

**COTTON DISEASE LOSS ESTIMATE COMMITTEE REPORT, 2016**

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**Abstract**

The National Cotton Council Disease Loss committee submitted estimates of the losses due to each disease during the 2016 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-12-09-2016.pdf> which documents cotton acreage planted, harvested, and average yields for each state. Cotton acreage harvested is expected to total 9.46 million acres, which is an increase of 19 % from 2015. Record high upland cotton yields were expected in Alabama, California, Oklahoma and Tennessee. Total average percent loss was estimated at 12.5%, which is up 3.3 % from 2015.

Plant parasitic nematodes were the group of pathogens responsible for the largest average percent loss estimated at 4.30% follow by boll rots at 3.07% disease losses. Missouri suffered the greatest total disease losses of over 20%. Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, South Carolina, Tennessee, Texas and Virginia all estimated losses over 10%. Arizona, California, New Mexico, and Oklahoma, appeared to have the best growing conditions with the least amount of disease losses. In Oklahoma the largest disease loss, this year was due to bacterial blight. This disease was reported from most of the 90,000 irrigated acreage in the state. Based on the USDA Planted

Varieties Survey for 2016, about 67,500 irrigated acres were planted to susceptible varieties dominated mostly by DP 1522 B2XF and NG 3406 B2XF. In severely infected fields, producers lost up to a bale/acre based on their estimates when comparing yields from resistant varieties (mostly DP 1518 B2XF) planted in nearby fields.

Table 1. Cotton disease loss estimate percentages by state for the 2016 season.																		
Percent disease loss estimates, 2016.	AL	AZ	AR	CA	FL	GA	LA	MS	MO	NM	NC	OK	SC	TN	TX	VA	Bales lost	% Bales lost
Fusarium Wilt (F.o. vasinfectum)	1.0	0.0	0.3	1.8	0.0	0.1	0.0	0.1	0.1	0		0.0	1.5	0.5	0.3	0.0		0.35
Bales lost to Fusarium (x 1,000)	7.1	0.0	2.5	4.6	0.0	2.3	0.0	1.1	0.6	0.0		0.0	4.4	2.8	22.2	0.0	47.4	
Verticillium Wilt (V. dahliae)	1.0	1.5	0.1	0.3	0.0	0.0	0.0	0.0	0.1	1		0.8	0.0	0.5	2.2	0.0		0.47
Bales lost to Verticillium (x 1,000)	7.1	5.4	0.8	0.8	0.0	0.0	0.0	0.0	0.6	0.9		4.2	0.0	2.8	162.8	0.0	185.4	
Bacterial Blight (X. malvacearum)	0.2	0.0	0.1	0.0	0.0	0.5	0.8	0.1	2.0	0.5		2.5	0.1	0.0	0.2	0.0		0.44
Bales lost to Xanthomonas (x 1,000)	1.4	0.0	0.8	0.0	0.0	11.3	2.2	1.1	11.3	0.4		14.1	0.3	0.1	14.8	0.0	57.8	
Root Rot (P. omnivora )	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0		0.2	0.0	0.0	3.0	0.0		0.33
Bales lost to Phymatotrichopsis (x 1,000)	0.0	7.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		1.1	0.0	0.0	222.0	0.0	230.3	
Seedling Diseases (Rhizoctonia & Etc.)	2.0	0.5	2.5	1.3	0.2	1.0	1.0	1.5	0.1	0.5		0.1	2.0	4.0	1.8	3.0		1.40
Bales lost to Seedling disease (x 1,000)	14.2	1.8	20.8	3.3	0.4	22.5	2.7	16.5	0.6	0.4		0.6	5.8	22.6	133.2	3.0	248.2	
Ascochyta Blight (A. gossypii)	0.5	0.0	0.1	0.0	1.0	trace	0.1	0.0	0.0	0		0.0	0.1	1.0	0.0	0.1		0.21
Bales lost to Ascochyta (x 1,000)	3.6	0.0	0.4	0.0	1.8	0.0	0.3	0.0	0.0	0.0		0.0	0.3	5.7	0.0	0.1	12.1	
Boll Rots (Rhizopus, etc.)	4.0	0.1	2.5	0.0	5.0	2.5	6.0	1.5	6.0	0.5		0.1	0.3	2.0	0.7	3.0		3.07
Bales lost to Rhizopus (x 1,000)	28.4	0.4	20.8	0.0	9.0	56.3	16.2	16.5	33.9	0.4		0.6	0.7	11.3	51.8	3.0	249.2	
Nematodes (All)	6.0	3.0	4.2	0.1	7.1	8.5	6.0	7.5	4.0	0.5		0.2	8.0	2.6	2.9	5.0		4.30
Bales lost to Nematodes (x 1,000)	42.6	10.8	34.9	0.3	12.8	191.3	16.2	82.5	22.6	0.4		1.1	23.2	14.7	214.6	5.1	672.9	
Nematodes (Meloidogyne spp.)	2.0	3.0	2.0	0.1	5.5	6.0	3.0	2.0	0.0	0.5		0.2	3.0	0.1	2.5	2.0		2.15
Bales lost to Meloidogyne (x 1,000)	14.2	10.8	16.6	0.3	9.9	135.0	8.1	22.0	0.0	0.4		1.1	8.7	0.6	185.0	2.0	414.7	
Nematodes (Reniform reniformis)	4.0	0.0	2.0	0.0	1.5	2.0	3.0	5.0	0.0	0		0.0	2.0	2.5	0.4	0.0		1.43
Bales lost to Reniform (x 1,000)	28.4	0.0	16.6	0.0	2.7	45.0	8.1	55.0	0.0	0.0		0.0	5.8	14.1	29.6	0.0	205.3	
Nematodes (Other spp.)	0.5	0.0	0.2	0.0	0.1	0.5	0.0	0.5	0.0	0		0.0	3.0	0.0	0.0	3.0		0.50
Bales lost to other Nematodes (x 1,000)	3.6	0.0	1.7	0.0	0.2	11.3	0.0	5.5	0.0	0.0		0.0	8.7	0.0	0.0	3.0	33.9	
Leaf Spots & Others	3.0	0.5	1.5	0.0	2.5	0.3	4.0	3.2	8.0	0		0.5	0.1	2.0	0.2	0.5		1.68
Bales lost to Leafspots & Others (x 1,000)	21.3	1.8	12.5	0.0	4.5	6.8	10.8	35.2	45.2	0.0		2.8	0.3	11.3	14.8	0.5	167.7	
Total Percent Lost	17.7	7.6	11.3	3.4	15.8	12.9	17.9	13.9	20.3	3.0		4.4	12.1	12.6	11.3	11.6		12.24
Total Bales Lost (x 1,000)	125.7	27.4	93.4	8.8	28.4	290.3	48.3	152.9	114.7	2.6		24.6	34.9	71.2	836.2	11.7	1871.1	
Total Yield in Bales (x 1,000) (USDA Nov'16)	710	360	830	260	180	2250	270	1100	565	85		565	290	565	7400	101	15531	