9.1 Chemical control

For many years the traditional method of controlling termites was to apply a liquid pesticide known as termiticide. To the soil it has worked by applying a chemical barrier around and beneath structure in order to block all possible routes of termites entry. Any termites attempting to penetrate through the treated soil were either killed or repelled.

Liquid termiticide like Dominion 21 is traditional liquid treatment applying the foundation, beneath concreted slab and within foundation wall trough a trimming methods, besides other termiticides are chlorinated hydrocarbon termiticides like chlordane, aldrin, lindane etc. were known to have tremendous stability in soil than other termiticides. There are several different insecticides used by pest control operators for soil treatment for termite.

The insecticides remain effective in soil for approximately to 5 to 10 year. The physical and chemical nature of soil surrounding home can impact the effectiveness of the chemical treatment.

For pre construction treatment of structures like house and other building can be pretreated at the time of construction to protect them against termite attack.

An exposed wood can be treated easily with timber of borrode D. (termiticide) it will last the life of the wood.

9.2 Foundational wall and Piers

By applying termiticide such as permethrin, cyper T.C. or Dominion 2L to a trench in the soil about 12 inches wide 6 inches deep to adjacent to foundation. Soil at the bottom of the trench can be loosened with a iron bar to allow further penetration.
Slabs

For effective pretreatment termite proofing much of the chemical barrier needs to put under the concrete slabs. Obviously it is easier to put out the barrier treatment before slab has been poured. After is has been poured, it will need to be drilled and chemical inject under the slab to seal off termite entry point. The diluted termiticide along both side of foundational wall and interior foundational wall and plumbing will give fruitful results.

Basement construction may require treatment which injects termiticides in to soil through holes drilled in the basement floor at regular intervals. Crawl space treatment also involve trenching or rodding soil long the foundation wall and around piers and pipes there applying termiticides to the soil. By digging narrow trenches along both inside and outside of foundation and around piers and chimney bases then applying the termiticides can prevent the damages.

9.3 Non chemical control measures

9.3.1 Mud tube removal

Termite control still relies heavily on chemical control, however there are many measures that control the active infestation. Removing mud tube is required as part of complete termite control. Removing all of tube provides a way of assessing the effectiveness of a termite treatment. Scrapping away mud tube as the sole work. The tube are an indication that termite are active around the house. Hence the scraping away termites is an important part of termite control is a preventive measure.

9.3.2 Debris removal

Removal of cellulose debris from the crawlspace. It should be included any direct control measures implemented when termites are found infesting the house.

9.3.3 Pathogenic fungi

Termite lives in an environment that is filled with microorganism including many that are pathogenic to insects. One pathogenic fungus *Metarhizium anisopliae* has been developed, commercially in to a product called bioblast. This product which contains fungal spores is applied to the above ground accessible termite infestations. The spores
germinate, penetrate the insect cuticle then grow inside the body killing the insect slowly. During grooming, feeding and other activities, the workers can mechanically transfer the fungus to other workers who were not exposed directly to the application.

9.4 Biological control

Certain species of parasites like round worm (nematodes) will infect and kill termites and other soil insect. They have been promoted and marketed by few companies. Although effective in the laboratory control is often variable under field condition. Soil moisture and soil type appear to limit the nematodes ability so move in the soil and locate termites.

A fungus *Metarhizium anisopliae* is a biological termiticide that require special application and handling techniques. It is labeled for above ground application to termite infestation in structure but it is not labeled for application to the soil. Spray effectiveness is enhanced when applied to many foraging termites because infected termites can pass the fungus to nestmates. However it is difficult to infect a large enough number of termites for the infection to spread throughout the colony. Furthermore, it provides no long lasting residual activity, and the fungal spore die with the dead termites. Insufficient research has been conducted to indicate whether this is an effective method for controlling termites.

9.5 Control measures in plants and agriculture crops

Termites can be major agricultural pests where crop losses can be severe. Counterbalancing this is the greatly improved water infiltration where termite tunnels in the soil allow rainwater to soak in deeply and help reduce run-off and consequent soil erosion. In addition to this plant defenses against termites are also studied in many plant have defenses against termites and there is an observable balance between the growth of plants and the feeding of termite, defense is typically achieved by secreting anti-feedant chemicals (such as oil, resins and lignins) in to the woody cell walls this reduce the ability of termites to efficiently digest the cellulose. Many of the strongly termite-resistant tree species have heartwood. Timber that is extremely dense (*Eucalyptus*) due to accretion of these resins. A commercial product Blockaid has been developed and use to create paint on non toxic termite barrier for buildings. These have shown that termites are
strongly repelled by the toxic material to the extent. This shows that toxic compound commercially to prevent termite feeding.

There is little knowledge about crop resistance to termite, however in general indigenous crops are more resistant to termite than exotic crops for instance millet are more resistant to termites than maize and cowpea while groundnuts suffer serious damage. Annual crops are attacked towards harvest time while perennial crops are attacked most destructively during dry season or in early stage of growth.

To reduce termite number provides plants less susceptible to termites. Predatory ants can control termites these are attracted by meat bone and sugarcane husks. Termite damage is relatively low in fields where *Gliricida* is planted as shade tree. *Aloe vera* cutting are planted to keep termites away. Mulching with neem bark wood reduce the survival of termites. Tobacco incorporated in the soils controls termites.