

**BROADLEAF WEED CONTROL WITH LIBERTY,
STAPLE, ROUNDUP ULTRA, AND BUCTRIL**
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Abstract

Thirteen field trials were conducted in 1999 and 2000 to evaluate weed control at the Central Crops Research Station near Clayton, NC; the Cherry Hospital Research Farm near Goldsboro, NC; the Peanut Belt Research Station located near Lewiston-Woodville, NC; and the Upper Coastal Plain Research Station located near Rocky Mount, NC. Treatments evaluated included Buctril (bromoxynil) at 0.5 lb ai/ac, Liberty (glufosinate) at 0.26 and 0.36 lb ai/ac, Roundup Ultra (glyphosate) at 1.00 lb ai/ac and Staple (pyrithiobac) at 0.032 and 0.064 lb ai/ac. Additional treatments evaluated included sequential applications of Liberty EPOST + POST at 0.36 lb ai/ac and Roundup Ultra EPOST + POST 1.0 lb ai/ac. Fallow areas were selected for heavy infestations of weeds of importance, or areas were seeded with weed species planted in rows running perpendicular to the plots. Broadleaf weeds were 1-2 inches or 3-4 inches tall at the time of EPOST application. Plots were arranged in a randomized complete block design with three replications of treatments. All species at both sizes occurred in at least two experiments, with some species found in five experiments. Weed control of emerged vegetation at the time of treatment was evaluated 14 to 20 days after treatment.

All herbicide treatments controlled 1-2 inch common cocklebur (*Xanthium strumarium*), Florida beggarweed (*Desmodium tortuosum*), jimsonweed (*Datura stramonium*), ladythumb smartweed (*Polygonum persicaria*), Pennsylvania smartweed (*Polygonum pensylvanicum*), pitted morningglory (*Ipomoea lacunosa*), prickly sida (*Sida spinosa*), redroot pigweed (*Amaranthus retroflexus*), smooth pigweed (*Amaranthus albidus*), and velvetleaf (*Abutilon theophrasti*) at least 90%. All treatments except for Staple at either rate controlled common lambsquarters (*Chenopodium album*), common ragweed (*Ambrosia artemesifolia*), tall morningglory (*Ipomoea purpurea*) at least 90%. EPOST + POST treatments of Liberty and Roundup provided 100% control of common cocklebur, common lambsquarters, common ragweed, Florida beggarweed, jimsonweed, Palmer amaranth, redroot pigweed, smooth pigweed, and velvetleaf at both sizes. The development of Liberty Link cotton and the registration of Liberty would provide cotton growers another broad spectrum option for annual broadleaf weed control.