

PREEMERGENCE HERBICIDES OLD AND NEW
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Abstract

Preemergence herbicides have long been the backbone of broadleaf weed control in cotton in the Southeast. Standard treatments in Georgia include fluometuron (Cotoran, Flo-Met or Meturon) or fluometuron plus Zorial. The combination of fluometuron plus Zorial provides the most consistent, broad spectrum weed control. The introduction of Command in 1993 and the recent approval of Staple raises the question, "How do these treatments compare with fluometuron or fluometuron plus Zorial?"

Experiments were conducted in 1995 at six locations in Georgia to compare various preemergence herbicides and combinations. Four of the sites were conventional tillage and two were conservation tillage in small grain residue. Treatments were Cotoran 1.5 lb AI/A, Karmex 1.0 lb AI/A, Zorial 1.5 lb AI, Command 1.0 lb AI/A, Staple 0.063 lb AI/A, and combinations of Cotoran plus Zorial, Cotoran plus Command, Cotoran plus Staple, Karmex plus Zorial, and Karmex plus Staple. Rates for the tank mixtures were identical to those for the individual product usage. The primary weeds evaluated were sicklepod, pitted morningglory, and smallflower morningglory.

Tank mixtures generally provided superior weed control compared to single products. Both Cotoran and Karmex benefitted significantly from a "helping" herbicide; in other words, the addition of Zorial, Command, or Staple. There were not dramatic differences in weed control among preemergence combinations and thus other factors--cost, injury potential, rotation, stewardship considerations, and/or insecticide regime--may significantly influence selection of one tank mixture over another. Staple caused slightly more visible crop injury (stunting) than other treatments.