

**WEED CONTROL AND YIELD WITH VARIOUS LIBERTY-LINK  
COTTON WEED MANAGEMENT SYSTEMS**

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**Abstract**

Recently Ignite has been registered for postemergence use in Liberty-Link cotton. The introduction of Liberty-Link cotton gives growers another tool in their arsenal for POST weed management. Trials were conducted at Kinston, NC and Goldsboro, NC in 2003 to investigate how Ignite application timing affects weed control and to evaluate potential tank-mix partners for use with Ignite.

Treatments were arranged in a randomized complete block design with 48 treatments arranged in a factorial with one additional treatment added as a standard comparison plus a weed-free check. Treatment options were EPOST, POST, and LAYBY. EPOST options were 1) no EPOST, 2) Ignite at 2 pt/A, or 3) Ignite at 2 pt/A + Dual II Magnum at 1 pt/A. POST options were 1) no POST, 2) Ignite at 2 pt/A, 3) Ignite at 2 pt/A + Envoke at .05 oz/A, or 4) Ignite at 2 pt/A + Staple at .6 oz/A. LAYBY options included 1) no LAYBY, 2) Caparol at 2 pt/A + MSMA at 2.67 pt/A, 3) Ignite at 2 pt/A + Caparol at 2 pt/A, or 4) Ignite at 2 pt/A + MSMA at 2.67 pt/A. Visual ratings were taken to determine crop injury due to stand reduction, stunting, and discoloration. Visual weed control ratings were taken approximately 7 days after EPOST and POST applications and 2 - 3 weeks after LAYBY application. Cotton was harvested to determine yield. Data were analyzed to reflect the factorial arrangement and means were separated using Fisher's protected lsd. No injury was seen with Ignite at any application stage. Envoke injured cotton 23 to 31% mid-season with injury not apparent 3-4 weeks later.

Ignite EPOST controlled Palmer amaranth, sicklepod, and pitted and ivyleaf morningglory  $\geq 80\%$  at mid-season. Mid-season grass control was 61 to 70% when Ignite was applied alone EPOST and, the addition of Dual II Magnum improved control 77 to 85% for large crabgrass and goosegrass, respectively.

Ignite applied sequentially EPOST and POST controlled large crabgrass, goosegrass, Palmer amaranth, sicklepod, and morningglory species at least 98% when evaluated. The addition of Envoke and Staple was of no benefit. Ignite + Caparol treatments were comparable to Caparol + MSMA treatments at LAYBY. Ignite plus MSMA was less effective than Ignite plus Caparol for control of Palmer amaranth, large crabgrass, and goosegrass. Separate efficacy trials (no crop) found that MSMA antagonized Ignite control of goosegrass, large crabgrass, broadleaf signalgrass, slender amaranth, and Palmer amaranth. Cotton yields were similar for all systems containing both an EPOST and LAYBY application.