

## Cotton Insect Losses 1991

Compiled for National Cotton Council

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### Background

This information was provided by state coordinators and was collected from surveys of county agents, Extension specialists, private consultants and research entomologists.

All data are averaged over a total reporting unit, state, etc. For example, if a unit report represents 100 acres and an eight percent loss on 25 of these acres, then in the table summary this shows up as a total 2% loss. This type of averaging is used for all data reported including yields and costs of control.

### Highlights

It is interesting to note that aphids are estimated to have produced the greatest pest related losses in U. S. cotton in 1991. Aphid losses reported at 2.01% were followed by boll/budworms at 1.68%, boll weevils at only 0.69%, lygus at 0.47% and all other pest species caused damages less than 0.2%. Total percent losses were 5.46%; dollars lost were \$282,678,760 and average costs of control were \$33.20. (Table 2)

There are increasing concerns about evolving new pests. This is true for sweet potato whiteflies. These insects have been pests of cotton in California and Arizona for many years. This year there were infestations in cotton reported from Florida, Georgia, Mississippi, Tennessee and very serious problems in South Texas.

We have also had reports of continued problems with soybean loopers in Georgia and Alabama cotton. In North Carolina the

European Cornborer has advanced to major pest status. There is

one report of "pill bugs" as a pest in small acreage in Texas. The corn root aphid was reported as a pest in New Mexico.

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Table 1 USDA 1991 US CROP PRODUCTION: ALL COTTON

Acres in thousands, yield in pounds per acre, production in thousand 480-pound bales

UPLAND	ACRES HVSTD	INDIC813 YIE320LD	PRODUCTION 1992/JAN.1 1991/DEC.1 FINAL/1991		
Alabama	410	626	535	520	375
Arizona	359	1,190	890	890	811
Arkansas	980	759	1,550	1,550	1,081
California	960	1,250	2,500	2,450	2,734
Florida	49	696	71	75	48
Georgia	425	813	720	700	405
Kansas	2	320	1	1	1
Louisiana	820	825	1,410	1,390	1,177
Mississippi	1,230	878	2,250	2,250	1,850
Missouri	327	621	423	425	314
New Mexico	65	554	75	85	95
North Carolina	457	683	650	650	263
Oklahoma	380	316	250	250	382
South Carolina	210	777	340	330	145
Tennessee	610	551	700	700	495
Texas	5,300	430	4,750	5,300	4,965
Virginia	18	728	27	25	6
US	12,602	653	17,143	17,591	15,147
--PIMA--					
Arizona	103	885	190	200	194
California	60	1,040	130	130	57
Mississippi	1	600	1	1	2
New Mexico	20	558	23	23	25
Texas	57	463	55	60	81
US	241	796	399	414	359
--ALL COTTON--					
US	12,842	656	17,542	18,005	15,505

Table 2 All States Cotton Insect Losses for 1991

Pest	Acres Infested	Above Treat Thresholds	# Insect Applicat	Cost of 1 Applicat	% Yield Reduction	Bales Lost
Boll Weevils	6122852	4114998	0.7	5.36	0.81	146118
Boll/Bud worms	11340862	8218848	1.6	8.01	1.68	300455
Fleahopper	4534082	1674827	0.2	4.03	0.13	23613
Lygus bugs	5109296	2717558	0.4	4.84	0.47	85073
Leaf perforator	315000	120000	0.0	9.90	0.00	394
Pink bollworm	512000	373300	0.1	9.77	0.08	15019
Spider mites	1816636	769633	0.1	11.12	0.08	14396

Thrips	7035422	3529410	0.3	4.91	0.13	22558
Beet armyworm	2305900	472000	0.1	9.79	0.02	3657
Fall armyworm	1805976	383380	0.0	7.47	0.03	5033
Minor pests	3018233	841400	0.1	10.39	0.08	13844
Aphids	10067992	5611800	0.9	7.85	2.01	36029
New pests	1584990	435087	0.1	12.02	0.11	19404
W Flower Thrips	2339276	85000	0.0	7.88	0.00	112
Acreage harvested: 13,022,000 Yield per acre: 1.38 Bales						
Percent Lost: 5.63 Dollars Lost: \$290,847,460 Cost per Acre: 33.39						

Table 3 Alabama (Central) Cotton Insect Losses for 1991

Pest	Acres Infested	Above Treat Thresholds	# Insect Applicat	Cost of 1 Applicat	% Yield Reduction	Bales Lost
Boll Weevils	100000	100000	1.5	2.00	0.50	677
Boll/Bud worms	100000	100000	4.0	4.50	1.00	1354
Fleahopper	0	0	0.0	0.00	0.00	0
Lygus bugs	100000	100000	2.0	2.00	5.00	6771
Leaf perforator	0	0	0.0	0.00	0.00	0
Pink bollworm	0	0	0.0	0.00	0.00	0
Spider mites	30000	1000	0.0	0.00	0.00	0
Thrips	100000	30000	0.0	0.00	0.00	0
Beet armyworm	10000	0	0.0	0.00	0.00	0
Fall armyworm	100000	95000	1.9	6.00	0.76	1029
Minor Pests	70000	20000	0.0	0.00	0.00	0
Aphids	100000	25000	0.1	3.50	0.08	102
New Pests	50000	10000	0.1	9.00	0.05	68
W Flower Thrips	100000	5000	0.0	0.00	0.00	0
Acreage harvested: 100000 Yield per acre: 1.35 Bales						
Percent Lost: 7.39 Dollars Lost: 2,880,150 Cost per Acre: 37.56						

Table 4 Alabama (North) Cotton Insect Losses for 1991

Pest	Acres Infested	Above Treat Thresholds	# Insect Applicat	Cost of 1 Applicat	% Yield Reduction	Bales Lost
Boll Weevils	210000	100000	0.7	2.00	0.48	1146
Boll/Bud worms	210000	170000	1.5	5.85	2.43	5844
Fleahopper	0	0	0.0	0.00	0.00	0
Lygus Bug	210000	180000	1.5	1.75	6.86	16500
Leaf perforator	0	0	0.0	0.00	0.00	0
Pink bollworm	0	0	0.0	0.00	0.00	0
Spider mites	160000	80000	0.0	7.00	0.38	917
Thrips	210000	20000	0.0	0.00	0.00	0
Beet armyworm	35000	0	0.0	0.00	0.00	0
Fall armyworm	160000	45000	0.0	0.00	0.21	516
Minor Pests	50000	0	0.0	0.00	0.00	0
Aphids	210000	90000	0.1	1.50	0.86	2063
New Pests	0	0	0.0	0.00	0.00	0
W Flower Thrips	210000	0	0.0	0.00	0.00	0
Acreage harvested: 210000 Yield per acre: 1.15 Bales						
Percent Lost: 11.21 Dollars Lost: 3,654,000 Cost per Acre: 13.05						

Table 5 Alabama (South) Cotton Insect Losses for 1991

Pest	Acres Infested	Above Treat Thresholds	# Insect Applicat	Cost of 1 Applicat	% Yield Reduction	Bales Lost
Boll Weevils	10000	0	0.0	0.00	0.00	0
Boll/Bud worms	100000	100000	5.0	4.50	1.00	1563
Fleahopper	0	0	0.0	0.00	0.00	0
Lygus bugs	100000	100000	2.0	2.00	5.00	7813
Leaf perforator	0	0	0.0	0.00	0.00	0
Pink bollworms	0	0	0.0	0.00	0.00	0
Spider mites	20000	1000	0.0	0.00	0.00	0
Thrips	100000	25000	0.0	0.00	0.00	0
Beet armyworm	30000	0	0.0	0.00	0.00	0
Fall armyworm	100000	95500	1.9	6.00	1.91	2984
Minor Pests	30000	25000	0.3	6.00	0.13	195
Aphids	100000	25000	0.1	3.50	0.08	117
New Pests	25000	5000	0.1	9.00	0.01	16
W Flower Thrips	100000	0	0.0	0.00	0.00	0

Acres harvested: 100000 Yield per Acre: 1.56 Bales

Percent Lost: 8.12 Dollars Lost: 3,654,000 Cost per Acre: 40.17

Table 6 Alabama (Summary) Cotton Insect Losses for 1991

Pest	Acres Infested	Above Treat Thresholds	# Insect Applicat	Cost of 1 Applicat	% Yield Reduction	Bales Lost
Boll Weevils	320000	200000	0.7	2.00	0.34	1823
Boll/Bud worms	410000	370000	2.9	4.84	1.65	8760
Fleahopper	0	0	0.0	0.00	0.00	0
Lygus bug	410000	380000	1.8	1.89	5.84	31083
Leaf perforator	0	0	0.0	0.00	0.00	0
Pink bollworm	0	0	0.0	0.00	0.00	0
Spider mites	210000	82000	0.0	7.00	0.17	917
Thrips	410000	75000	0.0	0.00	0.00	0
Beet armyworm	75000	0	0.0	0.00	0.00	0
Fall armyworm	360000	235500	0.9	6.00	0.85	4529
Minor Pests	150000	45000	0.1	6.00	0.04	195
Aphids	410000	140000	0.1	2.41	0.43	2281
New Pests	75000	15000	0.0	9.00	0.02	83
W Flower Thrips	410000	5000	0.0	0.00	0.00	0

Acres harvested: 410000 Yield per acre: 1.30 Bales

Percent Lost: 9.33 Dollars Lost: 14,305,650 Cost per Acre: 25.64

Table 7 Arizona Cotton Insect Losses for 1991

Pest	Acres Infested	Above Treat Thresholds	# Insect Applicat	Cost of 1 Applicat	% Yield Reduction	Bales Lost
Boll Weevils	0	0	0.0	0.00	0.00	0
Boll/Bud worms	310000	150000	0.7	10.00	0.17	2031
Fleahopper	120000	40000	0.1	9.00	0.00	43
Lygus bugs	420000	370000	3.3	10.00	1.64	20042
Leaf perforator	200000	110000	0.5	10.00	0.02	298
Pink bollworm	380000	280000	2.5	10.00	0.93	11375
Spider mites	90000	50000	0.2	14.00	0.01	135

Thrips	380000	40000	0.1	8.00	0.00	11
Beet armyworm	110000	85000	0.4	11.00	0.08	921
Fall armyworm	0	0	0.0	0.00	0.00	0
Minor Pests	280000	230000	1.8	14.00	0.31	3738
Aphids	120000	60000	0.2	10.00	0.01	146
New Pests	0	0	0.0	0.00	0.00	0
W Flower Thrips	380000	40000	0.1	8.00	0.00	11
Acreage harvested: 450000 Yield per Acre: 2.71 Bales						
Percent Lost: 3.18 Dollars Lost: 11,160,240 Cost per Acre: 105.09						

Table 8 Arkansas Cotton Insect Losses for 1991

Pest	Acres Infested	Above Treat Thresholds	# Insect Applicat	Cost of 1 Applicat	% Yield Reduction	Bales Lost
Boll Weevils	750000	150000	0.3	5.65	0.08	1223
Boll/Bud worms	900000	792000	3.3	8.35	1.50	23255
Fleahopper	80000	50000	0.1	4.35	0.01	82
Lygus bug	668000	210000	0.2	4.30	0.09	1370
Leaf perforator	0	0	0.0	0.00	0.00	0
Pink bollworm	0	0	0.0	0.00	0.00	0
Spider mites	200000	33000	0.0	7.80	0.01	81
Thrips	950000	800000	0.8	8.75	0.50	6525
Beet armyworm	0	0	0.0	0.00	0.00	0
Fall armyworm	0	0	0.0	0.00	0.00	0
Minor Pests	30000	1000	0.0	7.08	0.00	0
Aphids	668000	250000	0.3	7.75	0.26	4078
New Pests	0	0	0.0	0.00	0.00	0
W Flower Thrips	0	0	0.0	0.00	0.00	0
Acreage harvested: 950000 Yield per acre: 1.63 Bales						
Percent Lost: 1.94 Dollars Lost: 8,665,696 Cost per Acre: 40.50						

Table 9 California Cotton Insect Losses for 1991

Pest	Acres Infested	Above Treat Thresholds	# Insect Applicat	Cost of 1 Applicat	% Yield Reduction	Bales Lost
Boll Weevils	0	0	0.0	0.00	0.00	0
Boll/Bud worms	44300	7000	0.0	10.00	0.00	18
Fleahopper	0	0	0.0	0.00	0.00	0
Lygus bugs	221000	16000	0.0	17.50	0.02	415
Leaf perforator	0	0	0.0	0.00	0.00	0
Pink bollworms	35000	35000	0.3	10.00	0.04	907
Spider mites	267500	194750	0.2	18.00	0.21	5047
Thrips	0	0	0.0	0.00	0.00	0
Beet armyworm	94400	10000	0.0	10.00	0.00	0
Fall armyworm	0	0	0.0	0.00	0.00	0
Minor Pests	0	0	0.0	0.00	0.00	0
Aphids	279000	93000	0.1	20.00	0.10	2410
New Pests	0	0	0.0	0.00	0.00	0
W Flower Thrips	2800	0	0.0	0.00	0.00	0
Acreage harvested: 930000 Yield per acre: 2.59 Bales						
Percent Lost: 0.37 Dollars Lost: 2,533,655 Cost per Acre: 8.09						

Table 10 Florida Cotton Insect Losses for 1991

Pest	Acres Infested	Above Treat Thresholds	# Insect Applicat	Cost of 1 Applicat	% Yield Reduction	Bales Lost
Boll Weevils	0	0	0.0	0.00	0.00	0
Boll/Bud worms	50000	50000	5.0	7.60	4.00	958
Fleahopper	0	0	0.0	0.00	0.00	0
Lygus bugs	1200	700	0.0	4.20	0.01	5
Leaf perforator	0	0	0.0	0.00	0.00	0
Pink bollworm	0	0	0.0	0.00	0.00	0
Spider mites	0	0	0.0	0.00	0.00	0
Thrips	25000	500	0.0	3.50	0.00	0
Beet armyworm	130000	5000	0.2	10.50	0.09	67
Fall armyworm	3000	2000	0.0	10.00	0.08	59
Minor Pests	6100	2100	0.0	1.93	0.00	0
Aphids	28000	500	0.0	7.80	0.00	0
New Pests	3000	0	0.0	0.00	0.00	0
W Flower Thrips	0	0	0.0	0.00	0.00	0
Acreage harvested: 50000 Yield per Acre: 1.48 Bales						
Percent Lost: 4.18 Dollars Lost: 889,701 Cost per Acre: 40.73						

Table 11 Georgia Cotton Insect Losses for 1991

Pest	Acres Infested	Above Treat Thresholds	# Insect Applicat	Cost of 1 Applicat	% Yield Applicat	Bales Lost
Boll Weevils	425000	200000	0.5	42.50	0.00	0
Boll/Bud worms	425000	412500	4.9	6.88	0.97	6703
Fleahopper	7500	2500	0.0	2.00	0.00	0
Lygus bugs	325000	50000	0.1	3.60	0.00	0
Leaf perforator	0	0	0.0	0.00	0.00	0
Pink bollworm	0	0	0.0	0.00	0.00	0
Spider mites	60000	15000	0.0	8.00	0.00	0
Thrips	425000	325000	0.8	8.13	0.00	0
Beet armyworm	200000	75000	0.4	11.00	0.18	1219
Fall armyworm	37500	7500	0.0	11.75	0.00	0
Minor Pests	250000	175000	0.8	6.75	0.00	0
Aphids	375000	150000	0.4	4.50	0.00	0
New Pests	0	0	0.0	0.00	0.00	0
W Flower Pests	0	0	0.0	0.00	0.00	0
Acreage harvested: 425000 Yield per Acre: 1.63 Bales						
Percent Lost: 1.15 Dollars Lost: 2,281,500 Cost per Acre: 71.56						

Table 12 Louisiana Cotton Insect Losses for 1991

Pest	Acres Infested	Above Treat Thresholds	# Insect Applicat	Cost of 1 Applicat	% Yield Reduction	Bales Lost
Boll Weevils	743460	727300	2.8	3.25	1.87	24243
Boll/Bud worms	731520	681200	3.5	7.50	3.51	45413
Fleahopper	394690	272340	0.4	3.50	0.18	2270
Lygus bugs	677200	388110	0.5	3.50	0.25	3234
Leaf perforator	0	0	0.0	0.00	0.00	0
Pink bollworm	0	0	0.0	0.00	0.00	0
Spider mites	68436	31733	0.0	5.00	0.01	132
Thrips	606030	410210	0.5	3.00	0.26	3418
Beet armyworm	0	0	0.0	0.00	0.00	0
Fall armyworm	125376	5380	0.0	7.25	0.00	9
Minor Pests	0	0	0.0	0.00	0.00	0

Aphids	512600	409000	0.5	3.25	0.53	6817
New Pests	0	0	0.0	0.00	0.00	0
W Flower Thrips	230476	0	0.0	0.00	0.00	0
Acreage harvested: 776380 Yield per acre: 1.67 Bales						
Percent Lost: 6.61 Dollars Lost: 24,634,566 Cost per Acre: 41.98						

Table 13 Mississippi (Delta) Cotton Insect Losses for 1991

Pest	Acres Infested	Above Treat Thresholds	# Insect Applicat	Cost of 1 Applicat	% Yield Reduction	Bales Lost
Boll Weevils	740000	600000	0.5	2.50	0.41	6166
Boll/Bud worms	740000	650000	1.8	6.50	0.66	10019
Fleahopper	100000	0	0.0	0.00	0.00	0
Lygus bugs	740000	700000	2.4	2.50	0.24	3597
Leaf perforator	0	0	0.0	0.00	0.00	0
Pink bollworm	0	0	0.0	0.00	0.00	0
Spider mites	200000	100000	0.3	8.50	0.01	103
Thrips	740000	740000	1.5	3.75	0.10	1521
Beet armyworm	740000	250000	0.7	9.00	0.05	771
Fall armyworm	700000	75000	0.2	9.50	0.01	77
Minor Pests	700000	100000	0.3	7.50	0.00	21
Aphids	740000	500000	1.4	8.50	0.01	206
New Pests	740000	300000	0.2	3.00	0.01	123
W Flower Thrips	600000	20000	0.0	7.50	0.00	4
Acreage harvested: 740000 Yield per Acre: 2.06 Bales						
Percent Lost: 3.85 Dollars Lost: 6,510,604 Cost per Acre: 32.67						

Table 14 Mississippi (Hill) Cotton Insect Losses for 1991

Pest	Acres Infested	Above Treat Thresholds	# Insect Applicat	Cost of 1 Applicat	% Yield Reduction	Bales Lost
Boll Weevils	500000	500000	2.0	2.50	3.00	21875
Boll/Bud worms	500000	400000	1.2	6.50	0.60	4375
Fleahopper	50000	0	0.0	0.00	0.00	0
Lygus bugs	500000	250000	1.0	2.50	0.13	911
Leaf perforator	0	0	0.0	0.00	0.00	0
Pink bollworm	0	0	0.0	0.00	0.00	0
Spider mites	100000	50000	0.2	8.50	0.00	36
Thrips	500000	500000	1.5	3.75	0.10	729
Beet armyworm	500000	25000	0.1	9.00	0.01	55
Fall armyworm	350000	40000	0.2	9.50	0.00	29
Minor Pests	300000	25000	0.1	7.50	0.00	4
Aphids	500000	200000	0.8	8.50	0.01	58
New Pests	400000	20000	0.0	3.00	0.00	6
W Flower Thrips	50000	10000	0.0	7.50	0.00	1
Acreage harvested: 500000 Yield per acre: 1.46 Bales						
Percent Lost: 3.85 Dollars Lost: 8,087,100 Cost per Acre: 32.67						

Table 15 Mississippi (Summary) Cotton Insect Losses for 1991

Pest	Acres Infested	Above Treat Thresholds	# Insect Applicat	Cost of 1 Applicat	% Yield Reduction	Bales Lost
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Boll Weevils	1240000	1100000	1.1	2.50	1.25	28041
Boll/Bud worms	1240000	1020000	1.5	6.50	0.64	14394
Fleahopper	150000	0	0.0	0.00	0.00	0
Lygus bugs	1240000	950000	1.8	2.50	0.20	4508
Leaf perforator	0	0	0.0	0.00	0.00	0
Pink bollworm	0	0	0.0	0.00	0.00	0
Spider mites	300000	150000	0.2	8.50	0.01	139
Thrips	1240000	1240000	1.5	3.75	0.10	2250
Beet armyworm	1240000	275000	0.4	9.00	0.04	825
Fall armyworm	1020000	115000	0.2	9.50	0.00	106
Minor Pests	1000000	125000	0.2	7.50	0.00	24
Aphids	1240000	700000	1.1	8.50	0.01	264
New Pests	1140000	320000	0.1	3.00	0.01	129
W Flower Thrips	650000	30000	0.0	7.50	0.00	6
Acreage harvested: 1240000 Yield per acre: 1.81 Bales						
Percent Lost: 2.25 Dollars Lost: 14,597,704 Cost per Acre: 42.19						

Table 16 Missouri Cotton Insect Losses for 1991

Pest	Acres Infested	Above Treat Thresholds	# Insect Applicat	Cost of 1 Applicat	% Yield Reduction	Bales Lost
Boll Weevils	0	0	0.0	0.00	0.00	0
Boll/Bud worms	100000	80000	0.3	8.00	1.60	5417
Fleahopper	0	0	0.0	0.00	0.00	0
Lygus bugs	250000	100000	0.8	8.00	4.00	13542
Leaf perforator	0	0	0.0	0.00	0.00	0
Pink bollworm	0	0	0.0	0.00	0.00	0
Spider mites	125000	75000	0.6	10.00	1.50	5078
Thrips	100000	0	0.0	0.00	0.00	0
Beet armyworm	0	0	0.0	0.00	0.00	0
Fall armyworm	10000	0	0.0	0.00	0.00	0
Minor Pests	50000	25000	0.1	8.00	0.15	508
Aphids	100000	50000	0.2	15.00	2.00	6771
New Pests	0	0	0.0	0.00	0.00	0
W Flower Thrips	0	0	0.0	0.00	0.00	0
Acreage harvested: 250000 Yield per acre: 1.35 Bales						
Percent Lost: 9.25 Dollars Lost: 9,018,750 Cost per Acre: 18.76						

Table 17 New Mexico Cotton Insect Losses for 1991

Pest	Acres Infested	Above Treat Thresholds	# Insect Applicat	Cost of 1 Applicat	% Yield Reduction	Bales Lost
Boll Weevils	0	0	0.0	0.00	0.00	0
Boll/Bud worms	57150	33150	0.7	10.25	3.32	3453
Fleahopper	35400	11390	0.2	7.50	0.39	408
Lygus bugs	27550	12000	0.2	9.25	0.53	547
Leaf perforator	0	0	0.0	0.00	0.00	0
Pink bollworm	41000	2300	0.1	9.05	0.11	112
Spider mites	16700	1650	0.0	12.25	0.07	75
Thrips	52000	32400	0.5	8.80	2.84	2953
Beet armyworm	11500	6000	0.1	9.50	0.36	371
Fall armyworm	11500	3500	0.0	9.50	0.15	160

Minor Pests	29450	10200	0.0	11.46	1.07	1112
Aphids	48000	40300	1.1	8.50	2.77	2886
New Pests	40	32	0.0	8.00	0.00	4
W Flower Thrips	0	0	0.0	0.00	0.00	0
Acreage harvested: 80000 Yield per acre: 1.30 Bales						
Percent Lost: 11.60 Dollars Lost: 3,479,312 Cost per Acre: 27.00						

Table 18 North Carolina Cotton Insect Losses for 1991

Pest	Acres Infested	Above Treat Thresholds	# Insect Applicat	Cost of 1 Applicat	% Yield Reduction	Bales Lost
Boll Weevils	0	0	0.0	0.00	0.00	0
Boll/Bud worms	453000	452800	3.1	9.50	12.59	73931
Fleahopper	0	0	0.0	0.00	0.00	0
Lygus bugs	0	0	0.0	0.00	0.00	0
Leaf perforator	0	0	0.0	0.00	0.00	0
Pink bollworm	0	0	0.0	0.00	0.00	0
Spider mites	0	0	0.0	0.00	0.00	0
Thrips	453000	0	0.0	0.00	0.00	0
Beet armyworm	0	0	0.0	0.00	0.00	0
Fall armyworm	10000	2000	0.0	9.50	0.00	5
Eur corn borer	453000	68000	0.1	9.50	0.36	2115
Aphids	200000	1000	0.0	7.50	0.00	4
New Pests	0	0	0.0	0.00	0.00	0
W Flower Thrips	0	0	0.0	0.00	0.00	0
Acreage harvested: 453000 Yield per acre: 1.30 Bales						
Percent Lost: 12.96 Dollars Lost: 21,903,780 Cost per Acre: 30.21						

Table 19 Oklahoma Cotton Insect Losses for 1991

Pest	Acres Infested	Above Treat Thresholds	# Insect Applicat	Cost of 1 Applicat	% Yield Reduction	Bales Lost
Boll Weevils	250000	205000	1.5	6.00	1.41	3993
Boll/Bud worms	400000	250000	1.3	10.50	1.56	4427
Fleahopper	300000	150000	0.4	6.00	0.19	531
Lygus bugs	0	0	0.0	0.00	0.00	0
Leaf perforator	0	0	0.0	0.00	0.00	0
Pink bollworm	0	0	0.0	0.00	0.00	0
Spider mites	30000	15000	0.1	12.50	0.01	32
Thrips	400000	100000	0.3	4.50	0.08	213
Beet armyworm	0	0	0.0	0.00	0.00	0
Fall armyworm	0	0	0.0	0.00	0.00	0
Minor Pests	20000	10000	0.0	6.00	0.00	7
Aphids	125000	100000	0.5	10.00	0.30	850
New Pests	0	0	0.0	0.00	0.00	0
W Flower Thrips	0	0	0.0	0.00	0.00	0
Acreage harvested: 400000 Yield per acre: 0.71 Bales						
Percent Lost: 3.55 Dollars Lost: 2,895,270 Cost per Acre: 31.81						

Table 20 South Carolina Cotton Insect Losses for 1991

Pest	Acres Infested	Above Treat Thresholds	# Insect Applicat	Cost of 1 Applicat	% Yield Reduction	Bales Lost
Boll Weevil	0	0	0.0	0.00	0.00	0

Boll/Bud worms	208000	195000	308	6.90	1.88	6094
Fleahopper	10000	1000	0.0	4.00	0.00	16
Lygus bugs	10000	1000	0.0	4.00	0.00	16
Leaf perforator	0	0	0.0	0.00	0.00	0
Pink bollworm	0	0	0.0	0.00	0.00	0
Spider mites	40000	3000	0.0	8.75	0.03	94
Thrips	208000	20000	0.1	4.50	0.10	313
Beet armyworm	50000	5000	0.0	12.00	0.02	78
Fall armyworm	100000	5000	0.0	12.00	0.05	156
Minor Pests	120000	35000	0.5	9.90	1.18	3828
Aphids	200000	20000	0.2	4.00	0.05	156
New Pests	0	0	0.0	0.00	0.00	0
W Flower Thrips	150000	0	0.0	0.00	0.00	0

Acres harvested: 208000 Yield per Acre: 1.56 Bales

Percent Lost: 3.31 Dollars Lost: 3,096,000 Cost per Acre: 33.32

Table 21 Tennessee Cotton Insect Losses for 1991

Pest	Acres Infested	Above Treat Thresholds	# Insect Applicat	Cost of 1 Applicat	% Yield Reduction	Bales Lost
Boll Weevil	300000	80000	0.3	4.00	0.13	820
Boll/Bud worms	450000	195000	0.6	6.00	0.95	5996
Fleahopper	0	0	0.0	0.00	0.00	0
Lygus bugs	460000	115000	0.4	3.00	0.28	1768
Leaf perforator	0	0	0.0	0.00	0.00	0
Pink bollworm	0	0	0.0	0.00	0.00	0
Spider mites	150000	10500	0.0	5.00	0.00	11
Thrips	595000	250000	0.8	2.50	0.33	2050
Beet armyworm	0	0	0.0	0.00	0.00	0
Fall armyworm	12000	2000	0.0	6.00	0.00	0
Minor Pests	100500	3000	0.0	5.00	0.00	3
Aphids	350000	1500	0.0	5.50	0.00	0
New Pests	50	50	0.0	7.00	0.00	21
W Flower Thrips	0	0	0.0	0.00	0.00	0

Acres harvested: 615000 Yield per acre: 1.03 Bales

Percent Lost: 1.69 Dollars Lost: 3,072,693 Cost per Acre: 8.14

Table 22 Texas (District 1) Cotton Insect Losses for 1991

Pest	Acres Infested	Above Treat Thresholds	# Insect Applicat	Cost of 1 Applicat	% Yield Reduction	Bales Lost
Boll Weevils	20000	0	0.0	0.00	0.00	0
Boll/Bud worms	60000	30000	0.6	10.05	4.56	2438
Fleahopper	38000	15000	0.2	4.00	0.19	102
Lygus bugs	0	0	0.0	0.00	0.00	0
Leaf perforator	0	0	0.0	0.00	0.00	0
Pink bollworm	0	0	0.0	0.00	0.00	0
Spider mites	0	0	0.0	0.00	0.00	0
Thrips	45000	20000	0.3	3.50	0.51	271
Beet armyworm	0	0	0.0	0.00	0.00	0
Fall armyworm	0	0	0.0	0.00	0.00	0
Minor pests	1500	100	0.0	0.00	0.00	0
Aphids	60000	30000	0.0	0.00	0.95	508
New Pests	0	0	0.0	0.00	0.00	0

W Flower Thrips	0	0	0.0	0.00	0.00	0
Acreage harvested: 79000 Yield per acre: 0.68 Bales						
Percent Lost: 6.20 Dollars Lost: 955,500 Cost per Acre: 7.37						
Table 23 Texas (District 2) Cotton Insect Losses for 1991						
Pest	Acres Infested	Above Treat Thresholds	# Insect Applicat	Cost of 1 Applicat	% Yield Reduction	Bales Lost
Boll Weevils	100000	35000	0.0	6.38	0.00	25
Boll/Bud worms	2945000	2077000	1.3	9.75	1.74	54002
Fleahopper	1200000	60000	0.0	4.12	0.01	222
Lygus bugs	0	0	0.0	0.00	0.00	0
Leaf perforator	0	0	0.0	0.00	0.00	0
Pink bollworm	0	0	0.0	0.00	0.00	0
Spider mites	0	0	0.0	0.00	0.00	0
Thrips	0	0	0.0	0.00	0.00	0
Beet armyworm	0	0	0.0	0.00	0.00	0
Fall armyworm	20000	400	0.0	11.65	0.00	0
Minor Pests	0	0	0.0	0.00	0.00	0
Aphids	3100000	2500000	2.3	7.80	9.60	297500
New Pests	0	0	0.0	0.00	0.00	0
W Flower Thrips	0	0	0.0	0.00	0.00	0
Acreage harvested: 3100000 Yield per acre: 1.00 Bales						
Percent Lost: 11.35 Dollars Lost: 101,303,580 Cost per Acre: 30.83						

Table 24 Texas (District 3) Cotton Insect Losses for 1991						
Pest	Acres Infested	Above Treat Thresholds	# Insect Applicat	Cost of 1 Applicat	% Yield Reduction	Bales Lost
Boll Weevils	600000	240000	0.4	5.20	1.42	5200
Boll/Bud worms	675000	300000	0.9	9.00	2.22	8125
Fleahopper	675000	75000	0.1	2.00	0.02	81
Lygus bugs	0	0	0.0	0.00	0.00	0
Leaf perforator	0	0	0.00	0.00	0.00	0
Pink bollworm	0	0	0.0	0.00	0.00	0
Spider mites	65000	40000	0.1	9.00	0.47	1733
Thrips	0	0	0.0	0.00	0.00	0
Beet armyworm	0	0	0.0	0.00	0.00	0
Fall armyworm	50000	0	0.0	0.00	0.00	0
Minor Pests	75000	40000	0.1	5.00	0.59	2167
Aphids	675000	500000	0.9	6.40	2.96	10833
New Pests	0	0	0.0	0.00	0.00	0
W Flower Thrips	0	0	0.0	0.00	0.00	0
Acreage harvested: 375000 Yield per acre: 0.54 Bales						
Percent Lost: 7.70 Dollars lost: 8,104,200 Cost per Acre: 16.65						

Table 25 Texas (District 4) Cotton Insect Losses for 1991						
Pest	Acres Infested	Above Treat Thresholds	# Insect Applicat	Cost of 1 Applicat	% Yield Reduction	Bales Lost
Boll Weevils	16000	9000	0.0	4.65	0.01	0
Boll/Bud worms	86000	50000	0.5	7.00	2.00	5
Fleahopper	85000	79000	1.0	4.00	1.58	4
Lygus bugs	41000	35000	0.3	6.00	0.87	2
Leaf perforator	0	0	0.0	0.00	0.00	0
Pink bollworm	0	0	0.0	0.00	0.00	0
Spider mites	5000	2000	0.0	0.00	0.00	0
Thrips	59000	43000	0.2	4.25	0.22	0
Beet armyworm	0	0	0.0	0.00	0.00	0
Fall armyworm	0	0	0.0	0.00	0.00	0

Minor Pests	0	0	0.0	0.00	0.00	0
Aphids	20000	11000	0.0	7.00	0.01	0
New Pests	0	0	0.0	0.00	0.00	0
W Flower Thrips	0	0	0.0	0.00	0.00	0
Acreage harvested: 100000 Yield per acre: 0.00 Bales						
Percent Lost: 4.69 Dollars Lost: 3,038 Cost per Acre: 10.14						

Table 26 Texas (District 6) Cotton Insect Losses for 1991

Pest	Acres Infested	Above Treat Thresholds	# Insect Applicat	Cost of 1 Applicat	% Yield Reduction	Bales Lost
Boll Weevils	60000	30000	0.1	6.50	0.74	2344
Boll/Bud worms	408000	320000	0.8	7.50	2.35	7500
Fleahopper	100000	10000	0.0	5.00	0.01	39
Lygus bugs	8000	5000	0.0	6.00	0.10	313
Leaf Perforator	0	0	0.0	0.00	0.00	0
Pink bollworm	56000	56000	0.3	7.50	0.82	2625
Spider mites	2000	2000	0.0	13.00	0.02	78
Thrips	0	0	0.0	0.00	0.00	0
Beet armyworm	160000	4000	0.0	14.00	0.04	125
Fall armyworm	0	0	0.0	0.00	0.00	0
Minor Pests	30000	4000	0.0	6.50	0.04	125
Aphids	408000	380000	1.6	10.00	6.52	20781
New Pests	0	0	0.0	0.00	0.00	0
W Flower Thrips	0	0	0.0	0.00	0.00	0
Acreage harvested: 408000 Yield per acre: 0.78 Bales						
Percent Lost: 10.64 Dollars Lost: 9,771,750 Cost per Acre: 25.15						

Table 27 Texas (District 7) Cotton Insect Losses for 1991

Pest	Acres Infested	Above Treat Thresholds	# Insect Applicat	Cost of 1 Applicat	% Yield Reduction	Bales Lost
Boll Weevils	275000	200000	2.2	6.00	5.82	10833
Boll/Bud worms	275000	175000	1.0	8.50	1.27	2370
Fleahopper	275000	75000	0.3	2.50	0.11	203
Lygus bugs	0	0	0.0	0.00	0.00	0
Leaf perforator	0	0	0.0	0.00	0.00	0
Pink bollworm	0	0	0.0	0.00	0.00	0
Spider mites	20000	5000	0.0	12.50	0.00	3
Thrips	0	0	0.0	0.00	0.00	0
Beet armyworm	100000	2000	0.0	12.00	0.00	3
Fall armyworm	15000	5000	0.0	12.50	0.00	8
Minor Pests	0	10000	0.0	0.00	0.00	7
Aphids	275000	100000	0.7	7.00	1.82	3385
New Pests	0	0	0.0	0.00	0.00	0
W Flower Thrips	0	0	0.0	0.00	0.00	0
Acreage harvested: 275000 Yield per acre: 0.68 Bales						
Percent Lost: 9.03 Dollars Lost: 4,842,338 Cost per Acre: 28.40						

Table 28 Texas (District 8) Cotton Insect Losses for 1991

Pest	Acres Infested	Above Treat Thresholds	# Insect Applicat	Cost of 1 Applicat	% Yield Reduction	Bales Lost
Boll Weevils	79000	79000	3.0	4.00	10.00	8229

Boll/Bud worms	79000	79000	3.0	10.00	15.00	12344
Fleahopper	79000	79000	1.5	4.00	8.00	6583
Lygus bugs	79000	79000	1.5	4.00	10.00	8229
Leaf perforator	30000	0	0.0	0.00	0.00	0
Pink bollworm	0	0	0.0	0.00	0.00	0
Spider mites	30000	15000	0.4	12.00	0.95	781
Thrips	79000	79000	1.5	5.00	5.00	4115
Beet armyworm	0	0	0.0	0.00	0.00	0
Fall armyworm	0	0	0.0	0.00	0.00	0
Minor Pests	0	0	0.0	0.00	0.00	0
Aphids	0	0	0.0	0.00	0.00	0
New Pests	0	0	0.0	0.00	0.00	0
W Flower Thrips	0	0	0.0	0.00	0.00	0

Acres harvested: 79000 Yield per acre: 1.04 Bales

Percent Lost: 48.95 Dollars Lost: 11,601,000 Cost per Acre: 66.06

Table 29 Texas (District 10) Cotton Insect Losses for 1991

Pest	Acres Infested	Above Treat Thresholds	# Insect Applicat	Cost of 1 Applicat	% Yield Reduction	Bales Lost
Boll Weevils	65000	32000	0.2	3.10	0.11	227
Boll/Bud worms	128000	120000	1.7	5.25	0.39	835
Fleahopper	118000	116000	0.2	1.62	1.19	2533
Lygus bugs	0	0	0.0	0.00	0.00	0
Leaf perforator	0	0	0.0	0.00	0.00	0
Pink bollworm	0	0	0.0	0.00	0.00	0
Spider mites	42000	36000	0.3	11.75	0.02	49
Thrips	125000	3500	0.0	1.10	0.00	0
Beet armyworm	0	0	0.0	0.00	0.00	0
Fall armyworm	0	0	0.0	0.00	0.00	0
Minor Pests	0	0	0.0	0.00	0.00	0
Aphids	0	0	0.0	0.00	0.00	0
New Pests	0	0	0.0	0.00	0.00	0
W Flower Thrips	0	0	0.0	0.00	0.00	0

Acres harvested: 156000 Yield per acre: 1.36 Bales

Percent Lost: 1.71 Dollars Lost: 1,049,467 Cost per Acre: 13.03

Table 30 Texas (District 11) Cotton Insect Losses for 1991

Pest	Acres Infested	Above Treat Thresholds	# Insect Applicat	Cost of 1 Applicat	% Yield Reduction	Bales Lost
Boll Weevils	111500	95200	2.3	3.00	0.95	2261
Boll/Bud worms	114500	80800	1.3	5.91	0.60	1439
Fleahopper	117600	78400	1.0	1.98	0.46	1086
Lygus bugs	84400	2000	0.0	0.00	0.00	0
Leaf perforator	0	0	0.0	0.00	0.00	0
Pink bollworm	0	0	0.0	0.00	0.00	0
Spider mites	0	0	0.0	0.00	0.00	0
Thrips	108500	57800	0.4	0.76	0.14	343
Beet armyworm	0	0	0.0	0.00	0.00	0
Fall armyworm	0	0	0.0	0.00	0.00	0
Minor Pests	90400	16400	0.0	3.84	0.01	16
Aphids	114500	61500	0.4	1.47	0.15	365
New Pests	0	0	0.0	0.00	0.00	0

W Flower Thrips	0	0	0.0	0.00	0.00	0
Acreage harvested: 120200 Yield per acre: 1.98 Bales						
Percent Lost: 2.32 Dollars Lost: 1,587,165 Cost per Acre: 17.50						

Table 31 Texas (District 12) Cotton Insect Losses for 1991

Pest	Acres Infested	Above Treat Thresholds	# Insect Applicat	Cost of 1 Applicat	% Yield Reduction	Bales Lost
Boll Weevils	360000	275000	2.3	7.25	1.50	5271
Boll/Bud worms	366000	100000	0.5	8.00	0.27	958
Fleahopper	366000	200000	0.5	4.00	0.55	1917
Lygus bugs	0	0	0.0	0.00	0.00	0
Leaf perforator	75000	10000	0.0	8.50	0.03	96
Pink bollworm	0	0	0.0	0.00	0.00	0
Spider mites	5000	1000	0.0	15.00	0.00	10
Thrips	366000	10000	0.0	7.50	0.03	96
Beet armyworm	100000	5000	0.0	9.50	0.01	48
Fall armyworm	0	0	0.0	0.00	0.00	0
Minor Pests	0	0	0.0	0.00	0.00	0
Aphids	366000	5000	0.0	5.00	0.01	48
New Pests	366000	100000	1.4	15.00	5.46	19167
W Flower Thrips	366000	10000	0.0	7.50	0.03	96
Acreage harvested: 366000 Yield per acre: 0.96 Bales						
Percent Lost: 7.90 Dollars Lost: 7,979,160 Cost per Acre: 44.56						

Table 32 Texas (District 13) Cotton Insect Losses for 1991

Pest	Acres Infested	Above Treat Thresholds	# Insect Applicat	Cost of 1 Applicat	% Yield Reduction	Bales Lost
Boll Weevils	35000	35000	13.5	5.50	22.50	12305
Boll/Bud worms	35000	35000	5.5	9.25	4.50	2461
Fleahopper	10000	5000	0.1	5.50	0.14	78
Lygus bugs	0	0	0.0	0.00	0.00	0
Leaf perforator	0	0	0.0	0.00	0.00	0
Pink bollworm	0	0	0.0	0.00	0.00	0
Spider mites	15000	6000	0.3	21.00	0.00	0
Thrips	35000	20000	0.0	0.00	0.00	0
Beet armyworm	0	0	0.0	0.00	0.00	0
Fall armyworm	0	0	0.0	0.00	0.00	0
Minor Pests	10000	0	0.0	0.00	0.00	0
Aphids	16000	4000	0.2	8.00	0.23	125
New Pests	0	0	0.0	0.00	0.00	0
W Flower Thrips	0	0	0.0	0.00	0.00	0
Acreage harvested: 35000 Yield per acre: 1.56 Bales						
Percent Lost: 27.37 Dollars Lost: 4,311,000 Cost per Acre: 132.68						

Table 33 Texas (District 14) Cotton Insect Losses for 1991

Pest	Acres Infested	Above Treat Thresholds	# Insect Applicat	Cost of 1 Applicat	% Yield Reduction	Bales Lost
Boll Weevils	372892	322498	3.1	6.04	6.04	39280
Boll/Bud worms	372892	115898	0.5	7.23	0.62	4033
Fleahopper	372892	355197	1.6	4.36	1.14	7417

Lygus bugs	186946	3748	0.0	5.00	0.00	0
Leaf perforator	10000	0	0.0	0.00	0.00	0
Pink bollworm	0	0	0.0	0.00	0.00	0
Spider mites	75000	1000	0.0	5.75	0.00	0
Thrips	373892	3000	0.0	4.05	0.00	1
Beet armyworm	152000	0	0.0	0.00	0.00	0
Fall armyworm	1600	100	0.0	5.70	0.00	0
Minor Pests	322283	41600	0.1	6.88	0.00	0
Aphids	373892	5000	0.0	4.90	0.00	0
New Pests	900	5	0.0	6.10	0.00	0
W Flower Thrips	150000	0	0.0	0.00	0.00	0

Acres harvested: 373892 Yield per acre: 1.74 Bales

Percent Lost: 7.80 Dollars Lost: 14,610,546 Cost per Acre: 30.09

Table 34 Texas (Summary) Cotton Insect Losses for 1991

Pest	Acres Infested	Above Treat Thresholds	# Insect Applicat	Cost of 1 Applicat	% Yield Reduction	Bales Lost
Boll Weevils	2094392	1352698	0.7	5.82	1.53	85975
Boll/Bud worms	5544392	3482698	1.1	9.10	1.72	96509
Fleahopper	3436492	1147597	0.2	3.75	0.36	20264
Lygus bugs	399346	124748	0.0	4.45	0.15	8544
Leaf perforator	115000	10000	0.0	8.50	0.00	96
Pink bollworm	56000	56000	0.0	7.50	0.05	2625
Spider mites	259000	108000	0.0	11.71	0.05	2655
Thrips	1191392	236300	0.0	3.95	0.09	4826
Beet armyworm	512000	11000	0.0	10.94	0.00	176
Fall armyworm	86600	5500	0.0	12.31	0.00	9
Minor Pests	529183	112100	0.0	5.87	0.04	2315
Aphids	5408392	3596500	1.5	7.81	5.94	333546
New Pests	366900	100005	0.1	15.00	0.34	19167
W Flower Thrips	516000	10000	0.0	7.50	0.00	96

Acres harvested: 5767092 Yield per acre: 0.97 Bales

Percent Lost: 10.28 Dollars Lost: 166,118,744 Cost per Acre: 29.14

Table 35 Virginia Cotton Insect Losses for 1991

Pest	Acres Infested	Above Treat Thresholds	# Insect Applicat	Cost of 1 Applicat	% Yield Reduction	Bales Lost
Boll Weevils	0	0	0.0	0.00	0.00	0
Boll/Bud worms	17500	17500	2.5	9.50	3.99	1094
Fleahopper	0	0	0.0	0.00	0.00	0
Lygus bugs	0	0	0.0	0.00	0.00	0
Leaf perforator	0	0	0.0	0.00	0.00	0
Pink bollworms	0	0	0.0	0.00	0.00	0
Spider mites	0	0	0.0	0.00	0.00	0
Thrips	0	0	0.0	0.00	0.00	0
Beet armyworm	0	0	0.0	0.00	0.00	0
Fall armyworm	0	0	0.0	0.00	0.00	0
Minor Pests	0	0	0.0	0.00	0.00	0
Aphids	4000	0	0.0	0.00	0.00	0
New Pests	0	0	0.0	0.00	0.00	0
W Flower Thrips	0	0	0.0	0.00	0.00	0

Acres harvested: 17528 Yield per acre: 0.97 Bales



Percent Lost: 3.99 Dollars Lost: 315,000 Cost per Acre: 23.71