

**PRE/POST STAPLE COMBINATIONS
IN TEXAS HIGH PLAINS COTTON**
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Karmex PE at 0.032 + 0.8 lb/A fb Staple PT at 0.047 lb/A consistently and effectively controlled devil's-claw, which produced highest cotton yields.

Abstract

Devil's-claw (*Proboscidea louisianica*) is an increasing weed problem that is not controlled by standard preplant or pre-emergence cotton herbicides. Field experiments were conducted in 1997 and 1998 at the Texas Agricultural Experiment Station near Lubbock to evaluate Staple herbicide for devil's-claw control. Preemergence (PE) applications of Staple alone or in combination with Caparol or Karmex were compared to commercial standard herbicides including Caparol, Karmex, Cotoran, and Caparol + Zorial for devil's-claw control. PE combinations of Staple + Caparol or Staple + Karmex followed by (fb) Staple applied postemergence topical (PT) were compared to preemergence treatments alone. In both years, all plots received a preplant incorporated treatment of Treflan at 0.75 lb ai/A. Plots were four rows x thirty ft long, with three replications arranged in a randomized block design. PE treatments were applied immediately after planting and PT treatments were applied to weeds 2-3 inches tall. All treatments were applied at 10 gpa and crop oil concentrate was added to all Staple PT treatments.

Standard PE herbicides provided only 20-50% devil's-claw control in either year. Staple + Caparol or Staple + Karmex applied PE controlled devil's-claw 65-70% in 1997 but only 50-60% in 1998, due to insufficient rainfall for herbicide activation. Staple + Caparol PE fb Staple PT or Staple + Karmex PE fb Staple PT controlled devil's-claw 95-97% 30 days after treatment (DAT) in 1997 and 90-92% in 1998. At 60 and 90 DAT, Staple + Caparol PE fb Staple PT controlled devil's-claw 95% and 93% respectively in 1997, but only 75 and 65% respectively in 1998. At 60 and 90 DAT, Staple + Karmex PE fb Staple PT controlled devil's-claw 95 and 93% in 1997, respectively. In 1998, these treatments controlled devil's-claw 80 and 73%, respectively. Reduced control was observed in 1998 due to hot, dry conditions compared to normal rainfall in 1998, which produced more active early-season weed growth. Highest cotton yields (550-575 lb lint/A in 1997 and 600-625 lb lint/A in 1995) were produced with the Staple + Caparol fb Staple PT and Staple + Karmex fb Staple PT treatments.

These studies concluded that PE combinations of Staple + Caparol at 0.047 + 1.2 lb/A and Staple + Karmex at 0.047 + 1.0 lb/A controlled devil's-claw more effectively than Staple, Caparol, Karmex, Cotoran, or Caparol + Zorial alone. A combination of Staple + Caparol PE or Staple +