

COTTON DISEASE LOSS ESTIMATE COMMITTEE REPORT, 2017

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Abstract

The National Cotton Council Disease Loss committee submitted estimates of the losses due to each disease during the 2017 growing season. Disease incidence estimates are determined by cotton specialists in each state discussing disease incidence observed across each state during the year. Yield losses are calculated by using the USDA “Crop Production” published at <http://usda.mannlib.cornell.edu/usda/current/CropProd/CropProd-12-12-2017.pdf> which documents cotton acreage planted, harvested, and average yields for each state. Cotton acreage is expected to total 11.5 million harvested acres, which is an increase from 2015 and 2016. Record high cotton yields are expected to average 902 pounds per acre, which is an increase of 35 pounds from 2016. Increases in cotton acres harvested are expected in Alabama, California, Oklahoma and Tennessee. Total average percent cotton disease losses were estimated at 11.79 % which is very similar to the 12.5% loss estimate of 2016. Plant parasitic nematodes were the group of pathogens responsible for the largest average percent loss estimated at 4.65% follow by seedling disease at 1.87% disease losses. Alabama suffered the greatest total disease losses of over 24% with Florida, Georgia, and Louisiana, estimating losses over 17%. This region of the cotton belt received greater than average rainfall with cool temperatures in April and May. Arizona, California, New Mexico, and Oklahoma, appeared to have the best growing conditions with the least amount of disease losses.

Table 1. Cotton disease loss estimates for the 2017 season.

Percent disease loss estimates	AL	AZ	AR	CA	FL	GA	IA	MS	MO	NM	NC	OK	SC	TN	TX	VA	Bales lost	% Bales lost
Fusarium Wilt (<i>F.o. vasinfectum</i>)	1.0		0.1	2.0	0.5	0.3	0.0	0.1	0.1	0.0	0.0	0.0	1.0	0.0	0.4	0.0		
Bales lost to Fusarium (x 1,000)	8.3	0.0	1.1	6.0	0.9	5.8	0.0	1.4	0.7	0.0	0.1	0.0	7.3	0.0	38.0	0.0	69.5	0.33
Verticillium Wilt (<i>V. dahliae</i>)	0.5		0.4	0.2	0.0	0.0	0.0	0.0	0.5	1.0	0.0	2.0	0.0	0.8	2.1	0.0		
Bales lost to Verticillium (x 1,000)	4.2	0.0	4.2	0.6	0.0	0.0	0.0	0.0	3.6	1.0	0.0	22.0	0.0	5.5	199.5	0.0	240.6	1.16
Bacterial Blight (<i>X. malvacearum</i>)	3.0		0.1	0.0	0.0	0.1	0.5	0.1	0.1	0.0	0.0	0.0	0.2	0.0	0.2	0.0		
Bales lost to Xanthomonas (x 1,000)	24.9	0.0	1.1	0.0	0.0	2.3	2.1	0.7	0.7	0.0	0.1	0.0	1.5	0.0	19.0	0.0	52.4	0.25
Root Rot (<i>P. omnivora</i>)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	2.8	0.0		
Bales lost to Rhizoctonia (x 1,000)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	266.0	0.0	268.2	1.29
Seedling Diseases (Rhizoctonia & Etc)	8.0		2.5	1.5	0.3	0.5	2.0	1.1	2.5	0.5	2.0	0.1	1.0	4.0	1.8	2.0		
Bales lost to seedling disease (x 1,000)	66.4	0.0	26.5	4.5	0.5	11.5	8.4	15.5	18.1	0.5	14.2	1.1	7.3	29.2	171.0	4.2	378.9	1.82
Ascochyia Blight (<i>A. gossypii</i>)	0.1		0.0	0.0	2.0	0.0	0.1	0.0	0.0	0.0	0.5	0.0	0.1	0.5	0.0	0.1		
Bales lost to Ascochyia (x 1,000)	0.8	0.0	0.0	0.0	3.6	0.0	0.4	0.0	0.0	0.0	3.6	0.0	0.7	3.7	0.0	0.2	13.0	0.06
Boil Rot (Rhizopus, etc.)	1.0		1.2	0.0	4.0	5.0	5.0	0.7	1.0	0.0	3.0	0.2	0.2	1.0	1.0	3.0		
Bales lost to Rhizopus (x 1,000)	8.3	0.0	12.7	0.0	7.2	115.0	21.0	9.9	7.3	0.0	21.3	2.2	1.1	7.3	95.0	6.2	314.5	1.51
Nematodes (All)	10.2		4.1	0.1	9.5	10.0	7.0	7.5	4.3	0.5	4.0	0.1	10.0	2.6	3.1	4.0		
Bales lost to Nematodes (x 1,000)	84.7	0.0	43.5	0.3	17.1	230.0	29.4	105.8	31.2	0.5	28.4	1.1	73.0	19.0	294.5	8.3	966.6	4.65
Nematodes (Metolodyne spp.)	6.0		2.0	0.1	7.0	8.0	3.5	2.0	2.0	0.5	3.0	0.1	4.0	0.0	2.6	2.0		
Bales lost to Metolodyne (x 1,000)	49.8	0.0	21.2	0.3	12.6	184.0	14.7	28.2	14.5	0.5	21.3	1.1	29.2	0.1	247.0	4.2	628.6	3.02
Nematodes (Rotylenchulus reniformis)	4.0		2.0	0.0	2.0	1.0	3.5	5.0	2.0	0.0	0.5	0.0	2.0	2.5	0.5	0.0		
Bales lost to Reniform (x 1,000)	33.2	0.0	21.2	0.0	3.6	23.0	14.7	70.5	14.5	0.0	3.6	0.0	14.6	18.3	47.5	0.0	264.6	1.27
Nematodes (Other spp.)	0.2		0.1	0.0	0.5	1.0	0.0	0.5	0.1	0.0	0.2	0.0	4.0	0.0	0.0	2.0		
Bales lost to other Nematodes (x 1,000)	1.7	0.0	1.1	0.0	0.9	23.0	0.0	7.1	0.7	0.0	1.4	0.0	29.2	0.0	0.0	4.2	69.2	0.33
Leaf Spots & Others	0.5		0.3	0.0	3.0	2.0	3.0	2.3	0.2	0.0	1.0	0.5	0.1	0.7	0.3	0.5		
Bales lost to Leaf spots & Others (x 1,000)	4.2	0.0	3.2	0.0	5.4	46.0	12.6	32.4	1.5	0.0	7.1	5.5	0.7	5.1	28.5	1.0	153.2	0.74
Total Percent lost	24.3	0.0	8.7	3.8	19.3	17.9	17.6	11.8	8.5	2.0	10.2	3.1	12.6	9.5	11.7	9.6		
Total Bales lost (x 1,000)	201.7	0.0	92.2	11.4	34.7	410.6	73.9	165.7	61.6	2.0	72.6	34.1	91.6	69.1	1111.5	20.0	2452.7	11.79
Total Yield in Bales (x 1,000) (USDA Dec'17)	830	505	1060	300	180	2300	420	1410	725	100	710	1100	730	730	9500	208	20808	