

WIDESTRIKE 3™ – A PERFORMANCE AND STATUS REPORT FROM DOW AGROSCIENCES

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Abstract

WideStrike™ is the trademark of Dow AgroSciences dual gene insect protected cotton. It expresses the Cry1F and Cry1Ac proteins from *Bacillus thuringiensis* (Bt). WideStrike was first introduced in the U.S. in 2004 and has been deregulated in Brazil and Australia and extensively tested in Argentina, India, and Mexico where it has consistently performed against a wide range of Lepidopteran pests. A testament to its efficacy and value to U.S. cotton farmers has been its steadily increasing market share since introduction. The performance of WideStrike has been extremely consistent but like all Bt technologies, growers have been encouraged to continue to scout and treat if needed, and rare supplemental sprays have been needed for extremely high populations or secondary pests. There has also been a continuing concern of durability or resistance developing in target pests with all Bt technologies. To address the durability concerns, consistency, and broaden the spectrum, Dow AgroSciences acquired a license to Syngenta's Vip3A gene and prepared a breeding stack with WideStrike coined WideStrike 3.

WideStrike 3 cotton varieties were tested for efficacy by Dow AgroSciences field scientists and select university cooperators in 31 regulated field trials from 2011 to 2013. When insect pressure was average, no difference in performance was detected. However, in 11 high pressure sites, WideStrike 3 was numerically more consistent and provided greater insect protection from high levels of *Helicoverpa zea* (cotton bollworm) attacks. Yield values were also greater in WideStrike 3 varieties than comparable WideStrike varieties. In five experiments using caged *Spodoptera exigua* (beet armyworm), WideStrike 3 was statistically superior to WideStrike and provided dramatic protection from defoliation. WideStrike 3 received U.S. deregulation during 2013, and a limited launch in elite PhytoGen cotton varieties is expected in 2014. Details on the efficacy trials will be provided in the oral presentation.

WideStrike and PhytoGen are trademarks of the Dow Chemical company.