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Quarterly Newsletter on Western Gulf Forest Pest Management Issues

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).

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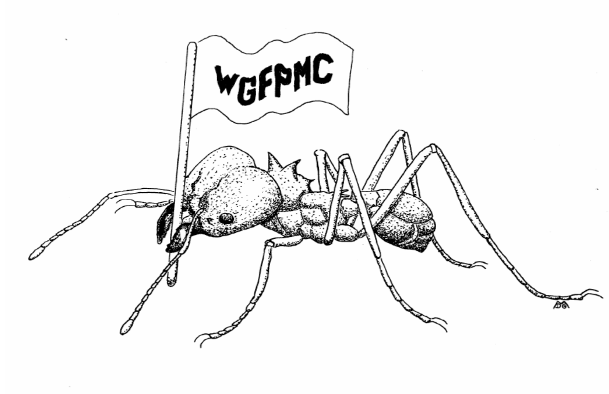
Announcement:

WGFPMC Contact Meeting - All WGFPMC executive and contact representatives, industry, and TFS foresters are invited to attend the 2005 WGFPMC Contact Meeting scheduled for Tuesday, August 16, 2005. See the agenda on p. 10. The meeting will begin at 9:00 AM at the Texas Forest Service Training Building at the Cudlipp Forestry Center in Lufkin. Lunch will be provided. SAF and Pesticide recertification credits likely will be made available for meeting participants. The meeting agenda will be sent out in early July.

Western Gulf Forest Pest Management Cooperative



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

Summary of 2004 WGFPMC Research Projects

In 2004, three research project areas – tip moth, leaf-cutting ant, and systemic injection - were continued from 2003. Results from systemic injection studies were presented in the last PEST newsletter (May 2005). Summaries of the results from the tip moth studies are presented below.

The WGFPMC established a multi-faceted research project directed at pine tip moth in 2001 to: 1) evaluate the impact of pine tip moth on tree height and diameter growth, and 2) evaluate the potential use of systemic insecticides to protect pine seedlings for one or more years after planting. All facets of this project were continued and expanded upon in 2004.

Pine Tip Moth Impact

From 2001 to 2003, 33 study plots, in 19 plantations, were established in Texas, Louisiana and Arkansas. Treatments were continued on 10 second-year sites established in 2003. Six additional (first-year) study plots were established on 5 more sites in 2004. In each plantation, one or two areas were selected and divided into two plots each; each plot contained 126 trees (9 rows X 14 trees). Treatments were randomly assigned to a plot in each area. The treatments included: 1) Mimic® 2F applied once per generation at 0.08 oz / gal. and 2) Check (untreated).

For the 17 plots established in 2003 and 2004, pesticides were applied by backpack sprayer to all trees within the plot (treatment area). Application dates were based the optimal spray periods predicted by Fettig et al, 2003. Plots established in 2001 and 2002 were not protected in 2004. Just prior to each spray date, the tip moth damage level was determined in each plot by surveying the internal 50 trees. Each tree was ranked on the extent of tip moth damage. Trees also were surveyed a final time in December 2004. At this time, data also were collected on tree height and diameter.

Continued on Page 2

Tip Moth Projects (Continued from Page 1)

Table 1: Mean percent of pine shoots (in top whorl) infested by Nantucket pine tip moth on one- and two-year old Loblolly pine trees following treatment with Mimic® after 4 - 5 generations; Arkansas, Lousiana and Texas sites - 2001 to 2004.

Treatment	Planted 2001 (N =16) Year 1	Planted 2001 (N =16) Year 2	Planted 2002 (N = 7) Year 1	Planted 2002 (N = 7) Year 2	Planted 2003 (N= 10) Year 1	Planted 2003 (N= 10) Year 2	Planted 2004 (N= 6) Year 1	Planted 2004 (N= 6) Year 2	Mean Year 1 (N= 39)	Mean Year 2 (N= 33)
Mimic®	1.7	3.8	1.5	3.8	1.2	1.2	1.4		1.5	3.0
Check	22.4	21.9	7.5	15.5	12.2	12.0	10.3		15.1	17.5
% Reduction	92	83	80	75	90	90	87		90	83

Tip moth infestation levels remained very low in 2004. They were slightly lower overall (11% of shoots) on first-year check trees in 2004 compared to first-year check trees in 2003 (12%) (Table 1). Similarly, tip moth damage was somewhat lower (11% of shoots) on two-year old sites in 2004 compared to year 2 sites in 2002 (16%). The Mimic® treatments provided excellent protection against tip moth on first and second-year sites in 2004 - reducing infestation levels by 87% and 90%, respectively.

A large majority (11 of 16) third-year Mimic®-treated plots (planted in 2001) showed significantly greater tree growth compared to the neighboring untreated trees (Table 2). Overall, the exclusion of tip moth on treated trees for the first two years improved tree height, diameter and volume index by 10%, 17% and 38%, respectively, compared to untreated trees.

Due to lower tip moth population levels in sites planted in 2002, the effects of the foliar sprays were not readily apparent. However, growth parameters have steadily improved in 2003 and 2004 on several sites. By 2004, mean volume in Mimic plots was significantly greater than checks on 4 of 7 sites. Overall, the exclusion of tip moth on treated trees for the first two years improved tree height, diameter and volume index by 5%, 3% and 13%, respectively, compared to untreated trees.

Although tip moth levels were low in the first and second year on sites planted in 2003, the protection provided by the Mimic® sprays was better than on sites planted in 2002. As a result, 6 of 10 sites saw significant gains in tree growth on Mimic® plots compared to untreated trees. Overall, tree height, diameter and volume growth has been improved during the second year by 12%, 10% and 17%, respectively, compared to untreated trees.

Because tip moth levels were again low in first-year sites planted in 2004 and the trees put on very little growth (perhaps due to the excessive rains), none of the 6 sites saw significant gains in tree growth on Mimic® plots compared to untreated trees. The study is being continued in 2005.

Table 2: Mean tree volume and percent growth gain of one-, two- and three-year old loblolly pine following treatment with Mimic® after 4 - 5 generations; Arkansas, Lousiana and Texas sites - 2001 to 2004.

Treatment	Planted 2001 (N =16) Year 1*	Planted 2001 (N =16) Year 2*	Planted 2001 (N =16) Year 3	Planted 2002 (N = 7) Year 1*	Planted 2002 (N = 7) Year 2*	Planted 2002 (N = 7) Year 3	Planted 2003 (N= 10) Year 1*	Planted 2003 (N= 10) Year 2*	Planted 2004 (N= 6) Year 1*	Mean Year 1 (N= 39)	Mean Year 2 (N= 33)	Mean Year 3 (N= 23)
Mimic®	201	2824	6465	131	2343	8187	141	2445	22	142	2607	6989
Check	138	2053	4680	149	2393	7242	113	2091	21	113	2137	5460
% Gain	**45.7**	**37.6**	**38.1**	**-12.1**	**-2.1**	**13.1**	**24.8**	**16.9**	**6.1**	**25.9**	**22.0**	**28.0**

Continued on Page 3

Pine Tip Moth Control

A preliminary study, initiated in 2002, evaluated the potential of loading seedlings with one of several reported systemic chemicals (emamectin benzoate, imidacloprid, thiamethoxam and fipronil) prior to planting for control of tip moth for one or more years. The results showed that fipronil was best, reducing tip moth damage well into the second growing season (see PEST 9.1).

Fipronil Technique and Rate Trial: A new trial was initiated in 2003 to further evaluate the potential of fipronil for extended protection of pine seedlings against tip moth. The intent was to evaluate this active ingredient applied at different rates to nursery beds, lifted bare root seedlings, and plant holes. The results showed that fipronil, applied in plant holes, as a dip, or by higher rate root soak, was effective in reducing tip moth damage by > 75% over the first growing season. The study was continued into 2004 to determine the duration of treatment effects.

One research plot had been established in 2003 within each of 8 second-year plantations in Texas, Georgia, North Carolina and Virginia. Most plots contained 450 trees (5 rows X 90 trees). Ten seedlings from each treatment were planted on each of five beds. The treatments included:

1) Fipronil (T*) – 1 treatment of furrows in nursery bed (Oct.)
2) Fipronil (T) – 2 trts of furrows in nursery bed (Oct & Dec)
3) Fipronil (0.3% T) + Terrasorb™ root dip
4) Fipronil (0.003% T) - 2 hr root soak
5) Fipronil (0.03% T) - 2 hr root soak
6) Fipronil (0.3% T) - 2 hr root soak
7) Fipronil (0.3% R*) - 2 hr root soak
8) Fipronil (6.5% T) - 30 ml applied to plant hole
9) Check - Bare root seedlings (lift and plant)

** T = Termidor®, R = Regent®

Tip moth damage was evaluated after each tip moth generation (3-4 weeks after peak moth flight) in the same manner as in the impact, hazard rating and other control studies. Each tree was measured for diameter and height in the fall (November) following planting.

Pine seedlings treated with fipronil (Termidor®) using plant hole and root dip with Terrasorb™, continued to have significantly lower tip moth infestation levels during the second growing season compared to check trees. Overall, reductions in damage for these treatments ranged from 28 – 77% (Table 3). Root soak (0.3% Regent), and root dip (0.3% Termidor + Terrasorb) treatments resulted in the greatest improvement in tree growth compared to checks. Increasing rate from 0.003% to 0.3% significantly improved protection provided by fipronil (Termidor®) root soaks as well as improved tree growth. This trial is being continued into 2005 to further evaluate the duration of treatment efficacy.

Table 3. Effect of fipronil treatments on tip moth damage to loblolly pine shoots (top whorl) and volume growth during first two growing season on eight sites in Virginia, North Carolina, Georgia and Texas, 2003 & 2004.

			Pct. Shoots Infested (**Pct. Reduction Compared to Check**)				Volume Growth (cm^3) (**Pct. Gain Compared to Check**)			
Treatment §	N		2003		2004		2003		2004	
T Fip Furrow 1	250		26.4	**-2**	17.3	**0**	85 *	**19**	2225 *	**20**
T Fip Furrow 1+1	250		28.4	**-9**	17.7	**-2**	66	**-8**	1854	**0**
T Fip + TerraSorb Dip	400		3.6 *	**86**	17.2 *	**28**	120 *	**72**	2407 *	**47**
T Fip Soak 0.003%	400		26.1	**1**	25.4	**-7**	72	**3**	1656	**1**
T Fip Soak 0.03%	400		14.0 *	**47**	25.0	**-5**	90	**30**	1885 *	**15**
T Fip Soak 0.3%	400		5.8 *	**78**	21.5	**10**	101	**45**	1962 *	**20**
R Fip Soak 0.3%	400		5.6 *	**79**	22.3	**6**	134 *	**93**	2364 *	**45**
T Fip Plant Hole 6.5%	400		2.8 *	**89**	5.4 *	**77**	112	**62**	2180 *	**33**
Check	550	A	26.5		23.8		69		1634	
	400	B	26.0		17.3		71		1856	

§ T = Termidor, R = Regent
* Means followed by an asterik are significantly different from checks at the 5% level based on Fisher's Protected LSD.
Check A - 3, 4 and 5 Generation Mean; Check B - 4 and 5 Generation Mean

Tip Moth Projects (continued from page 4)

Fipronil Technique and Rate Refinement Trials: Three new trials were initiated in 2004 to further evaluate fipronil applied at different rates to 1) seedlings in nursery beds alone or combined with a plant hole treatment, 2) lifted bare root or containerized seedlings, or 3) root dips using different root coatings.

Four to six research plots were established in 2004 in second-year plantations in Texas, Arkansas, Louisiana, Georgia and North Carolina. A randomized block design (with rows as blocks) was used for each trial. Ten seedlings from each treatment were planted on each of five beds. The treatments for each trial included:

Trial 1

1) Regent (fipronil) applied to nursery bed furrows in (Dec.) at 2x annual limit.
2) Regent 4x in furrow.
3) Regent 4x + methanol in furrow.
4) Regent 8x in furrow.
5) Regent 2x in furrow + Regent (0.3%) applied to plant hole.
6) Regent 4x in furrow + plant hole treatment.
7) Regent 4x + methanol in furrow + plant hole treatment.
8) Regent 8x in furrow + plant hole treatment.
9) Regent plant hole treatment alone.
10) Mimic foliar spray 5x at 0.8oz/gal
11) Check - Bare root seedlings (lift and plant)

Trial 2

1) Regent (0.3%) - 2 hr bare root soak
2) Regent (0.3%) + methanol - 2 hr bare root soak
3) Regent (1%) - 2 hr bare root soak
4) Regent (3%) - 2 hr bare root soak
5) Mimic foliar spray 5x at 0.8oz/gal
6) Check - Bare root seedlings (lift and plant)
7) Regent (0.3%) - 2 hr containerized soak
8) Regent (0.3%) + methanol - 2 hr containerized soak
9) Regent (1%) - 2 hr containerized soak
10) Regent (3%) - 2 hr containerized soak
11) Check - containerized seedlings

Trial 3

1) Regent (1%) + Terrasorb™ root dip of bare root seedlings.
2) Regent (1%) + methanol + Terrasorb™ root dip.
3) Regent (3%) + Terrasorb™ root dip.
4) Terrasorb™ root dip + Mimic foliar spray 5x at 0.8oz/gal.
5) Terrasorb™ Check
6) Regent (1%) + Driwater™ root dip of bare root seedlings.
7) Regent (3%) + Driwater™ root dip.
8) Driwater™ Check
9) Regent (1%) + clay root dip of bare root seedlings.
10) Regent (3%) + clay root dip.
11) Clay Check

Tip moth damage was evaluated after each tip moth generation (3-4 weeks after peak moth flight) in the same manner as in the impact, and other control studies. Each tree was measured for diameter and height in the fall (November) following planting.

In Trial 1, in-furrow treatments alone (regardless of rate) had little or no effect on tip moth protection and tree growth (Table 4). The data suggests that more time is needed to allow seedlings to uptake fipronil from the soil. Because an in furrow treatment of fipronil to nursery beds is likely to be the safest and most economical way of treating seedling, additional trials were established in 2005, to look at the effects of earlier bed treatments (July and September) on in-furrow treatment efficacy.

In contrast to in-furrow treatments alone, all treatments that included a plant hole treatment provided good to excellent protection (84% - 97% reduction in damage) against tip moth and significant gains (32% - 84%) in volume growth. Trials have been established in 2005 to look at the potential of soil injecting fipronil solutions at different rates and volumes.

In Trial 2, all fipronil root soak treatments to bare root and containerized seedlings provided good to excellent protection (75% - 97% reduction in damage) against tip moth (Table 5). Generally, treatment efficacy improved with increase fipronil rate. However, while the 3% rate provided the best protection against tip moth, it also may have inhibited seedling growth. Also, the addition of methanol (to hopefully improve fipronil uptake) proved detrimental – reducing tip moth protection, seedling growth and tree survival.

In Trial 3, nearly all root dip treatments (regardless of type of root coating) provided excellent protection against tip moth – reducing damage by 80% – 96%. However, seedlings treated with the highest fipronil rate (3%) in combination with Terrasorb™ or Driwater™ root coatings had significantly less growth compared to the 1% fipronil rate. Again this suggests that the higher rate of fipronil may inhibit tree growth. These treatments also had significantly lower survival compared to the check trees. The addition of methanol again did not improve protection, it reduced seedling growth, and caused a dramatic increase in seedling mortality.

These three trials are being continued into 2005 to further evaluate the duration of treatment effects.

Continued on Page 5

Tip Moth Projects (continued from page 4)

Table 4. Effect of fipronil treatments (Trial 1) on tip moth damage to loblolly pine shoots (top whorl) and volume growth during first growing season on four sites in Texas and Louisiana, 2004.

Treatment §	N	Pct. Shoots Infested	(**Pct. Reduction Compared to Check**)	Volume Growth (cm^3)	(**Pct. Gain Compared to Check**)	Mean % Tree Survival	(**Pct. Gain Compared to Check**)
Furrow 2x R	200	15.0 *	**18**	20.1	**10**	85	**4**
Furrow 4x R	200	16.2	**11**	21.0 *	**15**	82	**-1**
Furrow 4x R + meth	200	17.6	**3**	22.5	**23**	84	**2**
Furrow 8x R	200	16.3 *	**11**	20.2	**10**	80	**-2**
Furrow 2x R + PH	200	3.0 *	**84**	25.8 *	**41**	91 *	**11**
Furrow 4x R + PH	200	0.8 *	**96**	33.7 *	**84**	77	**-6**
Furrow 4x R + meth + PH	200	0.5 *	**97**	24.2 *	**32**	87	**5**
Furrow 8x R + PH	200	0.6 *	**97**	24.2 *	**32**	84	**2**
Plant Hole only	200	0.6 *	**97**	25.3 *	**38**	79	**-4**
Mimic spray	200	0.9 *	**95**	16.5	**-10**	82	**0**
Check	200	18.2		18.3		82	

§ R = Regent, meth = methanol, PH = plant hole

* Means followed by an asterik are significantly different from checks at the 5% level based on Fisher's Protected LSD.

Table 5. Effect of fipronil treatments (Trial 2) on tip moth damage to loblolly pine shoots (top whorl), volume growth and survival during first growing season on six sites in Texas, Arkansas, North Carolina, and Georgia in 2004.

Treatment §	N	Pct. Shoots Infested	(**Pct. Reduction Compared to Check**)	Volume Growth (cm^3)	(**Pct. Gain Compared to Check**)	Mean % Tree Survival	(**Pct. Gain Compared to Check**)
0.3% R BR RS	300	4.6 *	**79**	68.4	**25**	94	**5**
0.3% R + meth BR RS	250	5.0 *	**78**	36.9 *	**-32**	76 *	**-14**
1.0% R BR RS	350	3.8 *	**83**	68.0	**25**	93	**4**
3.0% R BR RS	250	1.4 *	**94**	59.4	**9**	82 *	**-8**
BR Mimic or Pounce Spray	300	7.6 *	**66**	82.9 *	**52**	92	**3**
Check Bare Root	300	22.3		54.6		89	
0.3% R Cont. RS	250	1.8 *	**91**	90.1 *	**56**	96	**0**
0.3% R + meth Cont. RS	200	5.0 *	**75**	44.5 *	**-23**	90 *	**-6**
1.0% R Cont. RS	250	0.7 *	**97**	83.5 *	**44**	96	**0**
3.0% R Cont. RS	200	0.1 *	**100**	51.3	**-11**	93	**-3**
Check Containerized	250	19.9		57.8		96	

§ R = Regent, meth = methanol, BR = bare root, RS = root soak, Cont. = containerized

* Means followed by an asterik are significantly different from checks at the 5% level based on Fisher's Protected LSD.

Continued on Page 6

Tip Moth Projects (continued from page 5)

Table 6. Effect of fipronil treatments (Trial 3) on tip moth damage to loblolly pine shoots (top whorl), volume growth and survival during first growing season on five sites in Texas, Arkansas, North Carolina and Georgia, 2004.

Treatment §	N	Pct. Shoots Infested	(**Pct. Reduction Compared to Check**)	Volume Growth (cm^3)	(**Pct. Gain Compared to Check**)	Mean % Tree Survival	(**Pct. Gain Compared to Check**)
1.0% R & TS RD	200	1.1 *	**94**	59.4	**-8**	84 *	**-13**
1.0% R + meth & TS RD	200	4.0 *	**80**	40.7	**-37**	39 *	**-59**
3.0% R & TS RD	200	0.8 *	**96**	31.8 *	**-51**	79 *	**-17**
TS RD & Mimic Spray	250	5.8 *	**70**	68.0	**5**	97	**1**
TS RD Check	200	19.4		64.5		96	
1.0% R & DW RD	200	1.0 *	**93**	72.8	**31**	95	**1**
3.0% R & DW RD	200	1.4 *	**90**	56.3	**1**	83 *	**-12**
DW RD Check	200	14.2		55.5		95	
1.0% R & Clay RD	250	2.1 *	**91**	61.1 *	**34**	93	**-3**
3.0% R & Clay RD	200	0.9 *	**96**	60.5 *	**33**	93	**-3**
Clay RD Check	250	22.2		45.6		96	

§ R = Regent, meth = methanol, RD = root dip, TS = Terrasorb, DW = Drywater

* Means followed by an asterik are significantly different from checks at the 5% level based on Fisher's Protected LSD.

Operational Planting Trial: A trial was initiated in 2003 to determine the efficacy of fipronil in reducing tip moth infestation levels in loblolly pine plantations.

Four plantations (3 TX and 1 LA; 19 – 38 acres in size) were each divided in half. Half of each plantation was planted with seedlings soaked in 0.3% fipronil for 2 hours and the other half planted with untreated seedlings. Also in each half, a 100-tree plot was established with the reverse treatment (the plot in the treated half had untreated seedlings and the plot in the untreated half had treated seedlings). Ten 10-tree plots were evenly spaced with each of the half plantations to monitor tip moth damage levels in these areas.

Tip moth damage was evaluated in each 100- and 10-tree plot after each tip moth generation (3-4 weeks after peak moth flight) in the same manner as in the impact and other control studies. Each tree was measured for diameter and height in the fall (November).

In 2003, fipronil-treated seedlings in both treatment areas consistently had lower tip moth damage levels compared to check areas throughout the growing season. Overall, fipronil reduced damage by >83% (Table 5). Volume growth was improved by fipronil in both treated areas.

In 2004, fipronil-treated seedlings in both treatment areas again had lower tip moth damage levels compared to check areas throughout the growing season. Overall, fipronil reduced damage by 11 - 44% (Table 5). Fipronil-treated seedlings continued to show improved growth as measured by height, diameter and volume in both treated areas.

Reference:

Fettig, C.J., J.T. Nowak, D.M. Grosman and C.W. Berisford. 2003. Nantucket pine tip moth phenology and timing of insecticide spray applications in the Western Gulf region. USDA Forest Service So. Res. Stat. Res. Pap. SRS-32. 13p. or http://www.srs.fs.usda.gov/pubs/rp/rp_srs032.pdf

Continued on Page 7

Tip Moth Projects (continued from page 6)

Table 7. Effect of operational planting of fipronil-treated seedlings on infestation by tip moth, weevils and aphids, volume growth, and survival during the first two seasons on four sites in east Texas or Louisiana - 2003 & 2004.

Treatment	Pct. Shoots Infested (**Pct. Reduction Compared to Check**) 2003		2004		Volume Growth (cm^3) (**Pct. Gain Compared to Check**) 2003		2004		Pct. Survival in 2004
Fipronil 10 X 10	1.4 **a**	**86**	12.2 **a**	**44**	57 **bc**	**13**	1517 **b**	**20**	96.0
Check 10 X 10	9.7 **b**		21.8 **c**		51 **ab**		1261 **a**		95.2
Fipronil 100	1.9 **a**	**82**	12.6 **ab**	**10**	65 **c**	**46**	1819 **c**	**85**	79.3
Check 100	10.5 **b**		14.0 **b**		44 **a**		983 **a**		80.0

* Means followed by the same letter in each column are not significantly different at the 5% level based on Fisher's Protected LSD.

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Southern Pine Beetle South-wide Trend Predictions for 2005

by Bill Upton and Ronald F. Billings (with data contributed by southern forest pest specialists)
(See http://texasforestservice.tamu.edu/xls/forest/pest/sbp%20tbl1%2005.xls)

The southern pine beetle (SPB), *Dendroctonus frontalis*, has a well-deserved reputation as the most destructive forest pest of pine forests in the South. In 2000, nearly 60,000 multiple-tree infestations were detected on federal, state and private forest lands throughout the South, resulting in the loss of millions of dollars of resources. By 2004, the number of SPB infestations had declined to 6,381 for all southern states combined. The Texas Forest Service (TFS) has developed a reliable system for predicting infestation trends (increasing, static, declining) and levels (low, moderate, high, outbreak) that has been implemented across the South since 1986. This information provides forest managers with valuable insight for better anticipating SPB outbreaks and more lead time for scheduling detection flights and preparing suppression programs.

Each spring, traps baited with the SPB attractant (frontalin) and southern pine turpentine are set out in pine forests when dogwoods begin to bloom. Dogwood blooms mark the primary dispersal season for populations of the destructive SPB as well as certain beneficial insects. The traps are monitored weekly for a 4-6 week period by federal and state cooperators. Of particular value for forecasting purposes are catches of clerids (also called checkered beetles), known predators of SPB. Using data on the average number of SPB captured per trap per day and the relative proportion of SPB to checkered beetles, infestation trends for the current year can be forecasted (see related article entitled "How to Forecast Southern Pine Beetle Infestation Trends with Pheromone Traps" on the Texas Forest Service web page at http://texasforestservice.tamu.edu).

The results from the 2005 prediction survey, based on 203 trapping locations within 16 states, indicate moderate to increasing populations in Mississippi and Alabama, and certain counties or ranger districts in Georgia and South Carolina. Only one county in Florida (Okaloosa) and one county in Georgia (Wilkes) are expected to have high SPB activity. Overall, beetle activity is predicted to be declining from last year's moderate levels or remain low in most areas surveyed in other states. Very few or no SPB infestations are expected again this year in Texas, Arkansas, Louisiana, Kentucky, Tennessee, Florida, North Carolina, Maryland, Delaware or New Jersey. A state-by-state summary of trap catches for SPB and clerids for 2004 and 2005, together with SPB predictions for 2005, are listed in Table 1.

Annual predictions of infestation trends have proven to be 75-85% accurate. Collectively, trend predictions from numerous specific locations provide insight into SPB population shifts within a given state as well as across the South. Also, comparison of trapping results for the current year with those from the previous year for the same localities provides additional insight into SPB population changes.

Continued on Page 8

SPB Prediction (continued from page 7)

In general, average trap catches that exceed 30 SPB per day, especially those in which SPB make up more than 35% of the total catch (of SPB and clerids), are indicative of increasing or continued high SPB infestation levels in the current year. Conversely, when catches of predators far outnumber those of SPB and fewer than 20 SPB adults are caught per day, infestation trends are likely to decline or remain at low levels. It is uncertain whether the predator population is directly responsible for declines in SPB outbreaks. Most likely, predators are just one of many contributing factors. It is interesting to note, however, that average trap catches of clerid beetles were down across the South in 2005, from 16.8 clerids per trap in 2004 to 6.5 clerids per trap in 2005. The significance of this declining population of clerids in terms of future SPB outbreaks remains to be determined.

The South-wide SPB survey results and trend predictions will also be posted on the Internet at http://www.fs.fed.us/research/4501/. Appreciation is expressed to the many state and federal cooperators who provide the data for this annual survey. For additional information, contact Dr. Ronald Billings, Texas Forest Service, at (979) 458-6650 or by e-mail at rbillings@tfs.tamu.edu.

TABLE 1: SUMMARY OF SOUTHWIDE SOUTHERN PINE BEETLE TREND PREDICTIONS FOR 2005

State	No. of Infestations in 2003	No. of Locations Trapped	2004 % SPB	2004 SPB/ trap/day	2004 Clerids/ trap/day	2005 % SPB	2005 SPB/ trap/day	2005 Clerids/ trap/day	2004 Prediction Trend/Level	Most Likely Locations of SPB Activity
Oklahoma	0	4	26%	17.3	18.9	0%	0.0	2.7	Static/Low	-----------
Arkansas	0	13	6%	0.6	15.2	1%	0.0	4.9	Static/Low	-----------
Texas	0	22	0%	0.0	5.3	0%	0.0	3.1	Static/Low	-----------
Louisiana	0	23	0%	0.0	3.6	3%	0.0	1.3	Static/Low	-----------
Mississippi	158	10	42%	32.8	41.0	56%	27.1	16.0	Increasing/Moderate-High	Homochitto N.F., Oktibbeha and Winston counties
Alabama	1,494	6	37%	15.0	21.2	51%	24.9	15.4	Increasing/Moderate	Lowndes County
Kentucky	0	2	0%	0.0	35.0	0%	0.0	7.0	Static/Low	-----------
Georgia	73	26	17%	10.1	41.1	43%	5.7	6.5	Declining/Low	Wilkes County
Tennessee	257	2	9%	0.7	21.7	10%	1.0	9.6	Declining/Low	-----------
Virginia	10	4	24%	8.8	21.2	11%	1.3	8.6	Declining/Low	-----------
Florida	10	25	21%	0.7	1.8	36%	4.8	0.6	Static/Low	Okaloosa County
South Carolina	4,324	35	29%	7.0	18.9	28%	7.1	10.4	Declining/Low-Moderate	Long Cane R.D. and Chester, McCormick and Newberry counties
North Carolina	10	20	31%	5.2	13.8	26%	4.1	6.6	Static/Low	Croatan N.F. and Columbus and Orange counties
Maryland	0	4	10%	0.1	2.3	32%	1.5	3.1	Static/Low	-----------
New Jersey	45	6	29%	2.1	5.1	11%	0.8	6.9	Declining/Low	-----------
Delaware	0	1	5%	0.1	2.2	11%	0.1	0.9	Static/Low	-----------
Southern States	6,381	203	18%	6.3	16.8	20%	4.9	6.5	Increasing/Moderate-High in MS, Increasing/Moderate in AL, Declining-Static/Low-Moderate elsewhere East, and Static/Low West	Mississippi, Alabama and South Carolina

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Thought You Might Be Interested to Know . . .

The Low Down on Pounce®

I've received several calls since last fall from WGFPMC members in Texas indicating the Pounce® has become very difficult to find. After numerous phone calls, here is the low down on the Pounce® situation.

Apparently, FMC had the sole rights to permethrin and the Pounce® 3.2 EC formulation. A few years ago, permethrin went off patent and several companies began producing generic 3.2 EC/3.2 AG formulations, including: Agriliance LLC (Pounce® 3.2EC & Artic™ 3.2EC), BASF (Permethrin Pro), Control Solutions (Waylay 3.2 AG), Helena (Permethrin 3.2 EC), Gro Pro LLC (Permethrin G-Pro), Micro-Flo Company LLC (Permethrin 3.2 AG), UAP – Loveland Products (Permethrin 3.2 EC) and United Phosphorous (Perm-Up 3.2 EC). Unfortunately, Pounce® 3.2 EC (FMC and Agriliance) is for the most part the only formulation of permethrin and/or Pounce® that has the supplemental 24C label in most southern states that allows use in nurseries to protect seedlings against regeneration weevils (Note: Permethrin 3.2 AG (Micro-Flo) has a 24C label for weevil control in SC only).

Recently, FMC has decided to discontinue their production of Pounce® 3.2EC (their other formulations of Pounce®, 1.5 G and 25 WP, are still being produced). This leaves Agriliance as the only manufacturer of Pounce® 3.2 EC. This might not normally be a problem, however, Agriliance is having a problem with their inventory of Pounce® and Artic™ (the other 3.2 EC). They have excess Artic™ product that they want to sell before they produce more Pounce®. Thus, their Pounce® supply is nearly gone and they do not plan to produce more in the near future until they reduce their Artic™ inventory.

However, Control Solution, Inc. may be riding to our rescue. They are in the process of submitting requests for 24C registrations in most southern states (including LA) for their Waylay 3.2 AG formulation. At least in Texas, the prospects of getting the Texas Department of Agriculture to approve a 24C registration for this product looks good at this time (hopefully I'm not speaking prematurely). I will keep you posted as I get more information.

Don Grosman

Upcoming Risk Assessments for Soil Fumigants

(Source: Georgia Pest Management Newsletter, June 2005)

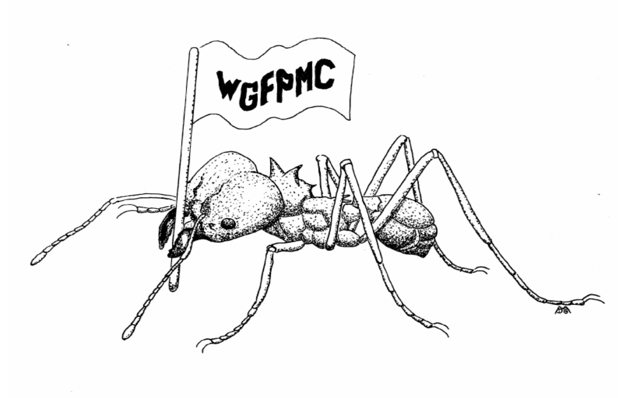
Watch for preliminary risk assessments for a number of soil fumigants, including dazomet, metam sodium, methyl bromide, 1,3-D (Telone), chloropicrin and a new active ingredient, iodomethane. The EPA is holding a technical briefing for the first three on July 13 in Washington D.C. The assessments for chloropicrin and iodomethane are expected in a few weeks. If you care about soil fumigants, take the time to read the assessments and provide feedback. **http://www.epa.gov/oppfead1/cb/csb_page/updates/fumigants_meeting.htm**

One for the Road

(Source: Georgia Pest Management Newsletter, June 2005)

One day, a man arrived home unexpectedly, surprising his wife and her paramour, the local exterminator. The woman pushed her "friend" into the closet, but the husband soon discovered the naked man.
"Who are you!?"
"I'm the exterminator from Bug-Out."
"Why are you in my closet?"
"Inspecting for clothes moths, sir."
"Well, what happened to your clothes?"
The exterminator looked down, aghast. "Good thing I came right over. The infestation is worse than we thought."

Western Gulf Forest Pest Management Cooperative
2005 Contact Meeting



August 16, 2005

Texas Forest Service
Cudlipp Forestry Center Training Building
Lufkin, Texas Forest Service

AGENDA

9:00 AM	Meeting called to order, introductions, opening comments
9:15 AM	WGFPMC Tip Moth Research Update (Dr. Don Grosman, WGFPMC)
11:30 AM	Status on Fipronil Registration (Dr. Harold Quicke, BASF)
12 Noon	Lunch (provided)
1:00 PM	Pitch Canker Outbreak (Mr. Dale Starkey, USFS)
1:30 PM	Recent Seed Orchard Pilot Studies (Dr. Alex Mangini, USFS)
2:00 PM	Break
2:15 PM	Unusual Seedling Mortality in 2005 (Mr. Harry Vanderveer, TFS)
2:45 PM	WGFPMC Research Update continued (Dr. Don Grosman, WGFPMC)
4:15 PM	Injection System (Tree & Soil) Demonstrations (Dr. Don Grosman, WGFPMC)
5:00 PM	Meeting Adjourned