COTTON DISEASE LOSS ESTIMATE COMMITTEE REPORT, 2015

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Abstract

The National Cotton Council Disease Loss committee submitted estimates of the losses due to each disease during the 2015 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 www.usda.gov/nass/PUBS/TODAYRPT/crop1115.pdf which documents cotton acreage planted, harvested, and average yields for each state. Total average percent loss was estimated at 9.18% which is down 2 % from 2014. Plant parasitic nematodes were the group of pathogens responsible for the largest average percent loss estimated at 3.42% down from the previous year. Alabama and North Carolina, suffered the greatest total disease losses of over 20%. California, Florida, Georgia, Louisiana, Mississippi, Tennessee, Texas and Virginia all estimated losses over 10%. Missouri, New Mexico, and Oklahoma, appeared to have the best growing conditions with the least amount of disease losses. South Carolina suffered extreme environmental stress three times during the season. Extremely dry conditions early in the growing season prevented development of any foliar diseases. During the drought plant stress in many fields was higher than normal and this meant that nematode-induced yield losses were projected to be higher than normal. However, the October flood and subsequent rainy weather literally destroyed many fields and separating any yield losses from diseases from those caused by the floods would be inappropriate.

Table 1. Cotton disease loss estimates for the 2015 season.																		
Percent disease loss estimates	**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	0.2	1.7	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.5	0.2	0.0		0.24
Bales lost to Fusarium (x 1,000)	3.8	0.0	0.9	6.0	0.0	1.2	0.0	0.6	0.4	0.0	0.0	0.0	0.0	1.5	6.3	0.0	20.7	
Verticillium Wilt (V. dahliae)	1.5	1.5	0.1	0.4	0.0	0.0	0.0	trace	0.1	1.0	0.0	1.0	0.0	0.5	1.2	0.0		0.46
Bales lost to Verticillium (x 1,000)	5.7	2.1	0.5	1.4	0.0	0.0	0.0	0.0	0.4	0.0	0.0	1.3	0.0	1.5	37.7	0.0	50.5	
Bacterial Blight (X. malvacearum)	1.0	0.0	0.5	0.0	0.0	0.2	0.3	0.3	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.0		0.16
Bales lost to Xanthomonas (x 1,000)	3.8	0.0	2.3	0.0	0.0	2.4	0.6	1.7	0.0	0.0	0.0	0.1	0.0	0.0	6.3	0.0	17.2	
Root Rot (P. omnivora)	0.0	1.5	0.0	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		0.29
Bales lost to Phymatotrichopsis (x 1,000)	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	94.2	0.0	96.5	
Seedling Diseases (Rhizoctonia & Etc.)	5.0	0.5	2.5	1.0	0.2	1.0	1.5	1.3	0.1	0.5	1.0	0.1	0.0	5.0	2.6	2.0		1.52
Bales lost to Seedling disease (x 1,000)	18.9	0.7	11.7	3.5	0.1	11.9	2.8	7.5	0.4	0.0	4.1	0.1	0.0	14.9	81.6	2.4	160.7	
Ascochyta Blight (A. gossypii)	0.5	0.0	0.0	0.0	1.0	trace	0.1	trace	0.0	0.0	0.5	0.0	0.0	0.5	0.1	0.1		0.1
Bales lost to Ascochyta (x 1,000)	1.9	0.0	0.0	0.0	0.7	0.0	0.2	0.0	0.0	0.0	2.1	0.0	0.0	1.5	3.1	0.1	9.6	
Boll Rots (Rhizopus, etc.)	4.0	0.1	1.0	0.0	4.0	4.0	0.5	0.3	0.0	0.0	15.0	0.0	0.0	1.0	0.5	5.0		2.4
Bales lost to Rhizopus (x 1,000)	15.1	0.1	4.7	0.0	2.7	47.7	0.9	1.7	0.0	0.0	61.7	0.0	0.0	3.0	15.7	6.0	159.4	
Nematodes (All)	6.5	2.5	4.2	0.1	4.0	10.0	6.0	7.9	0.1	0.5	3.2	0.2	0.0	2.8	2.8	4.0		3.4
Bales lost to Nematodes (x 1,000)	24.5	3.6	19.6	0.4	2.7	119.3	11.3	45.5	0.4	0.0	13.2	0.3	0.0	8.2	87.9	4.8	341.6	
Nematodes (Meloidogyne spp.)	2.0	2.5	2.0	0.1	3.0	7.5	3.0	1.6	0.0	0.5	2.5	0.2	0.0	0.0	2.4	2.0		1.8
Bales lost to Meloidogyne (x 1,000)	7.5	3.6	9.3	0.4	2.0	89.5	5.7	9.2	0.0	0.0	10.3	0.3	0.0	0.0	75.3	2.4	215.5	
Nematodes (Reniform reniformis)	4.0	0.0	2.0	0.0	1.0	2.0	3.0	5.8	0.1	0.0	0.5	0.0	0.0	2.8	0.4	0.0		1.3
Bales lost to Reniform (x 1,000)	15.1	0.0	9.3	0.0	0.7	23.9	5.7	33.4	0.4	0.0	2.1	0.0	0.0	8.2	12.6	0.0	111.2	
Nematodes (Other spp.)	0.5	0.0	0.2	0.0	0.0	0.5	0.0	0.5	0.0	0.0	0.2	0.0	0.0	0.0	0.0	2.0		0.2
Bales lost to other Nematodes (x 1,000)	1.9	0.0	0.9	0.0	0.0	6.0	0.0	2.9	0.0	0.0	0.8	0.0	0.0	0.0	0.0	2.4	14.9	
Leaf Spots & Others	1.0	0.2	1.0	0.0	2.5	0.5	2.0	2.0	0.0	0.0	0.5	0.5	0.0	0.7	0.1	0.1		0.6
Bales lost to Leaf spots & Others (x 1,000)	3.8	0.3	4.7	0.0	1.7	6.0	3.8	11.5	0.0	0.0	2.1	0.6	0.0	2.1	3.1	0.1	39.7	
Total Percent Lost	20.5	6.3	9.5	3.2	11.7	15.8	10.4	11.9	0.4	2.0	20.2	2.1	0.0	11.0	10.7	11.2		9.1
Total Bales Lost (x 1,000)	**77.3**	**9.0**	**44.3**	**11.3**	**8.0**	**188.5**	**19.6**	**68.5**	**1.6**	**0.1**	**83.2**	**2.7**	**0.0**	**32.7**	**335.8**	**13.5**	**896.1**	
Total Yield in Bales (x 1,000) (USDA Nov'15)	**377**	**142**	**467**	**353**	**68**	**1193**	**189**	**576**	**397**	**4**	**411**	**128**	**77**	**298**	**3138**	**121**	**7939.1**	