



Department of
Entomology

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Termite Protoza-killing Yeast

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Description:

This invention is a modified yeast that can be fed to termites to produce and express peptides that destroy the protozoa responsible for wood digestion in the termites' guts. The demise of these protozoa results in the death of the termites. The time required for the yeast to kill the termites is long enough to allow transfer of the yeast among colony mates. The peptide products of the modified yeast are very specific for the wood digesting protozoa, which means they are effective in small amounts and have low general toxicity and environmental impact. In proof of concept studies, all of the termites studied died within five weeks of eating the yeast.

Advantages:

- Affects large numbers of termites with the potential to kill entire colonies
- Very specific to protozoa
- Easily mass manufactured and applied as bait

Commercial Uses:

- Termite control
- Cockroach control
- Drugs against protozoan parasites
- Production of general insecticidal toxins

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