

PREPLANT APPLICATION OF SAFLUFENACIL FOR BROADLEAF WEED CONTROL IN CEREALS. Siyuan Tan, Mark Oostlander, Leo Charvat, Glen Forster, Lyle Drew, John O'Barr and Sam Willingham, Biologists, BASF Corporation, Research Triangle Park, NC 27709, USA and BASF Canada Inc., Mississauga, ON L5R 4H1, Canada.

The efficacy of a new developmental herbicide, saflufenacil, was tested in combination with glyphosate as a preplant treatment prior to cereal crops and as a chemfallow treatment. Trials were conducted from 2004 to 2008 in all the major ecozones of Western Canada, and across the cereal growing regions of the United States. Saflufenacil applied at rates from 18 to 50 g ai/ha, in combination with glyphosate at 450 or 840 g ae/ha provided excellent control of broadleaf weeds, including glyphosate tolerant species, in a preplant and chemfallow use pattern. Saflufenacil at the lower rate of 18 g ai/ha + glyphosate provided excellent burndown control of all evaluated broadleaf weeds. Increasing the rate to 50 g ai/ha provided residual activity on species such as wild mustard (*Sinapis arvensis*) and wild buckwheat (*Polygonum convolvulus*). Cereal tolerance to saflufenacil was assessed at rates from 18 to 100 g ai/ha over a wide range of climates and soil conditions. Cereals (bread wheat, durum wheat, barley, oats) showed excellent tolerance to saflufenacil at rates up to 100 g/ha.