

2014 Saskatchewan weed survey

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SPG Contributions	Project Status	Duration/Timeline of Project (Year to Year)	Co-funders	Total Project Cost
\$100,000.00	Completed	April 2014 – August 2016	Western Grains Research Foundation	\$315,000.00

Project Description

To complete the fifth set of weed surveys in Saskatchewan since the series of provincial surveys began in the mid 1970s; to measure the species compositions and population densities of the weed communities in the major summer annual crops and identify changes in weed communities that have occurred since previous surveys; to document abundance and distribution of resistant weed species; to document agronomic and weed control practices used on surveyed fields and relate to floristic composition of weed communities.

In 2014 and 2015, a total of 2,242 fields of spring wheat, barley, durum, oat, canola, flax, mustard, lentil, or pea were surveyed. In late summer of each year, weed seed samples were collected from plants that escaped herbicide control in a subset of the fields. All co-operating producers were asked to complete a management questionnaire to assist in interpreting the weed survey results.

Outcome

Changes in weed abundance can be identified because all the surveys since 1970s have used a similar methodology. Green foxtail, wild oats, and wild buckwheat have been ranked one, two, and three in each survey since the 1970s. Five other species have been ranked amongst the top 20 most abundant species in each survey (Canada thistle, shepherd's-purse, lamb's-quarters, stinkweed, and perennial sow-thistle). Since the 1970s five species have steadily increased: spiny annual sow-thistle, cleavers, barnyard grass species, round-leaved mallow, and canola. Since the 1980s three species have consistently increased: foxtail barley, dandelion, and narrow-leaved hawk's-beard. Low cudweed, broad-leaved plantain, and American willowherb, appeared in the top 25 in the most recent survey. The trends identified by the weed surveys can be used by research, industry, and extension to develop weed management recommendations for producers.

Research Objective

OBJECTIVE 1

To complete the fifth set of weed surveys in Saskatchewan since the series of provincial surveys began in the mid-1970s.

OBJECTIVE 4

To document agronomic and weed control practices used on surveyed fields and relate to floristic composition of weed communities.

OBJECTIVE 2

To measure the species compositions and population densities of the weed communities in the major summer annual crops and identify changes in weed communities that have occurred since previous surveys.

OBJECTIVE 3

To document abundance and distribution of resistant weed species.