

BELTWIDE REVIEW OF VALOR SX WEED CONTROL IN ROUNDUP READY COTTON

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Abstract

Valent U.S.A. Corporation is developing Valor® SX as a post-directed herbicide for use in cotton for both postemergence and residual weed control. Registration is expected the 1st quarter of 2004. Valor SX will be marketed as Valor SX Herbicide and Chateau™ Herbicide SW. Rates of these 51% WDG formulations for this use will be 1 to 2 oz. per acre. Valor SX is an N-phenylphthalimide herbicide. The mode of action in this family of chemistry is believed to be inhibition of protoporphyrinogen oxidase, an enzyme important in chlorophyll synthesis. Valor SX is currently registered for use in burndown and fallow bed programs, and is commonly combined with glyphosate prior to planting cotton. University weed scientists began field research studies on post-directed applications in 1998. This paper summarizes treatments from research across the cotton-growing belt of the United States.

In burndown applications, the addition of Valor SX at 2 oz./A provided residual control of pigweed sp., marehail, Florida beggerweed, eclipta, and ivyleaf morningglory. The use of air induction nozzles significantly reduced post emergent efficacy of Valor SX tank-mixes in burndown applications on certain weeds. Combinations of Valor SX, at 2 oz./A, + MSMA, Caporal, or glyphosate applied post directed resulted in 95% or greater control of the following broadleaf weeds: Pitted, entireleaf, and ivyleaf morningglory, hemp sesbania, common cocklebur, Palmer amaranth, spotted spurge, prickly sida, Florida beggerweed, lambsquarters, and sicklepod. The addition of Valor SX to glyphosate in either burndown or post directed applications significantly improved residual weed control over glyphosate applied alone.