

The Study on the Efficacy of Termiticide to Prevent the Attack of Subterranean Termites in Thailand

Khwanchai Charoenkrung and Charunee Vongkaluang

Abstract

The study on the efficacy of termiticides to prevent the attack of subterranean termites using on two methods which modified USDA forest service standard to fit in with construction practices in Thailand were made in four regions in Thailand. The methods used were Modified Ground Board Test (MGB) and Stake Test (ST) comparing termiticide groups available in the termiticide industry in Thailand such as Synthetic Pyrethroid (Cypermethrin, α -Cypermethrin, Permethrin, Bifenthrin, etc.), Organophosphate (Chlorpyrifos), Chlorinated-hydrocarbon (Aldrin, Chlordane, Dieldrin, etc.), and the newly promoted products (Fipronil, Imidachorpid, Chlorfenapyr, etc.). Result from MGB test revealed that the synthetic pyrethroid group such as Bifenthrin 24% EC Permethrin 38.4% EC is effectively prevent the attack of termites for more than 8 years; Fenvalerate 0.5% and 1% can prevent the attack more than 7 years. The organophosphate such as Chlorpyrifos 40% EC at 1% and 2% lasted between 8–9 years. Fipronil lasted more than 8 years and Imidachorpid can prevent the attack many years. Chemicals of the chlorinated-hydrocarbon group; Aldrin 20% EC and Chlordane 72% EC lasted more than 10 years; however, this products had been ban from the market because of their toxic residue in the environment. The stake test method showed that Fipronil was the best termiticides to prevent the attack of subterranean termites for up to 3 years.