

**INVESTIGATIONS INTO THE EFFECTS OF TANK MIX PARTNERS ON THE EFFICACY AND  
BEHAVIOR OF SAFLUFENACIL IN GLYPHOSATE RESISTANT HORSEWEED (*CONYZA  
CANADENSIS*)**

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**Abstract**

With glyphosate resistant (GR) marestail (*Conyza Canadensis*) continuing to pose problems for growers in the state of Tennessee, growers are always looking for new tools to be available in their herbicide arsenal to combat this troublesome weed. With Sharpen (a.i. saflufenacil) being available for 2010 growing season investigations during the 2009 growing season were conducted on cotton, in a burndown situation, to determine how this product works with other common burndown a.i. such as Glyphosate, Glufosinate, and Paraquat. This investigation was conducted to determine synergistic or antagonistic effects at labeled 1X use rate of the burndown herbicides when mixed at 0.25 oz/a, 0.5 oz/a, 1.0 oz/a, 2.0 oz/a rates of Sharpen. Crop injury, stand counts, and lint yield were taken to more accurately evaluate crop safety with yield data to further identify possible injury not seen by visual means. Treatments were put out at 7 DBP with Round-up Weathermax mixed with Clarity as the industry standard used for comparison. Results were that Sharpen at the 1 oz/a rate by itself did not provide acceptable control on marestail, though when tank mixed with each of the other common burn down herbicides at 1X use rates and Sharpen at 1 oz/a, greater than 95% control was achieved with no visual crop injury past the second true leaf.