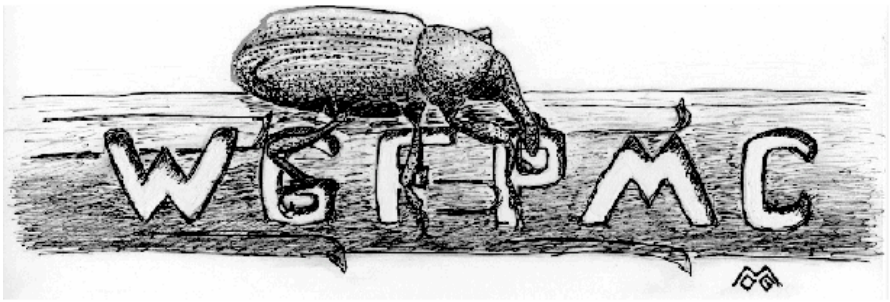
Progress
Education
Science
Technology

Vol. 5 No. 4 Dec. 2000

Quarterly Newsletter on Western Gulf Forest Pest Management Issues

Western Gulf Forest Pest Management Cooperative



Pales Weevil, *Hylobius pales*

Texas Forest Service, Forest Pest Management,
P.O. Box 310, Lufkin, Texas 75902-0310

PEST is a quarterly newsletter that provides up-to-date information on existing forest pest problems, exotic pests, new pest management technology, and current pesticide registrations in pine seed orchards and plantations. The newsletter focuses on, but is not limited to, issues occurring in the Western Gulf Region (including, Arkansas, Louisiana, Mississippi, Oklahoma, and Texas).

****

What on earth is chewing on my seedling?!?

What caused the damage to this seedling? See p. 5 for the answer and what you can do to prevent it.

****

Chemical Industries to Phase Out Two More Insecticides

Two commonly used insecticides, chlorpyrifos and diazinon, are on the way out. Within the past few months, the EPA (Environmental Protection Agency) has reached agreements with Dow Agrosciences (primary manufacturer of chlorpyrifos) and Syngenta (diazinon) to phase out the production, sale, and use of their respective products.

EPA is taking this action under the Food Quality Protection Act. EPA has targeted a large group of older pesticides called organophosphates for review because it feels they pose the greatest potential risk to children.

In August of 1999, for example, EPA announced action against methyl parathion and azinphos methyl (Guthion®) to protect children from pesticide residues in food.

Chlorpyrifos (Dursban®/Lorsban®) is a widely used organophosphate insecticide. An estimated twenty to twenty-four million pounds of chlorpyrifos are applied annually. Approximately 50% of its use is in agricultural settings and 50% of the use is for agriculture. An estimated 24% of all use of chlorpyrifos is as a termiticide.

Dow AgroSciences and other manufacturers have made an agreement with EPA to rapidly phase out chlorpyrifos products. The following explains which use areas will be affected by this action:

- Production will be stopped (12/1/00) and all home, lawn and garden uses of chlorpyrifos eliminated (12/31/01).

Continued on Page 2

Phase Out (Continued from Page 1)

- Production will be stopped and virtually all termiticide uses will be eliminated by December 2002. Pre-construction treatment (pre-treats) use rates will be set at one half of one percent (0.05%).

Agricultural uses (on about 40 different crops) will be largely retained, BUT tolerances (allowed residues on food crops) will be significantly reduced on those foods that are noted as being a regular part of the diet of children. Most end use products are to be reclassified as "restricted use.' The EPA notes that this action (loss and label changes) will affect over 825 products.

Diazinon is the pesticide most widely used by homeowners on lawns, and is one of the most widely used pesticide ingredients for application around the home and in gardens. It is used to control a variety of insects and grubs. The agreement between EPA and diazinon manufacturers (Syngenta and Makhteshim Agan), announced on December 5, 2000, will eliminate 75% of the use which amounts to more than 1 million pounds of the pesticide used annually. Diazinon's use on turf poses a risk to birds, and it is one of the most commonly found pesticides in air, rain, and drinking and surface water. The terms of the agreement implement the following phase-out schedules:

- For indoor household use, the registration will be canceled on March 2001, and all retail sales will stop by December 2002.
- For all lawn, garden and turf uses, manufacturing will stop in June 2003; all sales and distribution to retailers ends in August 2003. Further, the company will implement a product recovery program in 2004 to complete the phase out of the product.
- Additionally, as part of the phase out, for all lawn, garden, and turf uses, the agreement ratchets down the manufacturing amounts. Specifically, for 2002, there will be a 25% decrease in production; and for 2003, there will be a 50% decrease in production.
- Also, the agreement begins the process to cancel around 20 different uses on food crops.

It is important that users of chlorpyrifos and diazinon note that this is not a recall or a ban by EPA, so here are some points to consider:

- It is still legal to sell these products.
- It is still legal to buy and use these products according to label instructions.
- End users of these products should NOT panic and throw them in the trash. They should use them and or give them to someone who can/will use them.
- End users should NOT return them to the retailer.

If an end user chooses to dispose of these products, they should follow the label disposal recommendations.

****

Thought You Might Be Interested to Know . . .

Pesticides and Planning for Emergencies: Prevention, Reaction, and Response.
(Source: Georgia Pest Management Newsletter, Oct. 2000)

A new handbook from Purdue can help you prepare for pesticide emergencies. You can use the 112 page book to evaluate your risks and to prepare a plan for pesticide emergencies ranging from spills to fires. You can obtain the information on-line, **www.btny.purdue.edu/PPP**, or order a hard copy for $30 by calling 888-398-4636. Ask for *Pesticides and Planning for Emergencies: Prevention, Reaction, and*

Response. I have not reviewed this book, but the other pesticide information from Purdue is reported to be very useful.

Pest Spotlight: Spider Mites on Conifers

Spider mites (family Teranychidae) are not insects but are more closely related to ticks and spiders. Their common name is derived from their ability to produce silk, which most species spin on host plants. Mites are tiny – about the size of the period at the end of this sentence. They can also be prolific, which is why infestations often go unnoticed until plants exhibit significant damage.

HOSTS: Spider mites attack most species of trees and shrubs. Nursery seedlings, as well as Christmas trees, progeny test plantings and windbreak trees are particularly susceptible because they are often sprayed with insecticides that kill predators of spider mites. Pine, spruce, fir, juniper, pine, hemlock and white-cedar are often heavily attacked.

Some tree species are attacked by more than one species of spider mite. The most important species on nursery seedlings are the spruce mite (*Oligonychus ununguis*), the conifer spider mite (*O. coniferarum*), and the southern red mite (*O. ilicis*).

DISTRIBUTION: Mites are distributed nationwide across the range of their hosts.

DAMAGE: Heavy infestations of spider mites cause reduced seedling growth, along with yellowing or browning of foliage. Although most spider mite attacks do not cause seedling mortality, they may predispose trees to attack by insects or fungi or to damage by adverse weather conditions.

DIAGNOSIS: Foliage infested with spider mites may appear mottled, stippled, flecked or off-color. Conspicuous discoloration of needle bases is often the first sign of a problem. Infested trees may appear brownish-gray, and needle loss may occur. Look for mites, starting in May and continuing on a periodic basis, by sharply beating branches over white paper and examining the paper with a hand lens for reddish-brown mites. The minute sap feeders appear spiderlike, they have two "teeth": projecting from a head that is attached directly to a globular body, and four pair of legs. You may also be able to see eggs with a hand lens, which appear as tiny, shiny red or brown balls laid singly on the twigs and needles. In heavy infestations, webbing also may be conspicuous.

LIFE CYCLE: Spider mites usually overwinter as eggs in needle axils, under webbing on stems or branches, or under bud scales. Hatching occurs in the spring. The mites go through several stages before developing into adults. Depending on weather conditions, mites can complete their life cycle in 4 to 12 days. Each adult lays 40-50 eggs. There may be several generations in the spring and several more in the fall. Spider mites survive hot weather during the summer by remaining dormant in the egg stage.

MANAGEMENT: Biological - Spider mites have several natural enemies including lady beetles, predaceous mites and thrips and a anthrocorid bug. Cultural – During the growing season the foliage can be sprayed with water under pressure to dislodge mites and eggs. Chemical – Chemical control is generally recommended if you find an average of 5-10 mites per branch. If you find many eggs, a superior oil spray in early spring when the buds are still dormant (hard and resinous) will provide control. Otherwise, spray with a registered miticide in the spring and/or summer as soon as you find active mites in sufficient numbers to cause concern. Frequently, a second application 7-10 days later will be necessary unless the product is ovocidal. Early treatment, before populations build up, is most effective. Be aware that some chemical sprays are injurious to predatory mites.

REFERENCES:

Cordell, C.E., et al. 1989. Forest Nursery Pests. USDA Forest Service Agricultural Handbook 680. p. 140-141.

Drooz, A.T. 1985. *Insects of Eastern Forests*. USDA Forest Service Miscellaneous Publication 1426. p 30.

Johnson, W.T., and Lyon, H.H. 1991. Insects That Feed on Trees and Shrubs. 2nd edition. Cornell University Press. p 118-119.

Oaks and Other Trees May Naturally Shed Small Branches

by H. A. (Joe) Pase III, Texas Forest Service, Lufkin, Texas

Trees have many techniques for adapting to unfavorable environmental conditions. For instance, during severe drought, pine and hardwood trees may conserve water by prematurely shedding needles and leaves and thus reducing transpiration. Also, when the leaves or needles on a tree branch receive too much shade, the branch often dies and naturally prunes itself from the tree. An example is when a loblolly pine tree is surrounded by other trees, the lower branches of the loblolly pine senesce, die and drop off because they do not receive enough sunlight.

From time to time, natural pruning of small branches from oaks and other trees causes alarm to homeowners because they think the tree is dying. In some instances, the ground under a tree will be covered with pencil-sized branches that may even have green leaves attached to them. If there hasn't been a recent windstorm or other disturbance, this phenomenon may be caused by the natural formation of a layer of cells in the branch that causes the branch to break. This is referred to as branch abscission or cladoptosis. A similar abscission process occurs when deciduous trees shed their leaves each fall.

In some trees the formation of an abscission layer to shed branches rarely occurs, while in other trees, it is relatively common. Some trees that naturally prune branches by forming an abscission layer are cottonwood, post oak, white oak, white ash, American beech, black cherry, black willow, bald cypress, and longleaf pine. Some trees that commonly do not prune branches by forming a natural abscission layer are water oak, willow oak, black walnut, sugarberry, eastern red cedar, and Virginia pine.

Branches shed by abscission were found under a post oak (*Quercus stellata*) in Lufkin, Texas during the fall of 2000. A severe drought coupled with extremely high temperatures (109 degrees F) occurred during the summer of 2000. The picture below shows the typical swelling and smooth break where the abscission layer formed.

Funny Instruction Labels

Some examples of why the human race has probably evolved as far as possible. These are actual instruction labels on consumer goods:

On Sears hair dryer:
Do not use while sleeping.
(Gee, that's the only time I have to work on my hair!)

In a bag of Fritos:
You could be a winner! No purchase necessary. Details inside.
(The shoplifter special!)

On a bar of Dial soap:
Directions: Use like regular soap.
(and that would be how?)

On some Swann frozen dinners:
Serving suggestion: Defrost.
(But it's 'just' a suggestion!)

On Tesco's Tiramisu dessert:
(printed on bottom of the box)
Do not turn upside down.
(Too late! You lose!)

On Marks & Spencer Bread Pudding:
Product will be hot after heating.
(Are you sure? Let's experiment.)

On packaging for a Rowenta iron:
Do not iron clothes on body.
(But wouldn't that save more time?)
(Whose body?)

On Boot's Children's cough medicine:
Do not drive car or operate machinery.
(We could do a lot to reduce the construction accidents if we just kept those 5 year olds off those fork lifts.)

On Nytol sleep aid:
Warning: may cause drowsiness.
(One would hope!)

On a Korean kitchen knife:
Warning: keep out of children.
(hmm...something must have gotten lost in the translation...)

On a string of Christmas lights:
For indoor or outdoor use only.
(As opposed to use in outer space.)

On a food processor:
Not to be used for the other use.
(Now I'm curious.)

On Sainsbury's peanuts:
Warning: contains nuts.
(but no peas?)

On an American Airlines packet of nuts:
Instructions: open packet, eat nuts.
(somebody got paid big bucks to write this one...)

On a Swedish chainsaw:
Do not attempt to stop chain with your hands.
(Raise your hand if you've tried this...)

On a child's Superman costume: Wearing of this garment does not enable you to fly.
(Oh go ahead! That's right, destroy a universal childhood belief.)

****

Answer from Page 1: Reproduction weevil feeding on stem of seedling. **Control Options:** 1) delay planting for one year; 2) remove logging debris with intensive site preparation, i.e., shear & burn, shear & bed, or mechanical 3-N-1; or 3) plant Pounce®-treated seedlings. Contact your local pine seedling nursery or Don Grosman at 936/639-8170 or dgrosman@tfs.tamu.edu for more details about Pounce®-treated seedlings.

****

"PEST" **Wishes FOR a Joyous and SAFE Holiday Season!!!**