

INTERFERENCE OF BROADLEAF WEEDS IN SUGARBEETS. Dennis C. Odera, Abdelouhab Mesbah, and Stephen D. Miller, Graduate Assistant, Department of Plant Sciences, University of Wyoming, Dept. 3354, 1000 E University Avenue, Laramie WY 82071, Associate Dean and Director, Agricultural Experiment Station, University of Wyoming, Dept. 3354, 1000 E University Avenue, Laramie WY 82071, and Weed Research Scientist, Powell Research and Extension Center, 747 Road 9, Powell WY 82435-9135.

There has been increased infestation of Venice mallow (*Hibiscus trionum* L.), lanceleaf sage (*Salvia reflexa* Hornem.), wild buckwheat (*Polygonum convolvulus* L.), and redstem filaree [*Erodium cicutarium* (L.) L'Hér. ex Ait.] in sugarbeet fields within the Bighorn Basin of Wyoming. Field experiments were conducted in 2005 and 2006 at the Powell Research and Extension Center near Powell, Wyoming to determine the effect of various densities and duration of competition of these weeds on sugarbeet. In 2005, the densities were comprised of 2, 4, 6, 8, and 10 plants/m of sugarbeet, while the duration of competition was 2, 4, 6, 8, 10, and 12 weeks at a density of 6 plants/m. Sugarbeet root yield decreased as densities of Venice mallow increased. However, no significant effect was shown for densities of wild buckwheat, and sucrose content for both Venice mallow and wild buckwheat. There was poor establishment of lanceleaf sage and redstem filaree in 2005; therefore, no data was collected. In 2006, the weed densities were increased to 6, 12, 18, 24, and 30 plants/m of sugarbeet row. The duration of competition remained the same with a density of 18 plants/m of sugarbeet row. Sugarbeet root yield decreased as weed densities increased. Similarly, root yield decreased as duration of competition increased.