Miller, Stephen D.*, and K. James Fornstrom. Univ. of Wyo., Dept. Plant, Soil and Insect Sciences, Univ. Station Box 3354, Laramie, WY 82071. - Postemergence herbicide timing and combinations in sugarbeets.

Postemergence herbicide applications are becoming increasingly important in Wyoming sugarbeet weed management systems. Field trials were conducted at Torrington, Powell and Wheatland, WY from 1989-92 to evaluate the influence of application timing on weed control and sugarbeet tolerance with individual herbicides or combination treatments. Split treatments minimized sugarbeet injury and improved weed control in all situations. Two applications of desmedipham plus phenmedipham were generally as effective as three applications. DPX-66037 combinations with desmedipham plus phenmedipham provided more effective kochia, green foxtail, hairy nightshade or wild buckwheat control and clopyralid combinations with desmedipham plus phenmedipham more effective Russian thistle, hairy nightshade, wild buckwheat or common sunflower control compared to the herbicides applied alone with only minimal effects on sugarbeets. Further, ethofumesate combinations with desmedipham plus phenmedipham appear promising for increased control of several weed species; however, the risk of sugarbeet injury is also increased.