

ASSOCIATED PRODUCTS

Advion Cockroach Gel:
A cockroach gel based on a new active ingredient, Indoxacarb, which has a novel mode of action. Proven to give 'tertiary kill' – effective against German, Oriental, American cockroaches and other cockroach species.

Maxforce Prime:
The most attractive Bayer cockroach gel to date for all stages of cockroach development (Nymphs to adults). One 30g cartridge will treat 300m². Consistent high performance at various temperatures, reducing difficulties in applying in cold or warm weather. Formulated to overcome bait aversion in the United States and suitable for use in domestic housing, commercial kitchens, public areas, animal housing, ships & aircraft etc. Apply with applicator gun.

Maxforce White IC:
A milky coloured gel for control of cockroaches which is clean looking and inconspicuous in use. Apply with applicator gun.

Goliath Gel:
A highly effective professional insecticide gel for the control of German, Oriental and American cockroaches. Ideal for highly sensitive areas due to particularly small application.

Tech Reach Extension:
The Tech-Reach Bait Pro is a fantastic new tool that gives technicians the ability to reach far above, behind and around customer's items. No bait is wasted because the bait tube attaches on the end of the 24" extension.

B&G Multi-Dose Bait Gun:
The multi-dose gun allows precision application of gel baits for cockroach and ant control. Consistent delivery with each pull of the trigger. Six different placement sizes available from calibrated knob. No tips provided with this applicator.

INSPECTION & ASSESSMENT

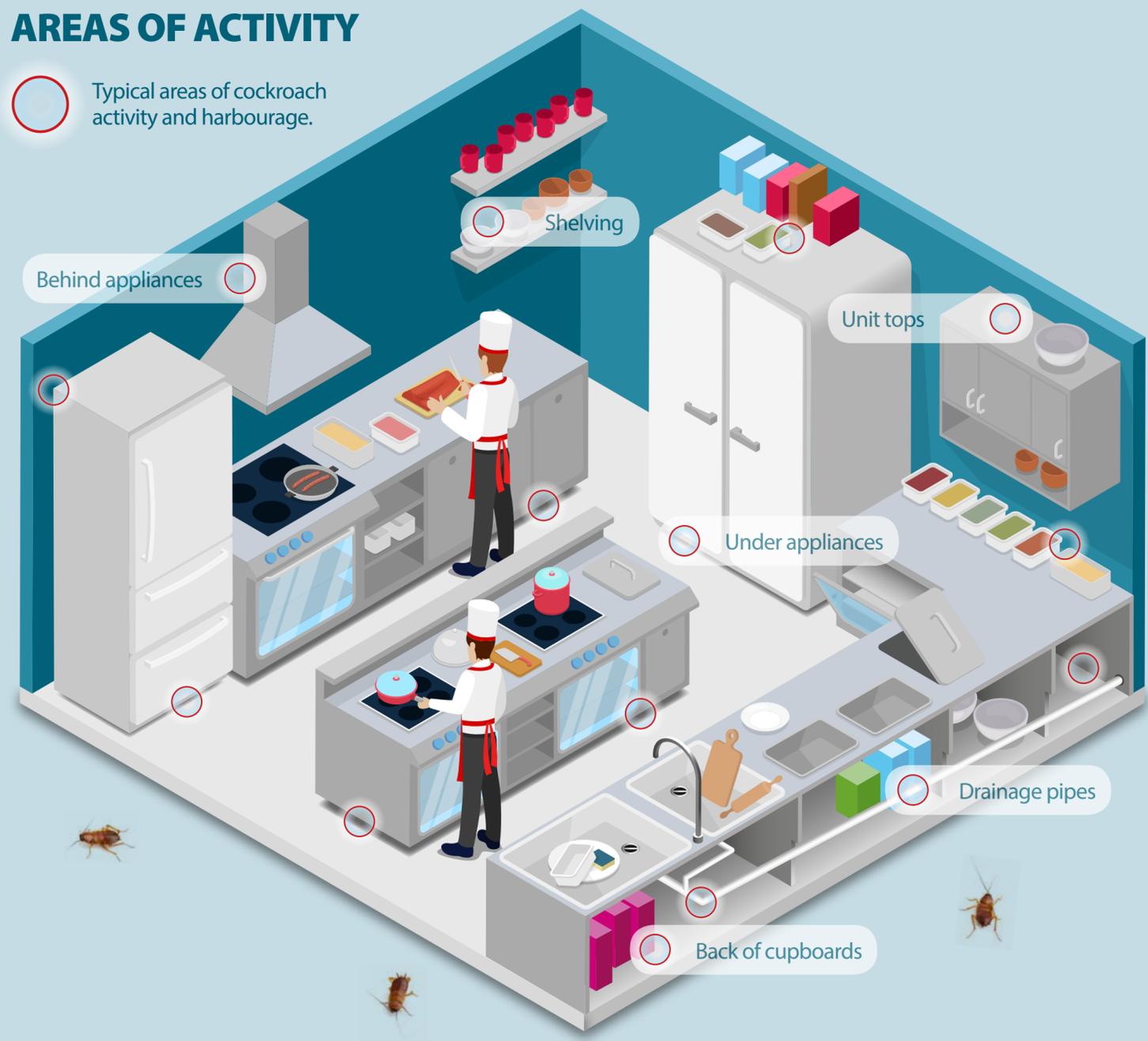
An integrated programmed approach is essential. Spot treatments will be completely ineffective for all but a small, localised infestation. Before a treatment is carried out, it is important to identify correctly the cockroach species. This will provide details of the biology, life cycle and habits of the pest, which can be exploited in the control programme.

Monitoring the extent of the infestation by visual inspection of voids, potential harbourages and using traps will help identify hotspots of infestation. Inspections are best carried out at night when the cockroaches are most active. A torch fitted with a red filter should be used, as cockroaches do not respond to red light. Aerosols may aid in flushing out insects from their harbourages. Lack of evidence is not a reliable sign of inactivity.

When using sticky traps, suitable placement sites would be underneath equipment, behind counters, in roof spaces and in ducting and electrical trunking. As cockroaches become trapped, the trap becomes more attractive to other cockroaches because of the effects of aggregation pheromones exuded by the trapped cockroaches. Adjoining buildings and areas sharing services should be included in this monitoring.

AREAS OF ACTIVITY

○ Typical areas of cockroach activity and harbourage.



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HOW?

Your Guide to Cockroaches



Cockroaches

This guide brings together tips, solutions, facts and products to help you and your customers keep these pests at bay.



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TREATMENT METHODS

An established cockroach infestation is likely to be difficult to control. This is because the cockroaches will be distributed throughout the building in difficult to reach harbourages. Furthermore the phenomenal breeding potential and production of many egg cases by each female cockroach means that unless a very high proportion of the population is eliminated, numbers will continue to increase.

Non-chemical control methods such as removal of food and water residues, proofing, improving hygiene and creating access to difficult-to-reach areas, will aid a successful cockroach control programme. If chemical control is needed, a combination of different formulations for different areas will give the most effective treatment. Care should be taken to select only those insecticides which are approved for use against cockroaches and that the area of approval covers the type of building to be treated.

Insect growth regulators, baits, residual insecticidal sprays, insecticidal dusts and ULV formulations may all be considered and most usually a combination of all or some of them will be selected. Use of one type of formulation alone in a complex building is unlikely to achieve a sufficiently high level of control. Re-treatment of all or some areas will almost certainly be needed. A thorough treatment is needed.

AFTER TREATMENT

After insecticidal application, post treatment monitoring should be carried out and steps should be taken to prevent re-infestation, by attempting to determine the source of the original infestation. For instance, are oothecae or cockroaches being introduced on incoming goods, laundry, potted plants or via drains? Continued use of sticky traps as a permanent early warning system may also be useful.





COCKROACH BIOLOGY

Cockroaches have long whip-like antennae which are carried reflexed along their bodies. Their heads are hinged under the pronotum (a shield-like covering) and their legs are large and bristly. Cockroaches are omnivorous. In addition to conventional foodstuffs, they will feed on paper, vomit, sputum, human and animal faeces, nail pairings and other cockroaches. Their activity peaks during the

hours of darkness, that is because they are crepuscular insects.

They exhibit incomplete metamorphosis; the juvenile stages or nymphs resemble the adults. Each cockroach moults several times in its life cycle producing a larger nymph and eventually moulting to the adult stage. Some species are fully winged in the adults, others may have

reduced wings or wing buds. When wings are present they are leathery and veined.

The females of those cockroaches classed as pests all produce egg cases or oothecae. The eggs hatch inside the case and nymphal cockroaches emerge from them. During the daytime, cockroaches spend most of their time in harbourages, grouped together. This

behaviour is influenced by them finding the same suitable harbourage and also by them producing an aggregation pheromone which is a chemical messenger to other cockroaches of the same species, who respond by being attracted to the source of the pheromone. As this pheromone is present in cockroach faeces, cockroaches will also be attracted to areas previously contaminated by cockroaches.



USEFUL FACTS

Undoubtedly amongst the most noxious of pests, cockroaches have lived alongside man for hundreds of years. There are over 4000 different species of cockroaches worldwide. Those species which are now classed as pests originated in tropical climes but have now become cosmopolitan, being distributed by commerce.

Cockroaches foul their environment with faeces or castings, and regurgitated food. They taint materials with their characteristic smell and the air in infested premises may contain fragments of their exoskeletons and cockroach excrement.

They move from filth to food indiscriminately and are therefore implicated in the mechanical transmission of pathogens such as those causing food poisoning and wound infections. Susceptible individuals may respond to exposure to allergens in cockroach excrement and cast skins, developing an allergic response such as allergic rhinitis or dermatitis.



They cause great distress to people occupying infested premises.

ASSOCIATED LAWS & LEGAL REQUIREMENTS

- Biocidal Products Regulations on labels
- Public Health Act 1936 gives local authorities the power to act to kill and remove vermin
- Clean Neighbourhoods and Environment Act 2005 allows prevention and eradication of cockroaches

COCKROACH (Blattidae): Species Characteristics

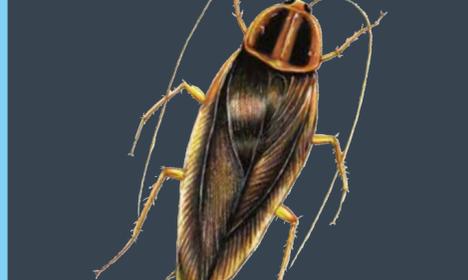
Oriental Cockroach
(*Blatta orientalis*)

20-24mm long; dark brown (nearly black); wings of male cover two-thirds of abdomen but wings of female are vestigial; can climb rough but not smooth vertical surfaces.



German Cockroach
(*Blattella germanica*)

10-15mm long; yellowish brown with two longitudinal dark marks on pronotum; wings well developed in both sexes; can readily climb rough and polished vertical surfaces.



Australian Cockroach
(*Periplaneta australasiae*)

30-35mm long; light brown with ivory-yellow circular band enclosing large, distinct, bilobed black spot; yellow submarginal stripe at base of forewings.



Nymphs

The nymphs of all species are similar in appearance to the adult but smaller. Immediately after hatching or moulting the nymphs are white, but the cuticle soon darkens to the normal colour.

