

Weed efficacy and teff response to selected herbicides.

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Teff is a warm seeded C₄ annual grass crop grown for forage and food that has recently grown in popularity across the United States. Hay from teff is well suited for livestock, especially for horses. The objective of this study was to evaluate teff response and weed efficacy of selected herbicides. Field studies were conducted in 2009 and 2010 at the Malheur Experiment Station, Ontario, OR. Herbicides were applied alone or in combination and included: 2,4-D amine, dicamba, Aim® (carfentrazone-ethyl), Goldsky® (florasulam+fluroxypyr-pyroxulam) and Powerflex® (Pyroxulam). All herbicide applications were made when teff was at the four leaf stage. Weed efficacy and crop safety was evaluated at two timings, early and late. Other observations included teff forage yield, broadleaf weeds and barnyardgrass biomass at harvest. Averaged over early and late efficacy evaluations, application of 2,4-D (367 g ae/ha) with dicamba (303 g ae/ha) resulted in greater than 90% control of broadleaves including redroot pigweed, lambsquarters, hairy nightshade and common purslane. Teff injury at the early evaluation was rated only 10% compared to the untreated control. Aim® applied at 35 g ai/ha had excellent crop safety and provided greater than 95% average efficacy for all broadleaf weeds evaluated in the study and produced the second highest teff forage yield. Powerflex® at 9.2 g a.i./ha was only evaluated in 2010, and provided 93% control of the barnyardgrass but only 80% of lambsquarters. GoldSky® at either 59 or 118 g ai/ha significantly increased teff forage yield above all other treatments by controlling >95% barnyardgrass and virtually 100% of all broadleaf weeds. GoldSky® produced 33% more teff forage yield than the currently labeled use of a combination of 2,4-D and dicamba and 41% more teff than when no herbicides were used. GoldSky® and Powerflex® also have excellent crop safety but unfortunately they are not currently registered for weed control in teff.