





#### **Science In Action**

# Why EXTERRA is the world's most effective termite baiting system

The EXTERRA Termite Colony Elimination System has established itself as the elite standard in termite management.

EXTERRA is founded on solid background science and only EXTERRA has remained true to the science, effectively exploiting the biology of termites in a manner no other system matches.

While EXTERRA focused on Science in Action to guarantee the most effective results, other products have focused on glitz, cost savings, fewer inspections and ease of installation (e.g. using smaller stations) – at the expense of premium performance and increased risk of termite damage.



### Science created the innovative Termite Interception Zone

This is unique to the EXTERRA system and patented. Soil microorganisms work with our FOCUS Termite Attractant™ to produce the natural gas that termites use to find their preferred food. This natural attractant is generated in the soil to direct the termites into the EXTERRA In-ground Stations, instead of your home!

With every other termite baiting system, the termites have the opportunity to pass between their small stations and find their way into your home; this is not so with EXTERRA.

Only EXTERRA with FOCUS
Termite Attractant creates a
unique Termite Interception Zone
to direct the termites into the
EXTERRA Stations instead of your
home! Peer reviewed, proven
science in action (Broadbent, Farr,
Bernklau, Siderhurst, James, &
Bjostad 2006).

This, combined with EXTERRA's larger Stations ensures better results are achieved.

Other systems may talk about having an attractant, but cite no peer reviewed scientific studies to justify their marketing hype. In reality, they only add an attractive food source to their stations, but the termites still have to locate this food. The termites can by-pass within a few centimetres of their stations and not know the food is there.

In total contrast, EXTERRA uniquely uses the natural gases that timbers evolve when they start to decay. The attractant vapour radiates out for 2–3 metres from the Stations through the soil to lure the termites into the Stations. This means that EXTERRA effectively surrounds your home with a complete and continuous interception zone, guiding termites into the EXTERRA Stations to protect your home.

This requires a precisely engineered level of the attractant gas. University research (Bernklau, Fromm, Judd, & Bjostad 2005) showed that low levels attracted termites, since termites prefer timber that is just starting to decay.

At higher levels, representing heavily decayed timbers, termites are

deterred. FOCUS Termite Attractant was developed by Ensystex with the Colorado State University to ensure optimal performance.

The attractant gas is continually produced by naturally occurring soil micro-organisms that grow on the FOCUS Termite Attractant.

### Larger quantities proven to succeed

### The largest Stations

Independent Australian research has consistently proven that termites prefer a larger food source (Howick 1975. Evans, Gleeson 2006. Lenz, Kard, Mauldin, Evans, Etheridge, Abbey 2000. Lenz, Yoshimura, Tsunoda 2003).

EXTERRA leads the Industry with large Quarterra In-ground Stations to ensure that the termites foraging near your home are intercepted sooner and eat more bait. After all, it is common sense that larger Stations are more easily located by the termites! (It might be quicker and cheaper to install smaller stations, but it is never better; the real cost may come when termites damage your home because they passed between the stations.)

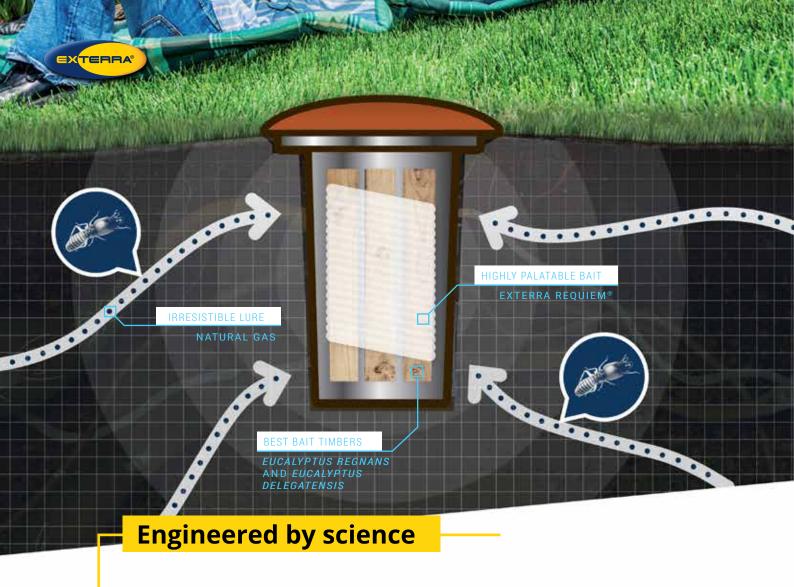
### Larger bait source

Since EXTERRA In-ground Stations are the largest, they hold significantly more bait.

More importantly, independent CSIRO research has shown that termites frequently abandon smaller stations (Evans, Gleeson 2006). This means that with other baiting systems the termites may simply abandon the baited station, and you are misled into believing that the colony was eliminated, only to find out a few months later that the termites are back. This is why you need the certainty of colony elimination from EXTERRA.

"Bait stations which offer large amounts of a favoured matrix are more likely to be: located by termites; have higher recruitment rates; have the treated matrix removed at greater rates; and visiting termites will show greater site tenacity and tolerance to disturbance, i.e. will be less likely to abandon a station after the disturbance of inspections."

As detailed by leading researchers at the International Congress on Urban Pests (Evans, Gleeson 2006.)



# Unique, patented, no disturbance design

Only EXTERRA's In-ground Stations have a patented hollow centre cavity so that the Stations can be inspected and termite bait added without disturbing the termites. This ensures that the disturbance sensitive termite species of this region are not disturbed and the feeding transition to the EXTERRA bait occurs flawlessly.

It is well documented in the scientific literature that termites will vacate smaller stations, before colony elimination occurs (Evans, Gleeson 2006).

Sadly for you, this often means that unscrupulous operators will inform you your problem is solved, only for you to find the termites are back and causing more damage a few months later!

## Highly palatable bait

EXTERRA's REQUIEM® Termite Bait with its unique feeding medium is the most palatable termite bait in the market. Numerous side by side trials have proven this. This means quicker and more reliable feeding, more bait consumed and better results.

EXTERRA's REQUIEM Termite Bait uses a unique, non-bleached blend of pure alpha-cellulose with proprietary feeding attractants, just what the termites are seeking!

(Peters and Broadbent 2003. Peters and Fitzgerald 2003. Peters, Broadbent and Dhang 2005. Garcia, Giron and Broadbent 2007. Peters, Broadbent and Dhang 2008. Sukartana, Sumarni and Broadbent 2009. Rawat 2010. Dhang 2011. Lee, Manb and Lee 2013. Lee, Neoh and Lee 2014. Manzoor and Pervez 2016).

# Most potent active ingredient

The active ingredient in EXTERRA's REQUIEM Termite Bait is up to 2,000 times more potent than similar actives (DeMark et al. 1989).

## Most effective bait

Independent trials show the benefits of EXTERRA's REQUIEM Termite Bait. EXTERRA has also been fully evaluated to confirm its efficacy against the widest range of termite species. (See studies noted below left.)

# Better monitoring and interception of termites

Only the best bait timbers are used during the monitoring and interception phase of the elimination program. *Eucalyptus regnans* and *Eucalyptus delegatensis*, which termites are evolved to eat and are the preferred timber source for termites (Peters and Fitzgerald 1999). Only REQUIEM is more palatable!





#### The proof is in the test

EJ Bernklau, EA Fromm, TM Judd, & LB Bjostad (2005). Attraction Of Subterranean Termites (Isoptera) To Carbon Dioxide. J. Econ. Entomol. 98 (2).

SG Broadbent, M Farr, EJ Bernklau, MS Siderhurst, DM James, & LB Bjostad (2006). Field Attraction of Termites to a Carbon Dioxide-Generating Bait in Australia. Sociobiology 48 (3).

DeMark et al. (1989) Dietary Activity of Chitin Synthesis Inhibitors. Purdue University, Insecticide & Acaricide Tests, 14:377.

P Dhang (2011) A Preliminary Study on Elimination of Colonies of the Mound Building Termite *Macrotermes gilvus* (Hagen) Using a Chlorfluazuron Termite Bait in the Philippines. *Insects 2011, 2, 486-490.* 

TA Evans, PV Gleeson (2006). The Effect of Bait Design on Bait Consumption in Termites (Isoptera: Rhinotermitidae). Bull Entomol Res. Feb 96 (1): 85-90.

CM Garcia, MY Giron and SG Broadbent (2007). Termite Baiting System: A New Dimension of Termite Control in the Philippines. Proceedings of the International Research Group on Wood Preservation, Jackson Lake Lodge, Wyoming, USA. IRG/WP 38.

CD Howick (1975). Influences of Specimen Size, Test Period And Matrix on the Amounts of Wood Eaten by Similar Groups of Laboratory Termites. *Proceedings of the British Wood Preservation Association*.

C Lee, CN Manb and CY Lee (2013). Effect of Chlorfluazuron Bait Against Macrotermes gilvus: Evidence for the presence of the toxicant compound in workers and larvae. Proceedings of the 10th Pacific-Termite Research Group Conference S4.1:2.

C Lee, KB Neoh and CY Lee (2014). Colony Size Affects the Efficacy of Bait Containing Chlorfluazuron Against the Fungus-Growing Termite *Macrotermes gilvus* (Blattodea: Termitidae). *J. Econ. Entomol. 107 (6): 2154:2162.* 

M Lenz, B Kard, JK Mauldin, TA Evans, JL Etheridge, HM Abbey (2000). Size of Food Resource Determines Brood Placement in *Reticulitermes flavipes* (Isoptera: Rhinotermitidae). *Presented at 31st annual meeting of the International Research Group on Wood Preservation; Paper no. 383.* 

M Lenz, T Yoshimura, K Tsunoda (2003). Response of Laboratory Groups of *Reticulitermes speratus* (Kolbe) to Different Quantities of Food. *Presented at 34th annual meeting of the International Research Group on Wood Preservation.* 

F Manzoor and M Pervez (2016). Evaluation of Chlorfluazuron Against Subterranean Termites *Heterotermes indicola* (Isoptera: Rhinotermitidae) in Pakistan. *Journal of Economic Entomology, 1–8.* 

BC Peters and CJ Fitzgerald (1999). Field Evaluation of the Effectiveness of Three Timber Species as Bait Stakes. *Sociobiology 33,* (3): 227-238.

BC Peters and S Broadbent (2003). Evaluating the EXTERRA™ Termite Interception and Baiting System in Australia. Proceedings of the International Research Group on Wood Preservation, Brisbane, Australia. IRG/WP 03-20267.

BC Peters and CJ Fitzgerald (2003). Field Evaluation of the Bait Toxicant Chlorfluazuron in Eliminating Coptotermes acinaciformis (Froggatt) (Isoptera: Rhinotermitidae). J. Econ. Entomol. 96, (6): 1828-1831.

BC Peters, S Broadbent and P Dhang (2005). Evaluating a Baiting System in Australia, Thailand and the Philippines. *Proceedings of the 5th International Conference on Urban Pests. Singapore.* 

BC Peters, S Broadbent and P Dhang (2008). Evaluating a Baiting System for Management of Termites in Landscape and Orchard Trees in Australia, Hong Kong, Malaysia and the Philippines. *Proceedings of the 6th International Conference on Urban Pests. Budapest, Hungary.* 

BS Rawat (2010) Studies on Chlorfluazuron 0.1% Based Baiting System for Termite Management in Buildings in India. *Ann. Entomol., 28 (2): 83-87.* 

P Sukartana, G Sumarni and S Broadbent (2009) Evaluation Of Chlorfluazuron In Controlling The Subterranean Termite Coptotermes Curvignathus (Isoptera: Rhinotermitidae) In Indonesia. Journal of Tropical Forest Science 21 (1): 13–18.

ENSYSTEX AUSTRALASIA PTY LTD
Unit 3 The Junction Estate,
4-6 Junction Street, AUBURN NSW 2144

www.EXTERRA.com.au

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