

NOVEMBER 2019

# PPC97

PLUS

Pest photo of the year  
Ask the technical team  
Level 2 Award in Pest Management - General Pest Control (GPC)  
Trading up!



23

## INSECT BAITS AND BAITING

Standalone tools to control urban pests

## RESISTANCE IN RODENTS

18

The consequences in an environment of increasing restrictions



16

**PHARAOH ANTS: THEN AND NOW**  
Life before gel baits



26

**GETTING TO GRIPS WITH SSPRA**  
Appropriate monitoring and controls



32

**PUT ON YOUR SUNDAY PEST**  
The merits of personalised workwear



40

**WHY DON'T THEY PAY THE PIPER?**  
Demonstrating the value of our trade and our people



12

**STOP PRESS!**

**PPC LIVE**

**SEMINAR AND DEMO SCHEDULE**

43

**FOWL PLAY ON THE PITCH**  
Stadium pest control with feathered colleagues



Professional Pest Controller  
the journal of the UK pest management industry



ISSN 2046-5025



You're invited!

BPCA

# Forum

learn · share · connect

Your local pest event.

FREE to attend

**NEW FORMAT!**



Association and industry news

Ask the technical team

Manufacturers and distributors

Guest speakers

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Practical breakout sessions

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[bpca.org.uk/forum](http://bpca.org.uk/forum)

SAVE THE DATE!

West Scotland	22 January
London	4 February
Midlands + AGM	2 April
East of England	12 May
South West	4 June
North East	22 September
Northern Ireland	7 October
Wales	21 October
South East	19 November
North West	2 December



### forum

/'fɔrəm/

noun

A meeting where ideas and views on particular issues can be exchanged.

"we hope today acts as forum for debate and learning"

# The trust equation



“...for trust to work, it needs to be a two-way street.”

Trust is a vital ingredient for business and personal success. You trust me to provide a service, and I trust you to pay me when the work is done. This is the most basic trust equation between you and your customers.

You have to trust your colleagues to look after your clients professionally and ethically, thereby representing your company ethos. They, in turn, need to be able to trust you to pay them, keep them safe and treat them fairly.

One of the many reasons people join BPCA is because an endorsement from a third-party helps customers trust them more. Accreditations, qualifications, insurances and continued learning all promote trust; that's why they're part of BPCA membership criteria. BPCA has to trust it's members to uphold its good name.

But for trust to work, it needs to be a two-way street. You need to be able to trust your trade association to keep you in the know, campaign with your interests at heart, and give you a competitive advantage over non-members.

## SHOULD YOU TRUST BPCA?

Many in our sector are sceptical by nature. Trusting too easily isn't a savvy business move. Trusting nobody is a recipe for disaster.

Charles H Green talks about the trust equation. You might have seen it before:

$$T = \frac{C + R + I}{S}$$

Trustworthiness =  $\frac{\text{Credibility} + \text{Reliability} + \text{Integrity}}{\text{Self-Orientedness}}$

## LET'S TALK ABOUT CREDIBILITY

Do you see the things that BPCA does as credible? Take a look at this magazine, our Codes of Best Practice, our training, forums, website, bulletins, PestEx, technical

advice. Is it good? Do they suggest BPCA knows pest management?

For me, I believe BPCA's credibility comes from its 76 years of experience as an association. I believe in the professional Staff team we employ, who live and breath this organisation. I believe in the credibility of our committee/elected-Board structure. I've sat on committees, and I've been on this Board for years now; the passion around these tables is second to none (see page 9 about Board recruitment).

What other pest organisations are winning awards for helping eBay to stop illegal pesticide sales (see page 10)? Who else is organising events in the Scottish Parliament (page 43)? Who else is organising free, accessible webinars that everyone can join in with (page 50)? The list goes on.

## NOW TAKE RELIABILITY

We've got some fantastic examples of the Association's reliability from this year. During the bird licensing debacle, BPCA led the way to inform the sector. We sent out emails, fielded hundreds of technical questions and organised free webinars to keep technicians on the right side of the law. BPCA campaigned on our behalf and was the only named pest organisation in Defra's summary of the call for evidence.

BPCA Registered is not even one year old. However, it's already recognised by the Department of Agriculture, Food and the Marine (DAFM) in Ireland for their register of Pest Management Trained Professional Users (PMU) (page 6). In Pest magazine's latest survey, they show the majority of companies surveyed were on BPCA Registered already!

When was the last time you asked BPCA for support and didn't get it?

Now I suspect if you don't trust BPCA - it's probably because of the "T" in the trust equation.

## INTIMACY COMES FROM ENGAGEMENT

Trust doesn't work if you're not willing to experience what BPCA's got to offer.

Come to BPCA's Forums. Meet the team and the Board. Come and observe one of our committee meetings. Book onto a webinar. Do some of our CPD quizzes online. Talk to us at PestTech or PPC Live or give the team a call.

Finally, we've got to talk about the undoing of trustworthiness: self-orientation.

Simply put, this is self-interest. We might say, "I can't trust him on this deal - I don't think he cares enough about me; he's focused on what he gets out of it."

BPCA's a not-for-profit trade association, owned solely by its members. If you don't like something, you can change it.

Nobody is profiting from your membership fees. All profits are reinvested in member benefits.

Having said that, if you are entirely self-orientated, you might not get the return on your membership you want.

## DO YOU TRUST BPCA?

If you don't think that what we're doing is credible - tell us and we'll fix it.

If you don't think we're reliable - tell us when we've let you down.

If you have no feelings of intimacy toward the Association - come join in.

And if you think we're all self-orientated, remember: BPCA is its members. Come and engage with us before you make up your mind.

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**BPCA REGISTERED CPD POINTS**  
 Online CPD quiz = 1 point each  
**bpc.org.uk/cpd-area**  
 Remember to log anything else  
 you've learned in your CPD diary for  
 even more points

**BASIS PROMPT: PC/67143/19/G**  
 Reading PPC mag = 2 points  
 Online CPD quiz = 3 points each  
**bpc.org.uk/cpd-quiz**



# Contents

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 bpc.org.uk/linkedin 

## NEWS 6

## PEST PHOTO OF THE YEAR 11

BPCA is looking for the best pest photograph of the year and is offering a £500 prize.

## PPC LIVE 2020: SEMINARS AND DEMONSTRATION SCHEDULE 12

## ASK THE TECHNICAL TEAM 15

Your latest questions, answered.

## PESTWATCH PHAROAH ANTS: THEN AND NOW 16

Natalie Bungay looks at treatments for pharaoh ants and how options have changed.

## RESISTANCE IN RODENTS, BOTH BEHAVIOURAL AND METABOLIC 18

Dr Mike Ayres investigates the consequences in an environment of increasing restrictions.

## INSECT BAITS AND BAITING 23

Partho Dhang explores the intricacies of insecticide baits.

## UNDERSTANDING AND IMPLEMENTING SSPRA 26

BPCA Consultant member John Lloyd is back in PPC to help us to conduct a proper SSPRA.

## MEMBER BENEFIT IN FOCUS PUT ON YOUR SUNDAY PEST 32

Greg Garrood investigates what makes for decent pest management workwear.

## WE BUILD IT... YOU DRIVE IT? 34

Kat Shaw explores the franchising model for pest management businesses.

## TRADING UP! 36

This year, BPCA's Executive Board set up a series of three working groups, to find out what championing professionalism in pest management looks like.





facebook.com/Britishpestcontrol



youtube.com/user/BPCVideo

**SERVICING STORIES WHERE THERE'S WAX,  
THERE'S... MOTHS? 38**

Ian Furlong details his first encounter with wax moths and their symbiotic relationship with the bees in his client's loft.

**SERVICING STORIES A GAME OF CAT AND  
MOUSE ...AND RAT AND COCKROACH  
AND PIGEON 39**

Nigel White talks us through a challenging site, detailing the approach taken when dealing with a multi-infestation.

**STRATEGIC STORYTIME  
WHY DON'T THEY PAY THE PIPER? 40**

Demonstrating the value of our trade and our people.

**WHERE WE'VE BEEN  
PLANET HOLYROOD 42****MEET THE MEMBER FOWL PLAY ON THE PITCH 43**

Kat Shaw spoke to Philippa Hawkins from Falconry Services Bird and Pest Control about carrying out pest control in stadiums with her feathered colleagues.

**PLASTIC WASTE: IS IT TIME TO THINK  
OUTSIDE THE BOX? 44**

Sean Taylor asks how pest management professionals can work smarter and greener, to help tackle climate change and cut waste.

**TRAINING PROGRAMME IN FOCUS LEVEL 2  
AWARD IN PEST MANAGEMENT -  
GENERAL PEST CONTROL (GPC) 45**

Kat Shaw gets into GPC to meet some candidates and find out what makes the course internationally-renowned.

**BESPOKE PEST TRAINING: IT'S NOT  
'ONE SIZE FITS ALL' 48**

Karen Dawes explains how bespoke training might be a better fit for your business.

**FREE CPD SEMINARS AND FORUMS 50****TRAINING CALENDAR 51**

# Cycle of seasons

“Some new businesses move rapidly from the initial enthusiasm of spring to the inevitable conclusion of winter. Thankfully, business failure rates appear to be very low in our sector, certainly compared to others.”

I write this on the autumnal equinox as we officially pass from summer into autumn. To a great extent, we work in an industry where the seasons matter because some of the pests we deal with have variable activity during the year. Even then, some pests do not obey the rules of seasonality and may appear earlier and depart later than their expected timeframe.

It's not just weather and pests that have their seasons. This is true for our businesses and for us as individuals.

As individuals, we may be in the spring, summer, autumn or winter of our lives and the joy of the pest control sector is that there are opportunities for all regardless of the season of life we may find ourselves in. Some come or came into the industry in the spring of their lives and remain while the summer, autumn and winter of their lives occur. The flexibility of our sector makes it appealing to people of all ages and, as your trade association, we need to ensure the sector is attractive to potential employees. Few people wake one morning thinking they want to be a pest controller.

The same is true of the businesses in our sector. Each year we see the new growth of spring as new businesses are established. Equally, we see long-established businesses reach their winter season and disappear. Sometimes they appear as something else, other times they disappear altogether. That

is the natural rhythm of life.

Despite these seasons and rhythms, we can choose to be out of season just like some of the pests we deal with. Some new businesses move rapidly from the initial enthusiasm of spring to the inevitable conclusion of winter. Thankfully, business failure rates appear to be very low in our sector, certainly compared to others.

Part of the season of business is often when they decide to join a trade association. We are fortunate as a trade association that we have members in every season - we can support them at every stage, starting with our probationary scheme in their spring season as new businesses and all the milestones thereafter. Perhaps we need to consider if we have all the appropriate member support and engagement opportunities for businesses at all stages of their lifecycle. Could we do more to support those businesses looking to sell up or those looking to grow? It would be good to understand what this support might look like.

Whatever season you and your business are in, your trade association is here to support you.

**IAN ANDREW**  
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## Hygeia Award wins for Rentokil employees

British Pest Control Association member Rentokil Initial is celebrating after two of its employees scooped Hygeia Awards for commitment to public health.



Richard Murphy-Packer and Matthew Herz celebrating their wins at the Hygeia Awards.

At a ceremony held by the Royal Society for Public Health (RSPH), Rentokil Initial employees were crowned winners in both the 'Pest Management' and 'Excellence in Learner Support' Award categories.

The Hygeia Awards recognise the achievements of learners and centres, and are awarded by RSPH.

## Changes to bird control general licences in Wales



Following a successful legal bid in England by campaign group Wild Justice, Natural Resources Wales has changed its own general licensing system. On 7 October three general licences were replaced, with a fourth licence being scrapped completely. New licences are in force and licences GL001, GL002 and GL004 are no longer valid.

The changes:

- Rooks are completely excluded from general licences, due to evidence of significant population decline.
- The collared dove and jay will be taken off GL001, as well as GL002 alongside the carrion crow, magpie, jackdaw and wood pigeon.
- Feral pigeons and Canada geese have been removed from GL004.

GL003 is to be withdrawn completely. According to Natural Resources Wales, "the small number of aerodromes and airfields in Wales, and the various species encountered at the different locations" means that the control of birds for aviation safety will need individual licence applications.

Read more about the changes on the Natural Resources Wales website, where the new licences are now available.

[cyfoethnaturiolcymru.gov.uk/permits-and-permissions](http://cyfoethnaturiolcymru.gov.uk/permits-and-permissions)

## BPCA Registered okayed for register of pest professionals in Ireland

BPCA  
REGISTERED

BPCA Registered has been approved as a recognised system for the employees of members working in Ireland to evidence their skills, qualifications and continued professional development.

The Department of Agriculture, Food and the Marine (DAFM) requires all trained professional users to register as a Pest Management Trained Professional User (PMU).

The British Pest Control Association (BPCA) individual recognition scheme is now an accepted CPD scheme allowing pest professionals to maintain their place on the register.

BPCA Registered cards are now authorised to carry a PMU number.

Members of the BPCA Registered scheme (who have their Level 3 Award in Pest Management Services Trained Professional User qualification), are now able to meet the requirements set out in rodenticide product labels under EU Biocidal Products Regulations.

Karen Dawes, BPCA Training Development Manager, said: "Less than a year after its launch, BPCA Registered has already established itself as a robust and sustainable method of evidencing the

professionalism of BPCA members and their staff.

"We aspire to move the culture of CPD in the sector away from being a points collection system by encouraging technicians to take a planned and integrated approach to self-development.

"Our approach has been welcomed by our members, service users and the professional sector."

Ian Andrew, BPCA Chief Exec, said: "We welcome DAFM's decision to approve the scheme for members of its register.

"We're looking forward to working with them in the future to ensure further developments reinforce and strengthen the professional development of our members working in Ireland."

### NEXT STEPS

If you're already on BPCA Registered and work in Ireland, contact BPCA and we'll register your PMU number against your account. If you're not on the scheme yet, but are a BPCA member, then you can contact our team and we'll get your company enrolled.

[registered@bpc.org.uk](mailto:registered@bpc.org.uk)  
[bpc.org.uk/registered](http://bpc.org.uk/registered)

## CEPA launches important memorandum on professionalism



On 1 October, the European pest management services trade association (CEPA) launched its 'Memorandum of Understanding on the Professionalisation of the Pest Management Sector' in an event hosted by the European Committee of the Regions.

The presentation of the MoU was followed by a fruitful panel discussion. Guest speakers included:

- Gianluca Nurra from the European association representing the trade in cereals, rice, feedstuffs, oilseeds, olive oil, oils and fats and agrosupply (COCERAL)
- Ilaria Di Silvestre from Eurogroup for Animals, animal advocacy organisation
- Dr Martin Geier from Biogents, a new

member of CEPA specialising in mosquito control solutions

- Henry Mott, Director of Conquer Environmental Services and newly re-elected President of CEPA.

The discussion focused on how to promote the integrated pest management approach followed by CEPA members. The panel agreed on the importance of reaching out to policy makers and users of pest management services with a message focused not only on public health but also on current environmental concerns. In this regard, the key role of prevention was emphasised. Solid data on the situation and the potential impact of professional pest management will be a cornerstone to support our message.

# Rat lungworm's sluggish journey to Europe

Scientists are looking into the spread of rat lungworm to several popular European holiday destinations.

First noted in China in the 1930s, rat lungworm is widespread in Southeast Asia and the Pacific Islands. However, in the last decade, the parasite has been found in the Balearic Islands, and it is believed that climate change and globalisation are to blame for its spread to Europe.

## WHAT IS RAT LUNGWORM?

Rat lungworm or *Angiostrongylus cantonensis*, is a parasite that multiplies in the lungs of rats, its preferred host, but can be spread by snails or slugs.

Rodents harbour the adult worm in their lungs, and as the life cycle continues the larvae of the parasite pass into the throat of the rat, are swallowed and excreted in the rat droppings.

Snails or slugs then pick up the larvae in the droppings, at which point they become something called an 'intermediate host' as the larvae continue to evolve.

People can become infected by eating raw or undercooked snails. Children have even been known to become infected after swallowing slugs 'on a dare'.

Crucially, it cannot be spread from person to person and it is very unusual for someone to become ill as a result of this parasite. Although some people show no symptoms when infected, sometimes it causes a rare type of meningitis (eosinophilic meningitis). However, in most cases, the parasite will die over time – humans are not its preferred host.

Other animals, such as dogs and horses, are at risk of infection, leading to breathing problems, weight loss and excessive bleeding.

## SPREAD TO EUROPE

Rat lungworm is what's known as an 'emerging disease', which means it is spreading to countries it has not previously been linked to.

First recorded in the EU on Tenerife in 2010, the parasite was then found in two hedgehogs on the island of Mallorca in 2018.

Scientists from the University of the Balearic Islands wrote a journal about the case and concluded that it is likely the parasite will be actively transmitted on the island and spread further over time.

# OPEN PLAN LIVING



At the end of August Martyn Belcher, ABM Pest Control, was called out by Nottinghamshire Police to a swarm of honey bees.

Armed with his swarm collecting gear (skep, spray bottle and garden secateurs) Martyn was greeted with an established colony hanging in a tree on a public park.

But this was no ordinary hive: this was an 'open air' colony. A first for him in his 20 years as a pestie and five years as a beekeeper. As you can see from the pictures, it's a fantastic structure.

Generally, PPE is not required when bees are in true swarm state. However, unfortunately for Martyn, these girls had been in this tree for over two weeks in order to build so much comb.

As a result, two of the guard bees decided he was too close and donated their rear end stings to his face and neck.

If left, the bees would have perished from the cold weather ahead. So, the decision was made to return with full PPE and a purpose-built hive, to place the entire colony and comb directly into.

Now the bees are safely sited with other colonies at an apiary in Mansfield, Nottinghamshire.



## SEND US YOUR SNAPS

A picture is worth a thousand words; if you've taken some while out on the job, we'd love to see them!

 [hello@bPCA.org.uk](mailto:hello@bPCA.org.uk)

# Mitie Pest Control purchase given official go-ahead



The purchase of Mitie Pest Control by Rentokil Initial has been green-lit by the Competition and Markets Authority (CMA) following an investigation.

In an update posted on the Gov UK website, the CMA announced that it had "accepted undertakings in lieu of reference for the completed acquisition by Rentokil Initial plc of MPCL Limited (formerly Mitie Pest Control Limited)".

It was previously announced in October 2018 that Rentokil Initial would be purchasing the pest management arm of Mitie for £40m in cash.

However, there were worries that this could create a lack of competition within the UK's pest control market place. As a result, the CMA launched an investigation which has been ongoing for the last ten months.

To address these concerns, Rentokil agreed to divest a set of contracts relating to pest control services for customers of MPCL, located in eight or more regions of the UK.

As such, the CMA has now agreed to allow the acquisition to go-ahead.

You can read more about the merger and its terms on the Gov UK website.

## Kiwa Group welcomes Acheta Consulting

The merger of BPCA member Acheta Consulting with Kiwa's Agri Food Division has been announced.



Acheta provides independent pest control consultancy and will be joining Kiwa Ltd, the UK arm of Netherlands-based Kiwa Group.

Kiwa is an international testing, inspection and certification (TIC) group which has doubled in size in the last 4 years.

Acheta will be an operating division of Harrogate-based Kiwa Agri Food, a UKAS-accredited Product Conformity Certification Body, also with a BRC 5-star rating as a Certified Body.

Acheta's core business activities, independent pest management inspection, training and consultancy continue unchanged, as does the Acheta Management Team, headed by Dr John Simmons and supported by regional managers Ian Adamson and Mark Bowron.

## New product manager at Bayer



BPCA member company, Bayer Environmental Science has appointed a new product manager to oversee the pest product portfolio.

Tim Peeling has been working in the professional pest sector for over 15 years and brings a huge amount of experience to the team.

"I spent the first ten years of my career on the ground as a pest controller at Prokill and then moved on to be a product manager at Pelsis which is where I spent the last five years," says Tim.

"I'm delighted to join the team, and I'm really looking forward to overseeing the pest product portfolio, as well as getting involved in research and development which Bayer is so well known for in the industry."

## Cliverton names new director



A new divisional director has been appointed at BPCA Associate Member, animal-related business insurance specialist Cliverton.

Mark Briggs has joined the company, bringing with him more than 20 years of insurance experience.

He succeeds Andrew Ball who has retired from Cliverton, part of the Lycetts Group of companies.

**SAVE THE DATE!**  
**11 MARCH 2020**

**BPCA**  
**PPC LIVE**  
Technical excellence in practice  
11 MARCH 2020 / YORKSHIRE EVENT CENTRE, HARROGATE

# "A Pestforce Franchise is a GREAT way..."

## to become your own boss and join the largest and most recommended Pest Control franchise in the UK.

People like to "knock" franchising. We know it's not for everyone - but if you are interested to know more a good place to start is what our current franchisees say... the next step is your call!!



Me and my son George spotted an advert for Pestforce and we got in touch to enquire about a franchise. It was a big step for us but the advice from Day 1 has been fantastic and after a month of ups and downs I can honestly say I wish I did this 10 years ago. The training is great and the business model is paying off. If it continues the way it is, we will get our investment back in 6 months.

Marc & George



I joined Pestforce in 2016 while looking for a new job in Pest Control. I had been a technician for years, tried running my own business, but it had never really taken off. I then met Gayle and the team and they explained the business model and how the franchise worked. I was technically qualified (RSPH L2) but lacked the know-how of how to run a successful pest control business. The on-boarding was seamless and it started really well financially, and has continued strongly over the last 3 years.

Gary O'Connor



For an information pack and to see if your area is available, call **01491 225 020** or email **gayle@pestforce.co.uk**

**PESTFORCE**  
PEST & ENVIRONMENTAL CONTROL SERVICES

## New areas found with rodenticide resistance



Rodenticide resistance in rats has been confirmed in several new areas by a Campaign for Responsible

Rodenticide Use study.

These include Durham, Northumberland, Tyneside and North Yorkshire, Greater Manchester and along the River Severn valley from Somerset to north west Shropshire, northern East Anglia and Devon.

Surveillance in 2019 by University of Reading's Vertebrate Pests Unit, covering house mice as well as rats, finds 93% and 61% respectively carrying at least one rodenticide-resistance gene. Among rats, nearly half have inherited the gene from both parents.

The new locations add to an existing widespread presence in central southern England.

One of the genes previously identified only on the Anglo-Welsh border was found in North Yorkshire, Merseyside and Essex.

The most severe resistance gene, already present in much of central southern England, was found for the first time in Devon.

CRRU chairman Dr Alan Buckle says the study's purpose includes to support a "competent workforce" - one of the UK Rodenticide Stewardship Regime's specific objectives.

"The report will help pest controllers, farmers and gamekeepers make well informed choices of anticoagulant active substance," he adds.

According to co-author Prof Colin Prescott, the widespread dominant presence of resistance genes across central southern England, where much of the country's commercial and agricultural activity occurs, makes it hardly surprising they are spreading at the margins.

This surveillance is funded by the Rodenticide Resistance Action Committee of CropLife International and continues in 2020.

The main source of samples for analysis are tail tips submitted voluntarily by pest controllers.

Since it began, Prof Prescott says the few samples submitted from English midland counties and much of Wales and Scotland have detected only rodenticide-susceptible animals.

"Quite why these regions retain susceptibility, or indeed whether this is the case, may only be answered by more detailed genetical studies," he adds.

Meanwhile, pest control technicians, farmers and gamekeepers in these priority areas are being encouraged to submit 2-3cm tail tip samples from rats that died by non-poison means.

Instructions can be found at [research.reading.ac.uk/resistant-rats](http://research.reading.ac.uk/resistant-rats)

The surveillance study report, with details of genes, geography and implications, is available at [thinkwildlife.org/downloads](http://thinkwildlife.org/downloads)

## Volunteers wanted: BPCA Executive Board

Because the BPCA AGM will be earlier next year, we're appealing for Board members sooner than normal.

The AGM will be held in April next year, alongside our Midland forum. We have several spots available on the Board due to rotation and resignation. We're looking for a few people from member companies to join the Executive Board and drive the mission of the Association.

Our ideal Board candidates will be:

- Passionate about pest management
- Willing to drive positive change
- Business-minded with sound judgement
- A good listener with an open-mind
- Good at challenging and scrutinising BPCA activity

- Courageous and unafraid of sharing their opinions in a board setting.

Responsibilities will include attending at least four Board meetings a year and helping to drive the Association's strategic enablers. You'll need to be fully prepared to do some independent work and scrutinise various papers. You'll need to have spare time to dedicate to the Board and Association.

Does this sound like you? All Board members are elected at the AGM, however if you register your interest now we can help answer all your questions and get you ready for election.

Email us to register interest: [membership@bPCA.org.uk](mailto:membership@bPCA.org.uk)

## Calling all Wolves pesties!

BPCA is looking for Servicing members in Wolverhampton and the surrounding areas to offer work placement days to university students.

Working in partnership with the University of Wolverhampton, BPCA will facilitate the work experience and offer the university support, guidance and training. [wlv.ac.uk](http://wlv.ac.uk)

Over the last year, BPCA has been building a relationship with the eight universities in the UK which offer the Chartered Institute of Environmental Health (CIEH) environmental health degree. [cieh.org](http://cieh.org)

It's an exciting opportunity to provide placements for university students, promoting a better understanding of the pest industry.

It is also hoped it will forge positive relationships between future environmental health officers and pest management companies.

University of Wolverhampton is the first institution to sign up, with BPCA looking to place 12 students with members.

Pest management companies would need to be willing to have students shadow them for at least a day's placement, although some companies and individual students may work out lengthier placements between themselves at their discretion.

Members who have a student placed with them will be eligible to receive CPD points, the amount of which is still to be confirmed.

BPCA Technical Manager, Dee Ward-Thompson, said: "It's all about helping future EHOs develop their practical understanding of how pest management impacts public health.

"We're thrilled to be working with the University of Wolverhampton on this, and we really hope members will get on board and offer up their time to such a great project."

If you'd like to take part, or would like more information, please register your interest by the end of November.

Get in touch with BPCA Technical Manager Dee Ward-Thompson on 01332 294 288 or email [technical@bPCA.org.uk](mailto:technical@bPCA.org.uk)

### NOT IN THE WEST MIDLANDS?

There are several universities we're currently in discussions with regarding this scheme. We're hoping that we will soon be rolling out the project with the following universities:

- University Centre Weston (UCW)
- Cardiff Metropolitan University
- Leeds Beckett University
- Liverpool John Moores University
- University of Middlesex.

## BPCA scoops two excellence awards



BPCA was delighted to be recognised at the Association Excellence Awards in October.

The Awards are held to recognise and reward the achievements of trade bodies, professionals, membership organisations and associations.

BPCA bagged a silver trophy for 'Best Association Partnership or Collaboration', for our work on stopping the unauthorised sale of pesticides, alongside the Crop Protection Association and eBay.

Judges for the awards commented on the project, saying that it was "good evidence of collaboration and a positive outcome".

They continued: "This was a good example of a tripartite collaboration between three different companies, to prevent unauthorised sale of potentially dangerous substances.

"An ambitious project, given the size and scope of eBay's listings. An outstanding partnership...with positive outcomes that will support the industry in continuing to deliver the original goal."

The second nomination came in the category 'Best Development of an Existing Association Event - over 400 delegates', which saw BPCA take home the bronze trophy for PestEx 2019.

BPCA was praised by judges for the 'brave decision' to bring the event in-house, introducing the British Pest Management Awards to the event and for a great collaboration with British Cleaning Council.

BPCA's Staff team was represented at the awards by Events Officer Sarah Holland and Technical Manager Dee Ward-Thompson.

"The whole team worked really passionately on both delivering a successful PestEx and helping eBay to clarify its policy on the sale of pesticides," said Dee.

"We couldn't be more pleased to be recognised for those efforts by the wider association sector."

# UK AID TOPS UP FUNDING TO TACKLE MALARIA

**MALARIA IS ENTIRELY PREVENTABLE. EVERY DEATH IS A TRAGEDY THAT IS IN OUR POWER TO STOP.**

International Development Secretary Alok Sharma announced that the UK would match £100 million of private sector funding to help tackle malaria.

Mr Sharma said the international community must "work together to do more to fight malaria", which kills a child every two minutes and is the biggest killer of children under five in most of Africa.

Speaking at the Global Fund replenishment conference in Lyon, France, the International Development Secretary said: "Malaria is entirely preventable. Every death is a tragedy that is in our power to stop."

"I am determined to step up the UK's efforts to end preventable deaths of mothers, new-born babies and children in the developing world by 2030.

"Thanks to our partnership with the private sector, UK aid is helping to save many thousands of lives in the fight against this deadly disease."

### GLOBAL FUND

The UK is the third-largest donor to the Global Fund, putting it at the forefront of efforts to reduce the number of malaria cases by investing in treatment, prevention and research.

Since 2002, the Global Fund is estimated to have helped save 32 million lives and reduced deaths from three killer infectious diseases - AIDS, tuberculosis and malaria - by 40% in the countries which it invests in.

Between 2000 and 2017 there has been huge progress in reducing malaria-associated deaths, with numbers cut from 839,000 to 435,000.

£100 million can help provide 20 million mosquito nets, prevent six million cases of malaria, and save over 75,000 lives.

It will also be used to strengthen health systems so governments in badly affected countries are better equipped to prevent and treat malaria. Sherwin Charles, CEO of

Goodbye Malaria, said:

"The private sector can play a transformational role when it comes to ending the world's deadliest infectious diseases.

"We need continued investment in new technologies, health innovations and greater efficiency. This will accelerate access to newer and more effective tools."

### WHAT IS MALARIA?

Malaria is a serious, mosquito-borne disease, which can be fatal when undiagnosed or untreated.

It's considered a worldwide healthcare priority, particularly in the face of global climate change which is expected to increase the spread of diseases like malaria.

In 2016, there were around 216 million cases of malaria recorded, resulting in up to 731,000 deaths. Around 90% of those cases and deaths occurred in Africa.

Malaria spreads when an infected female mosquito bites a person and passes a parasite known as Plasmodium into the bloodstream.

Symptoms include:

- A high temperature of 38°C or above
- Feeling hot and shivery
- Headaches
- Vomiting
- Muscle pains
- Diarrhoea.

Find out more about the Global Fund [theglobalfund.org](http://theglobalfund.org)

# Pest photo of the year #BestPestPic2020

**£500 PRIZE!**



## OUR FAVOURITES SO FAR...

BPCA is looking for the best pest photograph of the year and is offering a £500 prize for anyone who captures the perfect image of public health pest control. The competition is officially open now.

### TAKE PART NOW!

- ▶ Tweet your image to @britpestcontrol or tag us on Facebook @britishpestcontrol with the hashtag #BestPestPic2020
- ▶ Entries will be shortlisted before final judgment
- ▶ The top 10 will be put on display at PPC Live 2020
- ▶ The winning picture will get a £500 cash prize
- ▶ Closing time: 3.45pm 21 February 2020

The photograph can be of any public health pest or a pest management professional in action, helping to protect people from infestations.

Ian Andrew, BPCA Chief Exec said: "Pest professionals do an amazing job protecting people from disease and distress. We wanted to highlight the important work the pest sector does to protect the nation. Our 'Best Pest Pic' photo of the year competition will help celebrate and draw attention to our work."

### THE SHORTLIST AND WINNERS

The entries will be shortlisted and the top 10 best pest photographs of the year will be on display around the PPC Live 2020 exhibition hall, which takes place on Wednesday, 11 March 2020 at the Yorkshire Event Centre.

The winning photograph will be picked by a panel of leading experts and members of the BPCA team. The winner will collect the £500 cash prize.

The closing date for the competition is 3.45pm, 21 February 2020.

**Pest Mortem**  
@Pest\_mortem



**Covkill Pest Control**  
@covkillservices



**Pest Line**  
@Pestline1



**MIDS Pest Control Ltd**  
@MidsPest



**Coventry City Council Commercial Pest Control**  
@CovCommercialPC



**Stephen Maher**  
@stephenmarr\_



**Venables Pest Control**  
@PVenables Pest Control



**WE WANTED TO HIGHLIGHT THE IMPORTANT WORK THE PEST SECTOR DOES TO PROTECT THE NATION.**

**WINNER TO BE ANNOUNCED AT PPC LIVE 2020**

BPCA

**PPC LIVE**

Technical excellence in practice

11 MARCH 2020 / YORKSHIRE EVENT CENTRE, HARROGATE

## RULES

You must only submit your own photograph.

The picture must be taken in the UK.

The photograph must contain a public health pest OR a picture of pest professionals protecting people through pest management.

You must submit the photo via social media (Twitter or Facebook) with the #BestPestPic2020 hashtag.

The images must not contain any blood, gore or show a pest in distress.

You may submit up to three images.

You must be able to send us a high-resolution version of the image if you're shortlisted.

## TERMS AND CONDITIONS

This competition is open to residents of the UK, Channel Islands, Isle of Man and Republic of Ireland aged 18 years or over, except for employees of the British Pest Control Association (BPCA), their families or anyone else associated with this competition.

All information detailing how to enter this competition forms part of these terms and conditions. It is a condition of entry that all rules are accepted as final and that the competitor agrees to abide by these rules. The decision of the judges is final and no correspondence will be entered into. Submission of an entry will be taken to mean acceptance of these terms and conditions.

There are two entry routes to this competition as follows: by Twitter (tagging @britpestcontrol and using #BestPestPic2020) OR Facebook (tagging @britishpestcontrol and using #BestPestPic2020).

Image files must be 200 dpi and between 1MB and 3MB.

All entries must be received by the advertised closing time and date.

By submitting a photograph, you agree BPCA may have unlimited use of the photograph for any promotional activity in print or digitally.

You may enter a maximum of three photographs for consideration. Any photographs submitted after that will not be considered.

The prize can be collected at PPC Live 2020 (Wednesday, 11 March 2020 at the Yorkshire Event Centre) after the winner is selected. If you cannot make the event and you are shortlisted, BPCA will endeavour to make sure you get your prize money should your photograph be selected.

All questions and press should be directed to [hello@bpc.org.uk](mailto:hello@bpc.org.uk)



# PPC LIVE

## Technical excellence in practice

11 MARCH 2020 / YORKSHIRE EVENT CENTRE, HARROGATE

Professional Pest Controller LIVE 2020 is looking like it's going to be the biggest ever. It's the only UK pest show with indoor and outdoor practical demonstrations, designed for practicing pest professionals. Come along and learn something new that you can put into practice in your everyday work.

### SEMINAR AND DEMONSTRATION SCHEDULE

#### TECHNICAL SEMINARS

Our silent technical seminar theatre will have seating for 80 people and will use headphones, like PestEx, so you won't miss a single word of the presenters.

9.30-10.15

#### ANTICIPATING THE ANT SEASON: SPECIES, SIGNIFICANCE AND CONTROL



**Dr Matthew Davies,**  
Head of Technical Department,  
Kilgerm Chemicals

Matt shares simple tips to help recognise ants expected to cause pest problems in 2020 and beyond. As our industry encounters ever-changing insecticide labels and an evolving portfolio of insecticides, he summarises available control options for 2020.

10.30-11.15

#### REDUCING RISKS FROM FLYING INSECTS IN FOOD SITES



**John Lloyd,**  
Technical Consultant and Company Entomologist,  
Independent Pest Management & Insect Consultancy

With ever-increasing expectations and demands for improvements in food quality and food safety within the food manufacturing sector - are you doing enough to help your clients to manage risks from flying insects?

11.30-12.15

#### CONSIDERING BATS DURING THE PEST CONTROL PROCESS



**Jo Ferguson, Built Environment Manager and Becky Wilson, Bat Helpline Operative,**  
Bat Conservation Trust

Jo will outline how bats use buildings, why they are so important in a bats lifecycle and how pest control work may impact bats, including their legal protection. Becky will outline what to do when considering carrying out works where bats are present, including the latest best practice guidance and training course for pest controllers that BCT has developed with the BPCA.

12.30-13.15

#### PRACTICAL IMPACT OF RAT RESISTANCE



**Alex Wade, Technical Manager,**  
PelGar

A look into the mechanisms which cause resistance in rats, how these resistances affect the real-world application of pesticides and most importantly how to identify resistance on sites and how to deal with it quickly and effectively.

13.30-14.15

#### FUMIGATION IS GETTING CHEAPER AT LAST. HERE'S HOW YOU CAN GET INVOLVED.



**Martin Cobbald,**  
Managing Director,  
Dealey

The spectre of insecticide resistance is becoming a reality in many food sites in the UK. Phosphine resistance is especially concerning, with so many infestations being brought into the UK from countries with less rigorous fumigation practices. In the fight against resistance, there has been some considerable work done in the USA and Southern Europe to bring fumigation practices up to date and especially to find methods of combating resistance.

14.30-15.30

#### INTEGRATED RODENT CONTROL



**Sharon Hughes, Global Technical Marketing Manager,**  
BASF

Best practice rodent control utilises both non-chemical and chemical tools for effective control. For chemical control, the "risk hierarchy" and the effectiveness against both anticoagulant susceptible and anticoagulant resistant rodents must be considered. Sharon will explore a best practice integrated approach to rat and mouse control.



**SO MUCH TO SEE!**

The exhibition hall is getting booked up and loads of fantastic exhibitors are already confirmed:

Ienv Solutions  
Airgun Training and Education Organisation  
Alexandra Workwear  
APS Biocontrol  
Barrettine Environmental Health  
BASF  
Basis Registration

Bayer  
Beegone Line Removal  
Bell Laboratories  
Bower  
Bradshaw Bennett  
Cheshire Fleet  
Deadline Products  
Harris Associates  
Height for Hire  
Inspector Pipes

Killgerm Chemicals  
Lodi  
Metex  
PelGar  
Pelsis  
PestFix  
PestWest Electronics  
Polti UK  
RatGate  
Ratpak  
Russell IPM Limited

Service Master  
Service Tracker  
ServicePro  
Sumitomo Chemical  
Syngenta  
The Guild of Molecatchers  
Universal Solutions  
Woodstream Europe

**INTERESTED IN EXHIBITING?**  
ENQUIRE NOW  
sales@ppca.org.uk



[ppca.org.uk/ppclive](http://ppca.org.uk/ppclive)

**OUTDOOR DEMONSTRATION AREA**

Back by popular demand! We'll be getting outside (and not only to take in the beautiful countryside). We'll be hosting some practical pest management demonstrations. We are teaming up with experts and have some really exciting plans for this area.

**10.00-10.45**

**I WISH I COULD FLY! WHAT IT TAKES TO BE A DRONE PILOT**



**Clark Smith-Stanley, Photographer and Aviator, Profile Studios**

Depending on the application and location required, we can manoeuvre a UAV into difficult access areas and give live feedback to the ground station with a live feed. We'll also capture the imagery for later analysis. Find out what it takes to be a flying pest professional and revolutionise your surveys.

**11.00-11.45**

**VANS FOR THE PEST PROFESSIONALS**



**Matt Cahill, Owner, Cheshire Fleet Solutions**

Matt will talk through his most commonly asked question about van purchasing. What is the best way to purchase a van? What is the best package for me when choosing to finance a van? How is ULEZ or CAZ going to affect my business and when will they be in force? Should I get an electric van?

**12.00-12.45**

**BALLISTIC PEST MANAGEMENT**



**Dave Mills, Founder, Airgun Training and Education Organisation**

He's back at PPC Live by popular demand. Dave will talk through pellet choices, calibres, velocities, weights and airgun design. His talk has been tailored for pest professionals and will tackle more advanced subjects like the ballistic properties of pellets, internal and external ballistics considerations and pellet construction.

**13.00-13.45**

**CAUGHT OUT IN THE COUNTRYSIDE: PRACTICAL RURAL PEST MANAGEMENT**



**Dave Archer, Owner, DKA Pest Control**

This demonstration will show you how to tackle a wide range of rural pest problems, along with the legal aspects of how to carry out control methods. Dave will demonstrate methods such as fox calling, trapping, and talk about shooting with both rimfire and centrefire rifles. Not your average talk, Dave will give a hands-on approach to sharing his many tools and tricks of the trade while maintaining the highest level of professionalism.

**14.00-15.00**

**SAVE TIME AND MONEY WHILE WORKING AT HEIGHT IN PEST MANAGEMENT**



**Height for Hire**

Some pest management projects require technicians to work at height. Height for Hire will demonstrate a 20ms self drive machine, which allows technicians to work multiple jobs on the same hire. Choosing the right machine to work at height not only keeps you safer, but gives you greater control of your working schedule, allowing you to plan and price your jobs more efficiently, and to cover a wider geographical area.



**FREE!**  
PRE-REGISTERED GUESTS GET A BACON ROLL + HOT DRINK

**THERE'S MORE! SEE OVER!**

**NEW!**

**INDOOR DEMONSTRATION THEATRE**

We want to give you the chance to see new ideas and get some hands-on experience while you're at the show. PPC Live is all about how things work and giving you the tools to help you in the field.

**MAKE A DAY OF IT**

Why not make 11 March 2020 one of your team meeting days? Bring all your staff, have a meeting first thing in the huge cafe area. We'll sort out your breakfast roll and a coffee to energise the team. Then send everyone off to the various seminars, demonstrations

and exhibitors. With so much going on, it'd be impossible to see it all. So, divide and conquer! Get your people to report on what they've learned at the next team meeting and share those new experiences around, as part of your CPD programme

9.30-10.00

**CURRENT PROOFING PRODUCTS: APPLICATIONS AND LIMITATIONS**



**Gulliver Hill, Managing Director, Pestology**

Pest controllers are expected to consider proofing as one of their first responses so it's important to know the ins and outs of each product, and what might work where. Successful proofing can achieve long term eradication fast. Product misuse can also cause serious property damage, so awareness of the pitfalls of each product is key.

10.30-11.00

**A BETTER FIT: FACE FIT TESTING RESPIRATORY PROTECTIVE EQUIPMENT**



**Danny Barr, Business Development Manager, GVS**

Do you know how well your respiratory protection fits? Do you know if it offers any protection at all or is it worn to just follow procedure? Face fit testing is a legal requirement: a procedure to ensure your mask offers suitable protection. Sure, it could be adequate and have the correct filters, but if the mask is not fitted to you, chances are the hazards are getting past the mask and into your body! We will demonstrate using a portacount machine to show how well a mask fits, and how putting a mask on without this test may not be offering you the necessary protection.

11.30-12.00

**WHAT IS EATING YOUR HOUSE AND THE THINGS IN IT?**



**David Pinniger, Consultant Entomologist**

David will talk through identifying insect pest damage to wood, furniture textiles, taxidermy, books and paper. He'll also cover ways of identifying whether the damage is recent and active, or long dead. Pests covered will include furniture beetle, deathwatch beetle, biscuit beetle, carpet beetles, clothes moths and silverfish. There will be examples of pest damage to look at and a quiz for participants to identify the species which has caused the damage.

12.30-13.30

**INSECT IDENTIFICATION: THE DROP-IN SURGERY**



**Clive Boase, Owner, The Pest Management Consultancy**

Clive is hosting a drop-in session on insect identification. Visitors can bring their own insect samples, and get help with identification. Microscopes, books, keys and other resources will be available. In addition, there will be an opportunity to examine and gain experience with various new or tricky pests. Forget the big picture – it's all about the detail!

**BRING IN YOUR OWN INSECT SAMPLES**

14.00-14.30

**FLY CONTROL AND THE IMPORTANCE OF CATCH TRAY ANALYSIS**



**Sean Parr, UK Pro-Pest Sales Manager, John Fish, Pelsis Product Engineer, and Debbie Wilson, Technical Manager, Pelsis**

How can fly catch analysis help with the initial identification of insect infestations? Sean, John and Debbie will cover the importance of adding a fly catch analysis when servicing a fly control contract and how to approach end-users to upsell fly catch analysis as part of the contract. They'll also take a look at sourcing the correct fly killer unit and compare LED and traditional UV tubes.

15.00-15.30

**USING TECH AND THE ENVIRONMENT LOBBY TO GROW YOUR BUSINESS: WORKING WITH YOUR COMMUNITY, BEEKEEPERS AND TRAPS**



**Norman Guiver, Founder, U Watch**

This practical demonstration will cover two main applications; live trapping alerts with multiple traps and pest notification links between beekeepers, general public and pest controllers for any pest. Don't forget to bring your smart phone and be prepared to participate!



BPCA EMAIL

enquiry@bPCA.org.uk

. □ X

# Ask the technical team

When you're a BPCA member you can get technical support whenever you need it via our experienced technical team. Here are just a few of the latest questions posed...

INBOX

SENT

ARCHIVE

BIN

SPAM

## SUBJECT: LEGISLATION UPDATES

How can I keep myself and my staff updated?

**DEE REPLIES:** Health and safety legislation is always best reviewed via the HSE website. You can also sign up to ebulletins that inform you of changes or adaptations to health and safety practice.

If you are a member of BPCA then we will always keep in touch with you and let you know of changes in the industry.

You can also attend our Forums, seminars and events such as PPC Live and PestEx. Here you can speak directly to BPCA and other industry professionals about what is new and changing.

Networking is a great way to keep up-to-date. BPCA's technical team is always available on the telephone for members.

## SUBJECT: SNAP TRAPS

How often should I check break back traps?

**DEE REPLIES:** As there is no current legislation that governs the use of break back traps, this question does not have one simple answer!

The answer will depend upon the site's environmental conditions, the level of activity, the available access and site staff.

Let's look at a common scenario: an inner-city, mid-sized restaurant serving evening meals has an established house mouse infestation within various locations around the kitchen, stores and miscellaneous area. Break back traps have been found to be most effective.

How often should you check the traps? Daily may be an initial approach because if the activity is high then catches may be numerous. Daily visits will allow you to remove dead mice and reset the trap ready for its next visitor, equating to a quick and effective reduction in mice.

You could also employ the eyes of your client if they are happy to do so, there is no reason why they cannot report back to you when catches are found. See the PMA Code of Best Practice on Humane Use of Break Back Traps [pmalliance.org.uk/downloads](http://pmalliance.org.uk/downloads)

## SUBJECT: PREGNANT CUSTOMERS

What happens if someone is pregnant where I need to treat for insects?

**NATALIE REPLIES:** The management of Health and Safety at Work Regulations 1999, regulation 16, requires a risk assessment to be done in respect of new or expectant mothers.

Firstly, consider non-toxic methods. Then, if you do need to use chemicals, make sure you use the least toxic product, pesticide-free if possible. This is a requirement of CoSHH regulations too.

You need to consult product labels and Material Safety Data Sheets (MSDS) to ensure there are no warnings about use where there are pregnant women.

Always explain things to the individual and give clarity about what you are doing. BPCA is here to help if you need to discuss it further.

## SUBJECT: DODGY CUSTOMERS

What do I do if I am worried about the unsafe conditions of customers' premises?

**NATALIE REPLIES:** If you have a customer that you feel is contravening any legislation ie public health, food hygiene, etc then the best approach is firstly to confront them about it.

Explain what the problem is and why they need to deal with it. Offer to help too, if you can. Education and understanding are very powerful tools to get things done.

If this doesn't work, and you feel worried about the safety of the public or anyone else, then you may want to report to the local authority, which can ensure action is taken.

Initially, this may make you feel uncomfortable, but it is the professional thing to do in some circumstances. After all, we're here to protect public health and safety.



**ARE YOU A BPCA MEMBER WITH A TECHNICAL QUERY? GET IN TOUCH...**

 [enquiry@bPCA.org.uk](mailto:enquiry@bPCA.org.uk)

 01332 294 288

 @britpestcontrol



**SPEED VIEW**

**Check legislation updates via HSE and BPCA**

**Conduct a full risk assessment if a pregnant person is proximal to pest treatment**

**Check snap traps in line with best practice and by evaluating the whole scenario**

**Approach and inform customers who have unsafe conditions, then report if necessary**

# PESTWATCH:

## Pharaoh ants: then and now



Those in the industry for less than 10 years may not remember life before gel baits for controlling pharaoh ants (*Monomorium pharaonis*). BPCA Technical Officer, Natalie Bungay, looks at treatments for pharaoh ants and how options have changed.

It's been some time since the first insecticide gel bait formulation (imidacloprid based) was released to add extra options for controlling pharaoh ants. Before this release, the only option we had was s-methoprene insect growth regulators (IGR) which were, by their nature, slow acting.

How has this improved treatment options for professionals?

### BIOLOGY AND BEHAVIOUR

As with all pest insect species, it is vital that we first recognise the need to keep ourselves up-to-date on biology and behaviour.

Our understanding of pharaoh ants allows our customers to have faith in our knowledge and associated promise to rid them of the insect infestation. Getting to grips with the biology of the ants gives us the knowledge we need to ensure we target the insect in the right locations and we use the appropriate control methods.

Without knowledge of the pest species, we wouldn't know how to control it professionally, legally and effectively!

Let's have a bit of an update on pharaoh ants and their biology.

### Location and habitat

The pharaoh ant is a tropical species of ant only found in heated buildings in the UK.

Drawing from experience, popular areas to see reports of pharaoh ants are in bakeries at the side or near ovens or other machinery that lets off a fair amount of lovely heat! But this isn't to say that these obvious warm areas are the only locations these ants will head to.

There have been reports of the ants being found in hospitals and, more worryingly, within sterile surgical equipment.

The ant has a minimum breeding temperature of 18°C with the optimum being 30°C, which gives a good picture of

both the origin of the name 'tropical' ant and of the preferred environments mentioned.

### Reproduction and nests

The pharaoh ant follows a complete metamorphosis (egg>larva>pupa>adult) and, unlike some other ant species, the nest contains several queens, all of which lay eggs.

Queens have wings when they first emerge but these are soon lost, most likely because they are now unnecessary through evolution.

Nest sizes vary with no typical size being prevalent. Nest size is dependent on available space which means they can grow to massive proportion with some research finding nests with 50,000 workers and 100,000 ants at young stages!

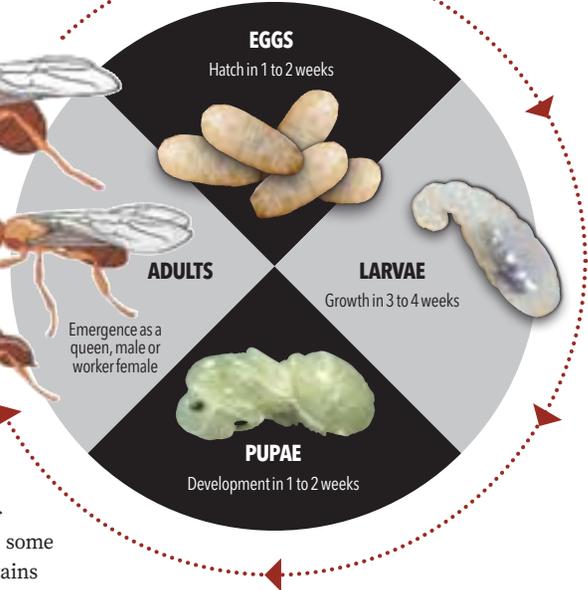
Eggs hatch in about one to two weeks and the resulting larvae are fed by the workers. Full larvae growth takes about three to four weeks, before they develop into pupae. The adult ant will then appear in about two weeks making the complete cycle time, as an average, six to eight weeks. The adult worker ants are wingless, about 4-5mm long and will live up to 10 months.

Workers provide food for the colony and maintain the nest. Only 5-10% of workers engage in foraging, so those ants you see trailing down the face of a wall or machine are only a small piece of the picture!

In the event of a threat, workers can move pupae and young larvae away from the original colony. This response to danger can be triggered if, for example, a pest technician wrongly decides to spray

### LIFE CYCLE OF AN ANT

Cycle takes 6 to 8 weeks



the trails or nests of ants which causes them to bud. Budding is a known process by which the ants gradually spread throughout buildings or complexes. Pharaoh ants also do this deliberately to start new colonies.

### GENERAL TREATMENT OVERVIEW

#### Tricky surveys

Successful control of pharaoh ants, as with most ant species, requires the destruction of nests.

This is often difficult to achieve because nests are often located in places such as voids and cavities, which can be inaccessible and tricky to survey visually.

The most effective control measures involve a thorough treatment so all the insects creating the infestation will be exposed to the toxicant in a short space of time.

Surveys must be conducted to determine the extent of the infestation, as not placing enough baiting points will ensure treatment failure. Surveys should involve visual assessments and the collection of information about the distribution of ants from clients. Additionally, a survey can be conducted by (regularly under-used) non-toxic baiting.



**IT'S STILL IMPORTANT THAT YOU CARRY OUT A BESPOKE AMOUNT OF FOLLOW-UPS TO ENSURE THE COLONY HAS BEEN WIPED OUT...**

Baits may be based upon various materials including honey, sugar and meat (eg raw liver).

**Treatment**

Once the extent of the infestation has been identified, the chosen bait can be applied.

We recommend that bait placement commences outside the infested area and progresses inwards until the whole area has been treated.

Care must be taken to ensure no pockets of infestation are missed during the treatment. Further surveys and customer liaison can determine the success of the treatment.

**Back in the day**

We've already mentioned that spraying the trails or nests of pharaoh ants is counterproductive and can cause more significant infestations. When threatened, ants bud off to form new satellite colonies in new areas of the structure.

Back in the day, the only option was to bait, and the single available mode of action was an IGR, s-Methoprene, which is still available today.

S-methoprene is a juvenile hormone equivalent; a substance that mimics a naturally occurring insect hormone. This is mixed with a base bait and collected by the workers and fed to the larvae and queens.

This has the effect of sterilising the queen(s) to prevent further production of viable eggs and preventing developing larvae from reaching the adult stage.

Although workers are not directly affected, they will die off naturally (in 10-12 weeks) and not be replaced by succeeding workers, and so control of the infestation follows.

Dependent on the size of the infestation, full noticeable control could take four to six months.

This lengthy control period caused concern from customers who needed the issue

to be controlled sooner rather than later but, unfortunately, it was the only real option.

**Now**

S-methoprene is still available today and can be favourable in some situations, for example, anywhere with an organic rating which means the non-toxic formulation of s-methoprene would likely be the first call product.

In the last ten years manufacturers have made a great investment with the release of faster-acting compounds. This means that rather than tedious control programmes that frustrate your customers, we now have a compound that will yield a visual reduction of pharaoh ants within a week. Full control can be achieved in as little as two to three weeks.

A couple of days after baiting with these new active ingredients may result in you and your customer seeing more activity. This is because the ants are drawn to it, because of highly attractive base formulations, so it's a good sign! Very quickly you will see favourable results.

Although we have this greater confidence and quicker reduction in ants, the complete control of the colony can take a little while (though not as long as four months). It's still important that you carry out a bespoke amount of follow-ups to ensure the colony has been wiped out and there are no remaining satellite colonies that have gone unnoticed.

**PESTWATCH: Calendar**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Ants</b>												
<b>Bed bugs</b>												
<b>Birds</b>												
<b>Bluebottles</b>												
<b>Carpet beetles</b>												
<b>Clothes moths</b>												
<b>Cockroaches</b>												
<b>Deathwatch beetles*</b>												
<b>Fleas</b>												
<b>Foxes</b>												
<b>Fur beetles</b>												
<b>Harvest mites</b>												
<b>Head lice</b>												
<b>House flies</b>												
<b>May bugs</b>												
<b>Mice</b>												
<b>Mosquitoes</b>												
<b>Moths</b>												
<b>Rats</b>												
<b>Red spider mites</b>												
<b>Spiders</b>												
<b>Squirrels</b>												
<b>Wasps</b>												
<b>Wood rot</b>												
<b>Woodworm</b>												

\* Beetles emerge

**AND DON'T FORGET...**

I would disappoint myself if I did not remind our readers of one of my most popular phrases – always read the label!

Regardless of what you read or what you are trained to do, you must always read the labels of the products you use. This is not only a legal requirement but labels and directions for use change on occasion, so you need to make sure you are following them.

Legality aside, labels affect treatment effectiveness. If you lay too much or lay too little, or apply it in the wrong places, it may cause treatment failure. Save yourself time and money – read your labels!

**ASK THE TEAM**

Is there a specific pest species you'd like us to do an in-depth write up on? Let us know and we might just do it in a future PPC magazine.

 [hello@bpc.org.uk](mailto:hello@bpc.org.uk)

# RESISTANCE IN RODENTS, BOTH BEHAVIOURAL AND METABOLIC

The consequences in an environment of increasing restrictions

**SPEED VIEW**

Genetically-encoded behaviour in rodents, such as neophobia and bait shyness, boosts survival in hostile environments

Research suggests that rodents have behavioural resistance to bait boxes and cereal-based baits

Resistance is mostly a self-inflicted problem by pesticide users through poor practice

Studies suggest 10-20% of food sites are permanently infested creating 'nurseries' for further resistance

If a main objective is to protect wildlife then 'undercover' baiting could be construed as baiting indoors when dealing with internal rodent problems

Pricing structures should allow staff to service properties properly and conduct necessary follow-ups



An online CPD quiz based on this feature is now available on the BPCA website. BPCA affiliates can take a CPD quiz at any time [bpca.org.uk/cpd-quiz](http://bpca.org.uk/cpd-quiz) or sign up at [bpca.org.uk/affiliate](http://bpca.org.uk/affiliate)



Much has been written about the resistance to Vitamin K antagonists, more colloquially known as 'the anticoagulants'. Dr Mike Ayers, from BPCA member company Precision Pest Management Solutions, investigates the impact resistance is having on the control of rodents.

The house mouse, *Mus musculus*, has a natural but mild resistance to anticoagulants (Buckle AP, 2012) which, with repeated sub-lethal dosing through poor practice, results in the typical Darwinian selection of the fittest producing properly or 'metabolically' resistant populations of mice with the resistance genetically encoded. Unfortunately the problem doesn't stop there.

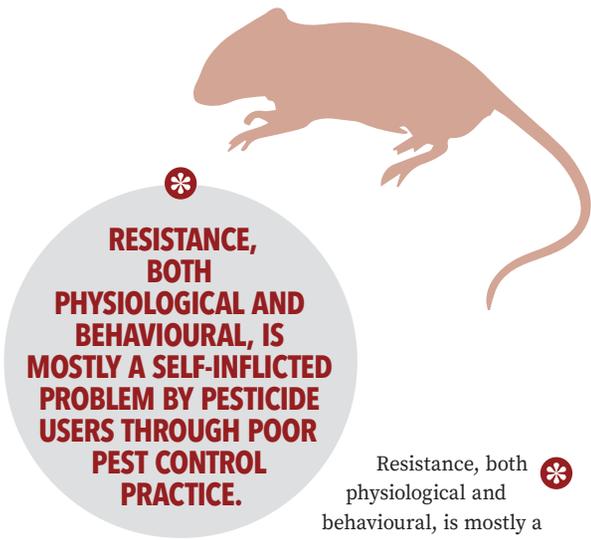
Rats and mice have genetically encoded behavioural patterns designed to increase the survival of their species in hostile environments. One of these behaviours in rats we know well as neophobia: the fear of new objects within their environment. Another is aversion to food that makes them feel unwell also known as bait shyness (Rzoska J, 1953). Part of this behavioural protection mechanism extends into an aversion of circumstances that result in their being eaten by predators, cats for example. Rodents have not only evolved a nocturnal behaviour to avoid their predators, they are also very cautious in new environments. This is why the parasite *Toxoplasma gondii*, when it infects rodents, induces much greater risk-taking and removes many of the behavioural cautions designed to protect the animal. This means that the rodent then becomes much more likely to be caught by a cat, which is exactly what the parasite was after as this is its primary host (Webster JP, 2007).

As behaviour is genetically encoded then it is no surprise that, in parallel with metabolic resistance to the active ingredients, the accumulation of usage restrictions, commercial expediency

and poor pest control practice has induced a growing resistance to the rodenticide delivery methods. The primary means being the bait box over the last 50 years.

There has been some research into this, primarily by Humphries et al (1992) who identified the West Midlands Behavioural Resistant (WMBR) mice in Birmingham that exhibited avoidance behaviour to bait boxes. Interestingly they also seemed to show an aversion to the cereal-based baits, which was possibly a part of the aversion. This was followed up by further research (Humphries et al, 2000) that confirmed a strong aversion to cereal-based food, the main ingredient of almost all our rodenticides! Hopefully this might have been restricted to a small area of Birmingham and while problems in London showed mouse populations with a stronger preference for meat-based baits, this may not have necessarily been an aversion to carbohydrates. If this were to develop to a greater extent we would certainly have problems.

We expect rats to avoid traps and glue boards when newly placed in their environment, but this phobic trait of avoiding bait boxes seems now to include traps and glue boards in some house mouse populations, and appears to have spread around the country in my and many others' experiences. Simmons and Swindell (2017) demonstrated that reliance on bait boxes to monitor and subsequently deliver toxic bait should be treated with caution, as they demonstrated clear evidence of box and trap avoidance.



**RESISTANCE, BOTH PHYSIOLOGICAL AND BEHAVIOURAL, IS MOSTLY A SELF-INFLICTED PROBLEM BY PESTICIDE USERS THROUGH POOR PEST CONTROL PRACTICE.**

Resistance, both physiological and behavioural, is mostly a self-inflicted problem created

by pesticide users through poor pest control practice. Rodents become resistant to poor practice far quicker than to the rodenticides but eventually poor practice leads to resistance. This has occurred for several reasons. Pest controllers and amateurs either didn't know what they were doing because of inadequate training or thought they could take short cuts. The commercial pressure on pest control companies over the last 30 years has meant that follow-ups haven't been conducted either as thoroughly or as frequently as necessary to eradicate a population. The retail codes of practice have also contributed to the problem in that the follow-up regimes were either too lax or too onerous. The former meant that contractors would either fail to report infestation or take the easy route for the sake of economy and simply stick to checking the boxes rather than inspecting the environment properly.

Many pest controllers seem to equate 'no takes' from the plastic boxes with 'no rodents' in the property. In my experience this is done by technicians either too rushed to spend time or too poorly trained. They miss all the other signs of infestation obvious to those not operating under those constraints of time and profit. I call this the 'wishful thinking technique' and it rarely works.

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# RESISTANCE IN RODENTS, BOTH BEHAVIOURAL AND METABOLIC

The arguably over-cautious behaviour of the legislators restricting the circumstances in which rodenticides could be used was partially responsible for the development of resistance in rat populations in the first place (Buckle AP, 2013). Not allowing the more potent, single feed active ingredients to be used outside resulted in survival rates that generated resistance.

Similarly, I believe that in attempting to reduce the use of rodenticides, the over-cautious interpretation of new label directions and the retail market restrictions had the significant unintended consequences of exactly the opposite. Such constraints have driven greater use of non-lethal monitoring systems, which are often inappropriately monitored. This means that single intruder rodents entering a building have the opportunity to reproduce to greater numbers requiring even more toxic bait to kill them than might have been if used on a prophylactic basis. This is especially true in sites with high potential for re-infestation or a high risk of colonisation. This, combined with inadequate training or supervision in the pest control industry, leads to a lack of control, reasonably high survival rates and the perfect breeding ground for developing both metabolic and behavioural resistance.

As part of their study, Simmons and Swindells (2017) identified that in a representative sample of food manufacturing sites 10 to 20% were permanently infested. This is a very high and worrying level of infestation. These are the genetic nurseries for developing further resistance especially in *Mus musculus*, although less so with rats as these tend to be permanent internal infestations much less often. However, with either species it should be a major concern for the public health authorities as well as the retail sector.

The consequence of this means that the threat to public health from rodent-

borne diseases, and damage to product and reputation is now likely to increase.

Legislation from the EU isn't helping either, and it seems there is a drive to remove anticoagulants completely. As there isn't a viable alternative at this time, this is arguably a very dangerous direction to take. A belief, by some in authority, that mass rodent control in complex three-dimensional cavity-based infestations can be achieved with environmental measures and rat or mouse traps alone demonstrates a significant ignorance of the nature of the problem and the adaptability of rodents.

How should the pest control industry respond to such threats?

From a point made earlier, rodents become resistant to poor practice first. The industry certainly needs to get its act together to ensure that wildlife poisoning levels drop significantly. The latest BPCA initiatives on improving professionalism through the BPCA Registered CPD scheme and reviewing the qualification levels necessary to be counted as a professional are to be welcomed. Many of the problems are the result of poor training but not all. I think that it is well accepted that the RSPH Level 2 does not necessarily make a professional. The syllabus itself, as designed by the RSPH, has a good and reasonably comprehensive course content but was designed to be delivered over 168 hours not the four days that it has morphed into. This has come about because of commercial pressures to get technicians trained as quickly and as cheaply as possible. Unfortunately, the result has been inadequately equipped technicians that do not understand the consequences of their actions, in their attempts to bring infestations under control.

This is complicated by the pest control industry itself still selling perimeter bait boxes to clients, on the basis that they 'need' external control. This is, and always was, a complete fallacy and really took off in 1989/90 when one company developed the green breadbin style external box as a means of achieving their profit targets rather than better pest control. Unfortunately, every other pest control company and manufacturer jumped on the bandwagon; it is sad to see that the rate of poisoning our wildlife correlates well with

the development of the external bait box. This hasn't changed and the development of an electronic bait box designed to prevent non-target animals might make it a little more difficult. Experience so far is that technicians continue to report mice taking the bait from these boxes and the 'three pass test' to activate the gate is one that could equally be completed by a non-target animal as well as a rat.

The problem is the contradiction in the business model. On one side the legislators and technical managers are trying to control and limit the use of rodenticides and, on the other, the commercial managers are setting high targets for sales staff (incidentally not as well trained or experienced as technicians) who will sell as many external boxes as possible to help achieve these targets and earn bonuses.

The CRRU Stewardship scheme, while seen by many as restrictive, goes a good way towards protecting our environment by making it more likely that proper surveys are carried out, bait is used appropriately in a focused, targeted manner and removed once control has been established. This is fine for external use as this is where non-target animals are most at risk. Revised CRRU guidelines (July 2019) make a much clearer and welcome distinction between the use of rodenticide inside and out, acknowledging that there is a much lower risk to wildlife when bait is used inside. It also acknowledges that there is no real alternative to the use of rodenticides in controlling rodent infestations and that there are sites very prone to infestation that may need prophylactic use of rodenticides on a permanent basis.

This is certainly much better for the professional pest controller, who should be capable of conducting an appropriate risk assessment to demonstrate that bait can be used safely. However, one of the barriers to controlling box shy rodents are the constraints put upon the technician in how the bait is delivered. These are the restrictions imposed by the label.

There are two issues with the labels. Firstly, only bromadiolone and difenacoum are approved for permanent baiting and, secondly, bait can only be used

**THE RESULT HAS BEEN INADEQUATELY EQUIPPED TECHNICIANS THAT DO NOT UNDERSTAND THE CONSEQUENCES OF THEIR ACTIONS IN THEIR ATTEMPTS TO BRING INFESTATIONS UNDER CONTROL.**



“ This means pest controllers must find a safe way to deliver bait that complies with the label restrictions without solely relying on the plastic bait box. ”

in a limited number of ways, mostly inside a tamper resistant bait box.

This presents a problem for pest controllers working to control rats in central southern England and other resistance hot spots, where both actives have been effectively declared useless but a risk assessment identifies permanent baiting to meet a threat as being necessary.

The instruction to place bait in tamper resistant bait stations is clear enough and would seem a perfectly sensible precaution, but best practice for external rat infestations is to identify the rat burrows and bait them, or use natural cover that is as secure as a tamper resistant bait station.

The allowance to use tamper resistant bait stations outside suggests these provide adequate protection to non-target animals. The often quoted ‘tamper resistant’ bait station is certainly not the paragon of protection. The bait inside is still very accessible to all small mammals and birds. Not only that but work by Buckle and Prescott (2010), and Quay (2011) showed that tamper-proof boxes were not well received by rats and thus delayed control, putting wildlife at greater risk by extending the baiting period. I have always found that, when trying to control rats outside using ‘covered or protected’ bait points that aren’t

bait boxes, properly secured is almost as effective as directly burrow baiting, ensures much speedier control and a shorter period of exposure to rodenticides for wildlife.

Bait used indoors is clearly ‘under cover’ from a wildlife point of view, although probably not what is meant by the label. By its very location, assuming the building is properly proofed, there is still very little risk of access by wildlife as acknowledged by the 2019 CRRU baiting guide. Permanent baiting of sites with a high risk of reinvasion would seem not only to be sensible but also necessary, in compliance with two key pieces of legislation often used by EHOs in the prosecution of sites with infestation: The Prevention of Damages by Pest Act 1949 and the Food Safety Act 1990. In the latter the building or business owner has to demonstrate that all practical means of preventing the offence have been adopted. The standard IPM techniques are relevant here but, as part of that programme, so would permanent location of toxic bait when used appropriately. The use of non-toxic biscuit based monitoring, in my opinion, does not meet that standard as it is reactive rather than preventative, unless inspected daily.

The delivery methods have been found to be increasingly important, in that Murphy et al (2014) showed that the standard tamper-resistant bait box was probably the least acceptable method of delivery of bait for house mice, compared with cardboard bait boxes. By choosing to limit its use to indoors against mice in order to protect wildlife, the next requirement would be to ensure its use in cardboard tunnels presents no risk to human health, pets and food products via CoSHH and site specific risk assessments. It would be useful to extend this research into the control of internal rat infestations, but we probably know enough that the use of open bait trays is generally more quickly accepted by rats than plastic rat bait boxes. The use of a plastic or metal box reduces bait take (Quay 2011), slows down the control, increases the likelihood of survival and increases the risk of resistance, as well as substantially increasing the risk to the client’s business. This means pest controllers must find a safe way to deliver bait that complies with the label restrictions without solely relying on the plastic bait box.

When reading the Deadline Rat and Mouse Bait label it would seem that sensible bait placement in cardboard bait tunnels or open trays (when suitably covered) inside, say, a closed warehouse could be argued to comply with the letter of the directions for use as long as a proper risk assessment was carried out. It does not define what ‘covered’ means. Given that the ‘cover’ needs to be as good or better than a tamper resistant box performs and protects the bait from wildlife, pets, children and product, it would seem to allow some flexibility to deal with tamper box shy mice and reduce the neophobic response from rats. This would be contingent on the pest controller being capable of conducting a sufficiently robust risk assessment to walk the line between being safe and effective at killing rodents. This then reflects back on the quality of the training. Perhaps also the regulatory authorities who dictate the contents of the label directions should take much greater direction from the end users who have practical expertise in managing rodents.

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# RESISTANCE IN RODENTS, BOTH BEHAVIOURAL AND METABOLIC



The retailer codes of practice more recently seem to have gone in the right direction; being less prescriptive, requiring the pest controller to conduct better assessments of risk of infestation and service levels required to meet that risk. However, pest controllers should ensure that their pricing structures are adequate to allow their staff to service properties properly and conduct the necessary follow-ups, to ensure that resident populations are eliminated rather than just reduced. Retailers and their manufacturers should therefore expect that the costs of their pest control contracts are likely to increase with the additional service demand. Purchasing departments should not be tempted to go for the lowest possible price. Pest control company owners and managers should encourage surveyors not to fall for the lure of a quick sale by cutting the price to win the business at any cost, because ultimately it will backfire when infestation takes hold and profitability will dwindle. This inevitably leads to an increased risk of infestation and any money saved on the contract lost many times over because of the cost of keeping the infestation longer than necessary.

## WHAT OF THE FUTURE?

I think that there will be other problems with rodents adapting to our techniques and preparations as they have already. One that might happen is that we are selecting for rodents that are much more sensitive to other components of our baits, such as denatonium benzoate, and might actively avoid bait tainted with it. Much work is done to ensure that the bait is as palatable as possible and there is no evidence for this at present but 50 years ago we had no evidence of behavioural resistance. The ability to taste bitter flavours is an evolutionary adaptation in most mammals to avoid eating toxic food. Plants take advantage of this by

making themselves taste bitter. Rats and mice can taste



denatonium benzoate although perhaps not as well as we do. Denatonium benzoate is used experimentally to research taste receptor physiology, the experimental animal is generally the laboratory rat. In one set of experiments (Caicedo and Roper, 2001) 17 out of 374 rats showed a response to 10µM concentration of denatonium, this is equivalent to about 5ppm. This is half the common concentration used in rodenticides (Buckle and Kaukeinen, 1992) so it is likely that a higher proportion of rats can taste it. At present we are culling the least sensitive rodents and selecting for the greatest aversion to the bittering agent. If we aren't already seeing aversion to this additive I believe we might do.

One thing is sure, if we don't deal with our skill and training base to ensure technicians can eliminate rodent problems quickly and effectively now, we run more risks of either losing the active ingredients via legislation or the rodents outpacing our techniques.

## References

Alejandro Caicedo A and D. Roper SD. Taste Receptor Cells That Discriminate Between Bitter Stimuli. *Science*. 2001 Feb 23; 291(5508): 1557-1560.

Buckle AP and Kaukleinen DE. Evaluation of aversive agents to increase the selectivity of rodenticides, with emphasis on denatonium benzoate (Bitrex TM) bittering agent. *Vertebrate Pest Conference, California Volume: 15* 1992.

Buckle AP and Prescott CV. Effects of tamper-resistant bait boxes on bait uptake by Norway rats (*Rattus norvegicus* Berk.). *International Journal of Pest Management*, 57 (1). pp. 77-83. 2011

Buckle AP. Anticoagulant resistance in the UK and a new guideline for the management of resistant infestations of Norway rats (*Rattus norvegicus* Berk.) *Pest Management Science* 69(3):334-341 2013.

Buckle AP. RRAG House Mouse Resistance Guideline 10 pp 2012

Humphries RE, Meehan AP and Sibly RM. The Characteristics and History of Behavioural Resistance in Inner-City House Mice (*Mus domesticus*) in the UK. *Proceedings of 15<sup>th</sup> Vertebrate Pest Conference, University of Nebraska*, 1992

Humphries RE, Sibly RM and Meehan AP. Cereal aversion in behaviourally-resistant house mice in Birmingham, UK. *Appl. Anim. Behav. Sci.*, 66, 323-333. (erratum vol 69, 175-176) 2000.

Kerins GM, MacNicol AD. Comparison of the half-lives and regeneration rates of blood clotting factors II, VII, and X in anticoagulant-resistant and susceptible Norway rats (*Rattus norvegicus* Berk.). *Comp. Biochem. Physiol. C Pharmacol. Toxicol. Endocrinol.* 122, 3. 1999

Murphy G, Baker RD, Thomas AF, Fowler M. The influence of bait presentation on bait uptake by mice (*Mus domesticus*) in infested urban domestic dwellings January 2014 *International Journal of Pest Management* 60(1)

Quy R. Review of the use of bait boxes during operations to control Norway rats, *Rattus norvegicus* – a report to CIEH 2011

Rzoska J. Bait Shyness, A Study in Rat Behaviour *British Journal of Animal Behaviour: Vol 1, Issue 4, Oct. 1953*, pp. 128-135

Simmons J and Swindells C. Controlling House Mice in the Food Industry. *Proceedings of the Ninth International Conference on Urban Pests* 2017.

Webster JP *Schizophyr Bull.* 2007 May; 33(3):752-6. Epub 2007



# INSECT BAITS AND BAITING

Standalone tools to control urban pests



Partho Dhang has a PhD in Zoology and is the author of 'Urban Pest Control: A Practitioner's Guide', where he explores trends in the industry, pest control tools, and sustainable pest management. In this exclusive article for PPC, Partho explores the intricacies of insecticide baits, giving practical insights for UK pest management professionals.



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SPEED VIEW

Indoor pests have habituated themselves with human food and items we leave lying around, thus making use of insecticide baits has turned out to be most advantageous and effective. As we know, pests find harbourage in homes for food and shelter.

The concept of baiting has taken these two aspects and turned it into a practical technique. A pest controller now provides bait as a food substitute, and bait stations as shelter to replicate both of the pests needs.

Another reason bait has become popular is reduced risk and higher safety qualities when used correctly.

## REDUCING RISK WITH BAIT

Baits are generally safer than spraying as they make use of very little active ingredients in their formulation. The amount of active ingredient varies between 50mg to 2.0g per kilogramme of bait.

The application rate is also a few grammes of formulated bait per square metre of the treatment area. This keeps both the application site and the applicator safe.

Most active ingredients used in insect baits are chosen to have low mammalian toxicity and are target specific. They are not usually contact poisons and are mainly analogues and antagonists of insect growth regulators (IGR) such as juvenile hormone (JH), ecdysone, chitin synthesis inhibitors and related compounds.

Each of these generation compounds has low toxicity to mammals, or selective toxicity towards insects, therefore making bait handling safe. But there are instances where toxic active ingredients are also used in baits to give a quick killing effect. In such cases, the percentage of active used in the formulation is kept at a level which is many times lower than conventional spraying.

Baits are target specific - baits made for one pest species rarely attract another pest species. This prevents affecting non-target organisms that may also be around. This is achieved by using pest-specific attractants and stimulants. In addition, baits should always be applied or placed in selective areas or inside concealed bait stations which prevent non-target organisms coming in contact.

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**Baits are generally safer than sprays as they have low levels of active ingredients**

**Baits designed to attract one species rarely attract other pests**

**By coprophagy and necrophagy, leftover insecticide is taken up by others in the infested location, causing secondary kills**

**After eight months, cockroach populations decreased about 80% in IPM units, compared with a 300% increase with conventional treatments**

**The human component involved in baiting is possibly the factor against its effectiveness, possibly resolved by training.**

## INSECT BAITS AND BAITING

“...baits offer no odour, no translocation, and no staining potential, which are all common household concerns.”

These two aspects lower the risks of bait when applied.

Baits work by a single process of ingestion - a precise act on the part of the pest. While conventional spraying requires the pest to come into contact with the chemical. To achieve this, baits need to be selectively placed, whereas for spraying the entire area is treated. Thus the amount of active ingredient used in baits can be very small.

### THE INNER WORKINGS OF BAIT

Baits developed for insect pests are food based. They have not only been effective in killing the insect directly through ingestion by the feeding individual, but also showed a killing effect on individuals that did not ingest the bait directly. The process termed ‘transfer effect’ or ‘secondary effect’ further enhances the efficacy of the bait against insects which are social or live in groups and exhibit trophallaxis or proctodeal feeding.

Cockroaches are not social insects but live in groups, therefore bait works well with them. Cockroaches have shown a horizontal transfer of insecticides contained in baits and there is much research to demonstrate this fact (Kopanic and Schal, 1997; Buczkowski et al, 2001).

The process of secondary kill takes effect due to the presence of unmetabolized slow acting insecticide in the bait formulation, in the faeces, or oral secretions or it may simply remain in the body of the dead cockroaches.

By the process of coprophagy and necrophagy, leftover insecticide is then taken up by another group individual in the infested location, which brings about secondary kills. Transfer effects or secondary kills increase the overall control efficiency of the bait; however the efficiency of the secondary kill can be dependent on the active ingredient and other influencing factors such as developmental stage, strain and donor/recipient ratio (Wang et al, 2008).

In one study, the researchers Bayer et al (2012) showed that cockroaches in fact consumed more active ingredient from a bait than needed to cause mortality proving there was no bait shyness. The

same work also estimated that a 30g tube of gel bait potentially killed from 394 to 6,966 adult cockroaches, depending on their species. Mortality for all cockroach species was faster for adults ( $\geq 3$  days) than for nymphs ( $\geq 7$  days).

Similar successful bait transfers, from one individual to others in a colony, have been shown in controlling all forms of social insect pests such as ants, termites and wasps.

### ARE BAITS ADVANTAGEOUS OVER CONVENTIONAL SPRAYS?

It remains an unchallenged fact that conventional methods of pest control have eased urban life of humans, but it has also brought enormous damage to health and the environment. Conventional methods of pest control can cover a wider range of pests, provide quick and easy elimination and have long field persistence as key benefits.

Conventional methods depend on the use of pesticides as a single approach to pest control, in which the chemical provides significant or acceptable reduction in the pest population. It involves a single action of a chemical application following some regular, predetermined spray schedule.

However, modern pest management is more than just eliminating pests. It involves maintaining control over pests, preventing re-infestations and reducing chemical use as being more important than mere killing (Dhang, 2011).

Baits have provided a rational solution to all the above and, in addition to being able to control cryptic pests, have allowed treatment to inaccessible and sensitive areas. In addition baits offer no odour, no translocation, and no staining potential, which are all common household concerns. Baits also leave lower or no residues. Furthermore, baiting is most suitable for treating sensitive locations such as high-density human population, food preparation areas, inside hospitals and schools.

It is another aspect, such as cost of services and overall efficacy, which make baits advantageous over conventional sprays. A World Health Organization (Europe) publication provides some insight

into it (Rust, 2008): it reported in one instance that the cost for a conventional service of cockroach control was US\$8.57 (£6.79) per unit and IPM was US\$7.49 (£5.93) per unit.

In another study, the costs for IPM involving monitoring, baiting, cleaning and structural repairs were US\$46-69 (£36-55) per unit in the first year and US\$24 (£19) per unit in the following year. In comparison, conventional chemical controls cost US\$24-46 (£19-36) per unit, and involved no repairs or structural modifications to the apartments.

In another study in public housing, the costs of conventional crack-and-crevice treatments with sprays and dusts were compared with vacuuming, baits and insect growth regulators (IGRs) for controlling German cockroaches. The average costs for IPM and conventional treatments were US\$4.06 (£3.64) and US\$1.50 (£1.19) per unit, respectively. After eight months, cockroach populations decreased about 80% in IPM units, compared with a 300% increase with conventional treatments.

### WHAT ARE THE METHODOLOGIES INVOLVED IN BAITING?

Compared to conventional spray treatment, baiting is inspection-driven, friendlier to the environment, and often more effective. Though the technology is restricted to a few pests, it has made significant progress as a tool in urban pest management. However, as discussed by Dhang (2011) the overall efficiency of baiting will depend on the bait applicators. Applicators’ knowledge and skills are of paramount importance for baiting to be successful, as the concept of baiting is a dynamic field, constantly evolving and adjusting to changes in insect behaviour and location.



### Comparison

Amount of active ingredient used in conventional spraying versus gel baiting to eliminate German cockroach, *Blattella germanica*, in a 250m<sup>2</sup> kitchen (Dhang 2018, unpublished work).

#### SPRAY - DELTAMETHRIN SC FORMULATION

**90** days duration

**12g** used

#### GEL BAIT - FIPRONIL BASED

**60** days duration

**0.075g** used

\*  
**COMPARED TO  
 CONVENTIONAL  
 SPRAY TREATMENT,  
 BAITING IS INSPECTION-  
 DRIVEN, FRIENDLIER TO  
 THE ENVIRONMENT, AND  
 OFTEN MORE  
 EFFECTIVE.**



The human component involved in baiting is possibly the single factor against its popularity among pest control practitioners, which could be resolved by training.

The critical part of a typical baiting programme depends on the following:

▪ **Quality of the bait**

Commercial bait varies in attractability, nutritional quality, colour, texture, moisture and many other factors which are critical to acceptability and sustained feeding. For best performance, bait needs to be tested before use.

▪ **Technical skills and knowledge of the bait applicator**

This is the second most important factor in bait performance. Good bait but poor placement and wrong dosage can make bait ineffective. The greatest variant in any baiting program is the quantity of bait consumed. Knowledge of pest biology is often required to overcome this issue.

▪ **Pest population**

It is never possible to determine the pest population based on a survey or inspection. Often the population of the pest determines the bait quantity, the number of visits and ultimately the cost. This has to be thoroughly noted before starting a baiting programme.

▪ **Harbourage location**

Baits will only work if they are ingested, which is always a voluntary act. A pest will not walk an extra mile to seek a bait when food is around the harbourage. To make baits competitive it is thus important to either aggregate the pest in a specific location, using a bait station or place the bait in the regular feeding zone near the harbourage.

▪ **Sanitation of the area**

Baits or a baiting programme does not work well if the sanitation of the site is poor. Leftover food or alternative food available on site acts as temptation away from the bait, reducing its consumption and in turn becoming ineffective in the elimination of the pest. Thus it is advisable to clean the site before baiting.

▪ **Follow-ups and monitoring**

One time bait application does not often work. Too much bait left may turn dry, get contaminated, and thence be unfit for sustained consumption. Too little will not kill all individuals in the group. This makes a repeat visit a must.

**References**

- Bayer BE; Pereira RM and Koehler PG, 2012. Differential consumption of baits by pest blattid and blattellid cockroaches and resulting in direct and secondary effects. <https://doi.org/10.1111/eea.1200>
- Buczowski G, Kopanic RJ and Schal C, 2001. Transfer of ingested insecticides among cockroaches: effects of active ingredient, bait formulation, and assay procedures. *Journal of Economic Entomology* 94, 1229-1236.
- Dhang P, 2011. Insect Bait: Technology to Manage Urban Pest with less Insecticide. In: Dhang P (ed.) *Urban Pest Management: an Environmental Perspective*. CABI, London, pp. 187-206.
- Dhang P, 2018. *Urban Pest Control: A Practitioner's Guide*. CAB International, Oxfordshire, UK, pp 98-107.
- Kopanic RJ Jr and Schal C, 1997. Relative significance of direct ingestion and adult-mediated translocation of bait to German cockroach (Dictyoptera: Blattellidae) nymphs. *Journal of Economic Entomology* 90, 1073-1079.
- Rust M, 2008. Cockroaches. In: Bonnefoy X; Kampen H and Sweeney K (eds) *Public Health Significance of Urban Pests*. World Health Organisation Regional Office for Europe, Copenhagen, Denmark, pp.65.
- Wang C; Yang, X; El-Nour MA and Bennett GW, 2008. Factors affecting secondary kill of the German cockroach (Dictyoptera: Blattellidae) by gel baits. In: Robinson WH and Bajomi D (eds.) *Proceedings of the sixth International Conference on Urban Pests*, Budapest, July 2008, OOK-Press, Budapest, pp. 153-159.

# UNDERSTANDING AND IMPLEMENTING SSPRA



The purpose of a Site-Specific Pest Risk Assessment (SSPRA) is to gauge the chance of pest activity happening, and to ensure appropriate monitoring and control measures are in place. BPCA

Consultant member John Lloyd, of Independent Pest Management & Insect Consultancy, is back in PPC to help us to conduct a proper SSPRA.



In the food industry, a proactive, risk-based approach to pest management is essential for protecting your client's products and brand.

All too often food companies, pet food manufacturers or food industry-related companies implement basic pest management systems that might look good on paper, but fail to provide a full level of protection due to weaknesses in the pest management programme.

One of the reasons this can occur is because of an inadequate pest risk-assessment of the site.

Often, pest management companies overlook potential risks to finished products and the potential harm that can occur to their client relationships when customers complain about receiving pest-contaminated pallets, packaging or product.

By then, serious customer-relationship damage may already have occurred and QA departments are then tasked with the burden of investigating the problem, appeasing their client and implementing safeguards to prevent the problem from occurring again.



## REVIEWING YOUR SSPRA

For large, dynamic sites, or sites associated with food production, an SSPRA is an important component for a good quality, integrated pest management programme.

If you do not have an SSPRA you should carry one out as soon as possible, as it will reduce the risk of future pest problems.

If you have already had an SSPRA in place, then an annual review is strongly recommended.

In the event of any customer pest-related complaints, a review of the SSPRA should be carried out to prevent such incidents occurring again.

Following an SSPRA review, significant improvements can often be made by implementing simple modifications to the existing pest management programme, and this can significantly improve the quality of pest monitoring. A review can also help to speed the resolution of existing pest problems.

## 1 ENVIRONMENTAL FACTORS

### 1.1 Environment/location: industrial urban-rural

Different environmental settings influence the risk of pest activity that may occur on site. The environmental setting for each site is unique and this should be kept in mind when carrying out an SSPRA.

## 2 SITE PROXIMITY TO NEIGHBOURING HIGH-RISK AREAS

### 2.1 Is the site adjacent to watercourses, railway lines, waste handling facilities, water treatment sites or dense woodland?

These areas are important factors that can influence the presence of pest activity, by acting as pest reservoirs or by providing route ways for rodents or flying insects to occur on the adjacent property.

The presence of these areas can influence the shape of pest monitoring and pest control programmes. They can influence the quantity or location of pest monitors and even influence where external rodent monitoring could be concentrated, for example to intercept incoming rodent activity.

Woodland areas and watercourses can result in small, flying insects being carried on airstreams into buildings.

## 3 BUILDING TYPE

### 3.1 Is the property old, new, purpose-built for use or converted for use?

In old buildings the building fabric may be susceptible to pest activity. It can provide easier access for pests to enter via gaps and holes into the building or to penetrate wall voids etc.

New and purpose-built facilities present a lower risk of pest ingress into the building fabric, because they are usually designed to reduce the risk of pest access and pest harbourage within the building.

For example, external metal wall cladding panels with a securely sealed base are effective in excluding rodents.

### 3.2 Is the property detached or 'shared' (adjoining neighbouring premises)?

A 'shared' property significantly increases the risk of infestation from adjacent premises because pests can move from one building to another.

If the neighbouring property has pests present, and pest prevention

measures are lacking or absent, this will significantly increase the risk of pests migrating from one property to another.

This can occur along cable and pipe route ways, through wall cavities or via connecting roof voids and under floor voids.

## 4 BUILDING STRUCTURE AND HIGH-RISK AREAS

### 4.1 Does the condition of the external building fabric and the quality of the proofing help to exclude pests from the building?

Good quality proofing and good door discipline is essential. If open wall cavities, holes and gaps are present in the external building fabric, there is a risk of pest ingress into the building.

The presence of wall cladding or thermal outer layers can create a 'double skin' that provides harbourage for rodents and allows them to ascend the building.

### 4.2 Are there any gaps or voids present?

The presence of wall cavities and roof voids provide a significant risk of pest activity – especially if they are linked to an adjacent premises.

### 4.3 Utility services: intake points for water, gas and electric data/telecoms cables

Open-ended conduits supplying pipes or cabling from the street outside provide a significant risk of pest ingress. Pipes and cables are frequently used by pests as a routeway into buildings.

These areas should be checked, and any gaps sealed. Monitoring is recommended.

### 4.4 Basements and shared basements

Basement areas can provide a source of harbourage unless monitored. Shared basements may allow pests to move between buildings.

### 4.5 Suspended ceiling voids

Suspended ceilings can provide harbourage for pests. They can provide a source of rodent or cockroach activity, allowing numbers to increase undetected and to infest areas below at ground level. Where there has been a history of pest activity, increased monitoring in these areas is recommended.

### 4.6 Is the building waterproof?

Leaky buildings can damage stock and create internally damp environments suitable for invertebrates such as psocids or flies. These can subsequently contaminate pallets, packaging or finished product.

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## UNDERSTANDING AND IMPLEMENTING SSPRA

### 4.7 Is good quality drainage present inside the building?

Poor quality drainage or areas of standing water may result in flying insect activity, such as flies and other small invertebrates (eg rove beetles, staphylinidae) which can appear in large numbers. Appropriate monitoring measures should highlight outbreaks of high numbers of flying insects, and also highlight the need for removal of standing water or for drain cleaning in localised areas.

## 5 BUILDING STRUCTURE AND CLEANING SCHEDULES

### 5.1 Are any high-risk, inaccessible areas present in the production area, such as high level ledges or overhead, horizontal surfaces?

Relatively inaccessible high level areas can be difficult to clean and difficult to inspect on a regular basis, allowing rodent or insect pest activity to develop undetected and to spread to adjacent areas.

These areas can present a significant risk of pest activity, especially in dry food-powder environments. For monitoring and control ensure an appropriate cleaning and inspection schedule is in place. If possible, deploy monitors in some inaccessible areas for periodic checking.

### 5.2 Are there any flat roofs or overhead voids present that are inaccessible for cleaning?

These areas can provide ideal conditions for pest activity to become established and for numbers to increase undetected. They therefore present a risk of infestation for adjacent areas.

## 6 PREVIOUS HISTORY OF PEST ACTIVITY

### 6.1 Review the pattern of previous pest activity.

Based on pest history, it might be necessary to review pest monitoring and treatment measures currently in place. Consider if the history and frequency of pest incidents indicates the need to increase the frequency of service visits (for example, increasing routine service visits from every six weeks to four weeks).

### 6.2 Has there been any previous history of pest activity or 'hot spot' areas.

Check if appropriate monitoring or control measures have been put in place to reduce the risk of a pest incident occurring again.

### 6.3 What is the risk of critical pest activity happening again?

Consider how long ago an incident occurred, where, why, its cause and what was its severity? Were there any risks to food safety as a result of a previous pest incident? Did it result in a customer complaint or were significant economic costs incurred? Ensure appropriate safeguards are in place to prevent recurrence.

### 6.4 Is a review of the existing service programme required?

Based on previous pest history, it might be necessary to completely review the current pest control monitoring or treatment measures for the site.

## 7 CODES OF PRACTICE

### 7.1 Company operating standards, regulatory standards and codes of practice

Check company operating standards, regulatory standards and codes of practice to ensure that the proposed integrated pest management programme is compliant and effective in reducing the risk of pest activity.

### 7.2 For example: Codes of practice such as organic standards or AIB might restrict or exclude the use of rodenticides on site.

For organic or 'non-toxic' sites, many forms of non-toxic monitoring are available and a non-toxic system will require more frequent checks of the non-toxic rodent monitors.

Therefore, the presence of a suitably trained member of staff might be necessary to ease the burden of additional checks otherwise carried out by the pest contractor. Ideally, on non-toxic sites, internal rodent monitors should be checked weekly by a trained, competent person, and the pest contractor should provide visits every four weeks.

This is because the usual interval of six weeks (eight visits a year) between service visits is too long, as rodents can become established in a building during the six-week period.

## 8 PEST CONTROL SERVICE CONTRACT

### 8.1 Is the current pest control service agreement relevant and satisfactory?

Is the service contract still relevant and fit for purpose for the demands of the site?

## IMPROVE YOUR SSPRA

- 1 Increasing the number of pest monitors in an area
- 2 Adjusting pest monitoring to include species-specific monitors such as specific pheromone traps for dry food pests
- 3 Improving your non-toxic rodent monitoring by including the use of lures or placebo baits
- 4 Review the frequency of routine service visits to see if they are appropriate for the needs of the site (this often becomes 'set' or outdated)
- 5 Some sites now increase their service frequency for fly control units to reduce the risk of flying insect problems during the warm summer months
- 6 Some sites in rural areas increase the frequency of their pest control visits during seasonal peak periods such as harvest time, when a greater level of dispersal occurs from rodents or insects
- 7 Some sites experience increased stored-product insect activity when nuts or fruit products are brought in from harvest - additional measures may be required.

### 8.2 If there have been recurring or chronic pest problems, is the frequency of service visits appropriate for the site? Does the number of service visits need to be increased?

Basic pest control contracts usually provide for eight visits each year (a visit every six weeks) for rodents and crawling insects. However, larger, more complex, or high specification sites may require twelve visits per year.

### 8.3 Is the frequency of servicing for fly control units sufficient?

There are typically four visits per year for fly control units. However, for high-risk sites, or sites where glue boards in fly control units fill quickly, the frequency of visits could be increased to (1) twelve each year, or (2) fortnightly during the summer months, to ensure glue boards in fly control units remain effective.

### 8.4 Is monitoring for stored product insects (SPIs) required? If present, are existing monitoring measures appropriately deployed?

High-risk areas such as raw material and finished product storage areas could require monitoring for stored product moths or crawling insects.

There is a high risk of SPI activity at dried food, powdered dry food and pet food manufacturing sites. In areas such as bakeries and flour mills, monitoring for SPIs adjacent to machinery may be needed. This will highlight the risk of increases in activity and also highlight a need for targeted cleaning to reduce the risk of increased SPI activity. Typically, moth pheromone traps are serviced are eight times per year.

### 8.5 Is there provision for periodic biologist or technical audits? Is the frequency of inspection for these visits appropriate for the needs of the site?

Usually, on high specification sites, biologist or technical inspections are carried out once, twice or four times per year.

### 8.6 Is there any provision in place for an annual, independent, third party audit to assess and verify the quality standard of the pest management programme?

IPMIC Ltd can provide help and technical support for independent third party audits, regarding food safety and the quality of pest management. We can advise on pest-related matters, assess quality standards and verify compliance to company standards and codes of practice.

Unbiased third-party audits assist with your programme of continuous development for pest management on site.

## 9 WASTE HANDLING

### 9.1 Are good quality processes and good operating standards in place for handling waste on site?

Are conditions for the storage and removal of waste appropriate? Are cleaning schedules efficient in removing spillages?

### 9.2 How close is the waste handling area to the building?

If adjacent to the external perimeter of the building, can the waste storage area be relocated?

### 9.3 Waste handling areas attract pests and provide harbourage for rodent and insect pest activity.

Are appropriate monitoring and control measures in place for external rodent activity in waste handling areas? Are appropriate fly control measures in place inside the building adjacent to waste handling areas?

## 10 SITE PROCESSES – HIGH-RISK AREAS

### 10.1 High-risk areas – flies present a significant risk in high-risk food areas, especially where ready-to-eat food products are present.

This is because flies are vectors of food-borne pathogens and, in high-risk areas, food may support the growth of pathogenic

micro-organisms transmitted by flies. Such microbial contamination presents a risk to public health because the food may not be exposed to further treatments that would otherwise destroy pathogenic micro-organisms, prior to being eaten.

The restricted use of pest monitors in high-risk zones places a greater emphasis on good quality visual inspections of the building fabric, floors, drains and machinery.

Pest monitors and fly control units can be strategically deployed in adjacent, low-care areas to intercept rodents or flying insects before they enter high-risk areas. When electric fly control units are deployed in a high-risk environment, their purpose is to demonstrate an absence of flying insect activity, and to intercept any individual flies that might stray into the area.

### 10.2 Are appropriate fly control measures in place to intercept flying insect activity?

Flies may enter from adjacent low risk areas such as processing or packing areas, external doorways, passageways or from waste hatches.

### 10.3 High-risk areas – critical threshold limits. Are critical threshold limits present for flying insects?

The critical threshold limits for flying insect activity should be low. To ensure that appropriate 'safe limits' or 'acceptable limits' are in place, a review of previous flying insect activity, and a review of the critical threshold limits is recommended.

### 10.4 High-risk areas – historical flying insect activity.

Consider the primary source for previous flying insect activity. External sources could cause higher numbers of blowflies or moths to be present, and an internal source may cause higher numbers of drain flies or fruit flies to occur.

Consider if appropriate control measures are in place to reduce the risk to finished product.

## 11 RAW MATERIALS AND FINISHED PRODUCTS

### 11.1 Dry food sites are susceptible to a wide variety of stored product insect pests.

Food sites particularly at risk are those handling or processing the following

commodities: rice, dried vegetables, herbs, dried fruit, cocoa beans, nuts, chocolate, grain, cereal-based products or dry-powdered food products such as dried milk or infant formula.

High-risk areas would include raw material storage areas, food production machinery and finished product storage areas.

Ensure that an appropriate insect monitoring strategy is in place for the detection of insect pests associated with the food being handled on site.

Facilities handling dry food products have a high risk of stored product moth and stored product beetle activity. Therefore a review of existing SPI monitoring measures is recommended. Are there any monitors in place for stored product moths?

Are there any monitors in place for stored product crawling insects? Is the distribution of SPI monitors appropriate? Is the type of SPI monitor appropriate for the species being monitored (for example, are blunder traps or pheromone traps more appropriate)?

## 12 PROCESS MACHINERY

### 12.1 Cereal-based food products, meat and fish based products are especially attractive to insect pests.

Therefore, in the production area, any accumulated food debris present inside machinery significantly increases the risk of insect pest activity.

On food production sites, a significant risk of insect activity can occur when food process machinery is run constantly and only stopped briefly or occasionally to allow for cleaning, and when food debris accumulates in food process machinery in areas that are difficult to access for frequent cleaning.

Set up an inspection schedule for machinery and coordinate access between the pest control contractor, hygiene department, electrical department and engineering department – to ensure that high-risk process machinery is accessible for more frequent cleaning and for SPI inspections to be carried out during the year.

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# UNDERSTANDING AND IMPLEMENTING SSPRA

## 13 PLANT AND EQUIPMENT

### 13.1 Stored product insect activity can be associated with a wide variety of plant and equipment.

High-risk equipment would include silos, hoppers, weighers, mixers, storeveyors, conveyors (especially less accessible overhead types) and dust extraction units. Additional areas would include motor housing areas and electrical areas such as cabinets or electrical switch units.

To reduce the risk of increased SPI activity, deploy appropriate crawling insect monitors or moth pheromone traps. Frequent cleaning should occur and an inspection schedule for plant and equipment is recommended.

## 14 RODENT MONITORING

### 14.1 Is an appropriate rodent monitoring and control programme in place?

Ensure an adequate level of monitoring is in place in both internal and external areas. Ensure vulnerable areas are adequately protected (such as external doorways and waste handling areas).

### 14.2 Is non-toxic monitoring in place?

A variety of non-toxic monitoring methods can be used – placebo (non-toxic bait), break back traps or rodent lures. Ideally using more than one type of non-toxic monitor could increase the level of detection and may help indicate the early presence of rodent activity.

### 14.3 Is rodent monitoring proactive and does it reflect changes that have occurred on site?

Sites are dynamic environments that provide new opportunities for sudden occurrences of pest activity. New activity can be caused by high volume pallet movements, open doors, removing or installing new machinery, changes in production/processing methods and structural changes, such as new buildings, construction and extensions. Ensure pest monitoring and control programmes are robust, proactive, adaptable and updated to reflect any changes on site.

## 15 FLYING INSECTS

### 15.1 Position of electric fly control units

For effective control of flying insects, the location of each electric fly control unit should

be carefully assessed to maximise the control of flying insects in an area and to reduce the risk of contamination of food or packaging.

### 15.2 Suitability of electric fly control units

Are existing fly control units the correct size for the area to be covered?

### 15.3 Do the electric fly control units have electrified grids or glue boards present?

The type of fly control unit used can influence the frequency of service visits. Many sites using fly control units with electrified grids are serviced four times a year. However, when using glue board units, the glue boards can fill quickly during the summer months (especially if they are located near external doors).

Once full, the lack of an adhesive surface on the glue boards means that the fly control unit is no longer effective for intercepting flies. This therefore significantly increases the risk of contamination for food and packaging in production areas.

### 15.4 Is the frequency of service visits to fly control units sufficient?

If glue boards become full during the summer months, consider increasing the frequency of service visits either from monthly to fortnightly, or from quarterly to monthly – depending on the level of risk.

### 15.5 Are appropriate measures in place to exclude flying insects from the building?

Doorways in goods-in or dispatch areas usually experience higher levels of flying insect activity.

Improvements could be made by installing automatic roller doors, fitting self-closing mechanisms to pedestrian doors or fly-strip curtains to external doors. These measures will reduce the risk of pest ingress.

## 16 CRAWLING INSECTS

### 16.1 Any previous history of crawling insect activity will influence the nature of the crawling insect monitoring programme. Is an adequate level of monitoring in place for crawling insects?

Crawling insects are usually casual intruders, but some species such as house crickets (*Acheta domesticus*) or booklice (*Psocids*) can complete their life cycle inside the building and present a risk to food and packaging.

Depending on the history of crawling

insect activity, and the species concerned, a specific crawling insect monitoring strategy might be required.

### 16.2 Monitoring for Psocoptera (booklice)

Ensure an adequate level of monitoring is in place especially in pallet and top-frame storage areas, packaging stores and in areas where pallets of dried, powdered raw materials or finished product are stored.

### 16.3 Monitoring for *Acheta domesticus* – house crickets

Ensure appropriate monitoring is in place for house cricket activity because infestations can be difficult to eradicate once they become established. Crickets will find harbourage in inaccessible gaps, holes, cracks and crevices and also in conduits for cables and piping. This hinders targeted treatments, making control measures difficult and slow.

House crickets pose a significant risk and can occur in raw material storage areas, packaging stores, production areas, finished product storage areas and boiler houses. If there has been a history of house cricket activity on site, a greater level of vigilance is required and there should be a greater emphasis on insect monitoring to allow for the early detection of any new activity.

Increased levels of monitoring could include areas such as wall-floor junctions, overhead ledges, and along cable and pipe route ways. If possible, deploy crawling insect monitors adjacent to machinery at risk, or adjacent to motor housing areas or along electrical cable trunking.

## 17 COCKROACHES

### 17.1 Has there been a history of intermittent or persistent cockroach activity on site?

If cockroach activity has occurred, an extended form of monitoring and more detailed inspections are required. The number of cockroaches caught on crawling insect monitors should be carefully recorded for trend analysis.

### 17.2 Have German cockroaches (*Blattella germanica*) appeared on site?

German cockroaches prefer warm, moist environments especially where plant and machinery are present. They can be found inside tray wash plant, motor housings, under machine panels, inside electrical switch boxes, fridge motor areas and vending machines.

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German cockroaches can readily climb smooth surfaces to occupy gaps, crevices and voids for harbourage. Once established, populations can be difficult to eradicate. If there has been a history of German cockroach activity, ensure a greater level of vigilance and positive reporting by staff is in place.

Monitoring should be increased and detailed inspections should be carried out. If necessary, ensure that high-risk plant or equipment is visually inspected as part of a regular inspection schedule. This will enable localised, targeted treatments to be carried out if required.

### 17.3 Have Oriental cockroaches (*Blatta orientalis*) appeared on site?

Oriental cockroaches can occur in warm voids, drains, waste/compactor areas, cellars, boiler houses and pipe ducts. They will exploit spaces and voids inside processing equipment.

They will travel extensively from their point of harbourage and can travel up to 100 metres in search of food. Ensure that extended monitoring is in place and that detailed inspections are carried out. This will enable localised, targeted treatments to be carried out if required.

## 18 STORED PRODUCT INSECTS

### 18.1 Is a monitoring programme in place in high-risk areas for the detection of stored product insects (SPIs) such as SPI beetles or dry product moths?

SPIs are associated with dried food products including cereal products, nuts, dried fruit, spices, seeds, powdered milk, tea and preserved meats. Some SPI species are able to enter packaging such as paper, cardboard, plastic cellophane and foil. Access holes are very small, and some insects are able to penetrate tiny gaps in pouches or packaging that has not been fully hermetically sealed. This can allow SPIs to develop inside packages of finished product.

Once inside finished product packaging (or in other areas where accumulated food debris occurs), all stages of insect development can be present (eggs, larvae, pupae and adult). Ensure that appropriate

monitors are deployed for stored product beetles and dry food-product moths. Also ensure that appropriate visual inspections are carried out on product stored in high-risk storage areas.

### 18.2 Which areas are covered for stored product insect monitoring?

Appropriate inspections and SPI monitoring is required in high-risk areas where food could become exposed to insect activity during the production process – especially in the post-cooking and pre-packaging stages of production. There is a risk of contamination of food by stored product insects in raw materials, foods and dried food products, and food storage areas.

### 18.3 Have all risks of stored product insect activity occurring in the production process been considered?

To allow for the early detection and control of stored product insect activity in high-risk areas, key plant and equipment in the production area should be monitored and inspected. This would include high-risk machinery such as DCE units, conveyors and screw conveyors, plansifters, cyclones, weighers, enrobers and filling lines.

Any equipment where dead air spaces may cause food debris to accumulate, such as air handling systems, ducts, chutes or pneumatic conveyors. Peripheral locations next to the main production area are also high-risk areas, because these can harbour stored product insects and cause the re-infestation of production machinery after it has been cleaned.

There are many potential peripheral high-risk areas, but typical examples would include electrical switch boxes, electrical conduits, electrical cable ladders, overhead horizontal surfaces, and ledges and wall floor junctions in the food production areas.

### SHARE GOOD PRACTICE IN PPC

We're always looking for people to contribute to PPC magazine. If you want to write something for the magazine, give us a call.



01332 225 115

## Fundamental mistakes when carrying out SSPRAs

Fundamental pest problems can arise because some contractors fail to recognise the specific requirements of a site or fail to identify the specific risks that may allow pest activity to occur.

SSPRAs should not be based on generic assessments because the location and circumstances for each site is unique, and each has its own potential risks for the occurrence of pest activity.

### ANNUAL SERVICE CONTRACT REVIEWS

As part of the SSPRA, a review of the pest service contract is also recommended. Considerations should include:

- The scope of service being provided (does it cover all relevant pest species – such as stored product insects)?
- Is the frequency of service visits sufficient?
- Is there an appropriate follow-up visit protocol in place, in the event of internal rodent or insect pest issues?
- Are the critical limits for pest activity set too high or too low?
- Does the contract include provision for an annual SSPRA?
- These matters should be reviewed annually, and not left unchanged until there is a problem.

### CLIENT-CONTRACTOR COMMUNICATION

For SSPRAs to be effective, close liaison between you and your client is vital.

Commercial sites are dynamic places, often with ongoing changes to the production processes or to building fabric, or new construction projects taking place. Consequently, pest activity can be dynamic too.

You need to encourage clients to inform you about important changes on site so that you can update their SSPRA, and implement revised monitoring and control measures.

If companies undertake new construction/development projects or introduce changes to procedures relating to food handling, food processing, waste handling or modifying processing machinery on site, it is wrong to assume that the existing SSPRA will remain up to date, and under these circumstances, a new SSPRA should be carried out.

### THE BENEFITS OF SITE-SPECIFIC PEST RISK ASSESSMENTS

- They focus attention on vulnerable or critical areas of the site that might otherwise be overlooked
- They highlight the risk of pests in peripheral areas in places that might be difficult to access such as voids, electrical areas and plant
- They help to identify the risk of pest infestations and the risk of food contamination by pests during the food handling or food production process
- They reduce the risk of pest activity occurring at critical control points. This allows appropriate safeguards or control measures to be put in place to reduce the risk of pest-related incidents from occurring.

MEMBER BENEFIT IN FOCUS

# PUT ON YOUR SUNDAY PEST

Professional pest management workwear



Personalised workwear and uniforms for pest management companies are becoming more and more popular. They can help set your brand apart from the crowd and make a lasting first impression with your clients. Greg Garrod from Alexandra Workwear investigates what makes for decent pest management workwear.

**P**ersonalising workwear has benefits for both your employees and you as an employer and brand.

Your chosen workwear should be tailored to the needs of the business and the job roles undertaken by employees. Personalised garments can provide a level of consistency and positivity for your organisation, supporting the growth and development of your brand.

Why choose a personalised uniform?

## VISIBILITY

A logo present on your employee's uniforms allows your customers to easily identify a member of staff. Ensuring staff are visible to customers and clients gives a sense of reassurance and confidence.



## BUILD RAPPORT

Internal relationships within teams are key to the success of your organisation. A team wearing the same uniform will have a significantly increased bond and better teamwork skills.

## IMPROVED EFFICIENCY

Having the company's name, logo and their own name on their clothing gives the employee a sense of responsibility. Wearing such a garment with pride is one part of it, but being accountable for the company's image and reputation, efficient and conscientious working behaviour is a further by-product.

## PROMOTE YOUR BRAND

Having your brand logo and information clearly displayed on your employee's workwear and uniforms makes it easier for customers and potential customers to notice your brand and contact you. Free advertising wherever your employees are.

**ENSURING STAFF ARE VISIBLE TO CUSTOMERS AND CLIENTS GIVES A SENSE OF REASSURANCE AND CONFIDENCE.**



## DISCOUNT WORKWEAR

### PROFESSIONALISM

Set yourself apart from the competition by wearing your professional uniform. A high-quality uniform helps you focus on selling your services through professionalism and quality, rather than price.

### SHOW OFF YOUR ACCREDITATIONS

If you're a BPCA member, you probably want to show that off to the world. We have BPCA member logos on file and quality assured by the BPCA's marketing team. If you have any other logos, awards or accreditations that you're particularly proud of, then those can go on your uniform too.

### GETTING YOUR UNIFORM RIGHT

Having the right workwear makes a huge difference to your business, from the performance of your staff to the perception of your customers. We get that.

At Alexandra we also understand that a new uniform is a big project, so we're here for you with whatever support you need.

### THE RIGHT SIZE

It's so important to get the right size workwear and we've fitted men and women of all proportions. We can offer you a straightforward, off-the-shelf solution, though we also have options beyond that to get things just right for you. Ask us about our sample service and our on-site sizing.

### PERSONALISED

Make your uniform your own with our personalisation services. Pick your brand colours, ask us to print or embroider your logo or company name, or even use your employees' name or initials – we can go to that detail for your wearers. We have the BPCA member logo and BPCA Registered logo on file.

### QUALITY PRODUCTS

We won't compromise on quality. Our products use the very best fabrics we can find. They last longer and they don't fade. We source all our materials carefully and commercially, which helps us get a better price, and then we thoroughly test all finished products. We control all our factories because behaving ethically is so vital.

### YOUR IMPACT

Each purchase you make with Alexandra creates change. We make four million shirts and polo shirts every year. That is a big number and we know it is our responsibility to understand the significance that has on our global manufacturing sites and the wider environment. By choosing Alexandra, you are helping to reduce packaging by 40%, saving 4.8 tonnes of plastic. That is the same as 480,000 500ml plastic bottles that didn't end up in the world's oceans. It's our duty, and we plan to do more.

We're happy when you're happy. Our team is on hand to make your life easier, however we can. You can expect the very best customer service as standard. We'll deliver it, day or night, online or on the phone.

Anything less falls short in our eyes and our customer service awards show we get it right time and time again. Beyond that, we can be proactive thanks to our expertise in your sector. We'll anticipate trends and advise you in advance.

That's why BPCA chose Alexandra as your preferred supplier.



BPCA members can now take advantage of an additional exclusive discount from Alexandra Workwear.

Save between 15-20% on a range of quality workwear by stating you are a member of the BPCA when you set up your account.

Make your brand stand out with a variety of personalisation options available; including the official BPCA member logo

and BPCA Registered logo embroidered which are ready on file to use now.

Not only will you have access to this workwear range, but you can also enjoy preferential rates on the full list of catalogue products from Alexandra. Be sure to quote the name of the BPCA member company that you work for when placing your order.

Our expert team are on hand to advise which products are best suited to your business. There are two great ranges to choose from, including Essentials and Superior ranges. If you would like to speak to us in person, why not visit the PPC Live 2020 exhibition where Alexandra will be exhibiting alongside BPCA. More information on the event can be found at [bpca.org.uk/ppclive](http://bpca.org.uk/ppclive)

### VIEW YOUR RANGE OF SPECIALLY SELECTED WORKWEAR

[www.alexandra.co.uk/bpca](http://www.alexandra.co.uk/bpca)



### SALES HELP

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+44 (0)333 600 1111

# Alexandra

## OUR HISTORY

Alexandra is the preferred workwear suppliers to the BPCA with a long history and wealth of experience. We've been around a long time and we've grown. We're moving with the times and always adapting.

Things change and we've

seen a lot of developments across all our industries so we can anticipate trends.

We've made it our business to earn expertise in a range of sectors so we can help make sure your team looks ready to go, whatever the job. From the

outset in 1854, we've worked with companies big and small to advise and support.

We're bringing tradition up to date, and using our knowledge to shape the service we can offer you. Let our past shape your future.



# WE BUILD IT... YOU DRIVE IT? Pest management franchises



Starting your own pest management business is - pardon the pun - a scary business. But there are ways of starting a business with the assurance of a more extensive support system to help. In this article, BPCA Communications Officer, Kat Shaw explores the franchising business model.

If you're still on Facebook or Instagram, you've almost certainly got a friend who's a franchisee on your timeline touting health products, discounted makeup, and even CBD oil infused energy drinks. But some of the most successful businesses in the UK like McDonald's, Driver Hire, Mac Tools and Costa Coffee also work off a franchising model.



Maybe you're thinking about buying a pest management franchise. Maybe you're considering franchising your own brand. Perhaps you're just curious about how franchising a pest business works or you're sceptical of the entire business model.

Either way, it's an interesting business structure, so we thought it deserved investigation.

In essence, franchising is a way for someone to own and operate their own company but under the brand and structure of a larger, established business. How does that work?

- A licence is granted by the owner of the brand - known as the franchisor - to the franchisee
- The franchisor is given an initial fee by the franchisee and receives management fees going forward

(typically, these fees are based on a percentage of annual turnover or mark-ups on supplies)

- The management fees enable the franchisor to support the franchise network with things like training, product development, marketing and advertising
  - The day-to-day operation of the business is left to the franchisee
  - The franchisor decides how products or services are marketed and sold.
- You can buy a franchise whether you're starting from scratch or already own a business that is struggling to turn a profit and needs a little support.

Franchising is not for everybody, but it is a great formula, and it's just one of the numerous routes to get into pest control.



## HOW SUCCESSFUL ARE FRANCHISES?

There are strong statistics to support the case that franchising is a stable model for business start-ups.

According to the British Franchise Association's (bfa) most recent survey, 90% of franchisees report long-term profitability.

Interestingly, less than 5% of franchise-owned businesses close due to commercial failure. Compare that with a failure rate of more than 50% for small and medium-sized enterprises (SME) outside of the franchising model, and you can see how these businesses grow.

A spokesperson for the bfa told us; "the franchising industry has never been in a healthier state. The 2018 bfa NatWest Franchise Survey shows significant growth in employment and economic contribution to the UK.

"Not only this, but the industry has grown to over 900 systems in wide-ranging sectors such as health and beauty, personal services and seasonal services. This enables people with varying needs, backgrounds and motives to find a franchise that is suitable for them.

"A great example would be the rise in franchise systems that can be run from home, allowing people to work around their family commitments."

On the whole, buying a franchise is generally easier and less expensive than starting your own business.

The effort and financial backing you would put into getting an independent business off the ground is all accelerated with a franchise.

There are several successful pest management franchises currently operating in the UK, such

as BPCA members Prokill and Pestforce UK Ltd.

**INTERESTINGLY, LESS THAN 5% OF FRANCHISE-OWNED BUSINESS CLOSE DUE TO COMMERCIAL FAILURE.**

## PESTFORCE: a franchising case study

Started in 1991 by a gamekeeper, who turned his hobby and passion of pest control into a business, Pestforce was taken over by the current owners in 2014. Ever since then the business has been growing at a steady rate.

Pestforce is now a thriving franchise model with 49 (soon to be 50) franchisees across the UK including Scotland, Wales and Ireland.

While the head office is in Henley-on-Thames, Oxfordshire, there are 50+ locally based technicians across the country.



Sean Taylor, Phil Shaw and Gayle Baker talked through the Pestforce model and how it operates.

"When we bought the Pestforce brand we already ran a franchise, so we were able to take over and bring our experience," says Pestforce Owner and Managing Director, Sean.

"Pestforce has been around a long time and has certainly been through a journey.

"We bought a disenfranchised network, with very little infrastructure or support for franchisees. There have been some real tough decisions to make in order to protect the brand and everyone else's investment.

"We've been through plenty of highs and lows since the change of ownership - there's been a lot of work that's taken place to enhance the business and grow the reputation of the brand."

Franchise Recruitment Manager, Gayle, tells us that Pestforce

attracts a variety of people.

"Some join us who have no experience of pest control, who may be disillusioned with their current employment or may have been made redundant," says Gayle.

There's also a draw for those who have an interest in hunting, shooting or fishing and want to turn their hobby into a business. And there are those who already work within the industry but are looking to branch out on their own or expand their business.

"People typically want to join because they are looking to grow their business," Gayle explains. "They get completely involved in their day-to-day job, but they aren't working ON their business, expanding to employ people or just to get to that threshold where they're able to earn more money."

She continued, "Buying a franchise can be a scary decision. A big part of our process is to help potential franchisees understand what franchising is, and what the relationship between a franchisor and a franchisee looks like."

Sean says that it's standard to vet people but more importantly, for potential franchisees to vet Pestforce. There are nine steps that people must go through so that by the time the process is finished, everyone is confident that they're making the right decision for them.

"The franchisor and franchisee must understand each other. It's a crucial relationship," he says.

Phil Shaw is Pestforce Technical Director and, like the BPCA technical team, he's there to give support and advice to pest technicians.

"I provide 24/7 technical support to our franchisees, but we also introduce newcomers to neighbouring franchisees.

"By buddying up in this way, they can see what it's like at the coalface and support each other. And 100%, this is something that attracts people to a franchise.

"Yes, they want the ready-made

business. They

want the accounting structure in place. They see that there's a website in place and marketing experience that they don't have.

"But to run a successful company, you need expert guidance and encouragement, too. A franchise provides all of that."

Everybody joining the Pestforce brand goes through the company training programme, even if they're already qualified.

And alongside the technical training, there's business training, which prepares people coming into the franchise for the administrative side of running their own company.

"We provide the framework for them to employ people, give them HR handbooks, contract templates," explains Gayle. "We want to make sure anyone employed by our franchisees understands our values and represents the brand positively.

"We make sure that people know how much work is involved in running your business, and people who have the right attitude and work ethic come through. If someone wants to really succeed, to learn, to be challenged in the right way, franchising is the right way to go."

Sean believes that a good work-life balance is something that is earned. "You don't just come in, start your own business and then go play golf every day," he says.

"We build the car; they drive it. But they still have to drive it in the right direction, so at the end of the day, your destiny is in your own hands."



### WANT SUPPORT STARTING A PEST MANAGEMENT COMPANY?

BPCA has a specialist Probationary Scheme and training courses available for those looking to start their own pest business.

 [bpc.org.uk/membership](http://bpc.org.uk/membership)



## Pest management: trade or profession?

This year BPCA's Executive Board set up a series of three working groups, to find out what championing professionalism in pest management looks like.

One group has been taking a look at industry qualifications, while another has been investigating the benefits of an 'Institute of Pest Management'.

In this issue we will look in detail at the findings of the third group, which was tasked with answering the question: "Is pest control a profession or a trade?"

Made up of people from across the BPCA membership, the research group would need to define what constitutes both a trade and a profession, to come to a conclusion about where the pest management sector currently fits.

From there, they would be able to discuss the future of pest management: how do we want to be viewed, going forward?

And what about the variety of roles which are present in the industry? Do some of these fit better with one definition than the other?

### DRIVING PROFESSIONALISM: ARE WE THERE YET?

It's vital that in a sector like pest management we can identify ourselves, and be identified by others, as experts in our field.

Although the general public might consider pest control to be a trade, this doesn't necessarily reflect the complexities of pest management.

Compare this with professionals, a term most often associated with lawyers, doctors, accountants and other people educated to degree level.

Where does that leave us?

BPCA Chief Exec, Ian Andrew, says: "We drive professionalism, but are we a profession? I have a sense that most pest controllers want to be seen as a professional. Are we there yet? Possibly not. Can we get there? Definitely."

He continued, "It's time to move away from the old-fashioned thinking of pest controllers being the 'rat catcher'. We know that it's so much more than that.

"What's getting in the way? Probably just the lack of a clear roadmap of how we get there, which is what the professionalism working groups can help to build."

Finally: does it matter?

What does matter is that we are trusted by our clients, who view us as the experts in pest management.

The more effectively we can build the perception of pest management as being beyond a trade, the greater the end-user trust is likely to be.

### 'TRADE OR PROFESSION?' WORKING GROUP MEMBERS

Chris Cagienard (Pest Solutions)

David Cross (Rentokil Initial)

Julia Pittman (Beaver Pest Control)

Ian Ship (999 Pest Control)

Peter Bowers-Davis  
(Integrum Services)

Peter Goodrum (NBC Environment)

Paul Gowland (Evicta & Cobra)

Paul Hayes (Stockport MBC)

### YOUR THOUGHTS

What do you think? Lend us your opinions and tell us where you think pest management fits.

 [hello@bpca.org.uk](mailto:hello@bpca.org.uk)

“ Professionalism pays: people with professional body membership will earn more than those without. ”

## SPOT THE DIFFERENCE

### trade

/treɪd/

noun

A job requiring manual skills and special training.

### profession

/prəˈfɛʃ(ə)n/

noun

(i) A paid occupation, especially one that involves prolonged training and a formal qualification.

(ii) A body of people engaged in a particular profession.

These are the dictionary definitions, but what do they mean in practice?

A profession is considered to be something a little more than a job.

Professionals are people we rely on to be experts, such as dentists, teachers and paramedics.

A profession can be described as:

- An occupation which will help you to build your skills and develop your expertise in a field which interests you
  - A career in which you need to keep learning, be challenged and stay up to date with the latest developments in your chosen area
  - A chance to earn more money!
- Professionalism pays: people with professional body membership will earn more than those without (an average of £152,000 more in fact).

...PEST CONTROL OCCUPIES THE SPACE SPANNING TRADE AND PROFESSION...

## HOW IS A TRADE DIFFERENT?

A trade requires work experience, on-the-job training, and often formal vocational education, but not a bachelor's degree. Usually manual in some way, these can be split into three groups; service, construction and industrial trades.

We can also categorise different types of job into three classifications; white collar, blue collar and the lesser-known grey collar workers.



### WHITE COLLAR

Relating to the work done or the people who work in an office or other professional environment. (Oxford Dictionary of English Third Edition, 2010)

- Software developer
- Accountant
- Analyst
- Management Consultant
- Civil Engineer.



### BLUE COLLAR

Relating to manual work or workers, particularly in industry, 'a blue collar neighbourhood'. (Oxford Dictionary of English Third Edition, 2010)

- Mining
- Textile manufacturing
- Farming
- Commercial fishing
- Landscaping.



### GREY COLLAR

Refers to occupations that incorporate some of the elements of both blue and white collar, and generally are in between the two categories in terms of income earning capability.

- Clergy
- Firefighter
- Paralegal
- Airline pilot
- Stenographer
- Teacher.

## WHERE DO WE FALL?

The working group found that pest management ticks all the attributes of being a trade and a number of those which make up a profession.

ATTRIBUTE	TRADE	PROFESSION	PEST CONTROL
<b>Responsibility</b>		■	■
<b>Accountability</b>		■	■
<b>Institutional preparation</b>		■	
<b>Higher education</b>		■	
<b>Autonomy</b>		■	■
<b>Code of conduct</b>		■	■
<b>Clients rather than customers</b>		■	■
<b>Direct working relationships</b>		■	■
<b>Ethical constraints</b>		■	■
<b>Merit-based</b>		■	
<b>Respect and status</b>		■	
<b>Specialist</b>	■	■	■
<b>On-the-job training</b>	■		■
<b>Vocational education</b>	■		■
<b>Manual skills</b>	■		■

On this basis, it seems that pest control occupies the space spanning trade and profession but ultimately fits more comfortably into the trade category.

Is there a way of breaking down the industry into roles which fit into each of these categories?

For example, could we create a two-tier industry, similar to an accountant and a chartered accountant?

The report from the group suggests this would mean accepting that there is a lower level of skills required for certain types of more basic pest control. Residential pest management might always be viewed as a trade, for example.

Then there are elements of pest management which could be elevated to 'profession' status, such as field biologists and technical staff specialising in the more complex work, such as manufacturing and BRC clients.

SERVICING STORIES

# Where there's wax, there's... moths?



Ian Furlong from BPCA member company Independent Pest Control and Hygiene Services details his first encounter with wax moths and their symbiotic relationship with the bees in his client's loft.



An entirely new challenge arose for us recently when we got a call about an infestation of moth in a storage room.

That's not unusual itself but when we got to the site we identified these as wax moth, a new one for us.

They were literally all over the walls and contaminating soap being stored, so this was a big challenge. We didn't know where they had come from or where they could be breeding.

Although considered a minor pest, wax moth larvae can cause a lot of damage and there was the potential for significant financial loss in this instance.

Upon inspecting the roof space during our survey we found an active bees nest, plus two old hives. These were crawling with moth larvae, living and feeding on the old nests.

This made sense, as wax moths feed on unrefined beeswax, comb honey and bee-collected pollen. Beekeepers are not particularly fond of them, as they can do incredible damage to colonies.

It was clear these nests were the source of the problem and this was not going to be a small job.

Before we began dealing with the wax moths, we had to look at how we were going to deal with the bees.

Ideally we would have relocated them but unfortunately it was decided that it was not practicable to do so, especially as the wax moths had already weakened the active colony.

Once our technician had treated the bees, we began work on the moth infestation.

We had to take down a double-skinned ceiling, one part of which was timber,

the other part ceiling tiles. We then had to remove the loft insulation, which was a two-man job.

From start to finish it took us 14 days, which included treating the problem and rebuilding the ceiling.

The client was ecstatic; they were up against time with the storage and turnaround of their products.

The wax moth infestation could have been extremely costly for them if the problem wasn't rectified successfully and efficiently.

And as always, it's a reminder to never leave any stone unturned when doing your survey and inspect the unusual places that may not be so obvious.



Image: Andy Reago + Chrissy McClarren

## About wax moths

The two types of wax moth are very easy to remember: the greater wax moth and the lesser wax moth.

As with most pests of this nature, it's the larvae which cause the most damage. They live as nest parasites in beehives and eat cocoons, pollen and chew through beeswax, earning them their name.

To fully develop into adults, the larvae require access to 'used' or dirty brood comb which contains essential proteins for larval development.

The larvae destroy the comb, which causes the stored honey to spill or be contaminated. It

can also kill bee larvae or cause honey bee diseases to spread.

Interestingly, they've even been known to eat and digest polyethylene plastic, the kind which is used to make carrier bags and bottles.

Rate of growth is entirely dependent on environmental conditions, varying from anywhere between six and 55 days.

The adult wax moths are between 13-15mm long with a 31mm average wingspan, and it's often the adults that are the first obvious sign of an infestation for many people.



Image: Iliia Ustyantsev

Greater wax moth (above); Lesser wax moth (below)

### WANT TO SHARE YOUR FIRST TIME WITH PPC READERS?

Got an interesting milestone or new pest to share with the sector? Send us your stories and pictures and we'll share your new-found experience.

 [hello@bpc.org.uk](mailto:hello@bpc.org.uk)

## SERVICING STORIES

# A game of cat and mouse ...and rat and cockroach and pigeon



What do you do when a huge site is literally teeming with pests and wildlife? Nigel White, from BPCA member company Tactical Environmental Services, talks through one of their more challenging sites, detailing the approach taken when dealing with a multi-infestation.

## THE PROBLEM

In March of this year, we were called out to a market in central London which was struggling with a range of pest problems.

To give a bit of context on the scale of the job, the site contains 160 shops with communal bins, pedestrian walkways, open areas and a dozen cats.

We established that the current pest management company only carried out communal area checks and an isolated baiting plan, with callouts to individual shops.

This was deemed insufficient since the problems were persisting. In our survey, we found everything from German and Oriental cockroaches to mice, rats, feral pigeons and cats.

The cats were something of a surprise; all believed to be feral but impossible to say. They were given free access to the shops, which we were a little shocked to see when inspecting food premises.

## THE PLAN

We had a team meeting at Tactical to discuss all potential treatments before submitting a proposal.

It took into account the size of the infestation, types of infestations, how to approach and how we could enforce control measures to gain effective control.

The breakthrough moment was the integrated pest management plan we came up with.

The plan was complicated and required a lot of people working collaboratively, but we were confident it would be effective.

## IN ACTION

We worked with a food safety consultant, who liaised with all the tenants to improve hygiene, staff awareness and helpful monitoring, reporting to us with activity locations.

We implemented separate levels of pest monitoring and have broken down the site into four phases. We split the stores in half, allocating these as phase one and phase two. The communal bin room and offices are phase three, with overnight pest works earmarked as phase four.

We allocated this site to the same two technicians, so they have an ongoing knowledge of all issues and can build rapport with the tenants.

We also take part in quarterly management reviews with the market's onsite management team, which enables us to update our client but also gives them the opportunity to raise any issues.

## THE RESULTS SO FAR

Around 90% of the shops are now under our remit, which has been a huge help; having so many businesses on board and being able to educate the owners on best practice increases the probability of successful treatment.

What we have is definitely an evolving pest management plan, but wildlife is adaptable and so we need to be.

With an integrated pest management plan, you have to accept some trial and error, not just sell a system that you're used to and hope it works.

Of course, this job is ongoing but thanks to effective collaboration with the customer there have been great results so far: a marked improvement in historical issues and a reduced callout rate.

I think the tide has turned in this game of cat and mouse!

## YOUR MAGAZINE, YOUR STORIES

Done something worth shouting about? Want to share your win with our readers? PPC is a member magazine - if you've got a Servicing Story, get in touch!



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STRATEGIC STORYTIME

# WHY DON'T THEY PAY THE PIPER?

## Demonstrate the value of pest management and its people

Doctors, teachers, accountants, police officers, engineers, nurses... what do they all have in common? This issue we're talking about how we show off the value of our trade and our people. All our members own BPCA's strategy. We've committed to telling the story of one of our strategic goals in each issue of PPC.



Pest management is still regularly perceived as a panic purchase by the general population. A few sectors (food, hotels, manufacturing) are starting to recognise the importance of pest management professionals. But many still think the cost of our trade can be replaced by a Youtube video and trip to B&Q.

Even during a professional tender, we get regular reports from members that cost trumps quality with many a potential customer. The average investment in pest management services tends to be tiny in proportion to other safety measures.

Our strategic goal is to demonstrate the value of pest management and its people to the wider world. In other words, we want to elevate "pest professional" to the cultural significance given to educators, medical practitioners and other professions.

Raising the value of something means consumers are willing to pay more to source that service.

The goal isn't exactly straightforward. The traditional KPIs for success go out of the window. How does a trade association facilitate cultural change?

Facilitating a cultural shift from a single body is an uphill task, and like reputation, can take years to build up, but be lost overnight.

In the Middle East, pest professionals are held in much higher regard than those in the west. In the USA, restaurants proudly display their pest control contractor on the wall to show their customers they're protected. It is possible to change British attitudes.

We know cultural attitudes shift frustratingly slowly. But BPCA has been around for over 75 years, and we're not going anywhere. BPCA and its members are uniquely placed to get the ball rolling.

Once upon a time, in a small arbitration court somewhere in Germany, the Pied Piper was suing the town of Hamelin for non-payment of services rendered.

"Did I not do as you asked?" called the piper. "Has the plague of rats not gone? Are your winter food stores not safe? Haven't I stopped the spread of disease in your town?"

"But your fee was not fair!", protested the mayor. "One thousand guilders! For waiving around a flute? I could buy myself a flute from Amazon. In fact, Gary has a tambourine. He would have done it for a quarter of the price."

The piper sighed.

These people don't understand my work, he thought. All they see is a flautist who spent a couple of hours tooting and jigging his way through the town...

They didn't see:

- How expensive his professional equipment is or how much it costs to maintain.

- The hours of rehearsals and training the piper invested in his skill.

- His rehearsal room, reception

- area and little Heinrich the office administrator.

- His public liability insurance, product liability insurance, professional indemnity insurance, employers' liability insurance.

- His refresher training, continuing professional development days, and the qualifications he's working towards.

- His promotion costs, his horse (and its oats), his multicoloured uniform.

- Maintaining his accreditation from the German Magic Fluting Association (GMFA).

And so on and so forth.

You wouldn't dare quibble with your butcher, or the pub landlord, or your children's teacher, the piper thought. You wouldn't say one thousand guilders was too much to pay the town constable to stop a riot or the village surgeon to save a life, he thought.

It's not until the rats have ruined the winter supplies or infected the town water that you'll understand my trade.

"If you understood all I did and if you understood all I protected you against, you'd pay me my thousand guilders twice over."

## A to Z of pests goes PestAware



Many of you will know that BPCA has an A to Z of pests on our website. This is a tool for end-users to find pest control help and support.

What you might not know is that we've been filming videos to go along with some of the entries.

The purpose of our PestAware campaign is to help demonstrate the value of what we do.

So far we've released two videos: 'Worried about wasps?' and 'Fretting about fleas?'

We've got loads more videos planned including, rats, mice, stored product insects and cockroaches. We've averaged about 1,000 views per video, and the press we've received off the back of it has been amazing.

Let's have a look at some of the highlights...

**WHAT IS BPCA DOING TO SHOW THE VALUE OF PEST MANAGEMENT AND ITS PEOPLE?**

**We speak at conferences and events around the UK**

**We produce PestAware articles and help guides through our A-Z of pests**

**We actively help the biggest news agencies in the world report on pest management fairly and accurately**

**We work with government and other key stakeholders to raise awareness of what good pest management means and the benefits it brings.**

What else should we be doing? Send us your thoughts [hello@bpca.org.uk](mailto:hello@bpca.org.uk)

### OUR TIME

We can split the task into two. As an association, we need to educate the general public about:

1. The risks of inadequate pest management/pest species
2. The professionalism of our sector.

It's time to ask some of the big questions. What would the world look like without pest management? What is our role in society? Where is the evidence for the story we're telling?

Once we've got our stories, we as a sector need to package them up and get them out to a non-pest audience.

### HOW CAN YOU HELP?

It's in everyone's interest to advance our sector. There are four simple ways to do your bit, to demonstrate the value of pest management and its people:

1. Give good pest advice to your clients – take time to educate them and explain the public health significance of the work you're doing
2. Let your professionalism shine – be a fantastic, well-informed, pest management professional
3. Join or stay in membership – the bigger we are, the more legislators and associated sectors have to listen to us
4. Share the work we're doing whenever you see it!

It's a big job, changing the world – but if we all muck in, we'll do it.

### THE POWER OF PRESS

We've always done well at promoting pest professionals and BPCA members with good public relations. In July/August this year alone, we estimate that our messages had a circulation of 125,000,000.

### WORLD WIDE WASP

We released our wasp guide and video in July, and since then we've had an incredible response. We've been featured on BBC radio quiz shows and appeared on loads of local newspaper websites.

Some members have even been embedding the 'Worried about wasps?' video straight into their websites to help spread our pest awareness message.

**PEST MANAGEMENT IS STILL REGULARLY PERCEIVED AS A PANIC PURCHASE BY THE GENERAL POPULATION.**

### WHAT'S THE POINT?

The more we talk about pests, the problems they cause and the professional solutions our sector can provide, the better the general public will think of us.

Our PR is educational, supportive and more importantly promotes the value of our sector!  
[bpca.org.uk/pestaware](http://bpca.org.uk/pestaware)  
[youtube.com/BPCAvideo](https://youtube.com/BPCAvideo)

### PEST CONTROL: ZERO?

What would the world be like without pest management? Tell us your opinion!

 [hello@bpca.org.uk](mailto:hello@bpca.org.uk)



**BPCA**  
**PestAware**  
 the pest advice blog

WHERE WE'VE BEEN

# Planet Holyrood



On 18 September, BPCA held an event at the Scottish Parliament about the critical role played by pest management professionals in protecting public health and safety. We filled the member room bar with people interested in finding out what we do. In attendance was Willie Rennie MSP, leader of the Scottish Liberal Democrats, Mairi Gougeon MSP, Minister for Rural Affairs and the Natural Environment and members of the Housekeeping Association.

Between networking, drinks and canapés, there were short informal speeches about pest management and public health, with plenty of questions throughout.

Most notably, people found it hard to believe that pest control is, for the most part, unregulated.

Sticky subjects, like glue boards, were talked through and gently debated. The

Scottish Parliament could soon ban them altogether, although BPCA is working through the Pest Management Alliance (PMA) to keep them for professional use.

Rodenticides were talked about frankly, without shying away from the environmental risks involved. With proper training and competency, the risk to non-targets and secondary poison is very low. But several people present asked if some sort of licencing would help make the sector safer.

The event promoted the professionals in our sector, particularly BPCA members who have a much higher standard for entry than the industry at large. We're still in a country where anyone with a Safe Use of Rodenticides certificate can buy professional products and call themselves a pest controller.

Ian Andrew, BPCA Chief Exec, said: "We started a lot of conversations in the

members' room that day, and we're in the process of following those up. Ultimately, our job was to shout about the great work that our members do to protect public health. We asked MSPs to think carefully when something that could restrict our practice comes before them in the debating chamber.

"Thank you to everyone who came and supported our cause. As a sector, we need to get better at presenting ourselves to those in power and showing them that we're an essential service provider protecting citizens from disease and injury."

Where should we take our campaign for recognition next? Let us know.

 [events@bpca.org.uk](mailto:events@bpca.org.uk)

## SPEAKERS

### Ratcatcher: the public perception Welcome to the Scottish Parliament

Willie Rennie, MSP North East Fife, Leader of the Scottish Liberal Democrats

### What does a professional pest management company look like?

Ian Andrew, Chief Exec, BPCA

### The European perspective: EN 16636 Standard for Pest Management

Henry Mott, President, CEPA

### Professional pest management: organisational challenges

Ross Graham, Managing Director, Graham Environmental Services

## SPECIALIST INSURANCE FOR THE PEST CONTROL INDUSTRY

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## MEET THE MEMBER

# Fowl play on the pitch

## FALCONRY SERVICES BIRD AND PEST CONTROL



BPCA's Communications Officer, Kat Shaw, spoke to Phillippa Hawkins from Falconry Services Bird and Pest Control about carrying out pest control in stadiums with her feathered colleagues.

Football stadiums are the perfect place for pests to set up shop. Plenty of food scraps to feast on, lots of harbourage and easy access.

Birds, in particular, love that stadium real estate for roosting. Many are in built up areas, which means birds can use them as an anchor point from which to scavenge nearby estates or towns.

Arguably the most effective way to combat problem birds in a stadium environment is by using birds of prey.

### A PSYCHOLOGICAL STAND-OFF

Phillippa has worked in pest management for 20 years, having set up Falconry Services with her husband in 1999.

"I sort of got into falconry a bit by accident," says Phillippa. "I went to an agriculture show and someone was showing Harris's hawks and I loved it.

"I decided to learn how to fly them myself and I got hooked. After 23 years of flying hawks, I never get bored of them. It's such a buzz."

Falconry Services has been carrying out pest control contracts in stadiums for a number of years.

"We've had all sorts: mink in rivers by the stadium, bee swarms on turnstile gates two hours before kick-off.

"The French rugby team are notorious for releasing live cockerels onto the pitch, so we've been cheered on by thousands of rugby fans at half-time while we chase the birds with a net."

One of the contracts Phillippa carries out is for the Principality Stadium in Cardiff.

"It has a retractable roof which is open 90% of the time and is like a giant Meccano set, so realistically you can't proof that area," says Phillippa.

"The easiest way to go up there is with a bird."

There's a public image issue to bear in mind when considering the pest management methods we choose to implement. Of the options available, falconry is one of the least controversial and most natural methods of control.

The birds of prey work as a deterrent and although not guaranteed (after all, nature gonna nature) they don't generally attack the pest birds.

"It's more of a psychological stand-off to claim the territory," says Phillippa. "Falconry works by triggering the survival instincts of the pest bird."

This is why a falconer needs to be on site, working in the hotspots, at least four to six days a week in the beginning (depending on how established a colony of birds is).

She explains, "The pigeons needs to see the hawk as often as possible, exercising and flying around. It makes them unsettled

## Why can't we all just get along?

Pigeons are a regular smorgasbord of bacteria and disease, carrying such treats as ornithosis, listeria and E.coli.

Dry pigeon droppings can become airborne in small particles, which can lead to respiratory complaints such as psittacosis.

They can also cause structural damage, as bird

droppings are acidic and can corrode/erode metals, stonework and brickwork. We've all regretted parking under that tree, right?

And buildings covered in fouling look unpleasant, can smell and projects a poor image of a business, potentially ruining a hard-earned reputation.

and they'll be unwilling to stay."

She continued, "You really need to put the hours in. If the pest bird thinks the hawk is just passing through, they'll sit tight and ride it out.

"But if the hawk is there regularly and you can convince the pest that this is the hawk's territory, then they won't hang around and nest there."

### NATURE AT ITS BEST

Hiring a falconer to help control pest birds is not uncommon and is quite a spectacle to watch in action.

The falconer will try and get as close as possible to the roosting site and bring the bird over the top of them. Birds instinctively stay high, to keep the vantage point, and trained hawks will stay above the falconer, moving where they're directed.

It's important that you use the right type of bird on a site. For example, Phillippa flies Harris's hawks on stadium jobs, particularly female hawks.

"They are uniquely suited to doing stadium jobs because they're a gregarious, laid back, social bird in the wild," she says. "That means they cope with the busy stadium environment really well.

"In the wild, they're designed to work in crowded woodland, so flying among the metal beams of a stadium roof is no problem: their close wingspan means they can cope with that."

"In short, you can't beat nature at its best," says Phillippa. "Like all animals, pigeons are programmed to stay alive and being near a bird of prey is not conducive to that goal."

### YOU COULD BE ON THIS PAGE

Want BPCA to see what your team does best? We're looking for BPCA members to interview for 2020. Contact us today.

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# PLASTIC WASTE: is it time to think outside the box?

In this guest item Sean Taylor, Pestforce Managing Director and owner, asks how pest management professionals can work smarter and greener, to help tackle climate change and cut waste.

What should we be doing with all these recovered bait boxes? Return, recycle or reuse? I was shocked this week when one of our Pestforce technicians came back from setting up a new pest control contract for a regional retailer.

The picture demonstrates the way that many in the industry have been treating rodent bait boxes as disposable assets.

These boxes - generally made of plastic - are used on properties all over the country, as part of the delivery of pest control services. (And just for the uninitiated, these boxes do not always contain toxic products. That is a whole different debate but professional pest controllers will look to use non-toxic control measures where possible.)

In total we removed over 20 boxes that had been left at the site by at least the previous two contractors.

Simply seeing this picture back in the Pestforce head office has got us thinking: surely this situation can be avoided?

Clearly we are as guilty as most, as we were keen to make a good impression with our new customer by installing new boxes, without thinking of using what was in place. But at least we safely removed all this 'old' equipment from site - more than can be said

for the previous contractors.

Part of the problem is that these boxes are not overly expensive, which makes them economically and commercially 'disposable'. Yet they are highly durable and can last years if looked after properly.

Another aspect is that marketing teams have not missed an opportunity, so now every rodent box becomes an advertising board embossed with the company logo. After all, not many companies want to support free advertising for a competitor by leaving a branded box.

Now, just when the world has finally woken up to the issue of plastics, and their impact on the environment and wildlife, the picture shows that our industry really need to start thinking about how contracts are managed and how we, the service providers, need to come together to help our planet.

I am not a technician so I may not be the best person to comment. However, on the few occasions that I have been out on the ground with our teams, this is not an unusual sight!

I am sure that some 'outside the box' thinking will find a solution.

**IN TOTAL WE  
REMOVED OVER  
20 BOXES THAT  
HAD BEEN LEFT AT  
THE SITE...**

## SO WHAT IS THE ANSWER?

- Should we stop embossing permanent logos on boxes, so that they are more transferable when there is a change in service provider?
- Is it acceptable to use the old contractors' boxes?
- Should outgoing service providers have a corporate responsibility to collect all pest control equipment when the contract is lost?

As always, these things are not always as simple as they sound, but there is huge room for improvement and we will be talking to the British Pest Control Association to see if the industry can be a bit smarter and greener.

We can all do something to help reduce waste and re-using is just one element that will help cut waste.

Anyway, must dash: I've got more boxes to count...

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TRAINING PROGRAMME IN FOCUS

# Level 2 Award in Pest Management - General Pest Control (GPC)

The GPC training course is BPCA's residential training programme designed to give people the skills they need to enter the world of pest management. When combined with BPCA's online learning, the pass rate for the course is over 85%. We sent PPC reporter and BPCA's newest recruit, Kat Shaw, into GPC to meet some candidates and find out what makes the course internationally-renowned.



**YOU HAVE TO BE PREPARED TO HIT THE GROUND RUNNING, AS THE LEARNING BEGINS STRAIGHT AFTER THE WELCOME SESSION ON SUNDAY.**

Recognised as the benchmark qualification for those professionals undertaking general pest control the UK, the Level 2 Award in Pest Management is also the minimum qualification required to meet BPCA full membership criteria.

In full delegate mode, I went along to Yarnfield Park Training and Conference Centre in September with BPCA's Training Administrator, Clare Penn. She would be helping to facilitate the week and sitting in on the training as a 'fly on the wall', while I'd be trying to absorb as much pestie-knowledge as part of my induction.

The programme ran Sunday to Friday; five days of learning then a morning of revision and a three-hour exam.

## HIT THE GROUND RUNNING

For context, the qualification and course is broken down into three modules: Legislation, Vertebrates and Invertebrates.

These are taught in succession, followed by three, one-hour exams at the end of the week and then a bit of cathartic crying in the car park.

You have to be prepared to hit the ground running, as the learning begins straight after the welcome session on Sunday.

Our course was taught by Brighton's own Paul Westgate, owner of both Westgate Pest Control and questionable taste in music (sorry, Paul).

There was a mix of experience among the delegates in our group. There were complete newbies, some of us with a little knowledge, while

others were pest technicians in training and had been working in the field for anywhere up to a year.

## LEGISLATION, HEALTH AND SAFETY MODULE

Paul wastes no time getting straight into the learning, which begins with legislation. It was the part most of us were worried about and we wondered why the course started with this module.

That became clear as the week went on and spoiler alert: it works.

The module covered a range of important acts and regulations that, as pest management professionals, we need to be keeping in mind every single day.

And, as Paul pointed out, knowing the legislation can also help sell pest management services and sets a professional apart from a cowboy (see PPC96 for his article on the subject).

## VERTEBRATES MODULE

Vertebrates followed legislation, which was an opportunity to bore everybody with pictures of my pet rats.

It was also the portion of the week where we got to do an outdoor survey.

This was incredibly useful for me, as I had only read about surveys up to this point and it's a very involved process.

## SPEED VIEW

**Level: Core**

**Prerequisites: online learning**

**Delivery: blended (classroom, online learning, then exam)**

**Classroom duration: 6 days**

**Online study time: ~60 hours**

**Assessment: written exam**

**Qualification: RSPH Level 2 Award in Pest Management**

**BPCA Registered CPD points: 27 blended**

**BASIS Prompt CPD points: 24**



CONTINUED >

## Level 2 Award in Pest Management - General Pest Control (GPC)

We found possible harborage for a historical rat problem and identified areas for improvement.

Plus it gave us the opportunity to complete a risk assessment before starting.

### INVERTEBRATES MODULE

The final module was invertebrates; we learned about insect pest biology and got to take a tour of the training centre kitchens for a task.

We had expected that to scare us off the food but luckily there were no horrors to be found.

Throughout all of this, Paul was weaving legislation into the modules. And that's why, personally, I found it useful to start with legislation.

Pest management doesn't exist in a vacuum and so while we were learning about pests like rats, we were able to link it back to the Prevention of Damage by Pests Act 1949.

Or when filling out our risk assessment, we were able to use our knowledge of the Health and Safety at Work Act 1974 (HASAWA).



### LEARNING TOGETHER

GPC has lots of opportunities to join in with optional revision sessions with Paul throughout the week. Some of us set up our own revision groups, which created a really good sense of camaraderie.

In fact, there was a general good vibe all week and I think it helped the learning experience.

The final revision session on the morning of the exam is also optional, but I would highly recommend attending.

It gives you that last opportunity to get to grips with things you might

have struggled with throughout the week and, as a group, everyone pulls together and offers last-minute encouragement which is more helpful than you might expect.

### AND THE OSCAR FOR BEST LARVA GOES TO...

That's just a short overview of the week. As anyone working in pest management knows, you never stop learning and I found this course a great entry point.

Paul's teaching style is quite unique and I'm sure many people who have taken the course will still remember the FEPA, COPR, BPR train. Frankly, that keeps me awake at night occasionally.

Props to his acting ability though, as the carpet moth larva impression was an Oscar-worthy performance.

There are definite advantages to taking the exam following the classroom programme, rather than purely online learning.

It gives far more context to the learning, you can draw from the experience of those around you and everyone asks questions, helping each other to learn.

BPCA works hard to provide courses with multiple delivery options, so for those who learn better online, that's an option which also comes with cost savings.

And there's now a modular course for people who learn better in bite-sized chunks (see page 51).

For my style of learning, the residential course at Yarnfield worked perfectly.

In all honesty, speaking as a big ol' nerd, I would happily take the course again next week.



## And I would walk 9,000 miles...

At BPCA we facilitate a host of pest management training opportunities, that attract candidates from around the UK and further afield. One of our most renowned training programmes is the General Pest Control (GPC) course, which leads to the Level 2 Award in Pest Management qualification. This September, we welcomed Christiane (Chrissy) Anthony to the course, who travelled almost 9,000 miles to join other delegates on the one-week residential classroom programme.

Ascension Island is a very isolated, volcanic island about 1,000 miles off the coast of Africa, with a tiny population of around 800 people.

Chrissy has worked in pest management for the Ascension Island Government (AIG) for seven years.

Pest control falls under Ascension's Environmental Health department, which deals with everything from pests to water testing and sewage issues.

Earlier this year the department received funding from various projects, including the Darwin Initiative and the RSPB, and made the decision to use some of that funding to cement the professionalism of its employees.

Up to this point, Chrissy's training had been entirely on the job. This funding gave her the perfect opportunity to gain some formal pest management qualifications.

"My director was very keen to use the funding to help build my skills, but it was actually me who suggested that I take the Level 2 GPC through BPCA," explained Chrissy.

"It's a very widely recognised qualification and I knew that it would be a huge boost for me to have it."

Chrissy hasn't wasted any of her time in the UK.

"Once she had booked that, my director found other training courses that were taking place in the same month and I registered on those too. It's been a busy four weeks!"

Starting with work experience

### WANT TO SKILL UP?

Thinking of taking a course? Speak to our wonderful training team, who will help you find a route along the training pathway which suits you.



training@bpca.org.uk

Images: Ascension Island Government Conservation Department



**CONSERVATION IS A BIG ISSUE ON ASCENSION ISLAND. THERE HAVE BEEN SUCCESSFUL PROGRAMMES FOR PROTECTING GREEN TURTLES, PROBABLY THE MOST WELL-KNOWN OF ASCENSION'S WILDLIFE.**



for Charnwood Borough Council, Chrissy spent two days with the pest control team and two days with the Environmental Health department.

"I helped them carry out inspections on food premises and it was so helpful, to see how the industry works here compared with back home."

A week spent on the Level 2 GPC residential programme at Yarnfield Park Training and Conference Centre in Staffordshire was next for Chrissy.

The course is led by Paul Westgate, who Chrissy said had a great teaching style which suited her way of learning.

She explained, "Paul doesn't just talk at you for a week, he keeps you engaged and he gets you doing activities. And he comes up with quirky ways of helping you remember things, including the quiz night in the middle of the week which was a lot of fun."

"It was also really good to spend a lot of time with other people working or starting out in pest control, listening to their experiences and helping build each other's knowledge."

"Interestingly, we worked out that there was space for more people at Yarnfield Park than there are people living on Ascension."

After GPC it was off to Killgerm for the 'Principles Involved in Controlling Pests in Drainage Systems' training.

That title doesn't roll off the tongue, but the training was particularly useful for Chrissy, given that rats are not just a pest on Ascension but a huge conservation

concern too.

Finally, Chrissy completed her whistle-stop tour of the UK in Leicester: "I took the City and Guilds Safe Use of Pesticides and Pesticide Application qualifications. I got my results through straight away and I was very pleased to pass!"

"It's been an incredible opportunity to come to the UK and learn from some incredibly well-respected pest professionals."

"But the pace here is much quicker than I'm used to, so I'm looking forward to going back home and relaxing!"



Chrissy (front) on the GPC course.

### ASCENSION'S WILDLIFE

There are no native land mammals on Ascension, only sea mammals such as whales. Over the centuries several introduced mammals have gone feral; donkeys, sheep, cats, rats and mice.

✿ Conservation is a big issue on Ascension Island. There have been successful

programmes for protecting green turtles,

probably the most well-known of Ascension's wildlife.

And the Ascension Heritage Society has worked hard with the RSPB to protect the birdlife on the island.

"At one point there was a huge project to cull feral cat numbers, as they were affecting native bird populations like the frigate bird," says Chrissy.

"Unfortunately that meant the rat population started to get out of hand and they've been attacking other seabirds."

In terms of pests, Chrissy explained that there is a lot that we have here in the UK which they just don't get on Ascension, probably due to the lack of vegetation and native land mammals.

"Some of the pests we do share are rats, mice, ants, fleas and cockroaches," says Chrissy, "But our hotter weather means that cockroaches on Ascension fly, which I'm told you don't get here. It can make you jump when they fly at you!"

She continued, "We don't get pigeons which I know are a huge pest problem here in the UK, but we do have myna birds. They're an invasive species which is really aggressive and threatens native bird species."

To find out more about Ascension and its wildlife, visit [ascension-island.gov.ac](http://ascension-island.gov.ac)

## BESPOKE PEST TRAINING

# It's not 'one size fits all'



Training Development Manager, Karen Dawes, explains how bespoke training might be a better fit for your business.

At BPCA we're proud of our track record in delivering a range of courses and exams for pest management professionals, from using airguns safely to high level fumigation training. In addition to a 12-month calendar of training courses being held all around the UK, did you know BPCA also offers a wide range of courses that can be delivered to you on your doorstep and tailored to your requirements?

We have a pretty extensive training calendar at BPCA, but many pest management companies aren't aware that we also organise custom learning experiences alongside this.

Delivered at the convenience of your organisation, disruption to your business is minimised by holding sessions on a time and date agreed by you.

Additionally, the teaching can take place at your own site or at a venue convenient to you.

Our in-house training can be tailored to your company's processes and procedures, ensuring that your employees are able to relate to the training and put their new skills into practice very quickly.

We use industry professionals to deliver our training so you can be sure that the tuition you and your employees receive is of the highest quality.

Bespoke training is great value for money and the most cost-effective way of managing your training requirements.

If you have a number of employees you need to train, you'll cut the cost of developing your workforce without compromising on quality.

In short, on-site training with BPCA combines quality, convenience and cost-effectiveness.

### BESPOKE TRAINING CAN BE DELIVERED ON:

- Level 2 Award in Pest Management
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- Bed bug control
- Fumigation
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## What Rwandafull training

One company that recently took advantage of this method of learning was Africa Improved Foods (AIF), based in Rwanda.

The team at AIF got in touch to see if we could provide a bespoke fumigation training course for their employees.

Our expert of choice to deliver this training was Martin Cobbald, of Dealey fame and Vice President of BPCA's Executive Board. Here is a bit of his travel diary about the trip.

### ARRIVING IN RWANDA

Recently I have made a habit of saying yes to everything.

Can we fumigate a ship in Aberdeen? Yes. Can we gas aeroplanes? Yes. Can we help save money on import management? Yes. Can we do void clearances? Errr, yes!?

Relentless positivity and full acceptance of opportunity has worked well so far.

Everyone in the Dealey team pushes themselves to develop and learn new skills, making that 'yes' a reality.

So, when BPCA got in touch to ask if I could run a training course in Rwanda, of course my answer was...

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NORDISK INNOVATION



**EVERY MORNING I WOULD TEST THE STUDENTS AND EVERY MORNING THEY WOULD COME BACK WITH PERFECTLY FORMED, CORRECT ANSWERS WITH ADDITIONAL INFORMATION I HAD NOT TAUGHT...**

I had no idea exactly what to expect when I got to Kigali.

Of course, it didn't help my confidence that there was an Ebola outbreak two and a half hours' drive from the training centre, a week before my flight was due.

But I had already said yes; I was committed, and I wanted to go to Africa and give my prospective students 100% value.

I had been told to expect someone from the customer company to greet me.

When I got to arrivals at Kigali International Airport (after 24 hours of travel) a well-dressed man was waiting for me, holding a sign with my name.

I waved at him and he looked blankly back. I waved again to the same reaction. This was not a good start and I began to worry.

Eventually I manoeuvred through the crowd to be in front of him, pointed directly at his sign, then pointed to my chest and said "me!"

He jumped, apologised and grabbed hold of me in a very sudden and very warm embrace.

It turns out what I had mistaken for reticence was in fact him being tired, miles away and thinking about something else entirely.

The man was Julius Cesar: my host and one of my students in Rwanda.

### A FARM BOY FROM EAST ANGLIA

The first part of the course passed without much drama.

Pertinent questions were asked in perfect English. Pens scribbled frantically under studious frowns. Everyone appeared to be just 'getting it'.

We had a break at 11am. Everyone filed

out of the room and one young student remained behind to speak to me.

He introduced himself as Justin and we had a chat about this and that. After five or so minutes I commented: "Your knowledge is already very good!"

He thanked me and casually mentioned, "Oh, I have a master's degree in food safety from Ghent University."

I was aghast. What was a farm boy from East Anglia doing here to train people more qualified than he is?

Luckily it transpired that Justin and Julius were the most experienced in the room, and I was soon calmed a bit by the amount of specialist insect knowledge I was able to deliver to them.

The course, I felt, would go very well.

Lunch was a veritable banquet, served buffet style with everyone eating together: operations, management and a single ginger contractor from the UK.

I would train with them all afternoon, return to my hotel to adapt the next day's course to the AIF site and then the process would repeat. The only rest I had was sleep, really.

The burr in the blanket was the afternoon post-lunch lull which the students experienced.

There was lots of very outward, unconcealed yawning and a few heads lolling forward or backward, as the learners drifted in and out of consciousness.



I didn't worry about this too much. Every morning I would test the students and every morning they would come back with perfectly formed, correct answers with additional information I had not taught, which they had obviously got from their own overnight study.

On the fourth day we did a practical fumigation using recirculation technology, perfectly installed and with all candidates working excitedly as a team to put their knowledge to the test.

When it came time to climb up the silos, a safe operating procedure and a risk assessment were produced and distributed.

A quick run through these showed me that they would pass over the desk of the most officious UK SHEQ without interruption.

Harnesses and full-face gas masks appeared. The fumigation was executed very professionally, and wouldn't you know, during this operation someone produced a Bedfordshire Phosfuma. This piece of kit, made in Bedfordshire, is worth thousands of pounds and would make any UK fumigator green with envy. And here it was, glinting in the hot African sunshine.

I joined in with the excitement of the students and we all had fun talking about how to do a recirculation fumigation, with permanent monitoring and real-time CTPs. It was astoundingly technically proficient.

Really, I could not be more impressed by the Rwandans, the African Improved Foods Company or with the young people I was training.

I left the country with many of my previously held opinions revised. Most of all I left with great hope for the growth in knowledge and improvement for the post-harvest techniques for the East African region.

If my experience was typical of East Africa, I expect to return with great enthusiasm and very soon.

### WE'RE GONNA NEED A BIGGER BLOG!

Martin wrote a longer blog about his experiences, which you can read in full on the Dealey and Associates website:

 [dealey.co.uk](http://dealey.co.uk)

**NEW!**

# Free CPD webinars... another way to stay up-to-date with BPCA

This year BPCA trialled running free CPD webinars for all members and affiliates. The first five webinars have proved far more popular than we could have imagined. In fact, we've helped hundreds of people learn something new.

With these successes, we've decided to produce a full schedule of webinars for the rest of the year and into 2020. They're all free to attend, and if you miss them, you can catch up with them on our YouTube channel or the BPCA website.

## WHAT WE'VE GOT PLANNED:

CPD: 1 BPCA Registered; 2 BASIS Prompt	12.30 start
<b>Bed bug basics for pest management professionals</b>	27 November 2019
<b>Inspection and control of bed bugs</b>	10 December 2019
<b>Environmental risk assessments and non-toxic pest control</b>	21 January 2020
<b>Ant control for pest professionals</b>	13 May 2020
<b>Professional wasps, hornets and bees: biology, behaviour and control</b>	16 June 2020
<b>Rats and drains for pest professionals</b>	15 July 2020
<b>Social media and blogging for pest management companies</b>	13 August 2020
<b>Identify and understand delusional parasitosis</b>	17 September 2020
<b>Squirrel control for pest professionals</b>	21 October 2020
<b>Cockroach control for pest professionals</b>	18 November 2020
<b>Controlling flies around food</b>	15 December 2020

## WHAT IS A WEBINAR?

A webinar is just an online seminar. Like any other seminar, you can ask questions or chat with the other attendees before the talk, but you do it from the comfort of your own smartphone or computer.

## HOW DOES IT WORK?

- Register for the webinar at [bpc.org.uk/webinars](http://bpc.org.uk/webinars)
- You'll get an email from Zoom - our webinar partner with your confirmation details
- You'll get a reminder just before the webinar
- Click the link in your confirmation or reminder email and you'll be taken to the webinar (if you're on a smartphone, you'll be prompted to download the Zoom app)
- When the webinar starts, you'll be able to see and hear the presenter and their slides, but they can't see you
- You can type a question at any time in the webinar - they'll be answered at the end
- If you miss a live webinar, you can watch back the recordings of the webinars a few days later.

## BENEFITS OF WATCHING LIVE

- CPD points get added automatically on BPCA Registered or Basis Prompt
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- Chat to the other participants in the webinar
- Stream it live to your phone while you're on your lunch break.

## REGISTER FOR A WEBINAR NOW

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## WHAT YOU'VE ALREADY MISSED

**Professional flea control**  
This webinar will help you plan and carry out effective flea control and management.

**A practical approach to wasp management**  
This webinar is useful for pest technicians looking at improving their competency around the control of wasp nests.

**Risk management assessments for pest management professionals**  
A health and safety risk assessment considers the hazards present in a task or activity. RAs look at the likelihood of harm that might occur and the severity of that harm.

**General licences for bird control: update and next steps**  
An update on the current (June 2019) bird general licences issued by Defra and Natural England in England.

**Direct bait application in burrows**  
Presented by BPCA Technical Officer, Natalie Bungay.

You can still watch them on the BPCA YouTube channel or on the BPCA website.  
[bpc.org.uk/cpd-videos](http://bpc.org.uk/cpd-videos)  
[youtube.com/user/BPCAvideo](https://youtube.com/user/BPCAvideo)

<b>FEEDBACK SO FAR</b> Webinar feedback has been so good that we just had to shout about it a bit! Here is what our viewers said about our first four webinars.	<b>9/10</b>	<b>89%</b>	<b>443</b>	<b>875</b>
	average satisfaction rating	gained new info	watched live	watched later

## BPCA Regional Forums

### 2019 SCHEDULE



**LONDON**  
WEDNESDAY 20 NOVEMBER

SPONSOR

**EASTERN COUNTIES**  
WEDNESDAY 11 DECEMBER

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[bpc.org.uk/events/Regional-Forum](http://bpc.org.uk/events/Regional-Forum)

# Training calendar



## COURSES AND EXAMS

Level	Course/Exam	From (£)	Exam	Start Date	Location
FOUNDATION	<b>Using Rodenticides Safely</b>	130	✓	30/01/2020	Derby
				26/03/2020	Preston
	<b>Practical Vertebrate Trapping</b>	155		19/03/2020	Glasgow
	<b>Practical Insect Control</b>	155		18/03/2020	Glasgow
	<b>Starting and Managing Your Own Pest Management Business</b>	155		18/11/2019	Derby
			28/01/2020	Preston	
			02/03/2020	Derby	
CORE	<b>General Pest Control - Level 2 Award in Pest Management</b>	1010	✓	24/11/2019	Stafford
				23-28/02/2020	Stafford
	<b>Modular General Pest Control - Level 2 Award in Pest Management</b>	995	✓	23-24 + 25-26 + 30-31/03/2020 + 01/04/2020	Scotland
	Seven days covering health and safety, vertebrates and invertebrates, with one exams throughout.			15-16 + 22-23 + 29-30/04/2020 + 01/05/2020	London
	<b>Bed Bug Control</b>	155		05/12/2019	Newcastle
				05/03/2020	Derby
	<b>Insect Identification</b>	155		04/12/2019	Leeds
	<b>Practical Airgun use for Pest Management</b>	155		12/11/2019	Milton Keynes
				19/03/2020	TBA
	<b>Level 2 Award in the Safe use of Aluminium Phosphide for the Management of Vertebrate Pests</b>	310	✓	23-24/03/2020	Stafford
<b>Practical Day</b>	279		07-08/04/2020	Basingstoke	
ADVANCED	<b>Becoming a Field Biologist</b>	155		12/02/2020	Derby

## EXAMS ONLY

Exam	Start date	Location
	10/12/2019	Bury St Edmonds
	14/01/2020	Derby
	15/01/2020	Derby
<b>MULTIPLE EXAM DAYS - take any of these exams, on any of the dates:</b>		
<b>RSPH Level 2 Award in Pest Management (£155)</b>	21/01/2020	Scotland
<b>BPCA Certificate in Bird Management (£100)</b>	03/02/2020	London
<b>BPCA Certificated Technical Inspector (£155)</b>	21/02/2020	Derby
<b>RSPH Level 2 Award in Safe Use of Rodenticides (£40)</b>	28/02/2020	Stafford
<b>RSPH Level 3 Award in Safe Use of Fumigants for the Management of Invertebrate Pests (£305)</b>	17/03/2020	London
	01/04/2020	Midlands
	17/04/2020	North
	06/12/2019	Newcastle
	10/12/2019	Bury St Edmonds
	14/01/2020	Derby
<b>Advanced Technician in Pest Management</b>	15/01/2020	Derby
	21/01/2020	Scotland
	03/02/2020	London
	01/04/2020	Midlands
	11/12/2019	Bury St Edmunds
	18/12/2019	Derby
	14/01/2020	Derby
<b>BPCA Certificated Field Biologist</b>	15/01/2020	Derby
	21/01/2020	Scotland
	03/02/2020	London
	13/02/2020	Derby
	01/04/2020	Midlands

## ONLINE LEARNING

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[bpc.org.uk/online-learning](http://bpc.org.uk/online-learning)



	Member cost	Non-member
<b>Individual GPC modules</b>		
Introduction to Pest Management: Health, Safety and Legislation; Invertebrates; Vertebrates	£100	£150
<b>Full General Pest Control Online</b>	£300	£450
<b>Using Rodenticides Safely</b>	£75	£100
Online course and exam		
<b>Foundation Certificate in Pest Management</b>	£50	£75
<b>Completing Risk Assessments</b>	£40	£60

## ENQUIRIES AND BOOKINGS

[www.bpc.org.uk/training](http://www.bpc.org.uk/training) [training@bpc.org.uk](mailto:training@bpc.org.uk) 01332 225 113

### Terms and conditions

All costs are members only and exclude VAT.

Venue details are provisional and may change - please check the BPCA website before booking.

BPCA reserves the right to cancel a programme if insufficient bookings have been received.

Delegates will be offered an alternative date or a full refund of the programme fee if a programme is cancelled. BPCA will not be liable for any costs incurred by the delegates.

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