About Poseidon Sciences Group [PSG]

PSG represents a diversified group of companies involved in marine R&D, insect control, controlled release, bioremediation, aquaculture, subsea research and biomedical sciences. Projects are commercialized through strategic alliances and technology licensing. PSG is also involved in commercial testing and contract research in marine paints, insect repellents and skin care.

To learn more about us, please check our website at *www.poseidonsciences.com*

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December 15, 2022 **Poseidon Sciences Group announces success in development of a long-term nontoxic repellent against termites, with protection period of up to 5 years**.

Termite damage on a worldwide scale is estimated upwards of US$ 40 billion annually. Damage to crops and homes in the US alone is estimated at $11 billion annually in 2015. In Australia, as another example, termite damage is already about $1.5 billion each year. Current anti-termite technology uses extremely toxic chemicals which are designed to kill termites. Unfortunately, such chemicals not only kill termites but other beneficial insects, small animals and pets, too. Moreover, termite control is short-term with frequent re-application after six months to one year.

Estimates of annual economic losses caused by termites worldwide.

Regions	Annual economic losses	References
Australia	$1.5 billion	Staunton, 2012
China (mainland)	$1 billion	Lenz *et al.*, 2003
Fiji Islands	$1 million	Chand *et al.*, 2018
France	$0.5 billion	Lenz *et al.*, 2003
India	$35.12 million	Verma *et al.*, 2009
Indonesia	$1 billion	Hadi *et al.*, 2016
Japan	$0.8–1 billion	Tsunoda & Yoshumura, 2004
Malaysia	$10–12 million	Yeoh & Lee, 2007
Philippine	$100s million	Acda, 2013
Taiwan China	$4 million	Li *et al.*, 2011
Thailand	$0.5 billion	Vongkaluang, 2004
USA	$11 billion	Subekti *et al.*, 2015
World	$40 billion	Rust & Su, 2012

From: *Estimates of annual economic losses caused by termites worldwide. | Download Scientific Diagram (researchgate.net)*

The new Poseidon technology, called **Termes Repel**, is unique compared to extremely toxic chemicals being used in the termite control industry today. **Termes Repel** uses a novel proprietary technology that uses an environmentally friendly chemical that termites find unpleasant. As highly social insects, worker termites would communicate the unpleasant environment to the rest of the population and the population would avoid invading areas with **Termes Repel**. Thus, this technology does not kill termites but, at the same time, prevent them from coming into homes and buildings.

Termes Repel *is derived from the Late Latin term* ***termes****, meaning woodworm or white ant.*

About the technology. Research on **Termes Repel** began in 2003 to screen compounds considered safe for the environment and would effectively repel insects and other pests. By 2010, research scientists at Poseidon Sciences had identified a range of potential compounds with the right properties through computer modelling and laboratory bioassays. By 2015, one proprietary compound was selected for commercialization which involved formulation using slow-release technology and through field studies at our Biological Station located in Panay Island (Philippines) against the Asian subterranean termite (*Coptotermes formosanus*), also known as the Philippine milk termite. From South East Asia, this species has invaded ecosystems worldwide from as far as Africa to Florida in the United States. **Through the employment of Poseidon's proprietary controlled release technology, *Termes Repel* has been shown to repel this species for up to five (5) years with one single application around the periphery of homes and buildings.**

About the Asian subterranean termite. Wikipedia best describes the destructive power of this species:

"These termites are voracious feeders and consume wood, cardboard, and paper and sometimes even fabric. They feed on all sorts of cellulose-containing materials and drill holes in such materials as rubber, plastic, and styrofoam in their search for food. They also attack living trees by consuming

the heartwood which weakens the trees and can bring them down in a storm. They live underground and enter buildings through cracks, expansion joints, and utility conduits. They sometimes form foraging tubes along the surface of the ground and the outside surfaces of structures. They eat structural timbers from the inside outwards, leaving a thin film of surface wood which may display a blistered appearance.[7] In Singapore and Malaysia, this species is responsible for 80% to 90% of the damage caused to manmade structures by insects and it is the commonest species of termite found in built-up areas."

References

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