

# Chapter 1

## Introduction

Subterranean termites in the United States cause several hundred million dollars worth of damage every year! This includes the cost of controlling them and repairing damage to structures - including our homes. Based on the complexity of today's treatments (both chemical barriers and baits) and the potential consequences of an inadequate treatment, we believe: 1) a skilled professional is needed to implement effective termite treatments, 2) homeowners should work with a reputable pest management professional (PMP) who is experienced with termite treatments, and 3) homeowners should not attempt to treat their homes for termites themselves.

A holistic approach to managing termites includes building houses resistant to termites, taking measures to prevent termites by eliminating conducive conditions and having regular inspections to monitor your home for their presence. Understanding termite biology and behavior and knowing the advantages and disadvantages of different treatment approaches will help you make better pest control decisions. Agricultural pest management specialists have used this approach for years. This multiple tactics approach is called Integrated Pest Management or IPM.

### The basic components of IPM are:

1. Identify and understand the biology and behavior of termites - Chapter 2,
2. Determine if control is needed - Chapter 3,
3. Consider preventative measures - Chapter 4,
4. Know the available control measures, evaluate them and make decisions about them - Chapters 5-10,
5. Implement your chosen control measure - Chapters 6 and 7; and,
6. Evaluate the effectiveness of your control efforts - Chapter 3.

## Integrated Termite Management

The barrier method using liquid termiticides was the standard termite treatment for much of the 20th century. In 1952, chlordane became available and was the overwhelming termiticide used for more than 35 years; its use was discontinued in 1987. It was replaced by chlorpyrifos (Dursban, discontinued in 2005) and a number of synthetic pyrethroids which are still available for use as termiticides. Studies have shown pyrethroids are very repellent to termites, but are not very toxic. Non-

repellent products Premise and Termidor came on the scene in the 1990's and are still in use today and comprise the majority of the liquid termiticides used today.

The elimination of chlordane led to increased research and development by chemical manufacturers to fill an empty niche. This effort resulted in the development of bait products. The earliest bait was an insect-growth regulator, Sentricon, registered in 1994. The advent of effective bait systems has given a new dimension to termite control that was lacking earlier.

Another type of treatment is to treat structural wood directly with borates, which wicks into the wood to protect it from termite tunneling and feeding.

As time has passed, termite control manufacturers have focused their efforts on finding lower-toxic products and methods of controlling termites. This search for safe and effective, novel treatments will continue.

The bottom line: today's termite control professionals and homeowners have real choices about effective treatments they didn't have 20 years ago.

## Concern about Indoor Air Quality

Today's consumers are concerned about possible detrimental effects of termiticides on their families and pets. Because of this concern about termiticide, many consumers are interested in "biological" or "natural" products such as nematodes, pathogenic fungi, insect growth regulators (IGR's) and borate products. As a result, less intrusive, natural and other innovative termite control products are becoming more readily accepted by many consumers. Unfortunately, science is still scrambling to catch up with some least-toxic approaches and some tried for termites, have limited effectiveness.

## Construction

Understanding the myriad of historical and recent construction practices is an important component of termite control. When doing conventional barrier treatments, pest management professionals (PMP's) have had to contend with rubble or stone foundations, wells, drain tiles, plenums, wood foundations and common wall construction. On occasion, construction problems can confuse even the most experienced PMP.

The emphasis on energy-efficient structures has

resulted in new problems. The use of rigid foam for insulation around the exterior foundation of homes and other buildings has increased. This rigid foam insulation makes traditional barrier treatments difficult, if not impossible.

Air-tight construction has resulted in increased concerns about air quality.

Cellulose-based mulch products, such as shredded bark placed around the home, can increase termite activity around the outside of the home.

The information presented in this handbook is not intended as an endorsement of any one product over another or the use of one treatment approach. The uniqueness of each structure may make one treatment approach preferable than another, but these are decisions that must be left to you.

Structural anomalies, the location and severity of an infestation, expedience and cost of control and your own attitudes about termiticide safety are all factors you will need to consider.

As with any major decision affecting your home, we recommend you read and understand as much as possible before you make a decision about termite control. Discussions with pest control company personnel may be helpful, but there is often disagreement about which treatment approach should be used. Sometimes companies are biased toward procedures they are experienced in doing or selling to their clients. You need to sift through conflicting advice and make your best decision. We have written this handbook to help you get started.