

**JOHNSONGRASS CONTROL IS ANTAGONIZED  
BY BUCTRIL-GRAMINICIDE COMBINATIONS**

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graminicides. Buctril antagonized Assure II more severely than Fusilade DX, with antagonism for both graminicides greater than for Select.

**Abstract**

Eight experiments were conducted in 1994 and 1995 in Louisiana to evaluate interactions associated with use of Buctril (bromoxynil) and Assure II (quizalofop-P), Fusilade DX (fluazifop-P), or Select (clethodim) in respect to rhizome johnsongrass [*Sorghum halepense* (L.) Pers.] control. Treatments consisted of Buctril at 1.5 lbs ai/A applied 7, 3, and 1 d before; in tank mixture with; or 1, 3, and 7 d after application of Assure II (0.07 lb ai/A), Fusilade DX (0.19 lb ai/A), and Select (0.13 lb ai/A). Graminicides were applied on the same day. Visual estimates of percent johnsongrass control were recorded 14 and 28 d after treatment (DAT). Data were also expressed as a percent of the control (percent of graminicide check) obtained with each individual graminicide applied alone. Data were subjected to analysis of variance and means were separated using Fisher's Protected LSD ( $P \leq 0.05$ ).

The interaction of graminicide by sequence of application was significant. However, the interaction of graminicide by sequence of application by experiment was not significant. At 14 DAT, Buctril applied 1 d before, tank mixed with, or 1 d after Assure II reduced johnsongrass control 23, 49, and 11%, respectively, compared with Assure II applied alone. Likewise, Buctril reduced johnsongrass control with Fusilade DX 24, 35, and 18% at these same timings. In contrast, Buctril reduced johnsongrass control 11% when tank mixed with Select, but not when applied at least 1 day prior to or following the graminicide application. At 28 DAT, Buctril applied 3 or 1 d before, tank mixed with, or 1 d after application of Assure II reduced johnsongrass control 9, 28, 55, and 13%, respectively. A similar response with Fusilade DX was noted with reductions in johnsongrass control of 10, 24, 36, and 17, respectively. Additionally, Buctril applied 3 d after Fusilade DX also reduced johnsongrass control 12%. Buctril tank mixed or applied 1 d after Select reduced johnsongrass control 20 and 7%, respectively. Applying Buctril prior to Select did not reduce control. These data indicate that tank mixing Buctril with Assure II, Fusilade DX, or Select can result in reduced johnsongrass control, and that sequential applications of Buctril and graminicides are needed to reduce antagonism. Although a 3 d interval was needed to eliminate the reduction in johnsongrass control, cotton (*Gossypium hirsutum* L.) yield was reduced only when Buctril was tank mixed or applied within 1 d of all