Integrate to eradicate cockroach control solutions

The cornerstone of modern cockroach control it may be, but gel baiting alone does not appear to be the preferred solution for the majority of UK pest controllers. Indeed, the overwhelming majority of pest professionals continue to consider residual insecticide application important in their cockroach work. And almost three-quarters combine crack and crevice treatment with baiting for the most effective and timely control, as James Whittaker of BASF Pest Control Solutions, with the practical help of Mark Sheldon of Integrated Pest Solutions, explains.

These are among the interesting findings of the specific cockroach control practice section of the National UK Pest Management Survey undertaken in the past year with almost 300 pest control professionals across the UK by Pest magazine and BASF Pest Control Solutions.

Quality bait application is rated the second most important cockroach control practice, with thorough inspection in first place. Unsurprisingly, 99% of pest controllers involved in controlling this pest, consider bait application important – 90% rating it very important – with almost complete unanimity of opinion between local authority, company and self-employed pest controllers.

At the same time, residual insecticide application is considered important by 92% of pest controllers and very important by over half – again with little, if any, differences between the main pest control sectors (Figure 1).

“Over 70% of PCCOs combine a crack and crevice insecticide with baiting for the most effective treatment in the least possible time,” notes James Whittaker of BASF Pest Control Solutions. “This is almost the same proportion that make a point of using baits with sufficient ‘cascade effect’ killing power.
“However, less than 40% of those using such baits employ crack and crevice treatment alongside them, underlining the value of quality baiting. This is reinforced by the fact that more than half of pest controllers concentrate their baiting on key locations rather than spreading them more widely throughout infested areas.”

Borne firmly from experience too, one suspects, the vast majority of pest controllers take particular care to make their clients aware of bait locations and the need to avoid compromising them. After all, there are few things more frustrating on a call-back than finding many of your carefully placed bait points have been neatly removed in over-zealous kitchen or restaurant cleaning!

**Support role for crack & crevice sprays**

As well as providing support for less-than-ideal baiting situations, the extent to which insecticide spraying continues to play an important part in modern cockroach control almost certainly relates to both the range of environments involved and the need to demonstrate immediate results, believes James Whittaker.

“Gel baiting is clearly the key prescription for most domestic cockroach jobs as well as infestations in commercial kitchens and restaurants,” he stresses. “But where the areas involved are large with extensive voids – in some food processing sites and many factories or warehouses, for instance – crack and crevice spraying with a well-formulated residual insecticide can be the best solution, used alongside targeted baiting. The same approach is also helpful in dusty or dirty locations like the communal areas of apartments or public buildings, cellars or waste disposal areas.

“To gain complete control you are likely to rely on a bait but it tends to take a little time – mainly because only foraging adults and nymphs consume the bait. So, full control can only be achieved either once all eggs have hatched and nymphs have matured to the foraging stage, or have been in contact with sufficient insecticide from eating poisoned individuals, or their faeces, within their harboursages.

The speed of this ‘cascade effect’ fundamentally depends on the potency of the insecticide. Even with the most potent active, fipronil, many infestations are unlikely to be completely eliminated in less than a week; especially where they involve Oriental rather than German cockroaches, are relatively large or have access to plentiful alternative food sources.”

**Speedy impact**

Therefore, where the pressure is on for the most rapid, total control – as it can so often be in restaurants and other food outlets – James Whittaker sees a strong case for well-targeted crack and crevice treatment alongside baiting.

He considers it particularly valuable with baits based on less potent actives, but insists it must be undertaken with care to avoid contaminating nearby bait points.

While quality baiting is at the core of almost all his cockroach jobs, Manchester-based pest controller, Mark Sheldon of Integrated Pest Solutions (IPS) finds crack and crevice spraying a very useful complement in many situations.

"Rather than just putting down bait points all over the place, it’s important we use all the tools in our armoury if we want the most immediate and sustained control," he insists. "We also need to do so with a full understanding of exactly where the cockroaches are and how they behave.

“A strategic approach is vital in my experience. In 25 years working with Rentokil and Pestproof before establishing IPS, I’ve come to appreciate that good cockroach control is seldom a one hit wonder. It’s easy to get a good early result even with a bad German cockroach infestation. But the last few individuals take time and care to deal with. And leaving these is the recipe for a rapid explosion in problems, leading to costly call-backs.”
Use traps to pinpoint harbourages

Thorough initial inspection, supported by the continual use of monitor traps, is Mark Sheldon’s first cockroach control essential. As well as using traps as a good indication of the scale and concentration of infestations, he finds the direction of cockroach travel on them invaluable in pinpointing harbourages. He then employs a flushing agent to confirm their precise location.

Stressing that gel baits differ widely in their speed and overall efficacy, he only uses baits he knows he can rely on. Fipronil is his preferred active for its greater potency, giving noticeably more rapid control and more effective cascade killing.

“Cockroaches almost always have access to a number of food sources,” he points out. “The fact that many of these are close to – or even within their harbourages – makes the most potent insecticide crucial. That way non-foraging nymphs and egg-laying females only have to consume the smallest amount of a poisoned individual or its faeces to acquire a lethal dose. And, in turn, pass this on to others.

“I’ve always found Goliath Gel works the best. It may cost more per tube but smaller bait points than less potent products means each tube goes so much further. So it gives me better value as well as the greatest reliability.”

Mark Sheldon is adamant, though, that even the best bait is only as good as where you put it. All too often, in his technical support experience, he has found controllers baiting widely but failing to actually get to the problem.

“Getting close to where cockroaches are is the key,” he explains. “In most cases, you need to bait within the warm, damp and dark areas like ventilation ducts, fridge and washer motor housings and concealed heating pipe or duct runs that cockroaches love. Which means removing access panels rather than just baiting on the surfaces around them.

Extra effort pays dividend

“It may take more time initially and mean out-of-hours working. But, believe me, the extra effort will pay dividends overall.”

Alongside quality baiting, Mark makes use of a pyrethroid spray in areas where control is important, but bait application is likely to be less effective. These include dirty and damp basements and cellars, dusty wall and ceiling voids in public buildings and apartment blocks and also boiler rooms.

“I tend to rely more on crack and crevice spraying with Fendona, or the like, with jobs in large warehouses and storage areas,” he adds. “Waste disposal areas in apartments, retail complexes or food outlets can also be havens for cockroaches, but are generally far too dirty for effective baiting.

“Gel baits have undoubtedly revolutionised cockroach control, making it far less disruptive to carry out and more acceptable to clients than the spraying that was previously our only option,” concludes Mark Sheldon.

“However, we must appreciate that baiting alone doesn’t necessarily provide a quick, easy or complete answer to every cockroach problem. The baiting has to be of sufficient quality. In many cases it needs to be complemented by targeted crack and crevice spraying. And in some circumstances, crack and crevice treatment may even be the best basis for treatment.”
**Bigger maybe, but better?**

The old adage is that Americans regard everything in the USA as ‘bigger and better’. But in the case of cockroach infestations this is definitely not the case.

Going back 30 years, cockroaches were considered the number one insect pest. Magazines were full of articles and numerous papers were always presented at technical conferences – just as bed bugs are the ‘in’ pest topic today. However, the introduction of effective sprays and target-specific gel baits has seen a rapid decline of this pest.

In the National UK Pest Management Survey undertaken by Pest and BASF Pest Control Solutions in 2011 and 2012, cockroaches accounted for a mere 5% of both private pest controllers’ and local authority pest control units’ activities. For the self-employed pest controller it was only 2%. Between the years 2011 and 2012 the number of cockroach jobs overall fell by 14%.

Compare this with the USA. According to a survey in August 2013 by Readex Research on behalf of the leading US pest magazine – Pest Control Technology – nearly half of all pest controllers responding said cockroach control made up 16-30% of their overall service revenue, with nearly 40% of these expecting it to increase.

Asked what their preferred methods of treatments were, American pest controllers were very similar to the UK. The use of baits was identified by 96% of respondents, with 83% using insect growth regulators, general use insecticides was 82%, outdoor perimeter treatments 58%, vacuuming 46%, structural modification 35%, trapping 34%, fumigation 8% and the use of heat by only 3%.

In conversation with insect expert Clive Boase, of the Pest Management Consultancy, he explained that really heavy infestations of German cockroaches (the most frequent species found in the UK) were now virtually a thing of the past. Most infestations are relatively light and control effectively achieved.

This is not the case throughout the USA – maybe it is the warmer climate – but at PestWorld 2013 Prof Dini Miller from Virginia Tech presented her results of trials on cockroaches in low income housing in Richmond, Virginia. To establish a level of infestation pre-treatment she was forced to use the larger cockroach monitoring traps manufactured by Suterra – traps any smaller would simply have been overwhelmed.

The photo in our competition below records the number of cockroaches trapped by one of three traps, in one night alone! It is interesting to note that the adult roaches congregate in the centre.

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**WIN £100 of Suterra products**

The first prize is £100 worth of any Suterra products as selected by the winner. Pest is awarding a wind-up Pest torch to the three runners-up.

Send your suggestions to editor@pestmagazine.co.uk. Please mark the email ‘cockroach competition’ in the subject line and include your name and the name of the organisation you work for in your email.

All entries must be in by 14 March 2014. The winners will be announced in Pest issue 32 which will be published in April 2014.

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**Proportion of revenue derived from cockroach services in the USA**

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<th>Percentage of Revenue</th>
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Source: Readex Research, August 2013