sector.

What were your experiences of women in pest control in those early days?

Denny: 25 years ago, women weren't taken seriously in pest control but things have moved on a lot since then.

Tina: I always used to say, "The rats don't care who kills them!"

What is unique about Maclean Environmental?

Denny: We were one of the first members of the NPTA, our member number is 57. 2015 will mark 25 years in business. Today we have two full-time members of staff and we offer every kind of pest control. We have six children who have all been involved in the business at some point.

Tina has many years of experience in care, including as a mental health nurse prior to having children. She has been running Brolay Care Farm for 18 months.

Where did you get the idea for starting Brolay Care Farm?

Denny: We bought the building 30 years ago and moved in 15 years ago. Horses have always been a hobby in our family. Our children took part in competitions and show jumping.

Tina: I worked for a charity for 15 years and went from being a support worker to an area manager. I love working with people but I was getting less and less contact time. In one month I only had 12 hours of contact time and I made the decision then. Brolay Care Farm is hard work, but we provide health, social and educational care services directly to the people we work with. I just wish I'd started this 20 years ago.

What does Brolay Care Farm offer?

Tina: At Brolay Care Farm we work with adults and children with physical disabilities, learning disabilities and acquired brain injuries to provide an environment for them to spend time gaining confidence and learning new skills. We also run summer camps and we have had children visit from Chernobyl for a number of years. Activities at the farm include therapeutic farming and horticultural practices. By giving children who may struggle in the classroom, and adults who may not have had much experience in the countryside, meaningful and purposeful farming and agricultural activities. We aim to improve their overall wellbeing, as well as meet their educational or health needs.

Tina and Denny's hard work and dedication has clearly paid off as a number of vulnerable young people have now achieved NVQs in land-based studies at Brolay Care Farm. One of Tina and Denny's children, an NVQ assessor, intends to join the family business in the future which will enable even more vulnerable young people to undertake similar qualifications and continue the inspirational work that Brolay Care Farm does.

Further information is available from **www.brolay.co.uk** and **www.macenviro.co.uk**

"Brolay Care Farm is hard work, but we provide health, social and educational care services directly to the people we work with"

RSPCA issue wild birds & netting guidance

The RSPCA has recently issued important guidance on wild birds and netting. Pest controllers involved in bird control, particularly installation of bird netting, should be fully aware of the RSPCA guidance and need to take measures to reduce the risk of trapped birds in nets. Regular maintenance of bird netting is the key.

The RSPCA is publicising this issue and are advising that if you see a live animal entangled in or trapped behind netting, please contact the RSPCA's 24-hour cruelty and advice helpline on 0300 1234 999.

They are requesting information from the public, stating, "If you have seen dead birds in netting, or where you are aware of a regular issue of birds becoming trapped in netting, we would be grateful if you could please forward the following information to: wildlife@rspca.org.uk."

They are also requesting details of the address where the netting is located (include postcode where possible), the owner of the property or company (if known) and the address, if different to above, and the date of incident. The RSPCA will then use this information and write to the owner of the property to ask them to inspect their netting more frequently and to improve their maintenance schedule to prevent the problem reoccurring.

It has always been good practice for those involved in bird control to check and maintain their nets regularly, as well as installing them correctly in the first place. This stance from the RSPCA is a strong reminder that good practice is still important and should be adhered to.

Although the RSPCA is opposed, in principle, to killing or taking wildlife, they are not against netting as such, as they say that, "In circumstances where there is a proven case for controlling wild animals, we advocate the use of non-harmful methods of deterrence where possible. Bird deterrent netting can be an effective means of keeping birds off structures as it can prevent problems without needing to resort to other measures, such as killing birds."

"We recommend that anyone with netting installed on their property sets up a system to check regularly for trapped birds and to ensure any netting is in good repair."

They remind us that, "All wild birds, including pigeons and gulls, and their nests are protected under the Wildlife & Countryside Act 1981 (as amended). It is an offence, except under licence, to intentionally kill, injure or take any wild bird, take, damage or destroy the nest of any wild bird whilst it is in use or being built, and to intentionally take or destroy the egg of any wild bird."

It is certainly worth noting the implications of other legislation, such as the Animal Welfare Act 2006. The RSPCA guidance reminds us that, "Free-living wild animals are not normally covered by the Animal Welfare Act 2006. However, if they are under the control of man (for example as a result of having been captured or confined – such as becoming trapped in netting), then the legislation may apply. The extent to which it applies, and whether an offence is committed, will depend on the particular circumstances of a situation."

It is recommended by the RSPCA that, "Injured birds will require treatment from the nearest vet or wildlife centre." For information on RSPCA wildlife centres, check out www.rspca.org.uk/wildlife or for advice on 0300 1234 999.

Problems arise when netting is incorrectly installed or when it becomes damaged and is not repaired, leaving gaps where birds are able to enter and become trapped. If the netting is not checked or maintained, there is a risk that birds may suffer and die from injury or starvation.

If a bird does become trapped in netting, advice is as follows: The owner of the building where the netting is situated should be informed (if assistance is needed to free a bird call the RSPCA's helpline 0300 1234 999). The owner should then contact whoever erected the netting (usually a pest control company) as it is their responsibility to ensure that the netting is fit for purpose and appropriate in that location.

NEW BEDBUG RESEARCH

'The Mother of all Bedbugs'

The University of Sheffield has been at it again with the latest research regarding bedbugs. We have been reporting on Richard Naylor's University of Sheffield studies for years. Richard has now set up his own business (http://cimexstore.co.uk/) since gaining his PhD but fear not, because the University of Sheffield have continued researching bedbugs. Toby Fountain and The University of Sheffield colleagues have had their work published in the February 2014 issue of Molecular Ecology, under the title 'Human-Facilitated Metapopulation Dynamics in an Emerging Pest Species, *Cimex lectularius*'.

One thing that has been puzzling pest controllers and academics is the apparent ability of bedbugs to 'reappear' in large numbers after seemingly being eradicated. This new research points the finger at the exploits of single pregnant female bedbugs.

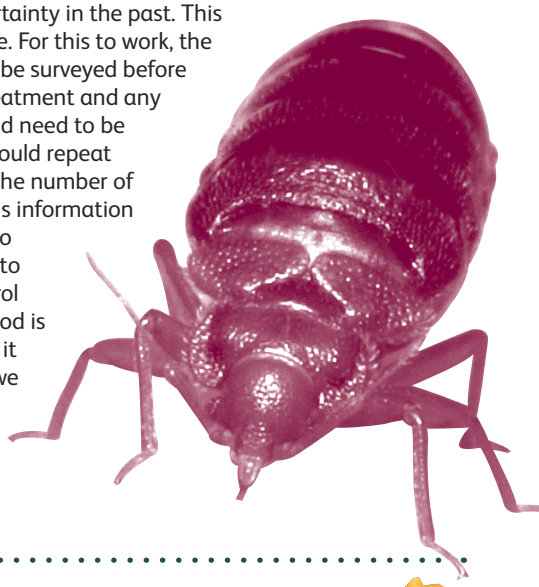
Researchers have used modern genetic technology to analyse the genetic makeup of bedbugs taken from properties in New South Wales (Australia), Birmingham and London. What they found was extremely interesting. The genetic diversity of bedbugs within a population in a premise is very low i.e. the bedbugs are very closely related. The fact that the bedbugs are so closely related is consistent with a single founding event per population. What this means is that every single bedbug in that area could have come from just one pregnant female bedbug being introduced. This clearly illustrates the power of a woman! This also shows how easy it is for bedbug activity to become established. The passive transfer of just one pregnant female is all it takes.

OK, so this suspicion of the importance of one pregnant female bedbug was already there – researchers had long thought that this was this case. However, what the current study adds is genetic PROOF that this really is the case. We can now state this with real confidence. It really is a welcome addition to the bedbug knowledge base.

A further finding that adds to the 'mother of all bedbugs' story, is that bedbug populations are very different to each-other in terms of relatedness. There is high genetic differentiation between populations, so they are not closely related at all. This adds further weight to the 'single female' idea and suggests strongly that there is limited connectivity between populations i.e. migrations between two populations are unlikely to be occurring.

With low genetic diversity, the question of inbreeding always comes up. With there being just one mother of a bedbug population in most cases, brothers and sisters will be mating with each-other. This inbreeding would normally be a problem in a population and could lead to inbreeding depression, as a result of the population bottleneck due to the single foundress effect (the single female bedbug introduction). What this means is that it is more likely that genes with a negative effect crop up in offspring, negatively affecting the 'fitness' of that individual and possibly reducing chances of survival. However, the research shows that despite the low genetic diversity, bedbugs spread and increase rapidly, suggesting the costs of inbreeding are limited.

A fascinating suggestion by the authors of the research is that the genetic techniques used could actually be useful in public health pest control. These techniques could be used to determine whether repeat bedbug activity is a result of pest management 'failure' or is a re-colonisation event. What powerful information this would be for a pest controller. Trying to pinpoint whether a control 'failure' is due to bedbugs being reintroduced or an error on the part of the pest controller (using the wrong products, missing harbourages) has been fraught with uncertainty in the past. This may be about to change. For this to work, the property would need to be surveyed before or immediately after treatment and any bedbug specimens would need to be kept for future study, should repeat bedbug activity occur. The number of bedbugs required for this information wouldn't be that high, so it could be integrated into normal inspection/control procedures. If this method is to be developed so that it is commercially viable, we would hope to be the first to report on it – watch this space!



PART 2: CONSIDERATIONS ON THE CONTROL OF COCKROACHES IN FOOD MANUFACTORIES

Michael D.S. Ayers B.Sc.(Hons) PhD. Managing Director Precision Pest Management.

Dr Mike Ayers, the Managing Director of Precision Pest Management, gives Pest Control News the benefit of his experience in cockroach control in the food industry, in the second of a three-part series of articles. Having set the background regarding cockroach control in food factories and principles of control in the first article (PCN 96), he now discusses control techniques.

In the food industry, treatment of colonies in equipment, bagged commodities or building structures is going to depend on local circumstances but the control options are as follows:

SPRAYS

These come in a variety of formulations; suspension concentrates, emulsions, lacquers, wettable powders and microencapsulated. These formulations are suitable for a particular surface and/or environment. Essentially, the active ingredient is mixed with a carrier (water or a solvent) to allow for dispersal onto surfaces in the environment. The cockroach comes into contact with it either by being covered by it during spraying or walking over it once it has been applied. The active ingredient enters the body by cuticular absorption or via ingestion during grooming.

As the process in essence means contamination of all the surfaces treated with the insecticide, these kinds of spray treatments are not acceptable for food contact surfaces or for surfaces that might be handled by people.

Sprays are really not much more than a 'line of sight' treatment. If you can see it you can spray it and getting sprays into areas you cannot see into is limited by the nozzle size and the length of the sprayer arm. Following the 'take the pesticide to the pest' rule, sprays are most effective when used for crack and crevice treatments and may not be as effective or present as low a risk when they are applied as a blanket coverage. This sort of treatment was once described as the equivalent of a machine gunner firing 700 rounds a minute for a day and hitting the target once. In my opinion, it is no longer considered effective or safe unless special circumstances dictate the risk is worth it. Treatment of cavities and voids is only possible if you can get the nozzle into the cavity/void and then the limit is the distance the spray will travel from the nozzle. This is generally from centimetres up to 1-2 metres. In practice, spray treatments in narrow wall cavities and inaccessible subfloor voids and drains is not possible to any effective degree.

Treatment of our hypothetical factory, with the deep-seated infestation in the walls and floor voids, is not likely to be practical with sprays, unless satellite colonies turn up. A single wandering cockroach on the floor is simply lost, as it has escaped from the harbourage and been unable to find its way back. A spray treatment of the floors is pointless and unsafe because unless there is a regular insect incursion, the insecticide will have been washed off before the next one turns up, resulting in unnecessary exposure by staff and technician. The most useful action from site staff is to capture the wandering insect for accurate identification and note precisely where it was found and which direction it was going in. Further interrogation of the insect is useless as I have never got one to reveal its hideout!

DUSTS

Active ingredients can be formulated with dry powder carriers. Dusts treatments are suitable for introducing into dry harbourages. Some dust products can be used for admixture into commodities like grain. The dust works like the spray in that the surfaces of the environment are contaminated by the dust where the insect comes into contact with it by walking through it. Like sprays, dusts get into the insect by cuticular absorption or ingestion during grooming. Recently, the use of Diatomaceous Earth (amorphous Silicon dioxide) has become more popular because it is non-toxic to mammalian systems due to its mode of action. Its natural lipophilia strips the wax layer from the cuticle of the insect, leading to dehydration and death.

Dusts are not suitable for damp environments as they are only effective when dry. However, dusts do have the advantage that they will disperse more effectively than sprays and are suitable for treating open dry cavities and voids. They are very useful for treating large open spaces but where the cavity is restricted the dispersal is limited to straight lines. This is because dusts do not disperse round bends very well, unless there is open space or air currents to carry them. Standard wall cavities can be treated relatively easily by drilling access points every 3-5m, as long as the cavity is relatively clear and not clogged with mortar. Solid brick walls tend to be untreatable. They may have a fine three-dimensional network of cockroach sized tunnels in gaps between the bricks left by the builders, but are in practice untreatable, because if one could find the exit, the preparation will not get more than a few inches from the hole before being defeated by the numbers of twists and turns. Ceiling voids are treatable if accessible and not insulated. Insulation makes effective treatment quite difficult although not impossible, but consideration should be given to the fact that the cockroaches might be living under the insulation and may not forage over the top where the dust is.

Treatment of our hypothetical factory would first require exploratory drilling of walls to identify which ones have cavities. Walls that do have cavities can be dusted. It is important to use the data from the population mapping to identify the peripheries of the infestation, because treatment should always start at the peripheries and work in towards the centre. I have come across several factories where enthusiastic pest controllers have identified the cavities as the source and started at the centre. Insecticides are generally very repellent, hence the need to take the pesticide to the pest so it cannot avoid it. If a cockroach can avoid the insecticide it will actively do so. This centre based treatment strategy only made the problem ten times worse because it forced the cockroaches out of their primary habitat and spread them into the rest of the factory, in many cases this includes up into the roof voids where there is a much greater risk of them falling off ledges into product.

The most useful action from site staff is to capture the wandering insect for accurate identification and note precisely where it was found and which direction it was going in. Further interrogation of the insect is useless as I have never got one to reveal its hideout!

BAITS

There are several new active ingredients now available in bait form. By and large, the modern cockroach gel baits are very effective if used properly. I have cleared areas with what turned out to be a single, but very detailed, application with subsequent follow up visits showing that all the cockroaches were dead and further application was unnecessary. However, they do rely on the cockroach finding the bait. This means the bait must be applied to the harbourage for it to be more effective.

In our hypothetical factory, cockroaches are in the drains on the ground floor as well as sub-floor voids. Treating a drain-based infestation with bait can be effective if one has access to enough of the drain system via manholes/inspection points. The problem with cockroaches in drains is that the drains are often damaged, particularly in the older factories, and that there is free movement by cockroaches from drains and subfloor voids. If this is the case then treatments of the drains with bait is an important part of the control process. However, it is very unlikely to be fully effective as the treatment is always at arms-length and there may be many cockroaches that are never exposed to the bait. It is important with a drain-based infestation to ensure that the cockroaches cannot escape from the drains. Drain covers should be properly fitted and drain seats repaired so that the lid can work properly. Where this isn't possible or practical we have found drain grease to be a useful means of effecting a seal, without permanently gluing the lid down with silicon sealant or similar.

If there is not complete access to voids and cavities then bait will have very limited effect. If escape points are known then baiting them is useful. It is better that they are sealed and E of ERD (Exclusion, Restriction, Destruction) is practiced at a very local level.

The role of aerosols, mists, fogs, fumigants, heat treatments, insect growth regulators and biological controls will be considered in the next issue of Pest Control News.

There are several new active ingredients now available in bait form. By and large, the modern cockroach gel baits are very effective if used properly

Hantavirus is here

Following the report of Hantavirus in a male patient in Yorkshire in 2012 and the identification of the virus in rat populations on his farm, Public Health England (PHE) has been conducting further research in the Yorkshire and Humber region. In light of their findings, they have extended their research across the UK. The main aim of this new research is to identify how prevalent and widespread Hantaviruses are in the UK.

Yorkshire and Humber Pest Liaison Group (YHPLG) invited Autilia Newton and Lisa Jameson from PHE (Yorkshire and Humber) to their meeting held in Ossett on 12th February 2014. Their presentation highlighted the facts regarding Hantavirus and explained why it is a virus of public health significance.

Hantavirus is a risk to public health because it is the only rodent-borne disease in the UK that can be inhaled.

Hantavirus is part of the Bunyviridae family, which are vector-borne viruses. With the exception of Hantavirus, transmission of this family of viruses occurs via arthropod vectors (mosquitoes, ticks, flies etc.). Hantaviruses are transmitted through contact with rodent excreta and urine. Hantaviruses can actually be inhaled, the virus is 'aerosolised' in particles of rodent excreta and urine that gets 'kicked up' into the air. Hantavirus is a risk to public health because it is the only rodent-borne disease in the UK that can be inhaled.

Hantaviruses cause two serious infections in humans:

- Hantavirus Pulmonary Syndrome (HPS)
- Haemorrhagic Fever with Renal Syndrome (HFRS)

HPS is commonly found in North and South America and affects the pulmonary functions of the human body, linked to breathing and the circulation of oxygenated blood. The HFRS strain is commonly found in Asia and Europe and affects the renal tract (kidneys). The strain of Hantavirus that caused illness in the Yorkshire patient was identified as being the HFRS Seoul Hantavirus. The typical incubation period is between two and four weeks, sometimes up to two months. It causes flu-like symptoms, lower back pain, eventually leading to kidney failure and can even be fatal.

There has not yet been a fatal case of Seoul Hantavirus in the UK. However, the virus does have a 15% mortality rate (number of deaths per unit of a population). Norway rats and Black rats have been identified as asymptomatic carriers (hosts) of the Seoul virus and other Hantaviruses.

About 150,000 cases of HFRS occur annually worldwide, with very few cases of Hantavirus being confirmed in the UK. The main reason for so few reported cases is probably down to under-reporting of the virus, due to difficulty in diagnosis.

Up until recently, only the antibodies to Hantaviruses have been found in humans (the human body produces antibodies to fight and protect against potentially harmful microorganisms). Antibodies would only be present in the human body if it had come into contact with that microorganism at some point.

As part of the investigation into the confirmed case of HFRS in the Humber and Yorkshire region of the UK, tests on local rat populations were carried out. Results showed that the patient's strain of Hantavirus (Seoul Hantavirus) was present in the rodent population on the patient's farm. This detection prompted the need for further investigation, to establish the public health risk of the virus to the region's population.

THE RESEARCH:

Blood tests and saliva samples were collected from 119 volunteers from the Yorkshire and Humber region of the UK. The main bulk of the volunteers providing the samples (98) stated their occupation to be farming, with the remaining 21 stating that they lived on a farm. This particular occupation population (those who work and/or live on farms in the region) were chosen due to

in the UK

their expected risk of contact with rodent excreta and urine. Analysis of the data revealed that 92.4 % of those questioned (sample =119) indicated they regularly see rats on their land. As Hantavirus is not the only zoonotic pathogen transmitted to humans by rodents, this significant result was of concern to PHE from a public health perspective.

In the late 1980s, research into the prevalence of Hantavirus in English farmers was found to be 4.7 %. Research carried out in the Yorkshire and Humber region in 2012/13 showed an increase in seroprevalence (the number in a population who test positive for a specific disease, based on a blood sample), with a result of 7.6 %. Nine of the 119 blood samples tested positive for Hantavirus antibodies, with seven of these blood samples showing a strong relationship with the strain of Seoul Hantavirus present in the Yorkshire and Humber patient.

The results have prompted the need for further research into Hantavirus antibody distribution, especially in high-risk occupation populations.

FURTHER RESEARCH:
The Yorkshire and Humber research suggests that the presence of Hantaviruses in the UK may be more widespread than previously thought. Breeders, owners or handlers of pet rats in the UK, or those who are exposed to wild or pet rats through their occupation, may be at significant risk.

Public Health England are conducting their research across the UK by collecting blood samples from four main target groups.

1. 100 from the general population (collected from the national blood service) to generate a baseline sample
2. 100 from owners and breeders of domesticated "fancy" rats
3. 100 from those with an occupational exposure to pet rats – breeders who supply pet shops
4. 100 from those with an occupational exposure to wild rats – small animal vets, pest control workers, sewage workers and farmers

The interest in "fancy" rat breeders and sellers resulted from two human Hantavirus cases identified in Wales in early 2013. The significance of this investigation was that those affected by the virus had only come into contact with their resident pair of pet Agouti rats. Up until this time "fancy" rats were believed not to carry zoonotic diseases.

Public Health England was present at PestTech 2013 where blood samples and questionnaires were taken from the fourth sector group listed above. PHE advised

The strain of Hantavirus that caused illness in the Yorkshire patient was identified as being the HFRS Seoul Hantavirus

the YHPLG that this study was falling short of the sample numbers required across the three occupation categories. PHE is requesting that anyone who wishes to contribute to the research from categories two, three or four listed above should contact PHE on hantavirus_study@phe.gov.uk for more information. Sewage workers are of particular interest to those conducting the research. (All individual sample information will be kept anonymous). Although the presence of Hantavirus has been identified in UK rodent populations, coming into contact with the virus is often related to a trajectory of probability linked to:

- Interaction with rodents carrying hantavirus
- Dose contact with the virus
- Reduced immune system/Underlying health conditions
- Housekeeping
- PPE precautions

Fundamentally, controlling both urban and rural rat populations is of the utmost importance to prevent human exposure to Hantaviruses. Hantavirus exists in UK rat populations and PHE strongly advise those who come into contact with rodents that they should not just focus on Hantavirus so don't forget to also consider the significance of leptospirosis and other rodent-borne diseases.

Group feeding in rats –

EVIDENCE FROM MOTION SENSOR CAMERA FOOTAGE

Practical observations made by pest controllers, as well as scientific research by the likes of Roger Quy (the Food and Environment Research Agency rodent expert), have helped our understanding of rodent feeding behaviour and informed rodent control practices for years.

It has long been said that Norway rats *Rattus norvegicus*, prefer to feed in groups. Practical observations and research have shown that this can be the case.

Research has shown that a quick uptake of rodenticide bait is more likely if the baiting method is in tune with rat foraging behaviour. A method of baiting whereby rats seek easy access, a quick escape and can feed in groups would seem likely to be successful. However, commonly used tamper-resistant bait boxes with internal baffles would seem to overly restrict a rat's access and discourage group feeding. There must be a better way to present bait effectively to rats?

In 2003, Roger Quy and colleagues found that among family groups housed in arenas, visits by single rats, regardless of age or size, to a bait box containing wheat grains were short, with a range of median values from 2-15 seconds per visit. If rats were not alone, visits were longer.

Another useful observation is that bait transfer becomes less likely if rats can feed in groups; biologically, group feeding presumably offers some protection from a predator attack.

So, a way of presenting bait to allow rats to feed in groups would be likely to improve bait uptake, while reducing bait transfer and therefore further reducing the risk to non-target species.

Pest Control News is aware of the AF Tyre-Baiter, a product that is designed to encourage group feeding in rats. The burning questions is; 'do rats really feed in groups from the AF Tyre-Baiter?' Pest Controller and mole trapping expert, Steve Gould, of Effective Pest Management, has provided us with the evidence. Steve was able to capture some remarkable footage of rats feeding in groups from the AF Tyre Baiter, taken with a motion sensor camera.

To see Steve's footage, visit this link:

http://youtu.be/I-FlvRfCpOQ

alternatively scan this QR code:

scan this QR code on your smart phone or tablet device to view the video

Looking at Steve's footage, the Tyre-Baiter certainly looks like a useful tool for rodent control, especially in rural areas.

Following on from this, Pest Control News spoke to Paul Hoyes at Killgerm, the designer of the Tyre-Baiter. Paul said, "It is ideal for use on farms and also landfill sites and it's particularly pleasing to see Steve's footage of it doing the job it was designed for, which is encouraging communal feeding in rats." Paul commented, "It's designed to utilise a used tyre to create a natural feeding area, which should increase bait uptake by rats. Just find a tyre on-site or supply your own and fit it onto the stand. Non-target animals are protected from consuming the bait, because the lid on top of the Tyre-Baiter and the low elevation from the group prevents access by animals larger than a rat. It's also easy to secure bait in the rim of the tyre. I think it also promotes an environmentally conscious attitude, re-using tyres is a way of recycling."

Paul was also pleased to see the technical benefits that motion sensor cameras are now offering to the pest control industry. Pest controllers can now see the hidden world of nocturnal vertebrate pest activity by using motion sensor cameras. Paul said, "I think the ability to record real-time videos of pest activity, such as rats and mice, is such a useful tool for the modern pest controller. It allows you to confirm the presence of pests and identify the source, access points and runs of these animals. Newer motion sensor cameras are also nice and sturdy, weather resistant, easily camouflaged and can be left unattended for weeks at a time; due to extended battery life. Using a high-capacity SD card means you can record video after video without having to worry about how much space you have left on the camera."

> "I think the ability to record real-time videos of pest activity, such as rats and mice, is such a useful tool for the modern pest controller"
>
> Paul Hoyes on the Motion Sensor Camera

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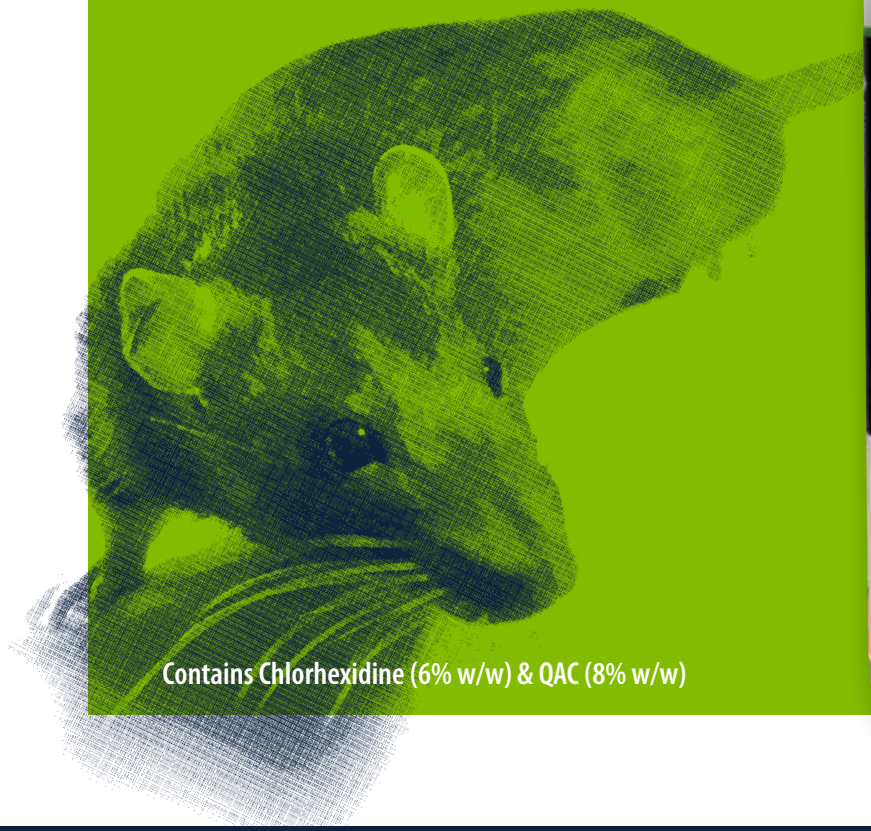

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Vodka beetles

A case study in urban pest control. A first record in a non-museum setting!

Pest controller, Malcolm Stowell (of Safeguard), has unearthed a new species in public health pest control – the first ever recorded case of Vodka beetle activity in a domestic setting. Previously, the Vodka beetle *Attagenus smirnovi* (can you see why it's called a Vodka beetle?!) has only been seen as a pest of significance in the museum sector. Malcolm's find shows that the public health pest control industry now needs to be aware. With the help of the technical editor of Pest Control News and museum pest control expert, David Pinniger, Malcolm describes this exciting discovery.

I remember when this all started, early last year, when I was called to a huge set of apartments in the NW8 region of London. To give you an idea of size, there were approximately 120 apartments, which were rather exclusive I might add. The tenants had literally just moved out and there had been complaints, mainly from the children, that they were being bitten and that the offending insects only seemed to come out at night. The beetle activity appeared to be coming from under the raised wooden floor and the tenants had reported seeing numerous beetles on a morning.

I remember thinking that the beetles looked like the usual suspects - varied carpet beetles, *Anthrenus verbasci*, but something wasn't quite right instinctively. I'm glad I sent them to Killgerm, for identification. I'd have never known I was dealing with Vodka beetles otherwise! I remember Matthew at Killgerm getting quite excited about it and he sought confirmation of his initial ID from Professor Moray Anderson and museum pest expert David Pinniger. He also told me that the source of the vodka beetles was likely to be wool and/or organic debris, which the larvae feed on.

Now filled with enthusiasm and excitement following the ID from the entomologists, I went back to the apartment complex a few days later. The apartment was now completely empty and I went in with the manager of the complex. Much to my disappointment, I couldn't find any beetles. I couldn't believe my luck, especially with the manager being there. Undeterred, I ploughed on with a thorough inspection and eventually found some of the beetles around the edges of the floors in the apartment. Phew, my perseverance paid off. I wondered why I only found them after I had been in the apartment for a period of time, following a thorough inspection. Having sought advice from Killgerm and David Pinniger, I was told that the vibrations caused by my movements were likely to have disturbed them to move out from under the floor.

Attagenus smirnovi, Vodka beetle by gbohne

I was still wondering about the cause of the reported 'bites' and whether these beetles really could be to blame for that. I'd even seen pictures of the 'bites' that the woman and children had experienced, so there was definitely something going on. Thankfully, Killgerm and David Pinniger were able to shed some light on this. I was told that Vodka beetles and their larvae are not biting insects. However, there are reports of dermestid larvae (Vodka beetles are in the family Dermestidae) causing irritation to people. Some people react to the urticating hairs of dermestid larvae. This could explain the bite-like reactions. Everything now seemed to be fitting into place.

Now armed with even more knowledge of the Vodka beetle, I was able to commence treatment. As well as using a residual insecticide, I was advised to use sticky flea traps for monitoring purposes, as there were reports that these had captured Vodka beetles at a botanical garden.

I performed an initial spray treatment with K-Othrine WG250 and put the sticky flea traps in place. I picked K-Othrine WG250 as it is a convenient wettable granule formulation, contains Deltamethrin as the active ingredient and provides excellent residual activity. On my return I found a few dead adult beetles. Following this, the maintenance staff tried to take some of the wooden floor up to expose the void beneath, which was unfortunately unsuccessful. Instead, we removed the beading around the edge of the rooms and I put Killgerid powder (diatomaceous earth) into the exposed gaps around the edges. The beading was then replaced the day after. I also conducted a second and thorough treatment with K-Othrine WG250, spraying the wall-floor junction and wooden floors in their entirety. My next visit was to be in two weeks' time, when I planned to inspect the monitors and use this information to decide whether a further insecticide application was required.

On my follow-up visit I inspected all rooms and I was pleased to find only one beetle, which was a great result. I was determined to eradicate the vodka beetles. The decorators had been painting the apartment for the previous two weeks and I asked them if they had seen anything. They said they had swept up some 'insects' in the two rooms where there was a known problem and also removed some insects from the window sills in the same rooms.

Next, I inspected the monitors and there were half a dozen Vodka beetles in each of the two traps. This was really interesting, as it showed the value of monitoring. I had only found one beetle with my own inspection, but the monitors showed greater numbers.

The beading around the perimeter of the rooms had now been put back into place, thus encapsulating the Killgerid beneath, which I had put down to provide prolonged residual control.

Based on the evidence of Vodka beetle activity provided by the monitors (and decorators), I decided that a further spray treatment with K-Othrine WG250 was justified.

I was still wondering about the cause of the reported 'bites' and whether these beetles really could be to blame for that. I'd even seen pictures of the 'bites' that the woman and children had experienced, so there was definitely something going on

Before I could confidently say that the Vodka beetles had been eradicated, I decided that I needed to make at least a couple more follow-up visits /inspections.

On my next return visit, there was no evidence of live Vodka beetle activity, just one dead adult beetle. I did speak to one of the porters (who lives in the basement apartment directly beneath the apartment that had the problem) and he reported that he'd seen some small insects first thing in the morning (which was the same symptom and how this all started in the first place).

He promised some specimens for when I planned to return two weeks later.

After yet another inspection, I found no more beetles or larvae within the apartment that originally had the problem. The apartment remains unoccupied, but is still at a temperature of 18-20 degrees celcius. I suspected that this temperature would continue to permit activity of the beetles and that I'd probably find them on the monitors if they were continuing to be active. I checked the porter's apartment that is directly below and he did have some Vodka beetles. Following an insecticide treatment, he has reported no further activity.

Job done!: The first ever case of Vodka beetles in a domestic setting fully eradicated!

ATTAGENUS SMIRNOVI, THE VODKA BEETLE OR BROWN CARPET BEETLE.

KEY FEATURES
The adult beetles are 4 – 6mm in length, oval shaped and covered in very short 'downy' hairs. They have a black head and thorax, with brown wing cases (elytra) and the antennae have a long club. Larvae can reach 8mm long and they are a golden-brown colour with a brush-shaped tuft of hair at the posterior. Adults fly well.

BIOLOGY
The optimum temperature for this species is about 24°C, why is why observations of this beetle in Northern Europe have been made almost always indoors. The female lays about 50 eggs and the larva will develop to an adult beetle in 6 - 18 months at room temperature. As the species mainly lives indoors in Northern Europe, both larvae and adults are found at all times of the year.

DISTRIBUTION
These beetles are generally restricted to London in the UK. They are found throughout Northern Europe and Russia.

SIGNIFICANCE
As the adult beetles eat very little, it is the larvae that are the real pests. The larvae feed on wool and organic debris, causing damage by directly feeding on such materials and also by leaving behind cast 'skins' and frass. These beetles are typically found where organic debris accumulates, such as in dead spaces and voids, especially in museums and historic houses. There are reports of the larvae feeding on dried plants, seeds, or animal material, including feathers, hides and furs.

Attagenus smirnovi, Vodka beetle by Andreas Herrmann

CONTROL
Treatment consists of identifying the extent of infestation and then treatment of affected areas with a residual insecticide. Checks should be made to ensure that old bird nesting material or similar is not harbouring infestation.

If carpets are to be treated then an insecticide that will not stain or otherwise damage the carpet should be selected.

‘Raining rats and bugs’

THE RISK TO PUBLIC HEALTH FROM FLOODING

The recent flooding events in the UK have left many of the population facing desperate and, in some cases, tragic times. Damage to property, displacement and even loss of life are major concerns.

Conditions provided by the flooding events also pose further risks, such as the potential impact of pests of public health significance that can thrive in such circumstances.

Pest Control News has been given permission to reproduce extracts of an existing advisory note regarding pests and flooding.

FLOODS

Floodwaters often bring mass devastation, flooding homes and other premises, causing stress and deprivation. The presence of floods also frequently heightens the risk of disease.

Floods can create the perfect environment for pests, such as rodents, since they are often displaced from sewers and burrows. The standing water, waste, sewage and debris left behind provide ideal breeding grounds for insects such as mosquitoes and other flies. Such favourable conditions can result in an abundance of disease carrying and nuisance causing flies, posing a significant risk to health.

DISEASE

Coliform bacteria and other faecal organisms can be associated with floods, stormdrains, sewer back-up incidents, etc.

Weil’s disease or Leptospirosis, carried by rodents, has been associated with flooding. Some studies have found a 15-fold risk of the disease associated with walking through floodwaters.

A recent report revealed that there were 42 cases of Weil’s disease reported in England in 2010. Epidemics may be associated with changes in human behaviour, animal or sewage contamination of water, changes in animal reservoir density, or following natural disasters such as floods. It is important to be aware of the flu-like symptoms caused by a Leptospirosis infection. Those who may be exposed to Leptospirosis should take relevant precautions listed on the ‘Leptospirosis (Weil’s disease)’ cards, which should be kept with you at all times.

INSECT PESTS

Filth and debris left by the floodwaters create excellent breeding conditions for houseflies, mosquitoes, other flies and insects associated with decaying organic matter. Those insects may be capable of causing significant nuisance and in some cases spreading disease. Control of such insects involves removal of the breeding source, which can be standing/stagnant water, and accumulations of organic matter in drainage systems. Flooded cellars in particular, can harbour Culex pipiens biotype molestus, a human-biting mosquito. Accumulations of decaying organic matter can provide breeding sites for a number of different ‘drain’ flies that may be involved in disease transmission and can certainly reach nuisance proportions. Such families of flies include the lesser dung flies family Sphaeroceridae, fruit flies family Drosophilidae, owl-midges or bathroom flies family Pyschodidae, fungus gnats family Mycetophilidae, sciarid flies family Sciaridae, window gnats family Anisopodidae and others. Sites that are very wet, for at least part of the year, may favour the development of biting midges, family Ceratopogonidae.

RODENT PESTS

After flooding, many rodents are displaced from their natural habitat. The rodents will then find areas that provide food, water and harbourage. Inevitably, rodents enter houses, sheds, barns, and other buildings. Flood-damaged premises are particularly attractive and provide easy access for rodents. These unwelcome rodents may cause damage to property directly by gnawing or indirectly by depositing faeces and urine. Rodents can threaten public health, as they may carry diseases such as *E.coli*, Salmonella and leptospirosis. The high instance of recent flooding in the UK has increased concern regarding exposure of householders to these diseases and rodent control is likely to become increasingly important.

GENERAL SAFETY PRECAUTIONS

The Environment Agency recommends the following Safety Precautions:

- Wear protective clothes, sturdy boots and waterproof gloves and face masks when handling debris
- Floodwater may be contaminated by sewage, chemicals, or rat’s urine (leading to Weil’s disease)
- Keep your hands away from your face while cleaning and always wash your hands if you come into direct contact with floodwater or silt
- Wash all cuts and grazes and cover with a waterproof plaster. Get a tetanus jab if you are not already inoculated

Contact the Environment Agency for further advice on cleaning up after a flood: **0845 988 1188**.

SUGGESTED FLOOD CLEAN UP PROCEDURE

After referring to the Environment Agency’s advice above, we suggest you follow this general flow diagram to ensure a safe and efficient flood clean-up procedure:

Conduct COSHH and Risk Assessments.

↓

Use a disinfectant to control coliform bacteria and other faecal organisms associated with floods, storm-drain and sewer back-up incidents.

↓

Use a disinfectant to sterilise soiled carpet floors and articles as part of the flood clean-up operation.

↓

The use of a ULV disinfectant could be valuable when contaminated matter is airborne or when large open indoor areas require space and surface treatment with a biocide, after physical removal of contaminated organic matter and prior to the application of a surface disinfectant.

↓

Flooding may result in rodent and/or insect infestations. Consider methods of rodent and insect control.

Disinfectants are also available that have been specifically formulated to deal with rodent-borne diseases, such as Leptospirosis. It is important to only use disinfectants that state an effect against the microorganisms that you are attempting to control.

STAY SAFE!

BIRD LICENCES UPDATE FOR 2014

As the new year has now begun, the pest management industry needs to be up to date with the latest bird licences, such as the General Licences and Class Licences issued by Natural England. Pest controllers in Wales, Scotland, Northern Ireland and the Republic of Ireland should also check the current licences with their relevant government departments.

When licences are renewed each year, changes may be made to the terms and conditions or to the accompanying advice. You are therefore advised to read the latest version of any licence you intend to use before you use it for the first time each calendar year.

ENGLAND

The new Natural England bird licences for 2014 have been reviewed and there are no changes that impact on their practical use by those in the pest control industry, when compared to the previous year. There are some slight changes in the wording of the licences, but the same meaning is still there.

SCOTLAND

Changes to the licences for Scotland are detailed below:

Air safety

Item 20 – "Any Larsen mate or Larsen pod trap must be firmly pegged or staked or tethered prior to use so that it cannot be moved should a non-target animal be caught."

Conservation licence

Item 12 – "In the case of other multi-catch cage traps, the following additional species may be used as decoys (in addition to those species listed above)" - 'Jay' has been removed from this list of decoys.

Item 20 – "Any Larsen mate or Larsen pod trap must be firmly pegged or staked or tethered prior to use so that it cannot be moved should a non-target animal be caught."

Damage to livestock etc.

Item 11 – 'Jackdaw' has been removed from the list of species of decoy birds.

Public health

Item 20 – "Any Larsen mate or Larsen pod trap must be firmly pegged or staked down or tethered prior to use so that it cannot be moved should a non-target animal be caught."

The 'Ruddy Duck' has been removed from the Scottish 'Public Health…' and 'Damage to Livestock…' Licences, whilst it remains on the Conservation Licence.

WALES

There are no practical changes as far as a pest controller is concerned. Apart from the below which has been removed and does not form part of the 2014 Air Safety Licence…

Item 5 (taken from the 2013 Licence) "No bird(s) shall be killed or taken and no nests or eggs taken or destroyed, except within the perimeter of the aerodrome."

Welsh licences are now issued by Natural Resources Wales, not CCW (Countryside Council for Wales).

NORTHERN IRELAND

The current versions of the bird licences for Northern Ireland have not changed from the previous versions. This has been confirmed in a conversation with a Northern Ireland Environment Agency Wildlife Officer.

REPUBLIC OF IRELAND

In brief, there have been no changes to the general terms and conditions. The only change for 2013/2014 season was the issue of the one licence, "Public Health" / "Damage to Crops or to Livestock" / "Damage to Fauna", which now encompasses and replaces individually issued and named counties and provinces (Cavan, Donegal, Connacht etc.) under the premise of the "State."

LICENCES FROM THE RELEVANT BODIES CAN BE OBTAINED VIA THE CONTACT DETAILS BELOW:

Natural England
http://www.naturalengland.org.uk/ourwork/regulation/wildlife/licences/default.aspx
Tel: 0845 601 4523

Scottish Natural Heritage
The bird licences for Scotland
http://www.snh.gov.uk/protecting-scotlands-nature/species-licensing/bird-licensing/
Tel: 01463 725364

Natural Resources Wales
http://naturalresourceswales.gov.uk/apply-buy-report/apply-buy-grid/protected-species-licensing/uk-protected-species-licensing/general-licences-birds/?lang=en#.UwSaUfl_uSo
Tel: 0300 065 3000

Northern Ireland - Environment Agency
http://www.doeni.gov.uk/niea/biodiversity/wildlife_management_and_licensing/wildlife.htm
Tel: 028 9056 9605

Republic of Ireland - Wildlife Licensing Unit, National Parks and Wildlife Service
Tel: +353-1-888 3242 or 1890 383 000 from Republic of Ireland only
http://www.npws.ie/licences/

The Ruddy Duck remains on the Scottish conservation licence.

2014 Year Ahead Conference:

Regulatory services for economic growth and public health.

This Year Ahead conference, for regulatory services (Trading Standards and Environmental Health, Including Licencing) was held in partnership with the Chartered Institute of Environmental Health (CIEH), Better Regulation Delivery Office (BRDO), Local Government Association (LGA) and Trading Standard Institute (TSI) at the Holiday Inn Hotel, Stratford-upon-Avon on 13th and 14th February.

The conference opened with a welcome to delegates delivered by the CIEH principal, Janet Russell. Over 200 delegates were commended for their efforts and resilience in getting to the venue and attending the event, in what had been labelled, "The worst storms to hit the UK in over a century."

Healthy Cities and Healthy Communities was the title of the first plenary session. This session described how local government are having to adapt to the changes in their structure. Financial pressures placed on the regulatory services over the years have been very high; an identified increase in the number of public health protection services with no option but to merge with neighbouring authorities was emphasised and the aim to achieve expectations is resulting in disjointed decision making regarding public health services.

John Ashton CBE, President, Facility of Public Health, explained that local government, without a central government resource base, is making the provision of local services difficult if not near impossible to deliver. Delegates were then taken on a journey back to the times of John Snow (a British Physician who is considered to be one of the founders of epidemiology for his work identifying the source of a cholera outbreak in 1854) and Sir Edwin Chadwick (an English social reformer, noted for his work to improve the poor laws of the 1800s and linking poor living conditions and sanitation to poor health). These men were pioneers of their time; highlighting public health issues and actioning change, with the introduction/improvement of public health protection laws and the development of environmental health officers (now practitioners). Emphasis was placed on the reality that public health protection services could be reverting back to the pre-1940s, where government and local authorities will no longer control regulatory services.

Listing improvements made to sewerage, waste, air pollution, food, water quality and living conditions that Snow and Chadwick had contributed to, disappointingly, discussions fell short of mentioning pest control as a public health protection service.

Pest control has become fragmented from environmental health departments and is seldom seen as part of an environmental health service today. This is of great concern to the National Pest Advisory Panel (NPAP) which is part of CIEH. NPAP was gold sponsors of the event in order to raise the profile of pest control in these difficult times.

Although pest control was not on the agenda at the conference, the presence of the NPAP reinforced the importance of public health protection from the control of public health pests.

LEADING INTO THE EVENING:

The Year Ahead conference is a two-day event, with a delegate meal on the evening of the first day. Delegates have the opportunity to digest communication from the day, have discussions with like-minded people and relax after a lots of information gathering.

At the meal, it was humbling to see that, Jonathan Peck (honorary member of the CIEH) continues to hold a presence, even after his untimely passing in September 2013.

CIEH events such as this rarely have speeches during the meal. However, Graham Jukes OBE, CIEH Chief Executive, made this event the exception by holding the room in memory to Jonathan. Graham personally expressed his condolences, and also reflected this on behalf of the CIEH family. Delegates were also provided with information for the memorial being held in Jonathan's honour at Southwark Cathedral and CIEH in London on 11th April 2014.

In a memorandum on the back of the menu card, the CIEH put together a fitting tribute to Jonathan with the words of Maya Augelou, an American author and poet, who said:

"I've learned that people will forget what you said,

People will forget what you did,

But people will never forget how you made them feel"

Information regarding the Jonathan Peck Memorial can be found at **www.jonathanpeckmemorial.com**

ICUP 2014

PROGRAMME PUBLISHED IN JULY

Book your place now for the International Conference on Urban Pests (ICUP) to be held at the University of Zürich in Switzerland on 20 – 23 July 2014.

Only held once every three years, this highly popular, non-profit, conference is the leading international forum for sharing information and ideas on the impact, biology and control of pests in the urban environment. It is attended by scientists, pest management professionals, and academic and government researchers from not only the UK, but also from all around the world.

Participants can expect discussion on a wide range of topics, particularly bed bugs, ants, flies and mosquitoes. Invasive or exotic species also receive special attention.

BED BUGS LEAD THE WAY

The North American bed bug expert Dr Michael Potter, of the University of Kentucky, will review the position in the USA. The control of bed bugs occupies a large proportion of American pest controllers' working time but are they winning the battle? He will present the latest USA -wide survey of pest control companies as well as research highlights from his own laboratory. Prof. Dini Miller of the Virginia Tech, USA will present her work on bed bugs in large tenements in low-income areas of the USA.

Aircraft are far from immune from bed bugs, and Adam Juson of Surrey-based Merlin Environmental will report on more than 100 aircraft he has inspected with bed bug infestations, along with various monitoring and control options.

NUMEROUS PAPERS FROM UK RESEARCHERS

There are several papers from researchers in the UK, including a paper presenting the findings in relation to the provision of pest control services by the local authorities in the UK given by Joanne Fozzard with Prof. Gai Murphy and Sabra Fearon. A paper regarding sewer baiting will be presented by Dave Oldbury with Sabra Fearon, Joanne Fozzard and Prof. Gai Murphy, representing NPAP.

Matthew Davies with Prof. Moray Anderson from Killgerm will be presenting their results regarding bacteria associated with *Musca domestica* in UK hospitals, Clive Boase of the Pest Management Consultancy will debate the presence of *Lasius neglectus*, whilst Dr Bob Childs and David Pinniger address woodworm topics. Heat treatment for insect control is to be addressed by Dave Hammond of Thermokil along with a new concept of cockroach baiting from Xenex's Dr Julian Entwistle.

In addition to the formal presentations, there are also numerous workshops where delegate participation is sought, a poster session, a set of proceedings, conference dinner and ample opportunity to network with delegates.

Registration is open and details are all posted on the website at **www.icup2014.ch**. Zurich is easy to get to from the UK with direct flights from London, Birmingham, Bristol and Edinburgh. Alternatively, travel by train.

THE NEXT GENERATION OF SOCIAL NETWORKS

Whether you only occasionally log into Facebook on your computer or check your Twitter feed through your smartphone every hour, social networks have become a huge part of our lives. However, the world of social networks is growing beyond just Facebook and Twitter. Here is a brief guide to three you might have heard of which are growing fast:

Instagram

What is Instagram?

Instagram is a social network for sharing photos and videos. What's unique about Instagram is the different filters you can apply to your photos, giving them a retro feel.

How does it work?

Other users can follow your feed, and you can follow theirs, but you can also share your Instagram photos easily on Facebook and Twitter.

Pinterest

What is Pinterest?

Pinterest allows you to collect pictures and photos you like ("pins") and organise them into boards. You can have boards with different subjects such as wildlife and the outdoors.

How does it work?

Other users can follow you or just one of your boards and you can do the same to them. You can either upload your own pins, create pins of things you like on the internet, or "repin" other users' images onto one of your boards.

Vine

What is Vine?

Vine is a very new social network for creating and sharing six-second videos.

How does it work?

As with Instagram and Pinterest, you can follow other users and they can follow you. Your short videos can be shared through Facebook and Twitter.

If you're wondering how this applies to pest control, there are many ways to get creative! A good start would be to post photos of your typical day at work, funny things you might have seen on the job and what's happening in your community. You can mix business interests with personal interests but a good rule of thumb is not to post anything you wouldn't want customers to see. To build up your following, search for current and potential customers such as local restaurants, shops and bars.

These new social networks have lots of potential if you're looking for new ways to connect with customers and like-minded individuals. And if you're already interacting with your customers through Facebook and Twitter there's a good chance they are on Instagram, Pinterest or even Vine. So stay ahead of the game make sure you build a presence before your competitors do!

A legacy to be proud of

A true visionary, Jonathan Peck pioneered many of the initiatives that have shaped and continue to impact the pest management industry. He created a legacy that has made a difference to many, safeguarding the industry whilst ensuring that best practice is at the fore.

Following a memorial service at Southwark Cathedral on 11th April, presentations will be given at the Chartered Institute of Environmental Health (CIEH) by industry leaders on Jonathan's key areas of work. These presentations will celebrate the accomplishments of a career that spanned over 40 years, and celebrate a legacy to be proud of.

11am	**Memorial Service at Southwark Cathedral, London Bridge, London, SE1 9DA**
1pm	**Lunch at CIEH, Chadwick Court, 15 Hatfields, London, SE1 8DJ**
2pm	**Presentations from the industry**
4-6pm	**Aperitifs and Networking**

For more information in relation to the memorial and Jonathan Peck's chosen charities please visit **www.jonathanpeckmemorial.com**

DEADLINE INSECTABAN RESIDUAL EMULSION

An insecticide with a long lasting residual activity for the control of flies and crawling insects; including cockroaches, fleas, ants, earwigs, silverfish and other bristle tails, beetles and booklice.

Deadline Alpha Express

CONTAINS 3.9% ALPHACHLORALOSE.

Alphachloralose is an acute-acting active substance that has been newly formulated and especially designed for use in tamper resistant bait boxes. For fast and effective control of mice indoors in a wide variety of locations. Only a small scratch from a mouse's incisors on the block's surface is sufficient.

Killgerm Training Manual A REVIEW

Pest Control News has been sent a shiny new copy of the latest revision of the Killgerm Training Manual, so let's see what we think of the new version.

First impressions are great – a modern, clean, sleek front cover in a sturdy binder. Quickly flicking through the pages and the first major improvement is clear straight away. The pages are more like cardboard than paper – very sturdy. This is definitely an improvement on previous versions, as the pages were a bit too flimsy and often ended up being ripped out of the binder.

The general layout and design has been significantly modernised. Plus, a number of photographs have been replaced, which is a good thing, as many of the photos from the previous version were beginning to look a little dated.

Well, it looks nice, but does it do the job? No point having a pretty looking technical manual if it doesn't have the information you want! Luckily, the content hasn't been messed with too much, as previous versions have always been stacked with information.

In fact, the Royal Society for Public Health has it on their reading list as an essential text for their RSPH Level 2 courses in pest management, which tells you something. It covers all the pests you can think of, with plenty of information on their biology and control.

We spoke to the author/editor responsible for overseeing the manual updates over the years and he told us that the following sections have received the most attention in terms of being updated; Waste Disposal (updated by waste experts Philip Dalgliesh and Stephen Leahy), Foxes (updated to include the latest 'living with urban foxes' guidance from CIEH), Bird Biology and Control (updated by bird expert Nigel Batten).

It's difficult to pick fault with the manual – it is perhaps quite a large and in-depth piece of work, so it's not really the kind of publication for quick reference in the field, but that's not really what it is intended for. As a 'back at base' reference manual/bible of pest control, it's invaluable.

Motion Sensor Camera

The Motion Sensor Camera offers the exceptional ability of recording real time videos of pest activity, such as rodent activity, in an infested area. It allows the operator to confirm the presence of pests and identify the source of an infestation.

Features:
5MP Camera
Photo or Video (colour)
Night mode (Black and white)
Adjustable sensitivity
Mini USB-output
SD card slot (32GB max)
Requires 4 AA batteries for camera power supply (not included)

AF Pinpoint

NOW AVAILABLE IN **BLACK!**

This popular and versatile bait station is now available in clear, white and black to suit all situations. Providing safe baiting for ant and cockroach species, it protects bait against dust and drying out and can be installed on both horizontal and vertical surfaces.

LEGAL WATCH:

Mounting Liability for Pest Professionals

By Jeff Lipman, Attorney & Dr. Stuart Mitchell

Pest Control News has been keeping an eye on the pest control industry in the United States, especially as legal cultures have the potential to 'migrate' from 'across the pond' to the UK. Here we update our readers on the latest legal developments, courtesy of PestWest USA's Principal Technical Specialist, Dr Stuart Mitchell and Attorney Jeff Lipman.

As practicing pest professionals, there are more and more acronyms used with industry "jargon." There are a few significant acronyms of which to be aware. One obvious acronym is "IPM," (Integrated Pest Management) and another is "HAB" (human-animal bond).

As liability stems from uncertainty, if professional services are provided for bedbug, flea, and tick elimination, HAB becomes an imperative. HAB must be considered in any service protocol. Pest elimination treatments, influenced by pest technician production goals, must not pose a greater danger to companion animals and tenants than the pests themselves (This is the American way of saying 'assess the risks and protect non-target species).

Pest technicians are generally compensated on their production. This model, by its very nature, encourages the technician to render pest control services as quickly as possible. In one sense, the pest control firm wants to provide the best service and encourage proficiency and efficiency of their pest technicians. However, this business model may often times conflict with their pest technician providing quality service versus earning a living. This places the issue of quality control in play.

An example of where this problem comes into play is in the arena of commercial bedbug, flea, and tick elimination; where, in multiple-unit housing, an entire floor or even building structure requires treatment. If the pest technician is striving for speed, quality will naturally suffer and bedbugs, fleas and ticks may in fact survive and spread.

Most pest control firms ignore this issue, exposing them to future litigation. Building owners and managers who get sued by distraught tenants (whom may also be companion animal owners) for infestations will likely defend the case based on their conduct in relying on their pest control firm as being reasonable and that the cause of the continued spread of infestation is linked to the inadequacy of the pest control firm rather than their own negligence ('passing the buck!').

While the building managers and owners may not have the pest control firm in their line of sight, the defense attorneys and insurance companies paying for their defense most certainly do.

The solution to this potential problem lies in quality control and documentation. Actually, documentation can be synonymous with quality control. The pest control firm should require their pest technicians to log in the time-in and time-out of each particular unit and specify what quality control measures are or were being taken either in the general service agreement or post treatment report. This post-treatment documentation can be simply accomplished by the technician checking off on a document (whether written or electronic) signifying that they complied with their standard operating procedure.

The purpose of the documentation is not only to preserve the information but also for the pest technician to think twice before they leave a job site

The purpose of the documentation is not only to preserve the information but also for the pest technician to think twice before they leave a job site as well as whether they spent the requisite time and attention to each project performed (common ground in the US and UK pest control industry, the huge importance of record keeping).

Influenced by behaviors that are essential to health and well being, the human-animal bond is a mutually favorable and dynamic relationship. HAB involves emotional, psychological, and physical interactions between people, animals, and the environment.

The American Veterinary Medicine Association (AVMA) recognizes the following.

- The human-animal bond has existed for thousands of years.
- The human-animal bond has major significance for veterinary medicine; as veterinary medicine serves society; it fulfills both human and animal needs.
- The existence of the human-animal bond is importance to client and community health.

The veterinarian's role in the human-animal bond is to maximize the potentials of this relationship between people and animals. This role must be included within the service protocols of the pest control firm and pest technician. Leave the medical practice and parasitology to the physicians and veterinarians.

MILNERS Solicitors

LAW'S BITTER LITTLE PILL

Whilst the market appears to be improving, during the stark recessionary time when cash flow was particularly tight, a significant amount of supply companies cottoned on to what the banks have been doing for many years and incorporated a Personal Guarantee into their standard terms and conditions. The Statute of Fraud 1677 sets out the basis for what a Personal Guarantee must contain – and simply the Guarantee must be in writing and signed by the guarantor/his or her authorised agent.

The sting of a Personal Guarantee is that it does exactly what it says on the tin. As opposed to your company being responsible for the debt, which it would be primarily, if a Personal Guarantee has been signed in order to establish a trading relationship with a supplier, then if your company unfortunately goes into liquidation, the pain does not end with the demise of your company. Many businesses have signed up for goods/services and at the same time inadvertently signed Personal Guarantees without properly reading what they were signing in order to obtain those goods/services. There are very limited defences to a Personal Guarantee – liquidation of your company certainly is not one of them.

The Unfair Contract Terms Act 1977 may apply and may give some relief. Indeed if the guarantor did not consent to the increasing credit to the company it is an established authority that a guarantor will be released from liability under a Guarantee if there was a material or "not insubstantial" change to the underlying agreement in respect of which the Guarantee had been given (unless the guarantor had consented to that change, or if the change, whilst material, cannot be otherwise than beneficial to the guarantor).

Some relief can be taken from the case of Triodos Bank NV v Dobbs 2005 whereby the Court of Appeal held that if a variation was not, in substance, a variation or amendment to the original underlying transaction but was, in fact, a new agreement outside the general purpose of the original Guarantee then the guarantor would not be liable in respect of that new agreement – even if as in Triodos, the guarantor was a director of the borrower and was aware of the revisions to the underlying agreement.

Personal Guarantees are different to Bank Guarantees where there is some greater protection afforded to the consumer/business (economic duress, error, misrepresentation etc) but the simplest way of avoiding Guarantees is not to sign them in the first place, as sadly they can truly become a very bitter pill to swallow.

As always if any questions arise from the above or if you have any queries concerning any other legal issue for that matter please do not hesitate to contact Giles on either:

0113 245 0845

giles.ward@milnerslaw.com or

uk.linkedin.com/pub/giles-ward/31/187/6b3

MilnersGiles

"If a Personal Guarantee has been signed in order to establish a trading relationship with a supplier, then if your company unfortunately goes into liquidation, the pain does not end with the demise of your company"

BPCA

BPCA GIVES OUT MORE THAN 40,000 REFERRALS

The British Pest Control Association has won the prestigious 'Association of the Year' Award from the Confederation of European Pest Management Associations (CEPA). The presentation took place at CEPA's General Assembly in Dortmund, following the Eurocido pest control trade show.

The Award was made in recognition of BPCA's contribution to bringing competing but complementary trade bodies closer together. BPCA Chief Executive Simon Forrester, who accepted the award on behalf of BPCA said, "This is a great and unexpected honour for the British Pest Control Association, as we work alongside very professional sister Associations within CEPA. To be singled out is high praise indeed. On a personal note, I am very pleased to see the lobbying and standards-setting activities of CEPA beginning to bear fruit, and I know that the best is yet to come."

www.cepa-europe.org

Pesticide Waste – the Battle Continues

Following BPCA's work to remove the huge cost burden from pesticide waste disposal, saving our sector an estimated £25million, the Association is producing a best practice guide for all of industry to use. This will be launched at or before BPCA's PPC Live event (see below) and a speaker from the Environment Agency will be on stage to tell you first hand what your business needs to do to comply with the law. The Association is also working with the companies who run waste take-back schemes to see whether things can be adapted to help SMEs and microbusinesses – who make up the majority of the sector. Finally, BPCA is working with DEFRA to change the core legislation (the 'list of wastes') which decides which products need to have waste transfer notes. More on that in the near future.

PPC Live

And finally, have you booked your free place at PPC Live yet? BPCA's new trade exhibition and conference is designed for technicians, surveyors and company owners. The event will be held on Wednesday 21 May 2014 at Salford City Stadium near Manchester. Over 250 people have already registered, and with 20+ exhibitors confirmed so far, there's sure to be lots to interest you.

Not like any other industry event, PPC Live will feature a variety of speakers, technical demonstrations and panel discussions, making PPC Live one event you don't want to miss out on!

Exhibitors confirmed so far:

Speaker sessions on:

- SGARs (Paul Charlson from CIEH NPAP)
- Pesticide Waste: how to stay the right side of the law (Matthew Womersley, Environment Agency)
- Panel discussion with a range of pest control clients from food, public sector, retail etc.
- Mouse treatments: efficiency of bait uptake (Gai Murphy from Salford University)
- BASF Pest Industry Research: what our sector is thinking

Technical sessions on:

- Sprayer demonstrations
- Foggers
- Bird Control
- Topical insect management and how to promote them in your business

Exhibitors so far:

- Rento
- Rentokil Products
- BASF
- Bradshaw Bennett Ltd
- Russell IPM Ltd
- Woodstream Europe Ltd
- Bell Laboratories
- Killgerm
- Huck Nets (UK) Ltd
- Barrettine Environmental Health
- PelGar International
- RSPH
- Agralan / Lance Lab
- Merlin Environmental Solutions Ltd
- SX Environmental Supplies
- Sentomol Ltd
- Friendly Data Solutions Ltdkil Products
- BASF
- Bradshaw Bennett Ltd
- Russell IPM Ltd
- Woodstream Europe Ltd
- Bell Laboratories
- Killgerm Chemicals
- Huck Nets (UK) Ltd
- Barrettine Environmental Health
- PelGar International
- RSPH
- Agralan / Lance Lab
- Merlin Environmental Solutions Ltd
- Sentomol Ltd
- Friendly Data Solutions Ltd
- BASIS PROMPT

We're informed there will be some new product launches on the day and everyone who pre-registers and attends gets to 'spin the wheel' for a valuable prize from selected exhibitors.

PPC LIVE

MANCHESTER - 21 MAY 2014

Free parking on site, free to attend, lots of CPD points available.

See you there!

www.ppclive.org

BPCA British Pest Control Association

ONLINE CPD

RSPH Level 2 Award in Using Aluminium Phosphide Safely for the Management of Vertebrate Pests

A number of centres have now been approved to offer this qualification, and the first candidate has already taken the assessment. By the time that this edition of PCN is delivered to you we will know whether or not this candidate has been successful.

Part of the approval process requires prospective centres to demonstrate that they have suitably experienced staff with regards to the safe use of aluminium phosphide. This would normally be by staff members providing verifiable records of their use of aluminium phosphide. Alternatively centres can request a visit from an RSPH examiner who can observe them carrying out aluminium phosphide treatments, or attend an RSPH Train the Trainer event.

RSPH is holding such an event on 27th March at Harper Adams University. This is to be run in conjunction with staff from Rentokil-Initial and Killgerm which are the suppliers of Phostoxin and Talunex in the UK. The day will include a marking exercise, discussion of assessment strategies and practical activities. RSPH will hold future events if this is justified by the demand.

We are also in the final stages of producing a short textbook for candidates taking the RSPH aluminium phosphide qualification. This has also been produced with the aid of Rentokil-Initial and Killgerm.

RSPH LEVEL 2 AWARD IN PEST MANAGEMENT AND LEVEL 2 CERTIFICATE IN PEST MANAGEMENT

Year-end figures for these qualifications show that there is no let-up in the number of candidates taking these important qualifications.

Just under 500 candidates took the L2 Award last year and the pass rate was just under 75 %. The corresponding figures for the Certificate are 122 candidates and a pass rate of nearly 87 %.

From a slow beginning the longer certificate qualification, which covers practical techniques used in pest management, is now gaining in popularity and may even become the qualification of choice within a few years.

Part of the approval process requires prospective centres to demonstrate that they have suitably experienced staff with regards to the safe use of aluminium phosphide

NATIONAL PEST TECHNICIAN'S ASSOCIATION

2014 is going to be a very busy year for the NPTA, with more training days than ever before. Venues include Scotland, Manchester, Hampshire, Norwich, Ireland, Midlands and Bristol, so we hope to see a lot of our Members (and prospective Members) face-to-face during the year.

The Association also faces a lot of issues being thrown at the industry by Government. The long-running 'SGARs Saga' is due to come to a head in October, but there is still a lot of work to be done, alongside other organisations representing users of these vital tools, such as the NGO, the NFU, the CIEH and the BPCA.

Recent changes in the interpretation of the legislation controlling pest controllers' waste by the Environment Agency (EA) will add more burden on the shoulders of the industry. Whilst we will be doing our best to reduce the impact, it does appear that the EA is determined to make life more difficult for us, despite Government Policy to reduce regulation on small businesses! We will do our best to keep you informed of developments in this area.

2014 will also see long-awaited improvements to our website and our magazine 'Today's Technician'. We hope you will all find them worthwhile.

If we don't see you on one of our training days, hopefully we will see you at our annual 'do' at Pest Tech 2014."

NPTA Regional Training Days 2014 –

Airth Castle, Scotland
19th March

Mercure Altrincham, Manchester
2nd April

Holiday Inn, Farnborough
30th April

Engineers House, Bristol
15th May

Lisburn Council Offices, Lisburn
21st May

NPTA House, Nottinghamshire
5th June

Norwich City Football Club, Norwich
1st October

These regional training days are free to NPTA members and £25 + VAT for non-members. To book a place on any of these training dates call NPTA House on 01773 717716 or email **office@npta.org.uk**

KILLGERM TRAINING DATES

NORTHERN

DATE	VENUE	COST EXCLUDING VAT
BASIC PRINCIPLES OF PEST CONTROL		
Insect Control		
15th April 2014	Ossett	* FREE to existing customers
3rd June 2014	Ossett	* FREE to existing customers
Safe Use of Pesticides		
16th April 2014	Ossett	* FREE to existing customers
21st May 2014	Ossett	* FREE to existing customers
4th June 2014	Ossett	* FREE to existing customers
Rodent Control		
17th April 2014	Ossett	* FREE to existing customers
5th June 2014	Ossett	* FREE to existing customers
Bird Control		
24th April 2014	Ossett	* FREE to existing customers
REFRESHER COURSES		
Insect Control		
14th May 2014	Ossett	* FREE to existing customers
Rodent Control		
15th May 2014	Ossett	* FREE to existing customers
SPECIALIST COURSES		
Air Weapons		
22nd May 2014	North	£160 Inc lunch
Insect Identification		
8th May 2014	Ossett	£155 Inc lunch

DATE	VENUE	COST EXCLUDING VAT
Wildlife Aware		
22nd May 2014	Ossett	£185 Inc lunch
Advanced Entomology: Insects and disease		
3rd April 2014	Ossett	£150 Inc lunch
PRACTICAL COURSES		
Safe Use of Aluminium Phosphide for Vertebrate Control		
18th March 2014	Bretton	£120 Inc lunch
23rd April 2014	Bretton	£120 Inc lunch
Practical Mole Trapping		
26th March 2014	Pickering	£135 Not inc lunch
30th April 2014	Pickering	£135 Not inc lunch
28th May 2014	Pickering	£135 Not inc lunch
Practical Rabbit Control		
19th March 2014	Pickering	£135 Not inc lunch
23rd April 2014	Pickering	£135 Not inc lunch
21st May 2014	Pickering	£135 Not inc lunch
Practical Rodent Control on Farms		
Available 2nd Wednesday of every month (numbers pending)	Pickering	£135 Not inc lunch
INSECT WORKSHOPS		
Insect Workshop 1 - Bedbugs & Fleas		
8th April 2014	Ossett	£120 Inc lunch
Insect Workshop 2 - Ants, Bees & Wasps		
26th March 2014	Ossett	£120 Inc lunch

SOUTHERN

SURREY

DATE	VENUE	COST EXCLUDING VAT
BASIC PRINCIPLES OF PEST CONTROL		
Insect Control		
7th May 2014	Reigate	* FREE to existing customers
Safe Use of Pesticides		
8th May 2014	Reigate	* FREE to existing customers
Rodent Control		
14th May 2014	Reigate	* FREE to existing customers
Bird Control		
13th May 2014	Reigate	* FREE to existing customers
SPECIALIST COURSES		
Air Weapons		
6th March 2014	Bisley	£160 Inc lunch
Bird Control (2 Day Course)		
16th & 17th April 2014	Bisley	£230 Inc lunch
28th & 29th May 2014	Cambridge	£230 Inc lunch
Working Safely in Pest Control (IOSH)		
29th May 2014	Reigate	£210 Inc lunch
INSECT WORKSHOPS		
Insect Workshop 1 - Bedbugs & Fleas		
13th March 2014	Reigate	£120 Inc lunch
Insect Workshop 2 - Ants, Bees & Wasps		
3rd April 2014	Reigate	£120 Inc lunch

BRISTOL AND SALISBURY

DATE	VENUE	COST EXCLUDING VAT
BASIC PRINCIPLES OF PEST CONTROL		
Insect Control		
9th July 2014	Bristol	* FREE to existing customers
Safe Use of Pesticides		
10th July 2014	Bristol	* FREE to existing customers
Rodent Control		
16th July 2014	Bristol	* FREE to existing customers

DATE	VENUE	COST EXCLUDING VAT
Bird Control		
17th July 2014	Bristol	* FREE to existing customers
REFRESHER COURSES		
Insect Control		
21st May 2014	Bristol	* FREE to existing customers
Rodent Control		
22nd May 2014	Bristol	* FREE to existing customers
SPECIALIST COURSES		
Air Weapons		
2nd April 2014	Bristol	£160 Inc lunch
PRACTICAL COURSES		
Safe Use of Aluminium Phosphide for Vertebrate Control		
13th March 2014	Salisbury	£110 Not inc lunch
INSECT WORKSHOPS		
Insect Workshop 1 - Bedbugs & Fleas		
16th April 2014	Bristol	£120 Inc lunch
Insect Workshop 2 - Ants, Bees & Wasps		
17th April 2014	Bristol	£120 Inc lunch

NORTHAMPTON

DATE	VENUE	COST EXCLUDING VAT
PRACTICAL COURSES		
Control of Rural Pests - Practical Trapping Techniques		
3rd April 2014	Northampton	£145 Inc lunch
Long Netting & Ferreting		
Available upon request	Northampton	£120 Not Inc lunch

NORWICH

DATE	VENUE	COST EXCLUDING VAT
BASIC PRINCIPLES OF PEST CONTROL		
Insect Control		
19th March 2014	Norwich	* FREE to existing customers
Safe Use of Pesticides		
20th March 2014	Norwich	* FREE to existing customers

SOUTHERN CONTINUED

Rodent Control		
26th March 2014	Norwich	* FREE to existing customers
PRACTICAL COURSES		
Safe Use of Aluminium Phosphide for Vertebrate Control		
29th May 2014	Newmarket	£120 Inc lunch
INSECT WORKSHOPS		
Insect Workshop 1 - Bedbugs & Fleas		
12th June 2014	Norwich	£120 Inc lunch
Insect Workshop 2 - Ants, Bees & Wasps		
24th April 2014	Norwich	£120 Inc lunch

SCOTTISH

DATE	VENUE	COST EXCLUDING VAT
SPECIALIST COURSES		
Air Weapons		
8th April 2014	Tayside	£160 Inc lunch
Wildlife Aware		
12th March 2014	Falkirk	£185 Inc lunch

* FREE to existing customers
1. Existing customers (subject to account status) - to cover admin, lunch, refreshments and venue costs a small fee of £20 + VAT per day will be invoiced to your account (please provide an official order number where appropriate)
2. Non customers - Courses are chargeable at £120 + VAT including lunch.

This is a selection of up-and-coming Killgerm Training courses. Further dates are available and can be seen on the website:
www.killgerm.com/pest_control_training.php

RSPH COURSES

ROYAL SOCIETY FOR PUBLIC HEALTH AND BRITISH PEST CONTROL ASSOCIATION - LEVEL 2 CERTIFICATE IN PEST MANAGEMENT	
FEE - £800 + VAT Inc RSPH Exam, Killgerm Manual (value £99.00), bacon sandwich on arrival, lunch & refreshments	
Venue: Ossett	
Module 1 & 2 - Monday 28th & Tuesday 29th April 2014	
Module 3 & 4 - Tuesday 6th & Wednesday 7th May 2014	
Module 5 & 6 - Monday 12th & Tuesday 13th May 2014	
Module 7 & 8 - Monday 19th & Tuesday 20th May 2014	
Examination - Friday 23rd May 2014	
ROYAL SOCIETY FOR PUBLIC HEALTH AND BRITISH PEST CONTROL ASSOCIATION - LEVEL 2 CERTIFICATE IN PEST MANAGEMENT RESITS/CONVERSIONS (PRACTICAL UNITS ONLY)	
FEE - £90 + VAT for existing Killgerm candidates £110 + VAT non Killgerm candidates	
Venue: Ossett	
20th March 2014	
Venue - Ruislip, Middlesex	
28th May 2014	
ROYAL SOCIETY FOR PUBLIC HEALTH - LEVEL 3 DIPLOMA IN PEST MANAGEMENT	
FEE - £870 + VAT per person *(includes RSPH Exam, lunch and refreshments)*	
Venue: To be arranged	
Training and information day	30th April 2014
Core unit examination	21st May 2014
ROYAL SOCIETY FOR PUBLIC HEALTH LEVEL 3 IN MOSQUITO MANAGEMENT	
FEE - £750 + VAT per person *(includes accommodation, dinner, refreshments over three days and RSPH Exam)*	
Venue - The Langstone Hotel, Hayling Island, Portsmouth	
Dates to be announced	

Killgerm TRAINING

For further information on any of these training courses or to book your place, call Killgerm Training on 01924 268445.

Alternatively email training@killgerm.com or book online at www.killgerm.com.

BPCA British Pest Control Association

BPCA 2013 TRAINING DATES

General Pest Control Course - Residential	
16-21 March 2014	Coventry
11-16 May 2014	Glasgow
Urban Bird Control and Management	
5 March 2014	BPCA Offices, Derby
Modular Course	
21 January-19 February 2014	BPCA Offices, Derby

FOR FURTHER INFORMATION PLEASE CALL **+44 (0) 1332 225113**

CONFERENCES AND EVENTS 2013/14

Date	Event	Venue	Organiser	Contact
26th - 27th March	Infodays	Benelux	KillgermRiwa	www.killgermriwa.com
11th April	Jonathan Peck Memorial	Southwark Cathedral, London	CIEH	www.jonathanpeckmemorial.com
8th - 9th May	ConexPest	Krakow	PSPDDD	www.pspddd.pl
2nd - 4th June	Fumigants & Pheromones	Krakow	insects Limited, inc.	www.insectslimited.com/krakow
20th - 23rd July	ICUP	Zurich	ICUP	www.icup2014.ch/Zurich/
3rd - 5th September	Pest Summit	Malaysia	Pest Control Organisation of Malaysia	www.pestsummit2014.com
24th September	BeneluxPest	Netherlands	KillgermRiwa	www.beneluxpest.nl
21st - 24th October	PestWorld 2013	Orlando	NPMA	www.npmapestworld.org
19th - 21st November	Parasitec	Paris	Parasitec	www.parasitec.org

The Motion Sensor Camera

Catch THEM IN THE Act

The MOTION SENSOR CAMERA offers the exceptional ability of recording real time videos of pest activity, such as rodent activity in an infested area. It allows the operator to confirm the presence of pests and identify the source of an infestation.

Encased in a sturdy, weather resistant housing that is easily camouflaged, the camera is designed to be left unattended for weeks at a time. With that in mind, it has a sturdy mounting strap with a python lock that provides added stability and gives you assurance that your camera will stay on target for as long as you need.

- 5MP Camera
- Night mode (Black and white)
- Mini USB-output
- 52° field of view
- IR Flash Range: 11-13 yards
- Photo or Video (colour)
- Adjustable sensitivity
- SD card slot (32GB max)
- Requires 4 AA batteries for camera power supply (not included)
- Dimensions: 145 mm x 82 mm x 36 mm

Killgerm Chemicals Ltd., P.O. Box 2, Ossett, W. Yorks. WF5 9NA.
t 01924 268420 f 01924 264757 e sales@killgerm.com www.killgerm.com