Bacterial Blight in Texas in 2015

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Bacterial blight was identified for the first time on cotton varieties in Texas that are resistant to race 18. Reports first surfaced in South Texas, though initial samples that were sent to Lubbock were only from susceptible cotton varieties. Some of the reports had indicated symptoms occurring on resistant varieties. Isolates of *Xanthomonas* were easy to obtain from one location, but uncharacteristically difficult from a second location in South Texas. A second wave of disease occurred in South Texas, and this time symptoms were found on resistant varieties like Fibermax (FM) 958. Only one colony of *Xanthomonas* was isolated from diseased leaves, in spite of the samples being in excellent condition. In late July, a producer near Plains, TX indicated that a large swath in his cotton field planted with bacterial blight resistant FM 1830GLT had defoliated. The field was checked one week later, and most of the lesions from the resistant cotton varieties had fallen off the leaves, while the disease was proliferating on susceptible varieties planted in a test in the field. Only one colony of *Xanthomonas* was isolated from this Plains site, despite plating out separately over 100 individual colonies. The field was resampled later in the summer to try and obtain more isolates, but all colonies of *Xanthomonas* were contaminated with a second bacterium, that had what appeared to be tremendous production of polysaccharides, and no isolates of *Xanthomonas* could be separated. Additional sites in Texas were found with bacterial blight symptoms in Garden City, Lubbock (five different sites), Ropesville, Amherst, Halfway (two sites, and multiple varieties), and Dawson county (two sites). *Xanthomonas* isolates were obtained from all these sites, though it was necessary to go back and try to reisolate from older leaves near the end of the summer at one site in Lubbock and Ropesville, because of either contamination with the second bacterium, or no viable colonies of *Xanthomonas* were found with the first isolations. Isolates were obtained on bacterial blight resistant varieties in Lubbock (one site, FM 1830GLT), Halfway (FM 1911GLT; Phytogen [PHY] 333W3FE), and Amherst (FM 1830GLT). In all, over 100 isolates of the bacterial blight organism were obtained, and tested on a set of varieties in the greenhouse during the fall and winter. None of these isolates appeared to be a new race. There was no consistent disease on the varieties that were resistant to race 18 (FM 1830GLT, FM 2484B2F, and PHY 375WRF). In the cases where water soaking symptoms did occur on the resistant varieties, it was rare and not repeatable. It was probably due to either seed which was not 100% characteristic of the variety or someone made a mistake in the trial with labeling varieties. A new race should be able to consistently produce disease symptoms on the resistant (to race 18) varieties. Currently, the cause of disease symptoms for the first time on resistant varieties is not known. Possibly an interaction occurred with a second bacterium, resulting in some initial infection, but little to no buildup within the resistant plants. There did not appear to be any yield loss associated with disease in resistant plants.