

**COMMAND 3ME AND ROUNDUP ULTRA  
SYSTEMS FOR ROUNDUP READY COTTON**  
G.H. Scott, S.A. Askew, J.W. Wilcut and W.A. Bailey  
North Carolina State University  
Raleigh, NC

**Abstract**

Command 3ME provides better and more consistent control of common lambsquarters (*Chenopodium album*), velvetleaf (*Abutilon theophrasti*), and prickly sida (*Sida spinosa*) than Roundup Ultra. However, Roundup Ultra provides better control of pigweed species (*Amaranthus* sp.) than Command 3ME, which does not control pigweed species. The PPI herbicide, Treflan, is commonly used for grass and small-seeded broadleaf weed control in cotton (*Gossypium hirsutum*). Treflan must be incorporated, which is costly to growers, and may potentially delay planting during wet years. Thus Command 3ME PRE seems to fit well into the Roundup Ultra systems. The objective was to evaluate Command 3ME PRE versus Treflan 4EC PPI in systems for weed control in Roundup Ready cotton. The study was conducted in Rocky Mount, NC in 1997 and 1998, and in Clayton, NC in 1998. Treatments included: Command 3ME PRE at 1.3 pints/A, Treflan 4EC PPI at 1 pint/A, Command PRE or Treflan PPI followed (fb) by Roundup Ultra AS NEEDED at 1.5 pints/A, Command PRE or Treflan PPI fb Cotoran 4L PRE at 2 pints/A, Command PRE or Treflan PPI fb Cotoran PRE fb Roundup Ultra AS NEEDED, Command PRE or Treflan PPI fb Roundup EPOST fb Bueno 6 at 2.7 pints/A + Bladex at 1.6 pints/A LAYBY, and Command PRE or Treflan PRE fb Cotoran fb Roundup Ultra EPOST fb Bueno 6 + Bladex LAYBY.

Weed control was estimated visually six weeks after the LAYBY applications for common ragweed (*Ambrosia artemisiifolia*), Palmer amaranth (*Amaranthus palmeri*), ivyleaf morningglory (*Ipomoea hederacea*), entireleaf morningglory (*Ipomoea hederacea* var. *integriuscula*), tall morningglory (*Ipomoea purpurea*), large crabgrass (*Digitaria sanguinalis*), and common lambsquarters (*Chenopodium album*).

When applied alone, Command PRE controlled common ragweed, large crabgrass, and common lambsquarters better than Treflan PPI. However, Treflan PPI applied alone provided better control of Palmer amaranth. Neither Command PRE nor Treflan PPI provided control of ivyleaf morningglory, entireleaf morningglory, or tall morningglory. Roundup Ultra increased control to almost 100% for all weeds. For AS NEEDED treatments in 1997 only one application of Roundup Ultra was needed. In 1998, the AS NEEDED treatments required two applications of Roundup Ultra. In 1997, the addition of Bladex plus MSMA

LAYBY or multiple applications of Roundup Ultra did not increase the control of any weed over Roundup Ultra applied once. In 1998, Roundup Ultra had to be applied twice in order to achieve the needed level of control.

Command 3ME PRE may provide weed control comparable or better than Treflan PPI in the Roundup Ready system, while eliminating the need for incorporation. Command 3ME would be very beneficial in fields infested with Treflan-resistant goosegrass (*Eluesine indica*). However, one advantage of using Treflan would be increased PPI pigweed control and the flexibility to use the in-furrow insecticide Temik.