

**CGA 362622 FOR EARLY POSTEMERGENCE
WEED CONTROL IN COTTON
Andy Kendig and Anthony Ohmes
University of Missouri Delta Center
Portageville, MO**

Abstract

Three studies were conducted with the experimental Novartis/Syngenta postemergence herbicide CGA362622 (362): 1) A multi species weed control screen; 2) evaluation of 362 in a program with various rates of preemergence Cotoran (flumeturon) and post-directed herbicides; and 3) 362 tank mixtures with grass-controlling herbicides

In the multispecies screen, 362 was applied at 0.0067 lb ai/A preemergence (PRE) and postemergence (POST) with 0.25% nonionic surfactant to rows of rice, grain sorghum, corn, soybean, cotton, large crabgrass, barnyardgrass, broadleaf signalgrass, giant foxtail, shattercane, johnsongrass, smooth pigweed, Palmer amaranth, velvetleaf, prickly sida, sicklepod, pitted morningglory, ivyleaf and entireleaf morningglory, hemp sesbania, and jimsonweed. Preemergence 362 provided 10 to 25% control of annual grasses and postemergence 362 provided 70 to 95% control. Preemergence 362 provided 85% or greater control of smooth pigweed, Palmer amaranth, sicklepod, prickly sida and pitted, entire, and ivyleaf morningglory. Postemergence 362 provided similar control of the same weeds with the exception of providing 64% prickly sida control and 96% hemp sesbania control. Rice, grain sorghum, corn, and soybean were injured by PRE and or POST 362 applications.

In the program study, Cotoran was applied at 0.5, 1 or 1.5 lb ai/A. Then 362 or Staple was applied early post at 0.0067 and 0.063 lb ai/A respectively, both with surfactant. Then Cobra (lactofen) plus a surfactant-containing MSMA were applied at 0.2 lb ai/A + 2 lb ai/A in a POST-directed spray when cotton was 6 to 9" tall. In 1999, control of Palmer amaranth, velvetleaf, giant ragweed, and ivyleaf and entireleaf morningglory was 90% or greater regardless for both 362 and Staple at all Cotoran rates. Weed control was generally lower in 2000, but there were few differences between 362 and Staple in equivalent programs. Higher floumeturon rates were needed to control Palmer amaranth, which were in an area known to have ALS resistance.

In the antagonism study, broadleaf weeds were controlled with earlier applications of Cotoran and Buctril (bromoxynil). Crabgrass and goosegrass at the 4-leaf to tillering stage were treated with Assure II (quizalofop) at 0.067 lb ai/A, Fusion (fluazifop + fenoxaprop) at 0.2 lb ai/A, Poast Plus (sethoxydim) at 0.125 lb/A, Select, (clethodim) at 0.125 lb ai/A and "Equinox" (BAS 620). Grass herbicides were applied alone and with 0.0067 lb ai/A of 362. Grass control was generally antagonized (an average of approximately 30%) when graminicides were applied with 362.