

## **AGR1407: 2014 Saskatchewan Weed Survey**

Weed surveys have previously been conducted in Saskatchewan in 1976-79, 1986, 1995, and 2003. The objectives of this project were 1) to complete the fifth set of weed surveys in Saskatchewan since the series of provincial surveys began in the mid-1970s, 2) 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, 3) document abundance and distribution of resistant weed species, and 4) 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. 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.