

**ECONOMIC IMPACT OF LEAFY SPURGE ON ALTERNATIVE
POST-CONSERVATION RESERVE PROGRAM LAND USES**

A Paper
Submitted to the Graduate Faculty
of the
North Dakota State University
of Agriculture and Applied Science

By

Steven Alan Hirsch

For Partial Fulfillment of the Requirements
for the Degree of
MASTER OF SCIENCE

Major Department:
Agricultural Economics

May 1995

Fargo, North Dakota

ABSTRACT

Hirsch, Steven Alan, M.S., Department of Agricultural Economics, College of Agriculture, North Dakota State University, May 1995. Economic Impact of Leafy Spurge on Alternative Post-Conservation Reserve Program Land Uses. Major Professor: Dr. Jay A. Leitch.

Leafy spurge infests some of the 2.9 million acres of Conservation Reserve Program (CRP) land in North Dakota. The CRP provides water quality and wildlife habitat benefits in addition to lowering crop surpluses, raising commodity prices, and providing income support for farmers. However, the CRP may have the unforeseen and unintended consequence of facilitating the spread of leafy spurge, a noxious weed. Once established, leafy spurge will reduce the expected benefits of the CRP and impact the returns to some post-CRP land uses.

Alternative land uses are (1) enrolling post-CRP land in a similar permanent vegetative cover program, (2) converting post-CRP land to grazing land, and (3) returning post-CRP to cropland. The study assumes 1/3 of total CRP acres in the state, about 967,000 acres, will be converted to each alternative land use and 4 percent, about 41,000 acres, of each land use is infested with leafy spurge. The estimated annual direct economic impacts are \$327,000 on permanent cover post-CRP land, \$1.331 million on post-CRP grazing land, and negligible (assumed \$0) on post-CRP cropland, for a total of \$1.658 million. Total annual direct and secondary economic impacts to North Dakota's economy are \$5.263 million, which would support about 66 jobs.