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Formosan Termites in Mulch?

There has been much controversy with the possibility of Formosan termites being found within mulch from Louisiana. Formosan termites are an introduced subterranean termite from Asia. They are considered more economically important since they consume more cellulose and have larger colony sizes compared to Eastern subterranean termites. Formosan termites are most readily identified by their soldier caste with its tear-dropped shaped head and aggressive behavior. If the soldiers are encountered by humans, they will insert their mandibles into human skin.

Formosan termites can be found in trees, so they have the potential for being transported in wood mulch. There is a quarantine within Formosan termite-infested areas in Louisiana, to prevent infested wood products from being shipped to new areas. Texas Department of Agriculture (TDA) supports the Louisiana Department of Agriculture and Forestry's quarantines and TDA has a quarantine to prevent moving Formosan termites from certain states and areas, until items have been fumigated by a TDA-approved method.

Consumers should aware that termites could be found in mulch, so cautious when buying mulch. If these termites are introduced into areas, the cost of treatment will be more than the value of the mulch. Therefore, it is advised to purchase mulch from reliable sources. If a bag of mulch is infested with termites, reseal the bag and return the mulch to the retailer.

A more common way of introducing Formosan termites into areas is using recycled infested railroad ties as landscape timbers. Eventhough the railroad ties are treated by creosote, the inner portion is not treated. This allows Formosan termites to inhabit the center areas of railroad ties.

For more information about termites, please visit <http://termites.tamu.edu/formosan.html>



Formosan termite alate. Photo by: Texas A&M Center for Urban and Structural Entomology.

Start of Termite Swarming Season

There are two subterranean termite genera that cause most of the structural damage in Texas. One genera *Reticulitermes* will become noticeable as the reproductives begin swarming during the day. Termites are social insects and have a caste system consisting of workers, soldiers, and winged reproductives. Each caste member within a termite colony has distinct physical and behavioral characteristics.

Termites feed on any cellulose material, such as roots, paper, and cardboard. They are important to our ecosystem since they decompose cellulose. However, subterranean termites become economic pests when they invade human dwellings and structures. Subterranean termites live in colonies underground, in order to avoid sunshine and outside air. The workers build the shelter tubes from tiny pieces of soil, wood, and debris that are glued together using secretions and fecal material. Termites tend to have an extensive tunneling system underground that allows them to carry food resources back into the colony.

Termite damage may be detected by the presence of mud tubes, damaged wood, and the swarming of winged termites. Termite damage may also be apparent on door frames or window sills, or dead termites might be visible along window sills or baseboards.

Some Preventative Practices

Eliminate contact between the wooden parts of the house foundation and maintain at least 6 inches between the soil and porch steps, lattice work, door or window frames.

Stumps, scrap wood, grade stakes, foam boards, cardboard boxes, and newspapers found around structures should be removed.

Firewood, landscape timbers, compost piles should not be stored around foundations.

Minimize moist areas by grading the soil and installing gutters, down spouts to allow water to drain away from the building.

Do not allow shrubs, vines, tall grasses and other dense vegetation to grow against structures. Thick vegetation makes it hard to inspect for termite activity, and these plants tend to trap moisture.

Use mulch sparingly and do not allow the mulch to contact wood siding or framing of the doors/windows around the structure.

Some Chemical Approaches to Termite Control:

In new construction, pretreated wood with liquid termiticides can be used. The termites will ingest the treated wood, by grooming each other or by exchanging nutrients, to cause death within the population.

If termites are found around structures some measures, such as applying liquid termiticides and installing baiting systems, can be taken. Soil termiticides provide continuous chemical barrier around the structure. Termiticides should be applied in such areas as under slabs, by drilling and injecting vertically through the slab, or treating horizontally through the foundation from the exterior. There are both repellent and non-repellant liquid termiticides that can be applied around structures. The termites attempting to tunnel into the treated area will either be killed or repelled, thus preventing them from entering the structure. Termite baiting systems can also be installed around structures and in conducive conditions within the area. The stations will initially contain a piece of untreated wood until termite activity is detected. Once termite activity is observed, then the untreated wood is replaced with a plastic tube containing a termiticide. The termiticide in the bait systems is found within the cellulose matrix. The worker termites feed on the cellulose matrix and then exchange this material with other members of the colony. This results in death of colony members.



Picture of a winged reproductive termite, *Reticulitermes* sp. (Isoptera: Rhinotermitidae). Photo by J. Hamer.

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