

CANADA THISTLE SEED DISPERSAL. Ryan P. Miller, Roger L. Becker, Liz A. B. Stahl, Milton J. Haar, Lee D. Klossner, and Frank Forcella, Assistant Extension Professor, Albert Lea Regional Center, Albert Lea, MN 56007-4001, Professor, Department of Agronomy and Plant Genetics, St. Paul, MN 55108-6026, Assistant Extension Professor, Worthington Regional Center, Worthington, MN 56187-2801, Assistant Professor, Department of Agronomy and Plant Genetics, Lamberton, MN 56152, Research Fellow, Southwest Research and Outreach Center, Lamberton, MN 56152, Research Agronomist, USDA-ARS, Morris, MN 56267-1065.

Canada thistle weed laws and enforcement are based upon the premise that Canada thistle spreads by wind-distributed seed. It is not clear to what extent this premise is valid. The objective of this research was to characterize the potential for Canada thistle to spread by wind dispersal. In 2006 studies were conducted at Rosemount, Lamberton, Elysian, St. Paul, Welcome and Morris, Minnesota. Seed traps constructed of wire mesh coated with adhesive were arranged at different distances and heights around a 3-foot diameter patch of Canada thistle. Collection took place over one week during the peak time of dispersal at six locations around MN and measured seed rain and flight. The contribution of wind dispersal to the spread of Canada thistle appears to be largely local. Estimates of seed rain within a twenty-foot radius of the Canada thistle patch was around 3,000 seeds with a relatively small number of seed traveled a distance of 20 feet. More than 90% of pappi were not associated with a viable seed. Dispersal was directional along prevailing winds and pappi with viable seed attached tended to travel closer to the ground than pappi with seeds. Although the amount of seed distributed over long distances appears to be few, it may be an important strategy for discovering new sites. Control efforts timed to prevent the production of viable seed should reduce the spread of Canada thistle.