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## Termites – their food and management

Subterranean termites in Australia cause about one billion worth of damage every year. With the expansion of residential suburbs into bushland, termite problems may be on the increase.

A survey by CSIRO in 2006 reported 32% of homes in mainland Australia had termites, and pre-purchase home inspections found termite damage in one-third of all homes (Australian Institute of Architects)

Termite management and prevention is essential to safeguard the value of homes. To formulate an integrated termite management program pest managers need to understand how and where termites feed and identify conditions conducive to termite infestation. Here we address these issues.

Termites derive their nutrition from cellulose. Termites can feed on nearly any source of cellulose, including wood, mulch, paper, cardboard, fabrics made of cotton and other plant-based materials, leather or even polystyrene. Even though termites feed on cellulose, they can penetrate and damage non-cellulose materials, including plasterboard, stucco, plastics, neoprene, vinyl and rubber.

### Polystyrene and waffle-pod slabs

One major concern is termite feeding on polystyrene. Many homes in Brisbane, including many new prestigious homes have been constructed with concrete slabs poured onto



The white zones indicate where termites have used Termidor dust to repair a damaged lead.

polystyrene waffle pods. Experiments conducted by Eco-Global Termite Doctor showed that termites consumed polystyrene material and caused considerable damage. Interestingly, polystyrene is used in conjunction with termite baiting systems. Those opposed to waffle-pod slab construction argue that using waffle-pods is akin to putting out baits for termites!

### Cellulose-based garden mulch

It is common practice to cover garden beds with mulch materials such as shredded bark and wood chips. Such cellulose-based mulches can increase termite activity by providing food and maintaining moisture for termites to thrive.

Subterranean termites tend to prefer softer woods (e.g. pine) to hard woods. Many garden mulch products are made of hardwoods and many customers regard hardwood garden mulch as being resistant to termites. We have found that no untreated wood is completely resistant to termite attack because the repellent substances (oils and resins) leach, and the wood loses its resistant quality due to weathering. It is recommended that all types of garden mulch abutting the property wall be avoided.

### Termite management

Subterranean termites prefer a moist environment. To maintain a moist environment above the ground, workers continually carry moist soil for use in constructing mud tubes/leads/trails. This 'mud' is tiny particles of soil, wood (and other food sources) or debris cemented together with saliva and faecal matter (Nebraska University Subterranean Termites: Handbook for Home Owners).

Termites need food and water to survive and thrive. The fundamental elements of a termite management program are to eliminate food sources around the property or make the food unpalatable (e.g. hardwood or treated timber) to termites and avoid any leaking water or moist decayed or decaying timber in contact with the soil.

Installation of a chemical barrier around and under the foundations of an existing building to protect it from termite attack is the conventional approach that has been used for at least 50 years. A combination of barrier and bait treatments may be appropriate in some situations.

A number of termiticide products are registered for termite control in and around dwellings in Australia. Subterranean termites are social insects, and the colony members constantly groom each other. This grooming behaviour can spread active ingredient (contained in a bait or barrier) throughout the colony.