AMALGAMATED PEST CONTROL

TICK MANAGEMENT

Of all species of ticks in Australia, one dominates in terms of health effects. The Paralysis Tick, *Ixodes holocyclus* is a major pest of humans and animals alike. The Brown Dog Tick, *Rhipicephalus sanguineus* can also become a serious household pest where dogs inhabit.

Adult Brown Dog Tick

Adult Female Paralysis Tick

Pest Status

Ticks are responsible for the poisoning of many native and domestic animals, the effects ranging from discomfort and illness to death. In humans, effects can range from mild to severe allergic reactions to paralysis. There have been recorded deaths attributed to the paralysis tick. Ticks also have the potential to spread infectious diseases, although Australia is largely free of tick borne diseases.

Identification and Life Cycle

Ticks are related to the same group of animals as spiders. Their body shape is oval but alters once they are engorged. They have no eyes or antennae.

There are four stages in the life cycle – Egg, Larvae Nymph and Adult.
The stages tend to be seasonal, with larvae more abundant in late summer/autumn, nymphs during late autumn/winter, and adults during spring/early summer. The complete life cycle takes about one year to complete.

Engorged Nymph

Eggs. Adult females can lay up to 2500 eggs. Eggs are laid in clumps in moist situations, such as under bark and debris which may be in contact with the ground. Eggs will hatch in 40-60 days depending on temperature and humidity.

Larvae hatch from the eggs, have six legs, and are approx 0.5-1mm in length. They require a blood meal after which they enlarge to around 1.5mm, drop off the host, and moult to become nymphs.

Nymphs have eight legs and are approximately 1-1.5mm in length. They require a blood meal, after which they enlarge to around 3.5mm, drop off the host, and moult to become an adult.

Adults have eight legs and are approximately 3-3.5mm in length. Adults also require a blood meal but for different reasons - the female to lay eggs, the male to mate. A female can enlarge to around 13mm, after which she will drop off the host, lay eggs and die. The male tends not to feed on other hosts, but only on the female tick, so this is of little medical concern.

Tick eggs in clumps

Food and Habitat

The tick's only food source is blood of warm-blooded animals. All active stages require a blood meal for nutrition, thus these ticks are known as a three-host-tick.
The most common hosts are dogs, cats, bandicoots, echidnas and possums; however most mammals can be infested by ticks.
The process of seeking a host is known as questing. The tick climbs to the top of the nearest vegetation and extends or waves its forelegs to and fro in order to make contact with a prospective passing host.
Ticks require moist humid conditions for survival. Such conditions limit their distribution and searching behaviour.
Brown Dog Ticks have been found on walls, eaves and pillars of homes. However Paralysis ticks rarely climb higher than 50cm.

Management and Treatment

Management and treatment of ticks is best achieved through an Integrated Pest Management approach. The main options include habitat modification and chemical control; however there are other management methods that may be suitable.

Habitat Modification

Habitat modification involves altering the environment to make conditions less conducive for tick survival. This is generally best achieved by changing the vegetation to increase the sunlight to the soiled areas. This will increase the surface temperature: which will reduce soil moisture and humidity. By creating drier conditions, the tick population will reduce.

In practical terms, this means clearing of brush, removal of leaf litter, removal of low growing vegetation, reduction in foliage cover, and keeping lawns cut. All these methods are designed to increase sunlight penetration to the ground and reduce humidity levels close to the ground. The practice of mulching in gardens to retain moisture levels is likely to be favourable to tick activity.

Chemical Treatments

There are 3 forms of chemical treatments.

Personal Repellents

Using a personal insect repellent can either reduce or prevent the incidence of tick bite. Repellents can be applied to clothing and skin, depending on the formulation; however they need to be applied regularly.

Host Treatments

This involves treating hosts with a longer lasting systemic product so that ticks will be killed either on contact or once they start feeding on the host. (E.g. tick treatments for pets).

Habitat Treatments

This involves the application of registered and approved insecticides to the areas where ticks are breeding, or are likely to travel or congregate waiting for a suitable host.

Other Management Methods

Physical Control

These aim to prevent a potential host from coming in contact with ticks. By staying away from high risk areas the problem of tick infestation can be minimised or eliminated. It some cases exclusion fencing has been used.

Biological Control

Biological controls can involve a number of factors including the use of predators or pathogens to reduce a pest population and host removal (removal of a host species can lead to a natural decline in the tick population).

Working as A Team

Management and treatment of ticks can only be achieved through a team effort between you and your Amalgamated Pest Control technician.

What needs to be done before we treat?

- Mow lawns and attend to other habitat modifications described above.
- Treat pets with approved tick treatments.
- Remove children's toys and similar items from the yard.
- It is preferable if animals are removed from the property (or at least the vicinity of the treatment area) until the treatment has dried.
- If the yard is dry, pre-wet the yard 1 hour prior to treatment to allow for optimum application to the soil.
- Discuss other requirements with your local Amalgamated Pest Control branch. i.e., what needs to be done after treatment?
- Note: Pets suspected suffering from effect of tick poisoning MUST be immediately taken to a Veterinarian.

Acknowledgements & References:
Doggett, S.L., 2005, The Ecology and Management of the Paralysis Tick, Ixodes holocyclus, Pests of Disease and Unease
See Also:
http://medent.usyd.edu.au/photos/tick_photos.htm
Norbert Fischer B.V.Sc. (Syd), The Paralysis Tick of Australia (Ixodes holocyclus), http://www.tickalert.org.au (copy text and photos)

Why Choose Amalgamated Pest Control?

- With over 80 years of industry experience we can provide the solutions to your pest management challenges.
- Our customers come first - We provide prompt service. While the others are arranging, we're doing.
- After-sales service is a priority. Once a treatment is completed, we stand by our work with a free service warranty backup. Should the need arise, a prompt on-call service applies for the entire warranty period.
- Our field technicians carry the latest specialised equipment designed to achieve the safest and most effective application possible. Our treatment methods have proved to be the most successful control measures available.
- We are a quality assured company to ISO9001:2000.
- We are comprehensively insured for your peace of mind.
- An Amalgamated Pest Control Management Program means more than just applying pesticides. We have field supervisors and national technical support available for expert advice on pests and pest management.
- The pesticides used are environmentally friendly and the safest available. Continual testing and research ensures that the latest developments are implemented with your interests in mind.
- We have extensive industry involvement at all levels, and active working relationships with our industry association (AEPMA), State and Federal Government bodies covering Health, WorkCover, Forestry, Primary Industries and Employment and Training.
- We can provide your complete pest management solution.

Our services include:

- All general household and commercial pests including rodents
- Mosquito and biting Midge Management
- Termites and other timber pests
- Bird and fly management
- Specialist compliance in HACCP and AQIS systems

Local Branch: