

Survey of Damage Caused by Forest Insects in the Southeast, CY 2002

Damage Class A -- Mortality (sorted by state and/or reporting organization)

State/ Org.	Insect*	Ownership*	Documented Damage			Estimated Damage			TOTAL DAMAGE		
			MBF	Cords	Value	MBF	Cords	Value	MBF	Cords	Value
AL	SPB	S&P	811	21,362	1,005,810	484	12,737	599,737	1,295	34,099	1,605,547
AL	SPB	Fed.	2,035		222,019				2,035		222,019
FL	SPB	S&P				15,531	36,547	4,867,749	15,531	36,547	4,867,749
FL	SPB	Fed.	504	1,383	162,184				504	1,383	162,184
GA	SPB	S&P	31,512	8,532		231,088	62,565	55,146,000	262,600	71,097	55,146,000
GA	SPB	Fed.	10,845		1,183,190				10,845		1,183,190
LA	BTB	S&P				100		34,300	100		34,300
LA	IPS	S&P				800	1,500	604,400	800	1,500	604,400
MS	SPB	S&P				18,155		1,980,732	18,155		1,980,732
MS	SPB	Fed.	14,413		1,572,468				14,413		1,572,468
NC	SPB	S&P	53,388	57,494	13,619,598	13,347	14,374	3,404,899	66,735	71,868	17,024,497
NC	SPB	Fed.	1,355		147,880				1,355		147,880
NC	BTB	S&P	54		13,068	25		6,050	79		19,118
NC	IPS	S&P	360	287	90,613	360	287	90,613	720	574	181,226
NC	PW	S&P						(Seedlings) 10,124			(Seedlings) 10,124
OK	SPB	S&P	3		357				3		357
OK	MBB	S&P				31,513	18,757	4,595,664	31,513	18,757	4,595,664
SC	SPB	S&P	800,267	1,137,171	255,747,794				800,267	1,137,171	255,747,794
SC	SPB	Fed.	24,470		2,669,745				24,470		2,669,745
SC	BTB	S&P				1,800	750	529,200	1,800	750	529,200
SC	IPS	S&P				16,000	1,450	4,733,000	16,000	1,450	4,733,000
SC	PW	S&P						(Seedlings) 28,000			(Seedlings) 28,000
TN	SPB	S&P				104,181	150,349	21,840,595	104,181	150,349	21,840,595
TN	SPB	Fed.	732		79,861				732		79,861
TN	BTB	S&P					3	49		3	49
TN	IPS	S&P					10	178		10	178
TX	BTB	S&P				536	399	178,825	536	399	178,825
TX	IPS	S&P				2,143	4,792	753,816	2,143	4,792	753,816
VA	SPB	S&P				490	1,925	112,000	490	1,925	112,000
VA	BTB	S&P				100	200	19,000	100	200	19,000
VA	IPS	S&P				910	3,575	208,000	910	3,575	208,000
VA	GM	S&P				125,000	36,000	25,360,000	125,000	36,000	25,360,000
VA	GM	Fed.				50,000	365,000	6,800,000	50,000	365,000	6,800,000
VA	HWA	S&P				10,000		1,000,000	10,000		1,000,000
VA	HWA	Fed.				330	990	37,950	330	990	37,950
VA	Drought	S&P				5,000	10,000	1,100,000	5,000	10,000	1,100,000
USFS	HWA	Fed.	(See Damage Class D -- Miscellaneous)								
USFS	BWA	Fed.					100,010	600,100		100,010	600,100
TOTAL			940,749	1,226,229	276,514,587	627,893	822,220	134,640,981	1,568,642	2,048,449	411,155,568

***Abbreviations**

SPB = Southern Pine Beetle	IPS = Ips Engraver Beetles	MBB = Mixed Bark Beetles	HWA = Hemlock Woolly Adelgid
BTB = Black Turpentine Beetle	LB = Locust Borer	BWA = Blasam Woolly Adelgid	S&P = State/Private Ownership
	PW = Pales Weevil	GM = Gypsy Moth	Fed. = Federal Ownership

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Damage Class A -- Mortality (sorted by Insect and Ownership and compared to CY 2001)

Insect*	Ownership*	CY 2002 TOTAL DAMAGE			CY 2001 TOTAL DAMAGE		
		MBF	Cords	Value	MBF	Cords	Value
SPB	S&P	1,269,257	1,503,056	358,325,271	1,041,665	1,963,443	263,030,394
SPB	Fed.	54,354	1,383	6,037,347	105,452		12,223,390
BTB	S&P	2,615	1,352	780,492	6,306	8,392	2,026,497
IPS	S&P	20,573	11,901	6,480,620	14,236	17,630	4,778,038
MBB	S&P	31,513	18,757	4,595,664	237	908	81,835
LB	S&P	0		0	1,000		150,000
BWA	S&P		0	0		10	100
BWA	Fed.		100,010	600,100		100,010	600,100
PW	S&P	(Seedlings)		38,124	(Seedlings)		129,900
HWA**	S&P	10,000		1,000,000	200	300	21,500
HWA**	Fed.	330	990	37,950	300	900	34,500
GM	S&P	125,000	36,000	25,360,000	18,000	95,000	2,300,000
GM	Fed.	50,000	365,000	6,800,000	50,000	365,000	6,800,000
Drought	S&P	5,000	10,000	1,100,000	11,000		1,405,000
TOTAL		1,568,642	2,048,449	411,155,568	1,248,396	2,551,593	293,581,254

***Abbreviations**

SPB = Southern Pine Beetle
 BTB = Black Turpentine Beetle
 IPS = *Ips* Engraver Beetles
 LB = Locust Borer
 PW = Pales Weevil
 MBB = Mixed Bark Beetles
 BWA = Blasam Woolly Adelgid
 GM = Gypsy Moth
 HWA = Hemlock Woolly Adelgid

S&P = State/Private Ownership
 Fed. = Federal Ownership

** See Damage Class D -- Miscellaneous

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Damage Class B -- Growth Reduction (sorted by state and/or reporting organization)

State/ Org.	Insect*	Ownership*	TOTAL ESTIMATED DAMAGE		
			MBF	Cords	Value
LA	BCLR	S&P	6,800		1,672,800
LA	FTC	S&P		23,500	282,000
NC	ETC	S&P		200	2,000
NC	FTC	S&P	2,200		525,000
NC	VPS	S&P		1,000	10,000
TN	NPTM	S&P		272	5,084
TN	RHPS	S&P		131	2,448
TN	COM	S&P	9		1,887
TX	TM	S&P		5,776	69,312
VA	FC	S&P		6,000	72,000
VA	GM	S&P		25,000	300,000
VA	NPTM	S&P		1,000	20,000
VA	PBA	S&P		100	1,500
TOTAL			9,009	62,979	2,964,031

*Abbreviations

NPTM = Nantucket Pine Tip Moth

RHPS = Red-Headed Pine Sawfly

BCLR = Baldcypress Leafroller

FTC= Forest Tent Caterpillar

ETC = Eastern Tent Caterpillar

FC = Fall Canckerworm

GM = Gypsy Moth

VPS = Virginia Pine Sawfly

TM = Tip Moth

COM = Common Oak Moth

PBA = Pine Bark Adelgid

S&P = State/Private Ownership

Survey of Damage Caused by Forest Insects in the Southeast, CY 2002

Damage Class B -- Growth Reduction (sorted by Insect and compared to CY 2001)

Insect*	Ownership*	CY 2002 TOTAL DAMAGE			CY 2001 TOTAL DAMAGE		
		MBF	Cords	Value	MBF	Cords	Value
NPTM	S&P		1,272	25,084		12,597	101,932
RHPS	S&P		131	2,448		34	587
BCLR	S&P	6,800		1,672,800	5,300		1,208,400
FTC	S&P	2,200	23,500	807,000	3,500	19,000	667,000
ETC	S&P		200	2,000		275	2,200
FC	S&P		6,000	72,000		44	10,780
GM	S&P		25,000	300,000		7,212	865,440
VPS	S&P		1,000	10,000		1,000	22,000
TM	S&P		5,776	69,312		7,220	101,080
PBA	S&P		100	1,500		0	0
COM	S&P	9		1,887			
TOTAL		9,009	62,979	2,964,031	16,056	40,126	2,979,419

*Abbreviations

NPTM = Nantucket Pine Tip Moth

RHPS = Red-Headed Pine Sawfly

PBA = Pine Bark Adelgid

BCLR = Baldcypress Leafroller

FTC= Forest Tent Caterpillar

ETC = Eastern Tent Caterpillar

FC = Fall Canckerworm

GM = Gypsy Moth

VPS = Virginia Pine Sawfly

COM = Common Oak Moth

TM = Tip Moth

S&P = State/Private Ownership

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Damage Class C -- Seed and Cone (sorted by Insect and Ownership and compared to CY 2001)

Insect	Ownership	CY 2002 TOTAL DAMAGE		CY 2001 TOTAL DAMAGE	
		Lbs. of Seed	Value	Lbs. of Seed	Value
Seedbugs	S&P	4,510	1,669,060	5,416	1,986,440
Seedbugs	Fed.	4,000	1,000,000	4,000	1,000,000
Coneworms	S&P	9,860	3,587,580	9,860	3,587,580
Coneworms	Fed.	6,983	2,793,200	6,000	2,000,000
Cone beetle	S&P	0	0	0	0
Cone beetle	Fed.	500	1,000,000	500	125,000
Acorn weevil	S&P	0	0	2,700	27,000
Acorn weevil	Fed.	500	750,000	500	750,000
Other AI*	Fed.	50	80,000	40	75,000
TOTAL		26,403	10,879,840	29,016	9,551,020

* Other Acorn Insects

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Damage Class D -- Miscellaneous (sorted by state and/or reporting organization)

State/ Org.	Insect*	Owner ship*	Documented Damage			Estimated Damage			TOTAL DAMAGE		
			# of Trees	# of Acres	Value	# of Trees	# of Acres	Value	# of Trees	# of Acres	Value
LA	BW	S&P				500		5,000	500		5,000
OK	FW	S&P				100,000		5,000	100,000		5,000
OK	OB	S&P		10	3,000					10	3,000
OK	PW	S&P		58	7,250					58	7,250
OK	GH	S&P					10,000	50,000		10,000	50,000
TN	LPS	S&P				377		93	377		93
TN	SC	S&P				1,000		1,505	1,000		1,505
TX	PW	S&P				476,000		23,800	476,000		23,800
TX	TA	S&P				510,000	850	80,750	510,000	850	80,750
VA	OB	S&P				1,000,000		50,000,000	1,000,000		50,000,000
USFS	OB	Fed.					300,000	unknown		300,000	unknown
TOTAL			0	68	10,250	2,087,877	310,850	50,166,148	2,087,877	310,918	50,176,398

*Abbreviations

BTB = Black Turpentine Beetle
 IPS = *Ips* Engraver Beetles
 BW = Bagworms
 PW = Pales Weevil
 FW = Fall Webworm
 LPS = Loblolly Pine Sawfly

SC = Spring Cankerworm
 TA = Town Ant
 OB = Oak Borers
 FW = Fall Webworm
 GH = Grasshoppers
 BHPS = Black-Headed Pine Sawfly

S&P = State/Private Ownership
 Fed. = Federal Ownership

Survey of Damage Caused by Forest Insects in the Southeast, CY 2002

Damage Class D -- Miscellaneous (sorted by Insect and Ownership and compared to CY 2001)

Insect*	Ownership*	CY 2002 TOTAL DAMAGE			CY 2001 TOTAL DAMAGE		
		# of Trees	# of Acres	Value	# of Trees	# of Acres	Value
IPS	S&P				175,800	1,600,000	10,000,000
ETC	S&P					thousands	unknown
PW	S&P	476,000		23,800	595,200		26,800
LPS	S&P	377		93	243		52
SPB	S&P				5		60
TA	S&P	510,000	850	80,750	567,000	945	89,775
OB	S&P	1,000,000		50,000,000	200,000		1,500,000
OB	Fed.		300,000	unknown	200,000	300,000	1,500,000
GH	S&P		10,000	50,000		thousands	unknown
FW	S&P	100,000		5,000		thousands	unknown
BHPS	S&P					60	unknown
FC	S&P				400,000	1,000	unknown
BTB	S&P				500		unknown
BW	S&P	500		5,000			
SC	S&P	1,000		1,505			
TOTAL		2,087,877	310,850	50,166,148	2,138,748	1,902,005	13,116,687

*Abbreviations

SC = Spring Cankerworm

IPS = *Ips* Engraver Beetles

ETC = Eastern Tent Caterpillar

PW = Pales Weevil

BW = Bagworms

LPS = Loblolly Pine Sawfly

SPB = Southern Pine Beetle

FC = Fall Cankerworm

BHPS = Black-Headed Pine Sawfly

TA = Town Ant

OB = Oak Borers

BTB = Black Turpentine Beetle

GH = Grasshoppers

FW = Fall Webworm

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Damage Class E. -- Oak Defect and Degrade (note that this damage class is for calendar year 2001, the most recent year that oak-harvest figures are available)

Carpenterworm, red oak borer, and other oak borers cause significant defect and loss to oaks harvested across the southeast on federal, state, and private lands.

In a series of degrade studies, insect defect and loss in value averaged \$20.65 per M bd. ft. in 31 samples of lumber cut from 9 oak species taken from 4 states (Morris 1977, Southern Lumberman 234:19-20). This is seen as a conservative figure since others have estimated the loss at slightly greater than \$20.65 per M bd. ft. Across 13 southeastern states during calendar year 2001, the economic loss in oaks due to insect defect and degrade is estimated at **\$37,101,793**. (*This is a decrease of \$2,292,582 over the estimated economic losses in calendar year 2000*). The loss figure is derived by multiplying \$20.65 by the latest estimate (2001) of oak lumber production for the 13 states. The approximate amount of oak harvested across the 13 southeastern states in calendar year 2001 was 1,796,697 MBF. *This harvest amount is 120,802 MBF less than the amount estimated for calendar year 2000*. The annual cut of oak lumber was derived from tables in the 2001 Current Industrial Report, Lumber Production and Mill Stocks, Series MA321T(01)-1, USDC Bureau of the Census, Washington, D.C., 2002, 12 p.

APPENDIX I

On this year's data forms, each respondent was asked to fill in a code for "Method of Estimation" for each *estimated* damage figure they submitted. This was done in an attempt to better understand where the estimated data are coming from.

Among the 6 codes for methods of estimation, a total of 83 entries were submitted on the data forms. Following is the order (most to least popular) in which the methods were used:

1. Ground Survey: 27 entries; **33%** of total (*last year = 25%, rank 2*)
2. Projection From Past Data: 25 entries; **30%** of total (*last year = 39%, rank 1*)
3. Aerial Survey: 13 entries; **16%** of total (*last year = 16%, rank 3*)
4. Info. From Outside Source: 12 entries; **14%** of total (*last year = 10%, rank 4*)
5. Windshield Survey: 5 entries; **6%** of total (*last year = 4%, rank 6*)
6. Other Method(s): 1 entry; **1%** of total (*last year = 5%, rank 5*)

(83 entries total)