Bayer Environmental Science

A STRATEGY FOR FLEA CONTROL

INTRODUCTION

Fleas are a continuing problem in public health and cases of incomplete control following insecticide treatment are occasionally reported especially at the height of the season. Although it has been suggested that insecticides are losing their ability to kill fleas insecticidal resistance in fleas is not known and poor results must be due to other causes.

It is recommended that pest controllers develop a standard procedure for flea control, which takes account of the actions included in this leaflet.

IMPORTANT FACTORS IN FLEA CONTROL

Before treating flea infestations the pest controller should thoroughly inspect the premises and gain knowledge of the history of the infestation. The occupier should be consulted to ascertain who has been bitten and when and the possible involvement in the infestation of animals. Individuals may have been bitten somewhere other than the site believed to be infested. Flea bites can cause major disruption at work but it is important to make sure fleas are actually causing the problem. This can be done by observing the actual bites or fleas themselves and ensuring the "cable bug" is not responsible. Reactions to flea bites may take time to develop. Only some individuals react to flea bites whilst old and young people (particularly babies) may not react to bites and may appear not to have been bitten. The best evidence of an infestation is to observe the fleas actually in the premises.

Infestations may be widely dispersed and the extent of the infestation difficult to assess. Factors that must be considered are whether host animals are in the vicinity, even occupying areas outside and whether adjacent areas are likely to be infested. It is under these circumstances that part of an infestation could be missed.

Flea adults and larvae are very susceptible to good residual insecticides but the eggs and pupae are likely to be less susceptible. The pupae may be buried in bedding, carpets or food debris in cracks and crevices and may escape the first application of insecticide. In warm weather they quickly hatch out and there may appear to be a control failure if there has been no contact with insecticide residues. This is especially true in empty premises where the pupae may only emerge when the vibrations or heat from a passing host cause the pupae to hatch perhaps even leading to mass attack.

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The following factors may contribute to control failures:

- Inadequate survey.
- Insufficient cleaning of the infested premises. Thorough cleaning will deny the fleas their breeding site and create the most favourable environment for the insecticide.
- Animals may not have been treated or may become re-infested.
- Re-infestation may occur as people or animals carry the insects on their bodies or can be associated with materials brought into treated premises.
- Heavily soiled environments e.g. some animal bedding can cause the rapid inactivation of residual insecticides including Insect Growth Regulators which might otherwise control emerging insects.
- Pupae and larvae may be located deep in food debris, carpeting, bedding etc. making it difficult for the insecticide to reach the insects.
- Pupae may emerge only after residual insecticidal activity has declined although this is unlikely to explain callbacks made only a short time after treatment.
- Incomplete treatment of the infested area. Direct control measures at the brood, the predominant form, and against the adult fleas.
- Inefficient application of insecticide, incorrect dilution, sprayer setting, targeting of insecticide etc.

In order to achieve complete control of fleas, proficient application of an effective insecticide is essential. This will ensure a thorough survey is made of the infested and surrounding area in order to plan the treatment. Also that appropriate hygiene controls are imposed to effect a level of control and create a favourable environment for the insecticide.

The following procedure is recommended for flea control.

1. Survey.

Survey the problem to identify the focus of infestation. Identify the flea species causing the problem. This may enable the primary host to be identified. Where animals are involved request occupiers to identify the areas frequented by the animals; these are likely to be seats of infestation.

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2. Pre-Treatment Preparation.

Before treatment ensure:

2.1 Floors and upholstered furniture are vacuumed to remove animal hair, organic debris and the various forms of fleas. The vibration caused by vacuuming will also stimulate adults to emerge from the quiescent pupae rendering them vulnerable to insecticide residues. In extreme situations it may be necessary to steam clean infested areas.

Particular attention should be given to the areas where animals have been allowed to roam and rest e.g. under furniture, under chairs and sofa cushions, cracks and crevices in floors and along walls.

The vacuum cleaner bag will contain flea eggs and pupae etc. so should be disposed of in an outside waste bin.

2.2 Articles are removed from the floor so the entire surface can be treated.

2.3 Tile and concrete floors should be swept and washed or vacuumed.

2.4 Where there is a history for animals to be infested consider a preventive treatment.

2.5 Pet bedding should be destroyed e.g. by burning or washed in hot soapy water to eliminate immature and adult fleas. Bird and animal nests should be destroyed if they have been identified as the focus of infestation (subject to any statutory protection of the wildlife involved).

3. Treatment.

Treatments should consider:

3.1 Interior

Floor areas should be thoroughly sprayed with a residual insecticide e.g. Ficam® W, Coopex® WP, Crackdown® or Crackdown Rapide according to label directions. Insecticidal powder, aerosol or smoke treatments may also be useful e.g. Ficam D, Coopex Insect Powder, ProControl® Crawling Insect Killer or Coopex Smoke Generators.

Insecticide residues should be left undisturbed for as long as possible to ensure maximum residual activity.

3.2 Exterior

Treatment of the perimeter of the house including accessible sub-floor spaces with particularly a residual insecticide spray or powder.

3.3 Use rodenticides where rats and mice have been identified as primary hosts.

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4. Advice to occupier.

Advise the occupier that fleas may be observed after treatment as they hatch from eggs or emerge from pupae and so elimination should not be expected for at least ten days.

CHECKLIST FOR CONTROL

* SURVEY	- define the extent of the infestation
	- identify involvement of animals
* PRE-TREATMENT	- clean thoroughly
	- remove articles from the area to be treated
	- treat animals, as appropriate
* TREATMENT	- interior
	- exterior
	- control rodents etc., as appropriate
* ADVISE OCCUPIER	- expectations for control
	- further actions

ALWAYS READ THE LABEL. USE PESTICIDES SAFELY

The Ficam range of insecticides contain bendiocarb; the Coopex range contain permethrin; Crackdown contains deltamethrin; Crackdown Rapide contains s-bioallethrin and deltamethrin; ProControl Crawling Insect Killer contains s-bioallethrin and permethrin.

For further advice or information contact:

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