

**CGA-362622 INTERACTIONS WITH COTTON PESTICIDES**  
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**Abstract**

Four field studies were conducted over two years at the Plant Science Research Center, Starkville, MS, and the Black Belt Branch Experiment Station, Brooksville, MS, to evaluate johnsongrass (*Sorghum halepense* (L.) Pers.) control with tank mixtures and sequential applications of CGA-362622 and the graminicides clethodim, fluazifop, and quizalofop. CGA-362622 at 2.15 g ai/A was applied 7, 3, and 1 day before, mixed with, or 1, 3, and 7 days after application of 56.75 g ai/A clethodim, 85.35 g ai/A fluazifop, and 31.32 g ai/A quizalofop. Each graminicide was also applied alone. Graminicides were all applied on the same day to minimize environmental effects on efficacy. Visual estimates of control were recorded and then converted to a percent of that achieved with each respective graminicide alone. Data were expressed in this manner to minimize differences due to environmental conditions or johnsongrass growth stages among locations. Johnsongrass control 30 days after treatment (DAT), with each graminicide, was reduced 24 to 37% when tankmixed with CGA-362622. Tank mixtures with quizalofop resulted in 37% antagonism 30 DAT, which was greater than for any other graminicide. Conversely, tank mixtures with fluazifop resulted in 24% antagonism, which was the least of any graminicide. Generally, johnsongrass control was reduced more when CGA-362622 was applied prior to graminicide applications than when applied after. The level of johnsongrass control increased when CGA-362622 was applied 3 to 7 days after graminicide applications. This may be due to the additional efficacy from the CGA-362622 on johnsongrass. It appears that it is better to apply the graminicide before CGA-362622 than after, and it is best to wait at least 3 days after the graminicide application before applying CGA-362622.

In related research, CGA-362622 at 2.15 g ai/A was applied 24, 8, 4, 2, 1, and 0.5 hour before, immediately after (0 to 5 min), or 0.5, 1, 2, 4, 8, and 24 hour after application of 349.58 g ai/A malathion applied ULV, per the Boll Weevil Eradication Program. These data indicated that applications of CGA-362622 before or after an ULV application of malathion results in no detrimental interaction to cotton. There was no visual injury noticed for any of the treatments, and the application of CGA-362622 at any of the timings did not affect yield. This should help address concerns over herbicide/insecticide interaction potentials in areas enrolled in Boll Weevil Eradication Programs.