

#### PEST CONTROL NEWS®

THE MAGAZINE FOR THE PEST CONTROL INDUSTRY



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#### Harlequin Ladybird

Billed as the 'most invasive ladybird on the planet' the harlequin ladybird is certainly something that pest controllers need to become familiar with; and fast.

#### 6 Looking back on a bumper wasp season

Pest controllers reported unseasonably high numbers of call-outs for wasps this summer. Richard Moseley, Bayer technical manager, and Lee Pellington, from PestProof, give their views on the heightened activity.

#### 18 | Managing bedbug resistance

Evidence in scientific literature tells us that bedbugs *Cimex lectularius* have evolved many mechanisms that result in insecticide resistance.

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# issue |





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#### PC/62405/18/g

For further information on the BASIS PROMPT scheme or to register, please visit:

#### www.basis-reg.co.uk

Please address any of the above to:

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#### Bite Size...

#### Harlequin Ladybird

Billed as the 'most invasive ladybird on the planet' the harlequin ladybird is certainly something that pest controllers need to become familiar with; and fast.

#### TOUGHER 4 RODENTICIDE RULES ON PERMANENT BAITING

TOUGHER RESTRICTIONS
ON PERMANENT
RODENTICIDE BAITING BY
FARMERS, GAMEKEEPERS
AND PEST CONTROLLERS,
WITH LEGAL BACKING,
HAVE BEEN INTRODUCED
BY THE HEALTH AND
SAFETY EXECUTIVE (HSE).

#### SHOULD WE BE RISK ASSESSING WEIL'S DISEASE?

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#### THE PROBLEM WITH BIRD MITES

BIRD MITES ARE
ENCOUNTERED IN THE PUBLIC
HEALTH PEST CONTROL
INDUSTRY MOST OFTEN WHEN
WILD BIRDS LEAVE THEIR
NESTS THAT HAVE BEEN MADE
IN DOMESTIC PREMISES

#### ASIAN HORNET UPDATE FROM THE GB NON-NATIVE SPECIES SECRETARIAT

A NEW NEST HAS
BEEN LOCATED BY THE
NATIONAL BEE UNIT
IN NEW ALRESFORD,
HAMPSHIRE, FOLLOWING
A REPORT FROM A
MEMBER OF THE
GENERAL PUBLIC.

#### AUSTRALIAN 16 CARPET BEETLE

OVER THE LAST 20 YEARS WE HAVE SEEN A NUMBER OF SPECIES OF CARPET BEETLE WHICH HAVE BECOME ESTABLISHED IN THE UK AND ARE NOW PESTS IN HOUSES AND MUSEUM COLLECTIONS.

#### MANAGING 22 BEDBUG RESISTANCE

EVIDENCE IN SCIENTIFIC LITERATURE TELLS US THAT BEDBUGS HAVE EVOLVED MANY MECHANISMS THAT RESULT IN INSECTICIDE RESISTANCE.

#### BASIS PROMPT 10 CELEBRATES AS IT REACHES THE 5,000 MEMBER MARK

A PEST TECHNICIAN SAYS HE IS RELISHING THE CHANCE TO ADD MORE TO HIS KNOWLEDGE AND SKILLS AFTER HE BECAME THE 5,000TH PERSON TO JOIN THE BASIS PROMPT REGISTER.

#### LOOKING BACK 18 ON A BUMPER WASP SEASON

PEST CONTROLLERS
REPORTED UNSEASONABLY
HIGH NUMBERS OF CALLOUTS FOR WASPS THIS
SUMMER. PEST CONTROL
PROFESSIONALS GIVE
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#### Sale of Mitie Pest Control Limited

Mitie Group plc (LSE: MTO.L) ("Mitie" or the "Group") today announces the sale of the entire issued share capital of Mitie Pest Control Limited ("Mitie Pest" or the "Company"), to Rentokil Initial plc (LSE: RTO.L) ("Rentokil") for a consideration of £40 million in cash (on a debt free, cash free basis).

The consideration of £40 million will be paid in cash at completion, subject to any adjustment for final completion accounts. The majority of the proceeds will be used to strengthen the balance sheet and accelerate partial repayment of the deficit under the Group's defined benefit pension scheme, with the balance being reinvested in core businesses.

Mitie Pest reported profits before tax of £2.0 million for the financial year ended 31 March 2018. Earnings before interest and

tax, adjusted to exclude non-recurring items and the recharge of Mitie central service costs, were £3.2 million over the same period. At a balance sheet date of 31 March 2018, Mitie Pest had gross assets of £8.7 million. The Company continues to grow and the forecast earnings before interest and tax, adjusted to exclude non-recurring items and the recharge of Mitie central service costs for the six months ended 30 September 2018 are expected to be £2.4 million.

Phil Bentley, Chief Executive Officer, Mitie, commented:

"Historically, Mitie has worked with preferred partners to deliver certain specialist services for our clients. By teaming up with Rentokil Initial – the UK's largest provider of pest services – we free up funds to invest in our core businesses, whilst ensuring service quality and innovation are maintained for our clients."

Mitie Pest's Interim Managing Director Andy Halsall will continue his role with the company for an interim period, to ensure a smooth transition of the business from Mitie to Rentokil and ensure continuity of service for Mitie's customers.

Mitie has separately entered into a preferred supplier partnership with Rentokil, covering a range of services (including pest services) provided as part of an integrated facilities management offering to Mitie's wide range of customers. Rentokil's expertise will enhance the range of services that Mitie provides to its integrated facilities management customers.

The sale of Mitie Pest constitutes a Class 2 transaction for the purposes of the UK Financial Conduct Authority's Listing Rules.

On 9 October 2018, the CMA served an initial enforcement order for completed mergers under section 72(2) of the Enterprise Act 2002 on Rentokil Initial plc, in relation to the completed acquisition by Rentokil Initial plc of MPCL Limited (formerly known as Mitie Pest Control Limited).

#### www.pestcontrolnews.com/news



#### Tougher rodenticide rules for farmers, gamekeepers and pest controllers on permanent baiting

Tougher restrictions on permanent rodenticide baiting by farmers, gamekeepers and pest controllers, with legal backing, have been introduced by the Health and Safety Executive (HSE), the UK rodenticide regulatory body. A detailed booklet, CRRU Guidance: Permanent Baiting, is available from www.thinkwildlife.org/download/.

The practice is only approved where high potential for reinvasion is identified and when all alternatives have been considered. It is prohibited as a 'just-in-case' preventive measure when no signs of rats, nor high reinvasion threat, is present.

The new restrictions address a high risk of wildlife contamination through small mammals such as field mice and voles entering bait stations, eating rodenticide then falling prey to a wide range of predatory birds and mammals. The same applies to some small birds, which possibly explains why anticoagulant residues are found in sparrowhawks and peregrines, which feed almost entirely on birds taken in flight.

One of the main objectives of the UK Rodenticide Stewardship Regime is to reduce residues in all UK wildlife. Restricting the use of permanent baiting will significantly contribute towards achieving this, according to Dr Alan Buckle, chairman of the Campaign for Responsible Rodenticide Use, the body responsible to UK government for the stewardship regime.

Where permanent baiting is justified, some baits containing bromadiolone or difenacoum are allowed, but not all. Those containing the other three second generation anticoagulants are prohibited.

Rodenticide users need to check product labels carefully before use. There are new statements for prohibited as well as allowed permanent baiting rodenticides. For the latter, the key label phrase is "Permanent baiting is strictly limited to sites with high potential for reinvasion when other methods of control have proven insufficient."

Dr Buckle adds, "In all situations, permanent baiting must never be a routine practice. But as a monitoring device, non-toxic placebo baits should be used more often.

"To counteract rats' acute fear of new things, there is good reason for having tamper-proof bait stations in permanent outdoor locations, but with placebo rather than rodenticide present.

"Inspecting placebo-baited stations regularly can give early warning of a new infestation. Clearly, when this happens, a temporary switch to rodenticide baits can be made until the infestation is cleared. Normally this should take no more than 35 days, followed by resumption with placebo."

www.pestcontrolnews.com/news





#### Asian hornet update from the GB Non-Native Species Secretariat

A new nest has been located by the National Bee Unit in New Alresford, Hampshire, following a report from a member of the general public. The nest was promptly destroyed by the APHA Wildlife Team and the NBU is continuing to search for further nests, with support from local beekeepers.

There have also been confirmed cases in Hull and Cornwall. Two nests have now been destroyed in Cornwall and surveillance in this area continues. No live hornets have been seen in Hull since a single dead Asian Hornet was found in a house, despite extensive surveillance.

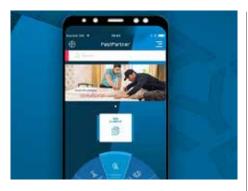
The New Alresford response highlights the importance of public awareness of this species and we are asking all stakeholders, particularly those in the southern half of England, to help us raise awareness of the need to be vigilant and report this species.

We have updated our identification sheets and alert posters, these are available online. We can provide hard copies of these to help with awareness raising.

If an Asian hornet is seen it can be reported via an online form, the Hornet Watch app; or by sending a picture to the alert email address: alertnonnative@ceh.ac.uk

www.nonnativespecies.org/alerts/index.cfm?id=4

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#### Bayer to launch new app at PestTech

The Bayer Pest Solutions Team is excited to be launching the new and improved Pest Partner app. The rejuvenated tool will incorporate great features from the current app while bringing fantastic new innovations to assist pest controllers.

The Pest Partner app will be available to download for free at PestTech on 7 November and will assist users in their daily work. The tool is unique, simple to use, and easily accessible.

"The latest feature, the treatment calculator, allows users to accurately calculate dosage requirements while on the job," explains Kimberley Baker, Bayer assistant product manager.

"Users can simply enter the pest type, product name and application method then the tool will calculate the correct rate to be applied.

"The already popular intuitive product information guide will continue to provide a list of pests that each product controls as well as the time of year and places the product can be used," she explains.

"A camera tool allows users to take a photo of the pest issue and send it to a Bayer expert for personalised advice on the best solution.

"Up-to-date safety data sheets and labels are all now available at the touch of a button to ensure that users are always armed with vital information for the correct and safe use of products.

"Additional features include sections on distributor locations and a live weather forecast to help guide application timings," says Kimberley.

For more information please visit Bayer on stand B1 at PestTech on 7 November, or visit www. environmentalscience.bayer.co.uk/ Pest-Management or contact the Pest Solutions Team on 00800 1214 9451 or email pestsolutions@bayer.com

www.pestcontrolnews.com



### Understand our businesses better, says food industry

The food industry wants pest controllers to get to know the sector's businesses better, according to new research.

70% of respondents would like more time spent educating their teams on potential site risks, and 80% seek a broader understanding of their food business requirements for the sites they're visiting.

The market research was conducted by Bayer, in collaboration with the British Retail Consortium (BRC) and asked UK and USA based respondents, in food safety and quality roles, questions about their experience in working with pest controllers.

Bayer technical manager, Richard Moseley, says it's the first large-scale piece of research of its kind, seeking honest views and opinions from professionals within the food manufacturing industry.

"I envisage the results being the start of bridge building between the two professions, that will greatly assist in developing the best pest management programmes possible," he explains.

"BRC Global Standards is delighted to partner with Bayer to understand the different requirements from both pest control officers and food safety managers and see how they compare. The revealing insight creates the basis of a better working relationship which will lead to stronger resilience in this technical area. This has to be good news for all stakeholders, including consumers," says a BRC spokesperson.

Further information about the research will be made available on the Bayer website, www.environmentalscience.bayer.

www.pestcontrolnews.com

# Harlequin Ladybird





Billed as the 'most invasive ladybird on the planet' the harlequin ladybird, which also goes by the scientific name of *Harmonia axyridis*, is certainly something that pest controllers need to become familiar with; and fast.

Also known as the Asian multicoloured ladybird, this invasive species has spread like wildfire since it was introduced into the UK in 2004 and has the potential to jeopardise many of the 46 native ladybird species that we have.

#### **IDENTIFICATION**

Enthusiastic ladybird spotters will probably prefer to identify ladybirds based on the colour patterns of their elytra (wing cases) but with 24 different colour forms of *Harmonia axyridis* being shown on the harlequin ladybird survey website, it makes sense to look at other identifying features.

The first clue to correctly identifying *H. axyridis* is actually its behaviour. In an attempt to coin a phrase calling it the 'crawling cluster fly' is probably not too wide off the mark. So yes, it clusters together in aggregations of a great number of individuals, entering premises in autumn and winter to overwinter, becoming active again in spring. These are the two peak times for complaints regarding harlequin ladybirds, much like the situation with cluster flies.

Two of the more noticeable physical identifying features that can be seen in the field are the size of *H. axyridis* and the coloration of its legs. It is quite a large species as ladybirds go, measuring 8mm in larger specimens, with legs almost always being brown in colour, marking it out as different to some of our native species. There are some native species that can match up to *H. axyridis* in size but many others are noticeably smaller. An identification sheet is available to download here <a href="http://www.harlequin-survey.org/downloads/Ladybird%20descriptions\_">http://www.harlequin-survey.org/downloads/Ladybird%20descriptions\_</a> Info%20pack NEW v.5.pdf





#### BIOLOGY

Aspects of the biology of *H. axyridis* explain why it has spread so significantly in the UK. Its life cycle can be swift, with pre-adult development taking about 14 to 20 days at 25°C. Adult females can begin to lay eggs after only 5 days and a single female can lay over a thousand eggs in their lifetime.

Two other factors that relate to the successful and rapid spread of the harlequin ladybird are its long breeding season and the fact that it can utilise a wide range of foodstuffs in addition to aphids. Harlequin ladybirds do not have a requirement for a dormant period before they can reproduce, as some ladybirds have (e.g. 7-spot and eyed ladybirds), and so have a longer reproductive period than most other species. Their broad food range compared to most other aphid predators (such as the 7-spot ladybird) means that the harlequin ladybird can easily outcompete our native species.

In 2004 in London, harlequin ladybird larvae were found still feeding in late October, long after all the native species had sought overwintering sites. When aphids are scarce, harlequin ladybirds consume other prey including ladybird eggs, larvae and pupae, butterfly and moth eggs and caterpillars.

#### **SIGNIFICANCE**

So why all the fuss? We come across harlequin ladybirds in public health pest control because they invade properties in their hundreds, even thousands, clustering in buildings during autumn and winter. This can be alarming and in some cases distressing to residents.

As well as being a nuisance, harlequin ladybirds can stain soft furnishings with their 'reflex blood', produced as a warning to predators. They can also bite humans when awoken from overwintering. The bites can produce a small raised bump with an associated stinging sensation. There are some reported cases of severe allergic reactions to ladybird bites, although is rare.

Thousands of harlequin ladybirds in a food premises present a food contamination risk, so this is an example of where ladybird control can be justified due to the requirements of food hygiene regulations, as 'food shall be deemed unsafe if it is considered to be injurious to health or unfit for human consumption.'

#### CONTROL

As always, pest controllers should seek to solve insect problems with non-chemical techniques. One of the best ways to deal with harlequin ladybirds is to use a vacuum to physically remove them. Just make sure that you use a vacuum that is suitable for pest control purposes i.e. one with a HEPA filter. The reason for using a vacuum with a HEPA filter is that insect fragments will be retained and not released from the vacuum into the air, where they are available to be breathed in and trigger allergic asthma. Using vacuum cleaners that don't have a HEPA filter can result in unnecessary risks to health.

Other examples of non-chemical techniques include the use of UV-light flytraps. The advice given in the 'electronic fly killers' article on page 12 of PCN issue 101 is relevant here, due to the large numbers of harlequin ladybirds that are often encountered, which may pose a fire risk if an appropriate risk assessment is not in place.

A recent development is the release of a proprietary harlequin ladybird trap that contains a lure, which can be used as component of an integrated control program.

Lastly, insecticide treatments can be undertaken if justified by risk and COSHH assessments. Broad-spectrum insecticides labelled for the control of 'beetles' or 'crawling insects' can be applied in affected premises and options include products suitable for 'knock-down' treatments or residual applications to cracks and crevices. Remember that widespread destruction of harlequin ladybirds is not advocated, as all species have their role to play but there are specific circumstances



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Testing protocol requires a testing panel comprised of a minimum of 50 children aged 42 to 51 months being unable to gain access to any station.

#### What are the tamper-resistance requirements for dogs?

A minimum of 12, young and healthy dogs weighing at least 20kg, are provided unrestricted access to a bait station for at least 2 hours. A station will only pass if all 12 dogs are successfully kept from accessing the bait.















#### BASIS PROMPT celebrates as it reaches the 5,000 member mark

A pest technician working in his first year in the industry says he is relishing the chance to add more to his knowledge and skills after he became the 5,000th person to join the BASIS PROMPT register.

Steve Wilson, who works for Essex and Suffolk Pest Solutions, based in Ipswich, has been presented with a bottle of champagne by Stephen Jacob, chief executive of BASIS PROMPT, to celebrate the register reaching the landmark figure last week.

The register was established 17 years ago and is backed by the Government and a host of leading organisations from across the pest management industry. Not only does it help its members to access courses and learning opportunities, it provides independent proof that they are trained and are constantly updating their CPD.

Steve, 38, joined the industry last year after spending 16 years in railway engineering but deciding to switch careers because he was increasingly having to spend time away from his family.

He has not looked back since and says that among the highlights of his

first year was an extremely busy summer dealing with wasps and the satisfaction of helping people with pest infestation problems.

He said: "This job is very different to what I did before, but I am really enjoying myself and no two days are ever the same.

"The most surprising thing I learned during the year was that no-one is immune from having a pest problem, and for some people with animal phobias it's a real problem, so a lot of my time has been talking to them about what we're doing and giving advice on proofing their homes.

"That's the bit of the job I like, along with learning about new developments, products and techniques, which is why I'm very pleased to have been signed up to PROMPT and delighted to have become its 5,000th member."

Essex and Suffolk Pest Solutions is based in Ipswich and is a family run business which has three technicians on the books, all of whom are signed up to the BASIS PROMPT register.

As well as receiving a bottle of champagne, Steve has also been invited to dine with the BASIS PROMPT team at the forthcoming PCN Dinner 2018 event in Milton Keynes.

Mr Jacob said: "Reaching 5,000 members is a staggering achievement for the pest management industry and for BASIS PROMPT, because we now represent over 50% of the technicians working in the sector and collectively, as an industry, we are in a very strong position with regards to demonstrating professionalism and currency of knowledge.

"I think it's fitting that Steve has been named our 5,000th member, because even though he is a relative newcomer to the industry, he has already recognised how being properly trained and staying up-to-date with the latest developments results in tangible benefits for his customers.

"We all want to work in an industry that is responsible, well informed and professional, which is why the BASIS PROMPT register is so important and why reaching our 5,000th member is good news for everyone."

For more information about BASIS PROMPT visit **www.basis-prompt.co.uk.** 

#### BASIS PROMPT Register launches a CPD hotline to help members keep track of their points

A UK register set up to encourage pest technicians to invest in training has set up a dedicated hotline for members who want an up-to-date tally of their CPD points or need advice on how to earn even more.

The BASIS PROMPT Register, which has around 4,900 members, has launched the hotline 01335 301311 in response to growing numbers of inquiries from callers keen to find out their latest points total after they attended a training course or carried out some extra research.

The scheme is the UK's leading professional register and is an industry initiative designed to provide independent proof that a pest controller has received proper professional training.

Key to membership of the scheme is the need to acquire CPD points, with members having to accrue 20 points in order to be accepted onto the scheme the following year. BASIS PROMPT keeps a tally of each member's points on their behalf and their record can also be viewed via a members' area on the register's website.

Points can be earned by taking part in a wide range of activities, including attending exhibitions and training courses, as well as participating in internal team meetings, company regional meetings, supplier meetings and reading industry magazines and websites.

The CPD hotline is open from Monday to Friday from 9am to 5pm and is operated by BASIS PROMPT co-ordinator Chrissie Webster.

Stephen Jacob, chief executive officer of BASIS PROMPT, said: "Although there is a minimum requirement to gather 20 points

throughout the year, many of our members collect many more and as a result they are increasingly very proactive when it comes to keeping in touch with their running total.

"That is why we decided to set up the CPD hotline specifically to help them, while we are also able to contact training course providers if members think that points they will have received for attending haven't been uploaded yet.

"Members are often surprised at the many different ways they can gather points and part of our service is talking to them about what activity they have taken part in which might be eligible for points.

"It's possible to gather enough points to earn your PROMPT card for the following year by tracking and recording the skills, knowledge and experience that you gain both formally and informally as you work and of course, the more points members gather, the more proficient they become at their jobs."





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#### **Health and Safety - Should we be** risk assessing Weil's Disease?

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Weil's Disease or Leptospirosis is caused by Leptospira sp bacteria which is a substance hazardous to health. If we identify that rats or mice are present on site it would be prudent to carry out a control of substances hazardous to health assessment, specifically a COSHH assessment for *Leptospira* sp.

hile we should be risk assessing Leptospira, we also need to know what can be done about it in terms of prevention. Ideally, we need to minimize risk and take the appropriate precautions (we'll come onto those). There is actually more to it than simple risk

assessment - to go further would be to raise awareness.

Firstly, a little more about Weil's Disease - there are approx. 2-3 recorded fatalities with around 60-70 reported cases per year. For example, in 2016 there were 62 reported cases (figures correct at time of going to press). Treatment is via intravenous antibiotics administered in hospital and there is no human vaccine available. The low numbers of cases recorded each year makes it a relatively rare disease in humans. possibly limiting the justification to carry out further research or work on preventative medications. There are many species / strains of Leptospira and to have a universal vaccination for all of them would probably be

**Symptoms:** The start of Weil's Disease is similar to that of flu for the first 3-4 days. It then progresses to meningitis symptoms during days 6-7. Around 8-10 days the kidneys begin to fail, and jaundice progresses. The other organs (pancreas, liver, intestines) then begin to fail and death is eventually caused by heart failure. Incidences in the pest control industry are minimal due to general awareness and our sector is considered one of the lowest risk groups for occupational exposure, even though we are encountering areas of rat and mouse activity nearly every day. Most cases are reportedly in the water leisure and construction industries. Perhaps in the pest control industry we have the most awareness due to training and therefore lowest incidences.

The bacteria: Leptospira can survive in water for extended periods (several weeks) and even in waterlogged areas such as a river bank. The bacteria harbours in rodents (note 'rodents', not just rats, as mice can carry Leptospira too) in the kidneys and therefore bladder, hence the risk associated with rodent urine. Leptospira can survive in rodent urine for several days. Leptospira enters humans via mucous membranes and ingestion, as well as through cuts / breaks in the skin. There is a chance of entry via the route of a rodent bite and may be linked to rodent grooming behaviour. If the rodent had recently groomed itself and then bitten someone it could transmit Leptospira via urine in this alternate way - but clearly chances of this are decreased compared with other routes of entry into the human body.

Control the risk: The old adage applies, control the rodents equals control the disease. When we are performing our roles in pest management we are front-line contact controllers of Leptospira. Before we reach for our PPE we need to avoid contact in the initial instance. So immediately we look at the work area. Certain disinfectant products such as PX-Lepto are proven to destroy Leptospira and are recommended to be applied as a clean-up measure. This can be used at any point during a treatment as a biocide disinfectant, with suggested use before and after treatment (if carrying out large clearances of rodents). To further minimise contact is to avoid contaminated water sources. (e.g. swimming or undertaking water sports in an area of known rat activity).

It's also important not to drink from anywhere but a clean running water source suitable for drinking!

Regarding protecting ourselves, now that we aren't swimming or drinking contaminated water sources, we must protect any cuts, wounds, skin grazes, abrasion, scratches or any other break in the skin. This is best achieved by wearing waterproof dressings / plasters and our trusty nitrile gloves (remembering to replace them frequently). When protecting our hands from contact, hand hygiene is paramount. We should be doing the following:

- Avoid hand to mouth contact.
- Wash hands after removal of gloves.
- Wash hands on a regular basis.
- Follow hand wash procedure using detergent (suitable soap) and clean running water. Soap should remain in contact with the skin for a minimum of 30 seconds.
- Wash any cuts or grazes immediately with soap and clean running
- Recommend the use of antibacterial gel or 'sanitizer' after washing and thoroughly drying the hands and/or skin.

In summary, it is recommended to COSHH assess Leptospira if the need / situation arises. An added benefit is to highlight the need to carry out normal procedures with increased vigilance. What about awareness in other industries? Maybe this is something we can assist with as we visit our customers, imparting our knowledge of arguably one of the biggest potential risks associated with rodent activity. Lastly, it is hoped everyone is carrying their Lepto cards and that you have informed your Doctor that you work in pest management!

#### **References:**

www.leptospirosis.org

http://www.hse.gov.uk/construction/healthrisks/hazardous-substances/ harmful-micro-organisms/leptospirosis-weils-disease.htm https://assets.publishing.service.gov.uk/government/uploads/system/  $uploads/attachment\_data/file/664448/UK\_Zoonoses\_report\_2016.pdf$ Leptospirosis Sorex Tech paper 3 House mice Lepto Sorex Tech paper 5





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Model shown is N152-CC-18 Ext/Ban 5L - ref 21027



here is a link to this issue's 'know your friend' in that Australian carpet beetles *Anthrenocerus australis* can feed on animal fur. Furthermore, dead flies and wasps are also a source of activity and seeing as we experienced an excellent season for wasp activity and a busy one for flies, it may be reasonable to expect further opportunities for *A. australis* to develop with increases in dead insects in general.

#### Australian carpet beetles, are there more out there? David Pinniger

Over the last 20 years we have seen a number of species of carpet beetle which have become established in the UK and are now pests in houses and museum collections. The Guernsey carpet beetle *Anthrenus sarnicus* was the first to be found in the 1970's and has now spread around the country as far north as Aberdeen. Brown carpet beetle *Attagenus smirnovi*, often known as the Vodka beetle, was the next to be found in London in the late 1980s. This has also spread in South East England and has been frequently found as a domestic pest in the London area. However, there are few documented records from elsewhere. Since 2010 we have found yet another carpet beetle called *Anthrenocerus australis*. As its name suggests, this is known as the Australian carpet beetle.

Australian carpet beetles are a household pest in Australia but are not common in other parts of the World. The first recorded UK infestation was in a warehouse in North London in 1938. There have been sporadic sightings of adult beetles since then, with a few specimens found in wool warehouses and museum stores. However, in 2010 an infestation of adults and larvae was discovered in an office carpet in the Victoria and Albert Museum in London. This was the first recorded infestation in the UK of Anthrenocerus larvae living in a museum. Treatment of the infested carpet with permethrin appeared have eradicated the infestation, and no more beetles or larvae have been found in the V & A since 2013. A few adult beetles were then found on sticky insect traps in a large historic house in London in 2012 and 2013 and in 2014 a small infestation of larvae was discovered in one room eating wool curtains and carpet. Despite cleaning of the area, adults and larvae are still appearing occasionally in other parts of the house showing that a population is now established in the building. Adult beetles were found on sticky traps in another historic house in North London in 2014 and at a further two sites in London in 2017 and 2018. The only confirmed recent record outside London is an Anthrenocerus infestation which was found in a flat in Bradford. The flat was converted many years ago from a warehouse which is likely to have been used for wool, so this means the population has been established a long time but has gone unnoticed.

At first glance with the naked eye, the adult beetles can be mistaken for other carpet beetle species, particularly *Anthrenus fuscus*. But when you look at the adults through a powerful hand lens or microscope you can see they have patches of short white hairs rather than the typical scales

of *Anthrenus* sp. The larvae of these two species are very hairy and are quite difficult to tell apart. *Anthrenocerus* have a distinct tuft of hairs at the back and are very active and move much quicker than *Anthrenus* larvae.

Carpet beetle larvae, including *Anthrenocerus*, generally feed on organic material containing animal protein but will also live on some vegetable protein. They will eat wool, fur and feathers and will seriously damage wool textiles and taxidermy specimens. In domestic situations they will frequently feed on dead flies, wasps and other insects. Australian carpet beetles would probably not be able to overwinter outdoors in the UK, but indoors they are likely to take 1 year to complete their life cycle.

They are certainly established in pockets in London, but are they more widely distributed than we think? Most people are not aware of their existence as there are very few images of *Anthrenocerus* in the older pest books except for "Urban Pest Control in Australia" by Gerozisis and Hadlington and the CSIRO book "Insects of Stored Products" by David Rees. The species is not in the English Heritage Pest poster, but we have included it in the new English Heritage book "Pests in Houses Great and Small". There are also a few images on the "whatseatingyourcollection" website. http://www.whatseatingyourcollection.com/

Please check if you find a strange looking carpet beetle and if you are not sure what species you have got, make sure you have its identity checked by an entomologist. In this way we hope to find out where it is living in the UK.



Adult Anthrenocerus australis.
Copyright Oxford Museum of Natural History



Anthrenocerus larvae and cast 'skins' on dead wasp. Copyright Samantha Higgs.



W

e certainly are a nation of dog lovers and the RSPCA estimate there are over 8 ½ million pet dogs in the UK. With fleas being an important topic in the previous issue, and having already covered the domestic cat, it makes sense to recap how to protect the domestic dog as a non-target

species when controlling associated ectoparasites or rodents.

#### Insecticide labels – 'read the label' to protect dogs when applying insecticides

The familiar label phrase 'exclude all animals and persons during application / treatment' remains on insecticide labels and is especially important when domestic dogs are present in a property. A frequently asked question is 'how long should people and animals keep away from the treated area?' The answer is simply 'treated premises can be reoccupied by children, pets and other animals once the sprayed surfaces are dry.'

#### Anticoagulant rodenticide use, when domestic dogs are present

After following the 'risk hierarchy' and making relevant assessments (e.g. Environmental Risk Assessment), if it is decided that second generation anticoagulants should be used to control pest rodents, make sure rodenticide LD50's are also considered when dogs are present. It also pays to think about anticoagulant resistance. If resistance to bromadiolone and / or difenacoum are known in Norway rat *Rattus norvegicus* populations in your geographical area, it is advisable to use alternatives such as brodifacoum, flocoumafen or difethialone to combat such resistance. However, the LD50 (lethal dose) of brodifacoum and flocoumafen-based baits for dogs is as low as 5g and 1.5g per kilogram of body weight respectively. Coming up is a table of LD50s. Which active ingredient would you pick for efficient Norway rat control, bearing in mind that they eat 10% of their body weight per day,

Grams of bait to deliver acute LD50 to species of specified body weight				
	House mice (25g)	<b>Rats</b> (250g)	Dogs (per Kg body weight)	
Difenacoum 0.005%	0.4	9	200	
Bromadiolone 0.005%	0.9	>6	200	
Difethialone 0.0025%	1.3	5.6	472	
Brodifacoum 0.005%	0.2	1.4	5	
Flocumafen 0.005%	0.3	1.3	1.5	

Realistically, contamination of domestic dogs with rodenticides is very unlikely, when label directions are followed (you've seen the dog food ads – cereal rodenticides are not top of the menu), and although there is limited potential via consumption of poisoned rodents these are often only a 'plaything' rather than an actual food source for a well-fed and occasionally pampered domestic dog. An average weight dog would need to eat many poisoned rodents over time to ingest a dangerous amount of anticoagulant bait. Even though the risks are therefore low, it is a label requirement to search for and remove rodent bodies, the presence of domestic dogs inspiring us to keep doing so and even increase the frequency of checking to a little more often. Rodenticide bait left exposed can occasionally be attractive to hungry (or daft!) dogs, which is an extremely important reason for protecting bait in accordance with label directions. So it's yet another case of 'follow the label' when it comes to protecting non-target domestic animals from the potential impacts of biocide use.





est controllers reported unseasonably high numbers of call-outs for wasps this summer. Richard Moseley, Bayer technical manager, and Lee Pellington, from PestProof, give their views on the heightened activity.

Richard explains that insect lifecycles are temperature dependent. "This means that as conditions get warmer, the reproductive process speeds up. Therefore, this year's earlier than

the reproductive process speeds up. Therefore, this year's earlier that normal high temperatures could be behind the early influx in wasp populations.

#### Wasp lifecycle

"Wasp nests generally start to develop in early spring and by August most are fairly large. Then in the autumn, queens leave the nest to hibernate in a sheltered place over winter.

"The surviving queens emerge in the early spring, when the population of other insects, such as aphids, spiders and small flies, starts to rise, providing a suitable food source for the queen to start the lifecycle again," he says.

However, this was not the case this year. "High temperatures caused rapid reproduction and large populations formed as early as June, when numbers normally don't peak until late August."

#### Double population

The Bayer Pest Solutions team has received suggestions from pest controllers that early wasp populations completed a whole lifecycle by mid-summer, as a wide variety of small and large wasp nests were seen during August.

"If this is the case, it would suggest that new queens left their original nest and started building new ones as it was too warm to hibernate, and it's possible that we could have seen a second generation of wasps. "There have also been reports that some of the more uncommon wasp species might have been more present than in an average year due to the high temperatures," explains Richard.

#### Small nests – small wasps

Lee Pellington adds to Richard's theory, suggesting that the cold snap in spring could have had a key part to play in the influx of wasps. "Many of the nests I came across this summer were smaller than I'd expect to see, most of them less than the size of a basketball. But these were full to the rafters, with abnormally small wasps," he says. "I think that the short spell of warmer weather, around 15°C in the early spring, encouraged the over-wintering queens to come out of hibernation. However, when the 'Beast from the East' hit in March, many of these were killed off, and those that survived were put on the backfoot.

"When the extensive heatwave started in May, rather than continuing to enlarge their nests, the queens focused on reproducing at a rapid pace, which meant the nests and wasps remained small, but tightly packed," says Lee.

Richard warns that although population numbers were unprecedented, there may also have been higher number of calls to wasp activity due to the amount of time the public spent outside during the summer. "With the prolonged warm weather, more people spent more time outside than normal, giving them the chance to spot and report more wasp activity than usual."

#### Looking to the future

It is very hard to tell what the 2019 wasp season will bring, especially as it seems weather conditions are becoming more and more unpredictable – as demonstrated with extremes experienced in the last 12 months. "If we have a very cold winter, there's a chance some of the hibernating queens may not survive. If it stays cold throughout the spring, there will be less food for emerging queens, potentially reducing numbers," explains Richard.

"This would be in line with the historic pattern of a rise and fall every other year. In 2016 some areas of the UK were inundated with wasps, but we saw a general decline in 2017. So, if this trend continues, 2019 could be a quieter year," he says.

"It's difficult to predict, and I wouldn't put a bet on this population pattern continuing. Therefore, it's important pest controllers are prepared in case this year's influx in numbers leads to an increased number of queens surviving the winter."

#### Be prepared

There is a number of options for wasp control, but one of the most widely and successfully used products is Ficam® D – a dust-based formulation, that does not agitate wasps when applied into the nest. However, it is important to take note, that the regulatory team at Bayer has worked hard to secure the re-registration of the product, but there will possibly be some amendments to the label requirements. Therefore, it's essential that pest controllers regularly check product labels for new regulations. Anybody wanting to find out more can visit the Bayer Pest Solutions Team on stand B1 at PestTech." For more information please visit www.environmentalscience.bayer. co.uk or contact the Pest Solutions Team at pestsolutions@bayer.com or call 00800 1214 9451.





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# The problem with bird mites



Bird mites *Dermanyssus gallinae* are encountered in the public health pest control industry most often when wild birds leave their nests that have been made in domestic premises. With the preferred host having literally taken off, the next best option is to forage for another which in some cases ends up being us.

#### Biology

Eggs and larvae are not usually close to the host animals or humans and it is knowledge of their biology that leads to recommendations to undertake two treatments. The first treatment would kill the adult and nymphal stages attacking the host(s). The second treatment should be undertaken approximately 7 days later, but this of course depends on the temperature, humidity and housing circumstances. The timing of the second treatment is to kill the stages originating from the eggs and larvae.

The presence of pet or wild birds nesting under roofs or nearby can be responsible for bringing *D. gallinae* into contact with humans within dwellings. In the domestic setting it is most often nests of sparrows, starlings and pigeons that are the source of bird mite activity. Once the nestlings leave the nest or when a nest is abandoned, the mites will migrate away in an attempt to find an alternative host for a blood meal. When the normal hosts are not available, the mites will attack us and yes, their bites can be painful and irritating. It is clear then that removal of abandoned nesting material by the pest control operator is an important part of an effective control strategy. Just remember that all birds, their nests and eggs are protected by law so become familiar with the relevant advice such as that listed here http://www.rspb.org.uk/forprofessionals/policy/wildbirdslaw/birdsandlaw/wca/

A frequently asked question is 'will they just die off?' Bird mites can survive for many weeks and months without feeding, so empty houses can still be at risk. Cool conditions can prolong the survival period of this pest, in line with the effects of temperature on arthropods in general. The survival ability can explain the persistence of bird mite problems in some cases. Thankfully they are unable to breed in association with humans alone.

A driver for bird mite control is the protection of animal health and human well-being. As well as their ability to bite which cause irritating lesions, they can harbour various disease-causing organisms such as Avian influenza viruses and Salmonella bacteria.

#### Available treatment methods

Depending on national legislations some products are on the markets for farm treatment but professional pest controllers need to check what is authorised for human dwellings - do not be tempted to use an agricultural or veterinary pesticide in a public health setting. It is worth noting that there is evidence of widespread resistance to pyrethroids in farm populations of D. gallinae. Furthermore, popular bendiocarb products (often used in resistance management programmes for other pests) available for use in the UK public health pest control industry are not authorised for mite control. As an alternative to chemical treatments, physical approaches such as diatomaceous earth have been used successfully and it is important to watch out for novel products in the future. Novel techniques such as using mite predators and entomopathogenic fungi, although showing some promise in trials, are still not fully developed at field level and are not therefore available to professional pest controllers. Heat and steam treatments have been used on farm but bringing warm and humid environmental conditions to premises can have a counter-effect and help D. gallinae mites to thrive in such favoured conditions.

#### Future approaches to bird mite control

Genetic approaches: since 2014 the transcriptomic makeup for *Dermanyssus gallinae* has been published. Several European teams are working on finalising the genomic information we know about this pest, to identify new ways to knock it down. Several EU groups are also working on a potential vaccine to protect hens against *D. gallinae*. Other groups are working on detoxification pathways used by *D. gallinae* to prevent them from being resistant or by using new plant-based products.

Pest Control News thanks Professor Olivier Sparagano, Associate Pro-Vice-Chancellor (Research) at Coventry University, for providing helpful guidance notes that influenced the production of this short piece.



# Managing bedbug resistance

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PCN has run a series of new 'science sense' articles in recent issues, examining the latest research in the scientific literature and providing a common-sense summary to readers. Themes have included insects found in association with 'eco-roofs', the carriage of antibiotic-resistant bacteria by pests and practical advice about protecting yourself against pest-borne salmonella infection. Now we cover the global issue of insecticide resistance in bedbugs Cimex lectularius.

Our aim continues, which is for key scientific information to be communicated exactly where it matters – to pest management professionals. Too often the bridge to practitioners isn't made, but not anymore...



vidence in scientific literature tells us that bedbugs *Cimex lectularius* have evolved many mechanisms that results in insecticide resistance. This resistance is known to impact on the effectiveness of some of the commonly used insecticides

in the pest management industry. Here we review the different types of resistance in bedbugs and share some practical control recommendations.

#### 'Kdr'/ 'knockdown resistance' to Pyrethroids

Pyrethroid resistance in bedbugs is due to mutations that affect the Na+ channel. This basically means that pyrethroid insecticides are unable to bind properly to the altered target site of the insect nervous system, which results in a lack of 'knockdown' and therefore practical treatment failure. It is thought that this type of resistance is present in modern bedbugs partly due to 'cross-resistance' to DDT which works in a similar way to pyrethroids – think of it as a 'genetic hangover' from the days of DDT resistance.

There is evidence in the literature of worldwide pyrethroid resistance, from the UK, Germany and Denmark through to the USA and Australia. In Australia, high levels of resistance to deltamethrin (Lilly et al., 2017) and permethrin are known. In a paper given by Lilly et al., at ICUP 2017 it was shown that 5 out of 31 bedbug field strains showed 100% resistance to topical application of deltamethrin. This isn't to say that deltamethrin doesn't have a place in a bedbug management programme but it means that knowledge of local resistance types will be helpful in selecting treatment strategies. For example, only intermediate levels of resistance to bendiocarb are noted in some bedbug populations. Of course, there are other mechanisms of resistance at play rather than just the one and we will move on to those soon. For now, we can look at another example of pyrethroid resistance, this time in Germany.

Another paper given at ICUP 2017 covered resistance in bedbugs, this one focussing on the situation in Germany, provided by Vander Pan et al., giving some very interesting findings. Resistance to deltamethrin in German bedbugs was determined, with 15 out of 18 field strains carrying kdr mutation. Also noted by the researchers was 'metabolic resistance' which we will learn about soon. The German researchers simulated real-life use of products: bedbugs were lured to deltamethrin sprayed wallpaper (aged by 1 & 2 weeks) by CO<sup>2</sup> and heat. The bedbugs were checked after 24 hrs and then daily after that. The key finding was that up to 50% of bedbugs survived crossing the sprayed surfaces! Many in the industry rely on the principle of bedbugs crossing treated dried deposits of residual insecticide sprays but this is not a reliable technique at all. The authors recommended directly spraying (topical application) bedbugs as being the most effective way of delivering insecticides for successful control. This is an important mentality change for some who undertake bedbug treatments.

#### Metabolic resistance

As described just previously, German bedbugs showing metabolic resistance have been noted by Vander Pan *et al.*, 2017 in their ICUP 2017 paper.

The Insecticide Resistance Action Group (IRAC) definition of 'metabolic resistance' is below and can be counteracted partly by using products containing synergists such as piperonyl butoxide (PBO):

'Resistant insects may detoxify or destroy the toxin faster than susceptible insects, or quickly rid their bodies of the toxic molecules. Metabolic resistance is the most common mechanism and often presents the greatest challenge. Insects use their internal enzyme systems to break down insecticides. Resistant strains may possess higher levels or more efficient forms of these enzymes. In addition to being more efficient, these enzyme systems also may have a broad spectrum of activity (i.e., they can degrade many different insecticides).'

#### Penetration resistance

The IRAC definition of penetration resistance is:

Resistant insects may absorb the toxin more slowly than susceptible insects. Penetration resistance occurs when the insect's outer cuticle develops barriers which can slow absorption of the chemicals into their bodies. This can protect insects from a wide range of insecticides. Penetration resistance is frequently present along with other forms of resistance, and reduced penetration intensifies the effects of those other mechanisms.'

Lilly *et al.*, 2016 showed penetration resistance in bedbugs due to the thickened cuticle of the 'Parramatta' strain even after forced exposure to wet deposits of lambda-cyhalothrin.

#### Behavioural avoidance

The IRAC definition of behavioural avoidance is:

'Resistant insects may detect or recognize a danger and avoid the toxin. This mechanism of resistance has been reported for several classes of insecticides, including organochlorines, organophosphates, carbamates and pyrethroids. Insects may simply stop feeding if they come across certain insecticides, or leave the area where spraying occurred.'

Kenneth Haynes in 2008 reported that bedbugs explore a test arena and ultimately rest on a paper tent-like harbourage that was not treated with a pyrethroid insecticide.

#### Key recommendations for resistance management in bedbugs

- The key is to rotate insecticide groups and utilise non-chemical measures when considering resistance management and Integrated Pest Management strategies
- Use a carbamate-based insecticide, preferably for the initial treatment
- Use an insect growth regulator e.g. pyriproxyfen to assist in resistance management
- Insecticides with a synergist e.g. piperonyl butoxide (PBO) can be helpful
- When selecting pyrethroid-based insecticides, use the more potent of the pyrethroids
- Spray bedbugs directly (also described as 'topically')
  with insecticide rather than relying on them crossing
  a barrier of dried insecticide deposit
- Thorough application of insecticides is required to help counteract behavioural avoidance
- Integrate physical measures of control e.g. diatomaceous earth and especially steam treatments
- Consider, when available, the novel 'sprayable entrapping' formulations (e.g. those based on polyalkyleneoxide modified heptamethyltrisiloxane) that use physical measures to encase bedbugs as there is no known resistance to this method

Full references available from technical@pestcontrolnews.com



# Decoding product labels: what do they really mean?

The second in our mini-series of articles, PCN looks to an industry advisor to 'crack the code' of product labels. In this issue we ask about insecticide label phrases and reach some common-sense answers.

The most helpful way of thinking about this is that insecticide labels are basically the law. For example, using a product in a manner that is inconsistent with the label may be an offence. Insecticides are governed strictly under the Health and Safety Executive approvals / authorisation system. They all come under scrutiny and with the wide variety of active ingredients available for insecticides and the potential environmental / health damage they could cause this is perfectly justified. We aim to 'lift the mist' around some of the phrases used and explain their purpose on the label. It's well worth reading the label not just from legal standpoint, but from the product usage angle. Often the manufacturers give strict dilution rates, special rates and specific information that can help you to use the product with accuracy and utmost efficacy. A few things first:

S

TATUTORY BOX: Present where products are approved under the Control of Pesticides Regulations 1986 (CoPR) and contains information of the highest priority under legal obligations. Often signified by a different background colour or bold

border with capitalised text, or in some cases a heading 'statutory conditions of approval relating to use'. For example: HSE and / or PCS (pesticide control service – indicates approval in Ireland) number is displayed here. COSHH Regs are mentioned, areas where not to use the product are also highlighted. Some may also show summary of dose rates, dilution requirements or 'special use' specification. Safety precautions are also covered – for example specific personal protective equipment (PPE). If the label seems woolly on PPE then the material safety data sheet (MSDS) will usually have the detail – or refer to it elsewhere (e.g. seek advice from your distributor or from the manufacturer).

Although there isn't a specific statutory box on insecticide labels where the product has been authorised under the biocidal products regulations (BPR), all the relevant information is still present and should be followed, in the same way as those approved under CoPR.

**BRANDING:** Important from a marketing perspective and can help identify the product. But from a health and safety perspective the active ingredient name and any other ingredients are much more important, along with the concentration.

**FIRST AID:** This guidance (or an essential section of it) often appears near the statutory box.

**ACTIVE INGREDIENT:** This is the biologically active compound contained within the product. This is always displayed on the label and so is its concentration. This is about the most important part of the label – telling us exactly what it is.

On to the other phrases that may crop up and a little about dilutions and concentrations, most often a little goes a long way!

FOR THE CONTROL OF...: It is imperative that the pest species you are treating appears in this section. The manufacturer has data on the species listed and therefore it is tried and tested. If the pest isn't named on the label you cannot use it to treat that pest, unless covered by an increasingly rare 'catch all' phrase like 'crawling insects'.

**APPLICATION:** This is usually a detailed section with specifics for each pest. It may indicate certain conditions and how the product may be used in those conditions. Precautions are also given. It's good practice to rotate insecticide groups to prevent resistance. Some manufactures will specify if the product isn't appropriate for a certain pest due to such resistance.

**DOSE RATES:** Some of the rates for the gel baits are specific, for example 'treat a kitchen of 10 m<sup>2</sup> with 10 spots of 0.2 g each. Or, treat a kitchen of 10 m<sup>2</sup> plus bathroom/toilet area of 10 m<sup>2</sup> with 20 spots of 0.2 g each'. This is where a bait gun is an absolute essential piece of equipment for accurate dosing and product application.

The ready-to-use insecticides are usually very simple and are just that...ready-to-use, no dilutions needed. However, when we come on to using ready-to-use preparations for misting, fogging or ultra-low volume (ULV) we can hit the snagging point of application rate. We may need to carry out some simple calculations to find out how much volume we need to treat a certain area. For example:

Dose rate – 100ml per 1000m<sup>3</sup>. Flow rate – 35ml per minute (Exodus & E2 Microgen machine).

A room measuring 10m x 10m x 3m = 300m<sup>3</sup>, 30ml of product would be needed. With the flow rate calculation – the machine would need to run for 50 seconds to dispense enough insecticide to treat the entire room. Much less time and product than you might expect. So by not following label directions not only would we potentially be overdosing and by using far too much it would make it much costlier than what is exactly needed.

Dilutions are also written a little confusingly at times. Using parts of water to parts of concentrate (the insecticide). Often the volume in ml is also given and provides the proportionate balance between the concentrate (insecticide) and the diluent (the water). In basic terms 1 part concentrate to 9 parts diluent would give the total 10 parts for the whole volume. Example: 100ml insecticide with 900ml water gives a total volume of 1000ml (1 litre) and the correct proportions of 1 in 9. But be careful to use the correct dilution for the application method you have chosen, e.g. the dilution rate for use with a misting unit will be different to that for a ULV, pneumatic sprayer or possibly a thermal fog. Some insecticides with dosing bottles or applicators are even easier to use and importantly accurately measure.

The hazard symbols for insecticides differ somewhat from the rodenticide labels due to the extensive damage that can be caused in the environment due to accidental release. Here are a few:





This symbol appears on pretty much every single insecticide. Environmental warning symbol with the accompanying risk phrase -Warning: Very toxic to aquatic life with long lasting effects.

The symbol itself just means 'Dangerous in the environment' the phrase often helps to specify.



Flammable: another symbol you may see. The active ingredient is not usually flammable, but sometimes the carrying agent can be. Usually for agrosol products



The harmonized hazard symbol. Often the associated risk phrase is 'harmful if swallowed' or 'may cause allergic reaction' dependent on the chemical. Can also apply with the phrase 'May cause respiratory irritation' or a similar human health impact.



Although we are now more used to seeing the 'exploding chest' symbol on rodenticide labels it also applies to some insecticides, in this case with the phrase 'May be fatal if swallowed'.



This symbol means corrosive. It is rarer than some of the other symbols and again usually associated with the carrying agent for the active



Bird Free® authorisation proven efficacy

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The successful authorisation of Bird Free<sup>®</sup>, with the UK competent authority for biocides, the Health and Safety Executive, brings further evidence to end users regarding the efficacy of this important product when used according to label directions.

raft of extensive scientific trial data, including field trials ('real world' data that we all like to see!), is required to be accepted by the HSE when issuing such product authorisations and this is exactly what was delivered by the team behind Bird Free®. Currently authorised 'for deterring feral pigeons from buildings and other structures',

further data is being evaluated for other bird species for them to be formally added to the product label. As Bird Free® is a deterrent, the label carries the following text: 'Product Type: PT19: Repellents and attractants. For use only as a repellent.'

Specifics of the authorisation are reflected on the label and of particular interest is the phrase 'Bird Free® will remain effective for a minimum period of 3 months'. It is important to recognise the word 'minimum' and understand that the manufacturer projects a much longer effective timespan in practical use situations.

As Bird Free® is now officially authorised as a biocide, it is recommended that relevant paperwork should include a record of the authorisation number, which is UK-2018-1127. The length of the authorisation is 10 years, being granted on the 5th June 2018 and due for renewal by 4th June 2028.

The authorisation also makes it clear that Bird Free® is for professional use only and therefore not for amateurs / nonprofessionals, while stating the active ingredients as peppermint oil (food grade) 0.53%; citronellal 0.42%.

Further information about the history of Bird Free® can be found here https://www.bird-free.com/





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- Year 1: 10% 25% based on daily revenue
- Year 2: 15% 30% based on daily revenue
- Year 3: 20% 35% based on daily revenue
- 28 days holiday, inclusive of bank holidays
- · Flexible working hours
- A competitive pension scheme
- Ongoing CPD, training and development
- · Recognition and constant support
- · Ford Connect Limited Van
- · Company smart phone

#### **Contract Type:**

Permanent, full time, 40 hours per week Application closing date: 6pm on Monday 19th November 2018

To apply or for further information please send your CV and a covering letter via email to: banksy@pestforce.co.uk

THE CLOSING DATE IS THE 19<sup>TH</sup> NOVEMBER 2018



# New Products

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www.pestcontrolnews.com



# VAZOR® PROVECTA

Vazor Provecta is a physical mode of action "sprayable entrapping" formulation for effective control of resistant populations of crawling and flying insects. This concentrate for dilution with water acts by causing external immobilization of target insects.

Based on Polyalkyleneoxide modified heptamethyltrisiloxane, Vazor Provecta is recommended to be used for the treatment of resistant populations e.g. bedbugs. It should be applied topically (directly) to insects such as bedbugs, cockroaches, spiders, ants, flies & mosquitoes and stored product insects. Vazor Provecta can be applied as a coarse spray or fine mist.

Vazor Provecta is an excellent alternative to traditional insecticides and functions as a resistance management tool due to the physical mode of action.

#### Benefits include:

- Physical mode of action.
- Product can be used in the presence of stored products.
- No residues, No waiting / withdrawal period.
- Exempt from biocidal product registration.

www.killgerm.com

#### HARMONIX® POULTRY RED MITE

Harmonix Poultry Red Mite is Bayer's latest product to be launched in the UK. Exempt from Biocidal Product Registration, it benefits from a dust penetrating formulation that uses a physical mode of action to control mites, whilst avoiding potential pesticide contamination. Suitable for any stage of the flock cycle, Harmonix Poultry Red Mite contains a food grade cellulose polymer that can be applied while birds are present as a standalone treatment, or as part of an integrated pest management programme. Harmonix Poultry Red Mite can help to reduce skin irritation and stress amongst poultry caused by mite biting, and can be an important tool when preventing the spread of poultry related disease, transmitted via poultry mites.

Product guide and further details can be found at www.environmentalscience.bayer.co.uk or by contacting the Bayer Pest solutions team at **pestsolutions@bayer.com** or on **00800 1214 945.** 

www.environmentalscience.bayer.co.uk/ pest-management/products/harmonixpoultry-red-mite



#### Goliath® Gel

The fastest and most cost-effective cockroach treatment.



- Fast, reliable action for immediate results
- Cascade effect for complete control
- Low dose rates for value and safety
- Precision application for speed and accuracy

Enabling the most effective solutions to your pest problems.





PEST CONTROL NEWS® PRESENTS

# **SHRUNK THE** CONTROLLER

**PCN DINNER 2018** 

7th November 2018 Arena MK, Milton Keynes

£75 pp (+vat) £750 per table (+vat) 10 people per table

- **Drinks Reception**
- **Charity Raffle**
- 3-Course Meal
- Live Music
- Free Bar (limited)

Bar will close at 12.30am Residents can continue the evening at the Pitchside Bar.

**Dress Code: Smart Casual -**No jeans/ no trainers

To arrange accommodation contact TravelWise on 01924 268 611. Credit card details will be needed to secure the booking.

Tickets can be cancelled up to 4 weeks prior the event, tickets cancelled after this time will be charged at full price.

To book your place please contact Sadie Baldwin 01924 268 433.



















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## Presentations at PestTech 2018

#### 09.30 - 09.45 John Hope - NPTA

Welcome and a new resource for NPTA members What our new Technical Manager can do for you.

#### 10.00 - 10.45 Richard Moseley - Bayer

The British Retail Consortium – what do they want from pest controllers?

The results of a recent market survey involving 200 food industry sites and 200 pest controllers.

#### 11.00 - 11.45 David Cross - RAMPs

<u>Update on the use of aluminium phosphide for</u> vertebrate control

There have been many recent changes in the use of this very valuable control method. Are you fully up to date?

#### 12.00 - 12.45 Emily Coan - Reading University

Pest Control News Workshop: 'Tales of Resistance' Genetic resistance has plagued the worldwide success of anticoagulant rodenticides. This is an ongoing battle but there are ways you can help map the spread of these genetic outbreaks.

#### 13.00 – 13.45 Martin Ball - Wildlife Incident Investigation Scheme

When an inspector calls

The Wildlife Incident Investigation Scheme (WIIS), what it is, how it operates and who is involved in it.

#### 14.00 - 14.45 Abigail Reade - The Tree Bee Society

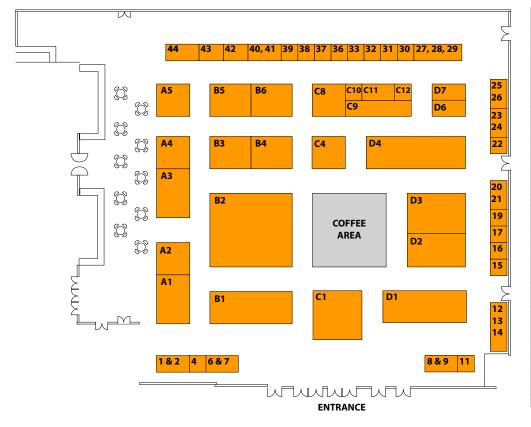
<u>Urban Buzz - codes of best practice for bees</u>
The special skills needed when dealing with bees, both honey and bumble.

#### 15.00 - 15.45 Simon Whitehead

Rabbiting – in the past, the present and the future The future looks to be very challenging....



#### **Stand Plan**



Stand	Company	Stand	Company
A1	Rat Pack	4	Water for Kids
A2	Rentokil Initial	6, 7	WaspBane
A3	Bell	8, 9	Cliverton
	Laboratories	11	W.F Insurance
A4	Syngenta	12,13,	Bower
A5	PestFix	14	
B1	Bayer	15	Metexx
B2	Killgerm	16	CRRU
В3	PestWest	17	Pest
B4	Agrisense	Management Alliance	
B5	County Workwear	19	Service Tracker
В6	1env	20,21	Bradshaw Bennet
C1	NPTA	22	RSPH
C4	BASF	23,24	International Pest Control
C8	Russell IPM		
C9	Pelgar	25,26	Lodi
C10	Todays Technician	27,28	ATEO
C11	Run	30	Bat Conservation
C12	Pest	30	Trust
	Magazine	33	врса
D1	Barrettine	36, 37	Huck Nets
D2	C.T.S Birds of Prey	38	
D3	Butlers Pantry	39	Service Pro
D4	Pelsis	40,41	Colins Traps
D6	Woodstream	42	Sentomol
D7	Inspector Pipes	43	PestTrader
1, 2	Basis Prompt	44	Lantra



The UK's largest trade exhibition and conference for the pest control industry!

















#### Who's onboard?

- Technicians
- Trainees
- Managers
- Company owners
- Specifiers
- Specialists
- Consultants
- Product developers
- Trainers
- Supervisors
- Suppliers
- EHOs
- Local authorities
- Anyone with an interested in professional pest management

WEDNESDAY

20 MARCH 2019



#### **CELEBRATING EXCELLENCE IN PEST MANAGEMENT**

The British Pest Management Awards (BPMAs) are back and bigger than before. We had such great feedback from our first awards that this year we've got more awards, more tickets, and more entertainment.

We're holding it at the Giant Robot rooftopia after day one of PestEx 2019. The venue is famous

for its variety of food, drink and entertainment.

Join us in celebrating the crucial role pest management plays in protecting public health. We've planned the evening with mingling in mind, so come along and network with award nominated pest professionals from across the UK.

**GIANT ROBOT** CANARY WHARF LONDON



2 0113 245 0845 

giles.ward@milnerslaw.com or in uk.linkedin.com/pub/giles-ward/31/187/6b3 

@MilnersGiles

#### Tis the season to be jolly...

o imagine the scene, the company has done well, profits are up and as a reward the Christmas night out on the town is now in good order and being planned. A few drinks, a meal out and then some more drinks post meal, what could possibly go wrong for your uninhibited employees and management board? Well of course in the main – largely nothing but for the unfortunate few – quite a lot.

Firstly, the mixture of alcohol, Christmas holidays, the release of a lot of stress, personal issues bubbling up over the year and yes... more alcohol can make for a rather toxic brew...all of which for you, as an employer, will carry the can.

Whether on your premises or otherwise, you are liable for your employees conduct, vicariously. So if your inebriated staff decide to be sick in the restaurant, insult someone causing a fight, have unwelcome desires on their colleagues or lie in the gutter getting hypothermia – the only person aside from themselves getting in trouble is you as the employer.

These are a few do's and donts to make life a little more palatable and a lot less litigious.

Your staff need to be made aware of the policies you have in terms of conduct and general respect for their work colleagues and reminded that they are ambassadors of the company and need to behave as such. They are still on work time and must behave appropriately. This should be sent in writing in advance and ideally confirmed to have been agreed too.

Drinks vouchers are an idea to limit consumption but aren't bullet proof, as is a dress code to avoid the Christmas fashion war which wastes valuable work time and petty gossip/ squabbles.

A warning about the consumption of excess alcohol is an idea regarding health and safety, good conduct and well being. Thought needs to be given to how your staff are to get home and what is the policy about getting to work the next day? We tend to start early, and come in late the next day.

One needs to avoid the words misconduct and disciplinary hearing with Christmas party and letting ones hair down subtly or actually not so depending on your staff, but warning specifically to those that may well go to town maybe a salutary lesson learnt best not in hindsight. Finally, a set plan of the evening when you are at the Christmas party and when matters descend into "not at the Christmas party" may assist in the event that things turn unfestive and a reminder that all events as they unfold are all on CCTV nowadays.

Whilst largely unnecessary it is worth setting the prescribed boundaries to avoid collateral damage to your balance sheet or at least minimise that risk since no one really wants the post party paranoia played out in the office blow by unadulterated blow.

For all these and other legal queries please feel free to call your legal eagle Giles ward on 07789 401 411 or e mail at giles.ward@milnerslaw.com.

Happy partying!

# Your guide to the pest control **2018 training dates**



Killgerm Training run courses nationwide offering different types of courses for different levels of experience and knowledge. Details of all course dates and locations are available online at

www.killgerm.com/pest-control-training-calendar; there is also a full list in the Killgerm catalogue on pages 223-225. For further information or to book your place on a course call **01924 268445** or email **training@killgerm.com**.

#### **2018 TRAINING DATES**

#### **Killgerm Principles of Rodent Control**

8th November 2018, Perth 13th November 2018, Ossett 27th November 2018, Bristol 4th December 2018, Ossett

#### **Insect Control**

14th November 2018, Ossett 28th November 2018, Bristol

#### Safe Use of Pesticides

15th November 2018, Ossett 29th November 2018, Bristol

#### Selling & Marketing for Bird Control

21st November 2018, Ossett

#### **Trapping Techniques**

21st November 2018, Killamarsh

#### Safe Use of Aluminium Phosphide for Vertebrate Control

20th November 2018, Bretton

#### Sales Skills Course

14th-15th November 2018, Bracknell

#### **IOSH Working Safely in Pest Control**

22nd November 2018, Ossett

#### **Starting Out in Pest Control**

29th November 2018, Nottingham

#### To book visit - www.killgerm.com







#### GENERAL PEST CONTROL COURSE (INC. RSPH LEVEL II IN PEST MANAGEMENT EXAM) AT YARNFIELD PARK, STAFFORDSHIRE.

9 – 14 DECEMBER 2018 10-15 MARCH 2019 2 – 7 IUNF 2019

#### **BPCA EXAM DAYS:**

6 NOVEMBER - COVENTRY 19 NOVEMBER – BRIGHTON 5 DECEMBER – ANTRIM 14 DECEMBER - STAFFORDSHIRE

#### OTHER PROGRAMMES AT BPCA OFFICES, DERBY.

27 NOVEMBER 2018 -SAFE USE OF AIR WEAPONS

30 NOVEMBER 2018 - CERTIFICATE IN BIRD MANAGEMENT

6 DECEMBER 2018 -CERTIFIED FIELD BIOLOGIST

13 DECEMBER 2018 - INSECT IDENTIFICATION

#### ONLINE LEARNING: AVAILABLE ANYTIME

FOUNDATION CERTIFICATE IN PEST MANAGEMENT USING RODENTICIDES SAFELY COMPLETING RISK ASSESSMENTS GENERAL PEST CONTROL COURSE

To book visit www.bpca.co.uk



#### **November 1, 2018**

Practical Vertebrate Trapping

#### November 8, 2018

RSPH Level 2 Award in the safe use of Rodenticides

#### November 15, 2018

#### RSPH Level 2 Award in Pest Management -

Day 1 - 15th November 2018

Day 2 - 16th November 2018

Day 3 - 22nd November 2018

Day 4 - 23rd November 2018

Day 5 - 29th November 2018

Day 6 - 30th November 2018

#### November 15, 2018

#### RSPH Level 2 Certificate in Pest Management -

Day 1 - 15th November 2018

Day 2 - 16th November 2018

Day 3 - 22nd November 2018

Day 4 - 23rd November 2018

Day 5 - 29th November 2018

Day 6 - 30th November 2018

#### To book visit - www.pestsolution.co.uk

#### **December 13, 2018**

RSPH Level 2 Award in the safe use of Rodenticides

#### **December 14, 2018**

RSPH Level 2 Certificate in Pest Management

#### **December 14, 2018**

RSPH Level 2 Award in Pest Management

#### January 17, 2019

RSPH Level 2 Award in the safe use of Rodenticides

#### February 28, 2019

RSPH Level 2 Award in the safe use of Rodenticides

#### March 7, 2019

#### RSPH Level 2 Award in Pest

#### Management -

Day 1 – 7th March 2019

Day 2 - 8th March 2019

Day 3 — 14th March 2019 Day 4 — 15th March 2019

Day 5 – 21st March 2019

Day 6 - 22nd March 2019



Join us at **PESTTECH** STAND B2

You know when you're in safe hands!

www.killgerm.com

# Bird Free® passes with flying colours!



AUTHORISED

#### 小島 BIRD FREE®

#### BIRD FREE® IS BACK!!

- Ready to use dishes
- Quick, easy, mess-free installation
- Making working at heights safer and easier
- Firm texture enables use on pitched roofs and angled surfaces
- Discreet low profile dishes
- Keeps pigeons away from structures without harming them
- **NOW WITH HSE AUTHORISATION**

