

## REPORT OF THE BACTERIAL BLIGHT COMMITTEE FOR THE 2019 YEAR

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### Abstract

Most states plant the majority of cotton acres with blight resistant varieties. States where at least 40% of the acres are planted with blight susceptible varieties included FL (59%), NM (50%), and TN (54%). Popular blight susceptible varieties planted in these states included Croplan 9608B3XF, DynaGro 3385B2XF, DP 1522B2XF, DP 1725B2XF, and ST 5818GLT. The most popular blight resistant (partial) variety planted in the U.S. is DP 1646B2XF.

### Introduction

Cotton in the U.S. can be infected with *Xanthomonas citri* subsp. *malvacearum*, causing bacterial blight disease. The primary method of control is by use of resistant varieties. In 2005 most cotton acres in Texas, Georgia, and Mississippi were planted with blight resistant varieties (Fig. 1, compiled by T. Wheeler). With the loss of Bollguard I varieties that were resistant to bacterial blight, and the replacement of bollguard II varieties that were mostly susceptible to bacterial blight, the percent of acres rose, that were planted with blight susceptible varieties. Costly epidemics of bacterial blight occurred in the midsouth starting in 2011 and increased in incidence and severity over the next five years. Producers began to plant more blight resistant varieties starting around 2017 and that trend has continued through 2019.

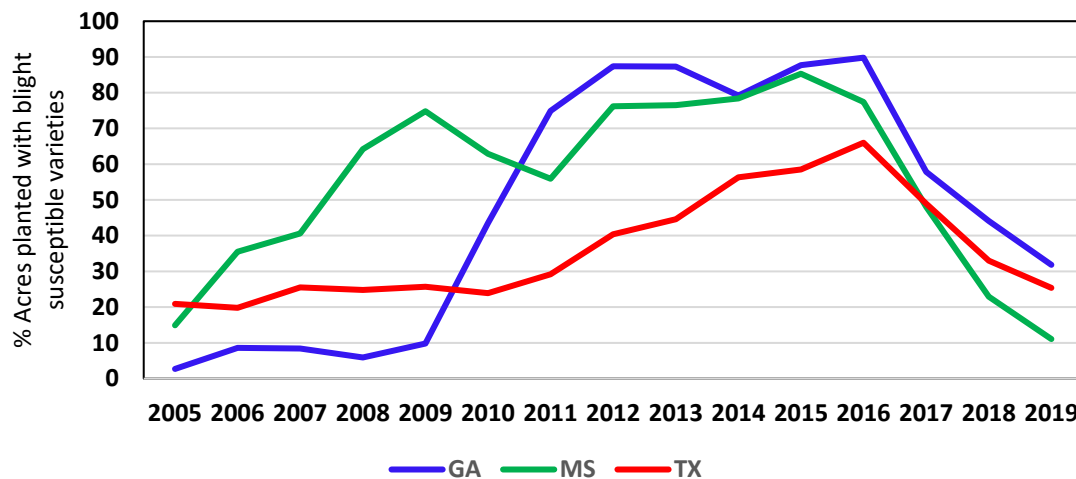


Figure 1. The percent of acres planted to blight susceptible varieties in GA, MS, and TX.

### Materials and Methods

Annually the U.S. Dept. of Agriculture, Agricultural Marketing Service – Cotton and Tobacco Program distributes an estimate of the cotton varieties planted for each year. The data from this report is entered into Excel and each variety is identified as resistant, susceptible, or unknown with regards to its response to bacterial blight. The percent of each of these categories is summed for each state and presented.

### Results and Discussion

States planting the highest number of acres with blight resistant varieties included KS (90%), MS (89%), LA (88%), and OK (87%) (Table 1). States planting the highest number of acres with susceptible varieties included FL (59%), NM (50%), and TN (54%). The most popular variety with blight resistance was DP 1646B2XF. In FL, NM, and TN, popular bacterial blight susceptible varieties were Croplan 9608B3XF, DynaGro 3385B2XF, DP 1522B2XF, DP 1725B2XF, and ST 5818GLT.

Table 1. Bacterial blight ratings for upland cotton cultivars in 2019.

State	% Blight resistant	% Blight susceptible	% Unknown
AL	75.2	24.2	0.0
AR	71.1	28.9	0.0
AZ	67.5	31.2	0.0
CA	37.2	11.8	51.0
FL	41.3	58.7	0.0
GA	67.6	31.5	0.8
KS	89.7	10.3	0.0
LA	88.2	8.2	3.5
MO	73.5	26.2	0.2
MS	88.5	11.0	0.5
NC	78.2	19.1	2.2
NM	50.5	49.5	0.0
OK	87.4	12.7	0.0
SC	76.4	20.7	2.8
TN	45.5	53.6	0.8
TX	73.3	25.0	1.5
VA	79.1	20.1	0.4