

BOLLGARD® II COTTON TECHNICAL REVIEW
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Abstract

Bollgard® II cotton was developed by inserting the *cry2Ab* gene into DP50B Bollgard cotton containing the *cry1Ac* gene. The combination of the *cry2Ab* and *cry1Ac* genes show promise for improved insect efficacy and an increased spectrum of control. Tobacco budworm, cotton bollworm and pink bollworm are more susceptible to the Cry1Ac protein than to Cry2Ab whereas fall armyworm, beet armyworm, cabbage looper and soybean looper are more susceptible to Cry2Ab than to Cry1Ac. In-plant expression of Cry2Ab is approximately 10-times higher than for Cry1Ac resulting in an efficacy contribution that is equal to or greater than Cry1Ac on the important lepidopteran insects in U.S. cotton production. Field efficacy results show good to excellent control of all economically important lepidopteran insects in U.S. cotton production with Bollgard II cotton. U.S. regulatory approval is anticipated in time for a small commercial launch in 2002. The greater grower value from the increased efficacy and improved spectrum of control means that Bollgard cotton will likely be phased out and completely replaced with Bollgard II cotton, a process that will take several years. Bollgard II cotton has been broadly licensed to U.S. cotton seed companies and is actively being introgressed into their elite varieties. Bollgard II cotton varieties will also be available containing the Roundup Ready® gene.