

UTILITY OF WINTER ANNUAL FORAGES FOR WEED SUPPRESSION.
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Recent research has shown that several winter annual forage species can provide good fall and winter grazing opportunities for ruminant animals in Missouri and may reduce winter annual weed populations. Research was conducted from 2000 to 2004 at Novelty, MO to evaluate the effect of soybean maturity on winter annual forage establishment, to determine the effects of no-till winter annual forage grass establishment compared to *Brassicas* species on winter annual weed suppression, and the effect of these management decisions on corn performance the following year. Pioneer 92B51, Pioneer 93B35, and Pioneer 94B01, were each planted at different dates at 432,250 seeds per hectare. Immediately following soybean harvest, 'Champion' collards, 'Purple Top' turnips, 'Marshall' annual ryegrass, or 'Forage Master' winter rye were seeded at 9, 8, 39, and 112 kg ha⁻¹, respectively. All treatments were planted to Burrus 671RR corn the following year at 71,877 seeds per hectare. In 2000 and 2002, winter rye reduced winter annual weed dry weights and had the highest forage production. However, corn grain yield was reduced 3139.9 and 1312.4 kg ha⁻¹ in 2000 and 2002, respectively, compared to the non-treated control. Collards, turnips, and annual ryegrass did not affect corn grain yield the following year. In 2001 and 2003, winter annual weeds were sparse. Winter annual forage yields with winter rye were 612.4 kg ha⁻¹ to 9,368.2 kg ha⁻¹ greater than annual ryegrass, collards, and turnips. However, corn grain yield was reduced 226.1 kg ha⁻¹ in a low yielding year (2001) and 1,865.1 kg ha⁻¹ in a high yielding year (2004).