

Miller, Stephen D.*, K. James Fornstrom and Abdul Mesbah. Univ. of Wyo., Dept. Plant, Soil and Insect Sciences, Univ. Station Box 3354, Laramie, WY 82071. - Canada thistle competition and control in sugarbeets.

Canada thistle (*Cirsium arvense* (L.) Scop.) is an aggressive perennial weed found throughout the northern half of the United States. Canada thistle is very competitive and has been reported to reduce small grain yields 60% at a density of 20 plants yd². Field trials were conducted at the Research and Extension Center, Powell, WY from 1988 to 1991 to evaluate the effect of various Canada thistle densities on sugarbeet yield and to evaluate the effectiveness of clopyralid for Canada thistle control. Sugarbeet yield, sucrose content and grower net returns decreased as Canada thistle densities increased. One thousand Canada thistle plants/A reduced sugarbeet yield 0.5 T/A. Sucrose content 0.03% and grower net returns \$19.20/A. Clopyralid provided good to excellent (85 to 95%) control of Canada thistle at 0.19 lb ai/A whether applied as a single or split treatment alone or in combination with desmedipham plus phenmedipham. Sugarbeet tolerance to clopyralid was excellent and not influenced by desmedipham plus phenmedipham.