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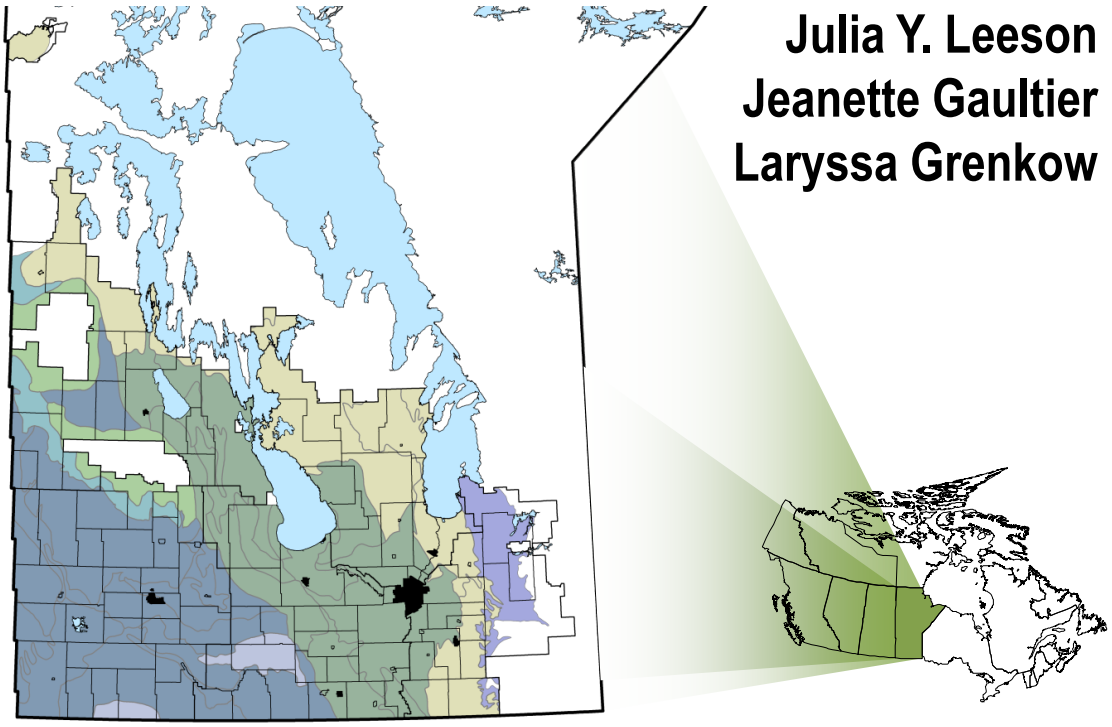
Manitoba Weed Survey

Annual Crops

2016



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Weed Survey Series

Canada

Manitoba Weed Survey of Annual Crops in 2016

by

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76-1	Weed survey of cultivated land in Saskatchewan (1976)
77-1	Weed survey of cultivated land in Saskatchewan (1977)
78-1	Report on the 1977 weed survey and questionnaire in Saskatchewan
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12-1	Alberta weed survey of dryland fields in 2010
14-1	Alberta weed survey - field management questionnaire
16-1.	Saskatchewan weed survey of cereal, oilseed and pulse crops in 2014 and 2015

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It a special pleasure to acknowledge the contribution made by 658 producers who agreed to co-operate in the project by permitting survey staff to count weeds in their fields.

Julia Leeson
Jeanette Gaultier

History of Weed Survey Activities in Manitoba

Early reports on weeds in Manitoba were lists of species with general statements of where they occurred and the seriousness of the problem[1]. The first indication of the relative importance of seven serious weeds in Manitoba was obtained from reconnaissance surveys in 1930 and 1931[2]. In these surveys, estimates of the prevalence and distributions of species were obtained from government officials and weed inspectors through interviews and questionnaires. Groh and Frankton[3] published the results of their reconnaissance survey in 1949. They listed the frequency of occurrence of weeds in various areas of the province. In a questionnaire survey conducted during the 1960s by Alex[4], the extension staff was asked to estimate the density and area infested with 40 species of weeds based on their knowledge of their specific Districts. These estimates for municipalities were presented on maps for each species. Although this survey provided information that was of great value at the time, researchers and extension specialists recognized, by the mid-1970s, a need for quantitative data based on weed counts in fields of producers.

From 1975 to 1978, a weed survey involving the weed supervisors was conducted during June when the weeds were in the seedling stage[5]. This survey was the first to obtain quantitative information on the occurrence and size of weed populations in annual crops.

The current series of surveys was initiated in 1978. These new surveys differed in the timing of the field counts. Weeds were counted during July and early August. Information on the distribution and abundance of weeds occurring in cereal and oilseed crops in Manitoba was obtained in a series of summer surveys from 1978, 1979 and 1981[6]. A goal of 500 fields was set for each year of the survey. A minimum of ten sites was allocated to each Agricultural District, resulting in an overrepresentation of the Interlake Region in relation to the number of cultivated hectares. Not all the selected sites in a District or all Districts were surveyed each year because of staff limitations and other unforeseen circumstances. Two Districts were not surveyed in 1978, one District was not surveyed in 1979 and two Districts were not surveyed in 1981. Distribution maps were produced for 32 species.

A question asked frequently is whether or not the species composition and density of the weed flora have changed since the last survey. Thus, surveys are needed to document the weed picture every few years so that these comparisons can be made. Consecutive annual surveys can only rarely be used to detect trends in weed distribution and abundance because shifts in weed populations occur slowly. Consequently, the initial three years of annual surveys were followed by a second survey conducted five years later in 1986[7]. Three Districts were not surveyed at this time.

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[1] **Fletcher, J.** 1897. The worst Canadian weeds. Central Exp. Farm, Canada Department of Agriculture. Bull. No. 28, Ottawa, ON. 43 pp.

[2] **Mason, J. M.** 1932. Weed survey of the prairie provinces. National Research Council of Canada. Rep. No. 26, Ottawa, ON. 34 pp

[3] **Groh, H. and C. Frankton.** 1949. Canadian weed survey. 7th Report. Canada Department of Agriculture, Ottawa, ON. 144 pp.

[4] **Alex, J. F.** 1965. Survey of weeds of cultivated land in the prairie provinces. Exp. Farm, Res. Branch, Canada Department of Agriculture, Regina, SK. 68 pp.

[5] **Thomas, A. G. and D. I. Donaghy.** 1991. A survey of the occurrence of seedling weeds in spring annual crops in Manitoba. Can. J. Plant Sci. 71: 811-820.

[6] **Thomas, A. G. and R. F. Wise.** 1984. Weed surveys of Manitoba cereal and oilseed crops in 1978, 1979 and 1981. Weed Survey Series Publication 84-1, Agriculture Canada, Regina, Saskatchewan. 230 pp.

[7] **Thomas, A. G. and R. F. Wise.** 1988. Weed surveys of Manitoba cereal and oilseed crops in 1986. Weed Survey Series Publication 88-1, Agriculture Canada, Regina, Saskatchewan. 201 pp.

A third survey was conducted eleven years later in 1997 utilized ecodistricts as the strata for the stratified random-sampling of sites[8]. This resulted in a greater proportion of the surveyed fields allocated to the Northwestern and Southwestern Regions. A goal of 500 fields was set for the survey. One District was not surveyed.

A complimentary survey of 116 cereal and oilseed fields was conducted in 1994 to determine if differences in weed populations existed between fields managed with zero and conventional tillage systems[9]. Each zero tillage field was paired with a nearby conventional field sown to the same crop. Fields were surveyed in the spring prior to spraying and again in the fall after tillage operations in the conventional fields but prior to spraying for winter annual weeds. Only 27 rural municipalities were included in the survey. No fields were surveyed in the Interlake Region.

The last provincial survey of Manitoba was completed in 2002 and summarized in a Weed Survey Series Report[10]. While the protocol was similar to the previous survey, more fields were included. The survey was part of a project to survey 4000 fields across all Prairie Provinces; therefore, the total number of fields surveyed in Manitoba was proportional to the farm area in Manitoba relative to Alberta and Saskatchewan. 631 fields were surveyed. The survey included the major annual cereal and oilseed pulse crops (spring wheat, barley, oats, canola, and flax).

A specialized survey of 84 winter wheat fields was conducted in 2009[11]. This survey used similar protocols to the current series of surveys and established a benchmark for the residual weed community in winter wheat in Manitoba.

[8] **Thomas, A. G., B. L. Frick, R. C. Van Acker, S. Z. Knezevic and D. Joosse.** 1998. Manitoba survey of cereal and oilseed crops in 1997. Weed Survey Series Publication 98-1, Agriculture and Agri-Food Canada, Saskatoon, Saskatchewan. 233 pp. 36 maps.

[9] **Thomas, A. G., D. J. Kelner, R. F. Wise and B. L. Frick.** 1997. Manitoba weed survey comparing zero and conventional tillage crop production systems (1994). Weed Survey Series Publication 97-1, Agriculture and Agri-Food Canada, Saskatoon, Saskatchewan. 130 pp.

[10] **Leeson, J.Y., A.G. Thomas, T. Andrews, K.R. Brown and R.C. Van Acker.** 2002. Manitoba weed survey of cereal and oilseed crops in 2002. Weed Survey Series Publ. 02-2, Agriculture and Agri-Food Canada, Saskatoon Research Centre, Saskatoon, SK. 191 pp.

[11] **Cavalieri, A., Lewis, D. W. and Gulden, R. H.** 2013. Residual weeds in winter wheat in Manitoba. Can. J. Plant Sci. 93: 1195–1200.

The 2016 Manitoba Weed Survey Project

Rationale

Fourteen years have passed since the fourth survey in Manitoba was conducted in 2002. Numerous changes in the agricultural industry since the last survey have presented the need for a new survey with updated information. Soybean, corn and sunflower were included in the survey for the first time in 2016. The increased acreage of soybean and corn would be expected to impact weed populations in the province. The weed survey data can be used to document the changes in the distribution and abundance of weeds that have occurred since the previous provincial surveys in 2002, 1997, 1986 and 1978 to 1981. Changes in weed abundance can be identified because all the surveys since 1978 have used a similar methodology. Individual weeds or groups of species identified as increasing in abundance can be targeted for attention by various agencies involved in weed science. The trends identified by the weed surveys are important to the research, industry, and extension communities for developing weed management recommendations for producers.

Objective

The objective of the project was to conduct, in 2016, the fifth weed survey in Manitoba since the series of provincial surveys began in the late 1970s. The survey would measure the species compositions and population densities of the weed communities in the major summer annual crops grown in Manitoba.

Expected benefits of the provincial weed survey

1. Quantitative field surveys of weed populations are used to reveal the current size, extent, and order of importance of species in the province, ecoregions, and other spatially defined areas of interest.

2. The spatial distributions of the most common species are represented in maps that clearly illustrate areas of high and low abundance in relation to the physical landscape and jurisdictional areas of the province.

3. Tracking the increase or decrease in weed populations and the changes in the composition and structure of weed communities, using the database of survey information from the previous four surveys, will indicate the extent by which various weeds are spreading or being controlled and thus the effectiveness of weed management programs.

4. Crop yield losses due to specific weeds can be estimated and these loss estimates can be used to establish the economic costs.

5. Weed survey data can provide an objective basis for developing ecologically and economically sustainable strategies to manage agricultural weeds. The data are used to set research and education priorities, develop recommendations, and design weed management strategies in the research, extension, and agri-business communities.

6. Targeting of increasingly scarce scientific resources requires objective information on the species compositions and population densities of the weed communities that occur locally, regionally or provincially. Individual species or groups of species can be targeted for attention by various agricultural agencies.

7. Additional benefits of the weed survey will be realized when the results are combined with the information gathered in the farm management questionnaire survey. The questionnaire survey will provide detailed information on what farmers are doing to produce a crop. By combining the field and questionnaire survey data, particular weed management practices that are important determinants of distinctive weed communities can be determined.

8. Relating trends in weed populations and communities to the use of specific agronomic and weed control practices or to cropping systems will identify possible reasons that certain weeds have become more or less of a problem on an ecoregion, crop, or provincial basis.

9. Predicting shifts in weed populations and communities that might occur because of anticipated changes in agronomic practices, weed control management, and agricultural policy will allow agricultural agencies to develop weed management strategies that meet the future needs of farmers.

Study Area

The survey included the 3.4 million hectares of cultivated land of the province of Manitoba. This area extends from the border with the United States in the south to approximately 54°N, and from the Saskatchewan border in the west to the Boreal Shield on the eastern side of the province.

Ecoregions and Ecodistricts

The represented by eight ecoregions [12] (Figure 1). Ecoregions are areas of similar landforms, climate, natural vegetation, soils and land use. Each ecoregion consists of one or more ecodistricts (Figure 2). Ecodistricts are areas with similar in landform, relief, surficial material, soil, vegetation and land use. Average January temperature, average July temperature, annual precipitation, and growing season length are mapped by ecodistrict based on climatic normal (Figure 3).

The **Aspen Parkland Ecoregion** occupies the southwestern corner of the province and a small area between Riding Mountain and Duck Mountain. Native vegetation is mostly gone, but would have been dominated by trembling aspen, bur oak and fescue grasslands. The ecoregion is underlain by Cretaceous shale, and is undulating to kettled to gently undulating to level, with glacial till, glaciolacustrine and glaciofluvial deposits. The dominant soil is a Black Chernozem, with pockets of Regosols and Gleysols. This ecoregion is a highly productive agricultural area. All twelve ecodistricts in this ecoregion were included in the survey.

The **Southwest Manitoba Uplands** consists of two distinct uplands (Pembina Hills and Turtle Mountain) in south-central Manitoba surrounded by the Aspen Parkland Ecoregion. The native vegetation is trembling aspen, balsam poplar and bur oak. The Southwest Manitoba Uplands is hummocky to kettled glacial till with fluvioglacial deposits, underlain by Cretaceous or Tertiary shale. The predominant soils are Dark Gray and Black Chernozems, with local areas of Gray Luvisols, peaty Gleysols and Mesisols. Agriculture is significant only in Pembina Hills. The majority of Turtle Mountain is included in a provincial park; therefore, there was one field in this ecodistrict in the survey.

The **Boreal Transition Ecoregion** occurs in Manitoba as a single ecodistrict forming a narrow belt bordering Riding Mountain and Duck Mountain. Trembling aspen and balsam poplar also dominate the native vegetation of this ecoregion. The ecoregion is a hummocky plain, with glacial till and fluvioglacial deposits underlain by Cretaceous shale. Predominant soils are Dark Gray Chernozems, with local areas of Gray Luvisols, peaty Gleysols and Mesisols.

The **Mid-Boreal Upland Ecoregion** occurs as three separate elevated uplands along the Manitoba escarpment known as Porcupine Hills, Duck Mountain and Riding Mountain. Each of these uplands is a unique ecodistrict. Native vegetation in this ecoregion is dominated by trembling aspen, balsam poplar, white and black spruce and balsam fir. This ecoregion consists of kettled to dissected deep glacial till, glaciolacustrine and glaciofluvial deposits overlaying Cretaceous shales. Predominant soils are Gray Luvisols, with local areas of peaty Gleysols, Mesisols, Eutric Brunisols and Dark Gray Chernozems. Agriculture only occurs in the lower elevations surrounding the parks in the two southern ecodistricts.

[12] **Smith, R. E., H. Veldhuis, G. F. Mills, R. G. Eilers, W. R. Fraser and G. W. Lelyk.** 1998. Terrestrial ecozones, ecoregions, and ecodistricts, an ecological stratification of Manitoba's natural landscapes. Technical Bulletin 98-9E. Land Resource Unit, Brandon Research Centre, Research Branch, Agriculture and Agri-Food Canada, Winnipeg, Manitoba. Report and national map at 1:1 500 000 scale.

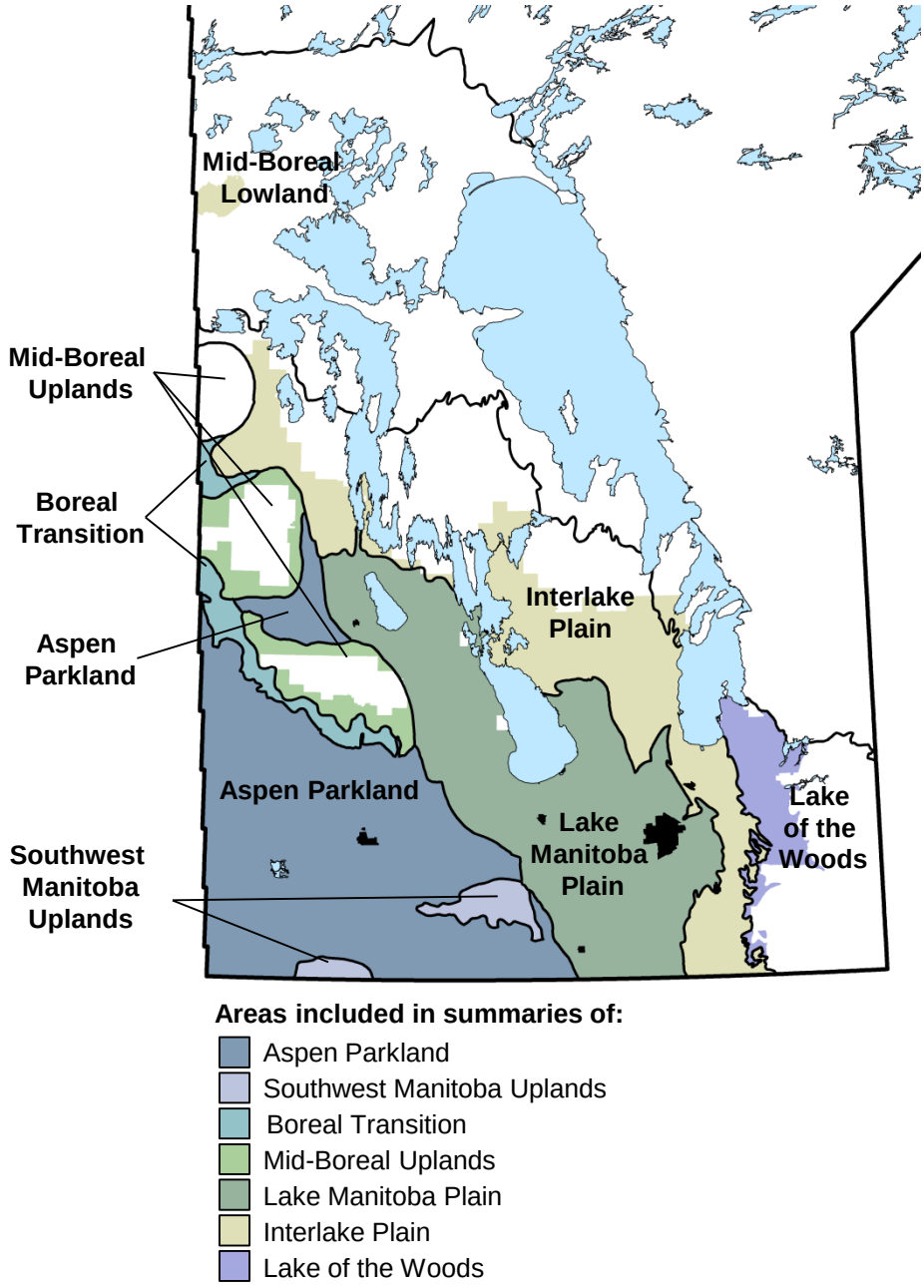

Figure 1. Area surveyed in ecoregions included in the weed survey. Ecoregions that are grouped in summaries are shaded with the same colour. Map derived from Canadian Soil Information System website[13].

[13] **Agriculture and Agri-Food Canada.** 2003. A national ecological framework for Canada: GIS data. [Online] Available: http://sis.agr.gc.ca/cansis/nsdb/ecostrat/gis_data.html [11 February 2016].

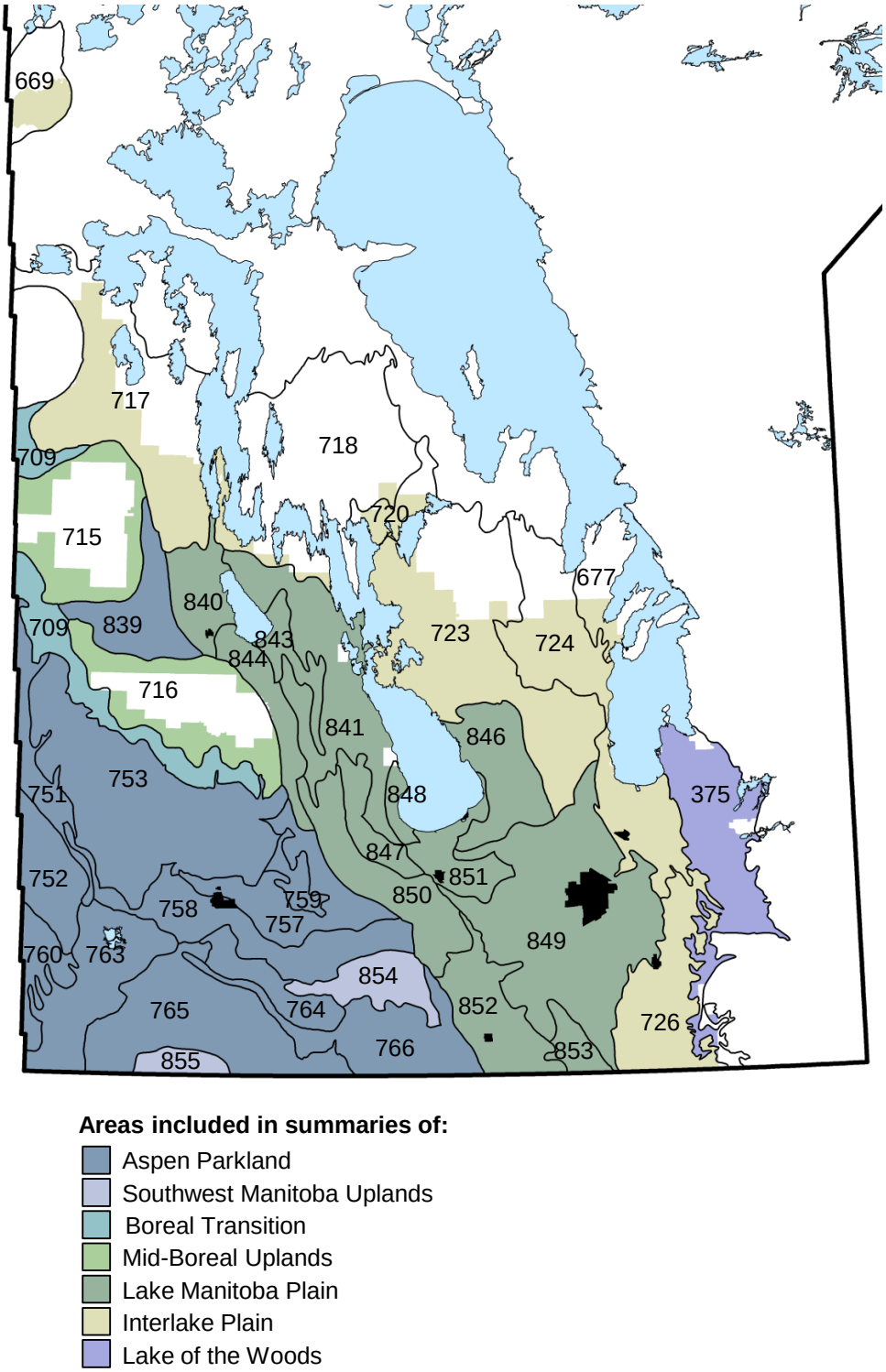

Figure 2. Area surveyed in ecodistricts included in the weed survey. Ecodistrict names are found in Table 2. Map derived from Canadian Soil Information System website[14].

[14] **Agriculture and Agri-Food Canada.** 2003. A national ecological framework for Canada: GIS data. [Online] Available: http://sis.agr.gc.ca/cansis/nsdb/ecostrat/gis_data.html [11 February 2016].

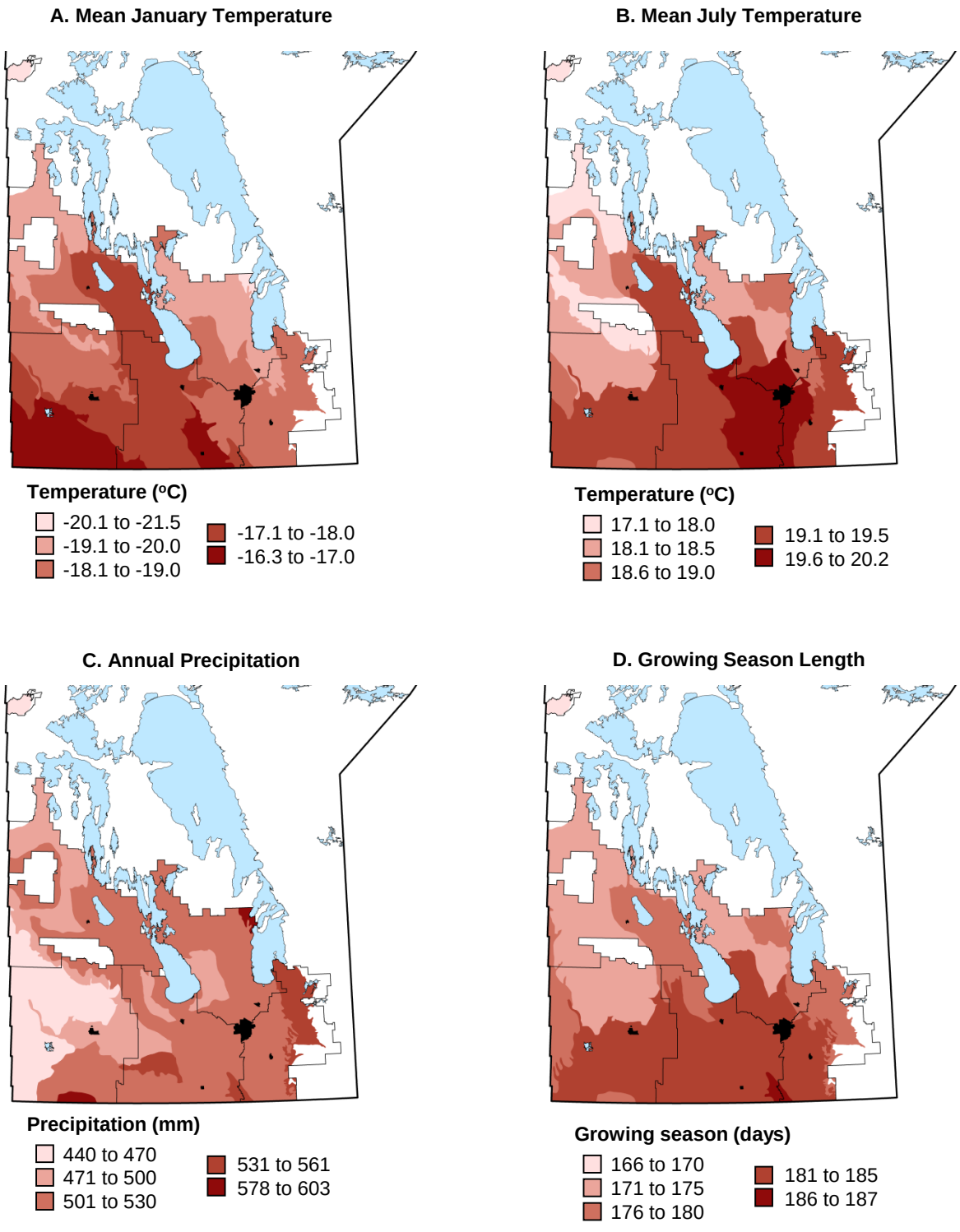

Figure 3. Average January temperature (A), average July temperature (B), annual precipitation (C), and growing season length (D) [15] are mapped by ecodistrict based on climatic normal.[16]

[15] Growing season length is the total number of days when mean daily air temperature equals or exceeds 5 degrees Celsius

[16] **Agriculture and Agri-Food Canada.** 1997. Canadian ecodistrict climate normals 1961-1990. [Online] Available: http://sis.agr.gc.ca/cansis/nsdb/ecostrat/district/climate.html [25 November 2003].

The **Lake Manitoba Plain Ecoregion** lies south and west of the Interlake Plain Ecoregion and extends from the USA-Canada border in a northwestern direction to Lake Dauphin. It is transitional between boreal forest and aspen parkland. Native vegetation is dominated by trembling aspen, bur oak and fescue grassland. The ecoregion is underlain by limestone, and has broadly ridged glacial till in the north and smooth lacustrine deposits in the south. The predominant soil is a Black Chernozem, with local pockets of Gleysols and Vertisols. All twelve ecodistricts in this ecoregion were included in the survey.

The **Interlake Plain Ecoregion** extends in a broad arc from the USA-Canada border at the southern edge of the province in a north western direction to the Saskatchewan border. Native vegetation in this ecoregion is dominated by trembling aspen and balsam poplar. The ecoregion is level to ridged, with glacial till and glaciolacustrine deposits underlain by Paleozoic limestone. Predominant soils are Dark Gray Chernozems, with local areas of Black Chernozems, Eutric Brunisols, Gleysols and Mesisols. Sites were allocated in all six ecodistricts in this ecoregion. However, much of the north eastern portion of the ecoregion is not used for agriculture.

The **Mid-Boreal Lowland Ecoregion** is north of the main agricultural area in Manitoba extending into eastern Saskatchewan. The majority of this ecoregion is not suitable for agriculture; however, grain and oilseed crops are produced where soils and drainage allow. This ecoregion is represented in the weed surveys by two ecodistricts. Cereals and oilseeds are grown on the alluvial soils in the Saskatchewan Delta, the northernmost ecodistrict included in the survey. Agricultural area in the Grindstone is found adjacent to the Interlake Plain Ecoregion. The survey data from this ecoregion is combined with data from the Interlake Plain Ecoregion in the weed summaries.

The **Lake of the Woods Ecoregion** occupies the southeastern corner of the province. This ecoregion is a mixed forest region, with native vegetation dominated by trembling aspen, paper birch, jack pine, white spruce, eastern white cedar, black ash and white elm. The area has glacial till with fluvioglacial deposits, overlaying Archean bedrock. The predominant soils are Organics Mesisols, Fibrisols, Brunisols, and Gray Luvisols with Dark Gray Chernozemic and Gleysolic soils found in local areas. Agriculture is not a major occupation in this ecoregion, limited to lowlands along rivers and streams where artificial drainage systems have been developed. Only one of the five ecodistricts, located along the western edge of the ecoregion, had enough cultivated area to be included in the survey.

Crop Selection

The selection of annual crops to be included in the survey was based on the 2015 seeded area for the province[17] (Table 1). A minimum of 20 fields was set as the limit for inclusion of a crop in the general survey. Based on a survey target of 600 fields in Manitoba, the six most common annual crops were selected.

Table 1. Area of the crops selected for the survey and the number of fields allocated to each crop

Crop	Seeded area (1,000 acres)	Proportion of area (%)	Expected number of fields
Canola	3140	36.3	217
Spring wheat	2915	33.7	202
Soybean	1385	16.0	96
Oats	480	5.5	33
Barley	400	4.6	28
Corn	340	3.9	24
Total	8660		600

Flax and sunflower were the next most common annual crops in Manitoba (seeded area of 125,000 and 100,000 acres, respectively). Weed populations in these crops were of particular interest; however, there was not enough acreage either of these crops to expect to reach the minimum number of fields through random site selection. Therefore, a separate survey of these two crops was conducted using different selection procedures. The results for these two crops are also included in this report. A target of twenty fields of each of these crops was set, for a total of 640 fields surveyed in 2016.

Stratification of Sites

Ecodistricts were used as the strata in a stratified random-sampling procedure. The number of fields in an ecodistrict was allocated in proportion to the seeded area of the selected crops in the ecodistrict, relative to the total area seeded to selected crops in all ecodistricts (Table 2). Hectarage of field crops derived from the 2011 census data of Statistics Canada for each soil landscape complex (a subunit of ecodistrict)[18] was summed to obtain hectarage per ecodistrict. To facilitate the organization of the survey for provincial staff, fields allocated to ecodistricts were subsequently allocated to municipalities based on proportion of each ecodistrict's area cultivated in each municipality (Figure 4). Four municipalities within the surveyed area did not have enough agricultural land base to have allocated sites (East St. Paul, St. Francois Xavier, St. Laurent and Headingly).

[17] **Statistics Canada**. 2016. Table 001-0010 - Estimated areas, yield, production and average farm price of principal field crops, in metric units, annual, CANSIM (database). [Online] Available: http://www5.statcan.gc.ca/cansim/a47 [accessed: January 12, 2017].

[18] **Agriculture and Agri-Food Canada**. 2013. Production variables by SLC v3.2 from 2011. [Online] Available: http://www.agr.gc.ca/atlas/rest/services/mapservices/aafc_interpolated_census_of_agriculture/MapServer [19 October 2015].

Table 2. Allocation of sites based on ecodistrict area for the survey of common annual crops and number of sites surveyed in each ecodistrict in the surveys of common annual crops, flax and sunflower

Ecoregion and Ecodistrict	Common Annual Crops Allocated	Common Annual Crops Surveyed	Flax Surveyed	Sunflower Surveyed
Lake of the Woods	**10**	**11**		
375 Stead	10	11		
Interlake Plain including Mid-Boreal Lowland *(Ecodisticts 669 & 677)*	**55**	**58**	**2**	**1**
717 Swan Lake	18	16		
718 Waterhen	1	0		
720 Gypsumville	1	2		
723 Ashern	4	4	1	
724 Gimli	23	27	1	1
726 Steinbach	7	7		
669 Saskatchewan Delta	1	1		
677 Grindstone	1	1		
Boreal Transition	**23**	**25**		
709 Swan River	23	25		
Mid-Boreal Uplands	**12**	**15**		
715 Duck Mountain	3	3		
716 Riding Mountain	9	12		
Aspen Parkland	**246**	**253**	**13**	**8**
751 St. Lazare	5	5		
752 Melville	9	9		
753 Hamiota	69	71	5	
757 Shilo	13	14		
758 Stockton	24	26	1	3
759 Carberry	7	7		1
760 Gainsborough Creek	2	4		
763 Oak Lake	15	12	1	1
764 Hilton	10	10	1	
765 Killarney	48	53	3	1
766 Manitou	31	31	2	2
839 Grandview	13	11		
Lake Manitoba Plain	**240**	**243**	**4**	**8**
840 Dauphin	12	8		
841 Alonsa	10	9		
843 Ste. Rose	4	3		
844 McCreary	8	7		
846 Lundar	2	1		
847 Gladstone	7	8		
848 Langruth	1	1		
849 Winnipeg	110	114	3	5
850 MacGregor	21	19	1	
851 Portage	12	14		
852 Winkler	46	48		3
853 Emerson	8	11		
Southwest Manitoba Uplands	**14**	**14**	**2**	**1**
854 Pembina Hills	13	13	2	1
855 Turtle Mountain	1	1		
Manitoba	**600**	**619**	**21**	**18**

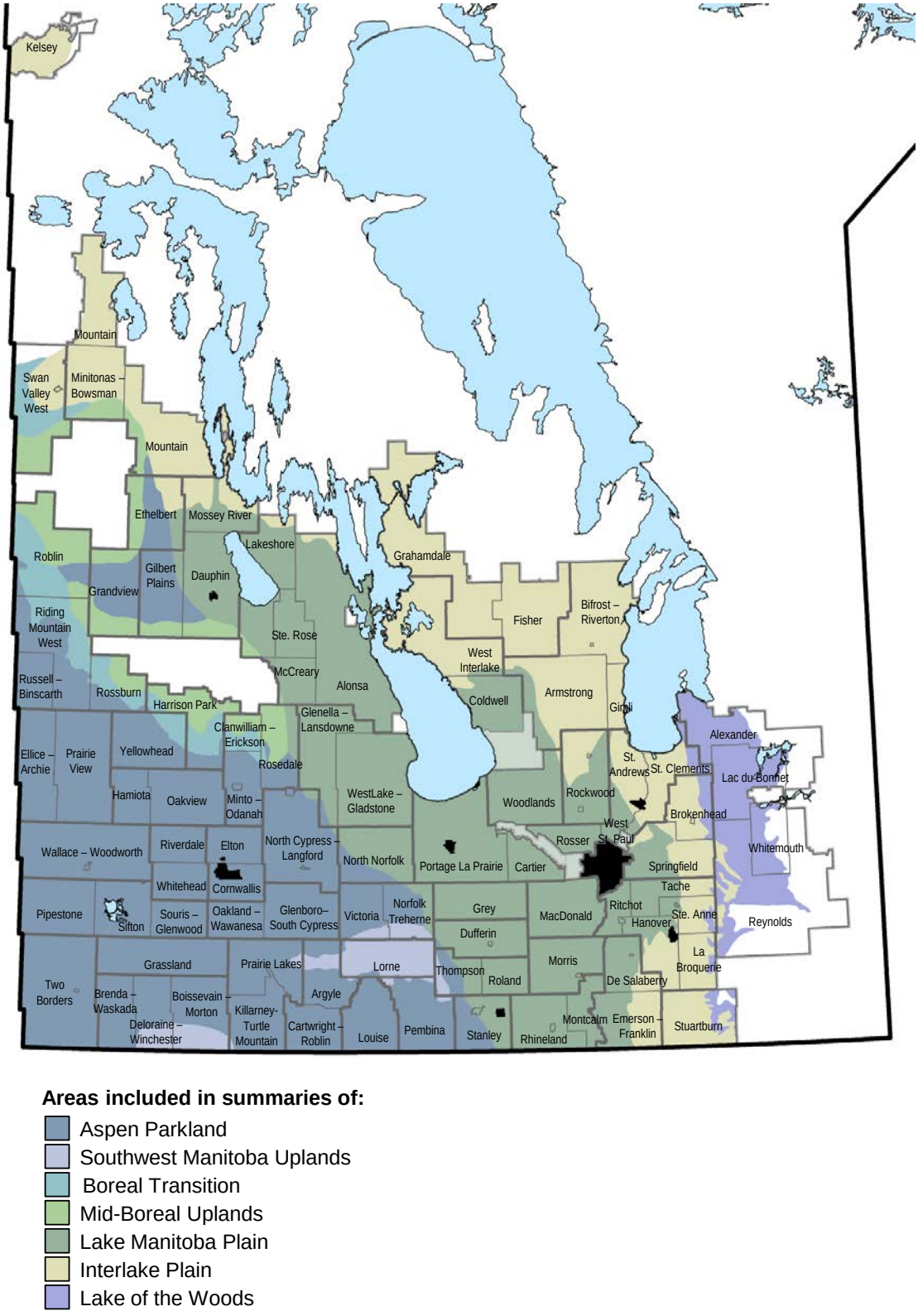

Figure 4. Municipalities included in the weed survey. Thick grey lines surround municipalities that are grouped in the summaries. Municipalities with without allocated sites are a lighter shade than those with allocated sites.

Random Site Selection

The random selection of sites used the legal land description grid established by the Dominion Land Survey System[19] in western Canada. A random sample was selected from all quarter sections (65 ha) that had greater than 16 cultivated hectares within each target ecodistrict and municipality. A list that contained eight times the allocated number of sites was developed for each ecodistrict.

Land owner information for the list of Legal Land Descriptions was acquired from the Manitoba Agricultural Services Corporation, and then telephone numbers were added as necessary from local telephone directories.

Manitoba Agriculture and Agriculture and Agri-Food Canada staff acted as the primary contact point for producers. Producers were contacted beginning in the last week in May and continuing through July. Sites were qualified, in the order that they were listed, until the required number of fields had been obtained. A site qualified if the person who farmed the land answered yes to all of the following questions.

1. Will you grant permission for a surveyor to count weeds on the selected quarter section during July or August?
2. Is there a field in the quarter section seeded to a selected crop?
3. Is the identified field accessible by road?
4. Do you agree to complete a questionnaire on management practices used on the identified field in the fall?

If a field in a quarter section did not qualify, an attempt was made to qualify a nearby field. This step was followed only if the land was farmed by the same person as the preselected quarter section.

For each site, the following information was recorded into a database:

(a) the name, mailing address, and telephone number of the farm operator for the qualified fields,
(b) a new quarter section if it had been changed from the preselected site,
(c) the crop seeded in the selected field and the identity of the underseeded crop if present,

Site Selection for Flax and Sunflower Survey

Randomly selected fields in the general survey that were seeded to flax or sunflower were qualified for inclusion in the survey. Eight flax fields and two sunflower fields were identified in this manner. Additional fields were identified by Manitoba Agriculture staff and permission to conduct the survey was subsequently obtained from the producers. A total of 21 flax and 18 sunflower fields were surveyed.

Field Survey Personnel and Training

The majority of the fields were surveyed by Manitoba Agriculture staff (79%) and University of Manitoba students (12%). Independent contractors surveyed the remaining fields. A total of 34 people contributed to the weed counts.

A full-day orientation session was held in Brandon at the Assiniboine Community College (ACC) on June 29 prior to the start of the field survey. The purpose of the session was to explain reasons for conducting a weed survey, how to implement the protocol, how to handle unknown weeds, how to collect samples and how to record the weed data on the field sheets. Much of the session was devoted to weed identification, including a slide show and a tour of the ACC weed garden. Potential identification problems with specific groups of species were highlighted during the session.

[19] **McKercher, R. B. and B. Wolfe**. 1986. Understanding Western Canada′s Dominion Land Survey System. Division of Extension and Community Relations, University of Saskatchewan, Saskatoon, SK.

Timing of Weed Counts

Weeds that had not been controlled in the fields were counted in the summer survey. This time was chosen for several reasons. The weeds in the field were, in part, a result of agronomic management decisions (e.g., crop rotation, time and type of tillage, rate and placement of fertilizer, and selection, rate and effectiveness of herbicide used) made by the farm operator at various times during the crop year. The impact of these agronomic practices on the weed flora was reflected in a summer survey. Counts at this time of the year showed the size and extent of troublesome weed populations. This survey time had additional advantages. Identification was simplified because many of the weeds were mature. In particular, wild oats and other grassy weeds had flowered or produced fruit and were easily recognized. Also, the field crew had more time to work on the survey during the summer than during the period immediately after crop seeding. Weed counts were completed in between July 18, 2016 and September 2, 2016.

Weed Counts in Fields

Once a surveyor arrived at a qualified field, the weeds were enumerated using a set pattern. The surveyor walked 100 paces along the edge of the field, turned at right angles, and walked 100 paces into the field. The inverted W-pattern began at this point (Figure 5). Five locations were sampled along each arm of the pattern, giving a total of 20 locations. Locations were 20 paces apart. The number of individuals of each weed species was determined in a 0.25 m^2 quadrat (50 cm by 50 cm) at each of the 20 locations. The procedure was modified when necessary to compensate for sloughs, odd-shaped fields and other irregularities.

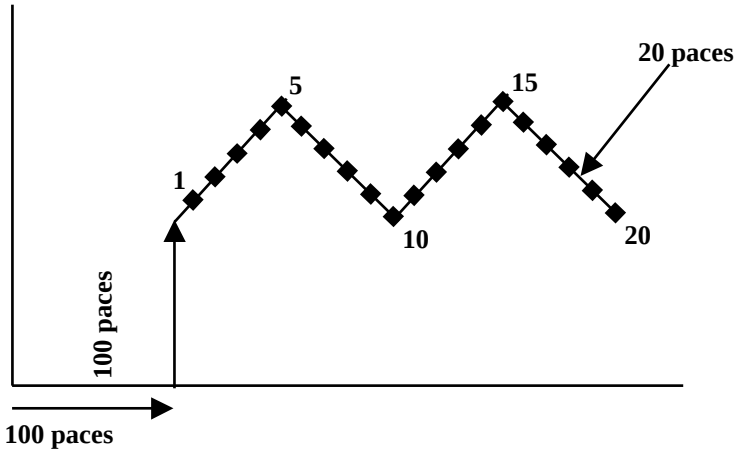

Figure 5. W-pattern used for field counts.

For perennial grass species such as quack grass and perennial herbaceous species such as Canada thistle, the number of shoots rather than the number of plants was counted. For annual grasses, such as wild oats, and clumped perennials, such as foxtail barley, a rooted individual was counted as a single plant whatever the number of tillers. Volunteer crop plants were counted as weeds. The underseeded species in a field was not counted.

Surveyors were asked to collect a specimen of each species they identified in each field for later verification. Also, any plant found in the field that could not be identified, or that the surveyor was unsure of, was collected. All specimens were pressed and submitted for identification. 2402 specimens and 642 photographs were examined to ensure the correct identification of the weed species. Species which require mature specimens to distinguish (western barnyard grass and barnyard grass, dock species) were combined in field summary tables; however, mature specimens were identified to species when collected. The common and botanical names of weeds that occur in this report, including 139 weeds identified in 2016, are listed in Table 3.

Table 3. Common[20] and scientific names[21] of plants that appear in this report

Common Name	Scientific Name
Absinth*	*Artemisia absinthium* L.
Alfalfa*	*Medicago sativa* L.
Alsike clover* (reported with clover species)	*Trifolium hybridum* L.
American dragonhead*	*Dracocephalum parviflorum* Nutt.
American stinging nettle	*Urtica dioica* subsp. *gracilis* (Aiton) Selander
American vetch* (may include other vetch species)	*Vicia americana* Muhl. *ex* Willd. var. *americana*
Annual blue grass (reported with blue grass species)	*Poa annua* L.
Annual sow-thistle*	*Sonchus oleraceus* L.
Aspen poplar (reported with poplar species)	*Populus tremuloides* Michx.
Aster species*	*Aster* spp.
Atriplex species	*Atriplex* spp.
Ball mustard	*Neslia paniculata* (L.) Desv.
Balsam poplar (reported with poplar species)	*Populus balsamifera* L.
Barley*	*Hordeum vulgare* L.
Barnyard grass* (includes western barnyard grass and barnyard grass)[22]	*Echinochloa* spp.
Barnyard grass* (reported with barnyard grass species)	*Echinochloa crus-galli* (L.) P.Beauv.
Beggarticks species*	*Bidens* spp.
Bicknell's geranium* (includes other geranium species)[23]	*Geranium bicknellii* Britton
Biennial campion	*Silene csereii* Baumg.
Biennial wormwood*	*Artemisia biennis* Willd.
Bird's-foot trefoil*	*Lotus corniculatus* L.
Black medick*	*Medicago lupulina* L.
Black mustard	*Brassica nigra* (L.) W.D.J. Koch
Black nightshade (reported with nightshade species)	*Solanum nigrum* L.
Bladder campion*	*Silene vulgaris* (Moench) Garcke
Blue grass species*	*Poa* spp.
Bluebur (includes western bluebur)	*Lappula squarrosa* (Retz.) Dumort.
Blue-joint*	*Calamagrostis canadensis* (Michx.) P.Beauv.
Bracted vervain	*Verbena bracteata* Lag. & Rodr.
Broad-leaved plantain* (includes other plantain species)	*Plantago major* L.
Buckwheat	*Fagopyrum esculentum* Moench
Buffalograss*	*Bouteloua dactyloides* (Nutt.) Columbus
Bur oak*	*Quercus macrocarpa* Michx.
Canada blue grass* (reported with blue grass species)	*Poa compressa* L.
Canada fleabane*	*Erigeron canadensis* L.
Canada thistle*	*Cirsium arvense* (L.) Scop.
Canary grass	*Phalaris canariensis* L.
Canola/rapeseed*	*Brassica napus* L. and *B. rapa* L.
Caraway	*Carum carvi* L.
Carolina geranium* (reported with Bicknell's geranium)	*Geranium carolinianum* L.
Chickweed*	*Stellaria media* (L.) Vill.
Clammy hedge-hyssop*	*Gratiola neglecta* Torr.

(Table continued on next page)

[20] **Darbyshire, S. J., M. Favreau and M. Murray.** 2000. Common and Scientific Names of Weeds in Canada. Publication 1397/B, Agriculture and Agri-Food Canada, Ottawa, ON. 132 pp.

[21] **Brouillet, L., F. Coursol, S.J. Meades, M. Favreau, M. Anions, P. Bélisle & P. Desmet.** 2010+. VASCAN, the Database of Vascular Plants of Canada. http://data.canadensys.net/vascan/ (consulted on 2017-01-06).

*Found in 2016 survey

[22] 51% western barnyard grass and 49% barnyard grass in 2016 survey (83 specimens)

[23] 71% Bicknell's geranium and 29% Carolina geranium in 2016 survey (7 specimens)

Table 3. Common and scientific names of plants that appear in this report *(continued)*

Common Name	Scientific Name
Cleavers (reported with false cleavers)	*Galium aparine* L.
Clover species* (includes alsike, white and red clover)[24]	*Trifolium* spp.
Cocklebur*	*Xanthium strumarium* L.
Common burdock	*Arctium minus* (Hill) Bernh.
Common groundsel*	*Senecio vulgaris* L.
Common mallow* (reported with round-leaved mallow)	*Malva neglecta* Wallr.
Common milkweed (reported with showy milkweed)	*Asclepias syriaca* L.
Common pepper-grass*	*Lepidium densiflorum* Schrad.
Common ragweed*	*Ambrosia artemisiifolia* L.
Common yarrow	*Achillea millefolium* L.
Common yellow wood-sorrel*	*Oxalis dillenii* Jacq.
Coriander	*Coriandrum sativum* L.
Corn spurry*	*Spergula arvensis* L.
Corn*	*Zea mays* L.
Cow cockle	*Vaccaria hispanica* (Mill.) Rauschert
Crested wheat grass	*Agropyron cristatum* (L.) Gaertn.
Curled dock* (reported with dock species)	*Rumex crispus* L.
Currant species*	*Ribes* spp.
Dandelion* (includes red-seeded dandelion)	*Taraxacum officinale* F.H.Wigg.
Dock species* (includes curled and willow-leaved dock)	*Rumex* spp.
Dog mustard*	*Erucastrum gallicum* (Willd.) O.E.Schultz
Downy brome*	*Bromus tectorum* L.
Durum (reported with wheat)	*Triticum durum* Desf.
Erect knotweed (reported with prostrate knotweed)	*Polygonum erectum* L.
Fababean	*Vicia faba* L.
False cleavers* (may include cleavers)	*Galium spurium* L.
False flax species* (includes flat- & small-seeded false flax)	*Camelina* spp.
False ragweed*	*Cyclachaena xanthiifolia* (Nutt.) Fresen.
Field bean*	*Phaseolus vulgaris* L.
Field bindweed	*Convolvulus arvensis* L.
Field dodder	*Cuscuta campestris* Yunck.
Field horsetail*	*Equisetum arvense* L.
Field mint	*Mentha arvensis* L.
Field pea	*Pisum sativum* L.
Flat-seeded false flax (reported with false flax species)	*Camelina alyssum* (Mill.) Thell.
Flax*	*Linum usitatissimum* L.
Flixweed*	*Descurainia sophia* (L.) Webb *ex* Prantl
Flodman's thistle*	*Cirsium flodmanii* (Rydb.) Arthur
Foxtail barley*	*Hordeum jubatum* L.
Geranium species* (reported with Bicknell's geranium)	*Geranium* spp.
Giant ragweed	*Ambrosia trifida* L.
Golden dock*	*Rumex fueginus* Phil.
Goldenrod species*	*Solidago* spp.
Goosefoot species* (reported with lamb's-quarters)	*Chenopodium* spp.
Green foxtail*	*Setaria viridis* (L.) P. Beauv.
Green pigweed*	*Amaranthus powellii* S. Watson
Green tansy mustard	*Descurainia pinnata* subsp. *brachycarpa* (Richardson) Detling
Ground-ivy	*Glechoma hederacea* L.

(Table continued on next page)

*Found in 2016 survey

[24] 11% alsike, 79% white and 11% red clover in 2016 survey (19 specimens)

Table 3. Common and scientific names of plants that appear in this report *(continued)*

Common Name	Scientific Name
Hairy nightshade* (reported with nightshade species)	*Solanum sarrachoides* Sendtn.
Hairy-nerved carrionflower	*Smilax lasioneura* Hook.
Hare's-ear mustard	*Conringia orientalis* (L.) C.Presl
Hedge bindweed*	*Calystegia sepium* (L.) R.Br.
Hemp dogbane (reported with spreading dogbane)	*Apocynum cannabinum* L.
Hemp-nettle*	*Galeopsis tetrahit* L.
Henbit	*Lamium amplexicaule* L.
Indian mustard	*Brassica juncea* (L.) Czern.
Kentucky blue grass* (reported with blue grass species)	*Poa pratensis* L.
Knawel	*Scleranthus annuus* L.
Kochia*	*Bassia scoparia* (L.) A.J.Scott
Lady's-thumb* (reported with pale smartweed)	*Persicaria maculosa* Gray
Lamb's-quarters* (includes other goosefoot species)	*Chenopodium album* L.
Large crab grass*	*Digitaria sanguinalis* (L.) Scop.
Leafy spurge*	*Euphorbia esula* L.
Low cudweed* (may include western marsh cudweed)	*Gnaphalium uliginosum* L.
Manitoba maple*	*Acer negundo* L.
Maple-leaved goosefoot*	*Chenopodium simplex* (Torr.) S.Fuentes, Uotila & Borsch
Marsh yellow cress*	*Rorippa palustris* (L.) Besser
Meadow rue species	*Thalictrum* spp.
Mouse-eared chickweed	*Cerastium fontanum* subsp. *vulgare* (Hartm.) Greuter & Burdet
Narrow-leaved American vetch* (reported with American vetch)	*Vicia americana* var. *minor* Hook.
Narrow-leaved hawk's-beard*	*Crepis tectorum* L.
Narrow-leaved plantain* (reported with broad-leaved plantain)	*Plantago lanceolata* L.
Needle-and-thread grass*	*Hesperostipa comata* (Trin. & Rupr.) Barkworth subsp. *comata*
Night-flowering catchfly*	*Silene noctiflora* L.
Nightshade species* (includes hairy and black nightshade)	*Solanum* spp.
Northern bedstraw*	*Galium boreale* L.
Northern willowherb*	*Epilobium ciliatum* Raf.
Oak-leaved goosefoot*	*Oxybasis glauca* (L.) S.Fuentes et al. subsp. *glauca*
Oats*	*Avena sativa* L.
Orchard grass*	*Dactylis glomerata* L.
Pale smartweed* (includes lady's-thumb)[25]	*Persicaria lapathifolia* (L.) Delarbre
Pasture sage	*Artemisia frigida* Willd.
Pennsylvania pellitory*	*Parietaria pensylvanica* Muhl. *ex* Willd
Perennial rye grass* (may include other rye grass species)	*Lolium perenne* L.
Perennial sow-thistle*	*Sonchus arvensis* L.
Persian darnel	*Lolium persicum* Boiss. & Hohen. *ex* Boiss.
Pineappleweed*	*Matricaria discoidea* DC.
Poplar species (includes aspen and balsam poplar)	*Populus* spp.
Povertyweed*	*Iva axillaris* Pursh
Prairie junegrass	*Koeleria macrantha* (Ledeb.) Schult.
Prairie sunflower	*Helianthus petiolaris* Nutt.
Prickly lettuce*	*Lactuca serriola* L.
Proso millet*	*Panicum miliaceum* L.

(Table continued on next page)

*Found in 2016 survey

[25] 98% pale smartweed and 2% lady's-thumb in 2016 survey (122 specimens)

Table 3. Common and scientific names of plants that appear in this report *(continued)*

Common Name	Scientific Name
Prostrate knotweed* (may include erect knotweed)	*Polygonum aviculare* L.
Prostrate pigweed*	*Amaranthus blitoides* S.Watson
Purple milk-vetch	*Astragalus agrestis* Douglas *ex* G.Don
Purslane speedwell*	*Veronica peregrina* L.
Purslane*	*Portulaca oleracea* L.
Pygmyflower	*Androsace septentrionalis* L.
Quack grass*	*Elymus repens* (L.) Gould
Rayless aster*	*Symphyotrichum ciliatum* (Ledeb.) G.L.Nesom
Red clover* (reported with clover species)	*Trifolium pratense* L.
Red goosefoot	*Oxybasis rubra* (L.) S.Fuentes, Uotila & Borsch
Redroot pigweed*	*Amaranthus retroflexus* L.
Red-seeded dandelion (reported with dandelion)	*Taraxacum erythrospermum* Andrz
Ridge-seeded spurge (reported with thyme-leaved spurge)	*Euphorbia glyptosperma* Engelm.
Rose species	*Rosa* spp.
Rough cinquefoil* (may include other cinquefoil species)	*Potentilla norvegica* L.
Rough hair grass*	*Agrostis scabra* Willd.
Rough pennyroyal	*Hedeoma hispida* Pursh
Round-leaved mallow* (includes common mallow)[26]	*Malva pusilla* Sm.
Rush species*	*Juncus* spp.
Russian pigweed	*Axyris amaranthoides* L.
Russian thistle*	*Salsola tragus* L.
Rye*	*Secale cereale* L.
Scentless chamomile*	*Tripleurospermum inodorum* (L.) Sch.Bip.
Scouring-rush*	*Equisetum hyemale* L.
Sedge species*	*Carex* spp.
Shepherd's-purse*	*Capsella bursa-pastoris* (L.) Medik.
Short-awned foxtail*	*Alopecurus aequalis* Sobol.
Showy milkweed* (may include common milkweed)	*Asclepias speciosa* Torr.
Siberian elm*	*Ulmus pumila* L.
Silverberry	*Elaeagnus commutata* Bernh. *ex* Rydb.
Silverweed*	*Potentilla anserina* L.
Silvery cinquefoil	*Potentilla argentea* L.
Slender wheat grass	*Elymus trachycaulus* (Link) Gould *ex* Shinners
Slough grass*	*Beckmannia syzigachne* (Steud.) Fernald
Small bugloss	*Anchusa arvensis* (L.) M.Bieb.
Small-flowered geranium (reported with Bicknell's geranium)	*Geranium pusillum* L.
Small-seeded false flax* (reported with false flax species)	*Camelina microcarpa* Andrz. *ex* DC.
Smooth brome (may include other perennial brome species)*	*Bromus inermis* Leyss.
Soybean*	*Glycine max* (L.) Merr.
Spear-leaved goosefoot*	*Blitum nuttallianum* Schult.
Spiny annual sow-thistle*	*Sonchus asper* (L.) Hill
Spreading dogbane (may include hemp dogbane)	*Apocynum androsaemifolium* L.
Stink grass*	*Eragrostis cilianensis* (All.) Vignolo *ex* Janch.
Stinkweed*	*Thlaspi arvense* L.
Stork's-bill*	*Erodium cicutarium* (L.) L'Hér. *ex* Aiton
Striate knotweed	*Polygonum achoreum* S.F.Blake
Sunflower*	*Helianthus annuus* L.
Tall buttercup	*Ranunculus acris* L.
Tall hedge mustard	*Sisymbrium loeselii* L.

(Table continued on next page)

*Found in 2016 survey

[26] 87% round-leaved mallow and 13% common mallow in 2016 survey (23 specimens)

Table 3. Common and scientific names of plants that appear in this report *(continued)*

Common Name	Scientific Name
Tansy	*Tanacetum vulgare* L.
Tartary buckwheat*	*Fagopyrum tataricum* (L.) Gaertn.
Thyme-leaved spurge* (may include ridge-seeded spurge)	*Euphorbia serpillifolia* Pers.
Timothy*	*Phleum pratense* L.
Toad rush*	*Juncus bufonius* L.
Tumble mustard	*Sisymbrium altissimum* L.
Tumble pigweed*	*Amaranthus albus* L.
Two-grooved milk-vetch	*Astragalus bisulcatus* (Hook.) A.Gray
Vetch species (reported with American vetch)	*Vicia* spp.
Vetchling species	*Lathyrus* spp.
Water smartweed*	*Persicaria amphibia* var. *stipulacea* (N. Coleman) H.Hara
Western barnyard grass* (reported with barnyard grass species)	*Echinochloa muricata* var. *microstachya* Wiegand
Western bluebur (reported with with bluebur)	*Lappula occidentalis* (S. Watson) Greene
Western marsh cudweed (reported with low cudweed)	*Gnaphalium palustre* Nutt.
Western snowberry*	*Symphoricarpos occidentalis* Hook.
Wheat* (may include durum)	*Triticum aestivum* L.
White clover* (reported with clover species)	*Trifolium repens* L.
White cockle*	*Silene latifolia* Poir.
White mustard*	*Sinapis alba* L.
White sweet-clover* (reported with yellow sweet-clover)	*Melilotus albus* Medik.
Wild buckwheat*	*Fallopia convolvulus* (L.) Á.Löve
Wild cucumber	*Echinocystis lobata* (Michx.) Torr. & A.Gray
Wild licorice	*Glycyrrhiza lepidota* Pursh
Wild mustard*	*Sinapis arvensis* L.
Wild oats*	*Avena fatua* L.
Wild radish	*Raphanus raphanistrum* L.
Wild tomato	*Solanum triflorum* Nutt.
Willow species*	*Salix* spp.
Willow-leaved dock* (reported with dock species)	*Rumex triangulivalvis* (Danser) Rech. f.
Witch grass*	*Panicum capillare* L.
Wood whitlow-grass	*Draba nemorosa* L.
Wormseed mustard*	*Erysimum cheiranthoides* L.
Yellow evening-primrose*	*Oenothera biennis* L.
Yellow foxtail*	*Setaria pumila* (Poir.) Roem. & Schult.
Yellow nut sedge	*Cyperus esculentus* L.
Yellow rocket	*Barbarea vulgaris* W.T.Aiton
Yellow sweet-clover* (includes white sweet-clover)	*Melilotus officinalis* (L.) Lam.
Yellow toadflax*	*Linaria vulgaris* Mill.

*Found in 2016 survey

Data Analysis

Weed count data on field sheets were numerically coded, entered into computer files, and verified. Data were processed in Microsoft® Excel and summary tables were produced following the standard format used in previous Weed Survey Series Reports.

For the first time in a Manitoba Weed Survey Report, the data was weighted. The 2016 data was weighted by crop to allow the use of all collected data in area summaries without bias toward sunflower and flax. The crop weights were calculated by taking the ratio of the expected number of fields in the province with the crop based on 2016 seeded acres[27] to the number of fields surveyed in each crop. Subsequently all data were weighted to account for sites not surveyed. The field weights were calculated by taking the ratio of the expected number of fields in the ecodistrict to the number of fields surveyed in the ecodistrict (see stratification of sites). To account for ecodistricts without any surveyed sites, weights were multiplied by the ratio of the expected number of fields within the ecoregion to the number of fields surveyed within the ecoregion. Previous survey data presented in this report was not weighted by crop but was weighted to account for sites not surveyed based on the 2011 Census of Agriculture to allow meaningful comparisons to the 2016 data.

The median density, mean density, mean number of species per field and percentage of weed free quadrats were calculated for each crop, ecoregion, crop district and region based on the weighted data. Standard errors were calculated for the means and percentage of weed free quadrats.

Weed data were summarized in tables using ecological, agronomic, and jurisdictional variables including ecoregion (Figure 1), crop, Municipality (Figure 4) and Crop Reporting District (Figure 6). A minimum of ten sites was set to allow meaningful summarization. Where these minima were not reached for a crop, a summary table was not provided, but data were retained in other appropriate summaries. For example, a separate summary table for oat in the Aspen Parkland Ecoregion was not provided; however, the fields were included in the appropriate overall summaries for areas and provincial oat summaries. Geographic areas (ecoregions and municipalities) with fewer fields than required were combined with adjacent areas.

The geographic distribution of 35 frequently occurring species is presented in maps produced with ArcMap GIS 10.2 from Environmental Systems Research Institute, Inc.. Inverse Distance Weighting was used to estimate frequency of the species by interpolating presence/absence data. The interpolation included all sites within used a fixed radius of 0.2° (approximately 22 km) extended if necessary to include a minimum of twenty sites. The sites were given a weight of inverse of the square root of the distance to the interpolated point. The data presented is smoothed using nearest neighbour focal statistics, based on the means within a four cell radius. The maps of volunteer crops (canola and wheat) do not include fields planted to the volunteer crop. Additionally, separate maps were made to show the current distribution of western barnyard grass and barnyard grass. Barnyard grass species were not identified to the species level in previous surveys; therefore, historical data is only presented at the genus level.

27 **Statistics Canada**. 2016. Table 001-0010 - Estimated areas, yield, production and average farm price of principal field crops, in metric units, annual, CANSIM (database). [Online] Available: http://www5.statcan.gc.ca/cansim/a47 [accessed: October 12, 2016].

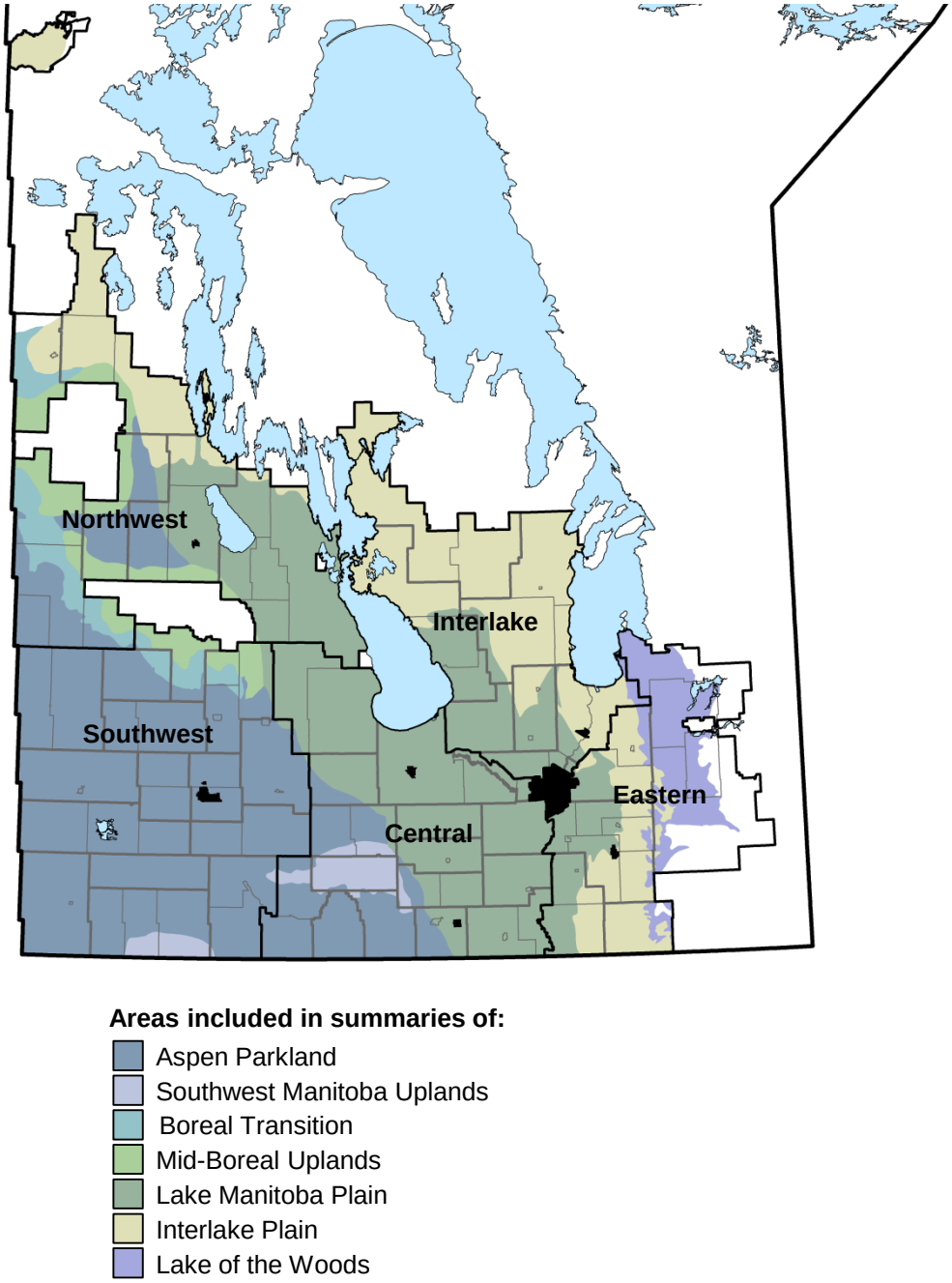

Figure 6. Crop Reporting Districts [28] included in the weed survey. Grey lines are municipality boundaries and thick black lines are Crop Reporting District boundaries.

[28] **Manitoba Agriculture.** 2016. Crop Report. [Online] Available: http://www.gov.mb.ca/agriculture/crops/cropreports/pdf/mb_agri_rptg_map_2012.pdf [31 January 2017].

Data were summarized using seven quantitative variables. Details for the calculation of these variables are described elsewhere[29].

Frequency. The number of fields in which a particular species occurred, expressed as a percentage of the total number of fields surveyed in groups such as crops or ecoregions, and in the province.

Field uniformity (all fields). The number of quadrats in which a particular species occurred, expressed as a percentage of all the quadrats surveyed in groups such as crops or ecoregions, and in the province (20 per field multiplied by the number of fields).

Field uniformity (occurrence fields). The number of quadrats in which a particular species occurred, expressed as a percentage of the number of quadrats in groups such as crops or ecoregions, and in the province for the occurrence fields only (20 per field multiplied by the number of fields in which the species occurred).

Field density (all fields). A measure of the number of plants of a species counted in a square metre. The density values for each species in a single field are averaged over all fields surveyed in groups such as crops, ecoregions, and in the province.

Field density (occurrence fields). A measure of the number of plants of each species counted in a square metre. The density values for each species in a single field are averaged over only the fields in which the weed occurred in groups such as crops or ecoregions, and in the province.

High density. The highest field density values recorded for a species in groups such as in groups such as crops or ecoregions, and in the province.

Relative abundance. A combination of the frequency, field uniformity (all fields) and field density (all fields) values for each species.

Relative frequency for a species (RF) is the frequency value for a species divided by the sum of frequency values for all species, expressed as a percentage.

Relative field uniformity (all fields) for a species (RU) is the field uniformity value for a species divided by the sum of field uniformity values for all species, expressed as a percentage.

Relative field density (all fields) for a species (RD) is the field density value for a species divided by the sum of field density values for all species, expressed as a percentage.

Relative abundance for a species = RF + RU + RD. The total of the relative abundance values for all species equals 300. This measure was used to rank the species in the field survey summary tables. This calculation assumed that the frequency, field uniformity and field density measures were equally important in estimating the abundance of a species. Relative abundance has no units attached to it, but the value for one species can be compared with the value of another species. For example, if green foxtail has a value of 36 and wild buckwheat 18, then green foxtail is twice as abundant as wild buckwheat. Relative abundance does not necessarily relate to the competitive ability of the species. A species may have a high relative abundance value but not be very competitive.

[29] **Thomas, A. G.** 1985. Weed survey system used in Saskatchewan for cereal and oilseed crops. Weed Science 33: 34-43.

Guide to the Use of the Field Survey Summary Tables

For the purposes of illustration, the meaning of the variables is explained for the species green foxtail in the provincial summary table (Table 5). A **frequency** of 24.4% means that green foxtail occurred at least once in 161 of the 658 fields surveyed. This variable estimates the geographic extent of the weed.

Field uniformity shows the proportion of quadrats (20 per field) in which the species occurred. In the example, the value for **all field uniformity** means that green foxtail occurred in 10.0% of the quadrats surveyed. This variable can be used as an estimate of the area occupied by a weed. The **occurrence field uniformity** value means that green foxtail was present in 41.1% of the quadrats when considering only the 161 occurrence fields.

Three density variables are included in the tables. Green foxtail had an **occurrence field density** of 14.6 plants per square metre and an **all field density** of 3.6 plants per metre square. The density for fields in which the species occurred is always equal to or higher than the density for all the fields in the summary. The **maximum density** shows that at least one field had a density of 163.4 green foxtail plants per square metre.

The final column shows the abundance of each species surveyed relative to each other. Values in this column add up to 300. **Relative abundance** is derived from the values of the frequency, field uniformity (all fields) and density (all fields) variables. The relative abundance variable is used for ranking species such as green foxtail and wild buckwheat. Because the all field density value of green foxtail is over 3 times larger than larger than that for wild buckwheat, green foxtail is ranked higher, even though wild buckwheat has a higher frequency and a slightly higher all field uniformity. The relative abundance value of 37.7 for green foxtail is higher than the value of 30.3 for wild buckwheat.

Limitations, Constraints and Biases

The results in this report provide a 'snapshot' of the size and extent of weed populations in agricultural ecoregions at the time of the survey. It might be argued that 2016 was not indicative of a typical year throughout Manitoba as the majority of the province had high precipitation in comparison with historic levels[30]. Differences in precipitation and temperature may favour some weeds over others, or may result in higher or lower weed numbers in some areas than usual for the period as a whole. Consequently, only dramatic or consistent trends in the weed data are considered to be important. Minor fluctuations may result from simple year-to-year variation.

The survey protocol has been designed to reduce bias in sampling, and to obtain objective information on the weed flora that remains after control practices have been used by the producer. In the development of the protocol, several constraints were placed on the eligibility of areas and fields for inclusion in the survey. The survey covers the main area of agriculture in the province. Only the major agricultural crops were considered. Other crops may have different weed floras. Fields were only surveyed if they were accessible by road, and if the producers were willing to cooperate. Riverlots were excluded due to unforeseen difficulties obtaining ownership information. These constraints will have altered the spectrum of fields slightly from a completely random sample.

For a variety of reasons, some sites on the final list are different from those on the stratified random list developed initially. When surveyors went to the field, they were given a list of preselected and qualified sites. Sometimes mistakes were made, and the legal description given was not in an appropriate crop, sufficiently accessible, or in another way not a legitimate site. In this instance, the surveyor made an alternative selection, usually in the immediate vicinity. Sometimes the alternate selections were in different ecodistricts.

Two municipalities (Coldwell and West Interlake) and one ecodistrict (718) with allocated sites were not surveyed (Figure 6). In each of these cases, only one site was allocated. Weighting was used to overcome this problem; however, the accuracy of regional summaries is expected to be lowered. The area in annual crops in each of the ecodistricts in the municipalities of East St. Paul, St. Francois Xavier, St. Laurent and Headingly was too small to have any allocated sites. Species distribution maps are interpolated for these areas based on surrounding sites.

[30] **National Agroclimate Information Service (NAIS).** Precipitation compared to historical distribution (Prairie Region) April 1 to August 16, 2016 [Online] Available: http://www4.agr.gc.ca/DW-GS/historical-historiques.jspx?lang=eng&jsEnabled=true [11 February 2016]

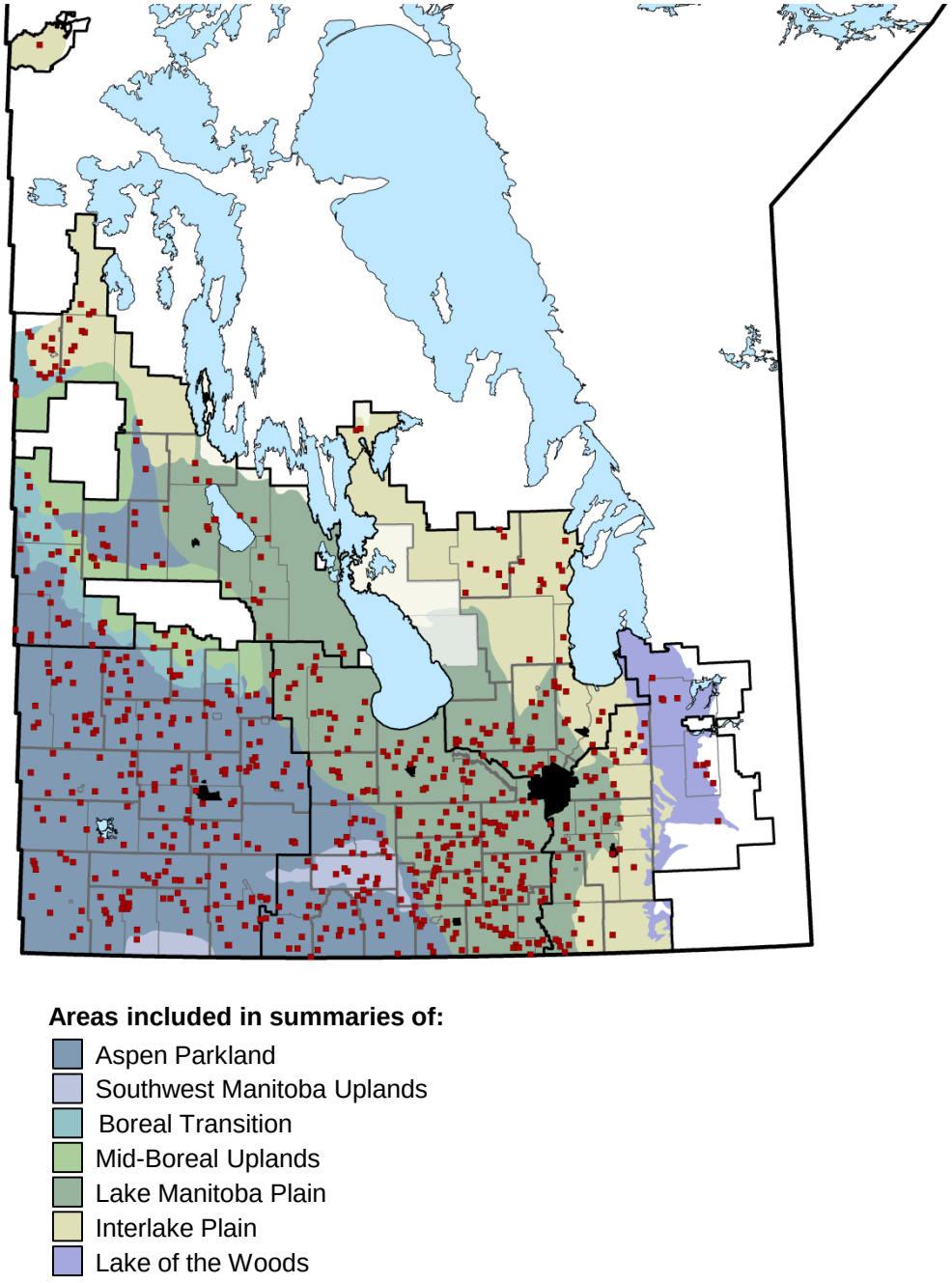

Figure 6. Locations of surveyed fields. Red squares indicate fields, black lines indicate crop reporting district municipality borders and grey lines indicate municipality borders. Areas with allocated sites that were not surveyed a lighter shade than those with surveyed sites

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Only a small portion of each field was surveyed. This portion intentionally did not include sloughs, field edges, shelterbelts, etc. It also did not extend into the less accessible areas of the field. This may limit the representation of some species, such as foxtail barley, that are found more commonly near saline sloughs, or smooth brome grass that is often found near field margins. The small area in the field was sufficient to illustrate the distribution of major species and minor species that might be important to agriculture. This level of sampling is not sufficient to give an exhaustive list of the flora, or to illustrate the distribution of rare species.

The identification of some weed species is difficult in the field. Surveyors were asked to send in samples to confirm identification. However, in some cases, good samples were not available. Generally, the identification and counts by the field surveyors were used without alteration, if identifiable samples were not available. Species which require mature specimens to identify (thyme-leaved spurge and ridge-seed spurge, western barnyard grass and barnyard grass, dock species) were combined in field summary tables. Combining these species allowed direct comparison with data from previous surveys.

It can be challenging to identify volunteers within the same crop. Therefore, volunteers are likely underestimated in area summaries and summaries of the same crop.

The weed survey recorded the numbers of individuals of each species. It does not show the vigour, the biomass or the competitive ability of the plants found in the field. The survey shows what was present, not its effect on the crop. In the survey analysis, all species are considered separately. The complex interrelationships among species have not been considered. This will be the subject of later analyses. Relationships between species and farm management practices will be considered in a further publication in this series. The relationships between species and field variables (for instance, distribution patterns in the field) are not considered.

List of Summary Tables in Part IV

Table 4. Number of fields surveyed, density, species richness and weed-free quadrats in the surveyed crops in Manitoba

Crop	Number of fields surveyed	Density (number/m^2)			Species (number/field)		Weed-free quadrats	
		mean	SE	median	mean	SE	%	SE
Canola	206	12.1	1.4	4.8	4.4	0.2	46.8	3.5
Spring wheat	196	16.0	1.9	4.8	4.4	0.2	43.7	3.5
Soybean	118	9.2	1.2	4.1	4.5	0.3	44.6	4.6
Corn	41	20.3	4.4	9.3	5.8	0.5	26.4	6.9
Barley	35	26.3	8.0	5.8	5.0	0.5	39.4	8.3
Oat	23	44.9	15.9	13.2	6.6	1.1	23.0	8.8
Flax	21	18.1	3.4	9.4	6.8	0.5	14.6	7.7
Sunflower	18	20.7	4.3	14.1	6.9	0.5	13.9	8.2
Manitoba	658	15.4	1.1	5.2	4.7	0.1	42.5	1.9

Table 5. 2016 Annual crops in Manitoba (658 fields)

Rank	Species	Frequency (%)	Field Uniformity		Field Density (#/m^2)			Relative Abundance
			All	Occurrence	All	Occurrence	High	
1	Green foxtail	24.4	10.0	41.1	3.6	14.6	163.4	37.7
2	Wild buckwheat	52.7	13.1	24.8	1.0	2.0	55.2	30.3
3	Barnyard grass species	23.0	6.4	27.8	1.1	4.8	80.0	18.2
4	Wild oats	20.7	5.6	26.8	0.9	4.4	69.6	15.6
5	Canola/rapeseed	23.2	6.5	28.1	0.7	2.9	35.6	15.4
6	Yellow foxtail	11.2	3.9	35.2	1.2	10.6	82.8	13.8
7	Dandelion	21.1	4.4	21.0	0.5	2.4	84.2	11.9
8	Redroot pigweed	20.9	4.5	21.7	0.4	2.1	22.2	11.6
9	Wheat	15.5	4.4	28.5	0.5	3.5	39.4	10.9
10	Round-leaved mallow	20.1	4.1	20.1	0.3	1.7	17.4	10.3
11	Broad-leaved plantain	12.5	3.4	27.4	0.6	4.5	57.4	9.6
12	Pale smartweed	17.5	3.2	18.3	0.4	2.0	24.8	9.0
13	Canada thistle	18.1	3.1	17.3	0.3	1.6	33.8	8.7
14	Lamb's-quarters	15.5	3.0	19.3	0.3	2.0	43.0	8.2
15	Spiny annual sow-thistle	11.1	2.6	23.7	0.2	2.0	17.0	6.3
16	Night-flowering catchfly	9.4	1.9	20.4	0.2	2.5	52.0	5.3
17	False cleavers	9.0	2.2	25.1	0.2	1.9	25.6	5.1
18	Chickweed	7.5	1.9	25.5	0.3	3.4	23.2	5.1
19	Perennial sow-thistle	8.5	1.8	21.4	0.2	1.8	24.2	4.5
20	Biennial wormwood	9.2	1.7	18.4	0.1	1.4	22.8	4.4
21	Field horsetail	4.3	1.0	22.5	0.3	5.9	61.2	3.5
22	Foxtail barley	6.9	1.1	16.1	0.1	1.7	15.0	3.3
23	Wild mustard	3.6	0.8	23.0	0.2	5.9	89.4	2.9
24	Oak-leaved goosefoot	6.0	0.9	14.3	0.1	1.4	16.2	2.7
25	Black medick	5.4	1.0	19.0	0.1	1.4	6.0	2.6
26	Golden dock	3.3	0.8	25.4	0.1	3.9	23.8	2.3
27	Shepherd's-purse	5.4	0.7	13.9	< 0.1	0.9	11.6	2.2
28	Thyme-leaved spurge	5.2	0.7	13.5	0.1	1.1	32.0	2.1
29	Purslane	3.9	0.8	21.6	0.1	1.9	8.4	2.1
30	Kochia	4.6	0.7	15.8	< 0.1	1.1	4.0	2.0
31	Stork's bill	2.3	0.7	28.1	0.1	4.2	15.8	1.7
32	Dock species	3.3	0.6	16.9	0.1	1.8	8.0	1.6
33	Hemp-nettle	3.1	0.5	16.0	< 0.1	1.3	11.6	1.4
34	Stinkweed	2.7	0.5	17.8	0.1	2.0	15.6	1.4
35	Clover species	2.4	0.5	22.4	< 0.1	1.7	10.8	1.3
36	Marsh yellow cress	2.7	0.5	18.2	< 0.1	1.3	4.8	1.3
37	Yellow sweet-clover	2.6	0.5	17.6	< 0.1	1.1	3.0	1.2
38	Quack grass	0.7	0.3	45.9	0.1	15.4	68.6	1.2
39	Rough cinquefoil	2.2	0.4	18.3	< 0.1	1.8	9.2	1.1
40	Northern willowherb	2.2	0.3	13.1	< 0.1	2.0	15.8	1.0
41	Tumble pigweed	2.3	0.4	15.6	< 0.1	0.9	1.8	1.0
42	Soybean	1.9	0.4	18.9	< 0.1	1.6	11.4	0.9
43	Witch grass	0.6	0.1	16.6	0.1	17.2	41.8	0.8
44	Rough hair grass	0.2	0.1	70.0	0.1	60.0	60.0	0.8
45	Alfalfa	2.1	0.3	12.0	< 0.1	0.7	1.6	0.8
46	American dragonhead	2.1	0.2	10.2	< 0.1	0.5	2.0	0.7
47	Scouring-rush	1.2	0.3	21.8	< 0.1	2.0	6.6	0.7
48	Narrow-leaved hawk's-beard	1.3	0.2	18.3	< 0.1	1.1	3.4	0.6
49	Maple-leaved goosefoot	1.7	0.1	7.8	< 0.1	0.5	1.0	0.5
50	Willow species	1.5	0.1	8.7	< 0.1	0.7	2.8	0.5
51	Annual sow-thistle	0.4	0.2	50.6	< 0.1	11.0	22.6	0.5
52	Green pigweed	0.6	0.2	34.3	< 0.1	4.3	15.2	0.5

(Table continued on next page)

Table 5. 2016 Annual crops in Manitoba (658 fields) *(continued)*

Rank	Species	Frequency (%)	Field Uniformity		Field Density (#/m^2)			Relative Abundance
			All	Occurrence	All	Occurrence	High	
53	American vetch	1.6	0.1	8.0	< 0.1	0.4	1.8	0.5
54	Prostrate pigweed	1.1	0.2	14.3	< 0.1	1.3	3.8	0.5
55	Manitoba maple	1.0	0.2	16.6	< 0.1	1.0	4.0	0.4
56	Proso millet	0.4	0.1	34.4	< 0.1	9.2	20.0	0.4
57	Rye	0.4	0.2	57.3	< 0.1	5.4	9.6	0.4
58	Bicknell's geranium	1.0	0.2	16.0	< 0.1	0.9	2.2	0.4
59	Oats	0.7	0.2	28.6	< 0.1	1.4	2.6	0.4
60	Canada fleabane	0.7	0.1	18.0	< 0.1	1.1	2.0	0.3
61	Absinth	0.6	0.1	11.8	< 0.1	3.2	17.6	0.3
62	Dog mustard	0.6	0.1	26.7	< 0.1	1.5	3.0	0.3
63	Low cudweed	0.8	0.1	9.2	< 0.1	1.3	3.0	0.3
64	Prostrate knotweed	0.7	0.1	13.8	< 0.1	1.4	3.4	0.3
65	Rayless aster	0.6	0.1	16.7	< 0.1	0.9	2.6	0.3
66	Cocklebur	0.6	0.1	14.8	< 0.1	1.2	3.8	0.3
67	Stink grass	0.5	0.1	24.8	< 0.1	1.6	3.2	0.3
68	Tartary buckwheat	0.3	0.1	44.4	< 0.1	4.2	10.2	0.3
69	Barley	0.6	0.1	15.2	< 0.1	1.3	2.0	0.3
70	Showy milkweed	0.8	0.1	7.9	< 0.1	0.7	1.0	0.3
71	Perennial rye grass	0.3	0.1	31.3	< 0.1	2.9	3.8	0.2
72	Common pepper-grass	0.1	0.1	55.0	< 0.1	18.0	18.0	0.2
73	Purslane speedwell	0.3	0.1	18.4	< 0.1	4.1	10.4	0.2
74	Flax	0.5	0.1	13.1	< 0.1	0.8	2.0	0.2
75	Leafy spurge	0.2	0.1	50.0	< 0.1	4.4	4.4	0.2
76	Siberian elm	0.6	< 0.1	6.9	< 0.1	0.4	1.2	0.2
77	Downy brome	0.2	0.1	35.0	< 0.1	2.0	2.0	0.1
78	False ragweed	0.4	< 0.1	10.5	< 0.1	0.5	2.8	0.1
79	Nightshade species	0.4	< 0.1	10.9	< 0.1	0.4	0.8	0.1
80	Bird's-foot trefoil	0.3	< 0.1	14.8	< 0.1	1.1	1.4	0.1
81	Flodman's thistle	0.3	< 0.1	16.0	< 0.1	1.4	2.0	0.1
82	Hedge bindweed	0.4	< 0.1	9.8	< 0.1	0.5	0.8	0.1
83	Scentless chamomile	0.2	0.1	35.0	< 0.1	4.0	4.0	0.1
84	Blue grass species	0.3	< 0.1	12.7	< 0.1	0.5	0.8	0.1
85	Common yellow wood-sorrel	0.2	< 0.1	20.0	< 0.1	3.6	3.6	0.1
86	Slough grass	0.3	< 0.1	10.0	< 0.1	0.6	0.6	0.1
87	Smooth brome	0.3	< 0.1	10.0	< 0.1	0.4	0.4	0.1
88	Needle-and-thread grass	0.2	< 0.1	20.0	< 0.1	1.6	1.6	0.1
89	Clammy hedge-hyssop	0.3	< 0.1	5.0	< 0.1	0.8	1.2	0.1
90	Bladder campion	0.3	< 0.1	5.0	< 0.1	0.2	0.2	0.1
91	Aster species	0.2	< 0.1	14.0	< 0.1	1.0	1.2	0.1
92	Spear-leaved goosefoot	0.2	< 0.1	25.0	< 0.1	1.4	1.4	0.1
93	Timothy	0.2	< 0.1	25.0	< 0.1	1.1	1.1	0.1
94	White mustard	0.1	< 0.1	25.0	< 0.1	1.4	1.4	0.1
95	Silverweed	0.2	< 0.1	5.0	< 0.1	1.2	1.2	0.1
96	Russian thistle	0.2	< 0.1	11.0	< 0.1	0.6	0.6	0.1
97	Common groundsel	0.1	< 0.1	30.0	< 0.1	1.8	1.8	0.1
98	Bur oak	0.2	< 0.1	15.0	< 0.1	0.6	0.6	0.1
99	Currant species	0.2	< 0.1	5.0	< 0.1	0.2	0.2	0.1
100	Sedge species	0.2	< 0.1	15.0	< 0.1	0.6	0.6	0.1
101	Goldenrod species	0.2	< 0.1	10.0	< 0.1	0.4	0.4	0.1
102	Rush species	0.2	< 0.1	10.0	< 0.1	0.4	0.4	0.1
103	Beggarticks species	0.2	< 0.1	10.0	< 0.1	0.4	0.4	0.1
104	Pennsylvania pellitory	0.2	< 0.1	5.0	< 0.1	0.2	0.2	0.1

(Table continued on next page)

Table 5. 2016 Annual crops in Manitoba (658 fields) *(continued)*

Rank	Species	Frequency (%)	Field Uniformity		Field Density (#/m^2)			Relative Abundance
			All	Occurrence	All	Occurrence	High	
105	Field bean	0.2	< 0.1	5.0	< 0.1	0.2	0.2	0.1
106	White cockle	0.2	< 0.1	10.0	< 0.1	0.4	0.4	0.1
107	Prickly lettuce	0.2	< 0.1	5.0	< 0.1	0.8	0.8	0.1
108	Corn spurry	0.2	< 0.1	10.0	< 0.1	0.4	0.4	0.1
109	False flax species	0.1	< 0.1	10.0	< 0.1	0.6	0.6	0.1
110	Blue-joint	0.1	< 0.1	5.0	< 0.1	1.6	1.6	< 0.1
111	Flixweed	0.2	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1
112	Large crab grass	0.1	< 0.1	15.0	< 0.1	0.8	0.8	< 0.1
113	Pineappleweed	0.2	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1
114	Western snowberry	0.2	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1
115	Povertyweed	0.2	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1
116	Buffalograss	0.2	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1
117	Short-awned foxtail	0.2	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1
118	Common ragweed	0.1	< 0.1	8.4	< 0.1	0.3	0.4	< 0.1
119	Yellow toadflax	0.2	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1
120	Northern bedstraw	0.1	< 0.1	5.0	< 0.1	0.4	0.4	< 0.1
121	Orchard grass	0.1	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1
122	Wormseed mustard	0.1	< 0.1	10.0	< 0.1	0.6	0.6	< 0.1
123	Toad rush	< 0.1	< 0.1	40.0	< 0.1	3.4	3.4	< 0.1
124	Yellow evening-primrose	0.1	< 0.1	10.0	< 0.1	1.0	1.0	< 0.1
125	Sunflower	0.1	< 0.1	10.0	< 0.1	0.4	0.4	< 0.1
126	Water smartweed	0.1	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1
127	Corn	< 0.1	< 0.1	20.0	< 0.1	1.0	1.0	< 0.1

Table 6. 2016 Canola in Manitoba (206 fields)

Rank	Species	Frequency (%)	Field Uniformity		Field Density (#/m^2)			Relative Abundance
			All	Occurrence	All	Occurrence	High	
1	Green foxtail	18.1	7.3	40.7	2.2	12.0	82.8	29.7
2	Wild buckwheat	48.0	10.6	22.0	0.8	1.6	14.4	28.3
3	Wheat	25.3	7.9	31.0	0.9	3.5	29.4	21.3
4	Yellow foxtail	10.8	4.5	41.7	1.6	14.8	82.8	20.2
5	Wild oats	23.8	6.3	26.4	0.7	3.0	27.2	17.9
6	Barnyard grass species	18.3	5.5	29.9	0.8	4.4	33.4	16.5
7	Redroot pigweed	21.6	4.1	19.0	0.5	2.1	22.2	13.0
8	Round-leaved mallow	20.7	3.8	18.4	0.2	1.1	4.0	10.6
9	Canada thistle	18.6	3.3	17.9	0.2	1.3	4.8	9.8
10	Dandelion	14.8	3.6	24.0	0.3	1.8	7.4	9.3
11	Broad-leaved plantain	13.8	3.2	23.5	0.3	2.3	12.2	9.1
12	Pale smartweed	18.5	2.8	15.2	0.2	1.2	10.0	8.9
13	False cleavers	13.2	2.9	22.3	0.2	1.6	8.2	7.8
14	Lamb's-quarters	16.0	2.1	13.0	0.1	0.9	8.4	7.0
15	Spiny annual sow-thistle	10.2	2.6	25.2	0.2	2.3	17.0	7.0
16	Chickweed	10.8	2.4	22.4	0.2	2.1	9.2	6.9
17	Field horsetail	4.9	1.4	28.4	0.4	8.6	61.2	6.0
18	Perennial sow-thistle	9.1	2.1	22.9	0.2	2.3	24.2	6.0
19	Oak-leaved goosefoot	8.4	1.6	18.8	0.2	2.1	16.2	5.0
20	Biennial wormwood	8.7	1.5	17.6	0.1	1.0	3.8	4.3
21	Golden dock	4.7	1.2	24.3	0.2	4.2	23.8	3.9
22	Night-flowering catchfly	7.6	1.0	13.2	0.1	0.7	2.6	3.3
23	Rough hair grass	0.5	0.3	70.0	0.3	60.0	60.0	2.9
24	Shepherd's-purse	7.1	0.7	10.3	< 0.1	0.7	1.6	2.8
25	Black medick	5.6	0.8	14.7	0.1	1.1	6.0	2.7
26	Kochia	5.2	0.9	16.6	0.1	1.2	4.0	2.6
27	Stork's bill	2.8	0.8	29.9	0.1	2.9	10.2	2.2
28	Thyme-leaved spurge	4.8	0.6	12.3	< 0.1	1.0	3.0	2.1
29	Dock species	4.0	0.5	13.2	0.1	2.0	8.0	2.1
30	Clover species	3.0	0.7	23.1	0.1	2.3	10.8	2.0
31	Foxtail barley	3.9	0.6	15.6	< 0.1	0.9	2.2	1.8
32	Hemp-nettle	2.3	0.6	27.3	0.1	2.8	11.6	1.7
33	Scouring-rush	1.1	0.6	57.1	< 0.1	4.6	6.6	1.3
34	Canola/rapeseed	2.4	0.4	18.1	< 0.1	1.4	4.6	1.3
35	Stinkweed	3.1	0.4	11.8	< 0.1	0.5	0.8	1.2
36	Rough cinquefoil	1.7	0.4	22.7	< 0.1	2.8	6.2	1.2
37	American dragonhead	3.2	0.2	6.4	< 0.1	0.3	1.0	1.0
38	Marsh yellow cress	1.9	0.4	18.6	< 0.1	1.3	3.4	1.0
39	Rye	0.5	0.4	80.0	< 0.1	9.6	9.6	0.9
40	Purslane	1.5	0.3	22.3	< 0.1	1.6	4.2	0.9
41	Tumble pigweed	1.8	0.3	14.5	< 0.1	0.8	1.4	0.8
42	Green pigweed	0.9	0.2	27.5	< 0.1	4.5	8.2	0.8
43	Alfalfa	1.9	0.2	12.3	< 0.1	0.8	1.6	0.8
44	American vetch	1.9	0.2	10.9	< 0.1	0.6	1.8	0.8
45	Willow species	1.9	0.2	10.0	< 0.1	0.6	1.0	0.7
46	Quack grass	0.5	0.3	65.0	< 0.1	7.4	7.4	0.7
47	Bicknell's geranium	1.4	0.3	19.5	< 0.1	1.1	2.2	0.7
48	Narrow-leaved hawk's-beard	1.0	0.2	24.9	< 0.1	1.8	3.4	0.6
49	Yellow sweet-clover	1.9	0.1	7.0	< 0.1	0.3	0.6	0.6
50	Flax	1.4	0.2	13.1	< 0.1	0.8	2.0	0.6
51	Prostrate pigweed	0.9	0.2	22.5	< 0.1	2.4	3.8	0.6
52	Leafy spurge	0.5	0.3	50.0	< 0.1	4.4	4.4	0.6

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Table 6. 2016 Canola in Manitoba (206 fields) *(continued)*

Rank	Species	Frequency (%)	Field Uniformity		Field Density (#/m^2)			Relative Abundance
			All	Occurrence	All	Occurrence	High	
53	Low cudweed	1.3	0.1	8.5	< 0.1	0.9	1.6	0.5
54	Downy brome	0.6	0.2	35.0	< 0.1	2.0	2.0	0.5
55	Perennial rye grass	0.6	0.1	25.0	< 0.1	2.2	2.2	0.4
56	Common yellow wood-sorrel	0.5	0.1	20.0	< 0.1	3.6	3.6	0.4
57	Soybean	1.0	0.1	10.0	< 0.1	0.5	0.8	0.4
58	Wild mustard	1.0	0.1	7.5	< 0.1	0.3	0.4	0.3
59	Prostrate knotweed	1.0	0.1	7.6	< 0.1	0.3	0.4	0.3
60	Flodman's thistle	0.5	0.1	20.0	< 0.1	2.0	2.0	0.3
61	Northern willowherb	1.0	0.1	5.0	< 0.1	0.2	0.2	0.3
62	Absinth	1.0	< 0.1	5.0	< 0.1	0.2	0.2	0.3
63	Cocklebur	0.9	< 0.1	5.0	< 0.1	0.2	0.2	0.3
64	Blue grass species	0.5	0.1	20.0	< 0.1	0.8	0.8	0.2
65	Canada fleabane	0.4	0.1	25.0	< 0.1	1.6	1.6	0.2
66	Aster species	0.5	0.1	15.0	< 0.1	1.2	1.2	0.2
67	Maple-leaved goosefoot	0.5	0.1	15.0	< 0.1	1.0	1.0	0.2
68	Hedge bindweed	0.5	0.1	15.0	< 0.1	0.8	0.8	0.2
69	Bur oak	0.5	0.1	15.0	< 0.1	0.6	0.6	0.2
70	Showy milkweed	0.5	< 0.1	10.0	< 0.1	1.0	1.0	0.2
71	Bird's-foot trefoil	0.5	< 0.1	10.0	< 0.1	0.8	0.8	0.2
72	Clammy hedge-hyssop	0.5	< 0.1	5.0	< 0.1	1.2	1.2	0.2
73	Goldenrod species	0.5	< 0.1	10.0	< 0.1	0.4	0.4	0.2
74	Rush species	0.5	< 0.1	10.0	< 0.1	0.4	0.4	0.2
75	Beggarticks species	0.5	< 0.1	10.0	< 0.1	0.4	0.4	0.2
76	Field bean	0.6	< 0.1	5.0	< 0.1	0.2	0.2	0.2
77	Manitoba maple	0.6	< 0.1	5.0	< 0.1	0.2	0.2	0.2
78	Prickly lettuce	0.5	< 0.1	5.0	< 0.1	0.8	0.8	0.2
79	Purslane speedwell	0.6	< 0.1	5.0	< 0.1	0.2	0.2	0.2
80	Flixweed	0.5	< 0.1	5.0	< 0.1	0.2	0.2	0.2
81	False ragweed	0.5	< 0.1	5.0	< 0.1	0.2	0.2	0.1
82	Pineappleweed	0.5	< 0.1	5.0	< 0.1	0.2	0.2	0.1
83	Western snowberry	0.5	< 0.1	5.0	< 0.1	0.2	0.2	0.1
84	Siberian elm	0.5	< 0.1	5.0	< 0.1	0.2	0.2	0.1
85	Oats	0.5	< 0.1	5.0	< 0.1	0.2	0.2	0.1
86	Smooth brome	0.4	< 0.1	10.0	< 0.1	0.4	0.4	0.1
87	Northern bedstraw	0.4	< 0.1	5.0	< 0.1	0.4	0.4	0.1

Table 7. 2016 Spring wheat in Manitoba (196 fields)

Rank	Species	Frequency (%)	Field Uniformity		Field Density (#/m^2)			Relative Abundance
			All	Occurrence	All	Occurrence	High	
1	Green foxtail	33.0	13.2	39.9	5.0	15.3	163.4	52.2
2	Wild buckwheat	54.5	13.5	24.8	1.1	2.1	45.6	33.1
3	Wild oats	23.2	5.6	24.3	1.2	5.3	51.8	18.7
4	Canola/rapeseed	29.5	6.9	23.6	0.6	2.2	27.4	17.6
5	Dandelion	24.5	4.6	18.6	0.8	3.3	84.2	15.2
6	Barnyard grass species	19.4	5.0	26.0	0.9	4.5	29.2	15.0
7	Canada thistle	21.3	3.7	17.2	0.5	2.2	33.8	11.5
8	Round-leaved mallow	18.3	4.3	23.4	0.4	2.3	14.6	11.0
9	Spiny annual sow-thistle	14.4	3.6	24.9	0.3	2.1	13.6	8.8
10	Lamb's-quarters	14.8	2.7	18.4	0.3	1.9	16.4	7.9
11	Night-flowering catchfly	13.9	2.7	19.8	0.3	2.1	11.6	7.7
12	False cleavers	12.5	3.2	25.8	0.2	1.9	16.8	7.5
13	Redroot pigweed	12.6	2.9	22.9	0.3	2.1	9.6	7.4
14	Chickweed	9.9	2.6	25.8	0.4	3.8	23.2	7.2
15	Broad-leaved plantain	9.0	2.2	24.0	0.4	4.8	53.0	6.9
16	Pale smartweed	11.1	2.4	21.9	0.3	2.6	20.0	6.8
17	Yellow foxtail	6.2	1.9	30.6	0.5	8.8	64.0	6.7
18	Foxtail barley	12.2	2.2	17.8	0.3	2.4	15.0	6.7
19	Wild mustard	5.2	1.4	26.8	0.5	9.9	89.4	5.8
20	Perennial sow-thistle	6.5	1.0	15.2	0.1	1.1	2.8	2.9
21	Biennial wormwood	6.3	1.0	16.5	0.1	1.0	3.0	2.9
22	Hemp-nettle	6.6	0.8	11.6	0.1	0.8	2.2	2.6
23	Stork's bill	3.0	0.9	31.4	0.1	4.3	11.4	2.4
24	Kochia	4.9	0.9	18.4	0.1	1.2	3.2	2.4
25	Soybean	3.8	0.9	23.5	0.1	2.2	11.4	2.3
26	Shepherd's-purse	4.9	0.8	16.6	< 0.1	1.0	2.2	2.2
27	Field horsetail	2.5	0.7	27.8	0.1	5.7	20.0	2.2
28	Black medick	4.3	0.8	18.3	< 0.1	1.1	4.2	2.1
29	Dock species	3.3	0.8	22.8	0.1	2.2	4.4	2.0
30	Stinkweed	2.4	0.7	27.9	0.1	3.4	13.6	1.8
31	Wheat	3.7	0.6	17.3	< 0.1	0.9	1.6	1.7
32	Annual sow-thistle	1.1	0.5	50.0	0.1	11.4	22.6	1.5
33	Tumble pigweed	3.3	0.4	13.5	< 0.1	0.9	1.8	1.4
34	Thyme-leaved spurge	3.1	0.4	12.8	< 0.1	0.8	2.6	1.3
35	Golden dock	1.6	0.4	23.2	0.1	4.7	11.4	1.2
36	Proso millet	0.5	0.3	60.0	0.1	20.0	20.0	1.1
37	Oak-leaved goosefoot	2.2	0.2	7.3	< 0.1	0.9	2.6	0.8
38	Manitoba maple	1.0	0.4	39.6	< 0.1	2.4	4.0	0.8
39	Alfalfa	2.0	0.2	11.2	< 0.1	0.7	1.2	0.8
40	American vetch	2.5	0.1	6.0	< 0.1	0.3	0.6	0.8
41	Prostrate pigweed	1.5	0.2	13.3	< 0.1	1.2	3.2	0.6
42	Purslane	1.0	0.1	9.9	< 0.1	4.1	8.2	0.6
43	Yellow sweet-clover	1.1	0.2	16.3	< 0.1	1.5	3.0	0.5
44	Narrow-leaved hawk's-beard	1.0	0.2	20.0	< 0.1	0.9	0.9	0.5
45	American dragonhead	0.9	0.2	21.8	< 0.1	1.3	2.0	0.5
46	Low cudweed	1.0	0.1	10.1	< 0.1	1.9	3.0	0.5
47	Scentless chamomile	0.5	0.2	35.0	< 0.1	4.0	4.0	0.4
48	Slough grass	1.0	0.1	10.0	< 0.1	0.6	0.6	0.4
49	Maple-leaved goosefoot	1.2	0.1	5.0	< 0.1	0.2	0.2	0.3
50	Showy milkweed	1.0	0.1	5.0	< 0.1	0.6	0.6	0.3
51	Scouring-rush	1.1	0.1	5.0	< 0.1	0.4	0.6	0.3
52	Spear-leaved goosefoot	0.5	0.1	25.0	< 0.1	1.4	1.4	0.3

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Table 7. 2016 Spring wheat in Manitoba (196 fields) *(continued)*

Rank	Species	Frequency (%)	Field Uniformity		Field Density (#/m^2)			Relative Abundance
			All	Occurrence	All	Occurrence	High	
53	Bicknell's geranium	0.9	0.1	7.4	< 0.1	0.5	0.8	0.3
54	Timothy	0.5	0.1	25.0	< 0.1	1.1	1.1	0.3
55	Clover species	0.5	0.1	15.0	< 0.1	0.6	0.6	0.2
56	Dog mustard	0.6	0.1	10.0	< 0.1	0.4	0.4	0.2
57	Russian thistle	0.5	0.1	10.0	< 0.1	0.6	0.6	0.2
58	Northern willowherb	0.6	< 0.1	5.0	< 0.1	0.4	0.4	0.2
59	False ragweed	0.5	0.1	10.0	< 0.1	0.4	0.4	0.2
60	Smooth brome	0.5	0.1	10.0	< 0.1	0.4	0.4	0.2
61	Rough cinquefoil	0.5	0.1	10.0	< 0.1	0.4	0.4	0.2
62	White cockle	0.5	0.1	10.0	< 0.1	0.4	0.4	0.2
63	Hedge bindweed	0.6	< 0.1	5.0	< 0.1	0.2	0.2	0.2
64	Willow species	0.5	< 0.1	10.0	< 0.1	0.6	0.6	0.2
65	Rayless aster	0.6	< 0.1	5.0	< 0.1	0.2	0.2	0.2
66	Corn spurry	0.5	< 0.1	10.0	< 0.1	0.4	0.4	0.2
67	Bladder campion	0.6	< 0.1	5.0	< 0.1	0.2	0.2	0.2
68	Quack grass	0.5	< 0.1	5.0	< 0.1	0.8	0.8	0.2
69	Witch grass	0.5	< 0.1	5.0	< 0.1	0.4	0.4	0.2
70	Siberian elm	0.5	< 0.1	5.0	< 0.1	0.2	0.2	0.2
71	Cocklebur	0.5	< 0.1	5.0	< 0.1	0.8	0.8	0.2
72	Short-awned foxtail	0.5	< 0.1	5.0	< 0.1	0.2	0.2	0.1
73	Blue grass species	0.5	< 0.1	5.0	< 0.1	0.2	0.2	0.1
74	Yellow toadflax	0.5	< 0.1	5.0	< 0.1	0.2	0.2	0.1
75	Yellow evening-primrose	0.3	< 0.1	10.0	< 0.1	1.0	1.0	0.1

Table 8. 2016 Soybean in Manitoba (118 fields)

Rank	Species	Frequency (%)	Field Uniformity		Field Density (#/m^2)			Relative Abundance
			All	Occurrence	All	Occurrence	High	
1	Canola/rapeseed	44.8	13.0	29.0	1.4	3.1	30.6	39.5
2	Wild buckwheat	54.1	11.1	20.5	0.7	1.3	8.8	31.9
3	Barnyard grass species	27.8	6.1	21.9	0.8	3.0	35.0	22.1
4	Dandelion	28.2	5.9	20.9	0.6	2.0	24.6	19.0
5	Redroot pigweed	27.6	6.7	24.3	0.5	1.8	14.4	18.9
6	Wheat	19.9	4.9	24.7	0.5	2.7	22.0	15.7
7	Green foxtail	14.8	3.6	24.7	0.7	4.6	37.0	14.7
8	Yellow foxtail	14.5	3.1	21.6	0.5	3.6	42.6	12.3
9	Wild oats	13.4	3.2	23.7	0.5	3.7	23.6	11.9
10	Broad-leaved plantain	10.2	3.3	32.8	0.4	3.9	16.4	10.3
11	Biennial wormwood	14.8	2.7	18.3	0.3	2.0	22.8	9.6
12	Round-leaved mallow	17.0	2.1	12.4	0.2	1.1	5.8	8.1
13	Lamb's-quarters	11.1	2.2	19.9	0.1	1.3	3.8	6.5
14	Night-flowering catchfly	3.9	0.9	22.4	0.4	10.5	52.0	6.3
15	Pale smartweed	16.6	1.5	9.3	0.1	0.5	1.8	6.3
16	Marsh yellow cress	8.9	1.4	15.8	0.1	1.2	4.8	4.7
17	Black medick	6.2	1.5	24.3	0.1	1.8	4.4	4.3
18	Field horsetail	7.2	0.8	11.2	0.1	2.1	7.4	4.1
19	Golden dock	3.2	1.1	33.9	0.2	4.9	11.8	3.6
20	Perennial sow-thistle	5.3	1.2	22.3	0.1	1.7	3.6	3.4
21	Spiny annual sow-thistle	7.1	1.0	13.8	< 0.1	0.7	1.6	3.2
22	Canada thistle	6.6	0.9	13.2	0.1	1.1	4.6	3.2
23	Oak-leaved goosefoot	6.7	0.9	12.9	< 0.1	0.7	1.4	3.0
24	Rough cinquefoil	5.2	0.7	13.0	0.1	1.2	2.2	2.5
25	Clover species	4.3	0.9	21.5	< 0.1	1.1	2.6	2.5
26	Purslane	6.5	0.6	9.9	< 0.1	0.4	0.8	2.5
27	Northern willowherb	6.4	0.5	8.6	< 0.1	0.4	1.0	2.3
28	Yellow sweet-clover	4.5	0.8	16.8	< 0.1	0.9	3.0	2.3
29	Oats	2.4	1.0	39.7	< 0.1	1.9	2.6	2.1
30	Thyme-leaved spurge	4.9	0.4	7.6	< 0.1	0.3	0.6	1.7
31	Chickweed	0.8	0.4	50.0	0.1	10.2	10.2	1.6
32	Willow species	3.4	0.2	7.3	< 0.1	0.8	2.8	1.3
33	Shepherd's-purse	2.5	0.4	17.6	< 0.1	1.1	2.0	1.3
34	Maple-leaved goosefoot	3.5	0.2	6.8	< 0.1	0.7	1.0	1.3
35	Dock species	3.3	0.3	8.2	< 0.1	0.5	1.2	1.2
36	Kochia	2.4	0.3	13.1	< 0.1	0.7	1.8	1.1
37	Barley	1.8	0.3	15.3	< 0.1	1.4	2.0	1.0
38	Cocklebur	0.8	0.4	45.0	< 0.1	3.8	3.8	0.9
39	Narrow-leaved hawk's-beard	1.8	0.2	12.9	< 0.1	0.9	1.4	0.9
40	Tumble pigweed	1.8	0.3	15.8	< 0.1	0.7	1.2	0.9
41	Wild mustard	2.5	0.2	8.0	< 0.1	0.3	0.4	0.8
42	Perennial rye grass	0.8	0.3	40.0	< 0.1	3.8	3.8	0.8
43	Rayless aster	0.8	0.4	45.0	< 0.1	2.6	2.6	0.8
44	Canada fleabane	2.0	0.1	5.0	< 0.1	0.3	0.4	0.6
45	Needle-and-thread grass	1.0	0.2	20.0	< 0.1	1.6	1.6	0.6
46	Nightshade species	1.6	0.1	7.4	< 0.1	0.3	0.4	0.5
47	Bird's-foot trefoil	0.8	0.2	20.0	< 0.1	1.4	1.4	0.5
48	Alfalfa	1.6	0.1	5.0	< 0.1	0.2	0.2	0.5
49	Stork's bill	1.0	0.1	15.0	< 0.1	0.8	0.8	0.5
50	Sedge species	0.8	0.1	15.0	< 0.1	0.6	0.6	0.4
51	Witch grass	0.9	0.1	10.0	< 0.1	0.6	0.6	0.3
52	Stinkweed	0.8	0.1	10.0	< 0.1	0.6	0.6	0.3

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Table 8. 2016 Soybean in Manitoba (118 fields) *(continued)*

Rank	Species	Frequency (%)	Field Uniformity		Field Density (#/m^2)			Relative Abundance
			All	Occurrence	All	Occurrence	High	
53	Pennsylvania pellitory	1.1	0.1	5.0	< 0.1	0.2	0.2	0.3
54	Manitoba maple	0.8	0.1	10.0	< 0.1	0.4	0.4	0.3
55	False flax species	0.8	0.1	10.0	< 0.1	0.6	0.6	0.3
56	Foxtail barley	1.0	0.1	5.0	< 0.1	0.2	0.2	0.3
57	Prostrate pigweed	1.0	< 0.1	5.0	< 0.1	0.2	0.2	0.3
58	Dog mustard	0.7	0.1	10.0	< 0.1	0.4	0.4	0.3
59	Povertyweed	0.9	< 0.1	5.0	< 0.1	0.2	0.2	0.3
60	Scouring-rush	0.9	< 0.1	5.0	< 0.1	0.2	0.2	0.3
61	Buffalograss	0.9	< 0.1	5.0	< 0.1	0.2	0.2	0.3
62	Absinth	0.8	< 0.1	5.0	< 0.1	0.2	0.2	0.3
63	American vetch	0.8	< 0.1	5.0	< 0.1	0.2	0.2	0.2
64	Bladder campion	0.7	< 0.1	5.0	< 0.1	0.2	0.2	0.2

Table 9. 2016 Corn in Manitoba (41 fields)

Rank	Species	Frequency (%)	Field Uniformity		Field Density (#/m^2)			Relative Abundance
			All	Occurrence	All	Occurrence	High	
1	Barnyard grass species	43.6	15.5	35.6	3.0	6.8	80.0	31.9
2	Wild buckwheat	59.1	20.8	35.3	1.6	2.8	7.8	31.2
3	Canola/rapeseed	37.7	15.4	40.9	1.9	5.1	35.6	25.5
4	Lamb's-quarters	38.6	13.6	35.1	1.9	4.9	43.0	24.4
5	Round-leaved mallow	47.5	12.2	25.8	1.2	2.5	17.4	21.7
6	Green foxtail	12.5	8.3	66.4	2.8	22.5	74.0	21.2
7	Redroot pigweed	35.5	9.3	26.3	0.9	2.6	16.6	16.5
8	Purslane	26.3	8.2	31.2	0.5	1.9	4.2	12.1
9	Broad-leaved plantain	19.0	5.0	26.2	0.8	4.4	32.2	10.6
10	Yellow foxtail	21.6	6.2	28.7	0.5	2.1	4.8	9.8
11	Dandelion	18.1	5.4	29.6	0.4	2.3	6.8	8.5
12	Pale smartweed	13.9	4.0	29.0	0.6	4.5	23.2	8.0
13	Spiny annual sow-thistle	7.3	2.6	35.0	0.2	3.2	5.8	4.0
14	Canada thistle	11.6	1.7	15.0	0.1	1.0	2.4	3.6
15	Stink grass	7.7	2.4	30.9	0.2	2.1	3.2	3.6
16	Common pepper-grass	2.5	1.4	55.0	0.4	18.0	18.0	3.5
17	Biennial wormwood	11.6	1.5	13.2	0.1	0.6	1.0	3.3
18	Wheat	7.1	1.7	23.7	0.2	2.9	5.6	3.3
19	Field horsetail	4.9	1.1	22.4	0.3	6.2	8.2	3.0
20	Perennial sow-thistle	4.7	2.0	42.1	0.2	3.8	7.4	2.9
21	Stinkweed	2.3	0.9	40.0	0.4	15.6	15.6	2.7
22	Black medick	5.0	1.7	33.4	0.1	2.8	5.6	2.6
23	Yellow sweet-clover	7.2	1.2	16.4	0.1	1.4	3.0	2.5
24	Golden dock	4.6	1.8	39.1	0.1	2.0	2.2	2.4
25	Green pigweed	4.8	1.6	32.3	0.1	2.3	2.8	2.3
26	Purslane speedwell	2.5	1.0	40.0	0.3	10.4	10.4	2.3
27	Thyme-leaved spurge	9.4	0.7	7.6	< 0.1	0.4	0.8	2.3
28	Rough cinquefoil	2.3	1.4	60.0	0.2	9.2	9.2	2.3
29	Shepherd's-purse	9.2	0.6	6.1	0.1	0.6	1.6	2.2
30	Dock species	2.3	1.6	70.0	0.1	5.8	5.8	2.0
31	Foxtail barley	5.0	1.1	22.5	0.1	1.4	2.2	1.9
32	Marsh yellow cress	2.5	1.4	55.0	0.1	3.6	3.6	1.7
33	False cleavers	2.3	1.3	55.0	0.1	4.0	4.0	1.7
34	Oak-leaved goosefoot	7.1	0.4	5.0	< 0.1	0.2	0.2	1.5
35	Narrow-leaved hawk's-beard	5.0	0.7	13.3	< 0.1	0.6	1.0	1.5
36	Alfalfa	4.5	0.7	14.7	< 0.1	0.9	1.6	1.4
37	Maple-leaved goosefoot	4.9	0.6	12.6	< 0.1	0.5	0.8	1.4
38	American dragonhead	4.6	0.6	12.7	< 0.1	0.7	1.2	1.3
39	Clover species	4.8	0.6	11.8	< 0.1	0.6	1.0	1.3
40	Siberian elm	4.6	0.4	9.7	< 0.1	0.7	1.2	1.2
41	Soybean	2.9	0.7	25.0	< 0.1	1.4	1.4	1.1
42	Bicknell's geranium	2.8	0.7	25.0	< 0.1	1.6	1.6	1.1
43	Kochia	4.6	0.4	7.7	< 0.1	0.3	0.4	1.1
44	Common groundsel	2.4	0.7	30.0	< 0.1	1.8	1.8	1.1
45	Wild mustard	2.5	0.5	20.0	< 0.1	0.8	0.8	0.8
46	Nightshade species	2.4	0.5	20.0	< 0.1	0.8	0.8	0.8
47	Large crab grass	2.5	0.4	15.0	< 0.1	0.8	0.8	0.8
48	Night-flowering catchfly	2.3	0.3	15.0	< 0.1	1.4	1.4	0.8
49	Flodman's thistle	2.5	0.2	10.0	< 0.1	0.4	0.4	0.6
50	Scouring-rush	2.4	0.1	5.0	< 0.1	1.2	1.2	0.6
51	Orchard grass	2.9	0.1	5.0	< 0.1	0.2	0.2	0.6
52	Wormseed mustard	2.3	0.2	10.0	< 0.1	0.6	0.6	0.6

(Table continued on next page)

Table 9. 2016 Corn in Manitoba (41 fields) *(continued)*

Rank	Species	Frequency (%)	Field Uniformity		Field Density (#/m^2)			Relative Abundance
			All	Occurrence	All	Occurrence	High	
53	Tumble pigweed	2.3	0.2	10.0	< 0.1	0.4	0.4	0.6
54	Prostrate pigweed	2.3	0.2	10.0	< 0.1	0.4	0.4	0.6
55	Clammy hedge-hyssop	2.5	0.1	5.0	< 0.1	0.2	0.2	0.5
56	Common ragweed	1.9	0.2	10.0	< 0.1	0.4	0.4	0.5
57	Sunflower	1.9	0.2	10.0	< 0.1	0.4	0.4	0.5

Table 10. 2016 Barley in Manitoba (35 fields)

Rank	Species	Frequency (%)	Field Uniformity		Field Density (#/m^2)			Relative Abundance
			All	Occurrence	All	Occurrence	High	
1	Green foxtail	36.5	17.3	47.3	7.3	20.1	98.0	46.9
2	Wild buckwheat	68.9	20.4	29.6	1.7	2.5	13.8	34.0
3	Wild oats	25.5	9.1	35.9	2.9	11.3	69.6	22.2
4	Canola/rapeseed	26.8	14.0	52.2	1.8	6.9	28.8	21.8
5	Pale smartweed	25.8	7.0	27.4	1.2	4.6	24.8	14.4
6	Quack grass	8.4	4.9	58.8	2.3	27.8	68.6	13.8
7	Canada thistle	31.1	7.4	23.7	0.6	1.8	8.8	13.3
8	Barnyard grass species	22.2	7.0	31.5	0.9	4.0	18.4	12.5
9	Yellow foxtail	11.2	5.1	45.6	1.8	15.8	41.0	12.4
10	Night-flowering catchfly	17.3	7.0	40.4	0.6	3.6	9.4	10.5
11	Dandelion	20.7	4.2	20.3	0.4	1.9	7.8	8.4
12	Redroot pigweed	20.4	4.1	20.0	0.4	2.0	6.0	8.4
13	Broad-leaved plantain	12.6	2.9	23.0	0.6	4.7	21.6	6.7
14	Spiny annual sow-thistle	13.6	3.8	27.9	0.3	2.4	7.4	6.5
15	Chickweed	3.3	2.9	90.0	0.7	22.8	22.8	5.5
16	Round-leaved mallow	13.7	2.7	19.8	0.2	1.1	2.0	5.2
17	Foxtail barley	13.4	2.4	18.0	0.2	1.6	4.4	5.1
18	Biennial wormwood	10.5	3.0	28.9	0.2	2.3	6.0	5.0
19	Perennial sow-thistle	12.1	2.0	16.9	0.2	1.4	4.2	4.4
20	Wild mustard	11.1	2.3	20.5	0.1	1.1	1.8	4.2
21	Thyme-leaved spurge	9.0	1.8	19.9	0.2	1.8	3.2	3.6
22	Lamb's-quarters	7.9	2.0	25.0	0.1	1.8	3.4	3.4
23	Tartary buckwheat	2.6	2.3	90.0	0.3	10.2	10.2	3.0
24	Absinth	2.6	1.1	45.0	0.4	17.6	17.6	3.0
25	Wheat	8.0	1.5	18.3	0.1	1.0	1.4	2.9
26	Shepherd's-purse	5.5	1.2	22.7	< 0.1	0.9	1.4	2.1
27	Kochia	5.4	0.8	14.7	0.1	1.9	3.6	2.0
28	Clover species	2.6	1.1	45.0	0.1	4.0	4.0	1.7
29	White mustard	3.6	0.9	25.0	< 0.1	1.4	1.4	1.5
30	American dragonhead	4.5	0.7	15.0	< 0.1	0.6	0.6	1.4
31	False cleavers	2.7	0.9	35.0	< 0.1	1.8	1.8	1.4
32	Oak-leaved goosefoot	2.8	0.8	30.0	< 0.1	1.8	1.8	1.3
33	Hemp-nettle	3.6	0.5	15.0	< 0.1	0.8	0.8	1.2
34	Soybean	4.9	0.2	5.0	< 0.1	0.2	0.2	1.2
35	Stinkweed	2.5	0.5	20.0	0.1	2.2	2.2	1.1
36	Yellow sweet-clover	2.6	0.5	20.0	0.1	2.0	2.0	1.0
37	Blue-joint	3.3	0.2	5.0	0.1	1.6	1.6	1.0
38	Rough cinquefoil	2.6	0.4	15.0	< 0.1	0.8	0.8	0.8
39	Marsh yellow cress	2.7	0.3	10.0	< 0.1	0.8	0.8	0.8
40	Prostrate knotweed	2.6	0.3	10.0	< 0.1	0.8	0.8	0.8
41	Stink grass	2.8	0.1	5.0	< 0.1	0.2	0.2	0.7
42	Black medick	2.8	0.1	5.0	< 0.1	0.2	0.2	0.7
43	Dock species	2.8	0.1	5.0	< 0.1	0.2	0.2	0.7
44	Water smartweed	2.7	0.1	5.0	< 0.1	0.2	0.2	0.7
45	Manitoba maple	2.6	0.1	5.0	< 0.1	0.2	0.2	0.6

Table 11. 2016 Oat in Manitoba (23 fields)

Rank	Species	Frequency (%)	Field Uniformity		Field Density (#/m^2)			Relative Abundance
			All	Occurrence	All	Occurrence	High	
1	Green foxtail	48.9	26.4	53.9	13.0	26.6	93.8	50.1
2	Barnyard grass species	42.9	14.3	33.4	4.6	10.8	44.8	24.2
3	Yellow foxtail	23.2	14.1	60.8	5.8	25.0	57.2	23.7
4	Wild buckwheat	45.3	20.8	45.8	2.1	4.6	13.4	22.2
5	Broad-leaved plantain	31.2	13.3	42.6	3.8	12.2	57.4	20.0
6	Pale smartweed	44.6	10.9	24.5	1.8	3.9	17.8	16.3
7	Wild oats	26.8	11.7	43.8	1.2	4.5	9.8	12.8
8	Wheat	9.1	5.1	56.6	1.9	21.5	39.4	8.4
9	Redroot pigweed	26.9	4.9	18.4	0.7	2.7	12.0	8.3
10	Perennial sow-thistle	25.1	6.2	24.7	0.5	1.9	6.8	8.1
11	Canola/rapeseed	26.4	5.2	19.7	0.4	1.5	5.0	7.6
12	Lamb's-quarters	18.1	5.0	27.4	1.0	5.5	17.8	7.5
13	Canada thistle	26.6	4.0	14.9	0.3	1.2	2.2	6.8
14	Witch grass	4.8	1.4	30.0	2.0	41.8	41.8	5.9
15	Wild mustard	9.7	3.9	40.4	0.8	8.7	16.2	5.4
16	Dandelion	18.1	3.5	19.4	0.3	1.6	4.2	5.2
17	Night-flowering catchfly	14.0	4.4	31.6	0.3	2.3	3.8	5.2
18	Northern willowherb	9.7	3.4	34.9	0.8	8.4	15.8	5.0
19	Purslane	9.3	3.1	33.6	0.4	4.4	8.4	4.0
20	Round-leaved mallow	12.2	3.0	25.0	0.2	1.9	4.0	3.9
21	Thyme-leaved spurge	10.4	2.3	22.1	0.2	1.5	2.4	3.1
22	Foxtail barley	13.8	1.2	8.5	0.1	0.7	1.0	2.9
23	Oak-leaved goosefoot	14.1	0.9	6.7	0.1	0.5	1.2	2.8
24	Black medick	9.7	2.0	20.1	0.1	1.2	1.8	2.7
25	Spiny annual sow-thistle	12.3	1.4	11.3	0.1	0.6	1.2	2.7
26	Yellow sweet-clover	5.0	2.8	55.0	0.2	3.0	3.0	2.5
27	Dog mustard	4.9	2.5	50.0	0.1	3.0	3.0	2.3
28	Stork's bill	3.8	0.8	20.0	0.6	15.8	15.8	2.3
29	Field horsetail	4.8	1.0	20.0	0.4	8.0	8.0	2.1
30	Canada fleabane	4.9	1.7	35.0	0.1	2.0	2.0	1.9
31	Tumble pigweed	4.9	1.5	30.0	0.1	1.8	1.8	1.7
32	Prostrate knotweed	4.8	1.2	25.0	0.2	3.4	3.4	1.7
33	Stinkweed	7.9	0.8	10.2	< 0.1	0.4	0.6	1.7
34	Barley	5.5	0.8	15.0	0.1	1.2	1.2	1.4
35	Rye	3.8	1.3	35.0	0.1	1.6	1.6	1.4
36	Rough cinquefoil	4.9	1.0	20.0	< 0.1	0.8	0.8	1.3
37	Scouring-rush	5.5	0.5	10.0	0.1	1.6	1.6	1.3
38	Alfalfa	4.9	0.7	15.0	< 0.1	0.8	0.8	1.2
39	Proso millet	4.7	0.7	15.0	< 0.1	1.0	1.0	1.2
40	Rayless aster	5.5	0.5	10.0	< 0.1	0.4	0.4	1.2
41	Tartary buckwheat	4.1	0.8	20.0	< 0.1	1.0	1.0	1.1
42	Showy milkweed	4.9	0.5	10.0	< 0.1	0.6	0.6	1.1
43	American dragonhead	4.9	0.5	10.0	< 0.1	0.4	0.4	1.0
44	Silverweed	4.8	0.2	5.0	0.1	1.2	1.2	1.0
45	Manitoba maple	4.9	0.2	5.0	< 0.1	0.6	0.6	0.9
46	Kochia	4.4	0.4	10.0	< 0.1	0.4	0.4	0.9
47	Golden dock	5.0	0.3	5.0	< 0.1	0.2	0.2	0.9
48	Chickweed	4.8	0.2	5.0	< 0.1	0.4	0.4	0.9
49	Maple-leaved goosefoot	4.8	0.2	5.0	< 0.1	0.2	0.2	0.9
50	Currant species	4.8	0.2	5.0	< 0.1	0.2	0.2	0.9

Table 12. 2016 Flax in Manitoba (21 fields)

Rank	Species	Frequency (%)	Field Uniformity		Field Density (#/m^2)			Relative Abundance
			All	Occurrence	All	Occurrence	High	
1	Green foxtail	34.6	19.9	57.5	3.7	10.7	32.2	37.2
2	Wild buckwheat	66.8	15.8	23.7	1.3	1.9	7.2	26.1
3	False cleavers	29.2	12.7	43.6	2.2	7.4	25.6	23.6
4	Canola/rapeseed	42.1	12.9	30.6	1.1	2.7	13.4	20.0
5	Pale smartweed	43.9	14.0	31.8	0.9	2.1	5.6	19.5
6	Wheat	46.5	10.5	22.5	1.0	2.1	10.4	18.2
7	Round-leaved mallow	29.4	7.9	26.8	1.0	3.5	9.8	14.5
8	Chickweed	14.1	6.8	48.3	1.3	9.3	23.0	13.3
9	Redroot pigweed	33.2	7.1	21.4	0.7	2.0	6.6	12.7
10	Shepherd's-purse	20.0	6.6	33.2	0.7	3.5	11.6	10.6
11	Canada thistle	37.3	4.3	11.4	0.3	0.7	1.2	9.3
12	Green pigweed	9.2	5.9	63.8	0.8	8.8	15.2	9.3
13	Dandelion	32.3	3.5	10.7	0.2	0.5	1.4	7.7
14	Barnyard grass species	24.3	2.9	11.9	0.3	1.1	3.4	6.7
15	Spiny annual sow-thistle	13.9	4.4	32.0	0.3	2.4	3.8	6.5
16	Wild oats	23.3	3.3	14.0	0.2	0.7	2.0	6.2
17	Night-flowering catchfly	20.0	3.5	17.4	0.2	1.1	1.8	6.1
18	Thyme-leaved spurge	13.9	2.5	18.0	0.2	1.3	1.6	4.5
19	Perennial sow-thistle	9.7	3.4	34.7	0.2	1.9	2.8	4.4
20	Clover species	9.2	3.4	36.8	0.2	1.8	2.6	4.3
21	Broad-leaved plantain	8.9	2.0	22.6	0.3	3.2	3.6	4.0
22	Rye	5.0	3.0	60.0	0.2	4.6	4.6	3.8
23	Yellow foxtail	9.5	2.1	22.5	0.2	1.7	2.2	3.5
24	Alfalfa	9.9	2.2	22.5	0.1	1.2	1.2	3.4
25	Foxtail barley	14.1	1.4	10.0	0.1	0.4	0.6	3.2
26	Marsh yellow cress	9.8	1.6	16.4	0.1	1.2	2.0	3.0
27	Hemp-nettle	9.2	1.6	17.3	0.1	1.3	2.4	2.9
28	Stinkweed	6.2	1.9	30.0	0.1	1.6	1.6	2.5
29	Bicknell's geranium	9.4	0.9	10.0	< 0.1	0.4	0.4	2.1
30	American dragonhead	9.5	0.5	5.0	< 0.1	0.3	0.4	1.8
31	Kochia	4.7	0.9	20.0	< 0.1	0.8	0.8	1.4
32	Quack grass	4.4	0.7	15.0	0.1	1.4	1.4	1.4
33	Biennial wormwood	4.7	0.5	10.0	< 0.1	0.8	0.8	1.2
34	Showy milkweed	4.8	0.5	10.0	< 0.1	0.4	0.4	1.1
35	Lamb's-quarters	4.7	0.5	10.0	< 0.1	0.4	0.4	1.1
36	Rough cinquefoil	5.6	0.3	5.0	< 0.1	0.2	0.2	1.0
37	Yellow sweet-clover	4.7	0.2	5.0	< 0.1	0.2	0.2	0.9
38	Soybean	4.2	0.2	5.0	< 0.1	0.2	0.2	0.8

Table 13. 2016 Sunflower in Manitoba (18 fields)

Rank	Species	Frequency (%)	Field Uniformity		Field Density (#/m^2)			Relative Abundance
			All	Occurrence	All	Occurrence	High	
1	Wild buckwheat	54.2	16.7	30.9	3.8	6.9	55.2	35.4
2	Green foxtail	45.0	20.6	45.7	2.7	6.0	17.6	31.1
3	Biennial wormwood	45.2	14.9	33.0	1.4	3.1	8.0	21.8
4	Thyme-leaved spurge	21.3	7.4	34.9	1.8	8.3	32.0	15.8
5	Round-leaved mallow	40.7	10.1	24.8	0.7	1.6	3.8	14.8
6	Wheat	27.5	8.8	32.1	1.1	4.1	11.0	14.3
7	Canola/rapeseed	27.2	10.1	36.9	0.9	3.3	8.0	13.9
8	Wild oats	21.2	7.4	34.9	1.2	5.6	12.2	12.9
9	Perennial sow-thistle	40.2	8.1	20.1	0.4	1.0	1.6	12.2
10	Barnyard grass species	21.5	7.0	32.5	1.0	4.7	16.8	11.9
11	Canada thistle	37.9	6.2	16.3	0.3	0.8	1.8	10.5
12	Pale smartweed	32.3	5.4	16.7	0.6	1.7	6.2	10.4
13	Redroot pigweed	22.1	5.2	23.4	0.5	2.1	3.8	8.4
14	Spiny annual sow-thistle	15.9	5.9	36.9	0.4	2.5	5.4	7.5
15	Lamb's-quarters	21.3	4.2	19.6	0.3	1.3	2.8	6.8
16	Yellow foxtail	15.9	2.4	15.4	0.6	3.5	7.0	6.4
17	Purslane	17.4	3.8	21.8	0.4	2.1	5.6	6.4
18	Field horsetail	5.7	3.1	55.0	0.6	11.4	11.4	5.7
19	Dandelion	16.3	3.3	20.0	0.1	0.9	1.2	4.9
20	Black medick	10.5	2.8	26.5	0.3	2.8	5.6	4.5
21	Annual sow-thistle	5.3	2.9	55.0	0.4	7.6	7.6	4.4
22	False ragweed	10.8	2.4	22.2	0.2	1.5	2.8	3.7
23	Wild mustard	11.1	2.5	22.6	0.1	1.1	1.6	3.6
24	Golden dock	11.7	2.3	20.0	0.1	1.1	1.8	3.6
25	Stork's bill	10.8	1.9	17.5	0.1	1.1	1.6	3.2
26	Toad rush	5.7	2.3	40.0	0.2	3.4	3.4	3.0
27	Shepherd's-purse	7.2	1.8	25.0	0.1	1.4	1.4	2.5
28	Willow species	11.3	0.9	7.6	0.1	0.5	0.8	2.4
29	Kochia	11.0	0.5	5.0	< 0.1	0.2	0.2	2.0
30	Marsh yellow cress	5.8	1.5	25.0	0.1	1.0	1.0	1.9
31	Narrow-leaved hawk's-beard	5.3	1.3	25.0	0.1	1.4	1.4	1.9
32	Corn	5.7	1.1	20.0	0.1	1.0	1.0	1.7
33	Stinkweed	7.2	0.7	10.0	< 0.1	0.4	0.4	1.6
34	Russian thistle	5.3	0.8	15.0	< 0.1	0.6	0.6	1.4
35	Aster species	5.5	0.5	10.0	< 0.1	0.4	0.4	1.2
36	Broad-leaved plantain	4.9	0.5	10.0	< 0.1	0.8	0.8	1.2
37	Oats	5.8	0.3	5.0	< 0.1	0.4	0.4	1.1
38	Oak-leaved goosefoot	5.5	0.3	5.0	< 0.1	0.6	0.6	1.1
39	Rayless aster	5.5	0.3	5.0	< 0.1	0.2	0.2	1.0
40	Foxtail barley	5.5	0.3	5.0	< 0.1	0.2	0.2	1.0
41	Common ragweed	5.5	0.3	5.0	< 0.1	0.2	0.2	1.0

Table 14. Number of fields surveyed by crop in each ecoregion

	Aspen Parkland	Southwest Manitoba Uplands	Lake Manitoba Plain	Boreal Transition	Mid-Boreal Uplands	Interlake Plain	Lake of the Woods
Canola	103	3	56	14	8	18	4
Spring wheat	92	7	63	11	6	15	2
Soybean	17	2	78	0	0	16	5
Corn	11	0	25	0	1	4	0
Barley	22	2	9	0	0	2	0
Oat	8	0	12	0	0	3	0
Flax	13	2	4	0	0	2	0
Sunflower	8	1	8	0	0	1	0
Annual crops	274	17	255	25	15	61	11

Table 15. Density, species richness and weed-free quadrats in the surveyed crops in each ecoregion

	Number of fields surveyed	Density (number/m^2)			Species (number/field)		Weed-free quadrats	
Area		mean	SE	median	mean	SE	%	SE
Aspen Parkland								
Annual crops	274	16.6	1.5	6.4	5.1	0.2	33.3	2.8
Canola	103	11.8	1.9	5.7	4.6	0.3	38.8	4.8
Spring wheat	92	18.3	2.4	6.6	5.2	0.2	30.8	4.8
Soybean	17	6.5	1.9	3.9	5.0	0.5	42.3	12.0
Corn	11	40.6	13.2	15.9	7.1	1.1	9.1	8.7
Barley	22	23.8	8.9	7.8	5.5	0.5	32.0	9.9
Flax	13	18.4	4.8	9.6	7.0	0.8	15.7	10.1
Southwest Manitoba Uplands								
Annual crops	17	21.6	8.7	8.7	4.7	0.6	32.7	11.4
Lake Manitoba Plain								
Annual crops	255	14.9	2.3	3.4	4.4	0.2	51.1	3.1
Canola	56	12.5	3.1	2.8	4.1	0.5	60.0	6.5
Spring wheat	63	13.2	3.9	1.7	3.4	0.4	60.7	6.2
Soybean	78	8.5	1.3	3.8	4.2	0.4	47.2	5.7
Corn	25	12.7	2.7	8.1	5.2	0.6	32.8	9.4
Oat	12	60.6	29.1	12.4	8.2	2.0	22.6	12.1
Boreal Transition								
Annual crops	25	10.8	2.7	4.8	4.6	0.6	43.1	9.9
Canola	14	11.6	3.8	27.0	4.6	0.8	40.7	13.1
Spring wheat	11	9.9	3.6	4.4	4.5	1.0	46.4	15.0
Mid-Boreal Uplands								
Annual crops	15	29.4	7.2	22.6	6.9	0.5	13.3	8.8
Interlake Plain								
Annual crops	61	8.7	2.0	2.6	3.5	0.4	55.3	6.4
Canola	18	5.5	2.2	1.3	2.4	0.7	69.9	10.8
Spring wheat	15	4.3	1.4	2.3	3.0	0.4	60.5	12.6
Soybean	16	12.8	5.3	4.8	4.9	0.8	42.9	12.4
Lake of the Woods								
Annual crops	11	18.7	6.7	4.7	5.4	1.1	39.8	14.8

Table 16. 2016 Annual crops in the Aspen Parkland Ecoregion (274 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Green foxtail	36.6	15.0	41.0	4.3	11.7	82.8	45.2
2	Wild buckwheat	64.0	17.7	27.7	1.4	2.3	55.2	35.6
3	Wild oats	27.0	7.7	28.4	1.4	5.1	69.6	19.7
4	Barnyard grass species	20.9	6.4	30.6	1.1	5.5	80.0	16.2
5	Round-leaved mallow	31.2	6.6	21.2	0.5	1.6	14.6	14.6
6	Canola/rapeseed	25.6	6.6	26.0	0.7	2.7	28.8	14.5
7	Yellow foxtail	9.7	3.2	32.8	1.0	10.1	57.2	10.4
8	Canada thistle	22.3	4.4	19.6	0.4	1.8	33.8	10.3
9	Wheat	17.0	4.8	28.0	0.5	2.7	23.2	9.9
10	Spiny annual sow-thistle	15.3	4.5	29.5	0.4	2.8	17.0	9.2
11	Redroot pigweed	17.2	3.3	19.1	0.4	2.1	22.2	8.3
12	Lamb's-quarters	16.0	3.1	19.3	0.3	1.9	43.0	7.5
13	Broad-leaved plantain	11.3	2.8	24.4	0.4	3.9	53.0	7.1
14	False cleavers	13.9	3.5	25.2	0.2	1.8	25.6	7.1
15	Chickweed	9.8	2.5	25.5	0.4	4.2	23.2	6.5
16	Night-flowering catchfly	15.0	2.7	18.2	0.2	1.4	6.6	6.4
17	Dandelion	13.5	2.8	20.4	0.2	1.5	7.4	6.1
18	Pale smartweed	9.6	2.1	21.5	0.2	2.1	23.2	4.8
19	Foxtail barley	10.3	1.8	17.6	0.2	1.5	12.4	4.4
20	Kochia	8.9	1.6	17.9	0.1	1.3	4.0	3.7
21	Perennial sow-thistle	9.1	1.6	17.9	0.1	1.0	7.4	3.7
22	Biennial wormwood	8.1	1.5	18.1	0.1	1.1	6.0	3.3
23	Shepherd's-purse	7.6	1.3	16.8	0.1	1.0	11.6	3.0
24	Stork's bill	3.3	1.0	30.9	0.2	5.2	15.8	2.5
25	Golden dock	3.3	0.9	27.9	0.2	5.5	23.8	2.5
26	Oak-leaved goosefoot	5.6	1.0	18.1	0.1	1.1	2.6	2.3
27	Black medick	5.1	1.0	20.6	0.1	1.3	5.6	2.2
28	Hemp-nettle	4.9	0.9	18.1	0.1	1.5	11.6	2.1
29	Thyme-leaved spurge	4.8	0.7	14.4	0.1	1.6	32.0	2.0
30	Rough hair grass	0.4	0.3	70.0	0.2	60.0	60.0	1.8
31	Stinkweed	4.2	0.6	14.7	0.1	1.6	15.6	1.7
32	Field horsetail	2.4	0.6	23.6	0.1	3.5	11.4	1.4
33	Wild mustard	3.3	0.6	19.7	< 0.1	1.2	2.7	1.4
34	Purslane	2.9	0.5	18.3	0.1	2.1	8.2	1.4
35	Scouring-rush	2.2	0.6	28.3	0.1	2.6	6.6	1.3
36	Soybean	2.0	0.6	30.3	0.1	3.0	11.4	1.2
37	Yellow sweet-clover	2.3	0.6	25.7	< 0.1	1.8	3.0	1.2
38	Annual sow-thistle	0.9	0.5	50.6	0.1	11.0	22.6	1.1
39	Quack grass	1.2	0.5	43.4	0.1	6.4	13.4	1.1
40	Green pigweed	1.3	0.5	36.5	0.1	4.9	15.2	1.0
41	Rye	1.0	0.5	57.3	0.1	5.4	9.6	0.9
42	Dock species	1.8	0.4	21.5	< 0.1	1.5	5.8	0.8
43	Prostrate pigweed	1.8	0.3	18.5	< 0.1	1.8	3.8	0.8
44	Proso millet	0.4	0.2	60.0	0.1	20.0	20.0	0.8
45	Narrow-leaved hawk's-beard	1.6	0.4	24.3	< 0.1	1.5	3.4	0.8
46	American dragonhead	2.2	0.2	8.6	< 0.1	0.4	1.2	0.7
47	Rough cinquefoil	0.9	0.3	31.3	< 0.1	4.5	9.2	0.7
48	Alfalfa	1.7	0.2	12.8	< 0.1	0.8	1.6	0.6
49	Manitoba maple	1.0	0.3	30.9	< 0.1	1.8	4.0	0.6
50	Tumble pigweed	1.6	0.2	11.3	< 0.1	0.6	1.4	0.5
51	Clover species	1.2	0.2	16.0	< 0.1	0.7	1.2	0.4
52	Barley	1.0	0.1	13.1	< 0.1	1.0	1.2	0.4

(Table continued on next page)

Table 16. 2016 Annual crops in the Aspen Parkland Ecoregion (274 fields) *(continued)*

Rank	Species	Frequency (%)	Field Uniformity		Field Density (#/m^2)			Relative Abundance
			All	Occurrence	All	Occurrence	High	
53	Northern willowherb	1.2	0.1	6.5	< 0.1	0.3	0.4	0.3
54	Downy brome	0.5	0.2	35.0	< 0.1	2.0	2.0	0.3
55	Low cudweed	0.8	0.1	10.1	< 0.1	1.9	3.0	0.3
56	Oats	0.4	0.2	55.0	< 0.1	2.6	2.6	0.3
57	Blue grass species	0.8	0.1	12.7	< 0.1	0.5	0.8	0.3
58	Perennial rye grass	0.5	0.1	25.0	< 0.1	2.2	2.2	0.3
59	Slough grass	0.8	0.1	10.0	< 0.1	0.6	0.6	0.2
60	Marsh yellow cress	0.4	0.1	35.0	< 0.1	1.4	1.4	0.2
61	Maple-leaved goosefoot	0.7	0.1	10.9	< 0.1	0.7	1.0	0.2
62	Flax	0.8	0.1	7.5	< 0.1	0.3	0.4	0.2
63	Nightshade species	0.6	0.1	14.4	< 0.1	0.6	0.8	0.2
64	American vetch	0.8	0.1	7.4	< 0.1	0.3	0.4	0.2
65	Absinth	0.8	< 0.1	5.0	< 0.1	0.2	0.2	0.2
66	False ragweed	0.5	0.1	16.1	< 0.1	0.9	2.8	0.2
67	Rayless aster	0.6	0.1	10.0	< 0.1	0.4	0.4	0.2
68	Timothy	0.4	0.1	25.0	< 0.1	1.1	1.1	0.2
69	White mustard	0.4	0.1	25.0	< 0.1	1.4	1.4	0.2
70	Russian thistle	0.5	0.1	11.0	< 0.1	0.6	0.6	0.2
71	Hedge bindweed	0.4	0.1	15.0	< 0.1	0.8	0.8	0.2
72	Common groundsel	0.3	0.1	30.0	< 0.1	1.8	1.8	0.2
73	Showy milkweed	0.5	< 0.1	6.2	< 0.1	0.6	0.6	0.1
74	Willow species	0.4	< 0.1	10.0	< 0.1	0.6	0.6	0.1
75	Pennsylvania pellitory	0.5	< 0.1	5.0	< 0.1	0.2	0.2	0.1
76	Smooth brome	0.4	< 0.1	10.0	< 0.1	0.4	0.4	0.1
77	White cockle	0.4	< 0.1	10.0	< 0.1	0.4	0.4	0.1
78	False flax species	0.4	< 0.1	10.0	< 0.1	0.6	0.6	0.1
79	Witch grass	0.4	< 0.1	5.0	< 0.1	0.4	0.4	0.1
80	Cocklebur	0.4	< 0.1	5.0	< 0.1	0.8	0.8	0.1
81	Pineappleweed	0.4	< 0.1	5.0	< 0.1	0.2	0.2	0.1
82	Western snowberry	0.4	< 0.1	5.0	< 0.1	0.2	0.2	0.1
83	Siberian elm	0.4	< 0.1	5.0	< 0.1	0.2	0.2	0.1
84	Short-awned foxtail	0.4	< 0.1	5.0	< 0.1	0.2	0.2	0.1
85	Wormseed mustard	0.3	< 0.1	10.0	< 0.1	0.6	0.6	0.1
86	Toad rush	0.1	< 0.1	40.0	< 0.1	3.4	3.4	0.1
87	Yellow evening-primrose	0.2	< 0.1	10.0	< 0.1	1.0	1.0	0.1
88	Stink grass	0.3	< 0.1	5.0	< 0.1	0.2	0.2	0.1
89	Corn	0.1	< 0.1	20.0	< 0.1	1.0	1.0	< 0.1

Table 17. 2016 Canola in the Aspen Parkland Ecoregion (103 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Green foxtail	28.4	10.7	37.8	2.5	9.0	82.8	38.1
2	Wild buckwheat	55.3	14.0	25.2	1.0	1.8	14.4	33.8
3	Wheat	26.7	8.8	32.8	0.9	3.5	23.2	22.2
4	Wild oats	27.4	7.3	26.5	0.8	2.8	27.2	19.4
5	Round-leaved mallow	34.3	6.6	19.2	0.4	1.1	3.8	17.0
6	Yellow foxtail	9.7	2.9	30.0	0.9	8.8	47.4	12.2
7	Barnyard grass species	15.2	4.4	29.1	0.5	3.2	17.4	11.7
8	Redroot pigweed	16.8	3.5	20.8	0.5	2.7	22.2	10.9
9	Canada thistle	20.9	3.8	17.9	0.2	1.1	3.8	10.1
10	Spiny annual sow-thistle	13.3	3.9	29.3	0.4	3.0	17.0	10.0
11	Lamb's-quarters	19.7	3.1	15.6	0.2	1.1	8.4	9.1
12	False cleavers	18.1	3.3	18.3	0.2	1.2	5.0	9.0
13	Dandelion	10.9	2.8	25.6	0.2	2.1	7.4	7.0
14	Chickweed	12.3	1.8	14.8	0.2	1.6	5.2	6.2
15	Rough hair grass	1.0	0.7	70.0	0.6	60.0	60.0	5.8
16	Broad-leaved plantain	10.2	1.8	17.7	0.1	1.2	2.0	4.9
17	Oak-leaved goosefoot	9.9	1.9	18.7	0.1	1.0	2.6	4.8
18	Kochia	9.5	1.6	17.2	0.1	1.3	4.0	4.7
19	Golden dock	4.0	1.2	30.8	0.3	7.5	23.8	4.7
20	Perennial sow-thistle	10.4	1.7	16.5	0.1	0.8	3.2	4.6
21	Shepherd's-purse	11.5	1.3	11.2	0.1	0.7	1.6	4.4
22	Biennial wormwood	9.4	1.5	15.8	0.1	0.8	3.8	4.1
23	Night-flowering catchfly	9.4	1.1	12.2	0.1	0.7	2.4	3.7
24	Stork's bill	3.8	1.5	40.0	0.1	3.8	10.2	3.5
25	Foxtail barley	6.8	1.0	14.9	0.1	0.9	2.2	2.9
26	Pale smartweed	5.1	1.0	20.0	0.1	1.3	3.4	2.6
27	Black medick	6.3	0.8	13.4	< 0.1	0.8	3.6	2.6
28	Scouring-rush	2.2	1.3	57.1	0.1	4.6	6.6	2.5
29	Hemp-nettle	1.9	1.0	52.8	0.1	6.1	11.6	2.4
30	Canola/rapeseed	3.9	0.8	21.2	0.1	1.6	4.6	2.2
31	Field horsetail	2.9	0.6	21.7	0.1	2.3	3.2	1.8
32	Rye	1.0	0.8	80.0	0.1	9.6	9.6	1.7
33	Thyme-leaved spurge	3.9	0.5	11.6	< 0.1	1.1	2.8	1.6
34	Green pigweed	1.8	0.5	27.5	0.1	4.5	8.2	1.6
35	Stinkweed	4.4	0.5	10.4	< 0.1	0.4	0.7	1.6
36	Quack grass	1.0	0.6	65.0	0.1	7.4	7.4	1.4
37	Purslane	1.9	0.6	31.7	< 0.1	2.3	4.2	1.4
38	Prostrate pigweed	1.8	0.4	22.5	< 0.1	2.4	3.8	1.2
39	Downy brome	1.3	0.4	35.0	< 0.1	2.0	2.0	0.9
40	Narrow-leaved hawk's-beard	1.0	0.4	45.0	< 0.1	3.4	3.4	0.9
41	American dragonhead	2.9	0.1	5.0	< 0.1	0.2	0.2	0.8
42	Perennial rye grass	1.2	0.3	25.0	< 0.1	2.2	2.2	0.8
43	Marsh yellow cress	1.0	0.3	35.0	< 0.1	1.4	1.4	0.6
44	Alfalfa	1.9	0.1	7.4	< 0.1	0.5	0.8	0.6
45	Flax	1.9	0.1	7.5	< 0.1	0.3	0.4	0.6
46	Rough cinquefoil	0.6	0.2	35.0	< 0.1	6.2	6.2	0.6
47	Dock species	2.0	0.1	5.0	< 0.1	0.2	0.2	0.6
48	Yellow sweet-clover	1.9	0.1	5.0	< 0.1	0.2	0.2	0.5
49	Blue grass species	1.0	0.2	20.0	< 0.1	0.8	0.8	0.5
50	Maple-leaved goosefoot	1.0	0.1	15.0	< 0.1	1.0	1.0	0.4
51	Hedge bindweed	1.0	0.2	15.0	< 0.1	0.8	0.8	0.4
52	Soybean	1.0	0.1	15.0	< 0.1	0.8	0.8	0.4

(Table continued on next page)

Table 17. 2016 Canola in the Aspen Parkland Ecoregion (103 fields) *(continued)*

Rank	Species	Frequency (%)	Field Uniformity		Field Density (#/m^2)			Relative Abundance
			All	Occurrence	All	Occurrence	High	
53	Tumble pigweed	1.0	0.1	10.0	< 0.1	0.4	0.4	0.4
54	Willow species	1.0	0.1	10.0	< 0.1	0.6	0.6	0.4
55	Absinth	1.0	0.1	5.0	< 0.1	0.2	0.2	0.3
56	Pineappleweed	1.0	< 0.1	5.0	< 0.1	0.2	0.2	0.3
57	Western snowberry	1.0	< 0.1	5.0	< 0.1	0.2	0.2	0.3
58	American vetch	1.0	< 0.1	5.0	< 0.1	0.2	0.2	0.3
59	Siberian elm	1.0	< 0.1	5.0	< 0.1	0.2	0.2	0.3

Table 18. 2016 Spring wheat in the Aspen Parkland Ecoregion (92 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Green foxtail	45.8	19.1	41.7	5.9	12.8	71.6	56.1
2	Wild buckwheat	65.6	18.3	27.9	1.6	2.5	45.6	36.1
3	Wild oats	29.4	8.1	27.5	1.9	6.3	51.8	22.2
4	Canola/rapeseed	38.3	8.0	21.0	0.8	2.1	27.4	18.2
5	Barnyard grass species	24.3	6.4	26.3	1.0	4.3	25.2	15.4
6	Round-leaved mallow	28.9	7.5	25.8	0.7	2.4	14.6	15.2
7	Spiny annual sow-thistle	20.1	6.1	30.2	0.5	2.7	13.6	11.7
8	Canada thistle	21.6	4.4	20.2	0.6	2.7	33.8	10.9
9	Broad-leaved plantain	13.9	3.8	27.3	0.9	6.3	53.0	10.5
10	Chickweed	11.5	3.9	33.7	0.7	6.1	23.2	9.1
11	Night-flowering catchfly	19.9	3.5	17.6	0.3	1.7	6.6	8.5
12	False cleavers	14.4	4.4	30.6	0.2	1.7	5.0	7.6
13	Dandelion	17.3	3.0	17.5	0.2	1.2	5.0	6.9
14	Foxtail barley	13.7	2.9	20.9	0.3	2.0	12.4	6.4
15	Pale smartweed	11.2	1.7	15.2	0.1	1.2	5.4	4.3
16	Redroot pigweed	10.6	1.7	16.4	0.1	1.3	3.6	4.2
17	Lamb's-quarters	10.8	2.0	18.0	0.1	0.9	2.6	4.2
18	Yellow foxtail	7.5	1.5	20.2	0.3	3.5	18.6	4.1
19	Kochia	9.3	1.9	19.9	0.1	1.3	3.2	3.9
20	Hemp-nettle	9.9	1.0	10.5	0.1	0.5	1.2	3.0
21	Soybean	4.5	1.5	34.2	0.2	3.5	11.4	2.9
22	Wild mustard	6.5	1.4	20.7	0.1	1.4	2.7	2.8
23	Biennial wormwood	7.5	1.1	14.9	0.1	1.0	3.0	2.7
24	Annual sow-thistle	2.2	1.1	50.0	0.3	11.4	22.6	2.7
25	Shepherd's-purse	4.6	1.2	25.7	0.1	1.4	2.2	2.2
26	Proso millet	1.1	0.7	60.0	0.2	20.0	20.0	2.0
27	Wheat	5.6	0.8	14.3	< 0.1	0.6	1.0	1.9
28	Stork's bill	3.3	0.8	23.3	0.1	3.5	8.0	1.9
29	Black medick	3.9	0.9	23.7	0.1	1.3	4.2	1.8
30	Perennial sow-thistle	3.9	0.8	21.2	< 0.1	1.1	2.0	1.6
31	Golden dock	2.2	0.6	28.1	0.1	6.2	11.4	1.6
32	Manitoba maple	2.1	0.8	39.6	0.1	2.4	4.0	1.4
33	Stinkweed	3.2	0.5	16.7	< 0.1	0.8	1.0	1.2
34	Field horsetail	2.2	0.4	20.0	0.1	2.5	4.6	1.1
35	Purslane	2.1	0.2	9.9	0.1	4.1	8.2	1.0
36	Prostrate pigweed	2.1	0.4	17.3	< 0.1	1.7	3.2	0.9
37	Narrow-leaved hawk's-beard	2.2	0.4	20.0	< 0.1	0.9	0.9	0.9
38	Low cudweed	2.1	0.2	10.1	< 0.1	1.9	3.0	0.8
39	Tumble pigweed	2.2	0.3	15.0	< 0.1	0.8	1.4	0.8
40	Thyme-leaved spurge	3.2	0.2	5.0	< 0.1	0.2	0.2	0.8
41	Oak-leaved goosefoot	2.2	0.2	10.0	< 0.1	1.4	2.6	0.8
42	Slough grass	2.2	0.2	10.0	< 0.1	0.6	0.6	0.7
43	Dock species	1.1	0.4	35.0	< 0.1	2.2	2.2	0.6
44	Yellow sweet-clover	1.0	0.3	30.0	< 0.1	3.0	3.0	0.6
45	Timothy	1.1	0.3	25.0	< 0.1	1.1	1.1	0.5
46	Clover species	1.2	0.2	15.0	< 0.1	0.6	0.6	0.4
47	American dragonhead	1.0	0.2	15.0	< 0.1	0.8	0.8	0.4
48	Russian thistle	1.1	0.1	10.0	< 0.1	0.6	0.6	0.3
49	Northern willowherb	1.3	0.1	5.0	< 0.1	0.4	0.4	0.3
50	Alfalfa	1.1	0.1	10.0	< 0.1	0.6	0.6	0.3
51	False ragweed	1.1	0.1	10.0	< 0.1	0.4	0.4	0.3
52	Smooth brome	1.1	0.1	10.0	< 0.1	0.4	0.4	0.3

(Table continued on next page)

Table 18. 2016 Spring wheat in the Aspen Parkland Ecoregion (92 fields) *(continued)*

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
53	Rough cinquefoil	1.1	0.1	10.0	< 0.1	0.4	0.4	0.3
54	White cockle	1.1	0.1	10.0	< 0.1	0.4	0.4	0.3
55	American vetch	1.1	0.1	10.0	< 0.1	0.4	0.4	0.3
56	Quack grass	1.0	0.1	5.0	< 0.1	0.8	0.8	0.3
57	Witch grass	1.1	0.1	5.0	< 0.1	0.4	0.4	0.3
58	Cocklebur	1.0	0.1	5.0	< 0.1	0.8	0.8	0.3
59	Showy milkweed	1.0	0.1	5.0	< 0.1	0.6	0.6	0.3
60	Short-awned foxtail	1.1	0.1	5.0	< 0.1	0.2	0.2	0.3
61	Blue grass species	1.1	0.1	5.0	< 0.1	0.2	0.2	0.3
62	Scouring-rush	1.0	0.1	5.0	< 0.1	0.2	0.2	0.2
63	Yellow evening-primrose	0.6	0.1	10.0	< 0.1	1.0	1.0	0.2

Table 19. 2016 Soybean in the Aspen Parkland Ecoregion (17 fields)

Rank	Species	Frequency (%)	Field Uniformity		Field Density (#/m^2)			Relative Abundance
			All	Occurrence	All	Occurrence	High	
1	Canola/rapeseed	77.5	20.0	25.8	1.8	2.3	18.8	65.7
2	Wild buckwheat	76.5	19.0	24.9	1.1	1.4	4.0	53.2
3	Wild oats	29.3	9.1	30.9	1.3	4.4	13.0	35.9
4	Round-leaved mallow	35.5	4.1	11.6	0.4	1.1	3.2	17.9
5	Wheat	29.0	5.9	20.2	0.4	1.2	3.0	17.8
6	Green foxtail	28.2	4.2	14.8	0.2	0.8	1.8	13.9
7	Redroot pigweed	28.3	3.2	11.1	0.1	0.5	1.0	11.5
8	Dandelion	17.8	2.4	13.4	0.1	0.6	1.4	7.9
9	Oats	5.5	3.0	55.0	0.1	2.6	2.6	6.6
10	Yellow foxtail	11.6	2.3	19.5	0.1	0.9	1.6	6.4
11	Kochia	11.1	2.0	17.7	0.1	1.0	1.8	6.1
12	Lamb's-quarters	16.9	1.1	6.6	0.1	0.4	0.6	5.7
13	Black medick	6.0	1.8	30.0	0.1	1.4	1.4	4.5
14	Canada thistle	11.5	1.1	10.0	0.1	0.5	0.6	4.5
15	Biennial wormwood	5.9	1.8	30.0	0.1	1.4	1.4	4.5
16	Night-flowering catchfly	11.5	0.9	7.6	< 0.1	0.3	0.4	3.8
17	Oak-leaved goosefoot	5.9	1.2	20.0	0.1	1.4	1.4	3.8
18	Northern willowherb	11.5	0.8	7.4	< 0.1	0.3	0.4	3.8
19	Barnyard grass species	11.2	0.6	5.0	0.1	0.5	0.6	3.8
20	Barley	6.0	0.6	10.0	< 0.1	0.8	0.8	2.6
21	Thyme-leaved spurge	5.8	0.6	10.0	< 0.1	0.6	0.6	2.4
22	Purslane	6.0	0.6	10.0	< 0.1	0.4	0.4	2.2
23	Clover species	6.0	0.6	10.0	< 0.1	0.4	0.4	2.2
24	False flax species	5.5	0.5	10.0	< 0.1	0.6	0.6	2.2
25	Pennsylvania pellitory	7.7	0.4	5.0	< 0.1	0.2	0.2	2.2
26	Nightshade species	5.6	0.6	10.0	< 0.1	0.4	0.4	2.1
27	Absinth	6.0	0.3	5.0	< 0.1	0.2	0.2	1.7
28	Spiny annual sow-thistle	6.0	0.3	5.0	< 0.1	0.2	0.2	1.7
29	Tumble pigweed	5.8	0.3	5.0	< 0.1	0.2	0.2	1.7
30	Perennial sow-thistle	5.5	0.3	5.0	< 0.1	0.2	0.2	1.6

Table 20. 2016 Corn in the Aspen Parkland Ecoregion (11 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Barnyard grass species	72.6	41.1	56.6	9.9	13.6	80.0	50.7
2	Wild buckwheat	90.2	33.1	36.7	2.6	2.8	6.8	32.1
3	Lamb's-quarters	45.6	24.1	52.8	5.3	11.6	43.0	29.0
4	Green foxtail	9.4	9.4	100.0	6.9	74.0	74.0	22.1
5	Canola/rapeseed	54.2	21.1	39.0	2.0	3.7	10.2	20.9
6	Pale smartweed	27.0	12.1	44.9	2.2	8.3	23.2	14.1
7	Round-leaved mallow	53.3	10.9	20.4	0.9	1.6	7.0	13.9
8	Redroot pigweed	27.1	10.8	39.6	2.0	7.2	16.6	12.9
9	Spiny annual sow-thistle	19.0	8.6	45.3	0.8	4.5	5.8	8.2
10	Perennial sow-thistle	18.6	7.8	42.1	0.7	3.8	7.4	7.4
11	Purslane	27.7	5.1	18.5	0.3	1.1	2.6	6.7
12	Stinkweed	8.9	3.5	40.0	1.4	15.6	15.6	6.1
13	Yellow foxtail	18.3	6.0	32.7	0.4	2.4	3.0	6.0
14	Rough cinquefoil	8.9	5.3	60.0	0.8	9.2	9.2	5.4
15	Yellow sweet-clover	18.6	4.2	22.4	0.4	2.1	3.0	5.2
16	Black medick	9.4	6.1	65.0	0.5	5.6	5.6	5.0
17	Dock species	8.9	6.2	70.0	0.5	5.8	5.8	5.0
18	Field horsetail	9.4	2.8	30.0	0.8	8.2	8.2	4.3
19	Canada thistle	17.5	3.1	17.7	0.2	1.3	2.4	4.3
20	False cleavers	9.2	5.1	55.0	0.4	4.0	4.0	4.2
21	Golden dock	9.8	5.4	55.0	0.2	2.2	2.2	4.1
22	American dragonhead	18.3	2.3	12.7	0.1	0.7	1.2	3.8
23	Broad-leaved plantain	18.3	1.4	7.6	0.1	0.6	0.8	3.4
24	Green pigweed	9.2	3.7	40.0	0.3	2.8	2.8	3.4
25	Common groundsel	9.4	2.8	30.0	0.2	1.8	1.8	2.9
26	Alfalfa	8.6	2.2	25.0	0.1	1.6	1.6	2.4
27	Nightshade species	9.4	1.9	20.0	0.1	0.8	0.8	2.2
28	Dandelion	8.9	1.8	20.0	0.1	0.8	0.8	2.1
29	Clover species	8.6	1.7	20.0	0.1	1.0	1.0	2.1
30	Night-flowering catchfly	8.9	1.3	15.0	0.1	1.4	1.4	2.1
31	Scouring-rush	9.4	0.5	5.0	0.1	1.2	1.2	1.8
32	Wormseed mustard	8.9	0.9	10.0	0.1	0.6	0.6	1.7
33	Prostrate pigweed	8.9	0.9	10.0	< 0.1	0.4	0.4	1.7
34	Maple-leaved goosefoot	9.4	0.5	5.0	< 0.1	0.2	0.2	1.6
35	Narrow-leaved hawk's-beard	8.9	0.4	5.0	< 0.1	0.2	0.2	1.5

Table 21. 2016 Barley in the Aspen Parkland Ecoregion (22 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Green foxtail	41.3	20.5	49.8	6.8	16.4	57.8	48.4
2	Wild buckwheat	91.4	28.2	30.8	2.4	2.6	13.8	43.9
3	Wild oats	27.1	11.0	40.5	4.1	15.3	69.6	29.0
4	Canola/rapeseed	34.3	18.5	54.0	2.6	7.7	28.8	28.6
5	Canada thistle	41.5	11.4	27.5	0.9	2.1	8.8	18.0
6	Night-flowering catchfly	23.7	8.5	36.1	0.6	2.6	4.8	12.1
7	Pale smartweed	22.6	6.9	30.5	0.8	3.5	8.0	11.6
8	Spiny annual sow-thistle	21.8	6.1	27.9	0.5	2.4	7.4	9.9
9	Redroot pigweed	24.3	4.7	19.2	0.4	1.6	4.0	8.9
10	Chickweed	5.2	4.7	90.0	1.2	22.8	22.8	8.8
11	Round-leaved mallow	22.0	4.4	19.8	0.2	1.1	2.0	7.7
12	Barnyard grass species	21.2	4.4	20.8	0.3	1.2	2.2	7.7
13	Biennial wormwood	13.3	4.7	35.3	0.4	2.8	6.0	6.8
14	Foxtail barley	17.9	3.5	19.6	0.3	1.8	4.4	6.8
15	Quack grass	5.2	3.7	70.0	0.7	13.4	13.4	6.1
16	Thyme-leaved spurge	10.1	2.4	24.2	0.2	2.4	3.2	4.3
17	Wheat	12.9	2.4	18.3	0.1	1.0	1.4	4.3
18	Wild mustard	13.2	2.0	15.4	0.1	0.8	1.4	4.1
19	Lamb's-quarters	8.6	2.5	29.7	0.2	2.0	3.4	3.8
20	Dandelion	8.6	2.2	25.7	0.1	1.6	2.6	3.5
21	Perennial sow-thistle	11.0	1.6	14.8	0.1	0.8	1.0	3.3
22	Shepherd's-purse	8.8	2.0	22.7	0.1	0.9	1.4	3.2
23	Kochia	8.6	1.3	14.7	0.2	1.9	3.6	3.0
24	White mustard	5.7	1.4	25.0	0.1	1.4	1.4	2.2
25	False cleavers	4.4	1.5	35.0	0.1	1.8	1.8	2.0
26	Oak-leaved goosefoot	4.4	1.3	30.0	0.1	1.8	1.8	2.0
27	Hemp-nettle	5.7	0.9	15.0	< 0.1	0.8	0.8	1.8
28	Broad-leaved plantain	5.7	0.9	15.0	< 0.1	0.8	0.8	1.8
29	Stinkweed	4.1	0.8	20.0	0.1	2.2	2.2	1.6
30	Yellow foxtail	4.5	0.2	5.0	< 0.1	0.2	0.2	1.0
31	Stink grass	4.5	0.2	5.0	< 0.1	0.2	0.2	1.0
32	Black medick	4.5	0.2	5.0	< 0.1	0.2	0.2	1.0
33	Dock species	4.4	0.2	5.0	< 0.1	0.2	0.2	1.0
34	Manitoba maple	4.2	0.2	5.0	< 0.1	0.2	0.2	0.9

Table 22. 2016 Flax in the Aspen Parkland Ecoregion (13 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	False cleavers	40.2	20.2	50.1	3.5	8.6	25.6	35.3
2	Wild buckwheat	69.3	20.7	29.9	1.8	2.5	7.2	30.5
3	Green foxtail	39.2	17.8	45.5	2.6	6.7	14.4	29.4
4	Round-leaved mallow	47.3	12.7	26.8	1.6	3.5	9.8	22.5
5	Wheat	52.2	12.3	23.6	0.6	1.2	2.4	17.4
6	Canola/rapeseed	45.2	12.0	26.7	0.7	1.6	3.1	16.7
7	Shepherd's-purse	32.2	10.7	33.2	1.1	3.5	11.6	16.4
8	Green pigweed	14.9	9.5	63.8	1.3	8.8	15.2	14.3
9	Redroot pigweed	29.3	6.2	21.2	0.8	2.7	6.6	11.8
10	Pale smartweed	32.4	7.6	23.5	0.4	1.3	2.4	10.9
11	Wild oats	37.6	5.3	14.0	0.3	0.7	2.0	9.6
12	Canada thistle	30.7	5.1	16.4	0.3	0.9	1.2	8.7
13	Night-flowering catchfly	24.6	4.8	19.6	0.3	1.3	1.8	7.8
14	Perennial sow-thistle	15.7	5.4	34.7	0.3	1.9	2.8	6.7
15	Chickweed	15.1	4.2	27.5	0.4	2.5	4.0	6.4
16	Rye	8.1	4.9	60.0	0.4	4.6	4.6	5.8
17	Spiny annual sow-thistle	14.9	3.4	22.8	0.3	2.0	3.8	5.6
18	Alfalfa	15.9	3.6	22.5	0.2	1.2	1.2	5.2
19	Foxtail barley	22.7	2.3	10.0	0.1	0.4	0.6	5.0
20	Hemp-nettle	14.9	2.6	17.3	0.2	1.3	2.4	4.5
21	Thyme-leaved spurge	14.9	2.2	14.5	0.2	1.4	1.6	4.4
22	Stinkweed	9.9	3.0	30.0	0.2	1.6	1.6	3.9
23	Broad-leaved plantain	7.6	1.9	25.0	0.2	2.8	2.8	3.2
24	Yellow foxtail	7.8	1.9	25.0	0.2	2.2	2.2	3.1
25	Clover species	8.1	2.4	30.0	0.1	1.2	1.2	3.0
26	Dandelion	7.6	1.9	25.0	0.1	1.4	1.4	2.7
27	Kochia	7.6	1.5	20.0	0.1	0.8	0.8	2.2
28	Quack grass	7.1	1.1	15.0	0.1	1.4	1.4	2.1
29	Showy milkweed	7.8	0.8	10.0	< 0.1	0.4	0.4	1.7
30	Lamb's-quarters	7.6	0.8	10.0	< 0.1	0.4	0.4	1.7
31	American dragonhead	7.8	0.4	5.0	< 0.1	0.4	0.4	1.5

Table 23. 2016 Annual crops in the Southwest Manitoba Uplands Ecoregion (17 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Wild mustard	6.9	6.9	100.0	6.1	89.4	89.4	35.8
2	Chickweed	43.2	13.8	32.1	1.7	4.0	23.0	29.1
3	Green foxtail	22.5	9.8	43.5	3.2	14.4	40.4	28.2
4	Wild buckwheat	48.7	13.3	27.4	1.1	2.4	8.6	27.1
5	Barnyard grass species	22.4	9.2	41.2	1.4	6.3	15.0	19.2
6	Redroot pigweed	21.3	9.2	43.2	1.3	6.3	9.6	18.6
7	Canada thistle	31.1	6.1	19.7	1.2	4.0	17.2	17.6
8	Pale smartweed	20.7	6.9	33.1	1.5	7.2	20.0	17.1
9	Canola/rapeseed	20.1	5.4	27.0	0.5	2.6	13.4	11.4
10	Wheat	26.7	3.9	14.7	0.4	1.5	10.4	10.9
11	Stinkweed	6.9	5.1	75.0	0.9	13.6	13.6	10.2
12	Dandelion	29.1	3.1	10.8	0.2	0.6	1.2	9.7
13	Round-leaved mallow	25.1	3.0	11.9	0.2	0.6	3.8	8.6
14	Lamb's-quarters	15.9	2.9	17.9	0.3	1.8	3.8	7.2
15	Wild oats	14.4	3.2	22.5	0.2	1.4	1.6	6.8
16	Yellow foxtail	6.9	2.7	40.0	0.4	5.8	5.8	5.7
17	Night-flowering catchfly	8.5	1.8	21.6	0.2	2.1	2.6	4.2
18	Shepherd's-purse	14.1	1.0	7.4	0.1	0.4	0.6	4.2
19	Spiny annual sow-thistle	14.1	1.0	7.4	< 0.1	0.3	0.4	4.1
20	Thyme-leaved spurge	6.9	1.7	25.0	0.2	2.6	2.6	3.8
21	Spear-leaved goosefoot	6.9	1.7	25.0	0.1	1.4	1.4	3.4
22	Perennial sow-thistle	10.7	0.9	8.5	< 0.1	0.4	1.4	3.3
23	Hemp-nettle	7.2	1.1	15.0	< 0.1	0.6	0.6	2.7
24	Stork's bill	7.2	0.7	10.0	0.1	1.2	1.2	2.6
25	False ragweed	9.1	0.5	5.0	< 0.1	0.2	0.2	2.4
26	Prickly lettuce	7.2	0.4	5.0	0.1	0.8	0.8	2.1
27	Absinth	7.2	0.4	5.0	< 0.1	0.2	0.2	1.9
28	Kochia	6.9	0.3	5.0	< 0.1	0.2	0.2	1.8
29	American dragonhead	1.9	0.1	5.0	< 0.1	0.2	0.2	0.5

Table 24. 2016 Annual crops in the Lake Manitoba Plain Ecoregion (255 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Green foxtail	18.8	7.5	39.7	3.6	19.4	163.4	36.6
2	Wild buckwheat	44.5	10.4	23.4	0.8	1.8	13.4	26.7
3	Yellow foxtail	15.6	5.2	33.3	1.6	10.3	82.8	19.9
4	Barnyard grass species	25.6	5.8	22.7	1.0	3.7	40.4	18.4
5	Canola/rapeseed	23.1	7.0	30.3	0.8	3.5	35.6	18.1
6	Redroot pigweed	29.2	6.8	23.3	0.6	2.1	14.4	18.0
7	Dandelion	26.4	5.5	20.9	0.8	3.0	84.2	17.1
8	Pale smartweed	23.3	4.1	17.5	0.5	2.1	24.8	12.9
9	Wheat	15.5	4.3	27.8	0.6	3.6	39.4	11.9
10	Wild oats	13.8	3.4	24.9	0.6	4.0	40.4	10.5
11	Lamb's-quarters	15.1	3.0	19.9	0.3	2.2	17.8	8.9
12	Broad-leaved plantain	8.6	2.5	28.6	0.6	6.8	57.4	8.5
13	Round-leaved mallow	14.7	2.8	19.1	0.3	1.9	17.4	8.2
14	Biennial wormwood	12.5	2.4	19.6	0.2	1.8	22.8	6.9
15	Canada thistle	13.9	1.7	12.4	0.2	1.1	4.8	6.0
16	Perennial sow-thistle	8.9	1.9	20.9	0.2	1.8	6.8	5.1
17	Purslane	6.4	1.5	24.0	0.1	1.8	8.4	3.9
18	Oak-leaved goosefoot	7.7	0.9	12.1	0.1	1.8	16.2	3.7
19	Spiny annual sow-thistle	6.7	1.3	19.9	0.1	1.2	5.4	3.5
20	Dock species	5.6	0.9	16.2	0.1	2.1	8.0	3.0
21	Thyme-leaved spurge	7.0	0.9	12.9	0.1	0.8	3.0	2.9
22	Golden dock	4.1	1.0	24.9	0.1	3.0	11.8	2.8
23	Wild mustard	4.4	0.9	20.6	0.1	2.7	16.2	2.8
24	Black medick	4.5	1.0	23.0	0.1	2.1	6.0	2.7
25	Night-flowering catchfly	3.5	0.9	25.5	0.1	3.1	11.6	2.5
26	Northern willowherb	4.3	0.6	15.1	0.1	2.5	15.8	2.4
27	Foxtail barley	4.7	0.6	13.3	0.1	1.5	6.4	2.2
28	Witch grass	1.0	0.2	21.6	0.2	24.4	41.8	2.0
29	Marsh yellow cress	4.0	0.7	17.8	< 0.1	1.2	3.6	2.0
30	Tumble pigweed	3.8	0.6	16.6	< 0.1	1.0	1.8	1.8
31	Field horsetail	2.8	0.3	12.5	0.1	3.9	8.0	1.7
32	Quack grass	0.3	0.2	80.0	0.2	68.6	68.6	1.6
33	Rough cinquefoil	2.7	0.5	19.4	< 0.1	1.5	3.0	1.5
34	Yellow sweet-clover	3.4	0.3	8.4	< 0.1	0.4	2.0	1.2
35	Maple-leaved goosefoot	3.4	0.2	7.2	< 0.1	0.5	1.0	1.2
36	Willow species	3.1	0.3	8.4	< 0.1	0.7	2.8	1.1
37	Prostrate knotweed	1.7	0.2	13.8	< 0.1	1.4	3.4	0.8
38	Clover species	1.4	0.3	19.2	< 0.1	1.5	4.0	0.8
39	Tartary buckwheat	0.7	0.3	44.4	< 0.1	4.2	10.2	0.7
40	Dog mustard	1.0	0.3	32.1	< 0.1	1.8	3.0	0.7
41	Alfalfa	1.8	0.2	10.8	< 0.1	0.5	0.8	0.7
42	Stink grass	0.9	0.3	30.9	< 0.1	2.1	3.2	0.7
43	Soybean	2.1	0.1	5.9	< 0.1	0.2	0.4	0.7
44	Kochia	1.9	0.2	8.2	< 0.1	0.3	0.4	0.6
45	Common pepper-grass	0.3	0.2	55.0	0.1	18.0	18.0	0.6
46	Canada fleabane	1.2	0.2	19.9	< 0.1	1.1	2.0	0.6
47	Chickweed	1.4	0.2	11.6	< 0.1	0.9	2.2	0.6
48	Purslane speedwell	0.8	0.1	18.4	< 0.1	4.1	10.4	0.5
49	Narrow-leaved hawk's-beard	1.2	0.2	14.9	< 0.1	0.9	1.4	0.5
50	American dragonhead	1.5	0.1	10.0	< 0.1	0.4	0.6	0.5
51	Showy milkweed	1.4	0.1	8.5	< 0.1	0.7	1.0	0.5
52	Cocklebur	0.8	0.2	24.1	< 0.1	1.9	3.8	0.5

(Table continued on next page)

Table 24. 2016 Annual crops in the Lake Manitoba Plain Ecoregion (255 fields) *(continued)*

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
53	Absinth	0.3	0.1	45.0	< 0.1	17.6	17.6	0.5
54	Bicknell's geranium	0.9	0.2	20.6	< 0.1	1.0	1.6	0.5
55	Manitoba maple	1.5	0.1	6.3	< 0.1	0.4	0.6	0.5
56	Leafy spurge	0.4	0.2	50.0	< 0.1	4.4	4.4	0.5
57	False cleavers	0.5	0.2	40.0	< 0.1	2.8	2.8	0.4
58	American vetch	1.3	0.1	5.0	< 0.1	0.3	0.4	0.4
59	Bird's-foot trefoil	0.8	0.1	14.8	< 0.1	1.1	1.4	0.4
60	Flodman's thistle	0.7	0.1	16.0	< 0.1	1.4	2.0	0.4
61	Stinkweed	0.9	0.1	12.8	< 0.1	0.6	0.6	0.4
62	Siberian elm	1.0	0.1	7.6	< 0.1	0.5	1.2	0.3
63	Perennial rye grass	0.4	0.1	40.0	< 0.1	3.8	3.8	0.3
64	Oats	0.9	0.1	9.2	< 0.1	0.5	0.8	0.3
65	Common yellow wood-sorrel	0.4	0.1	20.0	< 0.1	3.6	3.6	0.3
66	Scouring-rush	0.9	< 0.1	5.0	< 0.1	0.4	0.6	0.3
67	Shepherd's-purse	0.7	0.1	8.1	< 0.1	0.7	1.0	0.3
68	Barley	0.4	0.1	20.0	< 0.1	2.0	2.0	0.3
69	Needle-and-thread grass	0.5	0.1	20.0	< 0.1	1.6	1.6	0.3
70	Prostrate pigweed	0.8	< 0.1	5.0	< 0.1	0.2	0.2	0.2
71	Stork's bill	0.6	0.1	15.0	< 0.1	0.8	0.8	0.2
72	Clammy hedge-hyssop	0.7	< 0.1	5.0	< 0.1	0.8	1.2	0.2
73	Aster species	0.5	0.1	14.0	< 0.1	1.0	1.2	0.2
74	Hemp-nettle	0.5	< 0.1	10.0	< 0.1	2.0	2.0	0.2
75	Silverweed	0.6	< 0.1	5.0	< 0.1	1.2	1.2	0.2
76	Green pigweed	0.3	0.1	25.0	< 0.1	1.8	1.8	0.2
77	Bur oak	0.4	0.1	15.0	< 0.1	0.6	0.6	0.2
78	Rayless aster	0.6	< 0.1	5.0	< 0.1	0.2	0.2	0.2
79	Currant species	0.6	< 0.1	5.0	< 0.1	0.2	0.2	0.2
80	Goldenrod species	0.4	< 0.1	10.0	< 0.1	0.4	0.4	0.2
81	Rush species	0.4	< 0.1	10.0	< 0.1	0.4	0.4	0.2
82	Beggarticks species	0.4	< 0.1	10.0	< 0.1	0.4	0.4	0.2
83	Field bean	0.5	< 0.1	5.0	< 0.1	0.2	0.2	0.1
84	Hedge bindweed	0.5	< 0.1	5.0	< 0.1	0.2	0.2	0.1
85	Large crab grass	0.3	< 0.1	15.0	< 0.1	0.8	0.8	0.1
86	Flixweed	0.4	< 0.1	5.0	< 0.1	0.2	0.2	0.1
87	Povertyweed	0.4	< 0.1	5.0	< 0.1	0.2	0.2	0.1
88	Buffalograss	0.4	< 0.1	5.0	< 0.1	0.2	0.2	0.1
89	Common ragweed	0.3	< 0.1	8.4	< 0.1	0.3	0.4	0.1
90	Yellow toadflax	0.4	< 0.1	5.0	< 0.1	0.2	0.2	0.1
91	Sunflower	0.2	< 0.1	10.0	< 0.1	0.4	0.4	0.1
92	Water smartweed	0.3	< 0.1	5.0	< 0.1	0.2	0.2	0.1

Table 25. 2016 Canola in the Lake Manitoba Plain Ecoregion (56 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Yellow foxtail	15.8	7.1	44.7	3.3	20.8	82.8	38.9
2	Green foxtail	12.4	6.5	52.9	3.1	25.0	73.6	36.0
3	Wild buckwheat	41.8	7.5	17.9	0.5	1.2	6.2	23.6
4	Wheat	30.2	8.0	26.6	0.8	2.5	8.6	23.4
5	Redroot pigweed	35.8	6.0	16.7	0.6	1.7	10.6	20.9
6	Pale smartweed	35.9	4.9	13.6	0.4	1.2	10.0	18.3
7	Barnyard grass species	24.2	5.1	21.1	0.6	2.5	11.4	17.1
8	Dandelion	19.1	3.9	20.6	0.3	1.5	4.4	11.8
9	Oak-leaved goosefoot	10.2	2.2	21.9	0.4	4.4	16.2	8.8
10	Canada thistle	15.6	2.3	14.8	0.2	1.5	4.8	8.5
11	Biennial wormwood	14.3	2.8	19.8	0.2	1.3	3.6	8.5
12	Wild oats	10.7	2.3	21.6	0.2	2.1	4.8	7.2
13	Broad-leaved plantain	11.3	2.1	18.5	0.2	1.8	4.2	7.0
14	Dock species	10.7	1.7	15.8	0.3	2.5	8.0	6.9
15	Golden dock	7.6	1.6	20.8	0.2	2.0	6.6	5.0
16	Perennial sow-thistle	7.7	1.5	19.3	0.1	1.6	5.8	4.7
17	Thyme-leaved spurge	8.7	1.2	14.2	0.1	1.1	3.0	4.4
18	Round-leaved mallow	6.8	1.4	21.3	0.1	1.6	4.0	4.3
19	Spiny annual sow-thistle	3.4	1.4	42.5	0.1	2.7	4.8	3.3
20	Lamb's-quarters	8.8	0.4	5.0	< 0.1	0.3	0.6	2.9
21	Rough cinquefoil	3.4	0.9	27.5	0.1	2.9	3.0	2.8
22	Black medick	3.8	0.7	19.2	0.1	2.9	6.0	2.7
23	Leafy spurge	1.8	0.9	50.0	0.1	4.4	4.4	2.2
24	Night-flowering catchfly	3.7	0.7	18.0	< 0.1	0.8	1.2	1.9
25	Clover species	3.3	0.6	17.6	< 0.1	1.4	1.8	1.9
26	Willow species	3.6	0.4	10.0	< 0.1	0.6	1.0	1.5
27	Tumble pigweed	3.3	0.4	12.6	< 0.1	0.7	1.0	1.5
28	Common yellow wood-sorrel	1.8	0.4	20.0	0.1	3.6	3.6	1.4
29	Wild mustard	3.6	0.3	7.5	< 0.1	0.3	0.4	1.3
30	Prostrate knotweed	3.5	0.3	7.6	< 0.1	0.3	0.4	1.3
31	Marsh yellow cress	3.4	0.3	7.5	< 0.1	0.4	0.4	1.2
32	Flodman's thistle	1.8	0.4	20.0	< 0.1	2.0	2.0	1.2
33	Northern willowherb	3.7	0.2	5.0	< 0.1	0.2	0.2	1.2
34	American vetch	3.5	0.2	5.0	< 0.1	0.3	0.4	1.1
35	Bicknell's geranium	2.0	0.4	20.0	< 0.1	0.8	0.8	1.1
36	Foxtail barley	1.8	0.4	20.0	< 0.1	1.2	1.2	1.1
37	Aster species	1.7	0.3	15.0	< 0.1	1.2	1.2	0.9
38	Bur oak	1.7	0.3	15.0	< 0.1	0.6	0.6	0.8
39	Showy milkweed	1.7	0.2	10.0	< 0.1	1.0	1.0	0.8
40	Bird's-foot trefoil	1.7	0.2	10.0	< 0.1	0.8	0.8	0.7
41	Alfalfa	1.7	0.2	10.0	< 0.1	0.6	0.6	0.7
42	Clammy hedge-hyssop	1.7	0.1	5.0	< 0.1	1.2	1.2	0.7
43	Kochia	1.7	0.2	10.0	< 0.1	0.4	0.4	0.7
44	Goldenrod species	1.7	0.2	10.0	< 0.1	0.4	0.4	0.7
45	Rush species	1.7	0.2	10.0	< 0.1	0.4	0.4	0.7
46	Beggarticks species	1.7	0.2	10.0	< 0.1	0.4	0.4	0.7
47	Field bean	2.0	0.1	5.0	< 0.1	0.2	0.2	0.6
48	Yellow sweet-clover	2.0	0.1	5.0	< 0.1	0.2	0.2	0.6
49	Manitoba maple	2.0	0.1	5.0	< 0.1	0.2	0.2	0.6
50	Purslane speedwell	2.0	0.1	5.0	< 0.1	0.2	0.2	0.6
51	Purslane	1.8	0.1	5.0	< 0.1	0.4	0.4	0.6
52	American dragonhead	1.8	0.1	5.0	< 0.1	0.2	0.2	0.6

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Table 25. 2016 Canola in the Lake Manitoba Plain Ecoregion (56 fields) *(continued)*

Rank	Species	Frequency (%)	Field Uniformity		Field Density (#/m^2)			Relative Abundance
			All	Occurrence	All	Occurrence	High	
53	Flixweed	1.8	0.1	5.0	< 0.1	0.2	0.2	0.6
54	Cocklebur	1.7	0.1	5.0	< 0.1	0.2	0.2	0.5
55	Oats	1.7	0.1	5.0	< 0.1	0.2	0.2	0.5
56	Soybean	1.7	0.1	5.0	< 0.1	0.2	0.2	0.5

Table 26. 2016 Spring wheat in the Lake Manitoba Plain Ecoregion (63 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Green foxtail	26.0	7.6	29.1	4.3	16.6	163.4	51.3
2	Dandelion	31.6	7.1	22.5	2.0	6.2	84.2	34.6
3	Wild buckwheat	41.7	7.5	18.0	0.5	1.3	6.4	27.2
4	Wild oats	17.9	4.1	23.0	1.0	5.4	40.4	18.5
5	Barnyard grass species	13.8	4.2	30.0	1.0	7.0	29.2	17.5
6	Redroot pigweed	19.3	4.8	25.0	0.4	2.2	7.0	16.0
7	Yellow foxtail	6.5	2.9	45.1	1.2	17.9	64.0	15.0
8	Lamb's-quarters	18.5	3.2	17.3	0.4	2.4	16.4	13.5
9	Canola/rapeseed	16.0	4.0	24.8	0.3	2.1	7.0	13.1
10	Pale smartweed	11.1	2.8	25.5	0.3	2.3	6.8	9.4
11	Canada thistle	17.0	1.8	10.8	0.2	1.1	2.8	9.1
12	Perennial sow-thistle	11.9	1.7	14.1	0.2	1.3	2.8	7.1
13	Round-leaved mallow	8.9	1.6	17.9	0.2	2.7	14.2	6.8
14	Foxtail barley	11.0	1.4	12.3	0.2	1.9	6.4	6.8
15	Night-flowering catchfly	6.9	1.3	19.1	0.2	3.1	11.6	5.6
16	Dock species	7.0	1.4	20.6	0.2	2.3	4.4	5.4
17	Biennial wormwood	7.8	1.4	18.4	0.1	1.0	2.0	5.0
18	Spiny annual sow-thistle	6.2	1.2	18.9	0.1	1.4	2.8	4.2
19	Tumble pigweed	6.6	0.8	12.8	0.1	0.9	1.8	3.6
20	Wild mustard	4.8	0.7	14.9	< 0.1	0.7	1.0	2.7
21	Black medick	3.2	0.8	23.8	0.1	1.7	2.4	2.5
22	Wheat	3.1	0.8	25.0	< 0.1	1.5	1.6	2.4
23	Chickweed	3.2	0.5	16.0	< 0.1	1.3	2.2	2.0
24	False cleavers	1.8	0.7	40.0	< 0.1	2.8	2.8	1.9
25	Thyme-leaved spurge	3.2	0.6	17.9	< 0.1	0.8	1.4	1.9
26	Soybean	4.6	0.3	6.7	< 0.1	0.3	0.4	1.9
27	Oak-leaved goosefoot	3.6	0.2	5.0	< 0.1	0.5	0.6	1.4
28	Maple-leaved goosefoot	3.6	0.2	5.0	< 0.1	0.2	0.2	1.4
29	Golden dock	1.8	0.3	15.0	< 0.1	2.2	2.2	1.2
30	Broad-leaved plantain	1.8	0.4	20.0	< 0.1	1.2	1.2	1.2
31	Hemp-nettle	1.8	0.2	10.0	< 0.1	2.0	2.0	1.1
32	Alfalfa	1.8	0.2	10.0	< 0.1	0.4	0.4	0.9
33	Dog mustard	1.8	0.2	10.0	< 0.1	0.4	0.4	0.8
34	Scouring-rush	1.8	0.1	5.0	< 0.1	0.6	0.6	0.7
35	Willow species	1.4	0.1	10.0	< 0.1	0.6	0.6	0.7
36	Hedge bindweed	1.8	0.1	5.0	< 0.1	0.2	0.2	0.7
37	Rayless aster	1.8	0.1	5.0	< 0.1	0.2	0.2	0.7
38	Yellow sweet-clover	1.8	0.1	5.0	< 0.1	0.2	0.2	0.7
39	Showy milkweed	1.6	0.1	5.0	< 0.1	0.6	0.6	0.7
40	Siberian elm	1.6	0.1	5.0	< 0.1	0.2	0.2	0.6
41	American vetch	1.5	0.1	5.0	< 0.1	0.2	0.2	0.6
42	Field horsetail	1.4	0.1	5.0	< 0.1	0.4	0.4	0.6
43	Yellow toadflax	1.4	0.1	5.0	< 0.1	0.2	0.2	0.5
44	Prostrate pigweed	1.4	0.1	5.0	< 0.1	0.2	0.2	0.5

Table 27. 2016 Soybean in the Lake Manitoba Plain Ecoregion (78 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Canola/rapeseed	41.9	12.7	30.4	1.5	3.7	30.6	43.4
2	Wild buckwheat	47.0	9.9	21.0	0.7	1.4	8.8	30.8
3	Redroot pigweed	30.2	8.7	28.8	0.7	2.2	14.4	25.5
4	Barnyard grass species	27.3	5.1	18.6	0.5	1.8	19.4	18.3
5	Yellow foxtail	17.9	4.0	22.3	0.7	4.1	42.6	17.7
6	Green foxtail	13.6	3.8	28.0	0.8	5.9	37.0	17.2
7	Dandelion	26.3	5.2	19.7	0.4	1.4	8.2	16.8
8	Biennial wormwood	16.5	3.2	19.5	0.4	2.5	22.8	12.5
9	Wheat	16.3	4.0	24.4	0.3	1.8	4.8	12.1
10	Wild oats	12.2	2.7	22.4	0.5	3.8	23.6	11.6
11	Round-leaved mallow	16.7	2.2	13.3	0.2	1.1	5.8	8.8
12	Broad-leaved plantain	6.9	2.3	33.1	0.3	4.8	15.2	8.2
13	Lamb's-quarters	11.8	2.7	22.5	0.2	1.3	2.8	7.8
14	Pale smartweed	17.1	1.3	7.8	0.1	0.4	1.8	6.6
15	Golden dock	4.8	1.6	33.9	0.2	4.9	11.8	5.8
16	Spiny annual sow-thistle	8.2	1.3	15.7	0.1	0.8	1.6	4.3
17	Marsh yellow cress	7.3	1.2	16.8	0.1	1.1	1.8	4.1
18	Black medick	4.6	1.3	28.6	0.1	2.6	4.4	4.1
19	Field horsetail	4.9	0.5	11.0	0.2	3.2	7.4	3.7
20	Purslane	7.3	0.8	10.6	< 0.1	0.4	0.8	3.0
21	Perennial sow-thistle	4.2	0.9	21.0	0.1	1.9	3.6	3.0
22	Northern willowherb	7.0	0.6	9.0	< 0.1	0.5	1.0	2.8
23	Oak-leaved goosefoot	6.1	0.6	9.9	< 0.1	0.6	1.2	2.6
24	Canada thistle	5.1	0.7	14.2	< 0.1	0.8	1.4	2.5
25	Thyme-leaved spurge	6.1	0.4	7.1	< 0.1	0.3	0.4	2.2
26	Yellow sweet-clover	5.5	0.5	9.3	< 0.1	0.4	0.8	2.2
27	Willow species	5.0	0.4	7.3	< 0.1	0.8	2.8	2.1
28	Maple-leaved goosefoot	5.2	0.4	6.8	< 0.1	0.7	1.0	2.1
29	Rough cinquefoil	2.9	0.4	15.0	< 0.1	1.0	1.0	1.5
30	Cocklebur	1.2	0.5	45.0	< 0.1	3.8	3.8	1.5
31	Dock species	3.4	0.3	9.5	< 0.1	0.7	1.2	1.5
32	Narrow-leaved hawk's-beard	2.7	0.4	12.9	< 0.1	0.9	1.4	1.4
33	Perennial rye grass	1.1	0.5	40.0	< 0.1	3.8	3.8	1.3
34	Barley	1.4	0.3	20.0	< 0.1	2.0	2.0	1.0
35	Tumble pigweed	1.4	0.4	25.0	< 0.1	1.2	1.2	1.0
36	Needle-and-thread grass	1.4	0.3	20.0	< 0.1	1.6	1.6	1.0
37	Bird's-foot trefoil	1.2	0.2	20.0	< 0.1	1.4	1.4	0.8
38	Stork's bill	1.4	0.2	15.0	< 0.1	0.8	0.8	0.7
39	Shepherd's-purse	1.4	0.1	10.0	< 0.1	1.0	1.0	0.7
40	Oats	1.2	0.2	15.0	< 0.1	0.8	0.8	0.6
41	Canada fleabane	1.9	0.1	5.0	< 0.1	0.2	0.2	0.6
42	Witch grass	1.3	0.1	10.0	< 0.1	0.6	0.6	0.6
43	Stinkweed	1.2	0.1	10.0	< 0.1	0.6	0.6	0.5
44	Manitoba maple	1.2	0.1	10.0	< 0.1	0.4	0.4	0.5
45	Wild mustard	1.4	0.1	5.0	< 0.1	0.2	0.2	0.5
46	Prostrate pigweed	1.4	0.1	5.0	< 0.1	0.2	0.2	0.5
47	Kochia	1.3	0.1	5.0	< 0.1	0.2	0.2	0.4
48	Povertyweed	1.3	0.1	5.0	< 0.1	0.2	0.2	0.4
49	Scouring-rush	1.3	0.1	5.0	< 0.1	0.2	0.2	0.4
50	Buffalograss	1.3	0.1	5.0	< 0.1	0.2	0.2	0.4
51	Clover species	1.2	0.1	5.0	< 0.1	0.2	0.2	0.4

Table 28. 2016 Corn in the Lake Manitoba Plain Ecoregion (25 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Canola/rapeseed	38.6	16.2	42.0	2.3	5.9	35.6	37.2
2	Wild buckwheat	50.7	19.5	38.4	1.6	3.1	7.8	36.4
3	Round-leaved mallow	50.5	12.9	25.6	1.4	2.7	17.4	29.8
4	Redroot pigweed	42.9	10.3	24.1	0.7	1.6	4.4	21.1
5	Purslane	31.1	11.2	35.9	0.7	2.2	4.2	19.6
6	Lamb's-quarters	31.3	8.7	27.9	0.7	2.1	6.8	17.7
7	Barnyard grass species	33.9	6.5	19.2	0.7	1.9	7.0	16.4
8	Yellow foxtail	27.3	7.5	27.6	0.6	2.0	4.8	15.1
9	Green foxtail	12.0	5.9	49.0	0.9	7.3	15.6	13.5
10	Dandelion	18.9	5.1	26.8	0.4	1.9	5.0	10.1
11	Common pepper-grass	4.0	2.2	55.0	0.7	18.0	18.0	8.1
12	Stink grass	12.5	3.9	30.9	0.3	2.1	3.2	7.3
13	Wheat	11.5	2.7	23.7	0.3	2.9	5.6	6.8
14	Purslane speedwell	4.0	1.6	40.0	0.4	10.4	10.4	5.2
15	Biennial wormwood	11.1	1.8	15.9	0.1	0.7	1.0	4.0
16	Canada thistle	11.6	1.5	13.3	0.1	0.7	1.6	4.0
17	Broad-leaved plantain	11.8	1.4	11.8	0.1	0.7	1.2	4.0
18	Pale smartweed	11.3	1.5	13.3	0.1	0.7	1.2	3.9
19	Foxtail barley	8.0	1.8	22.5	0.1	1.4	2.2	3.8
20	Marsh yellow cress	4.0	2.2	55.0	0.1	3.6	3.6	3.5
21	Thyme-leaved spurge	11.8	1.0	8.4	< 0.1	0.4	0.8	3.4
22	Field horsetail	4.0	0.6	15.0	0.2	4.2	4.2	2.5
23	Siberian elm	7.5	0.7	9.7	< 0.1	0.7	1.2	2.4
24	Bicknell's geranium	4.5	1.1	25.0	0.1	1.6	1.6	2.2
25	Green pigweed	4.0	1.0	25.0	0.1	1.8	1.8	2.1
26	Kochia	7.5	0.6	7.7	< 0.1	0.3	0.4	2.0
27	Narrow-leaved hawk's-beard	4.5	0.9	20.0	< 0.1	1.0	1.0	1.9
28	Oak-leaved goosefoot	6.8	0.3	5.0	< 0.1	0.2	0.2	1.7
29	Maple-leaved goosefoot	4.0	0.8	20.0	< 0.1	0.8	0.8	1.6
30	Wild mustard	4.0	0.8	20.0	< 0.1	0.8	0.8	1.6
31	Large crab grass	4.0	0.6	15.0	< 0.1	0.8	0.8	1.5
32	Spiny annual sow-thistle	4.0	0.6	15.0	< 0.1	0.8	0.8	1.5
33	Flodman's thistle	4.0	0.4	10.0	< 0.1	0.4	0.4	1.2
34	Tumble pigweed	3.8	0.4	10.0	< 0.1	0.4	0.4	1.1
35	Yellow sweet-clover	4.0	0.2	5.0	< 0.1	0.2	0.2	1.0
36	Clammy hedge-hyssop	4.0	0.2	5.0	< 0.1	0.2	0.2	1.0
37	Shepherd's-purse	3.8	0.2	5.0	< 0.1	0.2	0.2	0.9
38	Alfalfa	3.8	0.2	5.0	< 0.1	0.2	0.2	0.9
39	Common ragweed	3.1	0.3	10.0	< 0.1	0.4	0.4	0.9
40	Sunflower	3.1	0.3	10.0	< 0.1	0.4	0.4	0.9

Table 29. 2016 Oat in the Lake Manitoba Plain Ecoregion (12 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Green foxtail	44.9	28.1	62.6	18.6	41.4	93.8	47.5
2	Barnyard grass species	58.9	16.7	28.4	4.8	8.1	40.4	21.8
3	Wild buckwheat	44.4	26.6	60.1	3.1	7.1	13.4	21.4
4	Pale smartweed	60.4	17.3	28.7	3.2	5.3	17.8	19.7
5	Broad-leaved plantain	28.3	13.2	46.7	6.0	21.1	57.4	18.7
6	Wheat	17.5	9.9	56.6	3.8	21.5	39.4	12.4
7	Yellow foxtail	26.1	10.1	38.7	2.8	10.8	28.2	11.9
8	Wild oats	34.8	12.4	35.6	1.3	3.6	9.8	11.4
9	Lamb's-quarters	26.8	8.4	31.2	1.8	6.9	17.8	9.7
10	Perennial sow-thistle	28.3	9.9	35.1	0.8	2.9	6.8	8.9
11	Canola/rapeseed	34.1	8.8	25.8	0.7	2.0	5.0	8.8
12	Witch grass	9.3	2.8	30.0	3.9	41.8	41.8	8.7
13	Wild mustard	18.8	7.6	40.4	1.6	8.7	16.2	8.1
14	Northern willowherb	18.8	6.6	34.9	1.6	8.4	15.8	7.6
15	Redroot pigweed	25.3	5.6	22.3	1.2	4.8	12.0	7.4
16	Canada thistle	33.8	4.3	12.7	0.3	1.0	2.0	6.4
17	Round-leaved mallow	23.6	5.9	25.0	0.4	1.9	4.0	6.0
18	Purslane	18.1	6.1	33.6	0.8	4.4	8.4	6.0
19	Dandelion	25.3	4.8	19.2	0.5	1.9	4.2	5.8
20	Oak-leaved goosefoot	27.3	1.8	6.7	0.1	0.5	1.2	4.3
21	Black medick	18.8	3.8	20.1	0.2	1.2	1.8	4.2
22	Dog mustard	9.5	4.8	50.0	0.3	3.0	3.0	3.6
23	Night-flowering catchfly	9.3	3.7	40.0	0.4	3.8	3.8	3.2
24	Field horsetail	9.3	1.9	20.0	0.7	8.0	8.0	3.1
25	Canada fleabane	9.5	3.3	35.0	0.2	2.0	2.0	2.8
26	Thyme-leaved spurge	9.5	2.9	30.0	0.2	2.4	2.4	2.7
27	Tumble pigweed	9.5	2.9	30.0	0.2	1.8	1.8	2.6
28	Spiny annual sow-thistle	16.6	1.3	7.6	0.1	0.3	0.4	2.6
29	Prostrate knotweed	9.3	2.3	25.0	0.3	3.4	3.4	2.6
30	Rough cinquefoil	9.5	1.9	20.0	0.1	0.8	0.8	2.1
31	Alfalfa	9.5	1.4	15.0	0.1	0.8	0.8	1.9
32	Tartary buckwheat	8.0	1.6	20.0	0.1	1.0	1.0	1.8
33	Showy milkweed	9.5	1.0	10.0	0.1	0.6	0.6	1.6
34	American dragonhead	9.5	1.0	10.0	< 0.1	0.4	0.4	1.6
35	Stinkweed	8.0	1.2	15.0	< 0.1	0.6	0.6	1.5
36	Silverweed	9.3	0.5	5.0	0.1	1.2	1.2	1.5
37	Manitoba maple	9.5	0.5	5.0	0.1	0.6	0.6	1.4
38	Kochia	8.5	0.9	10.0	< 0.1	0.4	0.4	1.4
39	Chickweed	9.3	0.5	5.0	< 0.1	0.4	0.4	1.4
40	Maple-leaved goosefoot	9.3	0.5	5.0	< 0.1	0.2	0.2	1.3
41	Currant species	9.3	0.5	5.0	< 0.1	0.2	0.2	1.3
42	Foxtail barley	8.0	0.4	5.0	< 0.1	0.2	0.2	1.2

Table 30. 2016 Annual crops in the Boreal Transition Ecoregion (25 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Barnyard grass species	27.8	11.5	41.2	2.7	9.6	33.4	42.4
2	Wild buckwheat	44.0	10.8	24.6	0.9	2.1	9.0	29.2
3	False cleavers	44.0	9.5	21.6	1.0	2.3	16.8	28.7
4	Wild oats	27.8	7.7	27.6	0.9	3.4	9.8	22.6
5	Canola/rapeseed	23.6	8.8	37.2	0.6	2.6	6.4	19.8
6	Canada thistle	32.1	7.0	21.9	0.5	1.6	4.0	19.0
7	Wheat	12.2	5.9	48.3	0.7	5.8	14.4	15.2
8	Lamb's-quarters	20.0	4.8	24.0	0.6	2.8	8.6	14.5
9	Chickweed	24.1	4.2	17.5	0.3	1.4	4.2	12.6
10	Foxtail barley	11.7	2.5	21.7	0.7	5.6	15.0	11.2
11	Pale smartweed	24.1	3.0	12.6	0.2	0.8	1.8	10.2
12	Broad-leaved plantain	12.1	2.6	21.6	0.3	2.3	4.2	7.9
13	Spiny annual sow-thistle	16.0	1.8	11.3	0.1	0.7	1.4	6.4
14	Dandelion	12.1	1.6	13.4	0.1	0.7	1.0	5.1
15	Perennial sow-thistle	8.2	2.2	27.5	0.1	1.3	1.8	5.0
16	Alfalfa	8.0	1.6	20.1	0.1	1.4	1.6	4.4
17	Night-flowering catchfly	12.1	1.2	10.0	0.1	0.5	0.8	4.4
18	American vetch	8.0	1.4	17.8	0.1	1.2	1.8	4.1
19	Scentless chamomile	3.9	1.4	35.0	0.2	4.0	4.0	3.7
20	Shepherd's-purse	7.8	1.0	12.5	0.1	1.2	2.2	3.6
21	Low cudweed	8.2	0.8	10.0	0.1	1.1	1.6	3.4
22	Field horsetail	8.2	0.8	10.0	0.1	0.8	1.2	3.2
23	Black medick	8.0	0.8	10.1	< 0.1	0.6	0.6	3.0
24	Redroot pigweed	8.2	0.8	10.0	< 0.1	0.5	0.6	3.0
25	Flax	4.1	1.0	25.0	0.1	2.0	2.0	2.7
26	Clover species	8.2	0.4	5.0	< 0.1	0.2	0.2	2.4
27	American dragonhead	4.1	0.6	15.0	< 0.1	1.0	1.0	1.9
28	Hemp-nettle	3.9	0.6	15.0	< 0.1	1.0	1.0	1.8
29	Round-leaved mallow	3.9	0.6	15.0	< 0.1	0.6	0.6	1.7
30	Green foxtail	3.9	0.4	10.0	< 0.1	0.8	0.8	1.5
31	Bicknell's geranium	4.1	0.4	10.0	< 0.1	0.6	0.6	1.5
32	Corn spurry	3.9	0.4	10.0	< 0.1	0.4	0.4	1.4
33	Rough cinquefoil	4.1	0.2	5.0	< 0.1	0.4	0.4	1.3
34	Cocklebur	4.1	0.2	5.0	< 0.1	0.2	0.2	1.2

Table 31. 2016 Canola in the Boreal Transition Ecoregion (14 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Barnyard grass species	21.4	14.3	66.7	4.1	19.1	33.4	54.0
2	Wild buckwheat	42.9	10.7	25.0	0.9	2.1	6.6	27.5
3	Wild oats	21.4	11.1	51.7	1.3	6.3	9.8	27.1
4	Wheat	21.4	10.4	48.3	1.2	5.8	14.4	25.6
5	Canada thistle	35.7	7.9	22.0	0.6	1.7	4.0	20.7
6	False cleavers	42.9	6.4	15.0	0.4	1.0	1.8	19.5
7	Chickweed	28.6	5.0	17.5	0.4	1.5	4.2	14.7
8	Pale smartweed	28.6	4.6	16.3	0.3	1.1	1.8	13.4
9	Lamb's-quarters	21.4	5.0	23.3	0.4	1.8	3.0	12.9
10	Broad-leaved plantain	14.3	2.9	20.0	0.4	2.8	4.2	9.4
11	Perennial sow-thistle	14.3	3.9	27.5	0.2	1.3	1.8	8.6
12	Dandelion	14.3	2.1	15.0	0.1	0.7	1.0	6.1
13	Spiny annual sow-thistle	14.3	1.8	12.5	0.1	0.9	1.4	6.0
14	Low cudweed	14.3	1.4	10.0	0.2	1.1	1.6	5.9
15	Field horsetail	14.3	1.4	10.0	0.1	0.8	1.2	5.5
16	Night-flowering catchfly	14.3	1.4	10.0	0.1	0.5	0.8	5.1
17	Redroot pigweed	14.3	1.4	10.0	0.1	0.5	0.6	5.1
18	American vetch	7.1	2.1	30.0	0.1	1.8	1.8	4.8
19	Flax	7.1	1.8	25.0	0.1	2.0	2.0	4.5
20	Alfalfa	7.1	1.8	25.0	0.1	1.6	1.6	4.3
21	Clover species	14.3	0.7	5.0	< 0.1	0.2	0.2	4.1
22	American dragonhead	7.1	1.1	15.0	0.1	1.0	1.0	3.2
23	Black medick	7.1	1.1	15.0	< 0.1	0.6	0.6	3.0
24	Bicknell's geranium	7.1	0.7	10.0	< 0.1	0.6	0.6	2.6
25	Rough cinquefoil	7.1	0.4	5.0	< 0.1	0.4	0.4	2.2
26	Cocklebur	7.1	0.4	5.0	< 0.1	0.2	0.2	2.0
27	Canola/rapeseed	7.1	0.4	5.0	< 0.1	0.2	0.2	2.0

Table 32. 2016 Spring wheat in the Boreal Transition Ecoregion (11 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Canola/rapeseed	45.5	20.0	44.0	1.4	3.2	6.4	45.8
2	False cleavers	45.5	13.6	30.0	1.8	4.0	16.8	42.8
3	Wild buckwheat	45.5	10.9	24.0	1.0	2.2	9.0	31.7
4	Foxtail barley	27.3	5.9	21.7	1.5	5.6	15.0	27.8
5	Barnyard grass species	36.4	7.7	21.3	0.8	2.2	5.6	24.1
6	Lamb's-quarters	18.2	4.5	25.0	0.8	4.5	8.6	17.1
7	Canada thistle	27.3	5.9	21.7	0.4	1.5	3.2	16.5
8	Wild oats	36.4	3.2	8.8	0.4	1.2	3.0	15.6
9	Chickweed	18.2	3.2	17.5	0.2	1.2	1.8	9.6
10	Scentless chamomile	9.1	3.2	35.0	0.4	4.0	4.0	9.1
11	Shepherd's-purse	18.2	2.3	12.5	0.2	1.2	2.2	8.6
12	Spiny annual sow-thistle	18.2	1.8	10.0	0.1	0.5	0.8	6.9
13	Broad-leaved plantain	9.1	2.3	25.0	0.1	1.4	1.4	5.7
14	Pale smartweed	18.2	0.9	5.0	0.1	0.3	0.4	5.5
15	Alfalfa	9.1	1.4	15.0	0.1	1.2	1.2	4.6
16	Hemp-nettle	9.1	1.4	15.0	0.1	1.0	1.0	4.4
17	Round-leaved mallow	9.1	1.4	15.0	0.1	0.6	0.6	4.0
18	Dandelion	9.1	0.9	10.0	0.1	0.8	0.8	3.7
19	Green foxtail	9.1	0.9	10.0	0.1	0.8	0.8	3.7
20	Night-flowering catchfly	9.1	0.9	10.0	< 0.1	0.4	0.4	3.3
21	Corn spurry	9.1	0.9	10.0	< 0.1	0.4	0.4	3.3
22	Black medick	9.1	0.5	5.0	0.1	0.6	0.6	3.0
23	American vetch	9.1	0.5	5.0	0.1	0.6	0.6	3.0

Table 33. 2016 Annual crops in the Mid-Boreal Uplands Ecoregion (15 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Green foxtail	30.8	20.9	68.0	10.4	33.8	98.4	51.6
2	Field horsetail	34.9	11.3	32.4	4.5	12.8	61.2	26.6
3	Wild buckwheat	61.9	12.5	20.3	0.9	1.5	7.6	19.2
4	Dandelion	50.4	14.2	28.3	1.1	2.3	5.6	19.2
5	Broad-leaved plantain	25.8	14.2	55.0	1.7	6.8	12.2	17.6
6	Barnyard grass species	19.0	11.8	62.1	2.0	10.3	19.6	16.1
7	Wild oats	43.5	9.0	20.6	0.6	1.3	2.8	13.3
8	Wheat	12.9	6.8	52.5	1.9	14.9	29.4	12.2
9	False cleavers	40.2	7.5	18.6	0.5	1.2	2.8	11.7
10	Clover species	25.5	8.4	32.8	0.9	3.6	10.8	11.6
11	Night-flowering catchfly	24.6	8.9	36.3	0.8	3.3	6.6	11.3
12	Stork's bill	18.7	8.3	44.4	1.1	5.9	11.4	11.2
13	Canada thistle	37.8	6.0	15.9	0.6	1.6	3.6	10.9
14	Chickweed	28.2	7.0	24.9	0.5	1.7	2.6	9.6
15	Pale smartweed	28.5	3.2	11.1	0.2	0.7	1.0	6.6
16	Round-leaved mallow	12.6	4.4	34.6	0.4	3.0	5.0	5.5
17	Stinkweed	21.7	3.0	13.6	0.1	0.6	0.8	5.3
18	Black medick	21.4	2.4	11.4	0.1	0.5	0.8	4.8
19	Bicknell's geranium	12.6	2.5	20.2	0.2	1.5	2.2	3.9
20	Hemp-nettle	12.6	2.2	17.2	0.1	1.2	2.2	3.6
21	American dragonhead	12.6	2.2	17.2	0.1	1.1	2.0	3.5
22	Shepherd's-purse	18.5	0.9	5.0	< 0.1	0.3	0.4	3.4
23	Lamb's-quarters	12.6	1.2	9.9	< 0.1	0.4	0.6	2.7
24	Canola/rapeseed	12.3	0.9	7.5	< 0.1	0.3	0.4	2.4
25	Canada fleabane	6.4	1.6	25.0	0.1	1.6	1.6	2.2
26	Tumble pigweed	6.4	1.6	25.0	0.1	1.4	1.4	2.1
27	Yellow sweet-clover	6.4	1.0	15.0	< 0.1	0.6	0.6	1.6
28	Spiny annual sow-thistle	6.1	0.9	15.0	< 0.1	0.8	0.8	1.6
29	Smooth brome	6.4	0.6	10.0	< 0.1	0.4	0.4	1.4
30	Alfalfa	6.1	0.6	10.0	< 0.1	0.6	0.6	1.4
31	Northern bedstraw	6.4	0.3	5.0	< 0.1	0.4	0.4	1.2
32	Low cudweed	6.4	0.3	5.0	< 0.1	0.4	0.4	1.2
33	Foxtail barley	6.1	0.3	5.0	< 0.1	0.4	0.4	1.1
34	Biennial wormwood	6.2	0.3	5.0	< 0.1	0.2	0.2	1.1
35	American vetch	6.1	0.3	5.0	< 0.1	0.2	0.2	1.1

Table 34. 2016 Annual crops in the Interlake Plain Ecoregion (61 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Broad-leaved plantain	29.9	7.3	24.4	0.8	2.6	32.2	28.0
2	Barnyard grass species	21.6	5.1	23.7	0.9	4.2	35.0	24.2
3	Yellow foxtail	5.8	3.8	65.6	1.3	22.2	41.0	22.0
4	Wild buckwheat	36.5	4.3	11.8	0.2	0.7	2.8	19.6
5	Wild oats	18.2	4.6	25.2	0.5	3.0	9.6	18.1
6	Dandelion	22.6	3.9	17.1	0.3	1.5	6.8	16.0
7	Wheat	9.9	2.9	29.4	0.6	5.9	22.0	13.8
8	Canola/rapeseed	16.7	4.1	24.8	0.3	1.5	3.8	13.7
9	Pale smartweed	19.5	3.5	18.1	0.3	1.3	5.8	13.7
10	Night-flowering catchfly	5.4	1.6	29.3	0.8	15.3	52.0	13.4
11	Green foxtail	6.1	2.3	37.7	0.5	8.6	18.4	11.0
12	Field horsetail	5.2	2.0	39.2	0.4	8.3	20.0	9.4
13	Redroot pigweed	13.6	2.2	15.9	0.1	0.8	4.0	8.3
14	Lamb's-quarters	11.6	1.9	16.1	0.2	1.4	4.8	8.0
15	False cleavers	6.0	2.3	38.7	0.2	3.0	8.2	7.2
16	Chickweed	4.1	2.1	50.0	0.2	4.7	9.2	6.4
17	Perennial sow-thistle	5.0	1.8	34.9	0.1	2.3	3.6	5.3
18	Spiny annual sow-thistle	8.7	1.2	14.1	0.1	0.7	1.4	4.9
19	Biennial wormwood	7.9	1.1	13.7	0.1	1.0	7.2	4.7
20	Clover species	4.2	1.5	35.9	0.1	1.9	2.6	4.3
21	Rough cinquefoil	6.6	0.8	11.8	0.1	1.2	2.2	4.0
22	Oak-leaved goosefoot	7.4	0.8	10.6	< 0.1	0.5	1.0	3.7
23	Canada thistle	5.5	0.8	13.8	0.1	1.7	4.6	3.7
24	Shepherd's-purse	7.3	0.6	8.1	0.1	0.9	1.6	3.7
25	Golden dock	3.4	0.6	16.6	< 0.1	1.4	1.8	2.3
26	Yellow sweet-clover	1.7	0.8	50.0	0.1	3.0	3.0	2.3
27	Oats	1.7	0.8	50.0	< 0.1	2.4	2.4	2.2
28	Black medick	4.8	0.4	8.4	< 0.1	0.3	0.4	2.1
29	Rayless aster	1.7	0.8	45.0	< 0.1	2.6	2.6	2.1
30	Soybean	2.5	0.6	25.7	< 0.1	1.4	2.4	2.0
31	Dock species	3.6	0.4	11.4	< 0.1	0.7	1.4	2.0
32	Proso millet	2.4	0.4	15.0	< 0.1	1.0	1.0	1.5
33	American vetch	3.7	0.2	5.0	< 0.1	0.2	0.2	1.4
34	Round-leaved mallow	3.1	0.2	5.0	< 0.1	0.3	0.4	1.2
35	Marsh yellow cress	2.5	0.2	9.1	< 0.1	0.4	0.4	1.2
36	Foxtail barley	2.6	0.2	7.0	< 0.1	0.4	1.2	1.1
37	Sedge species	1.7	0.3	15.0	< 0.1	0.6	0.6	1.0
38	Bicknell's geranium	2.1	0.1	6.2	< 0.1	0.2	0.4	0.8
39	Quack grass	1.1	0.2	20.0	< 0.1	1.6	1.6	0.8
40	Blue-joint	1.5	0.1	5.0	< 0.1	1.6	1.6	0.8
41	Willow species	1.6	0.2	10.0	< 0.1	0.4	0.4	0.8
42	Bladder campion	2.0	0.1	5.0	< 0.1	0.2	0.2	0.8
43	Stork's bill	2.0	0.1	5.0	< 0.1	0.2	0.2	0.8
44	Dog mustard	1.5	0.2	10.0	< 0.1	0.4	0.4	0.7
45	Wild mustard	1.5	0.2	10.0	< 0.1	0.4	0.4	0.7
46	Narrow-leaved hawk's-beard	1.8	0.1	5.0	< 0.1	0.2	0.2	0.7
47	Alfalfa	1.7	0.1	5.0	< 0.1	0.2	0.2	0.7
48	Nightshade species	1.7	0.1	5.0	< 0.1	0.2	0.2	0.7
49	American dragonhead	1.6	0.1	5.0	< 0.1	0.2	0.2	0.6
50	Hemp-nettle	1.6	0.1	5.0	< 0.1	0.2	0.2	0.6
51	Orchard grass	1.5	0.1	5.0	< 0.1	0.2	0.2	0.6
52	Thyme-leaved spurge	1.1	0.1	5.0	< 0.1	0.2	0.2	0.4

Table 35. 2016 Canola in the Interlake Plain Ecoregion (18 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Yellow foxtail	11.2	7.2	64.8	1.9	17.3	28.0	54.8
2	Wild oats	28.2	6.7	23.6	0.7	2.6	8.8	39.1
3	Broad-leaved plantain	24.5	6.3	25.8	0.6	2.3	9.6	33.6
4	Chickweed	11.8	5.9	50.0	0.6	4.7	9.2	27.2
5	False cleavers	5.9	5.6	95.0	0.5	8.2	8.2	22.7
6	Wild buckwheat	25.8	2.0	7.6	0.1	0.4	0.6	16.9
7	Pale smartweed	10.6	2.6	24.5	0.2	1.6	2.8	13.0
8	Redroot pigweed	13.9	2.1	15.1	0.1	0.8	1.4	12.2
9	Night-flowering catchfly	11.2	1.7	15.5	0.1	1.2	2.6	10.8
10	Barnyard grass species	9.4	1.6	17.5	0.2	1.8	3.2	10.4
11	Perennial sow-thistle	4.7	1.9	40.0	0.1	3.0	3.0	8.4
12	Shepherd's-purse	10.0	0.8	7.7	0.1	1.0	1.4	7.7
13	Lamb's-quarters	11.2	0.6	5.0	0.1	0.6	0.8	7.2
14	Spiny annual sow-thistle	9.4	0.9	10.0	< 0.1	0.4	0.6	6.6
15	Golden dock	6.5	1.0	15.0	0.1	1.2	1.2	6.2
16	Dandelion	7.8	0.4	5.0	< 0.1	0.2	0.2	4.5
17	Oak-leaved goosefoot	6.5	0.3	5.0	< 0.1	0.6	0.6	4.2
18	Willow species	4.7	0.5	10.0	< 0.1	0.4	0.4	3.3
19	Narrow-leaved hawk's-beard	5.3	0.3	5.0	< 0.1	0.2	0.2	3.0
20	Round-leaved mallow	4.7	0.2	5.0	< 0.1	0.4	0.4	2.8
21	American dragonhead	4.7	0.2	5.0	< 0.1	0.2	0.2	2.7
22	Wheat	4.7	0.2	5.0	< 0.1	0.2	0.2	2.7

Table 36. 2016 Spring wheat in the Interlake Plain Ecoregion (15 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Field horsetail	15.4	7.1	46.1	1.8	11.4	20.0	60.8
2	Wild buckwheat	48.9	6.6	13.5	0.4	0.8	2.8	39.0
3	Canola/rapeseed	26.2	6.7	25.4	0.4	1.4	3.8	31.2
4	Pale smartweed	8.6	4.7	55.0	0.5	5.8	5.8	24.3
5	Lamb's-quarters	22.2	3.5	15.7	0.4	1.7	3.6	23.3
6	Broad-leaved plantain	20.4	2.0	10.0	0.1	0.5	1.0	13.3
7	Dandelion	22.7	1.5	6.5	0.1	0.4	0.8	12.8
8	Redroot pigweed	9.1	2.8	31.3	0.1	1.6	4.0	12.4
9	Canada thistle	15.4	1.4	9.4	0.1	0.6	1.0	10.2
10	False cleavers	15.4	1.5	10.0	0.1	0.4	0.4	9.8
11	Barnyard grass species	13.6	1.0	7.5	< 0.1	0.3	0.4	7.6
12	Dock species	6.8	1.4	20.0	0.1	1.4	1.4	7.4
13	Wild oats	8.6	0.9	10.0	0.1	0.6	0.6	5.9
14	Spiny annual sow-thistle	6.8	1.0	15.0	< 0.1	0.6	0.6	5.4
15	Black medick	6.8	0.7	10.0	< 0.1	0.4	0.4	4.3
16	Shepherd's-purse	6.8	0.7	10.0	< 0.1	0.4	0.4	4.3
17	Soybean	2.3	1.0	45.0	0.1	2.4	2.4	4.2
18	Bladder campion	8.6	0.4	5.0	< 0.1	0.2	0.2	4.2
19	Stork's bill	8.6	0.4	5.0	< 0.1	0.2	0.2	4.2
20	American vetch	8.6	0.4	5.0	< 0.1	0.2	0.2	4.2
21	Bicknell's geranium	6.8	0.3	5.0	< 0.1	0.2	0.2	3.3
22	Hemp-nettle	6.8	0.3	5.0	< 0.1	0.2	0.2	3.3
23	Biennial wormwood	2.3	0.5	20.0	< 0.1	1.6	1.6	2.6
24	Foxtail barley	2.3	0.3	15.0	< 0.1	1.2	1.2	2.1

Table 37. 2016 Soybean in the Interlake Plain Ecoregion (16 fields)

Rank	Species	Frequency (%)	Field Uniformity		Field Density (#/m^2)			Relative Abundance
			All	Occurrence	All	Occurrence	High	
1	Barnyard grass species	41.5	10.3	24.9	2.5	5.9	35.0	38.1
2	Wheat	31.0	10.6	34.2	2.2	7.0	22.0	34.0
3	Night-flowering catchfly	5.6	3.7	65.0	2.9	52.0	52.0	27.7
4	Dandelion	42.9	8.8	20.5	0.8	1.9	5.0	24.1
5	Wild buckwheat	53.6	7.5	14.0	0.4	0.8	2.0	21.9
6	Canola/rapeseed	31.0	8.9	28.7	0.6	1.8	2.6	19.6
7	Broad-leaved plantain	25.4	5.5	21.7	0.2	0.9	1.2	12.5
8	Green foxtail	6.3	3.5	55.0	0.8	12.2	12.2	10.9
9	Rough cinquefoil	24.6	2.9	11.8	0.3	1.2	2.2	10.4
10	Clover species	14.1	4.9	34.8	0.3	1.8	2.6	9.8
11	Pale smartweed	26.8	3.0	11.3	0.1	0.6	1.4	9.7
12	Perennial sow-thistle	12.7	4.1	32.5	0.3	2.0	3.6	8.7
13	Biennial wormwood	21.9	2.3	10.3	0.1	0.6	0.8	7.7
14	Redroot pigweed	19.0	1.8	9.4	0.1	0.5	1.2	6.4
15	Yellow sweet-clover	6.3	3.2	50.0	0.2	3.0	3.0	6.0
16	Oats	6.3	3.2	50.0	0.2	2.4	2.4	5.7
17	Oak-leaved goosefoot	13.4	2.2	16.6	0.1	0.7	1.0	5.7
18	Rayless aster	6.3	2.9	45.0	0.2	2.6	2.6	5.5
19	Canada thistle	5.6	1.4	25.0	0.3	4.6	4.6	4.6
20	Field horsetail	6.3	1.6	25.0	0.1	1.8	1.8	3.8
21	Black medick	12.0	0.9	7.7	< 0.1	0.3	0.4	3.6
22	Marsh yellow cress	7.8	0.8	10.0	< 0.1	0.4	0.4	2.6
23	Sedge species	6.3	1.0	15.0	< 0.1	0.6	0.6	2.5
24	Foxtail barley	7.8	0.4	5.0	< 0.1	0.2	0.2	2.1
25	Wild oats	7.8	0.4	5.0	< 0.1	0.2	0.2	2.1
26	Dock species	7.8	0.4	5.0	< 0.1	0.2	0.2	2.1
27	Dog mustard	5.6	0.6	10.0	< 0.1	0.4	0.4	1.9
28	Wild mustard	5.6	0.6	10.0	< 0.1	0.4	0.4	1.9
29	Spiny annual sow-thistle	5.6	0.6	10.0	< 0.1	0.4	0.4	1.9
30	American vetch	6.3	0.3	5.0	< 0.1	0.2	0.2	1.7
31	Alfalfa	6.3	0.3	5.0	< 0.1	0.2	0.2	1.7
32	Nightshade species	6.3	0.3	5.0	< 0.1	0.2	0.2	1.7
33	Round-leaved mallow	5.6	0.3	5.0	< 0.1	0.2	0.2	1.5

Table 38. 2016 Annual crops in the Lake of the Woods Ecoregion (11 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Dandelion	45.6	18.6	40.9	2.9	6.3	24.6	38.0
2	Wild buckwheat	72.6	15.7	21.6	1.5	2.1	12.0	33.5
3	Broad-leaved plantain	45.3	16.0	35.4	2.1	4.5	16.4	31.6
4	Field horsetail	44.5	9.3	20.9	2.8	6.2	25.6	30.0
5	Perennial sow-thistle	9.5	8.6	90.0	2.3	24.2	24.2	20.6
6	Marsh yellow cress	44.5	8.1	18.1	0.9	2.0	4.8	19.1
7	Yellow foxtail	18.3	9.4	51.5	1.3	7.0	12.8	17.4
8	Wild oats	9.5	3.8	40.0	2.1	21.8	21.8	15.8
9	Canola/rapeseed	17.8	7.6	42.5	1.0	5.5	8.4	14.3
10	Lamb's-quarters	27.4	4.9	17.9	0.4	1.5	3.8	11.0
11	Barnyard grass species	18.3	5.9	32.4	0.4	2.4	3.2	10.2
12	Pale smartweed	27.8	3.3	11.9	0.1	0.5	1.0	8.3
13	Shepherd's-purse	17.5	3.9	22.5	0.2	1.1	2.0	7.3
14	Black medick	18.3	3.5	19.4	0.2	1.0	1.8	7.0
15	Spiny annual sow-thistle	18.6	1.4	7.4	0.1	0.3	0.4	4.8
16	Canada thistle	9.5	1.9	20.0	0.1	1.4	1.4	3.9
17	Redroot pigweed	8.7	1.7	20.0	0.1	1.0	1.0	3.4
18	Clover species	8.7	1.7	20.0	0.1	1.0	1.0	3.4
19	Night-flowering catchfly	8.7	0.9	10.0	0.1	0.8	0.8	2.7
20	Round-leaved mallow	9.1	0.9	10.0	< 0.1	0.4	0.4	2.6
21	Wild mustard	8.7	0.9	10.0	< 0.1	0.4	0.4	2.5
22	Hemp-nettle	9.5	0.5	5.0	< 0.1	0.2	0.2	2.2
23	Thyme-leaved spurge	9.5	0.5	5.0	< 0.1	0.2	0.2	2.2
24	Canada fleabane	8.7	0.4	5.0	< 0.1	0.4	0.4	2.1
25	Bladder campion	8.7	0.4	5.0	< 0.1	0.2	0.2	2.0
26	Purslane	8.7	0.4	5.0	< 0.1	0.2	0.2	2.0
27	Alfalfa	8.7	0.4	5.0	< 0.1	0.2	0.2	2.0

Table 39. Number of fields surveyed by crop in each crop reporting district

	Southwest	Northwest	Central	Eastern	Interlake
Canola	78	48	50	15	15
Spring wheat	73	26	71	7	19
Soybean	9	8	59	23	19
Corn	8	2	20	8	3
Barley	16	3	13	2	1
Oat	6	3	9	3	2
Flax	10	0	9	0	2
Sunflower	4	0	11	1	2
Annual crops	204	90	242	59	63

Table 40. Density, species richness and weed-free quadrats in the surveyed crops in each crop reporting district

	Number of fields surveyed	Density (number/m^2)			Species (number/field)		Weed-free quadrats	
Area		mean	SE	median	mean	SE	%	SE
Southwest								
Annual crops	204	16.4	1.5	6.6	5.0	0.2	31.3	3.2
Canola	78	13.9	2.4	5.8	4.8	0.3	35.1	5.4
Spring wheat	73	16.7	2.2	6.3	5.1	0.3	30.3	5.4
Barley	16	12.8	4.8	6.7	5.2	0.5	32.6	11.7
Flax	10	22.2	5.7	15.2	7.5	1.0	8.9	9.0
Northwest								
Annual crops	90	13.9	2.6	4.8	4.2	0.4	48.7	5.3
Canola	48	11.6	2.6	3.5	3.7	0.5	52.5	7.2
Spring wheat	26	15.6	4.5	6.2	5.0	0.6	41.9	9.7
Central								
Annual crops	242	17.8	2.5	5.5	4.9	0.2	42.9	3.2
Canola	50	8.8	1.9	5.2	4.5	0.5	51.0	7.1
Spring wheat	71	19.9	4.3	3.9	4.3	0.4	48.0	5.9
Soybean	59	8.8	1.3	4.7	4.6	0.3	41.1	6.4
Corn	20	24.2	6.9	14.0	6.2	0.8	24.1	9.6
Barley	13	28.8	14.8	3.1	5.3	1.2	46.2	13.8
Sunflower	11	15.5	2.5	14.1	7.0	0.7	16.7	11.2
Eastern								
Annual crops	59	13.1	2.9	3.1	4.6	0.5	50.0	6.5
Canola	15	18.4	7.5	1.4	4.4	0.8	57.2	12.8
Soybean	23	12.8	4.0	5.4	5.7	0.9	40.3	10.2
Interlake								
Annual crops	63	7.3	1.8	1.9	3.4	0.4	59.7	6.2
Canola	15	10.1	5.6	1.5	4.0	1.0	63.5	12.4
Spring wheat	19	3.2	1.3	1.0	2.0	0.3	72.2	10.3
Soybean	19	5.8	1.7	2.1	3.4	0.7	58.3	11.3

Table 41. 2016 Annual crops in the Southwest Crop Reporting District (204 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Green foxtail	37.2	15.0	40.3	4.1	11.1	82.8	44.7
2	Wild buckwheat	64.7	18.0	27.9	1.5	2.4	55.2	36.8
3	Wild oats	23.3	7.0	30.2	1.3	5.4	51.8	18.0
4	Barnyard grass species	20.4	6.8	33.5	1.3	6.4	80.0	17.6
5	Canola/rapeseed	24.3	7.3	30.0	0.7	3.0	27.4	15.1
6	Round-leaved mallow	28.2	6.8	24.0	0.5	1.7	9.8	13.9
7	Yellow foxtail	8.9	3.7	41.7	1.3	14.1	57.2	12.4
8	Wheat	15.7	4.5	28.5	0.5	3.0	23.2	9.6
9	Canada thistle	22.6	4.3	19.0	0.3	1.2	3.6	9.6
10	Lamb's-quarters	19.8	3.7	18.6	0.3	1.3	8.6	8.5
11	Redroot pigweed	16.8	3.2	19.0	0.4	2.1	22.2	8.1
12	False cleavers	16.1	3.8	23.4	0.3	1.8	25.6	8.0
13	Night-flowering catchfly	14.3	3.0	21.1	0.2	1.7	6.6	6.8
14	Spiny annual sow-thistle	11.6	3.2	27.6	0.3	2.5	13.6	6.6
15	Foxtail barley	13.3	2.6	19.9	0.3	2.1	15.0	6.5
16	Dandelion	11.1	2.5	22.6	0.2	1.8	7.4	5.5
17	Perennial sow-thistle	11.1	2.1	19.0	0.1	1.1	7.4	4.6
18	Stork's bill	5.7	1.9	33.1	0.3	5.3	15.8	4.5
19	Chickweed	8.6	1.6	19.0	0.2	1.8	6.4	4.0
20	Kochia	9.3	1.7	18.4	0.1	1.3	4.0	4.0
21	Field horsetail	3.6	1.1	30.0	0.4	10.3	61.2	3.8
22	Biennial wormwood	9.0	1.6	18.1	0.1	1.0	3.8	3.7
23	Broad-leaved plantain	8.8	1.5	16.6	0.1	0.9	2.8	3.4
24	Shepherd's-purse	8.4	1.3	15.7	0.1	1.1	11.6	3.3
25	Black medick	6.3	1.3	20.7	0.1	1.3	5.6	2.8
26	Oak-leaved goosefoot	6.4	1.2	18.9	0.1	1.2	2.6	2.7
27	Rough hair grass	0.6	0.4	70.0	0.3	60.0	60.0	2.5
28	Hemp-nettle	4.8	1.1	22.5	0.1	2.0	11.6	2.4
29	Thyme-leaved spurge	5.3	0.8	15.2	0.1	1.8	32.0	2.3
30	Pale smartweed	6.4	0.9	13.5	< 0.1	0.8	2.4	2.3
31	Stinkweed	5.4	0.7	13.0	< 0.1	0.6	2.2	1.8
32	Scouring-rush	3.0	0.8	28.3	0.1	2.6	6.6	1.7
33	Rye	1.3	0.7	57.3	0.1	5.4	9.6	1.3
34	Green pigweed	1.6	0.6	36.6	0.1	5.1	15.2	1.3
35	Golden dock	2.5	0.5	20.2	< 0.1	1.1	2.2	1.1
36	Proso millet	0.5	0.3	60.0	0.1	20.0	20.0	1.0
37	Purslane	2.0	0.5	26.4	< 0.1	1.8	4.2	1.0
38	Wild mustard	2.3	0.5	20.1	< 0.1	1.2	2.7	1.0
39	Narrow-leaved hawk's-beard	1.8	0.5	28.3	< 0.1	1.7	3.4	0.9
40	Prostrate pigweed	1.5	0.4	24.9	< 0.1	2.7	3.8	0.9
41	Yellow sweet-clover	1.8	0.3	19.5	< 0.1	1.8	3.0	0.8
42	Quack grass	1.1	0.4	36.3	< 0.1	4.2	7.4	0.8
43	Alfalfa	2.1	0.3	14.3	< 0.1	0.9	1.6	0.8
44	Manitoba maple	1.4	0.4	30.9	< 0.1	1.8	4.0	0.8
45	Tumble pigweed	2.2	0.2	11.3	< 0.1	0.6	1.4	0.7
46	American dragonhead	2.2	0.2	9.6	< 0.1	0.5	1.0	0.7
47	Soybean	1.5	0.3	21.4	< 0.1	1.1	2.2	0.7
48	Barley	1.4	0.2	17.1	< 0.1	1.5	2.0	0.6
49	Rough cinquefoil	0.9	0.2	19.3	< 0.1	2.6	6.2	0.4
50	Downy brome	0.7	0.3	35.0	< 0.1	2.0	2.0	0.4
51	American vetch	1.0	0.2	17.8	< 0.1	1.2	1.8	0.4
52	Dock species	0.9	0.2	22.6	< 0.1	1.4	2.2	0.4

(Table continued on next page)

Table 41. 2016 Annual crops in the Southwest Crop Reporting District (204 fields) *(continued)*

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
53	Low cudweed	1.0	0.1	10.1	< 0.1	1.9	3.0	0.4
54	Blue grass species	1.1	0.1	12.7	< 0.1	0.5	0.8	0.4
55	Scentless chamomile	0.5	0.2	35.0	< 0.1	4.0	4.0	0.4
56	Slough grass	1.1	0.1	10.0	< 0.1	0.6	0.6	0.3
57	Marsh yellow cress	0.6	0.2	35.0	< 0.1	1.4	1.4	0.3
58	Maple-leaved goosefoot	0.9	0.1	10.9	< 0.1	0.7	1.0	0.3
59	Nightshade species	0.9	0.1	14.4	< 0.1	0.6	0.8	0.3
60	Flax	0.5	0.1	25.0	< 0.1	2.0	2.0	0.3
61	False ragweed	0.7	0.1	16.1	< 0.1	0.9	2.8	0.3
62	Rayless aster	0.8	0.1	10.0	< 0.1	0.4	0.4	0.3
63	Timothy	0.5	0.1	25.0	< 0.1	1.1	1.1	0.2
64	White mustard	0.5	0.1	25.0	< 0.1	1.4	1.4	0.2
65	Clover species	0.5	0.1	23.1	< 0.1	1.1	1.2	0.2
66	Russian thistle	0.7	0.1	11.0	< 0.1	0.6	0.6	0.2
67	Common groundsel	0.4	0.1	30.0	< 0.1	1.8	1.8	0.2
68	Willow species	0.6	0.1	10.0	< 0.1	0.6	0.6	0.2
69	Pennsylvania pellitory	0.7	< 0.1	5.0	< 0.1	0.2	0.2	0.2
70	Smooth brome	0.5	0.1	10.0	< 0.1	0.4	0.4	0.2
71	White cockle	0.5	0.1	10.0	< 0.1	0.4	0.4	0.2
72	Absinth	0.6	< 0.1	5.0	< 0.1	0.2	0.2	0.1
73	Northern willowherb	0.5	< 0.1	10.0	< 0.1	0.4	0.4	0.1
74	Witch grass	0.5	< 0.1	5.0	< 0.1	0.4	0.4	0.1
75	Cocklebur	0.5	< 0.1	5.0	< 0.1	0.8	0.8	0.1
76	Showy milkweed	0.5	< 0.1	5.0	< 0.1	0.6	0.6	0.1
77	Pineappleweed	0.6	< 0.1	5.0	< 0.1	0.2	0.2	0.1
78	Western snowberry	0.6	< 0.1	5.0	< 0.1	0.2	0.2	0.1
79	Siberian elm	0.6	< 0.1	5.0	< 0.1	0.2	0.2	0.1
80	Short-awned foxtail	0.5	< 0.1	5.0	< 0.1	0.2	0.2	0.1
81	Yellow evening-primrose	0.3	< 0.1	10.0	< 0.1	1.0	1.0	0.1

Table 42. 2016 Canola in the Southwest Crop Reporting District (78 fields)

Rank	Species	Frequency (%)	Field Uniformity		Field Density (#/m^2)			Relative Abundance
			All	Occurrence	All	Occurrence	High	
1	Wild buckwheat	58.1	15.8	27.2	1.1	1.9	14.4	34.0
2	Green foxtail	26.2	9.9	37.7	2.8	10.5	82.8	33.9
3	Wheat	24.9	8.4	33.7	1.0	4.0	23.2	19.7
4	Round-leaved mallow	37.0	7.8	21.2	0.5	1.3	3.8	17.9
5	Wild oats	21.6	5.9	27.2	0.8	3.5	27.2	15.0
6	Barnyard grass species	17.6	5.6	31.5	0.8	4.6	21.6	14.3
7	Yellow foxtail	9.1	3.1	33.8	1.0	11.5	47.4	12.1
8	Redroot pigweed	18.7	4.1	22.0	0.6	3.1	22.2	11.7
9	Lamb's-quarters	24.9	4.3	17.2	0.3	1.3	8.4	11.2
10	False cleavers	19.2	4.3	22.5	0.3	1.6	5.0	10.0
11	Canada thistle	19.4	3.9	20.2	0.2	1.1	3.6	9.0
12	Field horsetail	5.0	1.8	34.9	0.7	14.6	61.2	7.9
13	Rough hair grass	1.3	0.9	70.0	0.8	60.0	60.0	6.8
14	Perennial sow-thistle	15.3	2.7	18.0	0.1	0.9	3.2	6.6
15	Dandelion	10.3	3.0	28.6	0.3	2.5	7.4	6.6
16	Spiny annual sow-thistle	9.3	2.6	27.4	0.2	2.4	5.4	5.7
17	Kochia	11.5	2.1	18.7	0.2	1.4	4.0	5.4
18	Biennial wormwood	12.7	2.0	15.8	0.1	0.8	3.8	5.1
19	Chickweed	11.3	1.7	14.9	0.2	1.4	4.2	4.9
20	Stork's bill	6.2	2.1	34.1	0.2	3.3	10.2	4.6
21	Broad-leaved plantain	10.9	1.8	16.5	0.1	1.0	2.0	4.6
22	Oak-leaved goosefoot	9.2	1.9	20.7	0.1	1.2	2.6	4.4
23	Shepherd's-purse	10.3	1.4	13.2	0.1	0.8	1.6	3.9
24	Night-flowering catchfly	9.9	1.5	14.8	0.1	0.8	2.4	3.9
25	Black medick	8.4	1.3	15.0	0.1	0.8	3.6	3.3
26	Foxtail barley	7.8	1.3	16.7	0.1	0.9	2.2	3.3
27	Scouring-rush	3.0	1.7	57.1	0.1	4.6	6.6	3.1
28	Hemp-nettle	1.3	1.2	90.0	0.2	11.6	11.6	2.4
29	Pale smartweed	6.4	0.6	10.0	< 0.1	0.7	1.4	2.2
30	Rye	1.3	1.1	80.0	0.1	9.6	9.6	2.1
31	Stinkweed	6.0	0.6	10.4	< 0.1	0.4	0.7	2.0
32	Green pigweed	2.5	0.7	27.5	0.1	4.5	8.2	1.9
33	Quack grass	1.3	0.9	65.0	0.1	7.4	7.4	1.7
34	Purslane	2.6	0.8	31.7	0.1	2.3	4.2	1.7
35	Golden dock	3.9	0.6	14.9	< 0.1	0.9	1.6	1.6
36	Prostrate pigweed	2.5	0.6	22.5	0.1	2.4	3.8	1.4
37	Thyme-leaved spurge	3.7	0.4	10.1	< 0.1	1.1	2.8	1.4
38	Canola/rapeseed	3.9	0.5	11.9	< 0.1	0.5	0.9	1.4
39	American dragonhead	3.8	0.3	8.3	< 0.1	0.5	1.0	1.2
40	Downy brome	1.7	0.6	35.0	< 0.1	2.0	2.0	1.1
41	Narrow-leaved hawk's-beard	1.3	0.6	45.0	< 0.1	3.4	3.4	1.1
42	Marsh yellow cress	1.3	0.5	35.0	< 0.1	1.4	1.4	0.8
43	American vetch	1.2	0.4	30.0	< 0.1	1.8	1.8	0.7
44	Rough cinquefoil	0.8	0.3	35.0	< 0.1	6.2	6.2	0.7
45	Flax	1.2	0.3	25.0	< 0.1	2.0	2.0	0.7
46	Blue grass species	1.3	0.3	20.0	< 0.1	0.8	0.8	0.6
47	Maple-leaved goosefoot	1.3	0.2	15.0	< 0.1	1.0	1.0	0.5
48	Soybean	1.3	0.2	15.0	< 0.1	0.8	0.8	0.5
49	Tumble pigweed	1.4	0.1	10.0	< 0.1	0.4	0.4	0.5
50	Willow species	1.3	0.1	10.0	< 0.1	0.6	0.6	0.4
51	Alfalfa	1.2	0.1	10.0	< 0.1	0.8	0.8	0.4
52	Absinth	1.4	0.1	5.0	< 0.1	0.2	0.2	0.4

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Table 42. 2016 Canola in the Southwest Crop Reporting District (78 fields) *(continued)*

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
53	Pineappleweed	1.3	0.1	5.0	< 0.1	0.2	0.2	0.4
54	Western snowberry	1.3	0.1	5.0	< 0.1	0.2	0.2	0.4
55	Siberian elm	1.3	0.1	5.0	< 0.1	0.2	0.2	0.4
56	Yellow sweet-clover	1.2	0.1	5.0	< 0.1	0.2	0.2	0.3

Table 43. 2016 Spring wheat in the Southwest Crop Reporting District (73 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Green foxtail	50.8	20.9	41.1	5.8	11.4	71.6	61.8
2	Wild buckwheat	63.8	17.8	27.9	1.8	2.8	45.6	37.7
3	Wild oats	28.8	8.5	29.5	2.1	7.3	51.8	25.3
4	Canola/rapeseed	35.6	10.4	29.2	1.0	2.9	27.4	21.7
5	Round-leaved mallow	23.7	6.6	27.9	0.5	2.2	9.6	13.1
6	Barnyard grass species	20.7	4.4	21.1	0.6	2.7	10.4	11.0
7	Night-flowering catchfly	20.6	4.6	22.4	0.4	2.1	6.6	10.5
8	Foxtail barley	17.4	4.3	24.5	0.5	3.1	15.0	10.1
9	Canada thistle	24.5	4.1	16.9	0.3	1.1	3.2	9.8
10	Spiny annual sow-thistle	13.9	3.4	24.4	0.3	2.1	13.6	7.3
11	Lamb's-quarters	16.6	3.2	19.1	0.2	1.5	8.6	7.3
12	False cleavers	17.2	3.2	18.7	0.2	1.1	2.8	7.1
13	Dandelion	13.7	2.9	21.0	0.2	1.6	5.6	6.3
14	Chickweed	9.4	2.2	23.8	0.2	2.4	6.4	5.0
15	Yellow foxtail	6.7	1.8	26.7	0.3	4.9	18.6	4.8
16	Stork's bill	5.0	2.1	41.4	0.3	6.4	11.4	4.6
17	Kochia	10.5	2.0	19.2	0.1	1.3	3.2	4.5
18	Hemp-nettle	9.5	1.3	13.8	0.1	0.8	2.2	3.4
19	Redroot pigweed	8.1	1.3	15.7	0.1	1.4	3.6	3.3
20	Broad-leaved plantain	8.4	1.5	17.5	0.1	0.9	1.6	3.3
21	Shepherd's-purse	8.0	1.2	15.4	0.1	1.0	2.2	3.1
22	Biennial wormwood	6.8	1.2	18.1	0.1	1.3	3.0	2.8
23	Proso millet	1.4	0.9	60.0	0.3	20.0	20.0	2.7
24	Black medick	6.1	1.2	20.3	0.1	1.1	4.2	2.6
25	Perennial sow-thistle	5.4	0.9	16.1	< 0.1	0.8	2.0	2.0
26	Wild mustard	4.1	1.0	23.5	0.1	1.4	2.7	1.9
27	Manitoba maple	2.8	1.1	39.6	0.1	2.4	4.0	1.8
28	Pale smartweed	5.5	0.6	11.4	< 0.1	0.5	1.2	1.8
29	Stinkweed	4.1	0.7	16.7	< 0.1	0.8	1.0	1.6
30	Field horsetail	2.8	0.6	20.0	0.1	2.5	4.6	1.4
31	Wheat	4.2	0.6	13.4	< 0.1	0.5	0.8	1.4
32	Soybean	2.6	0.7	25.0	< 0.1	1.3	2.2	1.3
33	Narrow-leaved hawk's-beard	2.8	0.6	20.0	< 0.1	0.9	0.9	1.2
34	Low cudweed	2.8	0.3	10.1	0.1	1.9	3.0	1.1
35	Tumble pigweed	2.9	0.4	15.0	< 0.1	0.8	1.4	1.0
36	Oak-leaved goosefoot	2.8	0.3	10.0	< 0.1	1.4	2.6	1.0
37	Scentless chamomile	1.3	0.5	35.0	0.1	4.0	4.0	0.9
38	Slough grass	2.8	0.3	10.0	< 0.1	0.6	0.6	0.9
39	Dock species	1.4	0.5	35.0	< 0.1	2.2	2.2	0.9
40	Yellow sweet-clover	1.4	0.4	30.0	< 0.1	3.0	3.0	0.8
41	Prostrate pigweed	1.3	0.4	30.0	< 0.1	3.2	3.2	0.8
42	Alfalfa	2.5	0.3	10.0	< 0.1	0.6	0.6	0.8
43	Thyme-leaved spurge	2.7	0.1	5.0	< 0.1	0.2	0.2	0.7
44	Timothy	1.4	0.4	25.0	< 0.1	1.1	1.1	0.7
45	American dragonhead	1.4	0.2	15.0	< 0.1	0.8	0.8	0.5
46	Russian thistle	1.4	0.1	10.0	< 0.1	0.6	0.6	0.4
47	False ragweed	1.4	0.1	10.0	< 0.1	0.4	0.4	0.4
48	Smooth brome	1.4	0.1	10.0	< 0.1	0.4	0.4	0.4
49	Rough cinquefoil	1.4	0.1	10.0	< 0.1	0.4	0.4	0.4
50	White cockle	1.4	0.1	10.0	< 0.1	0.4	0.4	0.4
51	Golden dock	1.4	0.1	10.0	< 0.1	0.6	0.6	0.4
52	Quack grass	1.4	0.1	5.0	< 0.1	0.8	0.8	0.4

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Table 43. 2016 Spring wheat in the Southwest Crop Reporting District (73 fields) *(continued)*

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
53	Witch grass	1.4	0.1	5.0	< 0.1	0.4	0.4	0.4
54	Cocklebur	1.3	0.1	5.0	< 0.1	0.8	0.8	0.4
55	Showy milkweed	1.4	0.1	5.0	< 0.1	0.6	0.6	0.4
56	American vetch	1.3	0.1	5.0	< 0.1	0.6	0.6	0.4
57	Short-awned foxtail	1.4	0.1	5.0	< 0.1	0.2	0.2	0.3
58	Blue grass species	1.4	0.1	5.0	< 0.1	0.2	0.2	0.3
59	Purslane	1.4	0.1	5.0	< 0.1	0.2	0.2	0.3
60	Scouring-rush	1.3	0.1	5.0	< 0.1	0.2	0.2	0.3
61	Yellow evening-primrose	0.8	0.1	10.0	< 0.1	1.0	1.0	0.3

Table 44. 2016 Barley in the Southwest Crop Reporting District (16 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Wild buckwheat	94.4	26.6	28.2	1.8	1.9	7.8	52.5
2	Green foxtail	37.8	12.7	33.6	3.9	10.4	57.8	47.5
3	Canola/rapeseed	41.5	19.8	47.6	2.0	4.8	13.8	38.3
4	Canada thistle	44.8	9.9	22.0	0.6	1.3	2.8	20.7
5	Spiny annual sow-thistle	23.7	6.8	28.7	0.7	2.8	7.4	14.8
6	Redroot pigweed	27.4	4.9	17.9	0.5	1.7	4.0	12.5
7	Foxtail barley	24.7	4.8	19.6	0.4	1.8	4.4	11.9
8	Night-flowering catchfly	20.0	6.1	30.7	0.4	1.8	4.0	11.2
9	Round-leaved mallow	18.2	5.1	28.2	0.3	1.5	2.0	9.4
10	Barnyard grass species	17.3	4.6	26.7	0.3	1.5	2.2	8.8
11	Wild oats	17.9	4.5	25.0	0.2	1.3	3.0	8.7
12	Thyme-leaved spurge	13.9	3.4	24.2	0.3	2.4	3.2	7.8
13	Wheat	17.8	3.3	18.3	0.2	1.0	1.4	7.3
14	Lamb's-quarters	11.8	3.5	29.7	0.2	2.0	3.4	6.7
15	Pale smartweed	11.9	1.5	12.7	0.1	0.9	1.6	4.3
16	Wild mustard	11.8	1.5	12.8	0.1	0.8	1.4	4.2
17	White mustard	7.9	2.0	25.0	0.1	1.4	1.4	3.9
18	False cleavers	6.0	2.1	35.0	0.1	1.8	1.8	3.6
19	Oak-leaved goosefoot	6.1	1.8	30.0	0.1	1.8	1.8	3.4
20	Biennial wormwood	5.8	2.0	35.0	0.1	1.6	1.6	3.4
21	Hemp-nettle	7.9	1.2	15.0	0.1	0.8	0.8	2.9
22	Broad-leaved plantain	7.9	1.2	15.0	0.1	0.8	0.8	2.9
23	Stinkweed	5.6	1.1	20.0	0.1	2.2	2.2	2.9
24	Perennial sow-thistle	7.9	0.8	10.0	< 0.1	0.6	0.6	2.5
25	Shepherd's-purse	6.0	0.6	10.0	< 0.1	0.4	0.4	1.8
26	Dandelion	5.6	0.6	10.0	< 0.1	0.4	0.4	1.7
27	Kochia	6.1	0.3	5.0	< 0.1	0.2	0.2	1.5
28	Dock species	6.1	0.3	5.0	< 0.1	0.2	0.2	1.5
29	Manitoba maple	5.8	0.3	5.0	< 0.1	0.2	0.2	1.4

Table 45. 2016 Flax in the Southwest Crop Reporting District (10 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	False cleavers	51.7	25.9	50.1	4.4	8.6	25.6	38.6
2	Wild buckwheat	79.9	26.1	32.7	2.2	2.8	7.2	32.6
3	Green foxtail	41.0	22.5	54.8	3.3	8.1	14.4	30.5
4	Round-leaved mallow	60.8	16.3	26.8	2.1	3.5	9.8	25.0
5	Wheat	57.7	15.3	26.6	0.8	1.4	2.4	18.2
6	Shepherd's-purse	32.2	13.3	41.1	1.4	4.4	11.6	16.7
7	Canola/rapeseed	48.0	12.0	24.9	0.7	1.5	3.1	15.1
8	Redroot pigweed	37.6	8.0	21.2	1.0	2.7	6.6	13.2
9	Green pigweed	10.0	9.0	90.0	1.5	15.2	15.2	12.3
10	Pale smartweed	32.2	8.4	25.9	0.5	1.4	2.4	10.1
11	Wild oats	38.9	5.8	15.0	0.3	0.8	2.0	9.2
12	Night-flowering catchfly	31.6	6.2	19.6	0.4	1.3	1.8	8.8
13	Perennial sow-thistle	20.1	7.0	34.7	0.4	1.9	2.8	7.5
14	Chickweed	19.5	5.3	27.5	0.5	2.5	4.0	7.2
15	Rye	10.4	6.2	60.0	0.5	4.6	4.6	6.4
16	Alfalfa	20.4	4.6	22.5	0.2	1.2	1.2	5.9
17	Foxtail barley	29.2	2.9	10.0	0.1	0.4	0.6	5.8
18	Canada thistle	20.1	4.1	20.2	0.2	0.8	1.0	5.2
19	Thyme-leaved spurge	19.1	2.8	14.5	0.3	1.4	1.6	5.0
20	Spiny annual sow-thistle	9.7	3.9	40.0	0.4	3.8	3.8	4.7
21	Stinkweed	12.8	3.8	30.0	0.2	1.6	1.6	4.4
22	Broad-leaved plantain	9.7	2.4	25.0	0.3	2.8	2.8	3.6
23	Clover species	10.4	3.1	30.0	0.1	1.2	1.2	3.4
24	Dandelion	9.7	2.4	25.0	0.1	1.4	1.4	3.0
25	Kochia	9.7	1.9	20.0	0.1	0.8	0.8	2.5
26	Lamb's-quarters	9.7	1.0	10.0	< 0.1	0.4	0.4	1.9
27	American dragonhead	10.0	0.5	5.0	< 0.1	0.4	0.4	1.7
28	Hemp-nettle	9.7	0.5	5.0	< 0.1	0.2	0.2	1.6

Table 46. 2016 Annual crops in the Northwest Crop Reporting District (90 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Green foxtail	17.9	8.9	49.5	3.5	19.4	98.4	37.9
2	Wild buckwheat	47.9	10.4	21.7	0.7	1.5	7.8	26.7
3	Broad-leaved plantain	21.8	7.5	34.3	1.3	6.1	53.0	22.0
4	Barnyard grass species	20.5	7.3	35.4	1.3	6.2	33.4	21.1
5	Wild oats	23.8	6.9	29.0	1.2	4.9	69.6	20.8
6	Chickweed	18.7	6.4	34.3	1.0	5.4	23.2	18.0
7	False cleavers	23.2	6.7	28.9	0.5	2.3	16.8	15.9
8	Wheat	12.6	5.6	44.5	0.7	5.8	29.4	13.7
9	Dandelion	23.8	5.2	21.8	0.4	1.6	9.4	13.5
10	Pale smartweed	22.0	4.7	21.5	0.4	1.6	8.0	12.4
11	Spiny annual sow-thistle	11.9	3.9	32.7	0.4	3.4	17.0	9.5
12	Canada thistle	19.8	2.9	14.7	0.2	1.3	4.0	9.4
13	Canola/rapeseed	14.0	3.5	25.3	0.2	1.7	4.6	8.6
14	Golden dock	5.4	2.2	41.5	0.5	9.0	23.8	6.9
15	Redroot pigweed	12.8	1.9	15.1	0.1	0.9	3.4	5.8
16	Night-flowering catchfly	5.3	1.6	30.8	0.2	3.9	11.6	4.4
17	Perennial sow-thistle	8.5	1.5	17.9	0.1	1.3	3.6	4.3
18	Field horsetail	6.8	1.3	19.8	0.1	2.0	4.6	3.9
19	Lamb's-quarters	7.6	0.8	11.0	0.1	1.3	4.6	3.4
20	Clover species	5.3	1.2	22.4	0.1	2.4	10.8	3.3
21	Black medick	5.5	1.1	20.9	0.1	1.9	4.4	3.2
22	Yellow sweet-clover	4.8	1.1	23.4	0.1	1.2	3.0	2.7
23	Shepherd's-purse	5.9	0.8	13.8	< 0.1	0.7	1.8	2.5
24	Round-leaved mallow	3.6	0.8	21.0	0.1	1.5	5.0	2.0
25	Bicknell's geranium	3.8	0.7	17.5	< 0.1	1.1	2.2	1.9
26	Northern willowherb	5.0	0.5	9.4	< 0.1	0.5	1.0	1.8
27	Hemp-nettle	4.0	0.5	11.5	< 0.1	0.9	2.0	1.7
28	Biennial wormwood	3.5	0.6	16.2	< 0.1	1.0	1.6	1.6
29	Quack grass	0.8	0.6	70.0	0.1	13.4	13.4	1.6
30	Oak-leaved goosefoot	3.3	0.5	14.4	< 0.1	0.7	1.4	1.4
31	Alfalfa	3.0	0.4	14.8	< 0.1	1.0	1.6	1.3
32	American dragonhead	2.8	0.4	16.3	< 0.1	0.9	2.0	1.3
33	American vetch	3.9	0.2	6.2	< 0.1	0.2	0.4	1.3
34	Stinkweed	2.8	0.4	13.6	< 0.1	0.6	0.8	1.2
35	Tumble pigweed	2.0	0.4	22.1	< 0.1	1.4	1.4	1.1
36	Low cudweed	2.8	0.2	8.5	< 0.1	0.9	1.6	1.1
37	Maple-leaved goosefoot	2.9	0.2	7.5	< 0.1	0.6	0.6	1.0
38	Canada fleabane	2.3	0.3	12.3	< 0.1	0.7	1.6	0.9
39	Foxtail barley	2.7	0.1	5.0	< 0.1	0.6	1.0	0.9
40	Marsh yellow cress	1.5	0.4	25.0	< 0.1	1.8	1.8	0.9
41	Perennial rye grass	1.3	0.3	25.0	< 0.1	2.2	2.2	0.8
42	Flax	2.1	0.2	7.5	< 0.1	0.3	0.4	0.7
43	Proso millet	1.4	0.2	15.0	< 0.1	1.0	1.0	0.6
44	Thyme-leaved spurge	1.3	0.2	15.0	< 0.1	1.0	1.0	0.6
45	Wild mustard	1.2	0.2	15.0	< 0.1	1.0	1.0	0.5
46	Scouring-rush	1.2	0.1	5.0	< 0.1	0.6	0.6	0.4
47	Purslane speedwell	1.2	0.1	5.0	< 0.1	0.2	0.2	0.4
48	Soybean	1.2	0.1	5.0	< 0.1	0.2	0.2	0.4
49	Rayless aster	1.2	0.1	5.0	< 0.1	0.2	0.2	0.4
50	Corn spurry	0.9	0.1	10.0	< 0.1	0.4	0.4	0.3
51	Bladder campion	1.1	0.1	5.0	< 0.1	0.2	0.2	0.3
52	Stork's bill	1.1	0.1	5.0	< 0.1	0.2	0.2	0.3

(Table continued on next page)

Table 46. 2016 Annual crops in the Northwest Crop Reporting District (90 fields) *(continued)*

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
53	Dock species	1.0	0.1	5.0	< 0.1	0.2	0.2	0.3
54	Rough cinquefoil	1.0	< 0.1	5.0	< 0.1	0.4	0.4	0.3
55	Smooth brome	0.8	0.1	10.0	< 0.1	0.4	0.4	0.3
56	Cocklebur	1.0	< 0.1	5.0	< 0.1	0.2	0.2	0.3
57	Northern bedstraw	0.8	< 0.1	5.0	< 0.1	0.4	0.4	0.3

Table 47. 2016 Canola in the Northwest Crop Reporting District (48 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Green foxtail	10.8	7.8	72.2	2.8	25.7	73.6	35.3
2	Wheat	21.6	10.2	47.1	1.3	6.2	29.4	28.3
3	Wild buckwheat	39.2	8.2	21.0	0.6	1.6	6.6	24.7
4	Wild oats	29.2	8.3	28.4	0.8	2.7	9.8	23.5
5	Barnyard grass species	13.5	7.4	54.5	1.3	9.5	33.4	22.7
6	Broad-leaved plantain	21.0	6.6	31.5	0.8	3.6	12.2	19.3
7	Chickweed	21.2	5.8	27.3	0.5	2.6	9.2	16.6
8	False cleavers	23.0	5.4	23.5	0.4	1.7	8.2	15.3
9	Canada thistle	21.2	3.5	16.5	0.3	1.6	4.0	12.2
10	Dandelion	17.7	3.9	21.8	0.3	1.5	4.4	11.2
11	Pale smartweed	17.2	3.9	23.0	0.3	1.5	3.4	11.0
12	Spiny annual sow-thistle	10.5	3.6	34.2	0.5	4.4	17.0	10.7
13	Golden dock	4.6	2.0	43.1	0.6	12.5	23.8	8.4
14	Clover species	8.4	2.2	25.6	0.2	2.7	10.8	6.6
15	Field horsetail	10.6	1.8	16.8	0.2	1.5	3.4	6.1
16	Redroot pigweed	12.6	1.5	11.8	0.1	0.5	1.2	5.5
17	Bicknell's geranium	5.7	1.1	19.5	0.1	1.1	2.2	3.3
18	Canola/rapeseed	3.9	1.1	27.5	0.1	2.7	4.6	3.1
19	Oak-leaved goosefoot	6.3	0.9	14.4	< 0.1	0.7	1.4	3.0
20	Lamb's-quarters	5.8	0.7	11.8	0.1	0.9	1.4	2.7
21	Shepherd's-purse	5.9	0.5	8.3	< 0.1	0.4	0.6	2.3
22	Low cudweed	5.3	0.4	8.5	< 0.1	0.9	1.6	2.3
23	Perennial sow-thistle	4.8	0.5	10.7	< 0.1	0.7	0.8	2.1
24	Alfalfa	3.8	0.6	14.7	< 0.1	0.9	1.6	1.9
25	Stinkweed	3.8	0.6	15.0	< 0.1	0.7	0.8	1.9
26	Perennial rye grass	2.4	0.6	25.0	0.1	2.2	2.2	1.7
27	Biennial wormwood	2.3	0.6	25.0	< 0.1	1.6	1.6	1.5
28	Round-leaved mallow	3.5	0.3	9.4	< 0.1	0.6	1.0	1.5
29	Hemp-nettle	3.5	0.4	10.5	< 0.1	0.4	0.6	1.5
30	Flax	3.9	0.3	7.5	< 0.1	0.3	0.4	1.5
31	Yellow sweet-clover	3.5	0.3	9.4	< 0.1	0.4	0.6	1.4
32	Black medick	2.2	0.4	20.0	< 0.1	0.8	0.8	1.2
33	Thyme-leaved spurge	2.4	0.4	15.0	< 0.1	1.0	1.0	1.2
34	Canada fleabane	1.6	0.4	25.0	< 0.1	1.6	1.6	1.1
35	Tumble pigweed	1.6	0.4	25.0	< 0.1	1.4	1.4	1.0
36	Purslane speedwell	2.3	0.1	5.0	< 0.1	0.2	0.2	0.8
37	Northern willowherb	2.3	0.1	5.0	< 0.1	0.2	0.2	0.8
38	American vetch	2.0	0.1	5.0	< 0.1	0.2	0.2	0.7
39	Dock species	2.0	0.1	5.0	< 0.1	0.2	0.2	0.7
40	Rough cinquefoil	1.8	0.1	5.0	< 0.1	0.4	0.4	0.7
41	Smooth brome	1.6	0.2	10.0	< 0.1	0.4	0.4	0.6
42	Night-flowering catchfly	1.8	0.1	5.0	< 0.1	0.2	0.2	0.6
43	Cocklebur	1.8	0.1	5.0	< 0.1	0.2	0.2	0.6
44	Northern bedstraw	1.6	0.1	5.0	< 0.1	0.4	0.4	0.6
45	American dragonhead	1.6	0.1	5.0	< 0.1	0.2	0.2	0.5

Table 48. 2016 Spring wheat in the Northwest Crop Reporting District (26 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Green foxtail	23.8	5.1	21.6	3.0	12.7	98.4	28.7
2	False cleavers	39.9	14.0	35.0	1.2	2.9	16.8	28.0
3	Broad-leaved plantain	20.7	7.8	37.5	2.6	12.6	53.0	27.8
4	Wild buckwheat	61.4	12.4	20.2	0.7	1.1	4.2	27.6
5	Barnyard grass species	29.6	9.6	32.3	1.9	6.3	25.2	26.5
6	Chickweed	24.2	9.5	39.3	1.9	7.9	23.2	25.6
7	Dandelion	30.7	6.9	22.4	0.6	2.0	9.4	16.3
8	Spiny annual sow-thistle	22.9	7.2	31.4	0.6	2.4	7.4	14.6
9	Canola/rapeseed	29.2	6.2	21.1	0.4	1.3	4.0	13.8
10	Pale smartweed	26.7	5.2	19.5	0.4	1.6	5.8	12.7
11	Night-flowering catchfly	10.4	4.4	42.4	0.7	6.4	11.6	10.4
12	Canada thistle	25.8	3.4	13.0	0.2	0.8	1.2	9.5
13	Wild oats	22.2	2.8	12.6	0.2	0.7	1.2	7.9
14	Lamb's-quarters	13.7	1.3	9.6	0.2	1.8	4.6	5.5
15	Redroot pigweed	12.7	1.9	15.0	0.1	1.1	3.4	5.1
16	Perennial sow-thistle	7.8	1.8	22.7	0.1	1.3	1.6	3.8
17	Shepherd's-purse	7.2	1.9	26.0	0.1	1.2	1.8	3.7
18	Field horsetail	4.0	1.4	35.0	0.2	4.6	4.6	3.3
19	Hemp-nettle	7.8	1.0	12.3	0.1	1.4	2.0	3.1
20	American vetch	10.5	0.7	6.7	< 0.1	0.3	0.4	2.9
21	Foxtail barley	9.9	0.5	5.0	0.1	0.6	1.0	2.8
22	Tumble pigweed	4.2	0.8	20.0	0.1	1.4	1.4	2.0
23	Wheat	4.3	0.9	20.0	< 0.1	1.0	1.0	1.9
24	Wild mustard	4.3	0.6	15.0	< 0.1	1.0	1.0	1.7
25	American dragonhead	2.9	0.9	30.0	0.1	2.0	2.0	1.7
26	Alfalfa	3.4	0.5	15.0	< 0.1	1.2	1.2	1.4
27	Round-leaved mallow	3.4	0.5	15.0	< 0.1	0.6	0.6	1.3
28	Scouring-rush	4.2	0.2	5.0	< 0.1	0.6	0.6	1.2
29	Northern willowherb	4.3	0.2	5.0	< 0.1	0.4	0.4	1.2
30	Soybean	4.3	0.2	5.0	< 0.1	0.2	0.2	1.1
31	Rayless aster	4.2	0.2	5.0	< 0.1	0.2	0.2	1.1
32	Corn spurry	3.4	0.3	10.0	< 0.1	0.4	0.4	1.1
33	Bladder campion	4.0	0.2	5.0	< 0.1	0.2	0.2	1.0
34	Stork's bill	4.0	0.2	5.0	< 0.1	0.2	0.2	1.0
35	Bicknell's geranium	2.9	0.3	10.0	< 0.1	0.8	0.8	1.0
36	Black medick	3.4	0.2	5.0	< 0.1	0.6	0.6	1.0
37	Stinkweed	2.9	0.3	10.0	< 0.1	0.4	0.4	0.9

Table 49. 2016 Annual crops in the Central Crop Reporting District (242 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Green foxtail	24.0	10.1	41.9	4.6	19.3	163.4	39.9
2	Wild buckwheat	46.7	12.7	27.2	1.0	2.2	13.8	26.8
3	Canola/rapeseed	27.7	8.0	29.0	1.0	3.5	35.6	18.3
4	Barnyard grass species	23.4	6.1	25.9	1.1	4.7	40.4	16.4
5	Redroot pigweed	28.4	7.1	24.9	0.7	2.5	16.6	16.2
6	Yellow foxtail	17.6	5.2	29.8	1.1	6.5	64.0	14.7
7	Dandelion	25.4	5.0	19.6	0.8	3.1	84.2	14.0
8	Wild oats	21.2	5.4	25.3	0.8	3.6	40.4	13.4
9	Pale smartweed	22.3	4.9	21.9	0.7	3.2	24.8	13.0
10	Round-leaved mallow	27.2	4.8	17.5	0.5	1.7	17.4	12.5
11	Wheat	15.9	3.9	24.6	0.5	3.3	39.4	9.7
12	Lamb's-quarters	15.6	3.6	23.1	0.5	3.2	43.0	9.3
13	Canada thistle	18.3	3.3	17.8	0.4	2.4	33.8	9.1
14	Broad-leaved plantain	7.5	2.3	30.5	0.6	8.0	57.4	7.0
15	Wild mustard	6.7	1.7	26.0	0.5	8.2	89.4	6.0
16	Spiny annual sow-thistle	12.1	2.4	19.9	0.2	1.4	11.2	5.6
17	Biennial wormwood	11.5	1.8	16.1	0.1	1.0	6.0	4.6
18	Night-flowering catchfly	9.0	1.5	17.0	0.1	1.5	9.4	3.9
19	Purslane	7.4	1.7	23.1	0.2	2.1	8.4	3.9
20	Perennial sow-thistle	7.7	1.4	18.2	0.1	1.5	6.8	3.5
21	Thyme-leaved spurge	7.3	1.0	14.3	0.1	1.0	3.0	2.8
22	Chickweed	5.2	1.1	20.4	0.1	2.5	23.0	2.8
23	Dock species	5.2	1.0	19.1	0.1	2.4	8.0	2.7
24	Black medick	4.9	0.9	19.1	0.1	1.5	6.0	2.3
25	Foxtail barley	5.8	0.7	11.8	0.1	1.4	6.4	2.3
26	Golden dock	3.8	0.8	20.1	0.1	2.9	11.4	2.1
27	Oak-leaved goosefoot	5.5	0.5	8.8	0.1	1.2	5.6	1.9
28	Witch grass	1.1	0.2	21.6	0.3	24.4	41.8	1.9
29	Northern willowherb	3.5	0.6	15.8	0.1	3.2	15.8	1.8
30	Field horsetail	2.8	0.4	15.5	0.1	4.8	11.4	1.7
31	Kochia	4.4	0.5	11.8	< 0.1	0.7	3.6	1.5
32	Tumble pigweed	3.8	0.6	16.1	< 0.1	0.9	1.8	1.5
33	Rough cinquefoil	2.9	0.7	22.8	0.1	2.1	9.2	1.5
34	Marsh yellow cress	3.3	0.6	18.0	< 0.1	1.2	3.6	1.4
35	Annual sow-thistle	1.0	0.5	50.6	0.1	11.0	22.6	1.3
36	Stinkweed	0.8	0.5	60.8	0.1	14.4	15.6	1.2
37	Soybean	1.9	0.5	25.3	0.1	2.9	11.4	1.1
38	Willow species	3.3	0.3	8.5	< 0.1	0.7	2.8	1.1
39	Yellow sweet-clover	3.1	0.2	8.1	< 0.1	0.4	2.0	0.9
40	Shepherd's-purse	2.3	0.3	11.1	< 0.1	0.7	1.4	0.8
41	Prostrate knotweed	1.9	0.3	13.8	< 0.1	1.4	3.4	0.8
42	Clover species	1.6	0.3	18.9	< 0.1	1.5	4.0	0.7
43	Maple-leaved goosefoot	2.5	0.2	7.0	< 0.1	0.4	1.0	0.7
44	American dragonhead	2.4	0.2	8.4	< 0.1	0.4	1.2	0.7
45	Stink grass	1.4	0.3	24.8	< 0.1	1.6	3.2	0.7
46	Absinth	1.2	0.2	14.6	0.1	4.4	17.6	0.7
47	Tartary buckwheat	0.8	0.4	44.4	< 0.1	4.2	10.2	0.7
48	Dog mustard	1.2	0.4	32.1	< 0.1	1.8	3.0	0.7
49	Hemp-nettle	2.0	0.2	11.3	< 0.1	0.7	2.4	0.7
50	Narrow-leaved hawk's-beard	1.6	0.2	13.1	< 0.1	0.8	1.4	0.6
51	Common pepper-grass	0.3	0.2	55.0	0.1	18.0	18.0	0.6
52	Showy milkweed	1.7	0.1	8.6	< 0.1	0.7	1.0	0.5

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Table 49. 2016 Annual crops in the Central Crop Reporting District (242 fields) *(continued)*

Rank	Species	Frequency (%)	Field Uniformity All	Field Uniformity Occurrence	Field Density (#/m^2) All	Field Density (#/m^2) Occurrence	Field Density (#/m^2) High	Relative Abundance
53	Stork's bill	1.2	0.2	17.4	< 0.1	1.3	1.6	0.5
54	Prostrate pigweed	1.7	0.1	5.9	< 0.1	0.2	0.4	0.4
55	Leafy spurge	0.5	0.2	50.0	< 0.1	4.4	4.4	0.4
56	Alfalfa	1.2	0.1	12.7	< 0.1	0.6	0.8	0.4
57	Canada fleabane	0.6	0.2	35.0	< 0.1	2.0	2.0	0.4
58	Purslane speedwell	0.3	0.1	40.0	< 0.1	10.4	10.4	0.4
59	Oats	0.5	0.2	42.9	< 0.1	2.1	2.6	0.4
60	Flodman's thistle	0.8	0.1	16.0	< 0.1	1.4	2.0	0.4
61	Siberian elm	1.1	0.1	7.6	< 0.1	0.5	1.2	0.3
62	Manitoba maple	1.2	0.1	5.0	< 0.1	0.4	0.6	0.3
63	Hedge bindweed	1.0	0.1	9.8	< 0.1	0.5	0.8	0.3
64	Perennial rye grass	0.4	0.2	40.0	< 0.1	3.8	3.8	0.3
65	Common yellow wood-sorrel	0.5	0.1	20.0	< 0.1	3.6	3.6	0.3
66	Green pigweed	0.5	0.1	27.6	< 0.1	1.8	1.8	0.3
67	Needle-and-thread grass	0.5	0.1	20.0	< 0.1	1.6	1.6	0.2
68	Clammy hedge-hyssop	0.8	< 0.1	5.0	< 0.1	0.8	1.2	0.2
69	Bicknell's geranium	0.5	0.1	21.2	< 0.1	1.3	1.6	0.2
70	Spear-leaved goosefoot	0.4	0.1	25.0	< 0.1	1.4	1.4	0.2
71	Silverweed	0.6	< 0.1	5.0	< 0.1	1.2	1.2	0.2
72	Aster species	0.5	0.1	15.0	< 0.1	1.2	1.2	0.2
73	Bur oak	0.5	0.1	15.0	< 0.1	0.6	0.6	0.2
74	Currant species	0.6	< 0.1	5.0	< 0.1	0.2	0.2	0.2
75	False ragweed	0.6	< 0.1	5.0	< 0.1	0.2	0.2	0.2
76	Barley	0.4	< 0.1	10.0	< 0.1	0.8	0.8	0.1
77	Goldenrod species	0.5	< 0.1	10.0	< 0.1	0.4	0.4	0.1
78	Rush species	0.5	< 0.1	10.0	< 0.1	0.4	0.4	0.1
79	Beggarticks species	0.5	< 0.1	10.0	< 0.1	0.4	0.4	0.1
80	Field bean	0.6	< 0.1	5.0	< 0.1	0.2	0.2	0.1
81	Prickly lettuce	0.5	< 0.1	5.0	< 0.1	0.8	0.8	0.1
82	False flax species	0.4	< 0.1	10.0	< 0.1	0.6	0.6	0.1
83	Flixweed	0.5	< 0.1	5.0	< 0.1	0.2	0.2	0.1
84	American vetch	0.5	< 0.1	5.0	< 0.1	0.2	0.2	0.1
85	Large crab grass	0.3	0.1	15.0	< 0.1	0.8	0.8	0.1
86	False cleavers	0.5	< 0.1	5.0	< 0.1	0.2	0.2	0.1
87	Cocklebur	0.5	< 0.1	5.0	< 0.1	0.2	0.2	0.1
88	Povertyweed	0.5	< 0.1	5.0	< 0.1	0.2	0.2	0.1
89	Scouring-rush	0.5	< 0.1	5.0	< 0.1	0.2	0.2	0.1
90	Buffalograss	0.5	< 0.1	5.0	< 0.1	0.2	0.2	0.1
91	Yellow toadflax	0.4	< 0.1	5.0	< 0.1	0.2	0.2	0.1
92	Wormseed mustard	0.3	< 0.1	10.0	< 0.1	0.6	0.6	0.1
93	Toad rush	0.1	< 0.1	40.0	< 0.1	3.4	3.4	0.1
94	Water smartweed	0.3	< 0.1	5.0	< 0.1	0.2	0.2	0.1
95	Corn	0.1	< 0.1	20.0	< 0.1	1.0	1.0	0.1
96	Quack grass	0.1	< 0.1	15.0	< 0.1	1.4	1.4	< 0.1
97	Common ragweed	0.1	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1

Table 50. 2016 Canola in the Central Crop Reporting District (50 fields)

Rank	Species	Frequency (%)	Field Uniformity		Field Density (#/m^2)			Relative Abundance
			All	Occurrence	All	Occurrence	High	
1	Green foxtail	19.4	6.3	32.4	1.8	9.4	65.2	33.0
2	Redroot pigweed	34.0	7.5	22.0	0.8	2.5	10.6	26.5
3	Wild buckwheat	39.5	6.4	16.3	0.4	1.1	4.2	21.7
4	Yellow foxtail	16.2	5.5	33.7	1.0	5.9	17.8	21.3
5	Wild oats	27.7	6.6	23.7	0.6	2.0	4.8	20.8
6	Wheat	28.5	6.4	22.3	0.5	1.8	7.6	20.4
7	Pale smartweed	23.5	3.6	15.5	0.4	1.7	10.0	14.4
8	Barnyard grass species	15.6	3.7	23.3	0.6	3.5	11.4	14.4
9	Round-leaved mallow	23.4	3.3	14.2	0.2	0.9	4.0	11.8
10	Canada thistle	18.0	3.1	17.5	0.2	1.3	4.8	10.7
11	Dandelion	15.8	3.2	20.4	0.3	1.7	4.4	10.6
12	Spiny annual sow-thistle	11.8	2.6	22.4	0.2	1.3	4.8	7.7
13	Dock species	8.4	1.3	15.0	0.2	2.8	8.0	6.2
14	Biennial wormwood	12.1	1.7	14.1	0.1	0.9	2.4	6.0
15	Oak-leaved goosefoot	7.7	1.0	12.8	0.2	2.4	5.6	5.1
16	Golden dock	6.4	1.5	22.8	0.2	2.4	6.6	5.0
17	Chickweed	5.9	1.6	26.3	0.1	2.5	5.4	5.0
18	Thyme-leaved spurge	8.0	1.2	15.2	0.1	1.3	3.0	4.5
19	Lamb's-quarters	12.0	0.9	7.3	< 0.1	0.3	0.8	4.2
20	Black medick	6.3	0.9	14.7	0.1	2.1	6.0	4.1
21	Night-flowering catchfly	8.2	1.0	11.6	< 0.1	0.6	1.2	3.6
22	Leafy spurge	2.1	1.0	50.0	0.1	4.4	4.4	2.8
23	Broad-leaved plantain	6.4	0.7	11.5	< 0.1	0.5	0.8	2.8
24	Foxtail barley	4.0	0.5	12.6	< 0.1	0.9	1.2	2.0
25	Common yellow wood-sorrel	2.1	0.4	20.0	0.1	3.6	3.6	1.8
26	Rough cinquefoil	1.9	0.6	30.0	0.1	3.0	3.0	1.8
27	Tumble pigweed	3.7	0.5	12.6	< 0.1	0.7	1.0	1.7
28	Willow species	4.1	0.4	10.0	< 0.1	0.6	1.0	1.7
29	Wild mustard	4.1	0.3	7.5	< 0.1	0.3	0.4	1.4
30	Flodman's thistle	2.1	0.4	20.0	< 0.1	2.0	2.0	1.4
31	Prostrate knotweed	4.0	0.3	7.6	< 0.1	0.3	0.4	1.4
32	Marsh yellow cress	3.9	0.3	7.5	< 0.1	0.4	0.4	1.4
33	Perennial sow-thistle	3.9	0.3	7.5	< 0.1	0.3	0.4	1.4
34	Shepherd's-purse	3.9	0.2	5.0	< 0.1	0.3	0.4	1.3
35	American dragonhead	4.0	0.2	5.0	< 0.1	0.2	0.2	1.2
36	Clover species	1.8	0.3	15.0	< 0.1	1.8	1.8	1.1
37	Aster species	1.9	0.3	15.0	< 0.1	1.2	1.2	1.1
38	Hedge bindweed	2.0	0.3	15.0	< 0.1	0.8	0.8	1.0
39	Stork's bill	1.9	0.2	10.0	< 0.1	1.2	1.2	0.9
40	Hemp-nettle	1.9	0.3	15.0	< 0.1	0.6	0.6	0.9
41	Bur oak	1.9	0.3	15.0	< 0.1	0.6	0.6	0.9
42	Showy milkweed	1.9	0.2	10.0	< 0.1	1.0	1.0	0.9
43	Clammy hedge-hyssop	1.9	0.1	5.0	< 0.1	1.2	1.2	0.8
44	Goldenrod species	1.9	0.2	10.0	< 0.1	0.4	0.4	0.8
45	Rush species	1.9	0.2	10.0	< 0.1	0.4	0.4	0.8
46	Beggarticks species	1.9	0.2	10.0	< 0.1	0.4	0.4	0.8
47	Prickly lettuce	1.9	0.1	5.0	< 0.1	0.8	0.8	0.7
48	Field bean	2.3	0.1	5.0	< 0.1	0.2	0.2	0.7
49	Yellow sweet-clover	2.3	0.1	5.0	< 0.1	0.2	0.2	0.7
50	Manitoba maple	2.3	0.1	5.0	< 0.1	0.2	0.2	0.7
51	Purslane	2.1	0.1	5.0	< 0.1	0.4	0.4	0.7
52	Flixweed	2.1	0.1	5.0	< 0.1	0.2	0.2	0.6

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Table 50. 2016 Canola in the Central Crop Reporting District (50 fields) *(continued)*

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
53	American vetch	2.1	0.1	5.0	< 0.1	0.2	0.2	0.6
54	Kochia	2.0	0.1	5.0	< 0.1	0.2	0.2	0.6
55	False cleavers	2.0	0.1	5.0	< 0.1	0.2	0.2	0.6
56	Absinth	1.9	0.1	5.0	< 0.1	0.2	0.2	0.6
57	False ragweed	1.9	0.1	5.0	< 0.1	0.2	0.2	0.6
58	Cocklebur	1.9	0.1	5.0	< 0.1	0.2	0.2	0.6
59	Northern willowherb	1.9	0.1	5.0	< 0.1	0.2	0.2	0.6
60	Soybean	1.9	0.1	5.0	< 0.1	0.2	0.2	0.6

Table 51. 2016 Spring wheat in the Central Crop Reporting District (71 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Green foxtail	28.5	13.0	45.4	6.8	23.8	163.4	54.2
2	Wild buckwheat	47.2	12.5	26.5	1.0	2.1	10.0	29.0
3	Dandelion	32.9	6.2	18.9	1.7	5.2	84.2	22.7
4	Wild oats	23.1	4.9	21.2	1.0	4.4	40.4	15.5
5	Barnyard grass species	18.2	5.5	30.0	1.1	6.1	29.2	15.4
6	Canada thistle	22.4	4.4	19.5	0.9	4.1	33.8	14.4
7	Canola/rapeseed	29.1	4.9	16.9	0.4	1.4	7.0	13.9
8	Round-leaved mallow	23.7	4.8	20.1	0.6	2.5	14.6	13.5
9	Redroot pigweed	18.3	5.3	28.9	0.5	2.9	9.6	12.4
10	Yellow foxtail	10.3	3.4	33.1	1.2	11.3	64.0	11.7
11	Wild mustard	8.4	2.6	30.7	1.3	15.8	89.4	11.3
12	Pale smartweed	14.4	4.0	27.7	0.6	4.1	20.0	10.5
13	Spiny annual sow-thistle	14.0	3.3	23.5	0.3	2.1	11.2	8.2
14	Lamb's-quarters	13.2	2.4	18.0	0.3	2.5	16.4	7.2
15	Foxtail barley	10.2	1.1	10.9	0.2	1.9	6.4	4.5
16	Biennial wormwood	10.1	1.5	15.2	0.1	0.8	2.0	4.4
17	Night-flowering catchfly	11.8	1.1	9.2	0.1	0.7	2.4	4.3
18	Perennial sow-thistle	9.3	1.1	12.2	0.1	1.3	2.8	3.9
19	Annual sow-thistle	2.9	1.4	50.0	0.3	11.4	22.6	3.8
20	Dock species	6.4	1.3	20.6	0.1	2.3	4.4	3.6
21	Chickweed	8.3	1.0	12.6	0.1	0.8	1.6	3.3
22	Soybean	2.8	1.4	48.1	0.2	6.0	11.4	2.9
23	Golden dock	3.1	0.9	29.0	0.2	6.5	11.4	2.7
24	Thyme-leaved spurge	5.7	0.9	16.4	0.1	1.1	2.6	2.6
25	Broad-leaved plantain	4.4	1.1	23.7	0.1	1.8	3.8	2.5
26	Stinkweed	1.4	1.1	75.0	0.2	13.6	13.6	2.4
27	Wheat	4.1	0.8	20.2	< 0.1	1.1	1.6	2.1
28	Black medick	3.0	0.7	23.8	0.1	1.7	2.4	1.7
29	Tumble pigweed	4.4	0.4	10.1	< 0.1	0.7	1.8	1.7
30	Hemp-nettle	4.3	0.4	8.3	< 0.1	0.6	1.0	1.5
31	Kochia	2.9	0.4	15.1	< 0.1	0.8	1.4	1.2
32	Purslane	1.3	0.2	15.0	0.1	8.2	8.2	1.1
33	Oak-leaved goosefoot	3.3	0.2	5.0	< 0.1	0.5	0.6	1.0
34	Maple-leaved goosefoot	3.3	0.2	5.0	< 0.1	0.2	0.2	1.0
35	Stork's bill	1.4	0.4	25.0	< 0.1	1.6	1.6	0.8
36	Spear-leaved goosefoot	1.4	0.4	25.0	< 0.1	1.4	1.4	0.8
37	Prostrate pigweed	2.7	0.1	5.0	< 0.1	0.2	0.2	0.8
38	Clover species	1.5	0.2	15.0	< 0.1	0.6	0.6	0.6
39	Alfalfa	1.7	0.2	10.0	< 0.1	0.4	0.4	0.6
40	Dog mustard	1.6	0.2	10.0	< 0.1	0.4	0.4	0.6
41	Shepherd's-purse	1.4	0.1	10.0	< 0.1	0.6	0.6	0.5
42	Hedge bindweed	1.7	0.1	5.0	< 0.1	0.2	0.2	0.5
43	Willow species	1.3	0.1	10.0	< 0.1	0.6	0.6	0.5
44	Yellow sweet-clover	1.6	0.1	5.0	< 0.1	0.2	0.2	0.5
45	Showy milkweed	1.5	0.1	5.0	< 0.1	0.6	0.6	0.5
46	Siberian elm	1.5	0.1	5.0	< 0.1	0.2	0.2	0.4
47	Field horsetail	1.3	0.1	5.0	< 0.1	0.4	0.4	0.4
48	Yellow toadflax	1.3	0.1	5.0	< 0.1	0.2	0.2	0.4

Table 52. 2016 Soybean in the Central Crop Reporting District (59 fields)

Rank	Species	Frequency (%)	Field Uniformity		Field Density (#/m^2)			Relative Abundance
			All	Occurrence	All	Occurrence	High	
1	Canola/rapeseed	47.1	14.9	31.6	1.8	3.9	30.6	47.9
2	Wild buckwheat	49.0	12.9	26.4	0.9	1.8	8.8	35.1
3	Barnyard grass species	25.7	6.4	25.0	0.8	3.0	19.4	21.6
4	Yellow foxtail	21.2	4.6	21.8	0.9	4.5	42.6	20.6
5	Redroot pigweed	29.2	7.2	24.5	0.4	1.5	4.8	19.4
6	Wild oats	15.3	3.6	23.4	0.6	4.1	23.6	14.5
7	Round-leaved mallow	28.2	3.4	12.2	0.3	1.1	5.8	13.6
8	Dandelion	26.6	4.1	15.4	0.3	1.0	6.4	13.6
9	Green foxtail	20.2	4.0	19.6	0.4	2.0	15.6	13.4
10	Wheat	20.5	4.4	21.2	0.3	1.6	4.8	13.1
11	Lamb's-quarters	16.0	3.3	20.5	0.2	1.1	2.8	9.2
12	Broad-leaved plantain	5.5	2.1	39.0	0.4	6.9	15.2	7.9
13	Pale smartweed	17.0	1.4	8.4	0.1	0.5	1.2	6.2
14	Biennial wormwood	12.2	1.5	12.2	0.1	0.8	1.2	5.4
15	Spiny annual sow-thistle	9.9	1.4	13.7	0.1	0.7	1.6	4.5
16	Field horsetail	5.1	0.7	13.0	0.2	4.2	7.4	4.3
17	Purslane	8.7	1.0	11.5	< 0.1	0.5	0.8	3.5
18	Chickweed	1.7	0.8	50.0	0.2	10.2	10.2	3.2
19	Marsh yellow cress	5.7	0.9	16.5	0.1	1.1	1.8	3.0
20	Willow species	6.9	0.5	7.3	0.1	0.8	2.8	2.7
21	Canada thistle	6.7	0.7	10.2	< 0.1	0.5	0.8	2.6
22	Night-flowering catchfly	4.9	0.7	13.5	0.1	1.1	2.6	2.4
23	Kochia	4.9	0.6	13.1	< 0.1	0.7	1.8	2.2
24	Black medick	3.5	0.9	24.9	< 0.1	1.1	1.4	2.2
25	Northern willowherb	6.8	0.3	5.0	< 0.1	0.3	0.6	2.1
26	Rough cinquefoil	3.9	0.6	15.0	< 0.1	1.0	1.0	2.0
27	Yellow sweet-clover	4.9	0.4	9.0	< 0.1	0.4	0.8	1.8
28	Oats	1.6	0.9	55.0	< 0.1	2.6	2.6	1.8
29	Narrow-leaved hawk's-beard	3.7	0.5	12.9	< 0.1	0.9	1.4	1.8
30	Thyme-leaved spurge	5.0	0.4	8.4	< 0.1	0.3	0.4	1.7
31	Perennial rye grass	1.6	0.6	40.0	0.1	3.8	3.8	1.7
32	Golden dock	3.9	0.3	7.5	< 0.1	0.5	0.8	1.4
33	Oak-leaved goosefoot	3.1	0.3	9.3	< 0.1	0.9	1.2	1.3
34	Tumble pigweed	2.0	0.5	25.0	< 0.1	1.2	1.2	1.3
35	Needle-and-thread grass	2.0	0.4	20.0	< 0.1	1.6	1.6	1.2
36	Perennial sow-thistle	3.1	0.3	10.0	< 0.1	0.6	1.0	1.2
37	Dock species	3.3	0.2	7.3	< 0.1	0.5	0.6	1.2
38	Shepherd's-purse	2.0	0.2	10.0	< 0.1	1.0	1.0	0.9
39	Maple-leaved goosefoot	2.0	0.1	5.0	< 0.1	1.0	1.0	0.8
40	Barley	1.7	0.2	10.0	< 0.1	0.8	0.8	0.7
41	Witch grass	1.8	0.2	10.0	< 0.1	0.6	0.6	0.7
42	Clover species	1.7	0.2	10.0	< 0.1	0.4	0.4	0.6
43	False flax species	1.6	0.2	10.0	< 0.1	0.6	0.6	0.6
44	Wild mustard	2.0	0.1	5.0	< 0.1	0.2	0.2	0.6
45	Prostrate pigweed	2.0	0.1	5.0	< 0.1	0.2	0.2	0.6
46	Povertyweed	1.8	0.1	5.0	< 0.1	0.2	0.2	0.5
47	Scouring-rush	1.8	0.1	5.0	< 0.1	0.2	0.2	0.5
48	Buffalograss	1.8	0.1	5.0	< 0.1	0.2	0.2	0.5
49	Absinth	1.7	0.1	5.0	< 0.1	0.2	0.2	0.5

Table 53. 2016 Corn in the Central Crop Reporting District (20 fields)

Rank	Species	Frequency (%)	Field Uniformity		Field Density (#/m^2)			Relative Abundance
			All	Occurrence	All	Occurrence	High	
1	Lamb's-quarters	39.3	18.1	46.0	3.3	8.4	43.0	29.7
2	Canola/rapeseed	39.8	16.6	41.6	2.6	6.6	35.6	26.2
3	Wild buckwheat	50.4	20.0	39.7	1.7	3.5	7.8	26.0
4	Round-leaved mallow	64.5	16.4	25.5	1.6	2.5	17.4	25.9
5	Redroot pigweed	54.8	16.0	29.3	1.7	3.1	16.6	24.5
6	Green foxtail	10.5	8.3	78.5	3.9	37.4	74.0	22.3
7	Purslane	40.1	13.2	32.8	0.8	1.9	4.2	16.7
8	Barnyard grass species	33.8	7.9	23.5	0.9	2.7	7.0	13.4
9	Yellow foxtail	29.6	9.7	32.8	0.7	2.5	4.8	13.0
10	Pale smartweed	18.7	6.3	33.5	1.2	6.3	23.2	11.2
11	Dandelion	19.8	6.5	32.8	0.5	2.3	5.0	8.5
12	Stink grass	15.8	4.9	30.9	0.3	2.1	3.2	6.5
13	Common pepper-grass	5.1	2.8	55.0	0.9	18.0	18.0	6.1
14	Canada thistle	15.3	2.9	19.1	0.2	1.3	2.4	4.9
15	Stinkweed	4.6	1.8	40.0	0.7	15.6	15.6	4.7
16	Purslane speedwell	5.1	2.0	40.0	0.5	10.4	10.4	4.1
17	Rough cinquefoil	4.6	2.8	60.0	0.4	9.2	9.2	4.0
18	Broad-leaved plantain	14.7	1.7	11.9	0.1	0.9	1.2	3.9
19	Dock species	4.6	3.2	70.0	0.3	5.8	5.8	3.6
20	Foxtail barley	10.1	2.3	22.5	0.1	1.4	2.2	3.4
21	Thyme-leaved spurge	14.9	1.2	8.4	0.1	0.4	0.8	3.3
22	Biennial wormwood	10.1	2.0	20.0	0.1	0.9	1.0	3.1
23	Wheat	5.1	2.0	40.0	0.3	5.6	5.6	3.1
24	Marsh yellow cress	5.1	2.8	55.0	0.2	3.6	3.6	3.1
25	Narrow-leaved hawk's-beard	10.3	1.4	13.3	0.1	0.6	1.0	2.6
26	American dragonhead	9.5	1.2	12.7	0.1	0.7	1.2	2.4
27	Siberian elm	9.5	0.9	9.7	0.1	0.7	1.2	2.3
28	Field horsetail	5.1	0.8	15.0	0.2	4.2	4.2	2.1
29	Bicknell's geranium	5.7	1.4	25.0	0.1	1.6	1.6	2.0
30	Kochia	9.5	0.7	7.7	< 0.1	0.3	0.4	2.0
31	Green pigweed	5.1	1.3	25.0	0.1	1.8	1.8	1.9
32	Maple-leaved goosefoot	5.1	1.0	20.0	< 0.1	0.8	0.8	1.5
33	Wild mustard	5.1	1.0	20.0	< 0.1	0.8	0.8	1.5
34	Large crab grass	5.1	0.8	15.0	< 0.1	0.8	0.8	1.4
35	Spiny annual sow-thistle	5.1	0.8	15.0	< 0.1	0.8	0.8	1.4
36	Night-flowering catchfly	4.6	0.7	15.0	0.1	1.4	1.4	1.4
37	Flodman's thistle	5.1	0.5	10.0	< 0.1	0.4	0.4	1.2
38	Wormseed mustard	4.6	0.5	10.0	< 0.1	0.6	0.6	1.1
39	Tumble pigweed	4.7	0.5	10.0	< 0.1	0.4	0.4	1.1
40	Prostrate pigweed	4.6	0.5	10.0	< 0.1	0.4	0.4	1.1
41	Yellow sweet-clover	5.1	0.3	5.0	< 0.1	0.2	0.2	1.0
42	Clammy hedge-hyssop	5.1	0.3	5.0	< 0.1	0.2	0.2	1.0

Table 54. 2016 Barley in the Central Crop Reporting District (13 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Green foxtail	28.6	18.7	65.3	8.6	30.2	98.0	46.6
2	Wild buckwheat	55.9	14.9	26.6	1.7	3.0	13.8	25.3
3	Canola/rapeseed	22.6	14.2	62.9	2.7	11.9	28.8	22.1
4	Pale smartweed	30.0	11.0	36.8	2.3	7.8	24.8	20.4
5	Barnyard grass species	30.9	9.5	30.8	1.7	5.4	18.4	17.4
6	Night-flowering catchfly	23.2	11.8	51.0	1.3	5.6	9.4	16.0
7	Dandelion	29.7	10.0	33.7	1.0	3.3	7.8	15.1
8	Canada thistle	30.5	8.2	26.9	0.8	2.6	8.8	13.4
9	Wild oats	22.7	8.8	38.6	1.0	4.5	6.2	13.1
10	Yellow foxtail	22.1	6.4	28.8	1.1	5.1	13.6	11.9
11	Broad-leaved plantain	7.2	5.7	80.0	1.6	21.6	21.6	10.2
12	Biennial wormwood	22.2	6.0	26.9	0.5	2.5	6.0	9.7
13	Redroot pigweed	22.6	5.2	23.1	0.6	2.5	6.0	9.4
14	Tartary buckwheat	7.2	6.5	90.0	0.7	10.2	10.2	7.8
15	Absinth	7.2	3.2	45.0	1.3	17.6	17.6	7.7
16	Wild mustard	16.2	4.5	27.5	0.2	1.3	1.8	6.5
17	Perennial sow-thistle	14.8	2.9	19.6	0.3	2.1	4.2	5.6
18	Clover species	7.2	3.2	45.0	0.3	4.0	4.0	4.3
19	Round-leaved mallow	15.5	1.1	7.4	0.1	0.6	1.0	3.9
20	Shepherd's-purse	7.9	2.7	35.0	0.1	1.4	1.4	3.5
21	Kochia	7.4	1.8	25.0	0.3	3.6	3.6	3.4
22	Soybean	13.8	0.7	5.0	< 0.1	0.2	0.2	3.1
23	Spiny annual sow-thistle	8.1	2.0	25.0	0.1	1.2	1.2	3.1
24	Yellow sweet-clover	7.2	1.4	20.0	0.1	2.0	2.0	2.7
25	Lamb's-quarters	7.2	1.1	15.0	0.1	1.4	1.4	2.4
26	Rough cinquefoil	7.2	1.1	15.0	0.1	0.8	0.8	2.2
27	Marsh yellow cress	7.6	0.8	10.0	0.1	0.8	0.8	2.1
28	Thyme-leaved spurge	7.6	0.8	10.0	< 0.1	0.4	0.4	2.0
29	Prostrate knotweed	7.2	0.7	10.0	0.1	0.8	0.8	2.0
30	Stink grass	7.9	0.4	5.0	< 0.1	0.2	0.2	1.8
31	Black medick	7.9	0.4	5.0	< 0.1	0.2	0.2	1.8
32	Water smartweed	7.6	0.4	5.0	< 0.1	0.2	0.2	1.7
33	Foxtail barley	6.2	0.6	10.0	< 0.1	0.6	0.6	1.7

Table 55. 2016 Sunflower in the Central Crop Reporting District (11 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Green foxtail	36.4	18.7	51.4	2.5	6.9	17.6	32.4
2	Canola/rapeseed	35.7	14.2	39.8	1.3	3.6	8.0	21.9
3	Wild oats	26.5	10.8	40.9	1.7	6.4	12.2	21.2
4	Round-leaved mallow	54.5	11.2	20.5	0.8	1.4	3.8	19.5
5	Wild buckwheat	63.4	10.4	16.5	0.6	1.0	3.6	19.4
6	Biennial wormwood	36.0	13.0	36.2	0.8	2.1	4.4	17.8
7	Pale smartweed	35.7	7.2	20.0	0.8	2.2	6.2	14.5
8	Wheat	27.4	6.9	25.0	0.7	2.6	3.8	12.6
9	Perennial sow-thistle	35.8	7.2	20.2	0.3	1.0	1.6	11.6
10	Purslane	28.2	6.2	21.8	0.6	2.1	5.6	11.5
11	Field horsetail	9.2	5.1	55.0	1.1	11.4	11.4	11.1
12	Canada thistle	35.4	6.6	18.7	0.3	0.9	1.4	11.1
13	Spiny annual sow-thistle	17.8	7.1	40.0	0.5	3.0	5.4	10.3
14	Redroot pigweed	27.7	5.5	19.9	0.4	1.6	2.8	10.1
15	Annual sow-thistle	8.6	4.8	55.0	0.7	7.6	7.6	8.3
16	Barnyard grass species	18.2	4.6	25.2	0.3	1.5	2.4	7.1
17	Yellow foxtail	9.5	1.9	20.0	0.7	7.0	7.0	6.8
18	Wild mustard	18.2	4.1	22.6	0.2	1.1	1.6	6.4
19	Golden dock	19.0	3.8	20.0	0.2	1.1	1.8	6.3
20	Stork's bill	17.6	3.1	17.5	0.2	1.1	1.6	5.6
21	Toad rush	9.2	3.7	40.0	0.3	3.4	3.4	5.5
22	Lamb's-quarters	17.9	1.3	7.5	0.1	0.4	0.4	3.8
23	Marsh yellow cress	9.5	2.4	25.0	0.1	1.0	1.0	3.4
24	Kochia	17.9	0.9	5.0	< 0.1	0.2	0.2	3.3
25	Thyme-leaved spurge	17.8	0.9	5.0	< 0.1	0.2	0.2	3.3
26	Corn	9.2	1.8	20.0	0.1	1.0	1.0	3.0
27	Dandelion	8.6	1.7	20.0	0.1	0.8	0.8	2.7
28	Willow species	9.5	1.0	10.0	0.1	0.8	0.8	2.4
29	Oats	9.5	0.5	5.0	< 0.1	0.4	0.4	1.9
30	False ragweed	9.0	0.4	5.0	< 0.1	0.2	0.2	1.7
31	Foxtail barley	8.9	0.4	5.0	< 0.1	0.2	0.2	1.7
32	Common ragweed	8.9	0.4	5.0	< 0.1	0.2	0.2	1.7

Table 56. 2016 Annual crops in the Eastern Crop Reporting District (59 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Yellow foxtail	21.3	8.5	40.0	3.2	15.1	82.8	38.8
2	Wild buckwheat	54.7	9.4	17.1	0.7	1.2	12.0	27.7
3	Barnyard grass species	32.2	6.7	20.7	1.0	3.0	35.0	22.0
4	Broad-leaved plantain	25.8	7.2	28.0	0.9	3.6	32.2	20.9
5	Dandelion	25.1	7.0	28.0	0.9	3.5	24.6	20.1
6	Redroot pigweed	29.2	6.1	21.0	0.5	1.9	14.4	17.4
7	Wheat	23.1	5.0	21.5	0.5	2.0	5.8	14.1
8	Pale smartweed	32.5	3.3	10.2	0.2	0.5	1.8	12.1
9	Canola/rapeseed	17.2	4.1	24.0	0.4	2.5	10.4	11.7
10	Lamb's-quarters	21.1	3.7	17.8	0.3	1.5	4.8	11.2
11	Biennial wormwood	13.4	3.5	26.5	0.5	3.9	22.8	10.9
12	Night-flowering catchfly	5.5	1.3	23.5	0.8	15.1	52.0	9.1
13	Field horsetail	9.9	1.8	18.1	0.5	5.1	25.6	8.1
14	Oak-leaved goosefoot	10.9	2.1	19.6	0.4	3.3	16.2	7.5
15	Wild oats	10.9	1.4	12.5	0.4	4.0	21.8	7.3
16	Marsh yellow cress	12.1	1.8	14.8	0.2	1.4	4.8	6.0
17	Perennial sow-thistle	3.5	1.7	47.4	0.4	12.2	24.2	5.9
18	Round-leaved mallow	10.7	1.8	16.9	0.1	1.2	2.0	5.3
19	Green foxtail	6.0	1.1	18.8	0.3	5.1	18.4	4.9
20	Clover species	7.4	2.0	26.7	0.1	1.3	2.6	4.6
21	Spiny annual sow-thistle	9.0	1.3	14.4	0.1	0.7	1.6	3.9
22	Canada thistle	6.5	1.0	15.7	0.1	1.7	3.6	3.4
23	Shepherd's-purse	4.4	0.8	19.2	0.1	1.2	2.0	2.3
24	Dock species	5.5	0.5	9.3	< 0.1	0.5	1.2	2.0
25	Thyme-leaved spurge	6.4	0.3	5.0	< 0.1	0.2	0.2	1.9
26	Purslane	5.8	0.4	6.5	< 0.1	0.3	0.4	1.8
27	Golden dock	3.5	0.6	16.6	< 0.1	1.4	1.8	1.8
28	Cocklebur	1.8	0.8	45.0	0.1	3.8	3.8	1.8
29	Bird's-foot trefoil	3.7	0.5	14.8	< 0.1	1.1	1.4	1.7
30	Black medick	3.3	0.6	19.4	< 0.1	1.0	1.8	1.7
31	Rough cinquefoil	3.7	0.3	9.2	< 0.1	1.0	2.2	1.5
32	Soybean	3.4	0.5	14.3	< 0.1	0.8	1.4	1.5
33	Wild mustard	3.2	0.3	10.0	< 0.1	0.4	0.4	1.1
34	Alfalfa	2.9	0.1	5.0	< 0.1	0.2	0.2	0.8
35	Oats	1.8	0.3	15.0	< 0.1	0.8	0.8	0.8
36	Stinkweed	1.8	0.2	10.0	< 0.1	0.6	0.6	0.7
37	Quack grass	1.1	0.2	20.0	< 0.1	1.6	1.6	0.6
38	Manitoba maple	1.8	0.2	10.0	< 0.1	0.4	0.4	0.6
39	Foxtail barley	2.2	0.1	5.0	< 0.1	0.2	0.2	0.6
40	Blue-joint	1.6	0.1	5.0	< 0.1	1.6	1.6	0.6
41	American vetch	1.9	0.1	5.0	< 0.1	0.4	0.4	0.6
42	Hemp-nettle	1.7	0.1	5.0	< 0.1	0.2	0.2	0.5
43	Canada fleabane	1.6	0.1	5.0	< 0.1	0.4	0.4	0.5
44	Bladder campion	1.6	0.1	5.0	< 0.1	0.2	0.2	0.5
45	Orchard grass	1.6	0.1	5.0	< 0.1	0.2	0.2	0.5
46	Common ragweed	1.0	0.1	10.0	< 0.1	0.4	0.4	0.4
47	Sunflower	1.0	0.1	10.0	< 0.1	0.4	0.4	0.4

Table 57. 2016 Canola in the Eastern Crop Reporting District (15 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Yellow foxtail	34.6	20.1	58.1	8.7	25.2	82.8	77.5
2	Wild buckwheat	58.7	9.8	16.7	1.1	1.8	12.0	29.9
3	Pale smartweed	52.6	5.9	11.2	0.3	0.5	1.6	19.9
4	Wheat	40.3	6.7	16.7	0.5	1.3	3.4	19.4
5	Barnyard grass species	39.7	6.2	15.6	0.4	1.0	3.2	18.0
6	Dandelion	25.7	6.6	25.5	0.5	1.8	6.0	15.7
7	Perennial sow-thistle	6.1	5.5	90.0	1.5	24.2	24.2	15.6
8	Oak-leaved goosefoot	15.0	4.8	31.8	1.1	7.6	16.2	14.9
9	Field horsetail	6.1	4.3	70.0	1.6	25.6	25.6	14.7
10	Wild oats	6.1	2.5	40.0	1.3	21.8	21.8	11.4
11	Broad-leaved plantain	20.6	3.8	18.5	0.3	1.5	3.2	10.6
12	Redroot pigweed	28.5	2.8	10.0	0.1	0.4	0.8	10.3
13	Canada thistle	12.8	2.6	20.0	0.3	2.5	3.6	7.5
14	Lamb's-quarters	21.2	1.1	5.0	0.1	0.6	0.8	6.6
15	Marsh yellow cress	6.1	1.5	25.0	0.2	3.4	3.4	4.2
16	Golden dock	8.3	1.2	15.0	0.1	1.2	1.2	3.8
17	Clover species	6.7	1.3	20.0	0.1	1.0	1.0	3.4
18	Bird's-foot trefoil	6.7	0.7	10.0	0.1	0.8	0.8	2.6
19	Night-flowering catchfly	8.3	0.4	5.0	< 0.1	0.2	0.2	2.4
20	Dock species	6.7	0.7	10.0	< 0.1	0.4	0.4	2.4
21	American vetch	6.7	0.3	5.0	< 0.1	0.4	0.4	2.0
22	Hemp-nettle	6.1	0.3	5.0	< 0.1	0.2	0.2	1.8
23	Black medick	6.1	0.3	5.0	< 0.1	0.2	0.2	1.8
24	Spiny annual sow-thistle	6.1	0.3	5.0	< 0.1	0.2	0.2	1.8
25	Thyme-leaved spurge	6.1	0.3	5.0	< 0.1	0.2	0.2	1.8

Table 58. 2016 Soybean in the Eastern Crop Reporting District (23 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Redroot pigweed	42.6	12.2	28.7	1.2	2.8	14.4	28.3
2	Dandelion	30.3	10.1	33.2	1.6	5.4	24.6	27.4
3	Barnyard grass species	32.3	6.6	20.5	1.6	4.9	35.0	24.3
4	Wild buckwheat	61.7	9.3	15.1	0.5	0.8	2.0	23.5
5	Biennial wormwood	26.9	7.8	28.9	1.2	4.5	22.8	21.5
6	Night-flowering catchfly	8.0	3.0	37.2	2.1	26.1	52.0	20.4
7	Broad-leaved plantain	25.1	8.1	32.5	0.9	3.5	16.4	18.9
8	Canola/rapeseed	33.2	7.3	22.0	0.7	2.0	10.4	17.9
9	Wheat	22.6	6.7	29.6	0.7	3.0	5.8	15.6
10	Marsh yellow cress	26.0	3.4	13.0	0.3	1.1	4.8	10.0
11	Pale smartweed	30.7	2.6	8.6	0.1	0.4	1.8	8.9
12	Clover species	13.9	4.0	29.0	0.2	1.4	2.6	7.7
13	Yellow foxtail	17.2	3.0	17.6	0.2	1.1	1.8	7.3
14	Lamb's-quarters	12.8	2.7	21.3	0.3	2.1	3.8	6.9
15	Field horsetail	20.5	1.4	7.0	0.2	0.7	1.4	6.1
16	Round-leaved mallow	12.4	2.0	16.1	0.1	1.0	1.6	5.1
17	Wild oats	17.8	0.9	5.0	< 0.1	0.2	0.4	4.3
18	Cocklebur	4.4	2.0	45.0	0.2	3.8	3.8	3.9
19	Shepherd's-purse	8.0	1.8	22.5	0.1	1.1	2.0	3.8
20	Oak-leaved goosefoot	9.9	1.6	16.1	0.1	0.6	1.0	3.7
21	Rough cinquefoil	9.4	0.9	9.2	0.1	1.0	2.2	3.2
22	Purslane	12.0	0.8	6.8	< 0.1	0.3	0.4	3.1
23	Spiny annual sow-thistle	8.0	1.3	16.2	0.1	0.8	1.6	3.1
24	Dock species	9.0	0.8	9.0	0.1	0.6	1.2	2.8
25	Black medick	4.0	1.4	35.0	0.1	1.8	1.8	2.6
26	Wild mustard	8.0	0.8	10.0	< 0.1	0.4	0.4	2.4
27	Thyme-leaved spurge	8.8	0.4	5.0	< 0.1	0.2	0.2	2.1
28	Bird's-foot trefoil	4.4	0.9	20.0	0.1	1.4	1.4	2.1
29	Green foxtail	8.0	0.4	5.0	< 0.1	0.3	0.4	2.0
30	Oats	4.4	0.7	15.0	< 0.1	0.8	0.8	1.7
31	Stinkweed	4.4	0.4	10.0	< 0.1	0.6	0.6	1.4
32	Canada thistle	4.4	0.4	10.0	< 0.1	0.6	0.6	1.4
33	Manitoba maple	4.4	0.4	10.0	< 0.1	0.4	0.4	1.3
34	Foxtail barley	5.5	0.3	5.0	< 0.1	0.2	0.2	1.3
35	Perennial sow-thistle	4.4	0.2	5.0	< 0.1	0.2	0.2	1.1
36	Canada fleabane	4.0	0.2	5.0	< 0.1	0.4	0.4	1.0
37	Bladder campion	4.0	0.2	5.0	< 0.1	0.2	0.2	1.0
38	Alfalfa	4.0	0.2	5.0	< 0.1	0.2	0.2	1.0

Table 59. 2016 Annual crops in the Interlake Crop Reporting District (63 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Wild buckwheat	42.7	6.0	14.1	0.3	0.8	3.6	27.2
2	Yellow foxtail	3.5	2.2	61.7	1.3	38.0	69.6	23.2
3	Canola/rapeseed	23.6	5.5	23.3	0.3	1.5	4.0	20.8
4	Barnyard grass species	25.9	4.5	17.3	0.4	1.6	7.0	20.7
5	Dandelion	28.6	4.7	16.5	0.3	1.0	5.0	20.2
6	Green foxtail	12.4	3.9	31.8	0.6	4.7	15.6	18.1
7	Wheat	10.5	3.4	32.5	0.6	5.6	22.0	16.9
8	Broad-leaved plantain	15.8	3.7	23.3	0.3	1.9	9.6	14.9
9	Wild oats	14.0	3.0	21.3	0.4	2.9	13.6	14.7
10	Quack grass	1.2	1.0	80.0	0.8	68.6	68.6	13.6
11	Perennial sow-thistle	8.0	3.3	41.4	0.2	3.0	5.8	11.1
12	Field horsetail	3.3	1.4	41.8	0.3	10.5	20.0	8.1
13	Redroot pigweed	11.0	2.0	17.9	0.1	0.9	4.0	7.9
14	Pale smartweed	13.3	1.5	11.0	0.1	0.5	1.2	7.4
15	Canada thistle	10.4	1.1	10.6	0.1	1.1	4.6	6.5
16	Biennial wormwood	6.8	1.5	21.7	0.1	1.9	8.0	6.2
17	Lamb's-quarters	9.1	1.3	14.6	0.1	0.9	3.2	6.0
18	Rough cinquefoil	4.9	0.9	18.8	0.1	2.0	2.8	4.3
19	Dock species	5.3	0.9	16.5	0.1	1.6	3.2	4.2
20	Shepherd's-purse	7.5	0.5	7.3	< 0.1	0.6	1.4	3.8
21	Night-flowering catchfly	5.3	0.8	14.6	0.1	1.0	2.6	3.6
22	Spiny annual sow-thistle	6.5	0.7	11.2	< 0.1	0.4	0.6	3.5
23	Oak-leaved goosefoot	6.8	0.6	9.0	< 0.1	0.4	0.6	3.5
24	Oats	3.6	1.0	26.7	< 0.1	1.3	2.4	3.3
25	Yellow sweet-clover	1.7	0.9	50.0	0.1	3.0	3.0	2.6
26	Rayless aster	2.2	0.8	36.3	< 0.1	2.1	2.6	2.6
27	Black medick	5.3	0.4	8.1	< 0.1	0.3	0.4	2.6
28	Foxtail barley	2.3	0.4	18.8	< 0.1	1.0	1.2	1.7
29	Alfalfa	3.6	0.3	7.6	< 0.1	0.4	0.6	1.7
30	Soybean	2.8	0.4	12.7	< 0.1	0.6	2.4	1.6
31	Clover species	2.2	0.4	17.2	< 0.1	1.2	2.6	1.6
32	Purslane	1.3	0.4	30.0	< 0.1	2.6	2.6	1.4
33	American vetch	3.5	0.2	5.0	< 0.1	0.2	0.2	1.4
34	Round-leaved mallow	3.2	0.2	5.0	< 0.1	0.3	0.4	1.4
35	Stinkweed	2.2	0.3	15.0	< 0.1	0.6	0.6	1.4
36	Sedge species	1.7	0.3	15.0	< 0.1	0.6	0.6	1.1
37	Willow species	2.1	0.2	8.9	< 0.1	0.4	0.4	1.1
38	False cleavers	2.0	0.2	8.9	< 0.1	0.4	0.4	1.0
39	Kochia	1.9	0.2	10.0	< 0.1	0.4	0.4	1.0
40	Thyme-leaved spurge	1.9	0.2	10.0	< 0.1	0.4	0.4	1.0
41	Bicknell's geranium	2.1	0.1	6.2	< 0.1	0.2	0.4	0.9
42	Dog mustard	1.5	0.2	10.0	< 0.1	0.4	0.4	0.8
43	Narrow-leaved hawk's-beard	1.9	0.1	5.0	< 0.1	0.2	0.2	0.8
44	Nightshade species	1.7	0.1	5.0	< 0.1	0.2	0.2	0.7
45	American dragonhead	1.7	0.1	5.0	< 0.1	0.2	0.2	0.7
46	Hemp-nettle	1.6	0.1	5.0	< 0.1	0.2	0.2	0.7
47	Aster species	0.5	< 0.1	10.0	< 0.1	0.4	0.4	0.3
48	Marsh yellow cress	0.4	< 0.1	5.0	< 0.1	0.2	0.2	0.2

Table 60. 2016 Canola in the Interlake Crop Reporting District (15 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Yellow foxtail	13.4	8.3	61.7	5.1	38.0	69.6	65.1
2	Wild buckwheat	44.7	6.6	14.8	0.4	0.9	3.6	24.2
3	Broad-leaved plantain	23.5	7.5	31.8	0.8	3.5	9.6	24.1
4	Perennial sow-thistle	13.4	7.1	53.2	0.6	4.5	5.8	19.0
5	Pale smartweed	34.7	4.2	12.2	0.2	0.6	1.2	16.6
6	Barnyard grass species	26.9	4.3	16.2	0.3	1.2	3.2	15.8
7	Wild oats	20.5	4.2	20.4	0.3	1.5	2.0	13.9
8	Green foxtail	14.2	3.5	25.0	0.3	2.4	4.6	11.7
9	Dandelion	14.2	3.9	27.5	0.2	1.3	1.8	10.7
10	Wheat	13.4	3.2	23.5	0.3	2.2	4.0	10.6
11	Biennial wormwood	7.1	3.5	50.0	0.3	3.6	3.6	9.1
12	Dock species	14.2	2.1	15.0	0.2	1.7	3.2	8.9
13	Night-flowering catchfly	13.4	2.6	19.4	0.2	1.4	2.6	8.8
14	Redroot pigweed	17.1	2.3	13.5	0.1	0.7	1.4	8.7
15	Shepherd's-purse	13.5	1.0	7.7	0.1	1.0	1.4	6.2
16	Rough cinquefoil	7.1	1.8	25.0	0.2	2.8	2.8	6.2
17	Canada thistle	14.2	1.1	7.5	< 0.1	0.3	0.4	5.5
18	Spiny annual sow-thistle	12.7	1.3	10.0	0.1	0.4	0.6	5.4
19	Lamb's-quarters	13.4	0.7	5.0	< 0.1	0.3	0.4	4.7
20	Oak-leaved goosefoot	7.1	1.1	15.0	< 0.1	0.6	0.6	3.7
21	Alfalfa	7.1	0.7	10.0	< 0.1	0.6	0.6	3.2
22	Kochia	7.1	0.7	10.0	< 0.1	0.4	0.4	3.0
23	Thyme-leaved spurge	7.1	0.7	10.0	< 0.1	0.4	0.4	3.0
24	Willow species	6.3	0.6	10.0	< 0.1	0.4	0.4	2.7
25	Narrow-leaved hawk's-beard	7.2	0.4	5.0	< 0.1	0.2	0.2	2.4
26	Oats	7.1	0.4	5.0	< 0.1	0.2	0.2	2.4
27	Round-leaved mallow	6.3	0.3	5.0	< 0.1	0.4	0.4	2.3
28	American dragonhead	6.3	0.3	5.0	< 0.1	0.2	0.2	2.2

Table 61. 2016 Spring wheat in the Interlake Crop Reporting District (19 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Field horsetail	5.1	3.0	60.0	1.0	20.0	20.0	44.1
2	Wild oats	11.4	3.7	32.5	0.8	7.2	13.6	43.0
3	Wild buckwheat	34.9	4.3	12.5	0.2	0.7	2.8	38.3
4	Lamb's-quarters	10.8	3.3	30.8	0.2	2.1	3.2	22.9
5	Dandelion	22.6	1.7	7.4	0.1	0.4	0.8	19.3
6	Canola/rapeseed	12.5	2.6	21.1	0.1	1.2	3.8	19.2
7	Broad-leaved plantain	15.2	1.5	10.0	0.1	0.5	1.0	14.6
8	Redroot pigweed	6.8	2.1	31.3	0.1	1.6	4.0	13.5
9	Foxtail barley	7.4	1.4	18.8	0.1	1.0	1.2	10.5
10	Soybean	7.4	1.1	14.2	0.1	0.7	2.4	8.6
11	Barnyard grass species	10.2	0.8	7.5	< 0.1	0.3	0.4	8.4
12	Dock species	5.1	1.0	20.0	0.1	1.4	1.4	8.0
13	Canada thistle	5.1	0.8	15.0	0.1	1.0	1.0	6.5
14	Spiny annual sow-thistle	5.1	0.8	15.0	< 0.1	0.6	0.6	5.9
15	Green foxtail	5.7	0.3	5.0	< 0.1	0.6	0.6	4.8
16	Black medick	5.1	0.5	10.0	< 0.1	0.4	0.4	4.8
17	Shepherd's-purse	5.1	0.5	10.0	< 0.1	0.4	0.4	4.8
18	False cleavers	5.1	0.5	10.0	< 0.1	0.4	0.4	4.8
19	Night-flowering catchfly	5.7	0.3	5.0	< 0.1	0.2	0.2	4.1
20	American vetch	5.7	0.3	5.0	< 0.1	0.2	0.2	4.1
21	Bicknell's geranium	5.1	0.3	5.0	< 0.1	0.2	0.2	3.6
22	Hemp-nettle	5.1	0.3	5.0	< 0.1	0.2	0.2	3.6
23	Biennial wormwood	1.7	0.3	20.0	< 0.1	1.6	1.6	2.8

Table 62. 2016 Soybean in the Interlake Crop Reporting District (19 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Canola/rapeseed	48.2	11.0	22.8	0.7	1.5	4.0	42.7
2	Wheat	20.8	7.2	34.7	1.5	7.1	22.0	42.5
3	Wild buckwheat	47.5	7.2	15.2	0.4	0.8	2.0	31.2
4	Dandelion	36.1	7.2	19.9	0.5	1.4	5.0	30.3
5	Barnyard grass species	31.1	4.9	15.6	0.4	1.4	3.4	23.7
6	Green foxtail	5.5	3.0	55.0	0.7	12.2	12.2	17.9
7	Perennial sow-thistle	11.0	3.6	32.5	0.2	2.0	3.6	12.5
8	Broad-leaved plantain	10.4	2.6	25.0	0.1	1.1	1.2	9.0
9	Yellow sweet-clover	5.5	2.8	50.0	0.2	3.0	3.0	8.6
10	Oats	5.5	2.8	50.0	0.1	2.4	2.4	8.1
11	Rayless aster	5.5	2.5	45.0	0.1	2.6	2.6	7.8
12	Rough cinquefoil	9.8	1.5	15.0	0.1	1.5	1.6	7.6
13	Canada thistle	4.9	1.2	25.0	0.2	4.6	4.6	7.2
14	Field horsetail	5.5	1.4	25.0	0.1	1.8	1.8	5.4
15	Oak-leaved goosefoot	10.4	0.8	7.6	< 0.1	0.4	0.6	5.0
16	Black medick	10.4	0.8	7.7	< 0.1	0.3	0.4	4.8
17	Pale smartweed	10.4	0.8	7.3	< 0.1	0.3	0.4	4.7
18	Biennial wormwood	11.0	0.5	5.0	< 0.1	0.3	0.4	4.6
19	Wild oats	5.5	1.1	20.0	0.1	1.0	1.0	4.2
20	Sedge species	5.5	0.8	15.0	< 0.1	0.6	0.6	3.4
21	Clover species	5.5	0.6	10.0	< 0.1	0.8	0.8	3.2
22	Dog mustard	4.9	0.5	10.0	< 0.1	0.4	0.4	2.5
23	Spiny annual sow-thistle	4.9	0.5	10.0	< 0.1	0.4	0.4	2.5
24	American vetch	5.5	0.3	5.0	< 0.1	0.2	0.2	2.2
25	Alfalfa	5.5	0.3	5.0	< 0.1	0.2	0.2	2.2
26	Nightshade species	5.5	0.3	5.0	< 0.1	0.2	0.2	2.2
27	Round-leaved mallow	4.9	0.2	5.0	< 0.1	0.2	0.2	2.0
28	Redroot pigweed	4.9	0.2	5.0	< 0.1	0.2	0.2	2.0

Table 63. Number of fields surveyed in each municipality

Crop Reporting District and Municipal Group	Municipality	Number of Fields
Southwest		
Brenda-Waskada, Boissevain-Morton & Deloraine-Winchester	Brenda-Waskada	8
	Boissevain-Morton	7
	Deloraine-Winchester	7
	Elton	7
Elton & Cornwallis	Cornwallis	4
Grassland	Grassland	12
Harrison Park	Harrison Park	10
Killarney-Turtle Mountain & Prairie Lakes	Killarney-Turtle Mountain	9
	Prairie Lakes	8
Minto-Odanah, Rosedale & Clanwilliam-Erickson	Minto-Odanah	6
	Rosedale	5
	Clanwilliam-Erickson	1
North Cypress-Langford	North Cypress-Langford	14
Oakland-Wawanesa & Glenboro-South Cypress	Oakland-Wawanesa	6
	Glenboro-South Cypress	5
Oakview & Hamiota	Oakview	10
	Hamiota	6
Pipestone, Souris-Glenwood & Sifton	Pipestone	5
	Souris-Glenwood	5
	Sifton	3
Prairie View & Ellice-Archie	Prairie View	14
	Ellice-Archie	6
Riverdale & Whitehead	Riverdale	5
	Whitehead	5
Two Borders	Two Borders	12
Wallace-Woodworth	Wallace-Woodworth	12
Yellowhead	Yellowhead	12
Northwest		
Gilbert Plains, Dauphin & Mossey River	Gilbert Plains	6
	Dauphin	4
	Mossey River	3
Grandview & Ethelbert	Grandview	8
	Ethelbert	2
Minitonas-Bowsman, Mountain & Kelsey	Minitonas-Bowsman	7
	Mountain	4
	Kelsey	1
Riding Mountain West, Roblin, Rossburn & Russell-Binscarth	Riding Mountain West	14
	Roblin	8
	Rossburn	5
	Russell-Binscarth	4
Ste. Rose, Lakeshore, McCreary & Alonsa	Lakeshore	3
	McCreary	3
	Ste. Rose	3
	Alonsa	2
Swan Valley West	Swan Valley West	13

(Table continued on next page)

Table 63. Number of fields surveyed in each municipality *(continued)*

Crop Reporting District and Municipal Group	Municipality	Number of Fields
Central		
Cartwright-Roblin & Argyle	Cartwright-Roblin	8
	Argyle	6
Dufferin	Dufferin	18
Grey	Grey	12
Lorne	Lorne	10
Louise	Louise	11
MacDonald	MacDonald	19
Morris	Morris	19
Norfolk Treherne & Victoria	Norfolk Treherne	9
	Victoria	5
North Norfolk	North Norfolk	11
Pembina	Pembina	11
Portage La Prairie & Cartier	Portage La Prairie	18
	Cartier	8
Rhineland & Montcalm	Rhineland	17
	Montcalm	7
Stanley	Stanley	14
Thompson & Roland	Thompson	11
	Roland	8
WestLake-Gladstone & Glenella-Lansdowne	WestLake-Gladstone	12
	Glenella-Lansdowne	8
Eastern		
Emerson-Franklin & De Salaberry	Emerson-Franklin	9
	De Salaberry	5
Hanover, Tache, Ritchot, Ste. Anne, La Broquerie	Hanover	6
	Tache	5
	Ritchot	3
	Ste. Anne	3
	La Broquerie	1
Springfield & Brokenhead	Springfield	10
	Brokenhead	6
Whitemouth, Lac du Bonnet, Alexander, Reynolds & Stuartburn	Whitemouth	5
	Lac du Bonnet	3
	Alexander	1
	Reynolds	1
	Stuartburn	1
Interlake		
Bifrost-Riverton, Armstrong & Gimli	Bifrost-Riverton	9
	Gimli	2
	Armstrong	1
Fisher & Grahamdale	Fisher	8
	Grahamdale	2
Rockwood	Rockwood	12
Rosser, St. Andrews, St. Clements & West St. Paul	Rosser	6
	St. Andrews	5
	St. Clements	3
	West St. Paul	1
Woodlands	Woodlands	14

Table 64. Density, species richness and weed-free quadrats in each municipality

Area	Number of fields surveyed	Density (number/m^2) mean	SE	median	Species (number/field) mean	SE	Weed-free quadrats %	SE
Southwest								
Brenda-Waskada, Boissevain-Morton & Deloraine-Winchester	22	9.0	2.8	3.9	3.6	0.4	45.2	10.6
Elton & Cornwallis	11	5.4	0.7	4.6	4.0	0.3	31.6	14.0
Grassland	12	5.7	1.3	3.4	4.0	0.3	47.9	14.4
Harrison Park	10	25.7	6.5	18.9	6.6	0.7	15.7	11.5
Killarney-Turtle Mountain & Prairie Lakes	17	18.7	5.8	10.9	4.8	0.5	33.1	11.4
Minto-Odanah, Rosedale & Clanwilliam-Erickson	12	40.3	9.1	25.2	7.0	0.9	9.8	8.6
North Cypress-Langford	14	30.5	6.5	26.6	4.6	0.8	26.7	11.8
Oakland-Wawanesa & Glenboro-South Cypress	11	10.5	4.4	4.3	3.9	0.5	33.0	14.2
Oakview & Hamiota	16	22.9	7.1	12.6	7.0	0.8	24.3	10.7
Pipestone, Souris-Glenwood & Sifton	13	18.0	5.8	8.6	4.7	0.4	29.0	12.6
Prairie View & Ellice-Archie	20	5.5	0.7	5.3	5.3	0.4	37.0	10.8
Riverdale & Whitehead	10	11.6	3.9	5.1	5.0	0.7	21.1	12.9
Two Borders	12	18.0	6.1	3.4	3.9	0.4	36.4	13.9
Wallace-Woodworth	12	12.6	2.9	10.2	6.4	0.9	34.7	13.7
Yellowhead	12	16.2	8.2	5.7	5.0	0.7	30.2	13.3
Northwest								
Gilbert Plains, Dauphin & Mossey River	13	11.0	6.5	1.6	3.5	1.0	63.8	13.3
Grandview & Ethelbert	10	46.1	13.8	27.7	8.3	0.8	7.2	8.2
Minitonas-Bowsman, Mountain & Kelsey	12	4.1	1.6	0.7	1.7	0.4	67.5	13.5
Riding Mountain West, Roblin, Rossburn & Russell-Binscarth	31	12.0	2.1	7.3	5.3	0.4	31.2	8.3
Ste. Rose, Lakeshore, McCreary & Alonsa	11	18.0	8.1	1.9	4.0	1.2	57.5	14.9
Swan Valley West	13	3.5	1.6	0.2	2.1	0.6	72.3	12.4
Central								
Cartwright-Roblin & Argyle	14	13.5	3.5	8.3	5.2	0.4	27.3	11.9
Dufferin	18	13.1	4.3	5.3	5.3	0.8	37.6	11.4
Grey	12	9.1	3.5	2.8	3.9	0.8	45.4	14.4
Lorne	10	15.1	5.8	6.8	3.9	0.9	38.0	15.4
Louise	11	6.0	2.9	1.3	4.9	1.0	58.1	14.9
MacDonald	19	10.7	4.3	3.4	3.3	0.7	58.2	11.3
Morris	19	24.4	11.0	8.3	5.9	1.0	39.3	11.2
Norfolk Treherne & Victoria	14	30.5	11.4	10.3	6.4	1.0	28.1	12.0
North Norfolk	11	36.1	10.9	20.9	6.6	1.0	21.6	12.4
Pembina	11	19.0	9.6	4.8	5.2	1.0	37.4	14.6
Portage La Prairie & Cartier	26	8.0	3.4	1.4	2.8	0.4	66.4	9.3
Rhineland & Montcalm	24	3.5	0.7	2.6	2.9	0.5	60.8	10.0
Stanley	14	12.4	3.8	5.4	5.1	0.6	34.8	12.7
Thompson & Roland	19	10.1	2.4	6.0	4.8	0.4	31.0	10.6
WestLake-Gladstone & Glenella-Lansdowne	20	53.0	20.4	8.4	8.2	1.4	33.2	10.5

(Table continued on next page)

Table 64. Density, species richness and weed-free quadrats in each municipality *(continued)*

Area	Number of fields surveyed	Density (number/m^2) mean	SE	median	Species (number/field) mean	SE	Weed-free quadrats %	SE
Eastern								
Emerson-Franklin & De Salaberry	14	9.3	2.6	2.3	6.3	1.2	43.7	13.3
Hanover, Tache, Ritchot, Ste. Anne, & La Broquerie	18	11.4	5.5	2.7	3.8	0.6	54.7	11.7
Springfield & Brokenhead	16	15.0	6.9	2.2	3.3	0.7	57.1	12.4
Whitemouth, Lac du Bonnet, Alexander, Reynolds & Stuartburn	11	18.4	6.7	4.7	5.3	1.1	40.2	14.8
Interlake								
Bifrost-Riverton, Armstrong & Gimli	12	9.4	2.8	2.1	4.3	0.8	46.4	14.4
Fisher & Grahamdale	10	6.3	2.1	2.3	5.7	1.0	44.5	15.7
Rockwood	12	9.9	6.7	1.3	2.7	0.7	64.8	13.8
Rosser, St. Andrews, St. Clements & West St. Paul	15	3.1	0.9	1.9	2.7	0.5	64.5	12.4
Woodlands	14	8.5	4.7	0.4	2.9	0.9	68.2	12.4

Table 65. 2016 Annual crops in Brenda-Waskada, Boissevain-Morton & Deloraine-Winchester in the Southwest Crop Reporting District (22 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Yellow foxtail	11.0	9.5	86.0	3.9	35.8	47.4	59.1
2	Wild buckwheat	69.4	15.1	21.7	0.9	1.3	4.4	48.2
3	Green foxtail	26.9	7.1	26.5	0.8	3.0	8.8	25.5
4	Round-leaved mallow	37.2	6.0	16.1	0.4	1.0	3.2	22.2
5	Kochia	18.5	5.1	27.5	0.4	2.1	4.0	15.9
6	Scouring-rush	6.6	5.3	80.0	0.4	6.6	6.6	13.4
7	Biennial wormwood	14.0	4.4	31.7	0.3	1.8	3.8	12.4
8	Wheat	14.0	3.3	23.3	0.3	2.0	5.2	11.2
9	Redroot pigweed	12.1	2.0	16.9	0.4	3.3	6.6	10.4
10	Canada thistle	21.4	2.4	11.0	0.1	0.5	0.6	10.1
11	Canola/rapeseed	13.2	2.9	21.7	0.2	1.1	1.6	9.0
12	Shepherd's-purse	14.0	1.6	11.7	0.1	0.6	1.4	6.9
13	Perennial sow-thistle	15.5	1.5	9.5	0.1	0.4	0.8	6.9
14	Purslane	4.7	2.3	50.0	0.2	4.2	4.2	6.5
15	Lamb's-quarters	9.0	1.4	15.2	0.1	1.2	2.0	5.5
16	Alfalfa	7.8	1.3	16.0	0.1	1.1	1.6	4.8
17	Stork's bill	4.7	1.9	40.0	0.1	1.8	1.8	4.6
18	Barnyard grass species	9.2	0.7	7.6	< 0.1	0.5	0.8	3.9
19	Thyme-leaved spurge	9.4	0.5	5.0	< 0.1	0.2	0.2	3.4
20	Golden dock	4.7	0.9	20.0	0.1	1.6	1.6	3.3
21	False cleavers	4.7	0.9	20.0	0.1	1.4	1.4	3.2
22	Foxtail barley	6.2	0.5	7.5	< 0.1	0.4	0.4	2.6
23	Black medick	4.7	0.5	10.0	< 0.1	0.4	0.4	2.1
24	Clover species	3.2	0.6	20.0	< 0.1	1.0	1.0	2.0
25	Northern willowherb	4.3	0.4	10.0	< 0.1	0.4	0.4	1.9
26	Cocklebur	4.5	0.2	5.0	< 0.1	0.8	0.8	1.9
27	Wild oats	4.7	0.2	5.0	< 0.1	0.2	0.2	1.7
28	Dandelion	3.1	0.3	10.0	< 0.1	0.4	0.4	1.4

Table 66. 2016 Annual crops in Elton & Cornwallis in the Southwest Crop Reporting District (11 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Wild buckwheat	60.3	18.9	31.3	0.9	1.4	2.2	52.1
2	Wheat	54.1	11.6	21.4	0.5	1.0	2.0	36.5
3	Canola/rapeseed	43.9	11.2	25.4	0.6	1.4	4.0	34.6
4	Yellow foxtail	25.9	7.9	30.4	0.4	1.5	1.8	22.4
5	Wild oats	16.7	7.3	43.9	0.4	2.3	3.0	19.3
6	Kochia	19.7	4.5	22.7	0.2	1.2	1.6	14.4
7	Purslane	17.0	4.3	25.1	0.2	1.4	2.6	13.5
8	Lamb's-quarters	20.3	4.1	20.0	0.2	0.8	1.0	12.6
9	Round-leaved mallow	9.2	3.7	40.0	0.3	3.0	3.0	11.6
10	Nightshade species	15.7	2.3	14.4	0.1	0.6	0.8	8.1
11	Biennial wormwood	9.3	2.8	30.0	0.1	1.4	1.4	7.9
12	Canada thistle	9.2	2.3	25.0	0.1	1.6	1.6	7.6
13	Black medick	9.5	2.4	25.0	0.1	1.4	1.4	7.5
14	Broad-leaved plantain	9.5	1.9	20.0	0.2	1.6	1.6	7.4
15	Green foxtail	9.5	2.4	25.0	0.1	1.2	1.2	7.2
16	Oak-leaved goosefoot	9.3	1.9	20.0	0.1	1.4	1.4	6.9
17	Perennial sow-thistle	10.2	2.0	20.0	0.1	1.0	1.0	6.7
18	Redroot pigweed	9.3	2.3	25.0	0.1	1.0	1.0	6.6
19	Common groundsel	6.9	2.1	30.0	0.1	1.8	1.8	6.3
20	Golden dock	10.2	2.0	20.0	0.1	0.8	0.8	6.3
21	Smooth brome	9.7	1.0	10.0	< 0.1	0.4	0.4	4.3

Table 67. 2016 Annual crops in Grassland in the Southwest Crop Reporting District (12 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Wild buckwheat	80.4	18.5	23.0	1.2	1.5	4.0	68.8
2	Redroot pigweed	43.6	7.4	17.0	0.7	1.7	4.0	34.9
3	Green pigweed	20.1	5.5	27.5	0.9	4.5	8.2	29.1
4	Round-leaved mallow	52.5	4.4	8.4	0.3	0.5	1.8	24.4
5	Prostrate pigweed	20.1	4.5	22.5	0.5	2.4	3.8	20.2
6	Green foxtail	15.5	4.6	29.9	0.5	3.5	9.0	20.1
7	Kochia	20.1	3.5	17.5	0.3	1.4	2.2	15.2
8	Stinkweed	16.2	2.8	17.0	0.2	1.5	2.2	12.4
9	Canada thistle	18.5	3.2	17.5	0.1	0.8	1.2	12.0
10	Foxtail barley	16.7	2.5	15.0	0.2	1.1	1.2	11.1
11	Barnyard grass species	16.2	2.1	13.2	0.1	0.7	1.4	9.2
12	White mustard	9.3	2.3	25.0	0.1	1.4	1.4	8.0
13	Canola/rapeseed	11.9	1.7	14.5	0.1	0.7	1.8	7.1
14	Lamb's-quarters	10.1	1.0	10.0	0.1	0.6	0.6	5.1
15	Perennial sow-thistle	10.1	1.0	10.0	0.1	0.6	0.6	5.1
16	Soybean	9.6	1.0	10.0	< 0.1	0.4	0.4	4.5
17	Scouring-rush	9.6	0.5	5.0	< 0.1	0.2	0.2	3.5
18	Wheat	2.7	0.9	35.0	0.1	2.4	2.4	3.2
19	Wild mustard	6.6	0.3	5.0	< 0.1	0.2	0.2	2.4
20	Thyme-leaved spurge	2.7	0.7	25.0	< 0.1	1.2	1.2	2.2
21	Night-flowering catchfly	2.7	0.3	10.0	< 0.1	1.2	1.2	1.7

Table 68. 2016 Annual crops in Harrison Park in the Southwest Crop Reporting District (10 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Canola/rapeseed	51.4	23.3	45.3	2.6	5.0	14.6	32.0
2	Field horsetail	9.2	7.9	85.0	5.7	61.2	61.2	28.2
3	Wild buckwheat	49.7	21.2	42.7	1.8	3.5	9.0	27.2
4	Barnyard grass species	32.1	16.1	50.1	3.2	9.9	21.6	26.9
5	Green foxtail	17.6	11.0	62.5	4.3	24.2	47.2	26.0
6	Chickweed	63.2	11.7	18.5	1.4	2.2	6.4	22.0
7	Lamb's-quarters	51.7	12.7	24.6	1.5	2.9	8.6	21.4
8	False cleavers	69.3	10.4	15.0	0.7	1.0	2.8	19.6
9	Wild oats	43.1	10.3	23.9	1.5	3.4	7.4	18.6
10	Dandelion	28.0	7.7	27.3	0.6	2.2	5.6	11.3
11	Canada thistle	19.2	6.4	33.5	0.6	2.9	3.2	9.0
12	Stork's bill	18.1	5.3	29.4	0.6	3.2	6.2	8.2
13	Night-flowering catchfly	28.5	3.0	10.4	0.1	0.5	0.8	6.7
14	American vetch	21.2	3.8	17.8	0.3	1.2	1.8	6.5
15	Pale smartweed	21.7	2.2	10.0	0.2	0.8	1.4	5.3
16	Spiny annual sow-thistle	21.2	2.1	10.1	0.2	0.8	1.4	5.2
17	Black medick	19.7	2.1	10.5	0.1	0.4	0.6	4.6
18	Foxtail barley	21.4	1.1	5.0	0.1	0.5	0.8	4.3
19	Flax	10.9	2.7	25.0	0.2	2.0	2.0	4.1
20	Shepherd's-purse	19.2	1.0	5.0	< 0.1	0.2	0.2	3.6
21	American dragonhead	10.9	1.6	15.0	0.1	1.0	1.0	3.1
22	Redroot pigweed	10.9	0.5	5.0	< 0.1	0.4	0.4	2.1
23	Broad-leaved plantain	11.0	0.6	5.0	< 0.1	0.2	0.2	2.1
24	Alfalfa	8.8	0.9	10.0	0.1	0.6	0.6	2.1

Table 69. 2016 Annual crops in Killarney-Turtle Mountain & Prairie Lakes in the Southwest Crop Reporting District (17 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Wild buckwheat	81.9	21.6	26.4	1.9	2.3	14.4	45.5
2	Green foxtail	24.3	7.7	31.7	4.8	19.8	71.6	37.3
3	Barnyard grass species	27.3	17.0	62.2	2.2	8.1	17.4	31.7
4	Round-leaved mallow	63.4	14.1	22.3	1.0	1.5	4.2	30.2
5	Wild oats	19.2	6.1	31.5	2.6	13.4	39.0	22.8
6	Wheat	19.7	8.3	42.2	1.1	5.6	9.2	17.0
7	Night-flowering catchfly	31.5	7.1	22.4	0.8	2.6	6.6	16.9
8	Yellow foxtail	31.5	4.6	14.5	0.9	2.8	10.0	15.1
9	Canada thistle	34.4	5.6	16.4	0.5	1.3	3.6	14.3
10	Proso millet	6.3	3.8	60.0	1.3	20.0	20.0	11.3
11	Spiny annual sow-thistle	13.4	6.4	47.4	0.4	3.0	3.6	10.3
12	Dandelion	12.0	4.8	40.0	0.4	3.7	6.8	8.9
13	Black medick	12.0	3.6	30.0	0.2	1.9	3.6	6.8
14	Canola/rapeseed	10.6	2.4	22.4	0.2	1.8	2.6	5.2
15	Lamb's-quarters	16.1	0.8	5.0	< 0.1	0.2	0.2	4.2
16	Biennial wormwood	11.7	1.5	12.7	0.1	0.7	1.2	4.2
17	Perennial sow-thistle	12.0	1.5	12.5	0.1	0.5	0.8	4.1
18	Redroot pigweed	12.0	0.9	7.5	< 0.1	0.3	0.4	3.5
19	Foxtail barley	6.3	0.3	5.0	0.1	2.0	2.0	2.3
20	Broad-leaved plantain	6.0	0.6	10.0	< 0.1	0.6	0.6	2.0
21	Absinth	6.9	0.3	5.0	< 0.1	0.2	0.2	1.8
22	Witch grass	6.3	0.3	5.0	< 0.1	0.4	0.4	1.7
23	Yellow sweet-clover	6.0	0.3	5.0	< 0.1	0.2	0.2	1.6
24	Pale smartweed	5.7	0.3	5.0	< 0.1	0.2	0.2	1.5

Table 70. 2016 Annual crops in Minto-Odanah, Rosedale & Clanwilliam-Erickson in the Southwest Crop Reporting District (12 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Green foxtail	33.0	25.4	76.8	11.9	36.1	82.8	47.3
2	Wild oats	56.5	26.4	46.8	7.9	14.0	51.8	41.2
3	Wild buckwheat	67.0	20.2	30.2	1.6	2.4	7.6	23.9
4	Barnyard grass species	50.9	13.0	25.6	2.0	4.0	7.8	19.0
5	Rough hair grass	8.6	6.0	70.0	5.1	60.0	60.0	17.1
6	Hemp-nettle	31.0	11.7	37.6	1.3	4.1	11.6	13.6
7	Chickweed	49.1	8.9	18.1	0.7	1.5	2.6	13.5
8	Field horsetail	42.3	8.9	21.0	1.0	2.4	4.6	13.1
9	False cleavers	40.5	10.4	25.8	0.7	1.8	5.0	13.0
10	Stork's bill	32.9	9.7	29.6	1.1	3.3	11.4	12.4
11	Wheat	17.2	9.0	52.5	2.0	11.8	23.2	12.1
12	Dandelion	25.9	7.2	27.7	0.7	2.5	5.0	9.0
13	Canada thistle	41.4	4.7	11.4	0.2	0.6	1.4	9.0
14	Rye	8.6	6.9	80.0	0.8	9.6	9.6	6.8
15	Foxtail barley	7.7	4.2	55.0	1.2	15.0	15.0	6.1
16	Night-flowering catchfly	14.7	5.3	36.1	0.4	3.0	6.6	5.9
17	Canola/rapeseed	15.9	3.5	22.0	0.1	0.9	1.6	4.4
18	Shepherd's-purse	16.3	2.4	14.7	0.2	1.3	2.2	4.1
19	Slough grass	16.4	1.6	10.0	0.1	0.6	0.6	3.5
20	Lamb's-quarters	17.3	1.3	7.5	0.1	0.3	0.4	3.3
21	Scentless chamomile	7.7	2.7	35.0	0.3	4.0	4.0	3.2
22	Stinkweed	17.2	0.9	5.0	< 0.1	0.2	0.2	3.0
23	Barley	9.1	1.8	20.0	0.2	2.0	2.0	2.7
24	Low cudweed	8.2	1.2	15.0	0.2	3.0	3.0	2.4
25	Oak-leaved goosefoot	9.1	1.4	15.0	0.1	0.6	0.6	2.2
26	Pale smartweed	8.6	0.9	10.0	0.1	0.6	0.6	1.8
27	Willow species	8.6	0.9	10.0	0.1	0.6	0.6	1.8
28	Black medick	8.7	0.4	5.0	< 0.1	0.2	0.2	1.5
29	American dragonhead	8.6	0.4	5.0	< 0.1	0.2	0.2	1.5
30	Short-awned foxtail	8.2	0.4	5.0	< 0.1	0.2	0.2	1.4

Table 71. 2016 Annual crops in North Cypress-Langford in the Southwest Crop Reporting District (14 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Green foxtail	70.6	49.7	70.4	15.7	22.3	57.8	98.4
2	Wild buckwheat	70.0	32.1	45.8	5.7	8.2	45.6	54.3
3	Canola/rapeseed	27.6	14.1	51.0	1.5	5.5	10.2	19.9
4	Spiny annual sow-thistle	13.6	10.7	78.7	1.5	11.1	13.6	14.6
5	Round-leaved mallow	13.6	8.7	63.7	0.9	6.5	9.6	11.3
6	Lamb's-quarters	33.4	3.3	9.9	0.2	0.5	1.8	10.0
7	Stork's bill	8.9	1.8	20.0	1.4	15.8	15.8	7.7
8	Canada thistle	22.9	2.7	11.6	0.2	0.8	1.0	7.3
9	Night-flowering catchfly	13.8	5.0	36.1	0.3	2.4	4.0	7.2
10	Redroot pigweed	21.1	2.7	12.8	0.1	0.7	1.2	6.8
11	Black medick	7.8	4.8	61.2	0.4	5.6	5.6	6.1
12	Wild oats	13.6	3.4	24.8	0.2	1.8	2.8	5.9
13	Thyme-leaved spurge	7.5	2.5	33.8	0.7	9.5	32.0	5.6
14	Yellow foxtail	15.5	2.0	12.6	0.2	1.1	1.8	5.2
15	Rye	8.9	3.1	35.0	0.1	1.6	1.6	4.4
16	Barnyard grass species	5.8	3.2	55.0	0.2	3.8	3.8	4.0
17	Field horsetail	5.8	1.7	30.0	0.5	8.2	8.2	3.9
18	Manitoba maple	8.1	1.6	20.0	0.1	0.8	0.8	3.0
19	Russian thistle	8.2	0.8	10.0	< 0.1	0.6	0.6	2.5
20	Rough cinquefoil	8.2	0.8	10.0	< 0.1	0.4	0.4	2.4
21	White cockle	8.2	0.8	10.0	< 0.1	0.4	0.4	2.4
22	Stinkweed	8.9	0.4	5.0	< 0.1	0.2	0.2	2.3
23	Hemp-nettle	8.2	0.4	5.0	< 0.1	0.2	0.2	2.1
24	Tumble pigweed	8.2	0.4	5.0	< 0.1	0.2	0.2	2.1
25	Yellow sweet-clover	5.8	0.9	15.0	0.1	1.2	1.2	2.1
26	American dragonhead	7.7	0.4	5.0	< 0.1	0.2	0.2	2.0
27	Broad-leaved plantain	5.8	0.6	10.0	< 0.1	0.4	0.4	1.7
28	Scouring-rush	5.8	0.3	5.0	0.1	1.2	1.2	1.7
29	Maple-leaved goosefoot	5.8	0.3	5.0	< 0.1	0.2	0.2	1.5
30	Perennial sow-thistle	5.8	0.3	5.0	< 0.1	0.2	0.2	1.5

Table 72. 2016 Annual crops in Oakland-Wawanesa & Glenboro-South Cypress in the Southwest Crop Reporting District (11 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Wild buckwheat	75.8	23.1	30.5	2.9	3.8	55.2	67.9
2	Green foxtail	45.8	16.0	34.9	2.5	5.4	17.6	50.1
3	Canola/rapeseed	28.4	14.1	49.7	1.4	4.8	13.8	33.1
4	Lamb's-quarters	41.3	13.7	33.1	0.8	1.8	3.4	30.2
5	Spiny annual sow-thistle	28.2	11.1	39.2	0.6	2.2	3.2	23.1
6	Barnyard grass species	27.0	9.6	35.7	0.7	2.4	4.6	22.0
7	Thyme-leaved spurge	14.1	3.3	23.1	0.4	2.8	2.8	10.4
8	Golden dock	8.4	4.6	55.0	0.2	2.2	2.2	8.0
9	Wheat	12.5	2.5	20.0	0.2	1.6	1.6	7.4
10	Redroot pigweed	12.5	2.5	20.0	0.1	0.8	0.8	6.4
11	Kochia	11.9	2.4	20.0	0.1	1.0	1.0	6.4
12	Canada thistle	10.7	1.6	14.7	0.1	1.0	1.0	5.3
13	Tumble pigweed	12.5	1.2	10.0	< 0.1	0.4	0.4	4.9
14	Wild oats	10.7	1.1	10.0	< 0.1	0.4	0.4	4.2
15	Rye	3.4	2.0	60.0	0.2	4.6	4.6	4.1
16	False ragweed	2.9	1.2	40.0	0.1	2.8	2.8	2.6
17	Pale smartweed	7.4	0.4	5.0	< 0.1	0.2	0.2	2.4
18	Manitoba maple	7.4	0.4	5.0	< 0.1	0.2	0.2	2.4
19	Clover species	3.4	1.0	30.0	< 0.1	1.2	1.2	2.2
20	Alfalfa	3.4	0.8	25.0	< 0.1	1.2	1.2	2.0
21	Perennial sow-thistle	3.4	0.8	25.0	< 0.1	1.0	1.0	1.9
22	Narrow-leaved hawk's-beard	2.9	0.7	25.0	< 0.1	1.4	1.4	1.8
23	Russian thistle	2.9	0.4	15.0	< 0.1	0.6	0.6	1.3

Table 73. 2016 Annual crops in Oakview & Hamiota in the Southwest Crop Reporting District (16 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Green foxtail	49.3	21.3	43.1	7.2	14.5	54.0	50.8
2	Wild buckwheat	63.9	17.0	26.7	1.4	2.2	10.2	25.4
3	Barnyard grass species	48.0	11.4	23.7	1.5	3.2	10.4	20.3
4	Wild oats	37.7	10.6	28.0	1.6	4.4	18.8	18.8
5	Round-leaved mallow	38.8	12.1	31.3	1.0	2.7	9.8	17.2
6	Canola/rapeseed	44.1	7.9	17.8	0.6	1.3	3.4	13.5
7	Spiny annual sow-thistle	27.7	8.5	30.5	0.9	3.2	5.8	12.8
8	Redroot pigweed	9.0	6.3	69.4	1.7	18.9	22.2	12.4
9	Stork's bill	13.9	7.1	50.7	1.3	9.1	10.2	11.7
10	Night-flowering catchfly	34.6	6.5	18.8	0.6	1.9	5.4	11.6
11	False cleavers	24.9	8.2	33.0	0.7	3.0	15.8	11.6
12	Wheat	11.0	7.0	63.7	1.0	9.3	14.0	10.1
13	Broad-leaved plantain	29.7	5.0	16.9	0.3	1.1	2.8	8.6
14	Lamb's-quarters	15.8	5.8	36.9	0.6	4.0	8.4	8.4
15	Chickweed	22.3	4.7	21.3	0.5	2.2	4.0	8.1
16	Canada thistle	21.8	5.5	25.3	0.3	1.3	2.2	7.6
17	Oak-leaved goosefoot	21.3	3.9	18.3	0.2	1.0	1.2	6.3
18	Shepherd's-purse	17.7	3.5	19.8	0.4	2.0	11.6	6.2
19	Foxtail barley	24.1	3.3	13.8	0.1	0.6	0.8	6.0
20	Pale smartweed	24.5	2.1	8.7	0.1	0.5	1.0	5.3
21	Dandelion	20.7	2.1	10.1	0.1	0.4	0.6	4.5
22	Hemp-nettle	15.5	2.1	13.8	0.1	0.6	1.2	3.9
23	Biennial wormwood	14.2	1.8	12.5	0.1	0.4	0.7	3.4
24	Black medick	13.9	0.7	5.0	< 0.1	0.2	0.2	2.5
25	Yellow sweet-clover	4.8	1.4	30.0	0.1	3.0	3.0	2.2
26	Stinkweed	6.8	1.4	20.0	< 0.1	0.5	0.5	1.9
27	Soybean	7.1	1.1	15.0	0.1	0.8	0.8	1.9
28	Yellow foxtail	6.8	1.0	15.0	< 0.1	0.5	0.5	1.7
29	Alfalfa	6.8	0.7	10.0	< 0.1	0.6	0.6	1.5
30	Pineappleweed	7.1	0.4	5.0	< 0.1	0.2	0.2	1.3
31	Siberian elm	7.1	0.4	5.0	< 0.1	0.2	0.2	1.3
32	Blue grass species	6.8	0.3	5.0	< 0.1	0.2	0.2	1.2

Table 74. 2016 Annual crops in Pipestone, Souris-Glenwood & Sifton in the Southwest Crop Reporting District (13 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Green foxtail	59.2	26.9	45.5	5.2	8.7	24.8	64.9
2	Barnyard grass species	9.5	9.5	100.0	4.3	44.8	44.8	34.0
3	Yellow foxtail	16.1	12.9	80.3	3.3	20.2	28.6	32.8
4	Wild buckwheat	55.5	13.6	24.5	1.1	2.0	7.8	30.0
5	Redroot pigweed	45.5	7.2	15.9	0.4	0.9	3.8	18.4
6	Night-flowering catchfly	31.2	6.6	21.2	0.4	1.3	2.4	14.6
7	Canada thistle	24.5	4.2	17.2	0.3	1.3	2.4	10.7
8	Thyme-leaved spurge	19.2	4.3	22.2	0.3	1.5	3.2	9.5
9	Wild oats	14.7	3.6	24.2	0.6	3.8	10.8	9.4
10	Scouring-rush	19.7	3.1	15.7	0.3	1.7	1.8	8.8
11	Round-leaved mallow	22.1	2.9	13.3	0.1	0.7	1.0	8.1
12	Lamb's-quarters	17.0	3.3	19.4	0.2	1.5	1.8	7.9
13	Perennial sow-thistle	19.2	2.5	13.2	0.1	0.7	0.8	7.1
14	Foxtail barley	6.9	2.8	40.0	0.3	4.4	4.4	5.6
15	Kochia	15.6	1.1	7.4	0.1	0.5	0.8	4.8
16	Prostrate pigweed	7.2	2.1	30.0	0.2	3.2	3.2	4.7
17	Canola/rapeseed	15.6	1.1	7.4	< 0.1	0.3	0.4	4.6
18	Rough cinquefoil	4.6	1.6	35.0	0.3	6.2	6.2	4.0
19	Rayless aster	12.2	1.2	10.0	< 0.1	0.4	0.4	4.0
20	Dandelion	10.1	0.5	5.0	< 0.1	0.4	0.4	2.8
21	Hemp-nettle	6.9	1.0	15.0	0.1	0.8	0.8	2.7
22	Broad-leaved plantain	6.9	1.0	15.0	0.1	0.8	0.8	2.7
23	Quack grass	7.4	0.4	5.0	0.1	0.8	0.8	2.2
24	Showy milkweed	7.4	0.4	5.0	< 0.1	0.6	0.6	2.2
25	Black medick	4.6	0.5	10.0	< 0.1	0.6	0.6	1.6
26	Stinkweed	4.6	0.2	5.0	< 0.1	0.2	0.2	1.2
27	Wheat	1.9	0.3	15.0	< 0.1	1.6	1.6	0.8

Table 75. 2016 Annual crops in Prairie View & Ellice-Archie in the Southwest Crop Reporting District (20 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Round-leaved mallow	44.4	13.3	29.9	0.8	1.9	3.8	36.3
2	Green foxtail	43.7	7.6	17.5	0.5	1.1	2.8	23.8
3	Wild buckwheat	37.6	7.5	19.9	0.5	1.2	7.2	22.4
4	Wild oats	43.5	7.7	17.8	0.3	0.8	1.6	21.8
5	Lamb's-quarters	27.6	5.8	21.1	0.3	1.1	1.5	16.0
6	Broad-leaved plantain	22.4	5.6	24.9	0.3	1.3	2.0	14.9
7	Foxtail barley	34.7	4.6	13.2	0.2	0.6	1.5	14.9
8	Oak-leaved goosefoot	22.3	5.1	22.7	0.3	1.4	2.6	14.5
9	False cleavers	27.3	4.9	18.1	0.3	1.0	1.6	14.5
10	Redroot pigweed	22.4	4.5	20.1	0.2	0.9	1.1	12.1
11	Canola/rapeseed	23.5	4.0	17.1	0.1	0.6	0.9	10.8
12	Barnyard grass species	25.3	3.1	12.2	0.1	0.4	0.8	9.6
13	Spiny annual sow-thistle	19.9	3.1	15.4	0.1	0.6	0.8	8.8
14	Canada thistle	11.1	3.3	29.8	0.2	1.4	1.9	8.0
15	Stinkweed	16.6	2.8	16.7	0.1	0.7	0.8	7.8
16	Shepherd's-purse	11.1	2.8	25.1	0.1	1.2	1.5	7.2
17	Green pigweed	1.6	1.4	90.0	0.2	15.2	15.2	5.9
18	Narrow-leaved hawk's-beard	10.8	2.2	20.0	0.1	0.9	0.9	5.8
19	Pale smartweed	11.1	2.2	19.9	0.1	0.8	1.2	5.8
20	Wild mustard	5.4	1.9	35.0	0.1	2.7	2.7	5.5
21	Wheat	12.6	1.6	12.7	0.1	0.5	2.4	5.1
22	Dock species	5.4	1.9	35.0	0.1	2.2	2.2	4.9
23	Marsh yellow cress	5.7	2.0	35.0	0.1	1.4	1.4	4.3
24	Timothy	5.4	1.3	25.0	0.1	1.1	1.1	3.4
25	Stork's bill	5.4	1.3	25.0	0.1	0.9	0.9	3.2
26	Black medick	5.4	1.1	20.0	< 0.1	0.7	0.7	2.7
27	Perennial sow-thistle	5.4	0.8	15.0	< 0.1	0.7	0.7	2.5
28	False ragweed	5.5	0.6	10.0	< 0.1	0.4	0.4	2.0
29	Hemp-nettle	5.4	0.5	10.0	< 0.1	0.3	0.3	1.8
30	Kochia	5.4	0.3	5.0	< 0.1	0.3	0.3	1.5
31	Alfalfa	1.6	0.3	20.0	< 0.1	1.2	1.2	0.9
32	Thyme-leaved spurge	1.6	0.1	5.0	< 0.1	1.6	1.6	0.8
33	American dragonhead	1.6	0.1	5.0	< 0.1	0.4	0.4	0.5

Table 76. 2016 Annual crops in Riverdale & Whitehead in the Southwest Crop Reporting District (10 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Wild oats	41.5	19.7	47.5	2.7	6.5	13.0	47.6
2	Canola/rapeseed	48.0	18.4	38.4	2.3	4.9	18.8	44.9
3	Wild buckwheat	57.6	16.3	28.2	0.8	1.3	2.0	31.2
4	Green foxtail	30.9	7.8	25.1	2.0	6.3	15.6	29.3
5	Wheat	38.7	11.5	29.8	0.7	1.7	2.6	22.9
6	Biennial wormwood	27.2	9.0	33.1	0.5	2.0	3.0	17.4
7	Kochia	31.8	6.4	20.0	0.5	1.7	3.2	16.2
8	Barnyard grass species	20.8	5.7	27.3	0.4	2.0	2.2	12.4
9	Dandelion	30.3	2.5	8.3	0.1	0.3	0.4	9.0
10	Tumble pigweed	20.8	3.2	15.3	0.2	0.8	1.4	8.2
11	Wild mustard	20.2	3.5	17.5	0.1	0.7	0.8	8.2
12	Round-leaved mallow	20.8	3.1	14.7	0.1	0.6	1.0	7.7
13	Lamb's-quarters	10.1	3.5	35.0	0.3	2.6	2.6	7.2
14	Yellow sweet-clover	10.1	3.0	30.0	0.3	3.0	3.0	7.1
15	Oak-leaved goosefoot	10.7	1.6	15.0	0.3	2.6	2.6	5.8
16	Perennial sow-thistle	10.6	1.6	15.0	0.1	0.8	0.8	4.1
17	American dragonhead	10.1	1.5	15.0	0.1	0.8	0.8	4.0
18	Thyme-leaved spurge	10.1	1.0	10.0	0.1	0.6	0.6	3.4
19	Foxtail barley	10.7	0.5	5.0	< 0.1	0.2	0.2	2.8
20	Night-flowering catchfly	10.7	0.5	5.0	< 0.1	0.2	0.2	2.8
21	Spiny annual sow-thistle	10.1	0.5	5.0	< 0.1	0.2	0.2	2.6
22	Canada thistle	10.1	0.5	5.0	< 0.1	0.2	0.2	2.6
23	Redroot pigweed	10.1	0.5	5.0	< 0.1	0.2	0.2	2.6

Table 77. 2016 Annual crops in Two Borders in the Southwest Crop Reporting District (12 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Yellow foxtail	14.1	12.0	85.0	8.1	57.2	57.2	61.3
2	Green foxtail	43.5	18.4	42.2	5.2	11.9	39.4	59.9
3	Foxtail barley	35.9	13.1	36.4	1.6	4.4	12.4	32.2
4	Wild buckwheat	57.2	8.5	14.8	0.5	0.9	1.8	26.8
5	Night-flowering catchfly	20.0	4.2	20.9	0.3	1.3	1.8	11.1
6	Biennial wormwood	28.9	1.9	6.6	0.1	0.5	2.0	10.2
7	Downy brome	12.2	4.3	35.0	0.2	2.0	2.0	9.1
8	Lamb's-quarters	24.3	1.8	7.5	0.1	0.3	0.4	8.6
9	Round-leaved mallow	15.1	2.6	17.3	0.1	0.9	2.6	7.4
10	Barnyard grass species	5.3	3.5	65.0	0.4	7.6	7.6	7.4
11	Barley	14.1	2.1	15.0	0.2	1.2	1.2	6.8
12	Soybean	8.3	3.3	40.0	0.2	2.2	2.2	6.7
13	Black medick	5.1	3.1	60.0	0.2	4.2	4.2	5.8
14	Redroot pigweed	14.0	1.5	10.7	0.1	0.5	1.0	5.6
15	Wild oats	5.1	1.8	35.0	0.2	3.2	3.2	4.1
16	Kochia	5.1	1.8	35.0	0.1	2.4	2.4	3.9
17	Broad-leaved plantain	12.2	0.6	5.0	< 0.1	0.2	0.2	3.9
18	Shepherd's-purse	6.4	1.4	22.4	0.1	1.4	1.4	3.7
19	Canola/rapeseed	11.2	0.6	5.0	< 0.1	0.4	0.4	3.7
20	Pennsylvania pellitory	11.2	0.6	5.0	< 0.1	0.2	0.2	3.6
21	Stinkweed	6.4	1.3	20.2	0.1	1.0	1.6	3.4
22	Perennial sow-thistle	8.2	0.7	8.1	< 0.1	0.3	0.4	3.0
23	Wheat	8.6	0.4	5.0	< 0.1	0.2	0.2	2.8
24	Thyme-leaved spurge	8.3	0.4	5.0	< 0.1	0.2	0.2	2.6
25	Pale smartweed	3.3	1.1	35.0	0.1	2.4	2.4	2.5
26	Yellow evening-primrose	5.1	0.5	10.0	0.1	1.0	1.0	2.1
27	False cleavers	3.3	0.7	20.0	< 0.1	1.0	1.0	1.7

Table 78. 2016 Annual crops in Wallace-Woodworth in the Southwest Crop Reporting District (12 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Green foxtail	73.9	19.2	25.9	1.7	2.3	5.4	39.6
2	Canola/rapeseed	28.4	12.4	43.6	2.5	8.9	27.4	33.8
3	Wild buckwheat	72.7	14.8	20.3	0.9	1.3	5.4	29.8
4	Wheat	42.1	9.8	23.4	0.7	1.6	3.6	19.5
5	Wild oats	26.3	9.1	34.4	1.0	3.9	7.8	19.1
6	Dandelion	27.1	9.4	34.8	0.9	3.4	7.4	18.6
7	Redroot pigweed	26.2	7.8	30.0	1.0	4.0	5.8	18.4
8	Spiny annual sow-thistle	40.8	5.1	12.6	0.5	1.3	4.6	14.5
9	Quack grass	9.0	5.8	65.0	0.7	7.4	7.4	11.1
10	Night-flowering catchfly	23.9	5.2	21.9	0.2	1.0	1.6	9.6
11	False cleavers	26.9	3.2	11.8	0.3	1.2	3.0	9.2
12	Manitoba maple	8.2	4.9	60.0	0.3	4.0	4.0	7.7
13	Biennial wormwood	26.9	2.2	8.3	0.2	0.6	1.4	7.1
14	Barnyard grass species	17.7	3.1	17.6	0.2	1.2	1.6	6.8
15	Shepherd's-purse	17.9	1.3	7.5	0.2	0.9	1.6	5.1
16	Oak-leaved goosefoot	15.2	2.3	14.9	0.1	0.8	1.8	5.1
17	Foxtail barley	9.0	2.7	30.0	0.2	2.2	2.2	5.0
18	Golden dock	17.2	1.3	7.4	0.1	0.5	0.6	4.3
19	Canada thistle	17.4	1.3	7.6	0.1	0.3	0.4	4.1
20	Kochia	15.0	0.7	5.0	0.1	0.4	0.6	3.4
21	Blue grass species	9.0	1.8	20.0	0.1	0.8	0.8	3.3
22	Maple-leaved goosefoot	9.0	1.3	15.0	0.1	1.0	1.0	3.1
23	Pale smartweed	6.0	1.2	20.0	0.1	1.6	1.6	2.6
24	Wild mustard	6.0	1.2	20.0	0.1	1.4	1.4	2.5
25	Broad-leaved plantain	9.0	0.9	10.0	< 0.1	0.4	0.4	2.4
26	Low cudweed	8.2	0.4	5.0	0.1	0.8	0.8	2.1
27	Lamb's-quarters	9.0	0.4	5.0	< 0.1	0.4	0.4	2.0
28	Western snowberry	9.0	0.4	5.0	< 0.1	0.2	0.2	1.9
29	Perennial sow-thistle	9.0	0.4	5.0	< 0.1	0.2	0.2	1.9
30	Purslane	8.2	0.4	5.0	< 0.1	0.2	0.2	1.7
31	Thyme-leaved spurge	8.2	0.4	5.0	< 0.1	0.2	0.2	1.7
32	Round-leaved mallow	6.0	0.6	10.0	< 0.1	0.6	0.6	1.7
33	Dock species	6.0	0.3	5.0	< 0.1	0.2	0.2	1.3

Table 79. 2016 Annual crops in Yellowhead in the Southwest Crop Reporting District (12 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Wild buckwheat	79.4	32.9	41.4	2.1	2.6	6.8	47.8
2	Barnyard grass species	7.2	7.2	100.0	5.7	80.0	80.0	40.9
3	Canada thistle	79.4	23.6	29.7	1.3	1.7	2.8	38.0
4	False cleavers	61.2	21.7	35.5	1.8	3.0	25.6	36.3
5	Perennial sow-thistle	62.0	22.5	36.4	1.5	2.4	7.4	34.7
6	Round-leaved mallow	62.3	20.6	33.0	1.4	2.3	7.0	33.2
7	Dandelion	23.0	6.3	27.3	0.3	1.5	2.6	10.4
8	Canola/rapeseed	10.0	5.7	57.1	0.3	3.4	4.4	7.5
9	Shepherd's-purse	17.1	4.2	24.8	0.3	1.5	2.2	7.5
10	Narrow-leaved hawk's-beard	10.6	4.8	45.0	0.4	3.4	3.4	7.1
11	Foxtail barley	13.0	4.5	34.5	0.2	1.8	2.2	6.7
12	Wild oats	16.3	2.2	13.5	0.1	0.6	2.0	5.2
13	Chickweed	12.8	2.6	20.0	0.1	1.0	1.0	4.9
14	Broad-leaved plantain	10.1	2.5	25.0	0.1	1.4	1.4	4.4
15	Green pigweed	7.2	2.9	40.0	0.2	2.8	2.8	4.3
16	Pale smartweed	7.2	2.5	35.0	0.1	1.8	1.8	3.7
17	Lamb's-quarters	7.0	1.0	15.0	< 0.1	0.6	0.6	2.3
18	Wheat	5.7	1.3	22.5	0.1	1.0	1.6	2.3
19	Kochia	2.9	0.6	20.0	< 0.1	0.8	0.8	1.1
20	Night-flowering catchfly	2.9	0.4	15.0	< 0.1	0.6	0.6	0.9
21	Redroot pigweed	2.9	0.3	10.0	< 0.1	0.4	0.4	0.8

Table 80. 2016 Annual crops in Gilbert Plains, Dauphin & Mossey River in the Northwest Crop Reporting District (13 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Green foxtail	20.8	8.4	40.5	4.8	23.2	98.4	60.6
2	Wild buckwheat	37.0	7.9	21.3	0.6	1.5	4.8	25.7
3	Golden dock	16.1	6.5	40.1	1.0	6.0	11.8	21.6
4	Broad-leaved plantain	16.1	6.8	42.5	0.8	5.2	8.0	20.9
5	Perennial sow-thistle	24.9	3.7	14.7	0.4	1.4	3.6	15.1
6	Barnyard grass species	20.6	4.0	19.3	0.4	1.8	5.4	14.3
7	Yellow sweet-clover	16.1	5.2	32.4	0.3	1.7	3.0	13.7
8	Night-flowering catchfly	12.4	4.4	35.6	0.4	3.0	6.0	12.6
9	Dandelion	20.5	3.4	16.8	0.2	0.8	1.0	11.8
10	Wheat	6.9	3.8	55.0	0.5	7.2	7.2	11.3
11	Redroot pigweed	16.5	3.2	19.7	0.2	1.2	2.2	10.6
12	Black medick	8.1	3.6	45.0	0.4	4.4	4.4	10.1
13	Canola/rapeseed	8.1	3.6	45.0	0.3	3.2	3.2	9.3
14	Canada thistle	19.4	1.6	8.2	0.1	0.6	1.0	8.6
15	Maple-leaved goosefoot	16.2	1.2	7.5	0.1	0.6	0.6	7.1
16	Marsh yellow cress	8.1	2.0	25.0	0.1	1.8	1.8	6.2
17	Perennial rye grass	6.9	1.7	25.0	0.2	2.2	2.2	5.6
18	Pale smartweed	8.0	1.6	20.0	0.1	1.2	1.2	5.2
19	Northern willowherb	8.1	1.6	20.0	0.1	1.0	1.0	5.1
20	Biennial wormwood	8.1	1.2	15.0	0.1	1.0	1.0	4.6
21	Spiny annual sow-thistle	6.9	1.4	20.0	0.1	1.0	1.0	4.4
22	False cleavers	11.3	0.6	5.0	< 0.1	0.2	0.2	4.2
23	Lamb's-quarters	8.4	0.4	5.0	< 0.1	0.4	0.4	3.3
24	Canada fleabane	8.1	0.4	5.0	< 0.1	0.2	0.2	3.0
25	Chickweed	6.9	0.3	5.0	< 0.1	0.2	0.2	2.6
26	Wild oats	4.4	0.7	15.0	< 0.1	0.6	0.6	2.3

Table 81. 2016 Annual crops in Grandview & Ethelbert in the Northwest Crop Reporting District (10 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Broad-leaved plantain	80.4	34.9	43.4	8.5	10.5	53.0	41.0
2	Chickweed	73.0	32.9	45.1	7.0	9.6	23.2	36.2
3	Wild oats	50.5	17.1	33.9	6.0	11.9	69.6	25.4
4	Green foxtail	30.8	15.6	50.6	5.5	18.0	57.8	21.5
5	Spiny annual sow-thistle	45.6	24.2	53.0	3.1	6.8	17.0	21.2
6	Wild buckwheat	69.6	19.1	27.4	1.6	2.3	7.8	18.9
7	Barnyard grass species	50.1	19.2	38.4	2.5	5.0	19.6	18.6
8	Dandelion	61.3	17.4	28.4	1.2	1.9	4.4	16.4
9	Pale smartweed	65.7	14.8	22.5	1.3	2.0	8.0	16.2
10	Wheat	30.9	15.6	50.5	2.7	8.6	29.4	15.3
11	Canada thistle	58.5	8.7	15.0	0.8	1.3	3.6	11.9
12	Golden dock	11.8	8.3	70.0	2.8	23.8	23.8	10.6
13	False cleavers	34.9	7.6	21.7	0.4	1.1	2.4	7.9
14	Quack grass	7.8	5.4	70.0	1.0	13.4	13.4	5.2
15	Clover species	15.7	3.9	25.0	0.3	1.7	3.2	3.9
16	Shepherd's-purse	11.3	4.5	40.0	0.2	1.8	1.8	3.5
17	Oak-leaved goosefoot	11.8	3.5	30.0	0.2	1.4	1.4	3.1
18	Field horsetail	7.9	2.8	35.0	0.3	3.4	3.4	2.5
19	Thyme-leaved spurge	11.8	1.8	15.0	0.1	1.0	1.0	2.3
20	Wild mustard	11.3	1.7	15.0	0.1	1.0	1.0	2.2
21	Bicknell's geranium	7.9	2.4	30.0	0.2	2.2	2.2	2.2
22	Canada fleabane	7.9	2.0	25.0	0.1	1.6	1.6	1.9
23	Tumble pigweed	7.9	2.0	25.0	0.1	1.4	1.4	1.9
24	Perennial sow-thistle	7.8	1.6	20.0	0.1	1.0	1.0	1.7
25	Northern willowherb	11.3	0.6	5.0	< 0.1	0.4	0.4	1.7
26	Soybean	11.3	0.6	5.0	< 0.1	0.2	0.2	1.6
27	Canola/rapeseed	11.3	0.6	5.0	< 0.1	0.2	0.2	1.6
28	Low cudweed	7.9	0.4	5.0	< 0.1	0.4	0.4	1.2
29	American dragonhead	7.9	0.4	5.0	< 0.1	0.2	0.2	1.1
30	Hemp-nettle	7.9	0.4	5.0	< 0.1	0.2	0.2	1.1

Table 82. 2016 Annual crops in Minitonas-Bowsman, Mountain & Kelsey in the Northwest Crop Reporting District (12 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Wild oats	41.4	9.6	23.1	1.0	2.5	8.8	70.4
2	Pale smartweed	24.0	9.7	40.2	0.8	3.3	5.8	54.7
3	Chickweed	16.7	8.4	50.0	0.8	4.7	9.2	47.1
4	False cleavers	8.4	7.9	95.0	0.7	8.2	8.2	38.8
5	Wild buckwheat	35.1	3.3	9.5	0.2	0.5	0.8	32.5
6	Field horsetail	8.0	2.8	35.0	0.4	4.6	4.6	19.7
7	Canola/rapeseed	7.7	3.5	45.0	0.2	2.0	2.0	15.7
8	Dandelion	11.1	0.6	5.0	< 0.1	0.2	0.2	8.3
9	Barnyard grass species	7.7	0.4	5.0	< 0.1	0.6	0.6	6.5
10	Broad-leaved plantain	8.4	0.4	5.0	< 0.1	0.2	0.2	6.3

Table 83. 2016 Annual crops in Riding Mountain West, Roblin, Rossburn & Russell-Binscarth in the Northwest Crop Reporting District (32 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Barnyard grass species	26.4	11.5	43.6	2.4	9.0	33.4	35.0
2	Green foxtail	19.6	9.4	48.1	2.6	13.5	37.4	34.1
3	Wild buckwheat	62.3	14.8	23.7	0.9	1.5	6.6	32.5
4	False cleavers	39.5	9.9	25.1	0.6	1.4	5.0	21.0
5	Wheat	22.5	8.0	35.4	0.8	3.6	14.4	18.2
6	Wild oats	16.6	6.0	36.2	0.7	4.0	9.8	13.9
7	Broad-leaved plantain	19.5	5.6	28.8	0.6	3.1	6.4	13.7
8	Canola/rapeseed	22.0	5.4	24.7	0.4	2.0	4.6	12.6
9	Canada thistle	22.4	4.7	21.0	0.4	1.9	4.0	11.9
10	Spiny annual sow-thistle	18.9	3.5	18.5	0.2	1.0	2.6	8.3
11	Pale smartweed	16.2	3.6	22.2	0.2	1.4	3.2	8.1
12	Dandelion	17.9	3.0	17.0	0.2	1.2	1.6	7.9
13	Redroot pigweed	20.4	2.8	14.0	0.2	0.9	3.4	7.9
14	Clover species	11.7	2.5	21.3	0.3	2.7	10.8	7.0
15	Chickweed	13.5	2.5	18.7	0.2	1.8	3.4	6.8
16	Field horsetail	15.7	2.2	13.7	0.2	1.1	2.6	6.4
17	Round-leaved mallow	11.8	2.5	21.0	0.2	1.5	5.0	5.9
18	Lamb's-quarters	12.6	1.6	12.5	0.1	0.8	1.4	4.7
19	Shepherd's-purse	15.4	1.1	7.2	0.1	0.4	0.6	4.4
20	Alfalfa	9.7	1.4	14.8	0.1	1.0	1.6	3.9
21	Stinkweed	9.2	1.2	13.6	0.1	0.6	0.8	3.3
22	Black medick	9.5	1.1	11.1	0.1	0.6	0.8	3.2
23	Perennial sow-thistle	6.4	1.3	20.0	0.1	0.9	1.0	2.9
24	Foxtail barley	8.9	0.4	5.0	0.1	0.6	1.0	2.5
25	American vetch	9.2	0.6	6.7	< 0.1	0.3	0.4	2.5
26	Hemp-nettle	6.6	1.0	15.0	< 0.1	0.6	0.6	2.5
27	Low cudweed	6.4	0.6	10.0	0.1	1.1	1.6	2.4
28	Bicknell's geranium	5.8	0.6	10.0	< 0.1	0.7	0.8	1.9
29	Flax	6.8	0.5	7.5	< 0.1	0.3	0.4	1.9
30	Yellow sweet-clover	6.1	0.6	9.4	< 0.1	0.4	0.6	1.9
31	Night-flowering catchfly	6.3	0.5	7.4	< 0.1	0.3	0.4	1.8
32	Oak-leaved goosefoot	6.8	0.3	5.0	< 0.1	0.2	0.2	1.7
33	American dragonhead	2.6	0.8	30.0	0.1	2.0	2.0	1.6
34	Corn spurry	3.1	0.3	10.0	< 0.1	0.4	0.4	1.0
35	Rough cinquefoil	3.2	0.2	5.0	< 0.1	0.4	0.4	0.9
36	Dock species	3.4	0.2	5.0	< 0.1	0.2	0.2	0.9
37	Smooth brome	2.7	0.3	10.0	< 0.1	0.4	0.4	0.9
38	Cocklebur	3.2	0.2	5.0	< 0.1	0.2	0.2	0.8
39	Northern bedstraw	2.7	0.1	5.0	< 0.1	0.4	0.4	0.7
40	Biennial wormwood	2.6	0.1	5.0	< 0.1	0.2	0.2	0.7

Table 84. 2016 Annual crops in Ste. Rose, Lakeshore, McCreary & Alonsa in the Northwest Crop Reporting District (11 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Green foxtail	27.8	21.0	75.6	9.3	33.6	73.6	78.8
2	Dandelion	51.1	13.3	25.9	1.2	2.3	9.4	32.0
3	Wild buckwheat	51.7	14.2	27.5	0.9	1.8	6.2	31.6
4	Barnyard grass species	18.4	7.4	40.1	1.6	8.5	13.8	20.3
5	Broad-leaved plantain	24.9	5.9	23.8	0.6	2.5	4.2	15.4
6	Night-flowering catchfly	9.0	5.4	60.0	1.0	11.6	11.6	13.2
7	Wheat	9.4	6.6	70.0	0.8	8.6	8.6	13.1
8	Redroot pigweed	28.2	3.8	13.3	0.2	0.7	1.2	11.6
9	Wild oats	18.4	3.7	20.2	0.2	0.9	1.2	9.1
10	False cleavers	9.0	3.6	40.0	0.3	2.8	2.8	7.1
11	Lamb's-quarters	9.0	1.8	20.0	0.4	4.6	4.6	6.3
12	Northern willowherb	18.1	0.9	5.0	< 0.1	0.2	0.2	5.6
13	Chickweed	9.0	2.3	25.0	0.2	2.2	2.2	5.5
14	Biennial wormwood	9.4	2.3	25.0	0.2	1.6	1.6	5.4
15	Perennial sow-thistle	9.0	2.3	25.0	0.1	1.6	1.6	5.2
16	Tumble pigweed	9.0	1.8	20.0	0.1	1.4	1.4	4.7
17	Bicknell's geranium	9.4	1.9	20.0	0.1	0.8	0.8	4.5
18	Black medick	8.7	1.3	15.0	0.2	2.0	2.0	4.4
19	Hemp-nettle	9.0	0.9	10.0	0.2	2.0	2.0	4.1
20	Golden dock	9.4	1.4	15.0	0.1	0.8	0.8	4.1
21	American dragonhead	8.8	1.3	15.0	0.1	0.6	0.6	3.8
22	Canada thistle	9.0	0.9	10.0	0.1	1.2	1.2	3.7
23	Scouring-rush	9.0	0.5	5.0	0.1	0.6	0.6	3.0
24	Purslane speedwell	9.4	0.5	5.0	< 0.1	0.2	0.2	2.9
25	Rayless aster	9.0	0.5	5.0	< 0.1	0.2	0.2	2.8
26	Pale smartweed	6.2	0.3	5.0	< 0.1	0.2	0.2	1.9

Table 85. 2016 Annual crops in Swan Valley West in the Northwest Crop Reporting District (13 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Wild oats	31.4	9.4	29.8	1.1	3.5	9.6	71.7
2	False cleavers	21.6	8.5	39.5	1.3	5.9	16.8	70.1
3	Canola/rapeseed	25.6	4.9	19.3	0.3	1.1	1.8	33.7
4	Chickweed	15.1	4.6	30.6	0.3	2.2	2.6	29.4
5	Pale smartweed	31.8	2.7	8.5	0.1	0.4	0.8	26.2
6	Wild buckwheat	23.1	1.2	5.0	0.1	0.3	0.4	15.7
7	Proso millet	9.7	1.4	15.0	0.1	1.0	1.0	11.2
8	Canada thistle	14.9	1.1	7.3	< 0.1	0.3	0.4	11.2
9	Green foxtail	9.7	1.0	10.0	< 0.1	0.4	0.4	8.3
10	Lamb's-quarters	8.0	0.4	5.0	0.1	0.8	0.8	6.6
11	Bladder campion	8.0	0.4	5.0	< 0.1	0.2	0.2	5.2
12	Stork's bill	8.0	0.4	5.0	< 0.1	0.2	0.2	5.2
13	American vetch	8.0	0.4	5.0	< 0.1	0.2	0.2	5.2

Table 86. 2016 Annual crops in Cartwright-Roblin & Argyle in the Central Crop Reporting District (14 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Green foxtail	47.6	24.5	51.5	5.5	11.5	41.8	71.9
2	Round-leaved mallow	66.2	16.7	25.2	1.9	2.9	14.6	42.0
3	Wild buckwheat	59.6	16.7	27.9	1.0	1.6	5.2	33.7
4	Wild oats	45.5	9.5	20.9	1.1	2.3	12.2	25.1
5	Canola/rapeseed	32.6	4.6	14.2	0.4	1.4	4.4	13.8
6	Night-flowering catchfly	35.0	3.5	10.0	0.3	0.7	3.0	11.8
7	Wheat	23.7	5.3	22.3	0.2	1.0	1.6	11.1
8	Yellow foxtail	16.5	3.3	20.0	0.6	3.6	3.8	10.5
9	Wild mustard	19.9	4.0	20.0	0.3	1.4	1.6	9.4
10	Biennial wormwood	13.8	3.9	28.4	0.4	2.7	6.0	8.9
11	Spiny annual sow-thistle	19.9	2.8	14.2	0.2	1.1	2.0	8.0
12	Redroot pigweed	22.7	2.2	9.7	0.1	0.5	1.0	7.1
13	Purslane	7.1	1.1	15.0	0.6	8.2	8.2	6.7
14	Oats	6.9	3.8	55.0	0.2	2.6	2.6	6.0
15	Dandelion	15.3	1.5	10.0	0.1	0.5	0.6	4.9
16	Chickweed	15.4	1.1	7.3	0.1	0.8	1.4	4.8
17	Barnyard grass species	7.1	1.1	15.0	0.2	2.2	2.2	3.5
18	Hedge bindweed	8.3	1.2	15.0	0.1	0.8	0.8	3.2
19	Clover species	8.2	1.2	15.0	< 0.1	0.6	0.6	3.0
20	Stork's bill	8.0	0.8	10.0	0.1	1.2	1.2	3.0
21	Perennial sow-thistle	8.9	0.6	7.3	< 0.1	0.3	0.6	2.5
22	False flax species	6.9	0.7	10.0	< 0.1	0.6	0.6	2.2
23	American dragonhead	8.3	0.4	5.0	< 0.1	0.2	0.2	2.1
24	Lamb's-quarters	6.9	0.3	5.0	< 0.1	0.6	0.6	1.9
25	Kochia	6.9	0.3	5.0	< 0.1	0.2	0.2	1.7
26	Canada thistle	2.0	0.5	25.0	< 0.1	1.4	1.4	1.0

Table 87. 2016 Annual crops in Dufferin in the Central Crop Reporting District (18 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Yellow foxtail	22.8	13.1	57.5	5.4	23.6	64.0	58.0
2	Wild buckwheat	69.8	17.0	24.4	1.3	1.9	7.4	39.5
3	Wheat	31.2	8.4	26.9	0.9	3.0	5.6	21.1
4	Redroot pigweed	35.5	7.8	21.9	0.8	2.2	5.0	20.1
5	Canola/rapeseed	25.7	10.0	39.0	0.7	2.6	5.6	19.5
6	Barnyard grass species	17.8	8.3	46.3	1.1	6.0	11.4	19.4
7	Biennial wormwood	30.8	5.9	19.0	0.4	1.4	2.4	14.6
8	Green foxtail	22.6	4.9	21.6	0.3	1.4	8.2	11.4
9	Lamb's-quarters	25.0	3.8	15.2	0.2	0.9	3.4	10.1
10	Thyme-leaved spurge	23.0	3.5	15.4	0.2	0.8	1.4	9.1
11	Dandelion	13.5	3.8	28.5	0.3	2.4	4.4	8.7
12	Willow species	28.3	1.5	5.3	0.1	0.2	0.8	7.3
13	Pale smartweed	19.9	2.1	10.5	0.2	0.8	1.4	6.9
14	Golden dock	17.9	1.8	10.1	0.1	0.6	1.8	6.0
15	Spiny annual sow-thistle	14.7	2.1	14.2	0.1	0.9	5.4	5.8
16	Wild oats	14.3	1.1	7.5	0.2	1.4	2.6	5.3
17	Purslane	10.1	2.1	20.4	0.1	1.5	5.6	5.0
18	Common yellow wood-sorrel	7.1	1.4	20.0	0.3	3.6	3.6	4.6
19	Marsh yellow cress	8.3	1.8	21.1	0.1	0.8	1.0	3.8
20	Northern willowherb	12.9	0.6	5.0	0.1	0.4	0.6	3.5
21	Witch grass	6.5	0.6	10.0	< 0.1	0.6	0.6	2.1
22	Showy milkweed	6.7	0.3	5.0	< 0.1	0.6	0.6	1.9
23	Oak-leaved goosefoot	6.5	0.3	5.0	< 0.1	0.6	0.6	1.8
24	American dragonhead	7.1	0.4	5.0	< 0.1	0.2	0.2	1.8
25	Wild mustard	7.1	0.4	5.0	< 0.1	0.2	0.2	1.8
26	Narrow-leaved hawk's-beard	6.5	0.3	5.0	< 0.1	0.4	0.4	1.7
27	Dock species	6.5	0.3	5.0	< 0.1	0.4	0.4	1.7
28	Kochia	6.5	0.3	5.0	< 0.1	0.2	0.2	1.6
29	Scouring-rush	6.5	0.3	5.0	< 0.1	0.2	0.2	1.6
30	Buffalograss	6.5	0.3	5.0	< 0.1	0.2	0.2	1.6
31	Tumble pigweed	4.5	0.4	10.0	< 0.1	0.4	0.4	1.4
32	Round-leaved mallow	4.5	0.2	5.0	< 0.1	0.4	0.4	1.2

Table 88. 2016 Annual crops in Grey in the Central Crop Reporting District (12 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Wild buckwheat	62.8	17.8	28.3	1.2	1.8	5.8	47.8
2	Green foxtail	28.4	6.9	24.4	1.2	4.2	32.2	27.9
3	Redroot pigweed	36.9	9.7	26.4	0.6	1.6	4.4	26.2
4	Canola/rapeseed	25.2	7.2	28.5	0.6	2.2	3.6	20.3
5	Barnyard grass species	20.6	6.8	33.2	0.7	3.4	7.0	20.2
6	Pale smartweed	32.1	5.5	17.2	0.4	1.3	3.0	18.9
7	Common pepper-grass	6.5	3.6	55.0	1.2	18.0	18.0	18.3
8	Marsh yellow cress	19.2	6.3	32.6	0.5	2.4	3.6	16.8
9	Lamb's-quarters	7.2	4.3	60.0	0.5	6.8	6.8	11.9
10	Purslane speedwell	6.5	2.6	40.0	0.7	10.4	10.4	11.9
11	Broad-leaved plantain	9.9	3.9	40.0	0.4	3.8	3.8	10.9
12	Biennial wormwood	16.3	2.3	14.0	0.1	0.6	1.0	7.8
13	Needle-and-thread grass	9.9	2.0	20.0	0.2	1.6	1.6	6.4
14	Yellow foxtail	9.9	2.0	20.0	0.1	1.0	1.0	5.7
15	Field horsetail	6.5	1.0	15.0	0.3	4.2	4.2	5.7
16	Purslane	7.2	2.2	30.0	0.1	1.2	1.2	5.1
17	Rough cinquefoil	12.7	0.6	5.0	0.1	0.8	1.0	5.1
18	Bicknell's geranium	7.2	1.8	25.0	0.1	1.6	1.6	5.1
19	Shepherd's-purse	9.9	1.0	10.0	0.1	1.0	1.0	4.7
20	Narrow-leaved hawk's-beard	7.2	1.4	20.0	0.1	1.0	1.0	4.2
21	Maple-leaved goosefoot	6.5	1.3	20.0	0.1	0.8	0.8	3.6
22	Wheat	10.5	0.5	5.0	< 0.1	0.2	0.2	3.5
23	Large crab grass	6.5	1.0	15.0	0.1	0.8	0.8	3.3
24	Prostrate pigweed	9.9	0.5	5.0	< 0.1	0.2	0.2	3.3
25	Stink grass	7.2	0.7	10.0	0.1	0.8	0.8	3.3
26	Round-leaved mallow	6.5	0.3	5.0	< 0.1	0.2	0.2	2.2

Table 89. 2016 Annual crops in Lorne in the Central Crop Reporting District (10 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Green foxtail	28.1	13.4	47.5	5.2	18.3	40.4	53.9
2	Chickweed	50.5	16.5	32.7	2.0	4.0	10.2	41.7
3	Wild buckwheat	44.3	19.2	43.3	1.8	4.0	8.6	41.1
4	Stinkweed	12.6	9.4	75.0	1.7	13.6	13.6	23.4
5	Canola/rapeseed	24.8	8.2	32.9	0.9	3.5	13.4	19.8
6	Dandelion	40.9	3.3	8.0	0.2	0.5	1.2	14.8
7	Yellow foxtail	12.6	5.0	40.0	0.7	5.8	5.8	12.8
8	Barnyard grass species	15.7	4.6	29.3	0.5	3.3	4.2	11.8
9	Wheat	19.1	2.7	14.2	0.5	2.7	10.4	10.9
10	Wild oats	13.2	4.6	35.0	0.2	1.6	1.6	9.1
11	Shepherd's-purse	25.8	1.9	7.4	0.1	0.4	0.6	9.0
12	Thyme-leaved spurge	12.6	3.1	25.0	0.3	2.6	2.6	8.3
13	Night-flowering catchfly	12.1	3.0	25.0	0.3	2.6	2.6	8.0
14	Spear-leaved goosefoot	12.6	3.1	25.0	0.2	1.4	1.4	7.3
15	Hemp-nettle	13.2	2.0	15.0	0.1	0.6	0.6	5.7
16	Pale smartweed	13.2	2.0	15.0	0.1	0.6	0.6	5.7
17	Lamb's-quarters	16.6	0.8	5.0	< 0.1	0.2	0.4	5.3
18	Canada thistle	12.6	0.6	5.0	< 0.1	0.2	0.2	4.0
19	Round-leaved mallow	3.4	1.7	50.0	0.1	3.8	3.8	3.3
20	Perennial sow-thistle	3.4	0.9	25.0	< 0.1	1.4	1.4	2.0
21	American dragonhead	3.6	0.2	5.0	< 0.1	0.2	0.2	1.1
22	False ragweed	3.4	0.2	5.0	< 0.1	0.2	0.2	1.1

Table 90. 2016 Annual crops in Louise in the Central Crop Reporting District (11 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Green foxtail	26.4	9.7	36.6	1.5	5.9	15.8	44.3
2	Round-leaved mallow	80.9	9.0	11.1	0.5	0.6	1.6	37.3
3	Wild buckwheat	59.9	9.4	15.7	0.5	0.9	3.0	33.6
4	Canada thistle	17.4	6.4	36.7	0.6	3.6	8.8	22.6
5	Night-flowering catchfly	27.8	5.7	20.5	0.4	1.4	4.8	19.9
6	Redroot pigweed	27.3	5.4	19.6	0.4	1.3	2.4	19.0
7	Wild oats	20.9	3.7	17.5	0.4	2.0	3.8	16.2
8	Dandelion	16.9	4.3	25.2	0.3	1.5	2.6	13.5
9	Canola/rapeseed	39.6	2.5	6.2	0.1	0.2	0.4	13.1
10	Spiny annual sow-thistle	20.5	3.6	17.4	0.1	0.7	0.8	11.4
11	Shepherd's-purse	19.9	3.1	15.4	0.1	0.7	1.4	10.6
12	Stork's bill	10.0	2.5	25.0	0.2	1.6	1.6	8.1
13	Barnyard grass species	16.9	1.2	7.0	0.1	0.7	0.8	7.1
14	Chickweed	10.5	1.0	10.0	0.2	2.0	2.0	7.1
15	Pale smartweed	6.9	1.7	25.0	0.2	2.4	2.4	6.5
16	Foxtail barley	10.5	0.5	5.0	0.1	0.6	0.6	3.9
17	Kochia	10.5	0.5	5.0	< 0.1	0.2	0.2	3.2
18	Lamb's-quarters	10.5	0.5	5.0	< 0.1	0.2	0.2	3.2
19	False cleavers	10.5	0.5	5.0	< 0.1	0.2	0.2	3.2
20	Wheat	10.5	0.5	5.0	< 0.1	0.2	0.2	3.2
21	Dock species	10.5	0.5	5.0	< 0.1	0.2	0.2	3.2
22	Annual sow-thistle	10.0	0.5	5.0	< 0.1	0.2	0.2	3.0
23	Broad-leaved plantain	9.1	0.5	5.0	< 0.1	0.2	0.2	2.8
24	Green pigweed	2.6	0.9	35.0	< 0.1	1.8	1.8	2.5
25	Quack grass	2.6	0.4	15.0	< 0.1	1.4	1.4	1.6

Table 91. 2016 Annual crops in MacDonald in the Central Crop Reporting District (19 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Canola/rapeseed	20.4	13.2	64.6	2.2	11.0	18.2	46.4
2	Green foxtail	5.8	5.2	90.0	3.8	65.2	65.2	44.7
3	Barnyard grass species	43.6	8.4	19.3	1.2	2.8	9.0	36.7
4	Pale smartweed	49.8	8.3	16.6	0.9	1.7	6.8	35.3
5	Wild oats	18.1	7.9	43.8	0.9	4.9	9.8	25.2
6	Wild buckwheat	35.3	6.0	17.0	0.3	1.0	3.6	22.5
7	Yellow foxtail	23.6	3.0	12.9	0.3	1.2	2.0	14.2
8	Redroot pigweed	19.6	3.8	19.3	0.2	1.1	2.2	13.5
9	Canada thistle	19.6	2.4	12.5	0.3	1.8	3.2	12.7
10	Foxtail barley	17.8	1.2	6.6	< 0.1	0.3	0.4	7.5
11	Round-leaved mallow	7.3	2.2	29.9	0.1	1.7	2.0	6.6
12	Perennial sow-thistle	11.6	0.9	7.5	< 0.1	0.3	0.4	5.1
13	Wheat	11.6	0.6	5.0	0.1	0.6	0.8	5.0
14	Tartary buckwheat	6.7	1.3	20.0	0.1	1.0	1.0	4.6
15	Dandelion	8.3	0.9	10.9	< 0.1	0.4	0.6	4.2
16	Oak-leaved goosefoot	5.8	0.6	10.0	< 0.1	0.8	0.8	3.0
17	Clammy hedge-hyssop	5.8	0.3	5.0	0.1	1.2	1.2	2.8
18	Marsh yellow cress	5.8	0.6	10.0	< 0.1	0.4	0.4	2.8
19	Prostrate knotweed	5.8	0.3	5.0	< 0.1	0.2	0.2	2.3
20	Dock species	5.5	0.3	5.0	< 0.1	0.2	0.2	2.2
21	Spiny annual sow-thistle	1.5	0.2	15.0	< 0.1	0.6	0.6	0.9
22	Stork's bill	1.5	0.2	15.0	< 0.1	0.6	0.6	0.9
23	Yellow sweet-clover	1.6	0.1	5.0	< 0.1	0.2	0.2	0.6
24	Thyme-leaved spurge	1.5	0.1	5.0	< 0.1	0.2	0.2	0.6

Table 92. 2016 Annual crops in Morris in the Central Crop Reporting District (19 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Green foxtail	15.1	11.0	73.2	10.7	70.8	163.4	54.9
2	Dandelion	68.4	16.5	24.2	2.4	3.6	26.4	34.4
3	Wild buckwheat	53.6	14.5	27.0	1.3	2.4	8.8	25.5
4	Round-leaved mallow	35.5	10.4	29.4	1.6	4.5	14.2	20.6
5	Canola/rapeseed	27.1	7.1	26.2	2.1	7.7	30.6	18.6
6	Redroot pigweed	42.1	8.8	21.0	0.4	1.0	2.8	15.7
7	Wheat	31.9	8.0	25.2	0.7	2.1	7.0	14.4
8	Yellow foxtail	21.1	6.5	31.0	1.3	6.1	17.8	13.9
9	Biennial wormwood	42.0	5.8	13.8	0.3	0.8	4.4	13.0
10	Canada thistle	30.5	6.1	20.0	0.5	1.8	4.8	12.1
11	Pale smartweed	42.7	4.0	9.3	0.2	0.4	1.2	11.1
12	Lamb's-quarters	7.6	4.6	61.1	1.0	13.0	16.4	8.9
13	Thyme-leaved spurge	31.7	3.0	9.6	0.1	0.4	1.0	8.3
14	Spiny annual sow-thistle	8.0	5.2	65.7	0.4	4.5	4.8	6.9
15	Soybean	19.7	1.3	6.5	0.1	0.3	0.4	4.5
16	Rough cinquefoil	6.3	1.9	30.0	0.2	3.0	3.0	3.3
17	Oak-leaved goosefoot	6.3	0.9	15.0	0.4	5.6	5.6	3.2
18	Dock species	6.3	1.6	25.0	0.2	2.4	2.4	2.9
19	Wild mustard	7.6	1.4	18.9	0.1	0.9	1.0	2.7
20	Marsh yellow cress	10.4	0.7	7.0	0.1	0.6	0.8	2.6
21	Wild oats	4.9	1.2	25.0	0.1	1.8	1.8	2.1
22	Aster species	6.3	0.9	15.0	0.1	1.2	1.2	2.1
23	Tumble pigweed	6.3	0.9	15.0	0.1	1.0	1.0	2.0
24	Bur oak	6.3	0.9	15.0	< 0.1	0.6	0.6	1.9
25	Broad-leaved plantain	6.3	0.9	15.0	< 0.1	0.6	0.6	1.9
26	Showy milkweed	6.3	0.6	10.0	0.1	1.0	1.0	1.8
27	Goldenrod species	6.3	0.6	10.0	< 0.1	0.4	0.4	1.6
28	Rush species	6.3	0.6	10.0	< 0.1	0.4	0.4	1.6
29	Beggarticks species	6.3	0.6	10.0	< 0.1	0.4	0.4	1.6
30	Barnyard grass species	5.8	0.5	8.5	< 0.1	0.5	0.6	1.5
31	Northern willowherb	6.3	0.3	5.0	< 0.1	0.2	0.2	1.4
32	Foxtail barley	5.0	0.4	8.4	< 0.1	0.5	0.6	1.3
33	Perennial sow-thistle	5.7	0.3	5.0	< 0.1	0.2	0.2	1.2
34	Common ragweed	1.6	0.1	5.0	< 0.1	0.2	0.2	0.3

Table 93. 2016 Annual crops in Norfolk Treherne & Victoria in the Central Crop Reporting District (14 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Wild mustard	9.4	9.4	100.0	8.4	89.4	89.4	34.7
2	Pale smartweed	51.5	19.8	38.5	4.3	8.3	23.2	33.9
3	Redroot pigweed	40.8	18.9	46.4	3.1	7.7	16.6	28.0
4	Barnyard grass species	64.8	16.1	24.8	2.1	3.3	15.0	26.7
5	Canola/rapeseed	39.2	12.5	31.9	2.3	5.8	28.8	21.0
6	Wild buckwheat	48.2	12.6	26.2	1.4	2.9	13.8	19.6
7	Canada thistle	41.6	10.1	24.4	1.9	4.6	17.2	18.9
8	Wild oats	48.3	9.4	19.5	0.9	1.8	7.2	16.0
9	Lamb's-quarters	31.7	11.9	37.6	1.1	3.6	8.0	15.8
10	Green foxtail	38.2	6.7	17.4	0.5	1.3	4.6	11.5
11	Chickweed	12.1	4.7	39.3	0.8	6.3	23.0	7.2
12	Round-leaved mallow	24.9	4.0	16.1	0.3	1.0	3.0	7.1
13	Kochia	17.4	4.3	24.7	0.4	2.2	3.6	6.5
14	Stinkweed	6.4	2.6	40.0	1.0	15.6	15.6	5.8
15	Rough cinquefoil	6.4	3.8	60.0	0.6	9.2	9.2	5.2
16	Dock species	6.4	4.5	70.0	0.4	5.8	5.8	4.9
17	Wheat	23.8	1.5	6.1	0.1	0.3	1.4	4.8
18	Spiny annual sow-thistle	21.5	1.5	7.1	0.1	0.4	0.6	4.5
19	Prostrate pigweed	15.5	1.1	7.1	< 0.1	0.3	0.4	3.2
20	Dandelion	8.9	1.8	20.0	0.1	0.8	0.8	2.7
21	Yellow foxtail	6.4	1.6	25.0	0.2	3.0	3.0	2.6
22	Night-flowering catchfly	9.1	1.2	13.5	0.1	1.1	1.4	2.5
23	Prickly lettuce	9.8	0.5	5.0	0.1	0.8	0.8	2.1
24	Absinth	9.8	0.5	5.0	< 0.1	0.2	0.2	1.9
25	False ragweed	9.8	0.5	5.0	< 0.1	0.2	0.2	1.9
26	Annual sow-thistle	2.5	1.4	55.0	0.2	7.6	7.6	1.8
27	Wormseed mustard	6.4	0.6	10.0	< 0.1	0.6	0.6	1.5
28	Purslane	6.4	0.6	10.0	< 0.1	0.4	0.4	1.5
29	Broad-leaved plantain	6.4	0.3	5.0	0.1	0.8	0.8	1.4
30	American dragonhead	6.4	0.3	5.0	< 0.1	0.2	0.2	1.2
31	Narrow-leaved hawk's-beard	6.4	0.3	5.0	< 0.1	0.2	0.2	1.2
32	Hemp-nettle	2.6	0.8	30.0	0.1	2.4	2.4	1.1
33	Stork's bill	2.5	0.5	20.0	< 0.1	1.6	1.6	0.8
34	Biennial wormwood	2.5	0.2	10.0	< 0.1	0.4	0.4	0.6

Table 94. 2016 Annual crops in North Norfolk in the Central Crop Reporting District (11 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Green foxtail	50.4	22.8	45.3	10.6	21.0	74.0	49.2
2	Wheat	31.3	19.5	62.1	5.1	16.2	39.4	29.3
3	Wild buckwheat	42.7	21.8	51.2	3.1	7.2	12.6	26.8
4	Redroot pigweed	49.7	16.5	33.2	1.9	3.9	10.6	21.8
5	Canola/rapeseed	28.4	15.0	52.7	3.2	11.3	35.6	21.2
6	Lamb's-quarters	32.7	11.9	36.3	2.9	8.8	43.0	19.3
7	Pale smartweed	41.1	14.5	35.2	1.7	4.1	10.0	18.7
8	Perennial sow-thistle	39.0	12.1	30.9	1.3	3.4	6.8	16.0
9	Dock species	29.6	8.9	29.9	1.6	5.4	8.0	13.7
10	Yellow foxtail	29.2	8.4	28.6	0.8	2.7	5.0	11.1
11	Barnyard grass species	8.4	7.5	90.0	2.0	23.8	23.8	10.8
12	Golden dock	29.2	2.9	10.1	0.3	1.0	2.2	6.8
13	Broad-leaved plantain	21.5	4.9	22.7	0.2	1.1	1.2	6.5
14	American dragonhead	17.7	2.4	13.3	0.1	0.7	1.2	4.3
15	Manitoba maple	22.0	1.1	5.0	0.1	0.4	0.6	4.2
16	Biennial wormwood	9.7	3.9	40.0	0.2	2.0	2.0	4.1
17	Oak-leaved goosefoot	21.5	1.1	5.0	0.1	0.3	0.4	4.0
18	Wild oats	8.4	2.1	25.0	0.3	3.6	3.6	3.2
19	Canada thistle	14.6	1.1	7.6	0.1	0.8	1.4	3.2
20	Purslane	15.3	1.2	8.1	< 0.1	0.3	0.4	3.1
21	Round-leaved mallow	15.3	0.8	5.0	< 0.1	0.2	0.2	2.8
22	Black medick	9.7	1.5	15.0	0.1	1.2	1.2	2.6
23	Foxtail barley	9.7	0.5	5.0	0.2	1.6	1.6	2.2
24	Field bean	10.2	0.5	5.0	< 0.1	0.2	0.2	1.9
25	Hedge bindweed	9.7	0.5	5.0	< 0.1	0.2	0.2	1.8
26	Night-flowering catchfly	9.7	0.5	5.0	< 0.1	0.2	0.2	1.8
27	Maple-leaved goosefoot	9.7	0.5	5.0	< 0.1	0.2	0.2	1.8
28	Wild mustard	9.3	0.5	5.0	< 0.1	0.2	0.2	1.7
29	Yellow sweet-clover	9.3	0.5	5.0	< 0.1	0.2	0.2	1.7
30	Willow species	7.7	0.8	10.0	< 0.1	0.6	0.6	1.7
31	Chickweed	7.7	0.4	5.0	< 0.1	0.2	0.2	1.4
32	Dandelion	7.7	0.4	5.0	< 0.1	0.2	0.2	1.4

Table 95. 2016 Annual crops in Pembina in the Central Crop Reporting District (11 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Wild buckwheat	81.1	24.7	30.4	1.5	1.8	4.2	42.6
2	Green foxtail	27.1	9.9	36.6	4.6	17.1	51.0	37.2
3	Wild oats	63.6	15.5	24.4	1.8	2.8	9.4	33.7
4	Canada thistle	27.0	10.8	40.0	3.2	11.9	33.8	30.5
5	Canola/rapeseed	44.3	10.9	24.7	0.5	1.1	3.0	19.7
6	Annual sow-thistle	9.0	8.5	95.0	2.0	22.6	22.6	19.1
7	Spiny annual sow-thistle	18.4	10.4	56.6	1.1	6.1	11.2	17.5
8	Soybean	9.0	7.6	85.0	1.0	11.4	11.4	13.1
9	Night-flowering catchfly	35.6	4.9	13.8	0.4	1.1	2.4	12.7
10	Round-leaved mallow	35.3	3.1	8.7	0.3	1.0	3.2	11.0
11	Golden dock	9.0	4.0	45.0	1.0	11.4	11.4	10.3
12	Dandelion	27.1	2.7	10.0	0.3	0.9	2.4	8.6
13	Barnyard grass species	18.0	4.0	22.5	0.4	2.1	2.6	8.6
14	Hemp-nettle	27.0	2.2	8.3	0.2	0.6	1.0	7.8
15	Broad-leaved plantain	9.0	4.0	45.0	0.3	3.8	3.8	6.7
16	Yellow foxtail	26.6	1.3	5.0	0.1	0.2	0.2	6.4
17	Foxtail barley	9.0	0.9	10.0	0.1	1.4	1.4	3.1
18	Wheat	9.4	0.9	10.0	0.1	0.6	0.6	2.8
19	Pale smartweed	9.0	0.4	5.0	< 0.1	0.4	0.4	2.3
20	Thyme-leaved spurge	9.0	0.4	5.0	< 0.1	0.2	0.2	2.2
21	Biennial wormwood	9.0	0.4	5.0	< 0.1	0.2	0.2	2.2
22	Lamb's-quarters	8.7	0.4	5.0	< 0.1	0.2	0.2	2.1

Table 96. 2016 Annual crops in Portage La Prairie & Cartier in the Central Crop Reporting District (26 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Dandelion	19.1	3.8	20.0	3.2	17.0	84.2	55.8
2	Barnyard grass species	34.5	8.4	24.5	1.3	3.7	19.4	47.0
3	Wild buckwheat	38.8	6.1	15.6	0.4	1.0	3.4	32.1
4	Wild oats	15.4	5.0	32.6	0.9	6.2	23.6	28.4
5	Green foxtail	15.4	3.4	22.3	0.6	4.0	14.0	20.7
6	Redroot pigweed	18.3	4.0	22.0	0.4	2.1	7.0	20.1
7	Pale smartweed	25.0	3.2	13.0	0.2	0.9	3.0	18.8
8	Spiny annual sow-thistle	20.6	1.8	8.9	0.1	0.4	1.0	12.4
9	Canola/rapeseed	15.8	2.0	12.4	0.1	0.6	0.8	11.2
10	Field horsetail	7.5	1.1	14.8	0.3	3.8	7.4	8.7
11	Round-leaved mallow	11.6	0.6	5.0	< 0.1	0.2	0.2	5.7
12	Black medick	3.8	1.3	35.0	0.1	2.4	2.4	5.4
13	Tumble pigweed	7.8	0.6	7.6	< 0.1	0.3	0.4	4.3
14	Canada thistle	7.9	0.4	5.0	< 0.1	0.5	0.6	4.2
15	Clover species	4.0	0.6	15.0	0.1	1.8	1.8	3.6
16	Perennial sow-thistle	3.7	0.5	15.0	< 0.1	1.0	1.0	3.0
17	Dock species	3.7	0.4	10.0	< 0.1	0.6	0.6	2.4
18	Siberian elm	2.7	0.4	15.0	< 0.1	1.2	1.2	2.2
19	Cocklebur	4.3	0.2	5.0	< 0.1	0.2	0.2	2.1
20	Oak-leaved goosefoot	4.0	0.2	5.0	< 0.1	0.2	0.2	1.9
21	Yellow sweet-clover	4.0	0.2	5.0	< 0.1	0.2	0.2	1.9
22	Prostrate pigweed	3.8	0.2	5.0	< 0.1	0.2	0.2	1.9
23	Biennial wormwood	3.8	0.2	5.0	< 0.1	0.2	0.2	1.9
24	Lamb's-quarters	2.7	0.3	10.0	< 0.1	0.4	0.4	1.7
25	Water smartweed	2.8	0.1	5.0	< 0.1	0.2	0.2	1.4
26	Kochia	2.7	0.1	5.0	< 0.1	0.2	0.2	1.3

Table 97. 2016 Annual crops in Rhineland & Montcalm in the Central Crop Reporting District (24 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Redroot pigweed	43.6	9.2	21.1	0.7	1.6	4.8	51.7
2	Canola/rapeseed	23.7	8.7	36.7	0.7	2.8	6.8	43.0
3	Round-leaved mallow	39.4	4.4	11.2	0.2	0.6	2.2	28.6
4	Barnyard grass species	18.1	4.8	26.8	0.2	1.2	2.0	21.3
5	Lamb's-quarters	25.5	4.0	15.6	0.2	0.7	2.8	21.2
6	Dandelion	16.5	3.5	21.5	0.2	1.3	3.4	18.3
7	Wild buckwheat	8.5	3.8	44.2	0.2	2.9	4.6	16.9
8	Spiny annual sow-thistle	13.8	3.2	23.1	0.2	1.5	1.8	16.4
9	Oak-leaved goosefoot	9.1	1.6	17.9	0.2	2.1	2.8	11.7
10	Pale smartweed	13.1	1.8	13.8	0.1	1.0	5.6	11.7
11	Purslane	12.5	2.2	17.6	0.1	0.9	1.8	11.6
12	Biennial wormwood	12.7	1.4	10.7	0.1	0.5	0.8	8.7
13	Yellow foxtail	9.4	1.0	10.8	0.1	0.8	1.4	7.2
14	Wild oats	8.5	0.4	5.0	0.1	1.1	1.4	6.4
15	Canada thistle	5.3	0.7	12.4	0.1	1.5	2.0	5.3
16	Willow species	5.4	0.8	15.0	0.1	1.0	1.0	4.9
17	Wild mustard	5.4	0.5	10.0	< 0.1	0.4	0.4	3.4
18	Povertyweed	4.9	0.2	5.0	< 0.1	0.2	0.2	2.4
19	Foxtail barley	3.9	0.2	5.0	< 0.1	0.4	0.4	2.1
20	Green foxtail	3.8	0.2	5.0	< 0.1	0.2	0.2	1.8
21	Yellow sweet-clover	3.6	0.2	5.0	< 0.1	0.2	0.2	1.8
22	Siberian elm	3.6	0.2	5.0	< 0.1	0.2	0.2	1.8
23	Bicknell's geranium	1.4	0.1	10.0	< 0.1	0.4	0.4	0.9
24	Oats	1.4	0.1	5.0	< 0.1	0.4	0.4	0.8

Table 98. 2016 Annual crops in Stanley in the Central Crop Reporting District (14 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Yellow foxtail	33.5	14.9	44.5	4.2	12.6	42.6	52.7
2	Round-leaved mallow	54.7	15.2	27.8	1.8	3.3	17.4	37.7
3	Canola/rapeseed	48.5	14.0	28.8	1.2	2.4	7.6	30.2
4	Wild buckwheat	49.1	12.9	26.2	0.9	1.8	4.4	27.1
5	Purslane	28.3	8.7	30.8	0.5	1.9	4.2	17.0
6	Redroot pigweed	15.5	6.9	44.2	0.5	3.5	4.2	13.0
7	Dandelion	21.8	6.2	28.5	0.3	1.5	1.8	12.0
8	Canada thistle	29.7	4.7	15.8	0.3	0.9	1.6	11.9
9	Lamb's-quarters	22.0	5.2	23.5	0.3	1.4	1.8	11.1
10	Black medick	17.6	4.4	24.9	0.2	1.1	1.4	8.6
11	Wheat	11.1	4.0	35.6	0.3	2.7	3.0	7.8
12	Spiny annual sow-thistle	24.7	2.4	9.6	0.1	0.4	0.8	7.6
13	Foxtail barley	13.1	3.0	22.5	0.2	1.4	2.2	6.5
14	Wild oats	11.9	3.0	24.9	0.2	1.5	1.8	6.1
15	Green foxtail	2.4	2.3	95.0	0.4	17.6	17.6	5.8
16	Broad-leaved plantain	13.1	2.0	15.0	0.1	1.0	1.2	5.2
17	Wild mustard	11.7	2.1	18.1	0.1	0.8	1.6	4.8
18	Tumble pigweed	9.3	1.9	20.0	0.2	1.8	1.8	4.7
19	Stink grass	6.6	2.3	35.0	0.2	2.4	2.4	4.4
20	Barley	8.7	0.9	10.0	0.1	0.8	0.8	3.0
21	Barnyard grass species	6.6	1.3	20.0	0.1	1.0	1.0	2.9
22	Clover species	8.7	0.9	10.0	< 0.1	0.4	0.4	2.7
23	Kochia	9.0	0.8	8.6	< 0.1	0.3	0.4	2.7
24	Night-flowering catchfly	9.4	0.5	5.0	< 0.1	0.4	0.4	2.5
25	Siberian elm	9.3	0.5	5.0	< 0.1	0.2	0.2	2.4
26	Biennial wormwood	6.2	0.9	15.0	< 0.1	0.6	0.6	2.3
27	Absinth	8.7	0.4	5.0	< 0.1	0.2	0.2	2.2
28	Northern willowherb	8.7	0.4	5.0	< 0.1	0.2	0.2	2.2
29	Perennial sow-thistle	2.4	0.9	35.0	< 0.1	1.6	1.6	1.5
30	Pale smartweed	2.4	0.2	10.0	< 0.1	1.0	1.0	0.9
31	Showy milkweed	2.5	0.3	10.0	< 0.1	0.4	0.4	0.8

Table 99. 2016 Annual crops in Thompson & Roland in the Central Crop Reporting District (19 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Yellow foxtail	40.3	13.6	33.6	1.4	3.4	13.6	34.1
2	Dandelion	42.1	10.6	25.0	0.9	2.2	7.8	27.5
3	Round-leaved mallow	36.2	7.9	21.7	0.5	1.5	4.0	19.8
4	Wild buckwheat	31.2	8.5	27.2	0.5	1.8	4.2	19.5
5	Green foxtail	12.6	7.0	55.6	1.1	8.4	14.0	19.3
6	Canada thistle	39.7	7.0	17.6	0.3	0.8	1.8	17.5
7	Purslane	12.6	6.7	53.4	0.7	5.9	8.4	16.0
8	Barnyard grass species	16.5	4.7	28.6	0.8	4.8	18.4	15.5
9	Canola/rapeseed	23.8	6.8	28.7	0.4	1.6	2.4	14.8
10	Wheat	24.1	3.4	14.3	0.2	0.9	2.4	10.2
11	Black medick	15.7	2.6	16.5	0.4	2.4	6.0	9.4
12	Wild oats	11.9	2.1	17.4	0.4	3.4	4.8	8.3
13	Golden dock	6.0	3.3	55.0	0.4	6.6	6.6	8.1
14	Thyme-leaved spurge	15.6	2.7	17.1	0.2	1.5	3.0	8.0
15	Kochia	18.0	2.4	13.1	0.1	0.6	1.4	7.0
16	Foxtail barley	11.8	2.6	22.4	0.2	1.7	2.2	6.8
17	Redroot pigweed	11.6	2.2	18.6	0.2	2.0	2.8	6.6
18	Wild mustard	13.8	2.8	20.1	0.1	0.9	1.8	6.6
19	Leafy spurge	6.0	3.0	50.0	0.3	4.4	4.4	6.6
20	Stink grass	7.9	2.2	28.1	0.1	1.7	3.2	5.0
21	Flodman's thistle	10.1	1.6	16.0	0.1	1.4	2.0	4.9
22	Spiny annual sow-thistle	12.4	1.2	10.0	< 0.1	0.4	0.4	4.2
23	Lamb's-quarters	11.6	0.6	5.0	< 0.1	0.2	0.2	3.1
24	Biennial wormwood	5.5	1.4	25.0	0.1	1.2	1.2	3.0
25	Field horsetail	1.5	0.8	55.0	0.2	11.4	11.4	2.8
26	Chickweed	5.4	1.1	20.0	0.1	1.0	1.0	2.6
27	Green pigweed	4.1	1.0	25.0	0.1	1.8	1.8	2.5
28	Prostrate knotweed	6.0	0.6	10.0	< 0.1	0.4	0.4	2.0
29	Oak-leaved goosefoot	7.0	0.3	5.0	< 0.1	0.2	0.2	1.9
30	Flixweed	6.0	0.3	5.0	< 0.1	0.2	0.2	1.6
31	American vetch	6.0	0.3	5.0	< 0.1	0.2	0.2	1.6
32	Toad rush	1.5	0.6	40.0	0.1	3.4	3.4	1.4
33	Clammy hedge-hyssop	4.1	0.2	5.0	< 0.1	0.2	0.2	1.1
34	Corn	1.5	0.3	20.0	< 0.1	1.0	1.0	0.7

Table 100. 2016 Annual crops in WestLake-Gladstone & Glenella-Lansdowne in the Central Crop Reporting District (20 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Green foxtail	54.4	27.1	49.9	19.1	35.2	98.0	55.9
2	Broad-leaved plantain	36.5	14.6	40.0	5.6	15.2	57.4	22.0
3	Wild oats	43.4	14.5	33.4	2.9	6.6	40.4	17.7
4	Barnyard grass species	40.1	9.7	24.3	4.1	10.2	40.4	17.3
5	Wild buckwheat	52.5	15.9	30.3	1.7	3.2	13.4	17.3
6	Redroot pigweed	44.9	11.3	25.1	1.5	3.5	12.0	13.8
7	Pale smartweed	21.4	10.8	50.6	2.6	12.4	24.8	12.9
8	Dandelion	53.2	8.5	16.0	0.7	1.3	5.0	11.9
9	Lamb's-quarters	30.8	7.7	25.1	1.4	4.6	17.8	10.2
10	Yellow foxtail	15.3	5.7	37.3	1.9	12.3	28.2	8.2
11	Perennial sow-thistle	31.0	4.9	15.7	0.3	1.1	4.2	6.8
12	Witch grass	6.4	1.9	30.0	2.7	41.8	41.8	6.8
13	Night-flowering catchfly	20.3	6.1	30.2	0.6	3.0	9.4	6.6
14	Northern willowherb	17.1	4.7	27.6	1.1	6.4	15.8	6.5
15	Wild mustard	13.0	5.2	40.4	1.1	8.7	16.2	6.3
16	Canola/rapeseed	23.7	4.3	18.3	0.3	1.2	2.0	5.5
17	Wheat	14.7	5.7	38.8	0.5	3.5	7.6	5.5
18	Canada thistle	28.8	2.6	8.9	0.2	0.8	2.0	5.2
19	Field horsetail	15.8	2.0	12.7	0.8	4.9	8.0	4.3
20	Tumble pigweed	17.1	3.5	20.8	0.2	1.1	1.8	4.2
21	Black medick	18.7	2.9	15.5	0.2	0.9	1.8	4.0
22	Dog mustard	11.9	3.8	32.1	0.2	1.8	3.0	3.7
23	Rough cinquefoil	14.8	3.1	20.8	0.1	0.9	1.0	3.5
24	Yellow sweet-clover	17.5	1.8	10.6	0.1	0.6	2.0	3.2
25	Thyme-leaved spurge	10.7	2.2	20.3	0.2	1.6	2.4	2.7
26	Maple-leaved goosefoot	16.9	0.8	5.0	0.1	0.4	1.0	2.6
27	Prostrate knotweed	9.4	1.9	20.3	0.2	2.6	3.4	2.5
28	Alfalfa	12.0	1.5	12.7	0.1	0.6	0.8	2.3
29	Tartary buckwheat	3.0	2.7	90.0	0.3	10.2	10.2	2.2
30	Canada fleabane	6.6	2.3	35.0	0.1	2.0	2.0	2.2
31	Oak-leaved goosefoot	11.7	0.9	7.7	0.1	0.9	1.2	2.1
32	Absinth	3.0	1.3	45.0	0.5	17.6	17.6	2.0
33	Purslane	11.7	0.9	7.8	0.1	0.5	0.8	2.0
34	Biennial wormwood	10.9	1.1	10.0	0.1	0.5	0.8	2.0
35	Spiny annual sow-thistle	5.3	2.1	40.0	0.1	2.8	2.8	2.0
36	Round-leaved mallow	12.0	0.6	5.0	< 0.1	0.4	0.6	1.8
37	Dock species	10.9	0.8	7.5	0.1	0.5	0.8	1.8
38	Foxtail barley	5.3	0.8	15.0	0.3	6.4	6.4	1.7
39	Perennial rye grass	4.1	1.7	40.0	0.2	3.8	3.8	1.6
40	Narrow-leaved hawk's-beard	5.2	1.0	20.0	0.1	1.4	1.4	1.3
41	Clover species	3.0	1.3	45.0	0.1	4.0	4.0	1.2
42	Showy milkweed	6.6	0.7	10.0	< 0.1	0.6	0.6	1.2
43	Silverweed	6.4	0.3	5.0	0.1	1.2	1.2	1.1
44	Willow species	4.1	0.6	15.0	0.1	2.8	2.8	1.0
45	Chickweed	6.4	0.3	5.0	< 0.1	0.4	0.4	1.0
46	Currant species	6.4	0.3	5.0	< 0.1	0.2	0.2	1.0
47	Marsh yellow cress	5.2	0.5	10.0	< 0.1	0.6	0.6	0.9
48	Yellow toadflax	4.3	0.2	5.0	< 0.1	0.2	0.2	0.6

Table 101. 2016 Annual crops in Emerson-Franklin & De Salaberry in the Eastern Crop Reporting District (14 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Redroot pigweed	61.0	17.9	29.3	1.7	2.8	14.4	45.6
2	Biennial wormwood	38.8	11.4	29.4	1.9	4.9	22.8	37.7
3	Wild buckwheat	77.9	11.0	14.1	0.7	0.9	2.4	30.1
4	Oak-leaved goosefoot	27.9	7.8	28.0	1.4	4.9	16.2	26.7
5	Wheat	39.1	9.9	25.4	0.9	2.4	5.8	25.8
6	Dandelion	31.6	7.3	23.2	0.6	2.1	8.2	19.1
7	Round-leaved mallow	31.5	5.9	18.7	0.4	1.3	2.0	15.0
8	Canola/rapeseed	37.1	4.4	11.7	0.2	0.5	1.0	12.2
9	Barnyard grass species	37.7	2.6	6.9	0.1	0.3	0.6	9.9
10	Clover species	8.8	4.8	55.0	0.2	2.6	2.6	8.5
11	Pale smartweed	36.5	1.8	5.0	0.1	0.2	0.2	8.4
12	Dock species	22.3	2.1	9.3	0.1	0.5	1.2	6.8
13	Broad-leaved plantain	14.6	3.1	21.0	0.1	0.8	1.0	6.6
14	Lamb's-quarters	14.2	2.1	15.0	0.2	1.3	2.4	6.3
15	Yellow foxtail	14.2	2.5	17.5	0.1	0.9	1.4	6.0
16	Spiny annual sow-thistle	12.9	2.1	16.2	0.1	0.8	1.6	5.2
17	Wild oats	21.7	1.1	5.0	< 0.1	0.2	0.2	5.0
18	Purslane	17.1	1.2	7.1	< 0.1	0.3	0.4	4.4
19	Green foxtail	12.9	0.6	5.0	< 0.1	0.3	0.4	3.1
20	Marsh yellow cress	8.8	0.9	10.0	< 0.1	0.4	0.4	2.6
21	Manitoba maple	7.1	0.7	10.0	< 0.1	0.4	0.4	2.1
22	Foxtail barley	8.8	0.4	5.0	< 0.1	0.2	0.2	2.0
23	Rough cinquefoil	8.8	0.4	5.0	< 0.1	0.2	0.2	2.0
24	Soybean	7.4	0.4	5.0	< 0.1	0.2	0.2	1.7
25	Perennial sow-thistle	7.1	0.4	5.0	< 0.1	0.2	0.2	1.6
26	Thyme-leaved spurge	7.1	0.4	5.0	< 0.1	0.2	0.2	1.6
27	Common ragweed	4.2	0.4	10.0	< 0.1	0.4	0.4	1.3
28	Sunflower	4.2	0.4	10.0	< 0.1	0.4	0.4	1.3
29	Canada thistle	4.2	0.4	10.0	< 0.1	0.4	0.4	1.3

Table 102. 2016 Annual crops in Hanover, Tache, Ritchot, Ste. Anne, La Broquerie in the Eastern Crop Reporting District (18 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Yellow foxtail	28.0	14.0	50.1	7.3	26.0	82.8	92.1
2	Wild buckwheat	43.2	9.1	21.0	0.6	1.5	6.0	30.4
3	Barnyard grass species	42.4	6.0	14.2	0.4	1.0	3.2	23.6
4	Wheat	32.2	5.7	17.8	0.5	1.7	3.4	21.6
5	Pale smartweed	34.2	3.5	10.4	0.2	0.5	1.6	15.7
6	Dandelion	24.8	3.7	14.8	0.4	1.5	3.4	15.1
7	Canola/rapeseed	9.7	4.7	48.8	0.6	6.4	10.4	15.1
8	Lamb's-quarters	25.0	3.2	12.6	0.2	0.9	2.2	13.1
9	Redroot pigweed	29.5	2.7	9.1	0.1	0.5	1.4	12.9
10	Broad-leaved plantain	16.8	3.8	22.4	0.2	1.3	2.2	11.8
11	Clover species	11.7	1.5	12.8	0.1	0.6	1.0	5.9
12	Canada thistle	6.1	1.2	20.0	0.2	3.6	3.6	5.3
13	Oak-leaved goosefoot	12.7	0.6	5.0	0.1	0.4	0.6	4.7
14	Golden dock	7.6	1.1	15.0	0.1	1.2	1.2	4.5
15	Soybean	5.1	1.3	25.0	0.1	1.4	1.4	3.9
16	Biennial wormwood	6.9	1.0	15.0	0.1	0.8	0.8	3.8
17	Bird's-foot trefoil	6.1	0.6	10.0	< 0.1	0.8	0.8	2.9
18	Night-flowering catchfly	7.6	0.4	5.0	< 0.1	0.2	0.2	2.7
19	Stinkweed	5.6	0.6	10.0	< 0.1	0.6	0.6	2.6
20	Round-leaved mallow	4.1	0.6	15.0	0.1	1.6	1.6	2.6
21	Green foxtail	4.1	0.6	15.0	< 0.1	0.8	0.8	2.3
22	American vetch	6.1	0.3	5.0	< 0.1	0.4	0.4	2.3
23	Thyme-leaved spurge	5.6	0.3	5.0	< 0.1	0.2	0.2	2.0
24	Orchard grass	5.1	0.3	5.0	< 0.1	0.2	0.2	1.8
25	Alfalfa	4.1	0.2	5.0	< 0.1	0.2	0.2	1.5

Table 103. 2016 Annual crops in Springfield & Brokenhead in the Eastern Crop Reporting District (16 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Broad-leaved plantain	34.3	10.9	31.7	2.0	5.7	32.2	37.1
2	Barnyard grass species	18.3	9.1	49.9	2.5	13.9	35.0	34.0
3	Wild buckwheat	40.2	8.7	21.6	1.0	2.4	12.0	29.5
4	Night-flowering catchfly	6.1	3.9	65.0	3.2	52.0	52.0	27.8
5	Perennial sow-thistle	6.7	6.1	90.0	1.6	24.2	24.2	20.5
6	Wild oats	15.2	3.3	21.6	1.5	10.2	21.8	19.1
7	Lamb's-quarters	18.2	5.2	28.4	0.5	2.7	4.8	15.2
8	Pale smartweed	23.5	4.2	17.8	0.2	1.0	1.8	13.9
9	Dandelion	11.2	3.5	30.9	0.4	3.2	6.8	10.1
10	Wheat	12.9	2.8	21.8	0.2	1.9	3.6	9.1
11	Marsh yellow cress	13.5	2.0	15.0	0.2	1.8	3.4	8.3
12	Redroot pigweed	12.9	2.2	17.4	0.2	1.7	2.2	8.2
13	Yellow foxtail	15.9	1.8	11.4	0.1	0.9	1.8	8.0
14	Cocklebur	6.8	3.1	45.0	0.3	3.8	3.8	7.6
15	Canada thistle	13.5	2.0	15.0	0.1	1.0	1.4	7.6
16	Spiny annual sow-thistle	9.4	2.0	21.8	0.1	1.2	1.4	6.2
17	Biennial wormwood	6.2	1.5	24.7	0.2	2.4	7.2	4.8
18	Bird's-foot trefoil	6.8	1.4	20.0	0.1	1.4	1.4	4.4
19	Rough cinquefoil	6.1	0.9	15.0	0.1	2.2	2.2	3.9
20	Oats	6.8	1.0	15.0	0.1	0.8	0.8	3.7
21	Canola/rapeseed	6.8	0.7	10.0	< 0.1	0.6	0.6	3.2
22	Golden dock	4.5	0.9	20.0	0.1	1.8	1.8	3.0
23	Quack grass	4.3	0.9	20.0	0.1	1.6	1.6	2.9
24	Wild mustard	6.1	0.6	10.0	< 0.1	0.4	0.4	2.8
25	Field horsetail	6.8	0.3	5.0	< 0.1	0.2	0.2	2.6
26	Black medick	6.7	0.3	5.0	< 0.1	0.2	0.2	2.6
27	Shepherd's-purse	4.5	0.4	10.0	0.1	1.6	1.6	2.4
28	Thyme-leaved spurge	4.5	0.2	5.0	< 0.1	0.2	0.2	1.7

Table 104. 2016 Annual crops in Whitemouth, Lac du Bonnet, Alexander, Reynolds & Stuartburn in the Eastern Crop Reporting District (11 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Yellow foxtail	27.0	16.8	62.1	4.8	17.8	41.0	45.1
2	Dandelion	36.5	17.4	47.7	2.8	7.7	24.6	36.6
3	Field horsetail	45.0	9.4	20.9	2.8	6.2	25.6	31.3
4	Broad-leaved plantain	44.7	13.7	30.7	1.8	4.0	16.4	29.4
5	Wild buckwheat	63.8	8.6	13.5	0.4	0.6	1.0	21.2
6	Barnyard grass species	27.0	9.8	36.4	0.9	3.3	5.4	18.1
7	Canola/rapeseed	18.0	7.7	42.5	1.0	5.5	8.4	15.1
8	Marsh yellow cress	35.3	5.7	16.3	0.6	1.6	4.8	14.5
9	Green foxtail	8.6	4.3	50.0	1.6	18.4	18.4	13.7
10	Lamb's-quarters	27.6	5.0	17.9	0.4	1.5	3.8	11.5
11	Pale smartweed	36.7	3.8	10.3	0.2	0.6	1.0	11.1
12	Shepherd's-purse	17.7	4.0	22.5	0.2	1.1	2.0	7.7
13	Black medick	8.8	3.1	35.0	0.2	1.8	1.8	5.1
14	Spiny annual sow-thistle	18.8	1.4	7.4	0.1	0.3	0.4	5.0
15	Redroot pigweed	8.8	1.8	20.0	0.1	1.0	1.0	3.6
16	Clover species	8.8	1.8	20.0	0.1	1.0	1.0	3.6
17	Wild oats	8.6	1.3	15.0	0.2	1.8	1.8	3.5
18	Night-flowering catchfly	8.8	0.9	10.0	0.1	0.8	0.8	2.8
19	Blue-joint	8.6	0.4	5.0	0.1	1.6	1.6	2.7
20	Round-leaved mallow	9.2	0.9	10.0	< 0.1	0.4	0.4	2.7
21	Wild mustard	8.8	0.9	10.0	< 0.1	0.4	0.4	2.6
22	Hemp-nettle	9.6	0.5	5.0	< 0.1	0.2	0.2	2.3
23	Thyme-leaved spurge	9.6	0.5	5.0	< 0.1	0.2	0.2	2.3
24	Canada fleabane	8.8	0.4	5.0	< 0.1	0.4	0.4	2.2
25	Bladder campion	8.8	0.4	5.0	< 0.1	0.2	0.2	2.1
26	Purslane	8.8	0.4	5.0	< 0.1	0.2	0.2	2.1
27	Alfalfa	8.8	0.4	5.0	< 0.1	0.2	0.2	2.1

Table 105. 2016 Annual crops in Bifrost-Riverton, Armstrong & Gimli in the Interlake Crop Reporting District (12 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Broad-leaved plantain	45.5	14.3	31.5	1.3	2.7	9.6	41.8
2	Wheat	18.5	6.2	33.6	2.2	12.0	22.0	35.8
3	Field horsetail	9.0	5.4	60.0	1.8	20.0	20.0	28.1
4	Dandelion	38.9	6.7	17.3	0.4	1.1	1.8	21.9
5	Green foxtail	9.8	5.4	55.0	1.2	12.2	12.2	21.8
6	Wild buckwheat	45.2	5.8	12.9	0.3	0.7	1.2	21.3
7	Barnyard grass species	37.1	6.2	16.6	0.5	1.2	3.2	21.2
8	Perennial sow-thistle	19.3	4.8	24.7	0.3	1.7	3.0	13.9
9	Canola/rapeseed	18.9	4.3	22.6	0.3	1.5	2.0	12.8
10	Redroot pigweed	15.0	2.9	19.5	0.2	1.1	1.4	8.9
11	Night-flowering catchfly	9.5	2.8	30.0	0.2	2.6	2.6	8.4
12	Spiny annual sow-thistle	18.2	2.3	12.6	0.1	0.5	0.6	8.1
13	Canada thistle	11.6	1.6	13.9	0.1	0.9	1.0	5.8
14	Pale smartweed	12.4	1.0	8.1	< 0.1	0.4	1.0	4.6
15	False cleavers	11.6	1.0	8.9	< 0.1	0.4	0.4	4.4
16	Wild oats	9.5	0.9	10.0	0.1	0.8	0.8	4.2
17	Black medick	9.8	1.0	10.0	< 0.1	0.4	0.4	3.9
18	Willow species	9.5	0.9	10.0	< 0.1	0.4	0.4	3.8
19	Shepherd's-purse	9.0	0.9	10.0	< 0.1	0.4	0.4	3.6
20	Dog mustard	8.7	0.9	10.0	< 0.1	0.4	0.4	3.5
21	Biennial wormwood	9.8	0.5	5.0	< 0.1	0.2	0.2	3.1
22	Nightshade species	9.8	0.5	5.0	< 0.1	0.2	0.2	3.1
23	American dragonhead	9.5	0.5	5.0	< 0.1	0.2	0.2	3.0
24	Hemp-nettle	9.0	0.5	5.0	< 0.1	0.2	0.2	2.9
25	Oak-leaved goosefoot	8.7	0.4	5.0	< 0.1	0.2	0.2	2.8
26	Round-leaved mallow	8.7	0.4	5.0	< 0.1	0.2	0.2	2.8
27	Clover species	2.6	1.2	45.0	0.1	2.6	2.6	2.7
28	Marsh yellow cress	2.6	0.1	5.0	< 0.1	0.2	0.2	0.8
29	Soybean	2.6	0.1	5.0	< 0.1	0.2	0.2	0.8

Table 106. 2016 Annual crops in Fisher & Grahamdale in the Interlake Crop Reporting District (10 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Dandelion	44.0	11.7	26.6	0.9	2.0	5.0	35.8
2	Wild buckwheat	60.4	6.9	11.4	0.4	0.6	2.8	25.0
3	Broad-leaved plantain	47.9	7.2	14.9	0.3	0.6	1.2	21.4
4	Redroot pigweed	30.5	7.9	26.1	0.4	1.3	4.0	20.7
5	Perennial sow-thistle	14.0	7.7	55.0	0.5	3.6	3.6	19.3
6	Yellow sweet-clover	14.0	7.0	50.0	0.4	3.0	3.0	17.1
7	Oats	14.0	7.0	50.0	0.3	2.4	2.4	15.7
8	Rayless aster	14.0	6.3	45.0	0.4	2.6	2.6	15.4
9	Canola/rapeseed	18.3	5.4	29.7	0.3	1.7	3.8	14.4
10	Wheat	25.9	3.2	12.2	0.2	0.8	1.4	11.7
11	Field horsetail	14.0	3.5	25.0	0.3	1.8	1.8	10.6
12	Spiny annual sow-thistle	26.4	2.6	9.9	0.1	0.4	0.6	9.5
13	Rough cinquefoil	12.4	3.1	25.0	0.2	1.6	1.6	9.0
14	Green foxtail	4.1	3.1	75.0	0.2	6.0	6.0	8.2
15	Black medick	25.3	1.9	7.5	0.1	0.3	0.4	8.1
16	Barnyard grass species	22.6	1.1	5.0	0.1	0.5	0.6	7.4
17	Shepherd's-purse	22.6	1.1	5.0	0.1	0.4	0.6	7.2
18	Sedge species	14.0	2.1	15.0	0.1	0.6	0.6	6.3
19	Clover species	14.0	1.4	10.0	0.1	0.8	0.8	6.0
20	Bicknell's geranium	17.0	1.1	6.2	< 0.1	0.2	0.4	5.1
21	Soybean	4.3	1.9	45.0	0.1	2.4	2.4	4.6
22	Lamb's-quarters	13.5	0.7	5.0	0.1	0.4	0.4	4.2
23	Round-leaved mallow	13.5	0.7	5.0	0.1	0.4	0.4	4.2
24	American vetch	14.0	0.7	5.0	< 0.1	0.2	0.2	3.9
25	Alfalfa	14.0	0.7	5.0	< 0.1	0.2	0.2	3.9
26	Biennial wormwood	4.3	0.9	20.0	0.1	1.6	1.6	2.9
27	Foxtail barley	4.3	0.6	15.0	0.1	1.2	1.2	2.4

Table 107. 2016 Annual crops in Rockwood in the Interlake Crop Reporting District (12 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Yellow foxtail	8.6	7.8	90.0	6.0	69.6	69.6	77.6
2	Wild buckwheat	49.3	10.0	20.3	0.5	1.1	3.6	41.7
3	Wild oats	24.8	7.9	31.7	1.4	5.5	13.6	37.1
4	Canola/rapeseed	32.0	8.0	24.9	0.4	1.4	4.0	30.7
5	Wheat	16.6	7.4	44.8	0.6	3.4	4.0	25.2
6	Dandelion	25.5	5.6	21.8	0.3	1.0	1.8	22.1
7	Dock species	17.3	2.6	15.0	0.3	1.7	3.2	14.0
8	Pale smartweed	17.3	2.6	15.0	0.2	0.9	1.2	12.7
9	Green foxtail	16.9	0.8	5.0	0.1	0.4	0.6	8.5
10	Shepherd's-purse	8.7	0.9	10.0	0.1	1.4	1.4	6.1
11	Narrow-leaved hawk's-beard	8.7	0.4	5.0	< 0.1	0.2	0.2	4.2
12	Canada thistle	8.6	0.4	5.0	< 0.1	0.2	0.2	4.2
13	Oats	8.6	0.4	5.0	< 0.1	0.2	0.2	4.2
14	Biennial wormwood	7.9	0.4	5.0	< 0.1	0.4	0.4	4.0
15	Soybean	8.2	0.4	5.0	< 0.1	0.2	0.2	4.0
16	Barnyard grass species	7.9	0.4	5.0	< 0.1	0.2	0.2	3.8

Table 108. 2016 Annual crops in Rosser, St. Andrews, St. Clements & West St. Paul in the Interlake Crop Reporting District (15 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Barnyard grass species	41.3	10.7	25.9	1.1	2.7	7.0	76.7
2	Lamb's-quarters	28.2	4.7	16.8	0.3	1.1	3.2	31.5
3	Wild buckwheat	27.1	4.7	17.4	0.3	1.0	2.0	30.1
4	Canola/rapeseed	26.4	3.4	12.7	0.3	1.0	2.6	26.5
5	Canada thistle	14.1	1.9	13.3	0.3	2.1	4.6	19.5
6	Dandelion	26.2	1.7	6.6	0.1	0.4	0.6	17.1
7	Green foxtail	8.2	2.5	30.0	0.1	1.6	1.6	13.3
8	Pale smartweed	19.3	1.6	8.4	0.1	0.3	0.4	13.2
9	Yellow foxtail	6.4	1.9	30.0	0.2	2.6	2.6	12.3
10	Foxtail barley	6.8	1.4	20.0	0.1	1.0	1.0	8.0
11	Dock species	6.1	1.2	20.0	0.1	1.4	1.4	7.9
12	Stinkweed	8.2	1.2	15.0	< 0.1	0.6	0.6	7.7
13	Redroot pigweed	12.9	0.6	5.0	< 0.1	0.2	0.2	7.3
14	Oak-leaved goosefoot	7.1	1.1	15.0	< 0.1	0.6	0.6	6.6
15	Wild oats	8.2	0.8	10.0	< 0.1	0.4	0.4	6.1
16	Rough cinquefoil	5.8	0.3	5.0	0.1	1.4	1.4	5.5
17	Kochia	7.1	0.7	10.0	< 0.1	0.4	0.4	5.3
18	Thyme-leaved spurge	7.1	0.7	10.0	< 0.1	0.4	0.4	5.3

Table 109. 2016 Annual crops in Woodlands in the Interlake Crop Reporting District (14 fields)

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
1	Quack grass	5.5	4.4	80.0	3.8	68.6	68.6	54.2
2	Green foxtail	19.5	8.0	41.0	1.3	6.6	15.6	36.0
3	Wild buckwheat	42.8	3.4	8.0	0.2	0.4	1.2	23.1
4	Canola/rapeseed	19.0	6.6	34.9	0.4	2.1	4.0	23.0
5	Perennial sow-thistle	12.7	6.7	53.1	0.6	4.3	5.8	22.7
6	Biennial wormwood	12.7	5.4	42.3	0.5	3.8	8.0	19.6
7	Wild oats	21.8	4.1	18.8	0.4	1.7	3.2	19.3
8	Dandelion	17.7	1.9	10.9	0.1	0.5	1.2	10.5
9	Barnyard grass species	18.2	1.7	9.4	0.1	0.5	0.6	10.4
10	Rough cinquefoil	8.4	2.1	25.0	0.2	2.8	2.8	9.4
11	Night-flowering catchfly	16.3	1.2	7.6	< 0.1	0.3	0.4	8.5
12	Oak-leaved goosefoot	15.5	1.2	7.5	0.1	0.5	0.6	8.3
13	Broad-leaved plantain	8.4	1.3	15.0	0.2	2.6	2.6	7.7
14	Canada thistle	12.7	1.1	8.3	< 0.1	0.4	0.4	6.8
15	Pale smartweed	10.5	1.4	12.9	0.1	0.6	0.6	6.8
16	Purslane	5.6	1.7	30.0	0.1	2.6	2.6	6.7
17	Wheat	2.2	1.5	70.0	0.2	11.0	11.0	6.2
18	Redroot pigweed	5.6	1.4	25.0	0.1	1.4	1.4	5.4
19	Alfalfa	8.4	0.8	10.0	0.1	0.6	0.6	5.0
20	American vetch	8.0	0.4	5.0	< 0.1	0.2	0.2	3.7
21	Shepherd's-purse	5.6	0.3	5.0	< 0.1	0.2	0.2	2.6
22	Aster species	2.2	0.2	10.0	< 0.1	0.4	0.4	1.2
23	Rayless aster	2.2	0.1	5.0	< 0.1	0.2	0.2	1.0
24	Black medick	2.2	0.1	5.0	< 0.1	0.2	0.2	1.0
25	Willow species	2.2	0.1	5.0	< 0.1	0.2	0.2	1.0

Table 110. Density, species richness and weed-free quadrats in each survey

Survey	Number of fields surveyed	Density (number/m^2)			Species (number/field)		Weed-free quadrats	
		mean	SE	median	mean	SE	%	SE
1978-81	1424	108.8	4.2	49.8	7.3	0.1	9.7	0.8
1986	501	61.0	3.5	35.2	7.0	0.2	13.5	1.5
1997	452	56.4	6.2	23.9	7.1	0.2	20.1	1.9
2002	631	34.7	2.8	13.4	5.8	0.1	31.3	1.8
2016	658	15.4	1.1	5.2	4.7	0.1	42.5	1.9

Table 111. 2002 Annual crops in Manitoba (631 fields)

Rank	Species	Frequency (%)	Field Uniformity		Field Density (#/m^2)			Relative Abundance
			All	Occurrence	All	Occurrence	High	
1	Green foxtail	64.8	26.1	40.2	13.6	20.9	1070.0	69.8
2	Wild oats	56.1	19.7	35.1	6.7	11.9	449.8	43.6
3	Wild buckwheat	58.5	15.6	26.7	1.7	2.9	80.6	26.6
4	Barnyard grass species	25.7	6.6	25.9	3.8	14.8	582.8	20.4
5	Canada thistle	42.6	7.3	17.1	0.8	1.8	18.2	15.0
6	Redroot pigweed	28.6	6.1	21.3	1.0	3.5	48.2	12.3
7	Lamb's-quarters	25.1	5.3	21.3	0.7	2.9	59.6	10.4
8	Pale smartweed	28.3	5.3	18.7	0.5	1.9	27.0	10.4
9	Canola/rapeseed	17.7	3.4	19.3	0.5	3.0	86.0	7.1
10	Dandelion	21.1	3.4	16.0	0.3	1.5	20.8	7.1
11	Wild mustard	16.6	2.8	17.0	0.3	2.0	45.2	6.0
12	Wheat	15.7	2.9	18.3	0.3	2.1	21.0	5.8
13	Quack grass	13.3	2.1	16.0	0.6	4.3	139.8	5.5
14	Spiny annual sow-thistle	17.5	2.4	13.5	0.2	1.1	11.4	5.3
15	False cleavers	10.7	2.8	26.5	0.4	4.1	40.6	5.2
16	Round-leaved mallow	11.4	2.0	17.9	0.2	1.6	13.0	4.0
17	Kochia	7.2	1.3	18.1	0.4	5.8	197.0	3.4
18	Night-flowering catchfly	9.8	1.6	16.5	0.2	1.5	11.0	3.3
19	Stinkweed	8.7	1.3	15.3	0.3	3.1	74.2	3.3
20	Perennial sow-thistle	12.2	1.1	9.1	0.1	0.8	6.4	3.2
21	Thyme-leaved spurge	7.3	1.6	21.7	0.2	2.2	14.4	2.9
22	Chickweed	4.9	1.4	28.3	0.3	5.3	44.0	2.6
23	Field horsetail	5.9	0.9	15.3	0.3	4.5	96.6	2.5
24	Hemp-nettle	7.0	1.1	16.2	0.1	1.6	10.6	2.4
25	Flax	4.0	1.2	30.2	0.2	4.9	26.8	2.2
26	Barley	4.8	0.8	17.4	0.1	1.8	10.0	1.7
27	Shepherd's-purse	5.3	0.6	12.2	0.1	1.3	8.4	1.6
28	Black medick	2.6	0.5	20.9	0.1	3.0	15.6	1.1
29	Alfalfa	2.6	0.5	19.3	0.1	2.5	13.4	1.0
30	Yellow foxtail	2.2	0.3	16.0	0.1	4.6	28.6	0.9
31	Prostrate knotweed	3.0	0.4	13.4	< 0.1	1.0	4.4	0.9
32	Stork's bill	1.7	0.4	24.4	0.1	3.8	25.6	0.8
33	Common ragweed	1.9	0.3	14.3	< 0.1	1.7	7.2	0.6
34	Oats	1.1	0.3	24.1	0.1	5.7	15.4	0.6
35	Broad-leaved plantain	1.8	0.2	11.8	< 0.1	1.8	11.4	0.6
36	American dragonhead	2.1	0.2	10.4	< 0.1	0.7	3.4	0.6
37	Showy milkweed	1.7	0.2	13.8	< 0.1	1.3	4.4	0.5
38	Field bean	1.2	0.3	24.8	< 0.1	1.6	3.2	0.5
39	Buckwheat	0.1	0.1	100.0	0.1	96.6	96.6	0.5
40	Pineappleweed	0.9	0.1	15.9	< 0.1	4.5	19.8	0.4
41	Dog mustard	0.7	0.2	29.1	< 0.1	3.5	8.8	0.3
42	Dock species	1.4	0.1	7.5	< 0.1	0.5	1.6	0.3
43	Cocklebur	1.1	0.1	9.9	< 0.1	1.1	4.4	0.3
44	Water smartweed	1.1	0.1	10.8	< 0.1	1.0	2.0	0.3
45	Prostrate pigweed	1.2	0.1	8.1	< 0.1	0.5	1.0	0.3
46	Clover species	0.5	0.1	18.4	< 0.1	8.6	29.4	0.3
47	Yellow sweet-clover	0.7	0.2	22.3	< 0.1	2.1	5.8	0.3
48	Narrow-leaved hawk's-beard	0.9	0.1	13.5	< 0.1	1.0	2.8	0.3
49	Biennial wormwood	0.9	0.1	12.3	< 0.1	0.9	2.2	0.2
50	Common groundsel	0.7	0.1	13.8	< 0.1	1.9	7.0	0.2
51	White cockle	0.5	0.1	21.8	< 0.1	3.4	4.8	0.2
52	White mustard	0.2	0.2	80.0	< 0.1	10.8	10.8	0.2

(Table continued on next page)

Table 111. 2002 Annual crops in Manitoba (631 fields) *(continued)*

Rank	Species	Frequency (%)	Field Uniformity		Field Density (#/m^2)			Relative Abundance
			All	Occurrence	All	Occurrence	High	
53	Coriander	0.5	0.1	27.5	< 0.1	2.2	3.8	0.2
54	Flixweed	0.8	0.1	10.0	< 0.1	1.2	2.4	0.2
55	Wild tomato	0.4	0.1	25.4	< 0.1	4.6	11.2	0.2
56	Absinth	0.7	< 0.1	6.3	< 0.1	0.4	0.6	0.2
57	Russian thistle	0.6	0.1	8.1	< 0.1	1.0	2.8	0.2
58	Maple-leaved goosefoot	0.4	0.1	24.5	< 0.1	3.2	6.4	0.2
59	Perennial rye grass	0.4	0.1	28.1	< 0.1	2.3	3.8	0.2
60	Bluebur	0.4	0.1	22.4	< 0.1	2.5	3.0	0.2
61	Manitoba maple	0.7	< 0.1	5.0	< 0.1	0.2	0.2	0.1
62	American vetch	0.6	< 0.1	5.0	< 0.1	0.5	0.8	0.1
63	Purslane	0.5	0.1	10.4	< 0.1	0.8	1.2	0.1
64	Foxtail barley	0.4	0.1	13.3	< 0.1	2.0	4.6	0.1
65	Mouse-eared chickweed	0.5	< 0.1	6.7	< 0.1	0.9	1.4	0.1
66	Sunflower	0.5	< 0.1	8.8	< 0.1	0.6	1.0	0.1
67	Corn	0.5	< 0.1	10.4	< 0.1	0.7	1.2	0.1
68	Bicknell's geranium	0.5	< 0.1	8.6	< 0.1	0.9	1.8	0.1
69	Tansy	0.3	0.1	17.9	< 0.1	1.3	2.2	0.1
70	Blue grass species	0.4	< 0.1	5.0	< 0.1	0.8	1.2	0.1
71	Oak-leaved goosefoot	0.3	< 0.1	5.0	< 0.1	0.2	0.2	0.1
72	Cow cockle	0.2	< 0.1	25.0	< 0.1	2.6	2.6	0.1
73	Scentless chamomile	0.2	< 0.1	10.0	< 0.1	1.2	1.2	0.1
74	Black mustard	0.1	< 0.1	30.0	< 0.1	2.2	2.2	0.1
75	Henbit	0.3	< 0.1	5.0	< 0.1	1.3	1.8	0.1
76	Proso millet	0.2	< 0.1	15.0	< 0.1	2.6	2.6	0.1
77	Timothy	0.2	< 0.1	15.0	< 0.1	1.8	1.8	0.1
78	Bladder campion	0.2	< 0.1	10.0	< 0.1	0.6	0.6	0.1
79	Field pea	0.1	< 0.1	20.0	< 0.1	1.0	1.0	0.1
80	Purple milk-vetch	0.2	< 0.1	15.0	< 0.1	0.6	0.6	< 0.1
81	Leafy spurge	0.2	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1
82	Silverberry	0.2	< 0.1	10.0	< 0.1	0.6	0.6	< 0.1
83	Witch grass	0.2	< 0.1	5.0	< 0.1	0.4	0.4	< 0.1
84	Goldenrod species	0.1	< 0.1	15.0	< 0.1	2.2	2.2	< 0.1
85	Common pepper-grass	0.2	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1
86	Prickly lettuce	0.1	< 0.1	20.0	< 0.1	0.8	0.8	< 0.1
87	Slender wheat grass	0.2	< 0.1	5.0	< 0.1	0.4	0.4	< 0.1
88	Fababean	0.2	< 0.1	10.0	< 0.1	0.6	0.6	< 0.1
89	Rose species	0.1	< 0.1	15.0	< 0.1	1.2	1.2	< 0.1
90	Wild licorice	0.2	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1
91	Ball mustard	0.2	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1
92	Giant ragweed	0.2	< 0.1	5.0	< 0.1	0.6	0.6	< 0.1
93	Wormseed mustard	0.2	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1
94	Scouring-rush	0.2	< 0.1	5.9	< 0.1	0.3	0.8	< 0.1
95	Canary grass	0.2	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1
96	False ragweed	0.1	< 0.1	10.0	< 0.1	1.4	1.4	< 0.1
97	Tumble mustard	0.1	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1
98	Poplar species	0.1	< 0.1	5.0	< 0.1	0.4	0.4	< 0.1

Table 112. 1997 Annual crops in Manitoba (452 fields)

Rank	Species	Frequency (%)	Field Uniformity		Field Density (#/m^2)			Relative Abundance
			All	Occurrence	All	Occurrence	High	
1	Green foxtail	72.5	35.9	49.5	29.1	40.1	1693.2	81.2
2	Wild oats	64.4	22.5	34.9	6.6	10.2	167.6	32.9
3	Wild buckwheat	68.3	24.2	35.5	2.7	3.9	41.0	27.5
4	Canada thistle	59.0	11.8	20.0	1.2	2.1	25.8	16.9
5	Redroot pigweed	39.8	9.5	23.9	1.6	4.0	63.8	13.6
6	Wild mustard	37.1	8.1	21.9	1.0	2.8	40.6	11.5
7	Pale smartweed	37.1	8.0	21.7	0.9	2.5	24.8	11.3
8	Perennial sow-thistle	35.1	6.5	18.6	0.8	2.3	35.2	10.0
9	Lamb's-quarters	29.9	5.8	19.5	0.8	2.5	65.0	8.7
10	Quack grass	26.7	4.9	18.5	1.3	4.8	44.8	8.7
11	Barnyard grass species	20.4	4.4	21.7	1.5	7.6	131.4	8.0
12	Chickweed	7.2	3.4	47.6	2.7	37.1	257.8	7.6
13	Shepherd's-purse	12.9	3.2	24.7	0.7	5.4	66.0	4.8
14	False cleavers	10.3	3.9	37.5	0.7	6.5	70.6	4.7
15	Night-flowering catchfly	12.9	3.4	26.7	0.5	4.2	25.6	4.6
16	Hemp-nettle	13.1	3.1	23.8	0.6	4.3	55.6	4.5
17	Stinkweed	13.4	2.4	17.9	0.3	2.5	21.0	3.8
18	Flax	6.9	2.2	31.8	0.8	11.3	70.8	3.6
19	Canola/rapeseed	9.7	2.4	24.9	0.3	3.6	39.4	3.3
20	Dandelion	14.0	1.9	13.7	0.1	1.0	9.2	3.3
21	Round-leaved mallow	13.4	1.8	13.7	0.2	1.2	11.4	3.2
22	Wheat	10.0	2.2	21.5	0.3	2.5	18.0	3.0
23	Thyme-leaved spurge	9.2	2.1	22.2	0.2	2.2	17.6	2.8
24	Kochia	6.8	1.4	20.6	0.3	4.0	50.8	2.2
25	American dragonhead	6.0	0.6	10.4	< 0.1	0.8	6.6	1.3
26	Field horsetail	5.2	0.6	11.9	0.1	2.0	6.6	1.2
27	Yellow foxtail	4.2	0.6	13.9	0.1	2.6	11.6	1.1
28	Prostrate knotweed	3.9	0.7	16.6	0.1	1.8	16.6	1.0
29	Barley	3.8	0.6	14.8	0.1	1.7	10.6	1.0
30	Alfalfa	3.5	0.6	17.2	0.1	1.5	9.0	0.9
31	Broad-leaved plantain	3.4	0.4	12.8	< 0.1	1.1	7.8	0.8
32	Common ragweed	2.5	0.4	15.5	0.1	2.6	14.6	0.7
33	Russian thistle	2.6	0.4	15.9	< 0.1	1.6	12.6	0.7
34	Clover species	2.3	0.4	16.6	0.1	2.6	30.6	0.7
35	Stork's bill	2.0	0.3	17.5	0.1	3.1	16.8	0.6
36	Spiny annual sow-thistle	2.0	0.4	17.3	< 0.1	1.3	5.0	0.5
37	Dog mustard	1.4	0.4	28.0	< 0.1	2.8	4.6	0.5
38	Showy milkweed	2.2	0.2	7.8	< 0.1	0.7	1.8	0.4
39	Indian mustard	1.4	0.3	18.1	< 0.1	1.2	2.6	0.4
40	Flixweed	1.3	0.2	16.5	< 0.1	2.8	10.2	0.4
41	Cocklebur	1.7	0.1	8.7	< 0.1	0.5	1.2	0.3
42	Narrow-leaved hawk's-beard	1.3	0.2	16.6	< 0.1	1.5	3.4	0.3
43	Absinth	1.4	0.2	13.3	< 0.1	1.2	3.8	0.3
44	Biennial wormwood	1.4	0.1	7.4	< 0.1	2.1	11.6	0.3
45	Rose species	1.7	0.1	5.6	< 0.1	0.4	1.0	0.3
46	Ball mustard	1.3	0.1	11.1	< 0.1	1.1	5.2	0.3
47	Tartary buckwheat	0.8	0.2	27.6	< 0.1	3.5	13.2	0.3
48	White mustard	0.2	0.2	85.0	0.1	31.2	31.2	0.2
49	Black medick	0.7	0.1	22.5	< 0.1	2.2	2.8	0.2
50	Buckwheat	0.4	0.2	50.0	< 0.1	7.2	7.2	0.2
51	Bluebur	0.7	0.1	21.5	< 0.1	1.4	4.4	0.2
52	Purslane	1.0	0.1	5.9	< 0.1	0.4	1.0	0.2

(Table continued on next page)

Table 112. 1997 Annual crops in Manitoba (452 fields) *(continued)*

Rank	Species	Frequency (%)	Field Uniformity		Field Density (#/m^2)			Relative Abundance
			All	Occurrence	All	Occurrence	High	
53	Nightshade species	0.2	0.2	70.0	< 0.1	10.6	10.6	0.2
54	Common groundsel	0.6	0.1	14.2	< 0.1	2.7	7.4	0.2
55	Dock species	0.8	< 0.1	5.0	< 0.1	0.8	1.2	0.1
56	Caraway	0.4	0.1	35.0	< 0.1	2.6	2.6	0.1
57	Proso millet	0.2	0.1	50.0	< 0.1	10.0	10.0	0.1
58	Bicknell's geranium	0.8	< 0.1	5.0	< 0.1	0.2	0.2	0.1
59	Manitoba maple	0.6	0.1	10.3	< 0.1	0.4	0.6	0.1
60	Two-grooved milk-vetch	0.4	0.1	22.5	< 0.1	2.9	5.4	0.1
61	Yellow sweet-clover	0.4	0.1	21.4	< 0.1	1.3	2.2	0.1
62	Low cudweed	0.4	< 0.1	7.9	< 0.1	4.0	6.0	0.1
63	Wild tomato	0.6	< 0.1	5.0	< 0.1	0.5	0.6	0.1
64	Sunflower	0.5	0.1	10.0	< 0.1	0.6	0.8	0.1
65	Water smartweed	0.5	< 0.1	6.5	< 0.1	0.6	1.2	0.1
66	Rough cinquefoil	0.5	< 0.1	7.6	< 0.1	0.4	0.6	0.1
67	Witch grass	0.4	< 0.1	10.9	< 0.1	0.6	0.8	0.1
68	American vetch	0.5	< 0.1	7.6	< 0.1	0.3	0.4	0.1
69	Spreading dogbane	0.4	< 0.1	5.0	< 0.1	0.5	0.6	0.1
70	Tumble pigweed	0.4	< 0.1	5.0	< 0.1	0.2	0.2	0.1
71	Wormseed mustard	0.2	< 0.1	20.0	< 0.1	1.6	1.6	0.1
72	Prostrate pigweed	0.3	< 0.1	7.3	< 0.1	0.7	1.2	0.1
73	Oak-leaved goosefoot	0.3	< 0.1	10.0	< 0.1	3.4	3.4	0.1
74	Marsh yellow cress	0.3	< 0.1	10.0	< 0.1	0.6	0.6	0.1
75	Silvery cinquefoil	0.3	< 0.1	10.0	< 0.1	0.4	0.4	0.1
76	Smooth brome	0.2	< 0.1	20.0	< 0.1	2.0	2.0	0.1
77	Giant ragweed	0.3	< 0.1	10.0	< 0.1	0.4	0.4	0.1
78	White cockle	0.2	< 0.1	10.0	< 0.1	0.8	0.8	< 0.1
79	Tansy	0.2	< 0.1	5.0	< 0.1	1.6	1.6	< 0.1
80	Leafy spurge	0.2	< 0.1	25.0	< 0.1	1.8	1.8	< 0.1
81	Bird's-foot trefoil	0.3	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1
82	Persian darnel	0.2	< 0.1	5.0	< 0.1	1.2	1.2	< 0.1
83	Foxtail barley	0.3	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1
84	Bladder campion	0.3	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1
85	Soybean	0.3	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1
86	Knawel	0.2	< 0.1	10.0	< 0.1	1.6	1.6	< 0.1
87	Cow cockle	0.2	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1
88	Yellow nut sedge	0.2	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1
89	Field bindweed	0.2	< 0.1	15.0	< 0.1	1.0	1.0	< 0.1
90	Poplar species	0.2	< 0.1	5.0	< 0.1	0.6	0.6	< 0.1
91	Pineappleweed	0.2	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1
92	Corn spurry	0.2	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1

Table 113. 1986 Annual crops in Manitoba (501 fields)

Rank	Species	Frequency (%)	Field Uniformity		Field Density (#/m^2)			Relative Abundance
			All	Occurrence	All	Occurrence	High	
1	Green foxtail	78.4	46.3	59.1	25.6	32.6	743.0	74.5
2	Wild oats	63.4	22.0	34.6	6.5	10.3	342.2	29.8
3	Wild buckwheat	70.6	26.3	37.3	3.6	5.0	69.6	28.0
4	Wild mustard	57.7	15.3	26.6	2.1	3.7	65.4	18.8
5	Pale smartweed	45.0	13.3	29.5	2.3	5.1	96.4	16.3
6	Lamb's-quarters	42.8	10.5	24.5	1.7	4.0	75.0	13.7
7	Flax	12.1	7.6	62.7	4.7	39.0	257.8	12.9
8	Redroot pigweed	40.0	9.7	24.1	1.6	4.0	86.8	12.8
9	Canada thistle	45.1	9.3	20.7	1.1	2.5	21.6	12.6
10	Stinkweed	27.9	6.4	22.8	1.3	4.5	113.4	9.0
11	Perennial sow-thistle	27.1	5.1	18.7	0.7	2.4	58.2	7.3
12	Quack grass	15.4	4.1	26.8	1.6	10.2	99.6	6.7
13	Night-flowering catchfly	15.9	4.9	30.7	0.7	4.5	38.0	5.7
14	Hemp-nettle	11.6	3.2	28.0	0.5	3.9	50.4	3.9
15	Chickweed	6.7	2.2	32.7	1.0	15.5	110.0	3.6
16	Barley	9.2	2.9	31.8	0.5	5.1	34.2	3.4
17	Shepherd's-purse	8.7	1.7	19.8	0.8	9.0	231.0	3.3
18	Field horsetail	9.2	1.8	19.5	0.5	5.4	50.4	3.0
19	Wheat	8.1	2.4	29.7	0.4	4.9	34.0	2.9
20	Dog mustard	5.4	2.2	40.9	0.5	9.5	69.2	2.6
21	False cleavers	5.6	1.7	30.1	0.4	6.3	51.4	2.2
22	Ball mustard	2.2	0.7	31.6	0.8	38.1	137.8	2.0
23	Round-leaved mallow	5.7	1.4	23.9	0.3	4.6	43.0	1.9
24	Russian thistle	7.4	1.1	15.4	0.1	1.8	12.8	1.8
25	Bluebur	6.5	1.2	19.2	0.1	1.7	22.6	1.7
26	Thyme-leaved spurge	5.4	1.3	24.2	0.2	3.2	31.0	1.7
27	Barnyard grass species	4.9	0.8	15.8	0.1	2.9	32.0	1.3
28	Canola/rapeseed	4.3	1.1	25.2	0.1	2.3	10.0	1.3
29	White cockle	3.8	0.8	21.3	0.2	5.1	46.4	1.2
30	Kochia	3.7	0.5	13.6	0.1	2.1	18.2	0.9
31	Rose species	4.2	0.4	9.3	< 0.1	0.7	3.4	0.8
32	American dragonhead	3.3	0.5	14.5	< 0.1	1.0	10.0	0.7
33	Alfalfa	2.0	0.5	24.6	0.1	3.6	25.4	0.6
34	Wormseed mustard	1.9	0.5	23.8	0.1	3.2	12.0	0.6
35	Narrow-leaved hawk's-beard	1.9	0.4	21.7	< 0.1	2.3	10.4	0.5
36	Dandelion	2.2	0.3	15.3	< 0.1	1.4	10.2	0.5
37	Water smartweed	2.5	0.2	6.2	< 0.1	1.3	4.6	0.5
38	Showy milkweed	2.1	0.2	10.7	< 0.1	1.1	4.4	0.5
39	Prostrate knotweed	2.2	0.2	9.9	< 0.1	0.5	1.2	0.4
40	Yellow foxtail	1.3	0.3	25.7	< 0.1	3.8	10.0	0.4
41	Clover species	1.8	0.2	13.2	< 0.1	1.6	5.6	0.4
42	Black medick	1.9	0.2	8.9	< 0.1	1.1	3.6	0.4
43	Mouse-eared chickweed	0.2	0.1	30.0	0.2	81.4	162.0	0.4
44	Yellow sweet-clover	1.6	0.2	15.4	< 0.1	0.8	5.2	0.4
45	Flixweed	1.5	0.2	16.2	< 0.1	0.9	3.2	0.4
46	American vetch	1.9	0.1	5.4	< 0.1	0.3	4.8	0.3
47	Corn	1.0	0.3	32.5	< 0.1	1.3	2.2	0.3
48	Bladder campion	0.7	0.3	41.9	< 0.1	7.0	14.4	0.3
49	Bicknell's geranium	1.3	0.2	16.5	< 0.1	0.8	3.8	0.3
50	Purslane	1.1	0.2	16.1	< 0.1	2.2	7.2	0.3
51	Corn spurry	0.4	0.2	55.8	0.1	14.4	27.4	0.3
52	Broad-leaved plantain	1.0	0.2	17.1	< 0.1	2.2	10.8	0.3

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Table 113. 1986 Annual crops in Manitoba (501 fields) *(continued)*

Rank	Species	Frequency (%)	Field Uniformity		Field Density (#/m^2)			Relative Abundance
			All	Occurrence	All	Occurrence	High	
53	Rye	0.8	0.2	25.0	< 0.1	1.6	1.6	0.2
54	Foxtail barley	0.9	0.1	12.1	< 0.1	2.5	10.6	0.2
55	Biennial wormwood	1.0	0.1	12.0	< 0.1	0.7	2.0	0.2
56	Stork's bill	1.1	0.1	6.1	< 0.1	0.3	0.6	0.2
57	Yellow toadflax	0.2	0.1	80.0	0.1	27.0	27.0	0.2
58	Prairie sunflower	0.5	0.2	35.0	< 0.1	2.2	2.2	0.2
59	Manitoba maple	0.8	0.1	10.0	< 0.1	0.5	1.0	0.2
60	Bird's-foot trefoil	0.2	0.2	75.0	< 0.1	11.8	11.8	0.2
61	Rough cinquefoil	0.6	0.1	15.3	< 0.1	1.2	3.2	0.1
62	Orchard grass	0.2	0.1	70.0	< 0.1	12.6	12.6	0.1
63	Red goosefoot	0.2	0.1	60.0	< 0.1	9.6	9.6	0.1
64	Field bindweed	0.6	0.1	10.6	< 0.1	0.5	1.0	0.1
65	Cow cockle	0.5	0.1	13.3	< 0.1	1.2	5.0	0.1
66	Dock species	0.5	0.1	10.0	< 0.1	1.3	1.6	0.1
67	Prostrate pigweed	0.5	< 0.1	9.0	< 0.1	0.7	4.2	0.1
68	Henbit	0.3	0.1	24.9	< 0.1	2.0	4.8	0.1
69	Tartary buckwheat	0.4	0.1	15.0	< 0.1	1.0	1.2	0.1
70	Common groundsel	0.4	0.1	15.7	< 0.1	0.7	0.8	0.1
71	Proso millet	0.3	0.1	19.7	< 0.1	3.1	11.0	0.1
72	Field pea	0.2	0.1	25.0	< 0.1	5.3	10.4	0.1
73	Common ragweed	0.4	< 0.1	5.0	< 0.1	0.3	0.6	0.1
74	Spiny annual sow-thistle	0.3	< 0.1	10.6	< 0.1	0.8	1.0	0.1
75	Common pepper-grass	0.4	< 0.1	5.7	< 0.1	0.4	1.0	0.1
76	Vetchling species	0.4	< 0.1	5.0	< 0.1	0.2	0.2	0.1
77	Pineappleweed	0.2	0.1	25.0	< 0.1	1.8	1.8	0.1
78	Witch grass	0.2	0.1	25.0	< 0.1	1.6	1.6	0.1
79	Oats	0.2	< 0.1	20.0	< 0.1	1.4	1.4	0.1
80	Small bugloss	0.2	< 0.1	15.0	< 0.1	2.0	2.0	0.1
81	Biennial campion	0.2	< 0.1	15.0	< 0.1	4.2	4.2	< 0.1
82	Giant ragweed	0.2	< 0.1	15.0	< 0.1	0.8	0.8	< 0.1
83	Ground-ivy	0.2	< 0.1	15.0	< 0.1	0.6	0.6	< 0.1
84	Blue grass species	0.2	< 0.1	7.1	< 0.1	1.1	3.0	< 0.1
85	Prickly lettuce	0.2	< 0.1	5.0	< 0.1	0.4	0.4	< 0.1
86	Wild tomato	0.2	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1
87	Poplar species	0.1	< 0.1	35.0	< 0.1	2.4	2.4	< 0.1
88	Absinth	0.2	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1
89	Scentless chamomile	0.2	< 0.1	5.0	< 0.1	0.6	0.6	< 0.1
90	Two-grooved milk-vetch	0.2	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1
91	Wood whitlow-grass	0.2	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1
92	Western snowberry	< 0.1	< 0.1	5.0	< 0.1	0.6	0.6	< 0.1
93	False flax species	< 0.1	< 0.1	5.0	< 0.1	0.4	0.4	< 0.1
94	Green tansy mustard	< 0.1	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1
95	False ragweed	< 0.1	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1

Table 114. 1978-81 Annual crops in Manitoba (1424 fields)

Rank	Species	Frequency (%)	Field Uniformity		Field Density (#/m^2)			Relative Abundance
			All	Occurrence	All	Occurrence	High	
1	Green foxtail	84.7	56.8	67.1	66.1	78.0	1459.8	95.7
2	Wild oats	73.8	32.5	44.1	13.0	17.6	629.8	35.4
3	Wild buckwheat	78.1	34.2	43.8	5.7	7.3	288.8	30.0
4	Pale smartweed	44.0	15.5	35.1	4.7	10.6	228.8	16.7
5	Canada thistle	50.8	11.1	21.9	1.4	2.7	63.0	12.8
6	Wild mustard	40.4	9.6	23.8	1.4	3.5	262.6	10.8
7	Lamb's-quarters	36.8	9.9	26.8	1.8	5.0	460.8	10.8
8	Perennial sow-thistle	41.9	8.6	20.5	1.1	2.7	104.0	10.3
9	Redroot pigweed	38.3	8.4	21.9	1.2	3.2	77.6	9.8
10	Night-flowering catchfly	17.3	5.3	30.7	0.8	4.4	82.8	5.2
11	Stinkweed	20.9	4.0	19.2	0.6	2.9	105.0	5.1
12	Quack grass	13.7	3.1	23.0	1.2	8.8	300.8	4.3
13	Barnyard grass species	9.7	2.6	27.2	1.9	19.5	340.4	4.2
14	Russian thistle	13.0	3.4	25.9	0.5	4.1	64.4	3.7
15	Flax	7.9	3.1	39.6	1.3	17.0	297.2	3.6
16	Bluebur	11.0	2.8	25.8	0.4	3.2	48.8	3.0
17	Hemp-nettle	8.3	2.8	33.4	0.4	5.0	39.6	2.6
18	Field horsetail	9.3	2.1	22.6	0.5	5.5	66.4	2.6
19	Thyme-leaved spurge	8.1	2.2	27.4	0.3	3.6	66.4	2.3
20	Wheat	8.2	2.1	25.2	0.2	2.9	61.4	2.2
21	Shepherd's-purse	7.7	1.7	22.3	0.3	3.4	49.8	2.0
22	Barley	6.5	1.6	24.4	0.2	2.7	33.4	1.7
23	Cow cockle	5.4	1.5	27.5	0.3	5.1	167.2	1.6
24	Prostrate knotweed	6.3	1.3	20.2	0.2	2.5	37.8	1.5
25	Round-leaved mallow	5.4	0.9	16.5	0.1	1.8	10.6	1.2
26	Dandelion	5.2	0.8	14.4	0.1	1.4	13.2	1.1
27	Black medick	3.4	0.8	23.9	0.3	7.9	63.4	1.0
28	Rose species	4.9	0.7	13.5	0.1	1.7	33.6	1.0
29	Canola/rapeseed	3.7	0.9	24.7	0.1	4.0	47.4	1.0
30	Dog mustard	3.5	0.9	25.5	0.2	4.5	38.2	1.0
31	Kochia	2.3	0.8	32.9	0.4	16.4	252.0	1.0
32	Chickweed	3.1	0.6	20.2	0.2	7.4	96.6	0.9
33	Clover species	3.4	0.7	19.5	0.1	3.6	44.2	0.9
34	False cleavers	2.3	0.7	29.2	0.1	6.0	32.0	0.7
35	Flixweed	2.9	0.5	16.0	0.1	3.6	83.6	0.7
36	Yellow sweet-clover	2.5	0.5	19.7	0.1	3.5	58.2	0.6
37	Prostrate pigweed	2.2	0.6	26.4	0.1	2.5	11.6	0.6
38	Tartary buckwheat	2.0	0.5	26.7	0.1	3.8	34.6	0.6
39	Broad-leaved plantain	2.2	0.4	16.0	0.1	5.3	60.0	0.6
40	Ball mustard	2.1	0.4	20.5	0.1	3.9	32.0	0.5
41	Alfalfa	2.3	0.4	15.7	< 0.1	1.1	7.8	0.5
42	Purslane	1.8	0.4	19.3	< 0.1	2.3	17.4	0.4
43	Showy milkweed	2.2	0.2	11.3	< 0.1	1.6	8.4	0.4
44	American vetch	2.3	0.2	10.5	< 0.1	0.6	4.2	0.4
45	Biennial wormwood	2.0	0.3	14.6	< 0.1	1.8	10.8	0.4
46	Field bindweed	1.6	0.4	22.0	< 0.1	2.2	20.2	0.4
47	White cockle	1.2	0.4	32.4	< 0.1	4.0	21.4	0.4
48	Yellow foxtail	0.6	0.2	40.2	0.2	33.7	157.0	0.4
49	American dragonhead	1.6	0.3	17.8	< 0.1	1.1	6.2	0.3
50	Narrow-leaved hawk's-beard	1.1	0.3	27.9	< 0.1	4.0	16.2	0.3
51	Wormseed mustard	1.2	0.2	19.1	< 0.1	1.3	4.2	0.3
52	Water smartweed	1.1	0.2	13.7	< 0.1	2.0	10.4	0.2

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Table 114. 1978-81 Annual crops in Manitoba (1424 fields) *(continued)*

Rank	Species	Frequency (%)	Field Uniformity All	Field Uniformity Occurrence	Field Density (#/m^2) All	Field Density (#/m^2) Occurrence	Field Density (#/m^2) High	Relative Abundance
53	Bicknell's geranium	1.2	0.1	11.1	< 0.1	0.5	1.6	0.2
54	Oats	0.6	0.2	32.2	0.1	12.3	81.2	0.2
55	Common ragweed	1.0	0.2	15.9	< 0.1	2.1	16.0	0.2
56	Prairie sunflower	1.0	0.1	12.9	< 0.1	1.6	15.0	0.2
57	Cocklebur	0.8	0.1	17.8	< 0.1	1.6	6.6	0.2
58	False ragweed	0.6	0.2	29.5	< 0.1	2.7	14.4	0.2
59	Witch grass	0.5	0.2	34.4	< 0.1	9.3	50.2	0.2
60	Absinth	0.8	0.1	13.6	< 0.1	1.3	2.2	0.2
61	Leafy spurge	0.6	0.1	22.4	< 0.1	2.7	9.6	0.2
62	Bladder campion	0.5	0.2	30.4	< 0.1	3.2	11.6	0.1
63	Stork's bill	0.7	0.1	11.8	< 0.1	0.9	5.2	0.1
64	Aster species	0.7	0.1	10.1	< 0.1	1.0	5.6	0.1
65	Smooth brome	0.6	0.1	13.2	< 0.1	3.4	9.8	0.1
66	Spear-leaved goosefoot	0.5	0.1	14.1	< 0.1	2.4	10.2	0.1
67	Povertyweed	0.4	0.1	23.5	< 0.1	4.4	14.4	0.1
68	Common pepper-grass	0.6	< 0.1	6.6	< 0.1	0.4	1.2	0.1
69	False flax species	0.5	0.1	19.2	< 0.1	1.5	5.0	0.1
70	Large crab grass	0.3	0.1	28.9	< 0.1	4.7	7.8	0.1
71	Field mint	0.4	0.1	21.3	< 0.1	1.5	3.2	0.1
72	Marsh yellow cress	0.3	0.1	20.4	< 0.1	2.3	4.0	0.1
73	Manitoba maple	0.5	< 0.1	7.0	< 0.1	0.3	0.8	0.1
74	Tall hedge mustard	0.1	0.1	95.0	< 0.1	59.6	59.6	0.1
75	Wild tomato	0.3	0.1	18.2	< 0.1	1.6	5.4	0.1
76	Corn spurry	0.3	0.1	22.6	< 0.1	1.9	5.2	0.1
77	Spiny annual sow-thistle	0.2	0.1	45.0	< 0.1	4.9	6.8	0.1
78	Tall buttercup	0.4	< 0.1	10.0	< 0.1	0.7	1.4	0.1
79	Western snowberry	0.2	0.1	21.2	< 0.1	2.1	6.0	0.1
80	Slender wheat grass	0.1	0.1	95.0	< 0.1	28.6	28.6	0.1
81	Foxtail barley	0.3	< 0.1	8.2	< 0.1	0.9	2.0	0.1
82	Pineappleweed	0.2	< 0.1	8.6	< 0.1	7.1	19.8	0.1
83	Pygmyflower	0.3	< 0.1	8.3	< 0.1	0.6	1.8	< 0.1
84	Poplar species	0.2	< 0.1	25.0	< 0.1	2.1	3.2	< 0.1
85	Dock species	0.2	< 0.1	14.3	< 0.1	0.6	1.2	< 0.1
86	Scouring-rush	0.2	< 0.1	15.0	< 0.1	0.6	0.8	< 0.1
87	Rough cinquefoil	0.2	< 0.1	16.0	< 0.1	1.1	3.8	< 0.1
88	Spreading dogbane	0.2	< 0.1	13.8	< 0.1	4.1	7.0	< 0.1
89	Common burdock	0.2	< 0.1	8.3	< 0.1	0.5	0.8	< 0.1
90	Rye	0.2	< 0.1	18.6	< 0.1	1.1	1.4	< 0.1
91	Atriplex species	0.1	< 0.1	25.0	< 0.1	2.2	2.2	< 0.1
92	Maple-leaved goosefoot	0.2	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1
93	Giant ragweed	0.1	< 0.1	20.4	< 0.1	1.1	2.2	< 0.1
94	Small bugloss	0.2	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1
95	Common groundsel	0.2	< 0.1	8.3	< 0.1	1.1	3.4	< 0.1
96	Green tansy mustard	0.1	< 0.1	10.0	< 0.1	1.9	3.6	< 0.1
97	Tumble pigweed	0.1	< 0.1	7.4	< 0.1	0.4	0.4	< 0.1
98	Pennsylvania pellitory	0.1	< 0.1	25.0	< 0.1	9.8	9.8	< 0.1
99	Pasture sage	0.1	< 0.1	11.4	< 0.1	1.0	2.0	< 0.1
100	Russian pigweed	0.1	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1
101	Prairie junegrass	< 0.1	< 0.1	10.0	< 0.1	30.2	30.2	< 0.1
102	Wild radish	0.1	< 0.1	30.0	< 0.1	2.6	2.6	< 0.1
103	Bracted vervain	0.1	< 0.1	20.0	< 0.1	1.8	1.8	< 0.1
104	Corn	0.1	< 0.1	5.0	< 0.1	0.8	0.8	< 0.1

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Table 114. 1978-81 Annual crops in Manitoba (1424 fields) *(continued)*

		Frequency	Field Uniformity		Field Density (#/m^2)			Relative
Rank	Species	(%)	All	Occurrence	All	Occurrence	High	Abundance
105	White mustard	0.1	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1
106	Canada fleabane	0.1	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1
107	Tumble mustard	0.1	< 0.1	10.0	< 0.1	0.6	0.6	< 0.1
108	Field dodder	0.1	< 0.1	15.0	< 0.1	0.8	0.8	< 0.1
109	Northern bedstraw	0.1	< 0.1	6.2	< 0.1	0.3	0.6	< 0.1
110	Meadow rue species	0.1	< 0.1	18.3	< 0.1	1.1	2.2	< 0.1
111	Ground-ivy	0.1	< 0.1	20.0	< 0.1	2.0	2.0	< 0.1
112	Common yellow wood-sorrel	0.1	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1
113	Field pea	0.1	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1
114	Wild cucumber	0.1	< 0.1	5.0	< 0.1	0.4	0.4	< 0.1
115	Hairy-nerved carrionflower	0.1	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1
116	Hare's-ear mustard	0.1	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1
117	Henbit	0.1	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1
118	Rough pennyroyal	0.1	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1
119	Blue grass species	< 0.1	< 0.1	20.0	< 0.1	2.3	4.2	< 0.1
120	Crested wheat grass	0.1	< 0.1	5.0	< 0.1	0.6	0.6	< 0.1
121	Timothy	< 0.1	< 0.1	5.0	< 0.1	0.4	0.4	< 0.1
122	Scentless chamomile	< 0.1	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1
123	Common yarrow	< 0.1	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1
124	Persian darnel	< 0.1	< 0.1	25.0	< 0.1	2.4	2.4	< 0.1
125	Prickly lettuce	< 0.1	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1
126	Purslane speedwell	< 0.1	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1
127	Yellow rocket	< 0.1	< 0.1	5.0	< 0.1	0.8	0.8	< 0.1

Residual Weed Population Shifts in Manitoba – 1978 to 2016

Abstract for Poster Presented at Canadian Weed Science Society Annual Meeting, November 21 -24, 2016

The comparison of the relative abundance of weeds in Manitoba in 2016 with results from previous provincial surveys enables the identification of recent shifts in species ranks, life form density and relative abundance. In 2016, a total of 658 fields of canola, spring wheat, soybean, corn, barley, oat, flax and sunflower were surveyed. These fields were selected using a stratified random sampling procedure based on ecodistricts. In each field, weeds were counted in 20 quadrats (50 by 50 cm) in late summer. Weed data are summarized using a relative abundance index based on frequency, field uniformity and density. Green foxtail (*Setaria viridis* (L.) P. Beauv.) was the most abundant weed, wild buckwheat (*Fallopia convolvulus* (L.) Á.Löve) ranked second, barnyard grass species (*Echinochloa* spp.) ranked third and wild oats (*Avena fatua* L.) ranked fourth. The results from the 2016 survey are compared to results from surveys of 631 fields in 2002, 452 fields in 1997, 501 fields in 1986 and 1424 fields in 1978-1981. Nine species have been ranked amongst the top 20 most abundant species in each survey. Ten species have declined ten or more ranks since the 1970s. Nine of these species continued to decline in 2016: bluebur (*Lappula squarrosa* (Retz.) Dumort.), Russian thistle (*Salsola tragus* L.), flax (*Linum usitatissimum* L.), barley (*Hordeum vulgare* L.), dog mustard (*Erucastrum gallicum* (Willd.) O.E. Schultz), quack grass (*Elymus repens* (L.) Gould), stinkweed (*Thlaspi arvense* L), wild mustard (*Sinapis arvensis* L.), hemp-nettle (*Galeopsis tetrahit* L.). Perennial sow-thistle (*Sonchus arvensis* L.) declined in the 2002 survey, but did not decrease any further in the 2016 survey. Spiny annual sow-thistle (*Sonchus asper* (L.) Hill) has increased the most since the 1970s, most notably from 1997 to 2002; however, it declined slightly from 2002 to 2016. Yellow foxtail (*Setaria pumila* (Poir.) Roem. & Schult.) has been steadily increasing since the 1970s, and appeared in the top twenty for the first time in 2016. Broad-leaved plantain (*Plantago major* L.) and biennial wormwood (*Artemisia biennis* Willd.) also appeared in the top 20 in the most recent survey. Other species that have increased since the 1970s include: canola (*Brassica napus* L.), dandelion (*Taraxacum officinale* F. H. Wigg.), false cleavers (*Galium spurium* L.), round-leaved mallow (*Malva pusilla* Sm.), wheat (*Triticum* spp.), chickweed (*Stellaria media* (L.) Vill.) and barnyard grass species. The relative abundance of annual grasses was lowest in the 2016 survey, while relative abundances of perennials and facultative winter annuals were the highest on record. The densities of annual grass and annual broad-leaved weeds were the lowest ever recorded while the densities of perennials and facultative winter annuals were slightly higher in 2016 than in 2002.

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Residual Weed Population Shifts in Manitoba – 1978 to 2016

Julia Y. Leeson[1], Jeanette Gaultier[2] and Laryssa Grenkow[3]

[1]Agriculture and Agri-Food Canada, Saskatoon, SK, [2]Manitoba Agriculture, Carman, MB, [3]Manitoba Pulse & Soybean Growers, Carman, MB

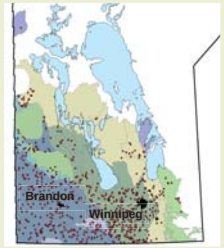
Objectives

- Present the top twenty species in 2016 Manitoba provincial weed survey
- Compare the relative abundance of weeds in Manitoba in 2016 with results from the 2002, 1997, 1986 and 1978-1981 provincial surveys
- Identify shifts in life form density and relative abundance

Methods

- Used a stratified random sampling procedure to select fields in ecodistricts shown on map
- Surveyed 658 fields of canola, spring wheat, soybean, corn, barley, oat, flax and sunflower
- Counted weeds in 20 quadrats (50 by 50 cm) per field in late summer (residual populations)
- Data weighted in analysis based on distribution of surveyed crops in 2011 census
- Summarized weed data using a relative abundance index based on frequency, field uniformity and density
- Frequency = % of fields in which species occurred
- Uniformity = % of quadrats in which species occurred
- Density = Average density of species in all fields
- Compared top twenty species from surveys of:
  - 631 fields in 2002
  - 452 fields in 1997
  - 501 fields in 1986
  - 1424 fields in 1970s (1978-1981)

2016 Manitoba Survey

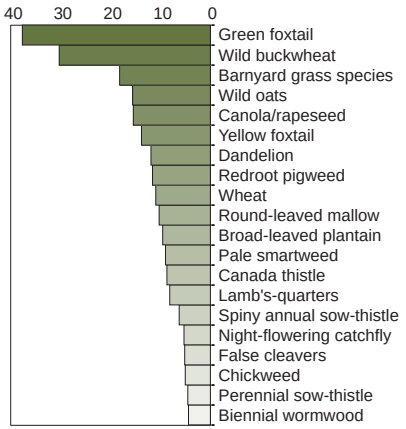


· Sites surveyed in 2016

— Ecodistrict boundaries

Ecoregions
- Aspen Parkland
- Lake Manitoba Plain
- Southwest Manitoba Uplands
- Interlake Plain
- Boreal Transition
- Mid-Boreal Uplands
- Mid-Boreal Lowland
- Lake of the Woods

Top 20 Species in 2016 Survey



Weed Species	Frequency (%)	Uniformity (%)	Density* (m^{-2})
Green foxtail	24.4	10.0	14.6
Wild buckwheat	52.7	13.1	2.0
Barnyard grass species	23.0	6.4	4.8
Wild oats	20.7	5.6	4.4
Canola/rapeseed	23.2	6.5	2.9
Yellow foxtail	11.2	3.9	10.6
Dandelion	21.1	4.4	2.4
Redroot pigweed	20.9	4.5	2.1
Wheat	15.5	4.4	3.5
Round-leaved mallow	20.1	4.1	1.7
Broad-leaved plantain	12.5	3.4	4.5
Pale smartweed	17.5	3.2	2.0
Canada thistle	18.1	3.1	1.6
Lamb's-quarters	15.5	3.0	2.0
Spiny annual sow-thistle	11.1	2.6	2.0
Night-flowering catchfly	9.4	1.9	2.5
False cleavers	9.0	2.2	1.9
Chickweed	7.5	1.9	3.4
Perennial sow-thistle	8.5	1.8	1.8
Biennial wormwood	9.2	1.7	1.4

*Average density in occurrence fields

Species Shifts

Relative Abundance Rank

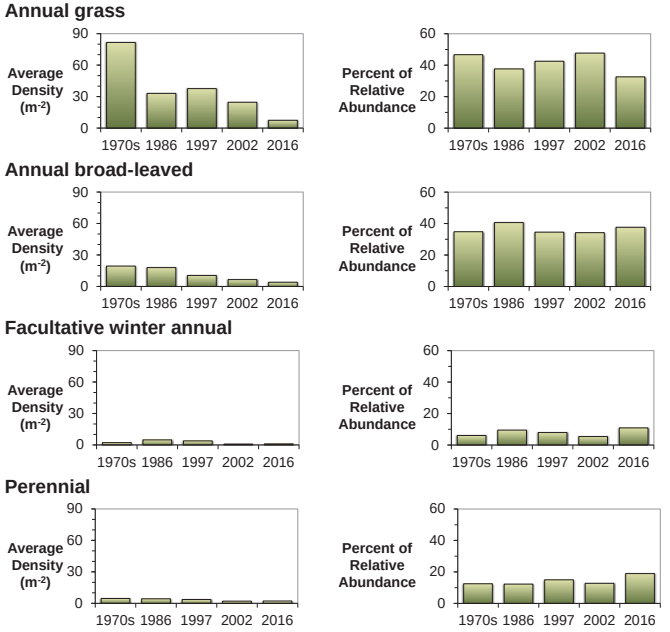
	1970s	1986	1997	2002	2016	Change
Spiny annual sow-thistle	77	74	36	14	15	62
Yellow foxtail	48	40	27	30	6	42
Broad-leaved plantain	39	52	31	35	11	28
Biennial wormwood	45	55	44	49	20	25
Canola/rapeseed	29	28	19	9	5	24
Dandelion	26	36	20	10	7	19
False cleavers	34	21	14	15	17	17
Round-leaved mallow	25	23	21	16	10	15
Chickweed	32	15	12	22	18	14
Wheat	20	19	22	12	9	11
Barnyard grass species	13	27	11	4	3	10
Wild buckwheat	3	3	3	3	2	1
Redroot pigweed	9	8	5	6	8	1
Kochia	31	30	24	17	30	1
Green foxtail	1	1	1	1	1	0
Wild oats	2	2	2	2	4	-2
Field horsetail	18	18	26	23	21	-3
Night-flowering catchfly	10	13	15	18	16	-6
Shepherd's-purse	21	17	13	27	27	-6
Lamb's-quarters	7	6	9	7	14	-7
Canada thistle	5	9	4	5	13	-8
Pale smartweed	4	5	7	8	12	-8
Thyme-leaved spurge	19	26	23	21	28	-9
Perennial sow-thistle	8	11	8	20	19	-11
Hemp-nettle	17	14	16	24	33	-16
Wild mustard	6	4	6	11	23	-17
Stinkweed	11	10	17	19	34	-23
Quack grass	12	12	10	13	38	-26
Dog mustard	30	20	37	41	62	-32
Barley	22	16	29	26	69	-47
Flax	15	7	18	25	74	-59
Russian thistle	14	24	33	57	96	-82
Bluebur	16	25	51	60	-	>-112

**Species in italics have maintained a position in the top 20 since 1970s*

Species Shifts Summary

- Spiny annual sow-thistle has increased the most since the 1970s; however, it did not increase from 2002 to 2016
- Yellow foxtail, broad-leaved plantain and biennial wormwood appeared in the top twenty for the first time in 2016
- Other species that have increased since the 1970s include: canola, dandelion, false cleavers, round-leaved mallow, chickweed, wheat and barnyard grass species
- Nine species have been in the top 20 since the 1970s
- Green foxtail has been ranked first in every survey
- Wild oats fell from the second most abundant species to the fourth surpassed by wild buckwheat and barnyard grass species
- Of the fourteen species with the largest decline, only perennial sow-thistle did not decrease in the most recent survey

Life Form Shifts



Life Form Shift Summary

- The densities of annual grass and annual broad-leaved weeds in 2016 were the lowest ever recorded
- The relative abundance of annual grasses was lowest in the 2016 survey, while relative abundances of perennials and facultative winter annuals were the highest on record

Next Step

- Interpret shifts in terms of management practices based on information obtained from questionnaires completed by survey participants

Weeds that have increased the most since the 1970s. Left to right: Spiny annual sow-thistle, yellow foxtail, broad-leaved plantain, biennial wormwood

Acknowledgements

The survey was funded by: Manitoba Agri-Research and Development Fund (GF2), Western Grains Research Foundation, Manitoba Pulse & Soybean Growers, Manitoba Wheat & Barley Growers Association, Manitoba Canola Growers, Manitoba Oat Growers Association, Manitoba Corn Growers Association, Manitoba Seed Growers Association, Manitoba Flax Growers Association and National Sunflower Association of Canada. We would like to thank the producers who granted us access to their land to conduct this survey. The survey would not be possible without the assistance of the many individuals who contacted producers, surveyed fields and entered data.

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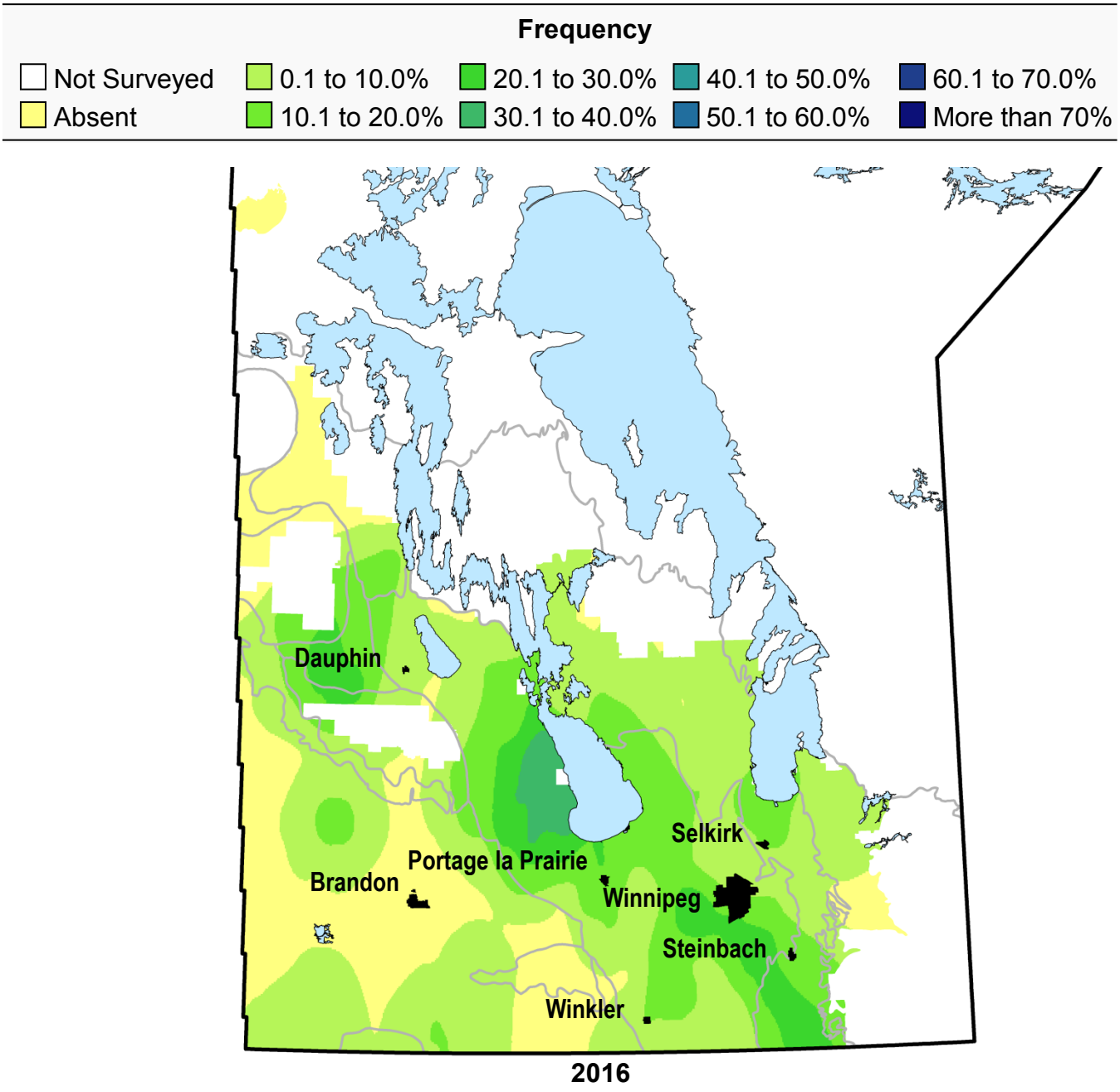
- Leeson, J.Y., A.G. Thomas, T. Andrews, K.R. Brown and R.C. Van Acker. 2002. Weed survey of Manitoba cereal and oilseed crops in 2002. Agriculture and Agri-Food Canada Weed Survey Series Publication 02-2.

Canada

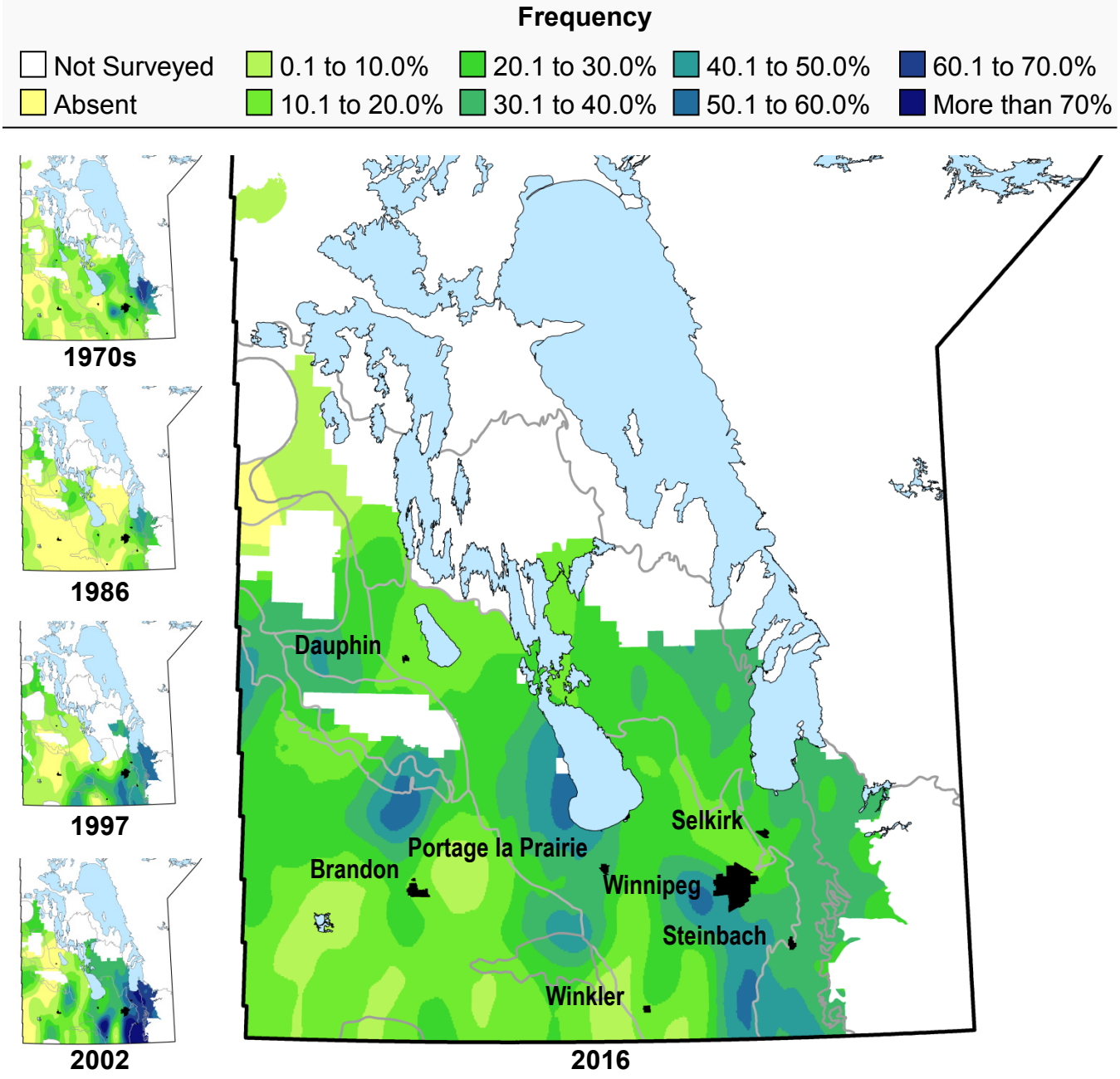
List of Distribution Maps

Barnyard grass, *Echinochloa crus-galli**



*See barnyard grass species for previous survey maps

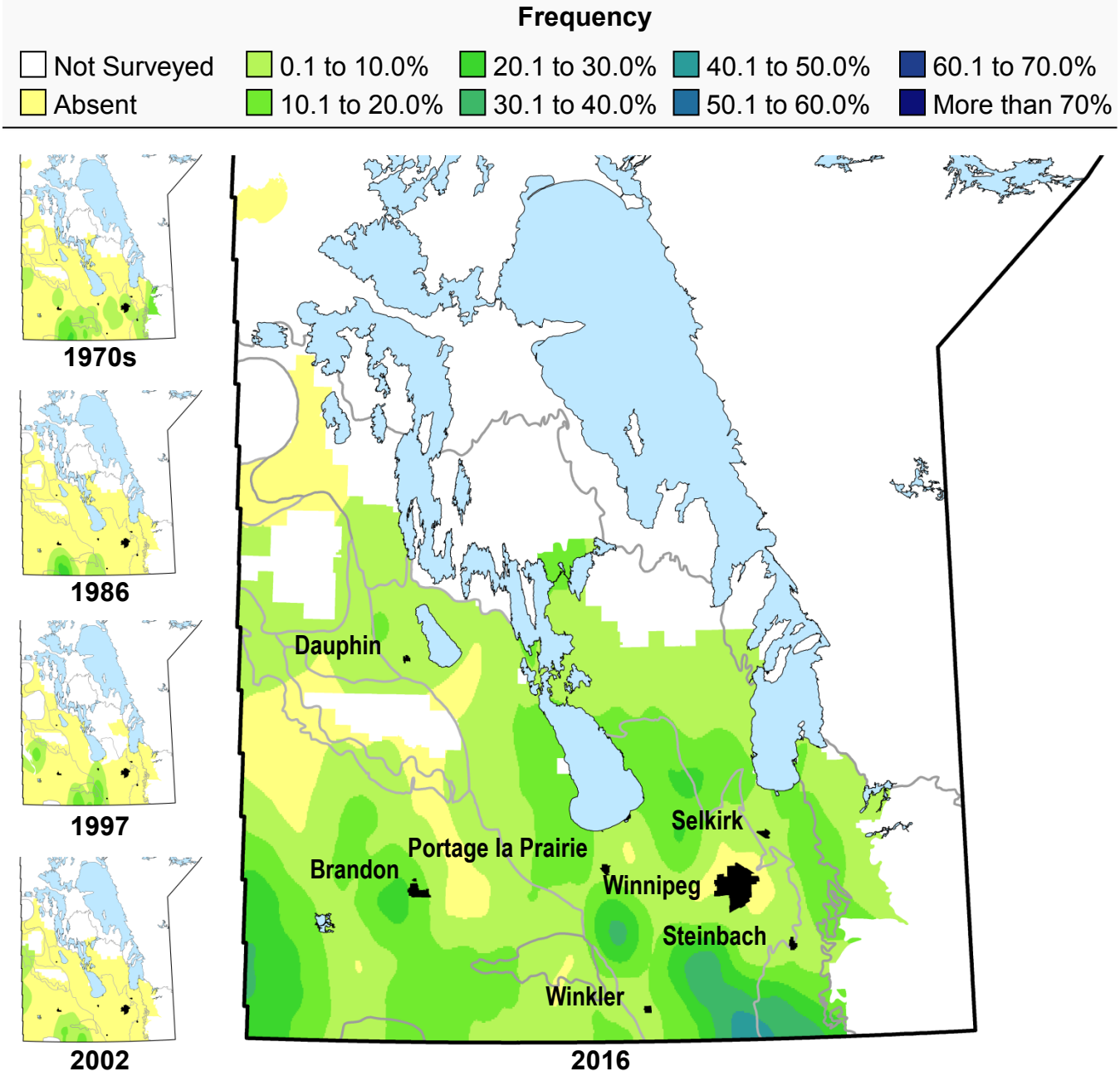
Barnyard grass species, *Echinochloa* spp.



Survey	Rank	Frequency (%)	Field Uniformity All	Field Uniformity Occurrence	Field Density (#/m²) All	Field Density (#/m²) Occurrence	Field Density (#/m²) High	Relative Abundance
1978-81	13	9.7	2.6	27.2	1.9	19.5	340.4	4.2
1986	27	4.9	0.8	15.8	0.1	2.9	32.0	1.3
1997	11	20.4	4.4	21.7	1.5	7.6	131.4	8.0
2002	4	25.7	6.6	25.9	3.8	14.8	582.8	20.4
2016	3	23.0	6.4	27.8	1.1	4.8	80.0	18.2

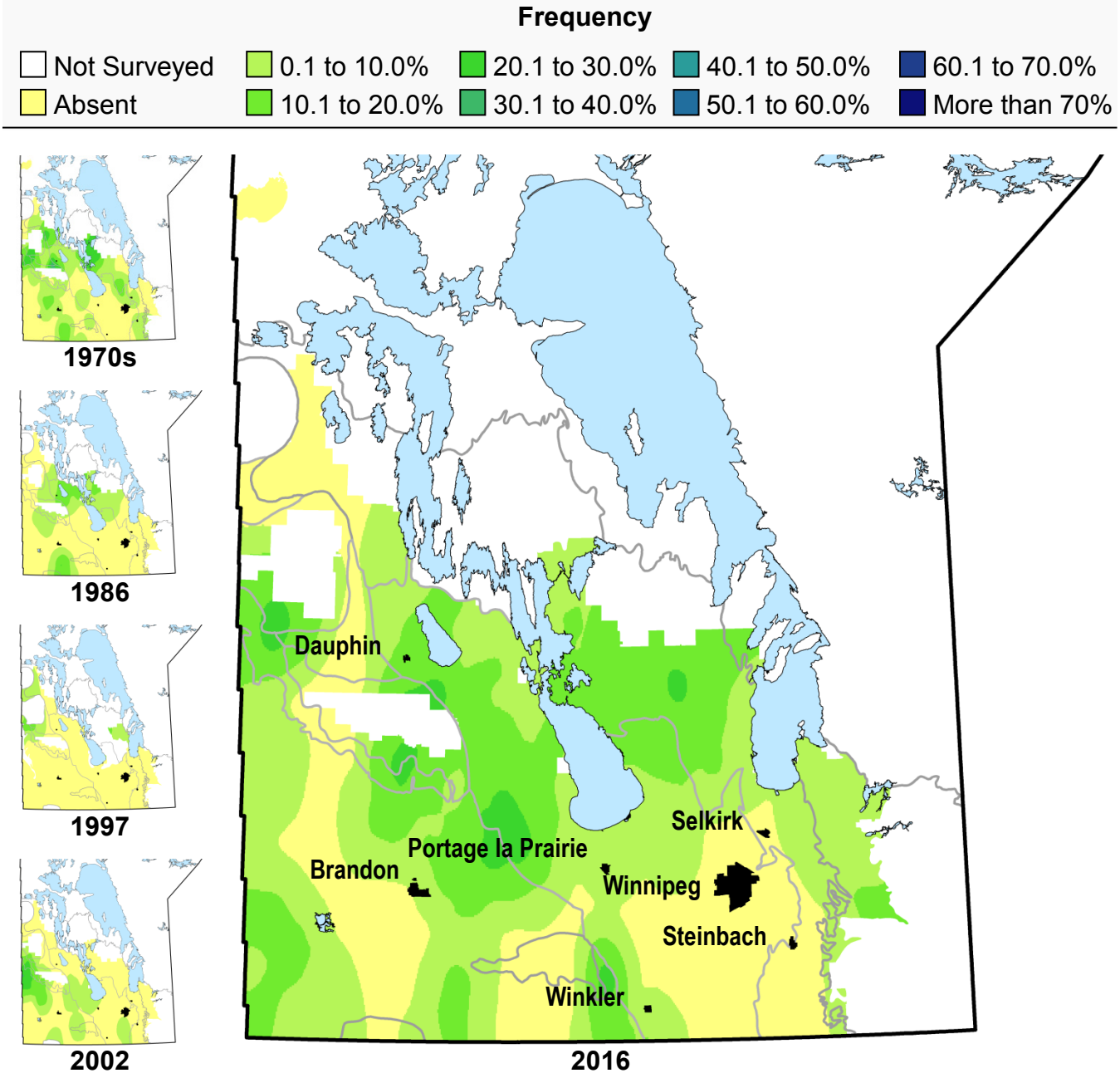
* Includes western barnyard grass and barnyard grass (*Echinochloa muricata var. microstachya and E.crus-galli*)

Biennial wormwood, *Artemisia biennis*



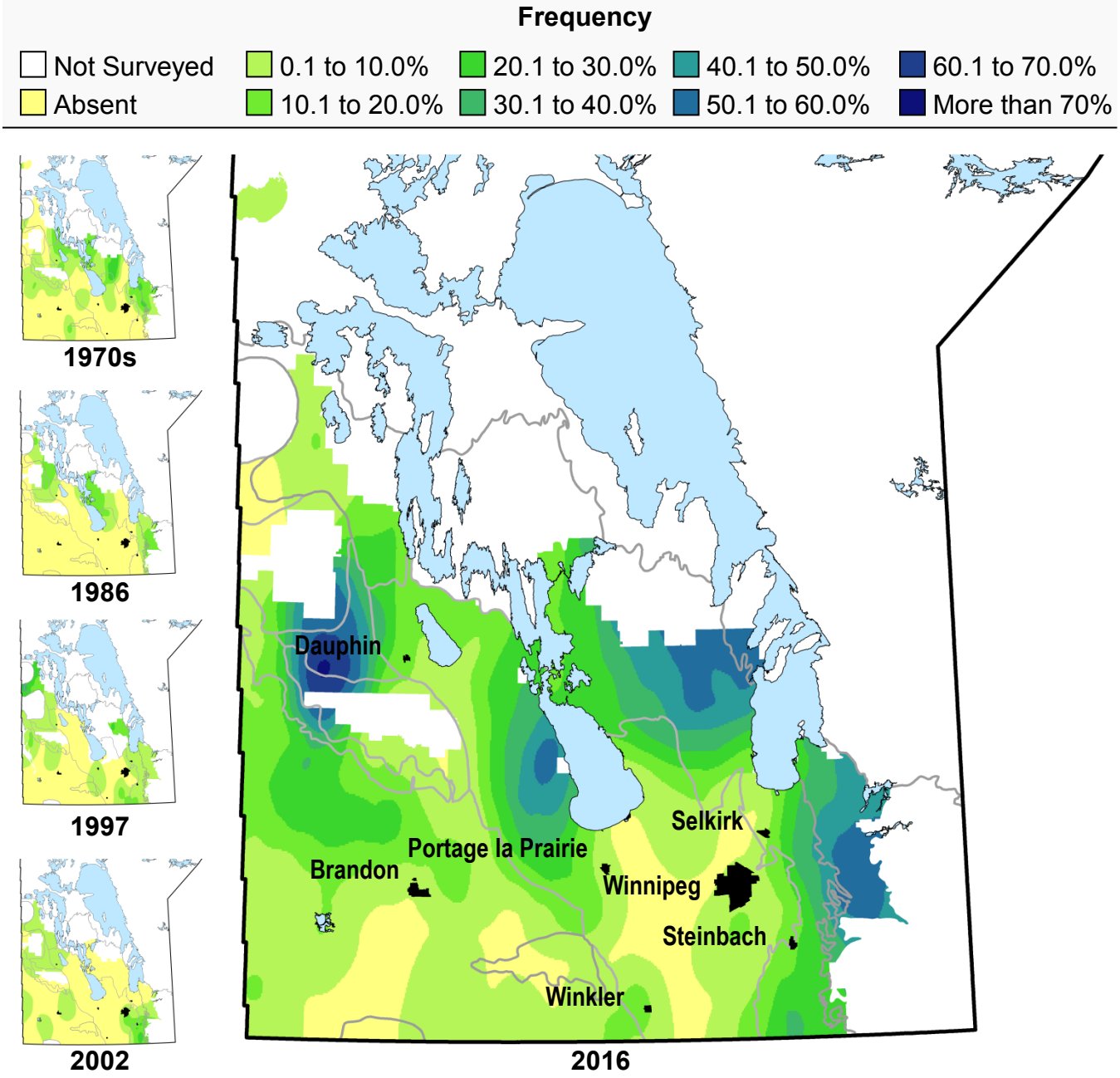
Survey	Rank	Frequency (%)	Field Uniformity All	Field Uniformity Occurrence	Field Density (#/m²) All	Field Density (#/m²) Occurrence	Field Density (#/m²) High	Relative Abundance
1978-81	45	2.0	0.3	14.6	< 0.1	1.8	10.8	0.4
1986	55	1.0	0.1	12.0	< 0.1	0.7	2.0	0.2
1997	44	1.4	0.1	7.4	< 0.1	2.1	11.6	0.3
2002	49	0.9	0.1	12.3	< 0.1	0.9	2.2	0.2
2016	20	9.2	1.7	18.4	0.1	1.4	22.8	4.4

Black medick, *Medicago lupulina*



Survey	Rank	Frequency (%)	Field Uniformity All	Field Uniformity Occurrence	Field Density (#/m²) All	Field Density (#/m²) Occurrence	Field Density (#/m²) High	Relative Abundance
1978-81	27	3.4	0.8	23.9	0.3	7.9	63.4	1.0
1986	42	1.9	0.2	8.9	< 0.1	1.1	3.6	0.4
1997	49	0.7	0.1	22.5	< 0.1	2.2	2.8	0.2
2002	28	2.6	0.5	20.9	0.1	3.0	15.6	1.1
2016	25	5.4	1.0	19.0	0.1	1.4	6.0	2.6

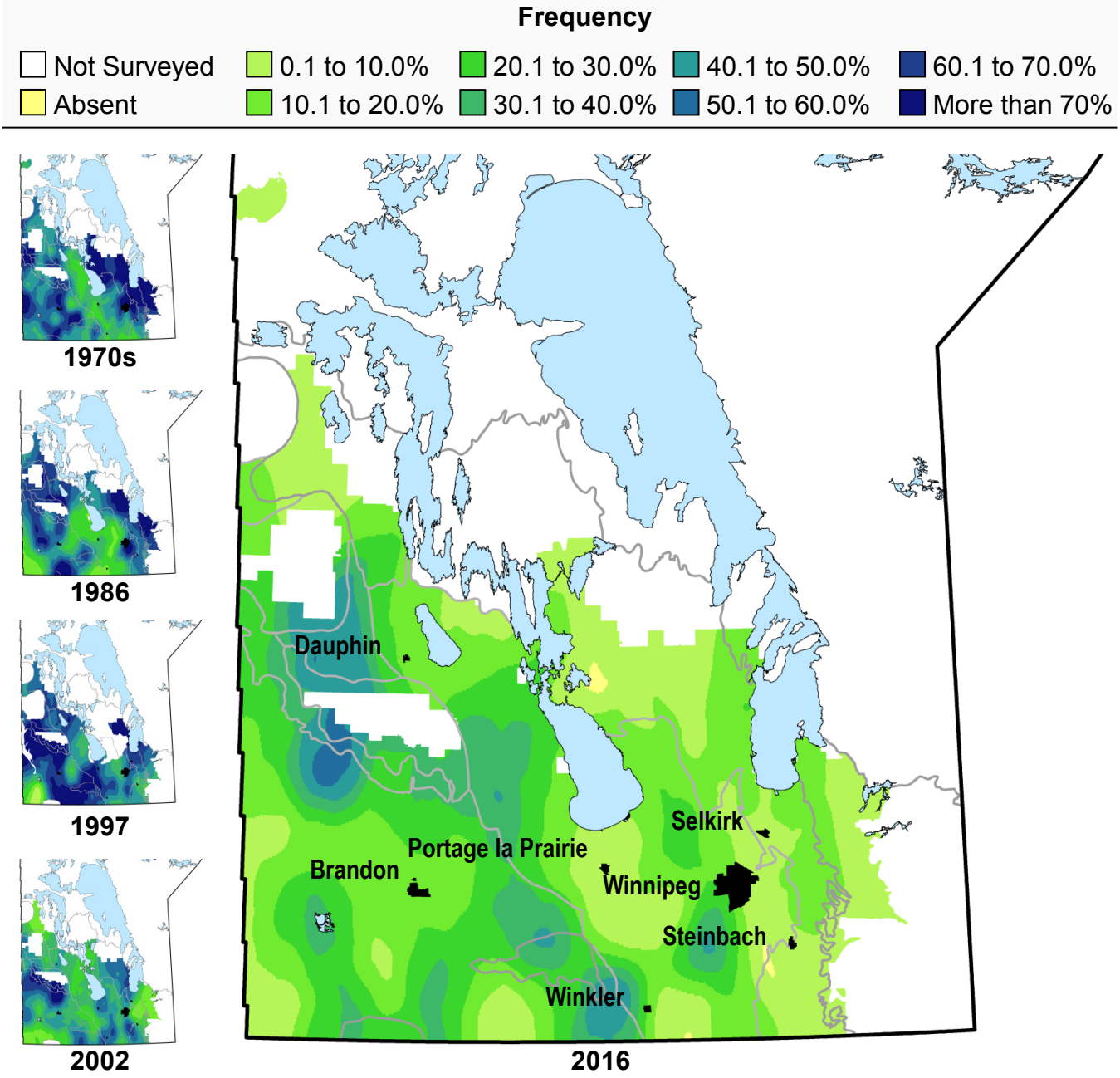
Broad-leaved plantain, *Plantago major**



Survey	Rank	Frequency (%)	Field Uniformity All	Field Uniformity Occurrence	Field Density (#/m²) All	Field Density (#/m²) Occurrence	Field Density (#/m²) High	Relative Abundance
1978-81	39	2.2	0.4	16.0	0.1	5.3	60.0	0.6
1986	52	1.0	0.2	17.1	< 0.1	2.2	10.8	0.3
1997	31	3.4	0.4	12.8	< 0.1	1.1	7.8	0.8
2002	35	1.8	0.2	11.8	< 0.1	1.8	11.4	0.6
2016	11	12.5	3.4	27.4	0.6	4.5	57.4	9.6

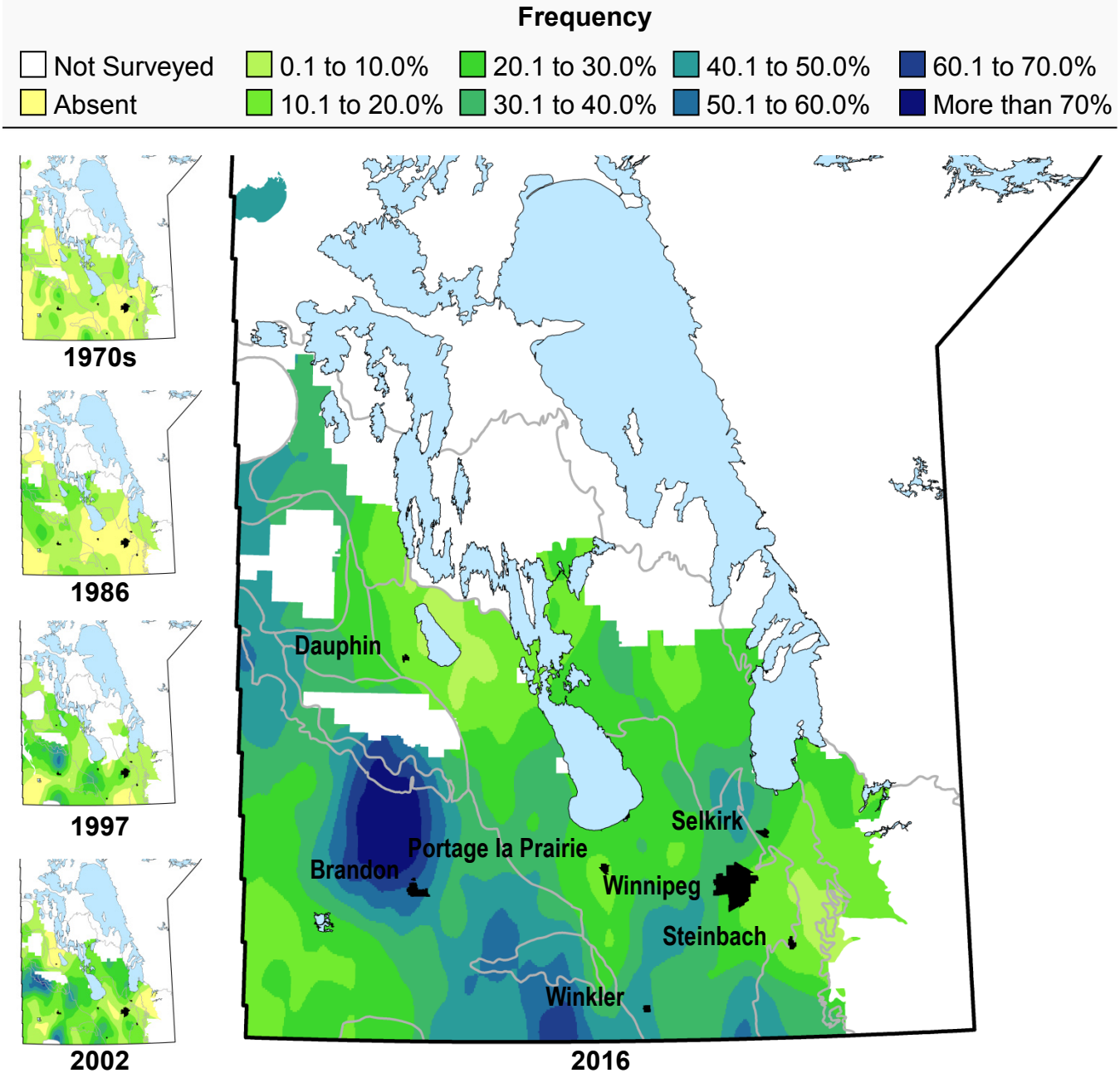
* Includes other plantain species

Canada thistle, *Cirsium arvense*



Survey	Rank	Frequency (%)	Field Uniformity All	Field Uniformity Occurrence	Field Density (#/m²) All	Field Density (#/m²) Occurrence	Field Density (#/m²) High	Relative Abundance
1978-81	5	50.8	11.1	21.9	1.4	2.7	63.0	12.8
1986	9	45.1	9.3	20.7	1.1	2.5	21.6	12.6
1997	4	59.0	11.8	20.0	1.2	2.1	25.8	16.9
2002	5	42.6	7.3	17.1	0.8	1.8	18.2	15.0
2016	13	18.1	3.1	17.3	0.3	1.6	33.8	8.7

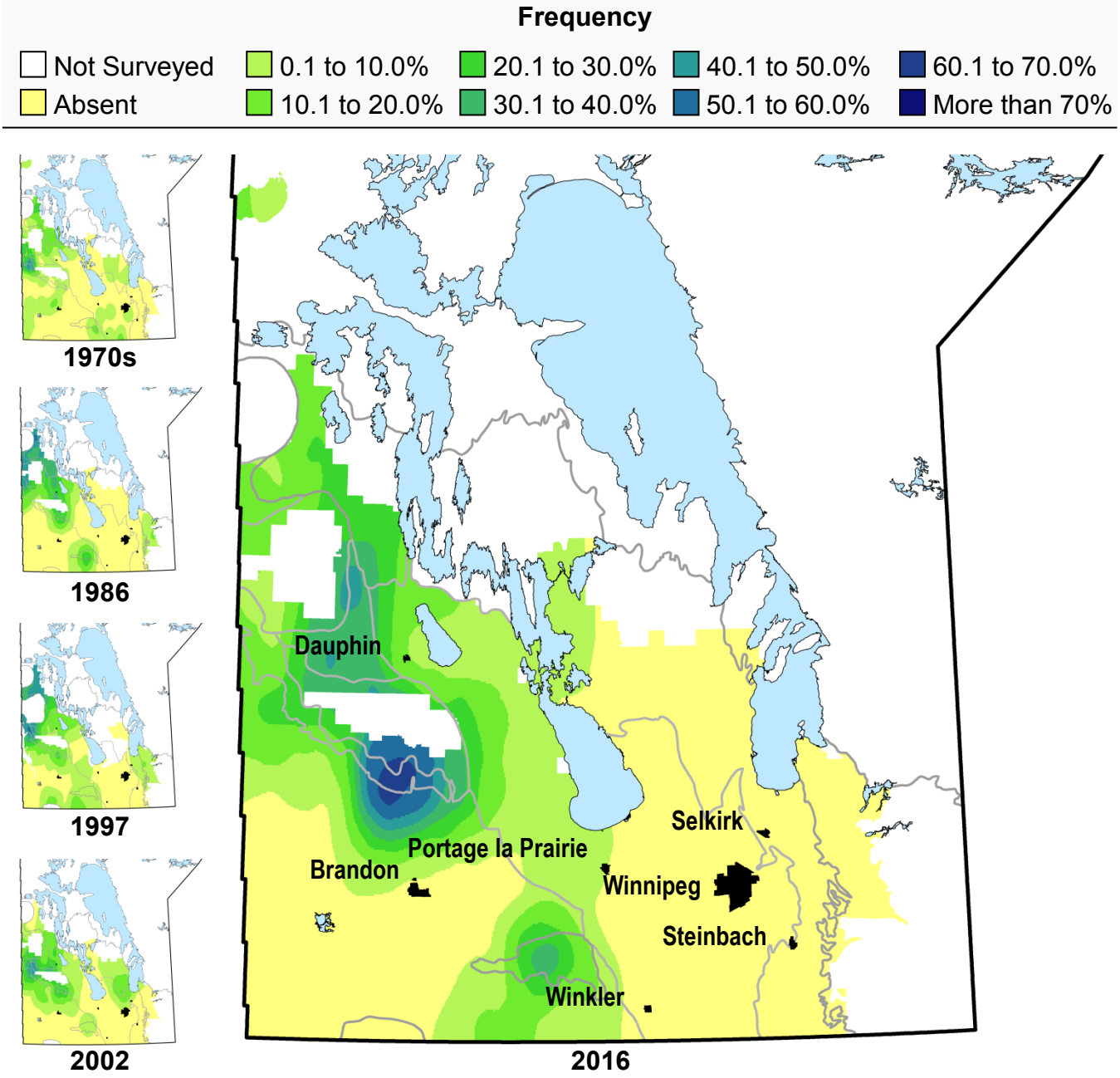
Canola/rapeseed, *Brassica napus and B. rapa*



Survey	Rank	Frequency (%)	Field Uniformity All	Field Uniformity Occurrence	Field Density (#/m²) All	Field Density (#/m²) Occurrence	Field Density (#/m²) High	Relative Abundance
1978-81	28	4.0	1.0	24.2	0.2	3.9	47.4	1.1
1986	27	4.7	1.2	25.2	0.1	2.3	10.0	1.4
1997	16	12.5	3.1	25.0	0.4	3.6	39.4	4.1
2002	9	20.7	4.1	19.5	0.6	3.1	86.0	8.2
2016	3	34.3	9.8	28.5	1.0	3.0	35.6	21.7

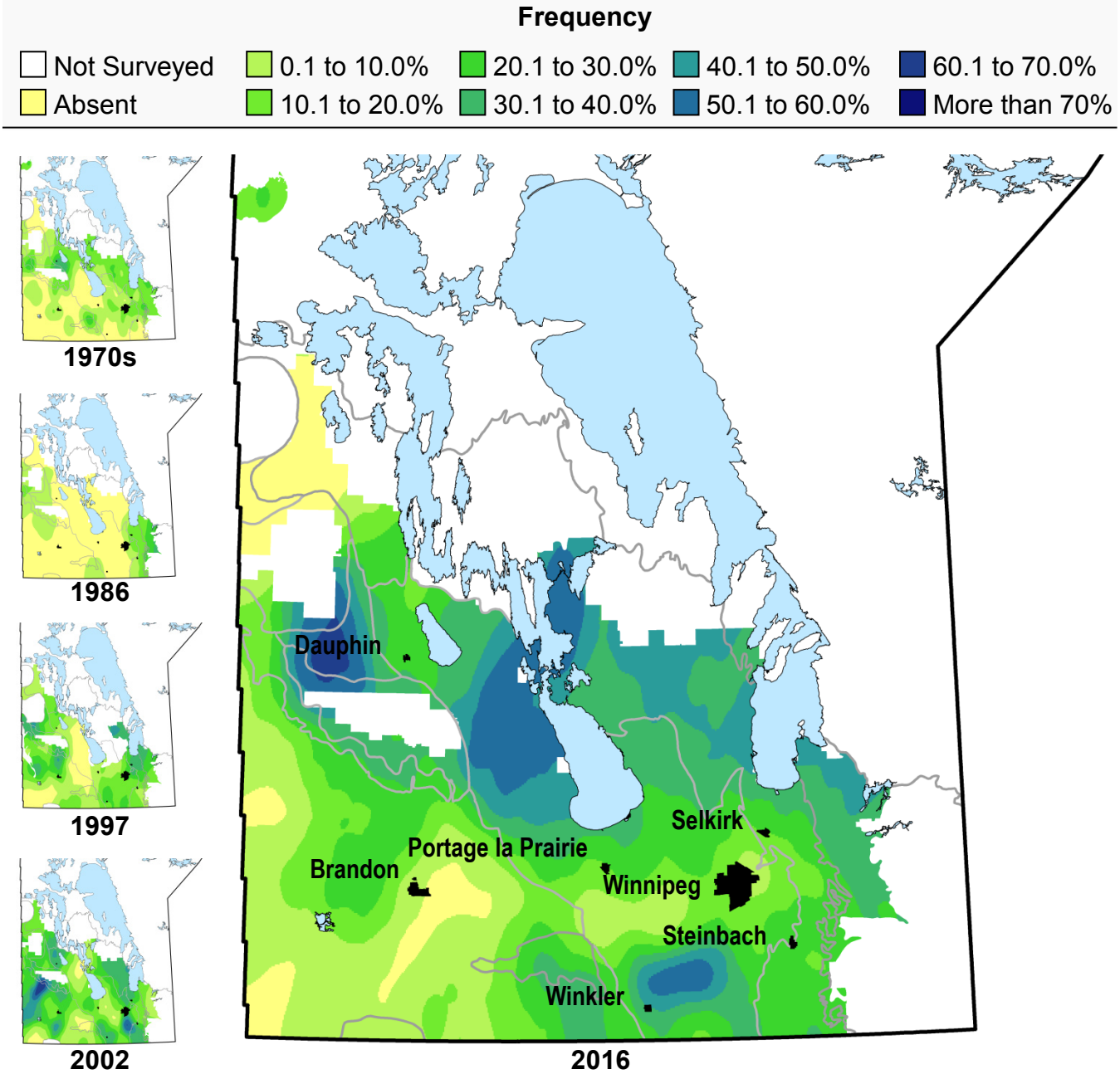
* Data only includes fields not seeded to canola

Chickweed, *Stellaria media*



Survey	Rank	Frequency (%)	Field Uniformity All	Field Uniformity Occurrence	Field Density (#/m²) All	Field Density (#/m²) Occurrence	Field Density (#/m²) High	Relative Abundance
1978-81	32	3.1	0.6	20.2	0.2	7.4	96.6	0.9
1986	15	6.7	2.2	32.7	1.0	15.5	110.0	3.6
1997	12	7.2	3.4	47.6	2.7	37.1	257.8	7.6
2002	22	4.9	1.4	28.3	0.3	5.3	44.0	2.6
2016	18	7.5	1.9	25.5	0.3	3.4	23.2	5.1

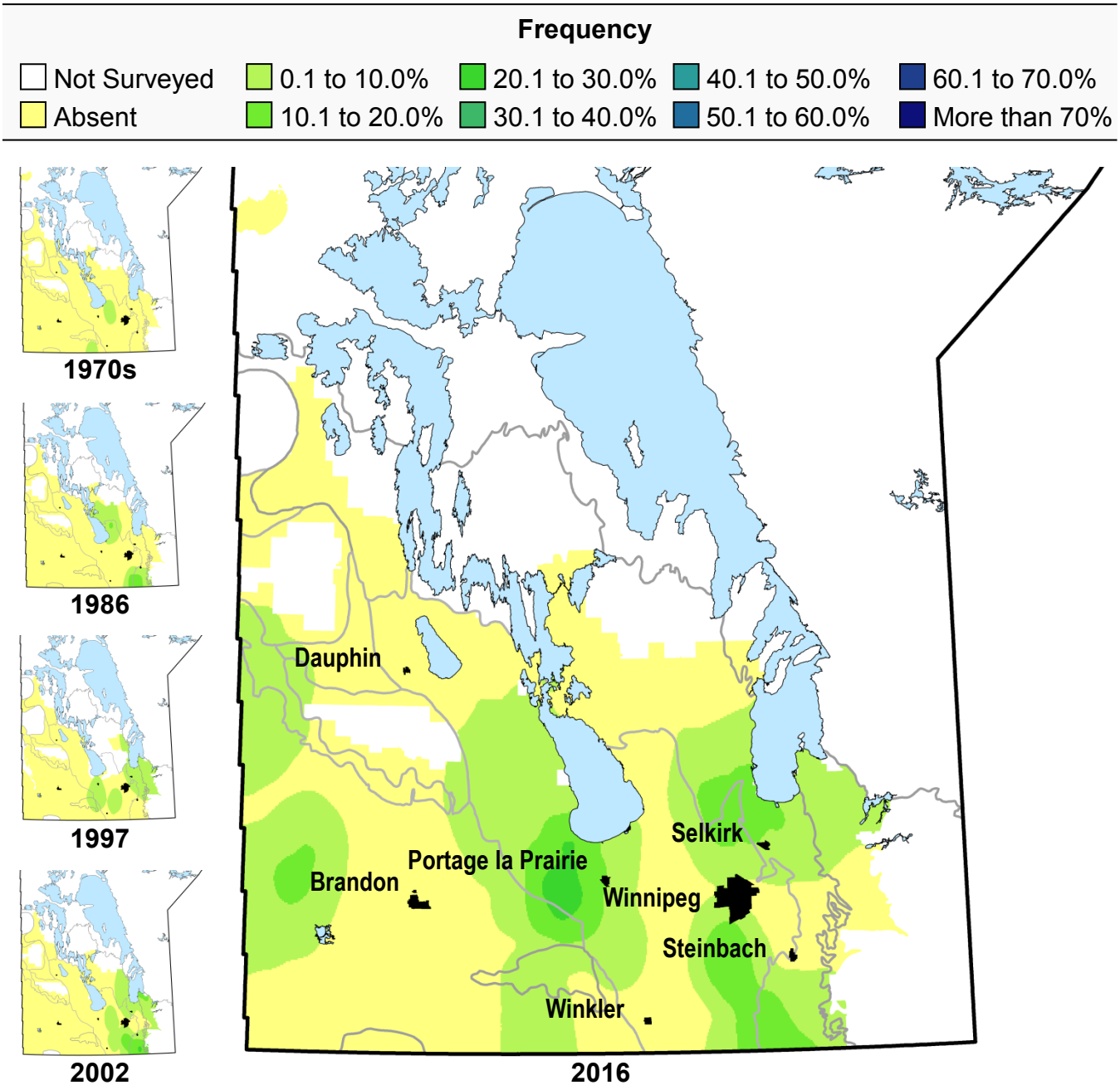
Dandelion, *Taraxacum officinale**



Survey	Rank	Frequency (%)	Field Uniformity		Field Density (#/m²)			Relative Abundance
			All	Occurrence	All	Occurrence	High	
1978-81	26	5.2	0.8	14.4	0.1	1.4	13.2	1.1
1986	36	2.2	0.3	15.3	< 0.1	1.4	10.2	0.5
1997	20	14.0	1.9	13.7	0.1	1.0	9.2	3.3
2002	10	21.1	3.4	16.0	0.3	1.5	20.8	7.1
2016	7	21.1	4.4	21.0	0.5	2.4	84.2	11.9

* Includes red-seeded dandelion (*Taraxacum erythrospermum*)

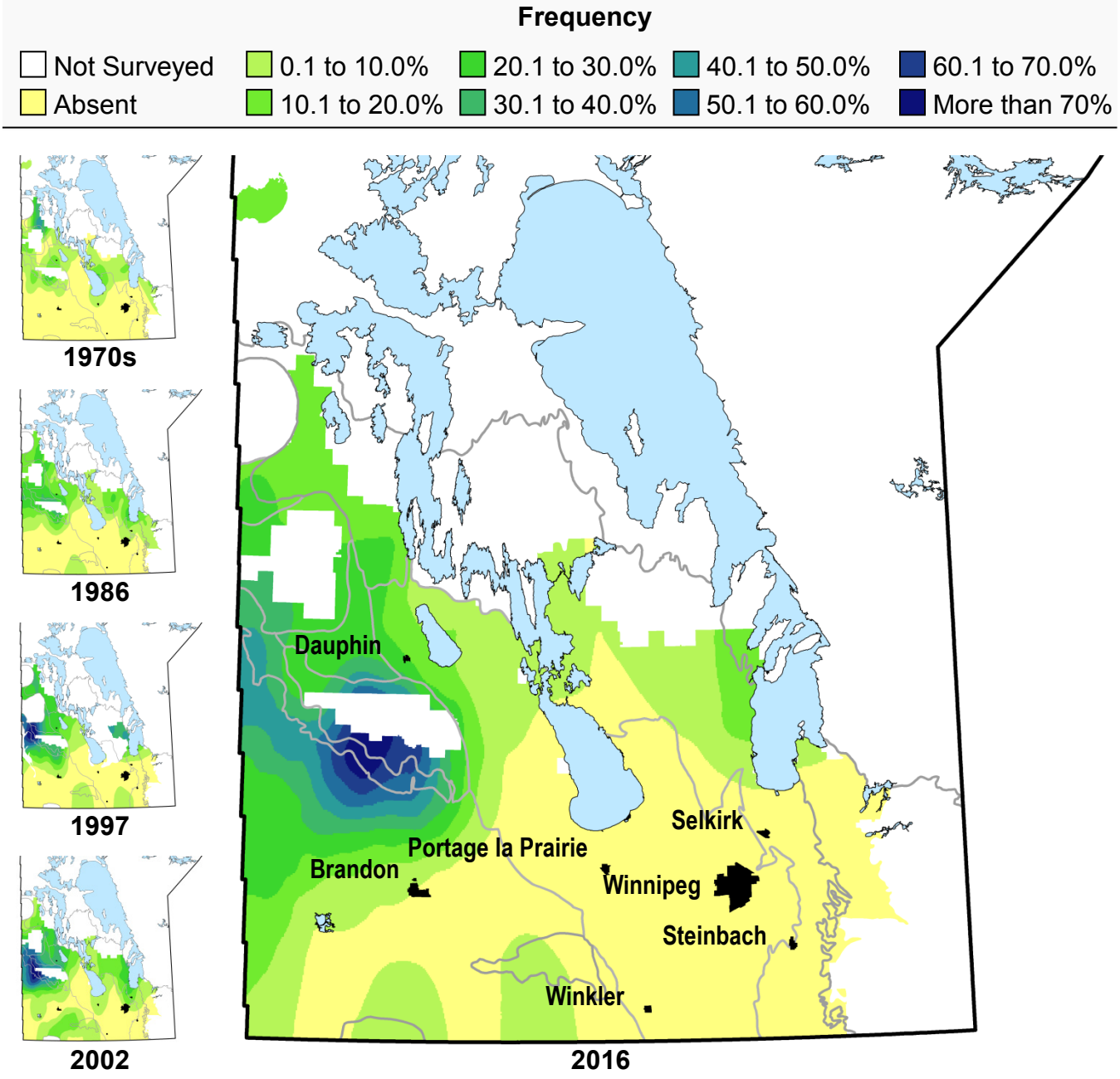
Dock species, *Rumex* spp.*



Survey	Rank	Frequency (%)	Field Uniformity All	Field Uniformity Occurrence	Field Density (#/m²) All	Field Density (#/m²) Occurrence	Field Density (#/m²) High	Relative Abundance
1978-81	85	0.2	< 0.1	14.3	< 0.1	0.6	1.2	< 0.1
1986	66	0.5	0.1	10.0	< 0.1	1.3	1.6	0.1
1997	55	0.8	< 0.1	5.0	< 0.1	0.8	1.2	0.1
2002	42	1.4	0.1	7.5	< 0.1	0.5	1.6	0.3
2016	32	3.3	0.6	16.9	0.1	1.8	8.0	1.6

* Includes curled and willow-leaved dock (*Rumex crispus and R. triangulivalvis*)

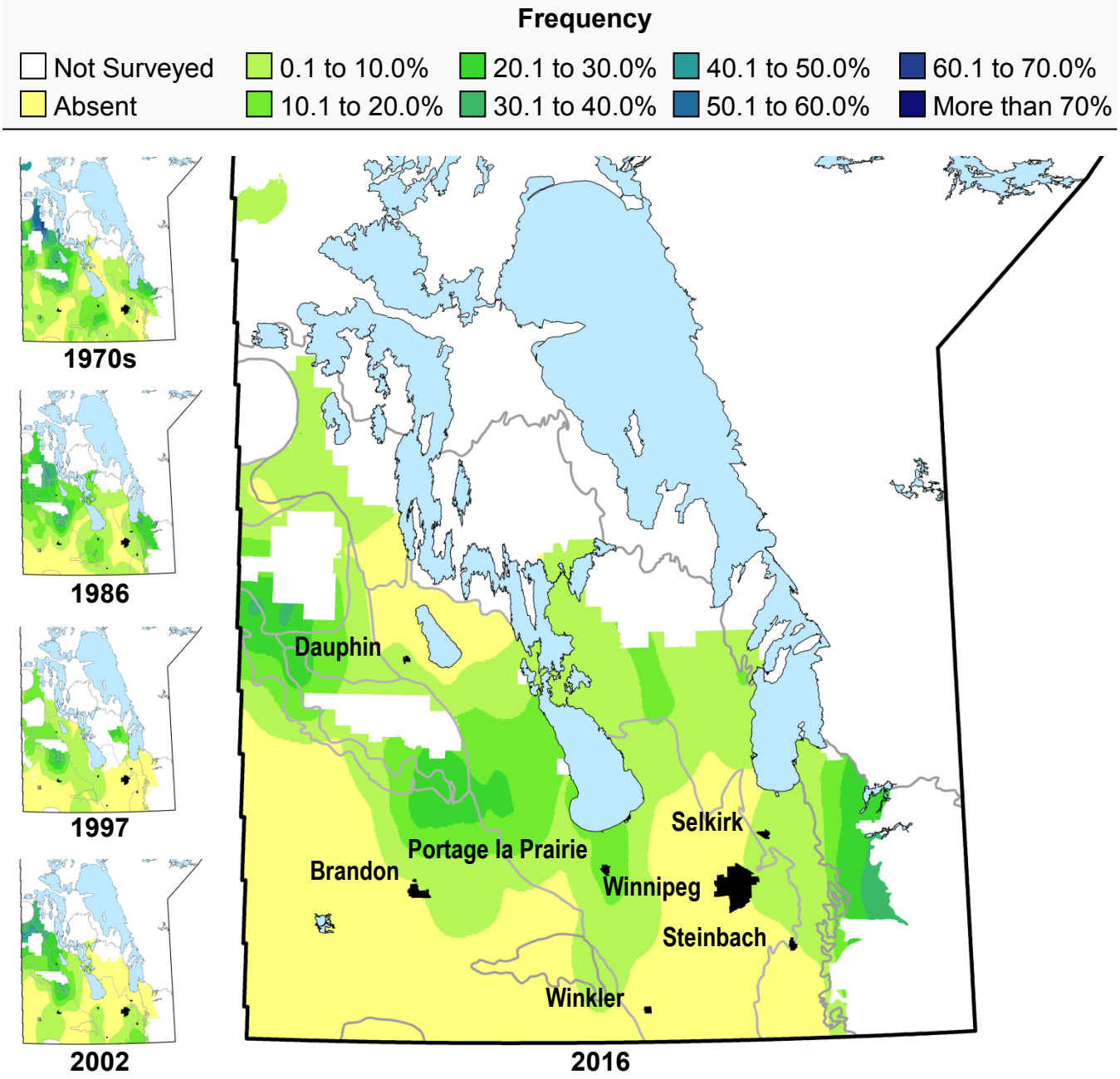
False cleavers, *Galium spurium**



Survey	Rank	Frequency (%)	Field Uniformity		Field Density (#/m²)			Relative Abundance
			All	Occurrence	All	Occurrence	High	
1978-81	34	2.3	0.7	29.2	0.1	6.0	32.0	0.7
1986	21	5.6	1.7	30.1	0.4	6.3	51.4	2.2
1997	14	10.3	3.9	37.5	0.7	6.5	70.6	4.7
2002	15	10.7	2.8	26.5	0.4	4.1	40.6	5.2
2016	17	9.0	2.2	25.1	0.2	1.9	25.6	5.1

* May include cleavers (*Galium aparine*)

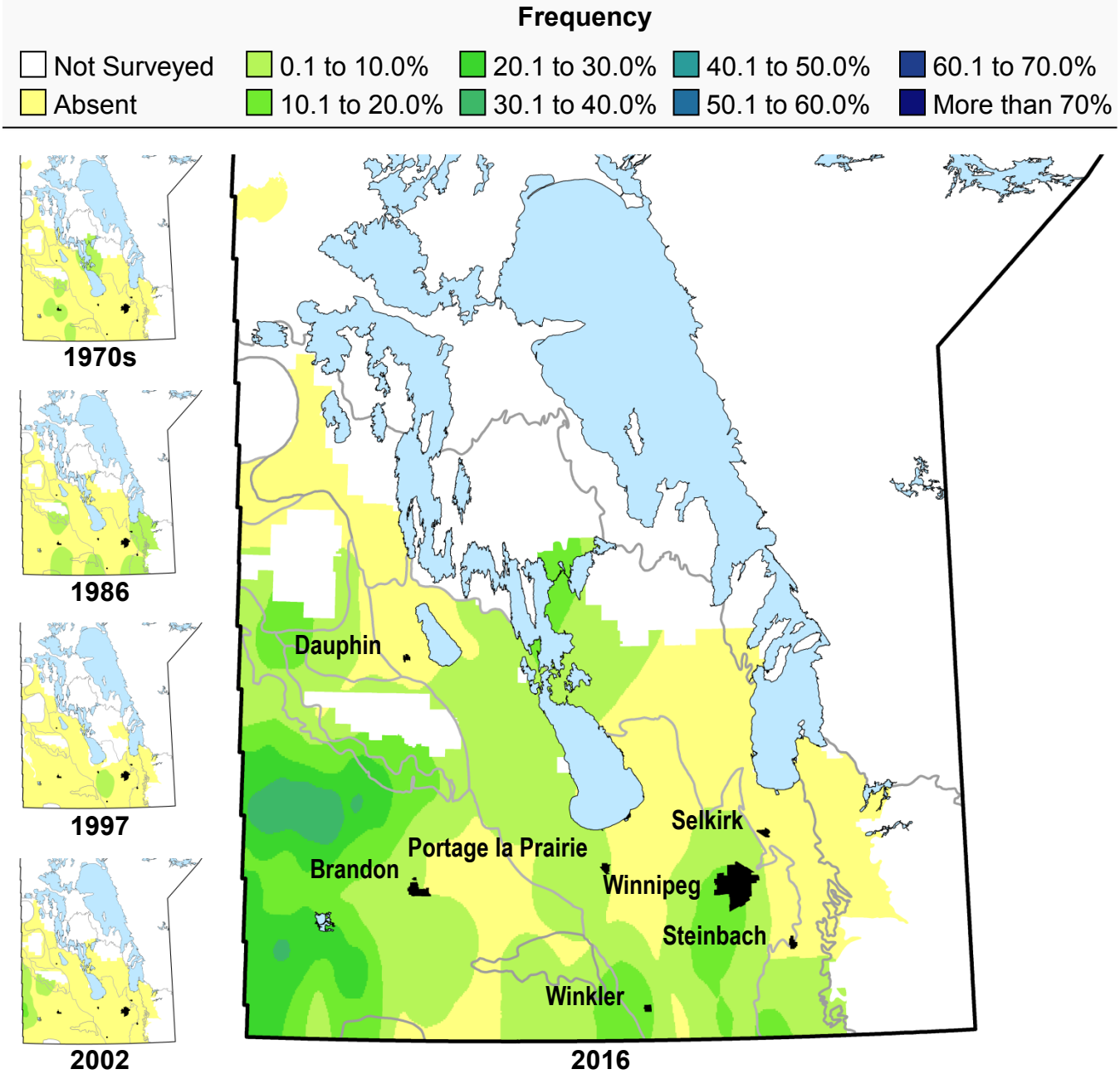
Field horsetail, *Equisetum arvense*



Survey	Rank	Frequency (%)	Field Uniformity All	Field Uniformity Occurrence	Field Density (#/m²) All	Field Density (#/m²) Occurrence	Field Density (#/m²) High	Relative Abundance
1978-81	18	9.3	2.1	22.6	0.5	5.5	66.4	2.6
1986	18	9.2	1.8	19.5	0.5	5.4	50.4	3.0
1997	26	5.2	0.6	11.9	0.1	2.0	6.6	1.2
2002	23	5.9	0.9	15.3	0.3	4.5	96.6	2.5
2016	21	4.3	1.0	22.5	0.3	5.9	61.2	3.5

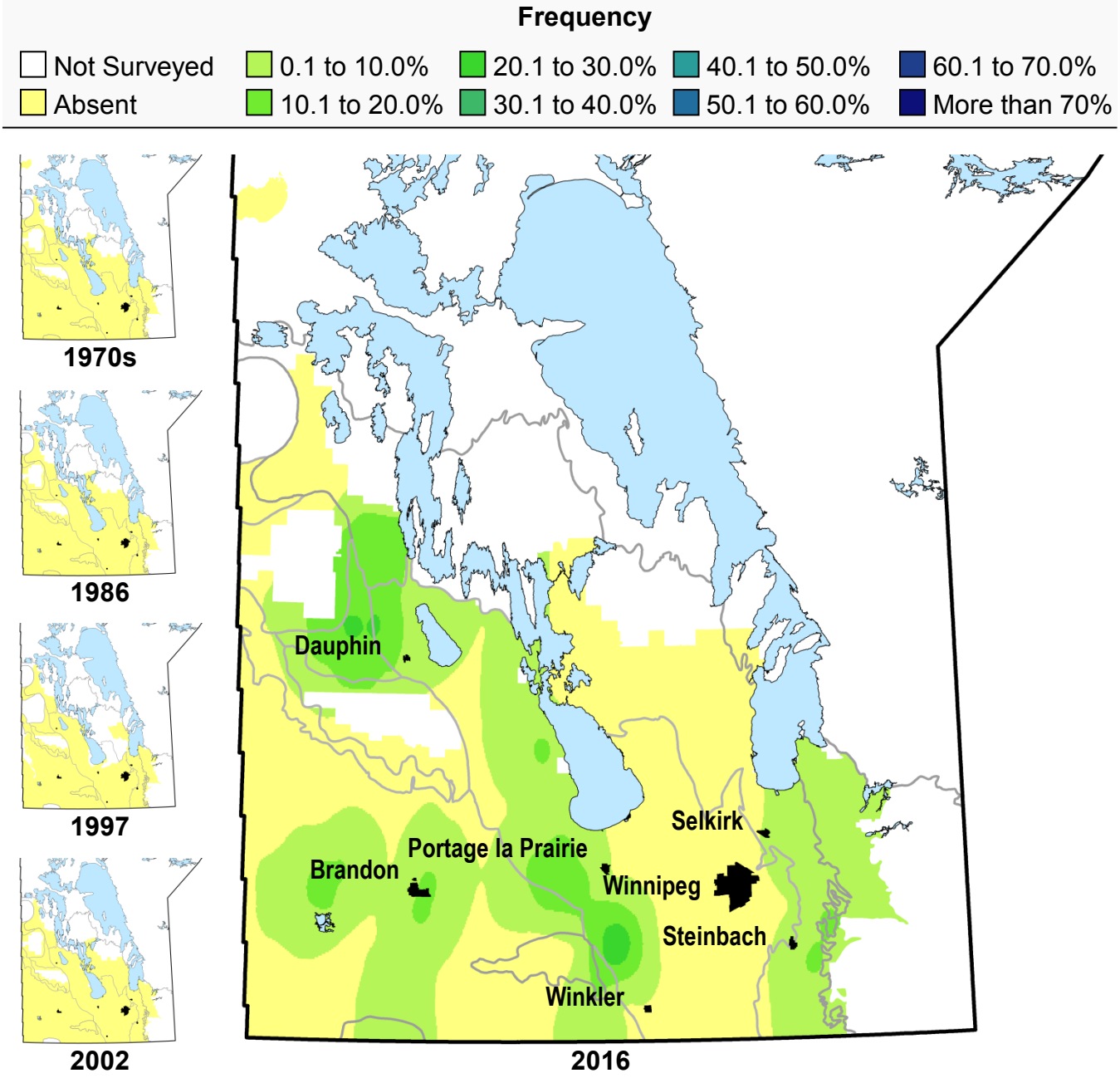
* Includes species (*species and species*)

Foxtail barley, *Hordeum jubatum*



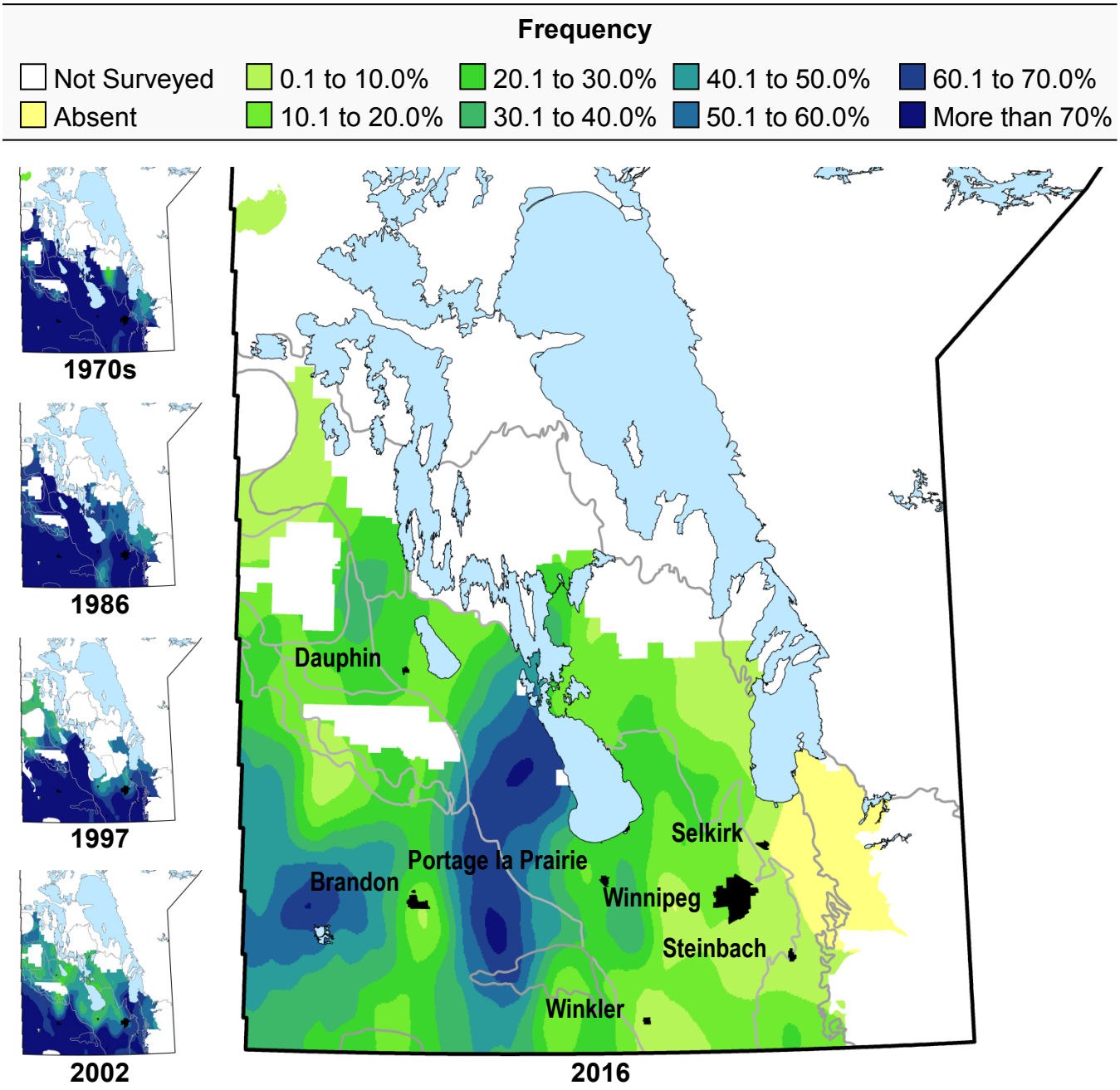
Survey	Rank	Frequency (%)	Field Uniformity All	Field Uniformity Occurrence	Field Density (#/m²) All	Field Density (#/m²) Occurrence	Field Density (#/m²) High	Relative Abundance
1978-81	81	0.3	< 0.1	8.2	< 0.1	0.9	2.0	0.1
1986	54	0.9	0.1	12.1	< 0.1	2.5	10.6	0.2
1997	83	0.3	< 0.1	5.0	< 0.1	0.2	0.2	< 0.1
2002	64	0.4	0.1	13.3	< 0.1	2.0	4.6	0.1
2016	22	6.9	1.1	16.1	0.1	1.7	15.0	3.3

Golden dock, *Rumex fueginus*



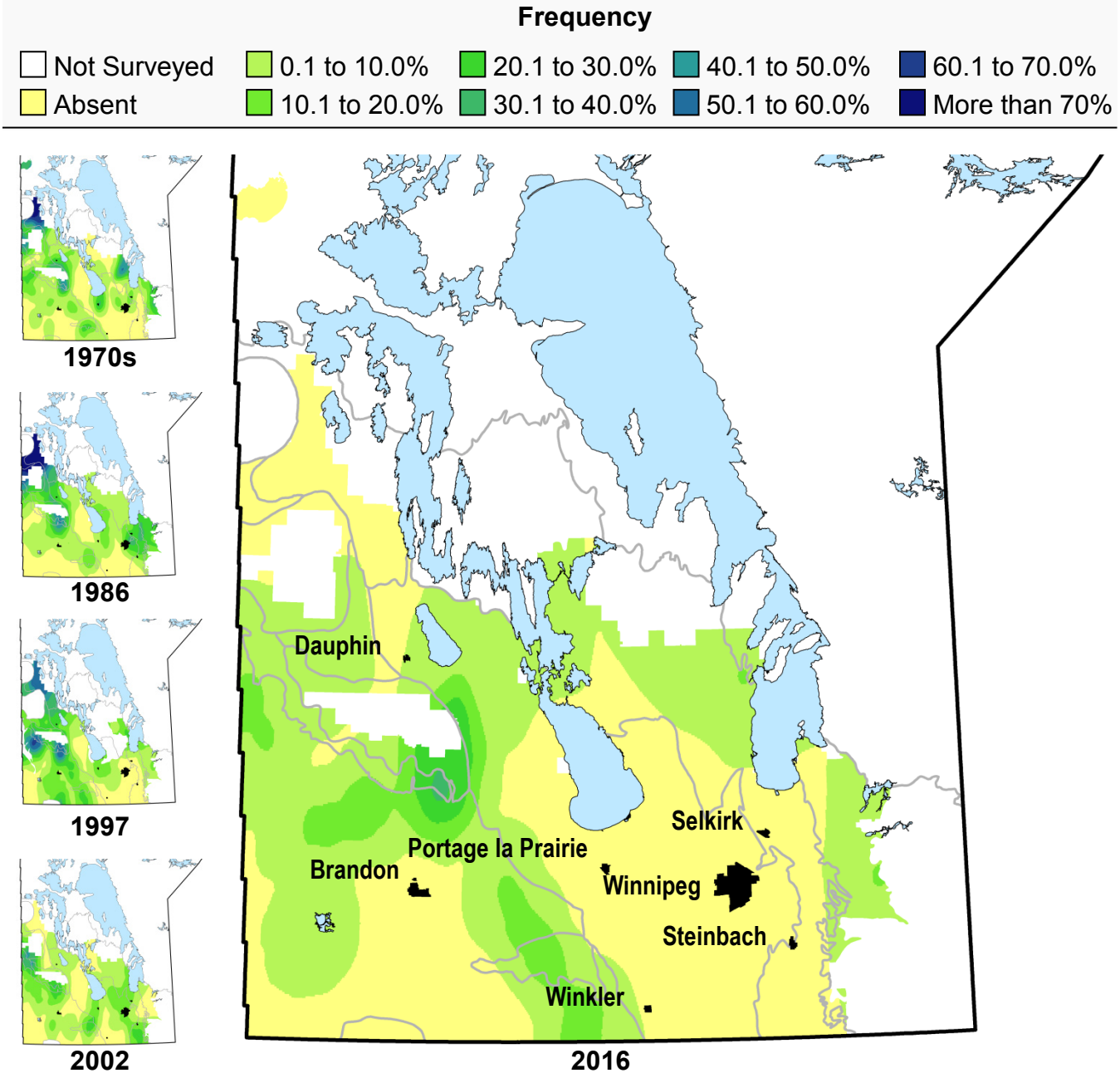
Survey	Rank	Frequency (%)	Field Uniformity		Field Density (#/m²)			Relative Abundance
			All	Occurrence	All	Occurrence	High	
1978-81	-	-	-	-	-	-	-	-
1986	-	-	-	-	-	-	-	-
1997	-	-	-	-	-	-	-	-
2002	-	-	-	-	-	-	-	-
2016	26	3.3	0.8	25.4	0.1	3.9	23.8	2.3

Green foxtail, *Setaria viridis*



Survey	Rank	Frequency (%)	Field Uniformity All	Field Uniformity Occurrence	Field Density (#/m²) All	Field Density (#/m²) Occurrence	Field Density (#/m²) High	Relative Abundance
1978-81	1	84.7	56.8	67.1	66.1	78.0	1459.8	95.7
1986	1	78.4	46.3	59.1	25.6	32.6	743.0	74.5
1997	1	72.5	35.9	49.5	29.1	40.1	1693.2	81.2
2002	1	64.8	26.1	40.2	13.6	20.9	1070.0	69.8
2016	1	24.4	10.0	41.1	3.6	14.6	163.4	37.7

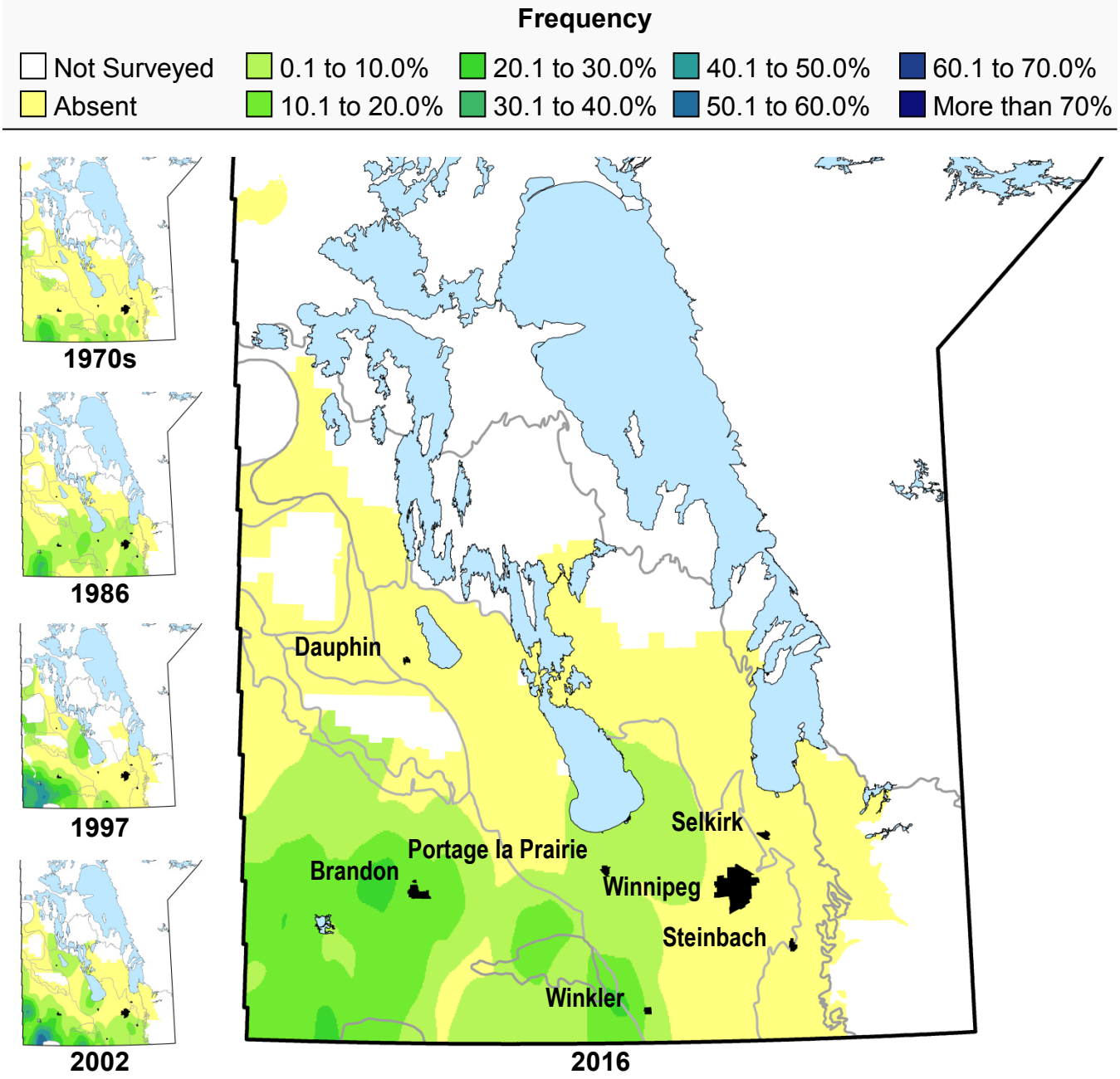
Hemp-nettle, *Galeopsis tetrahit*



Survey	Rank	Frequency (%)	Field Uniformity All	Field Uniformity Occurrence	Field Density (#/m²) All	Field Density (#/m²) Occurrence	Field Density (#/m²) High	Relative Abundance
1978-81	17	8.3	2.8	33.4	0.4	5.0	39.6	2.6
1986	14	11.6	3.2	28.0	0.5	3.9	50.4	3.9
1997	16	13.1	3.1	23.8	0.6	4.3	55.6	4.5
2002	24	7.0	1.1	16.2	0.1	1.6	10.6	2.4
2016	33	3.1	0.5	16.0	< 0.1	1.3	11.6	1.4

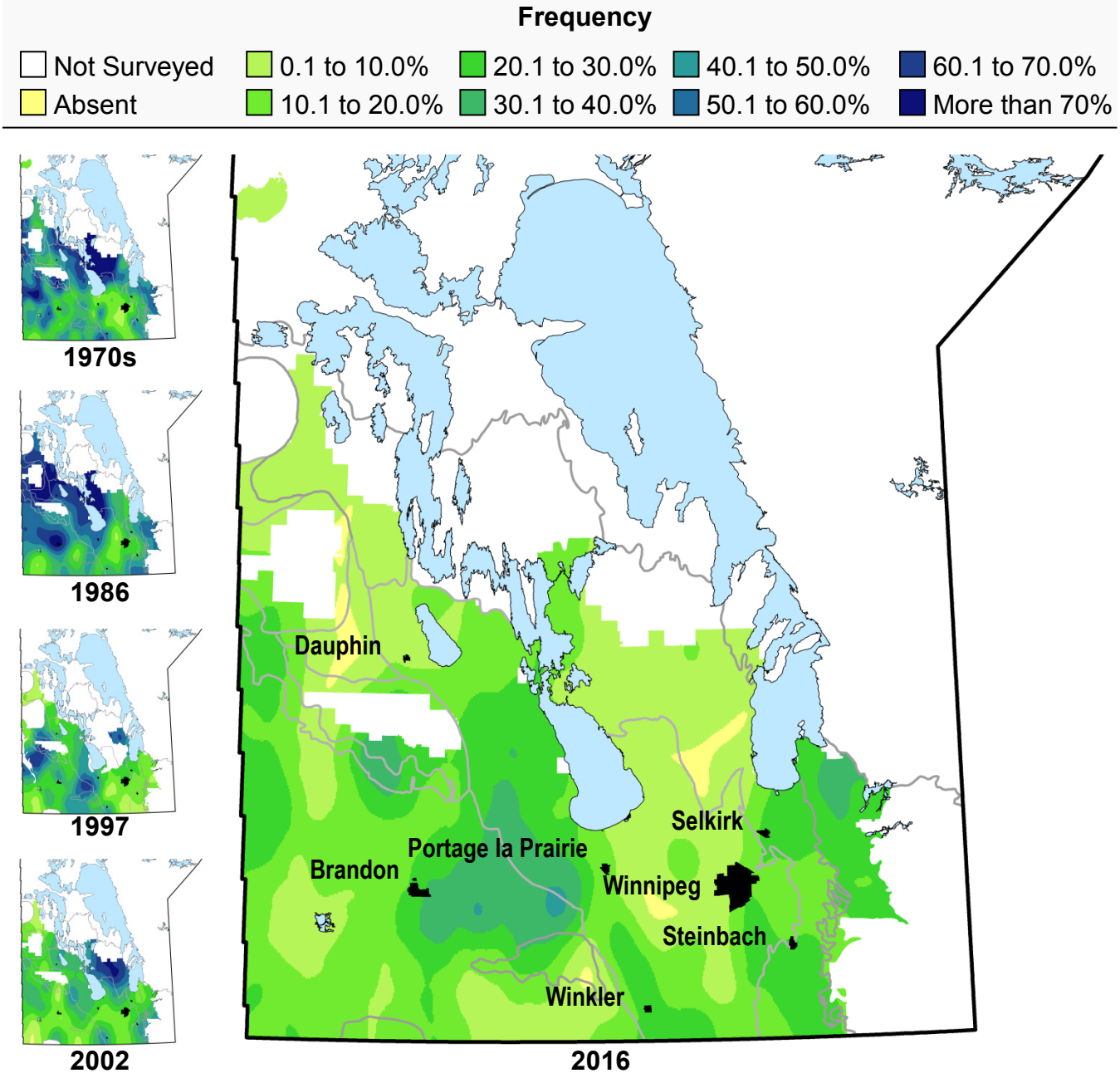
* Includes species (*species and species*)

Kochia, *Bassia scoparia*



Survey	Rank	Frequency (%)	Field Uniformity All	Field Uniformity Occurrence	Field Density (#/m²) All	Field Density (#/m²) Occurrence	Field Density (#/m²) High	Relative Abundance
1978-81	31	2.3	0.8	32.9	0.4	16.4	252.0	1.0
1986	30	3.7	0.5	13.6	0.1	2.1	18.2	0.9
1997	24	6.8	1.4	20.6	0.3	4.0	50.8	2.2
2002	17	7.2	1.3	18.1	0.4	5.8	197.0	3.4
2016	30	4.6	0.7	15.8	< 0.1	1.1	4.0	2.0

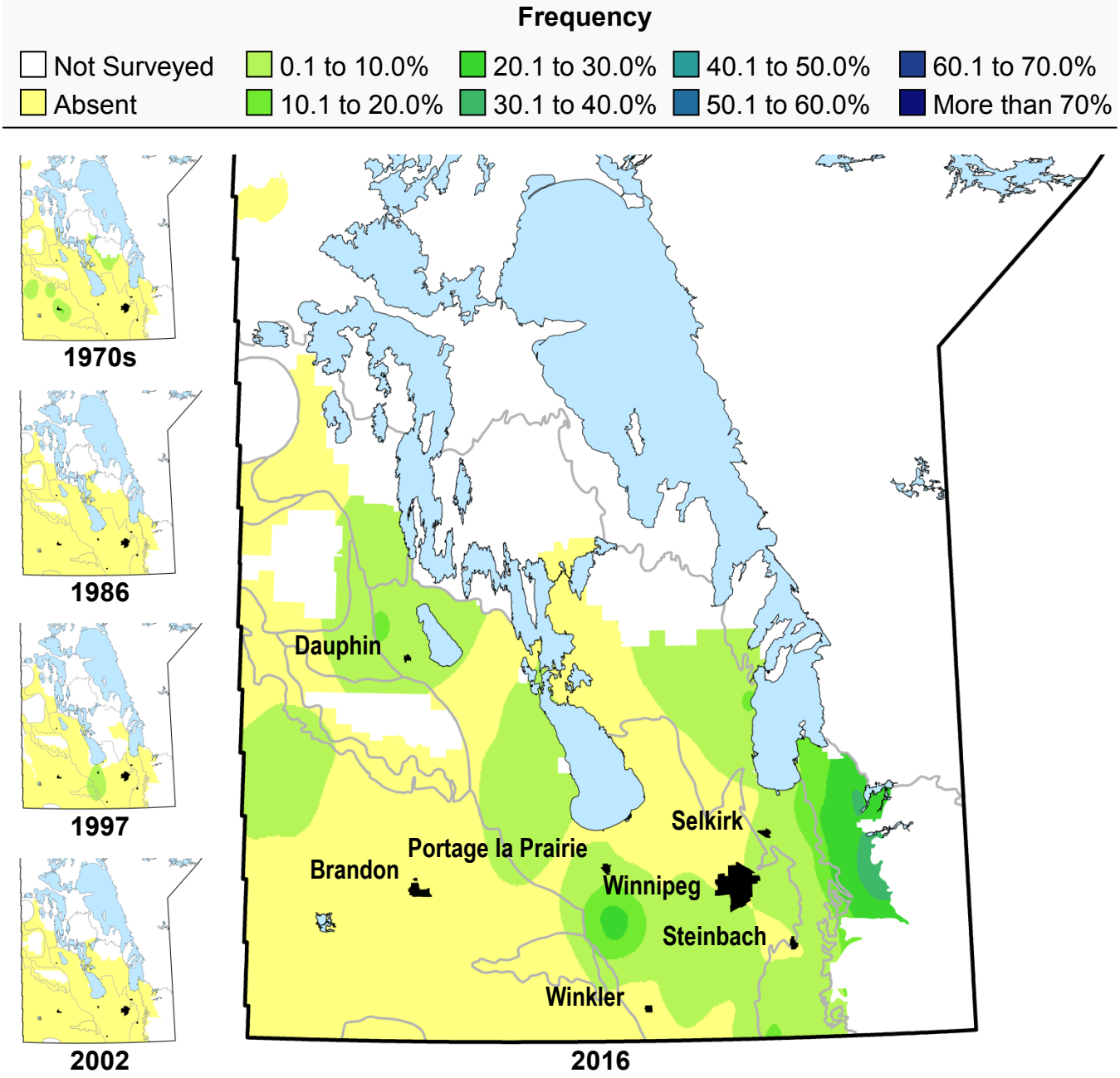
Lamb's-quarters, *Chenopodium album**



Survey	Rank	Frequency (%)	Field Uniformity All	Field Uniformity Occurrence	Field Density (#/m²) All	Field Density (#/m²) Occurrence	Field Density (#/m²) High	Relative Abundance
1978-81	7	36.8	9.9	26.8	1.8	5.0	460.8	10.8
1986	6	42.8	10.5	24.5	1.7	4.0	75.0	13.7
1997	9	29.9	5.8	19.5	0.8	2.5	65.0	8.7
2002	7	25.1	5.3	21.3	0.7	2.9	59.6	10.4
2016	14	15.5	3.0	19.3	0.3	2.0	43.0	8.2

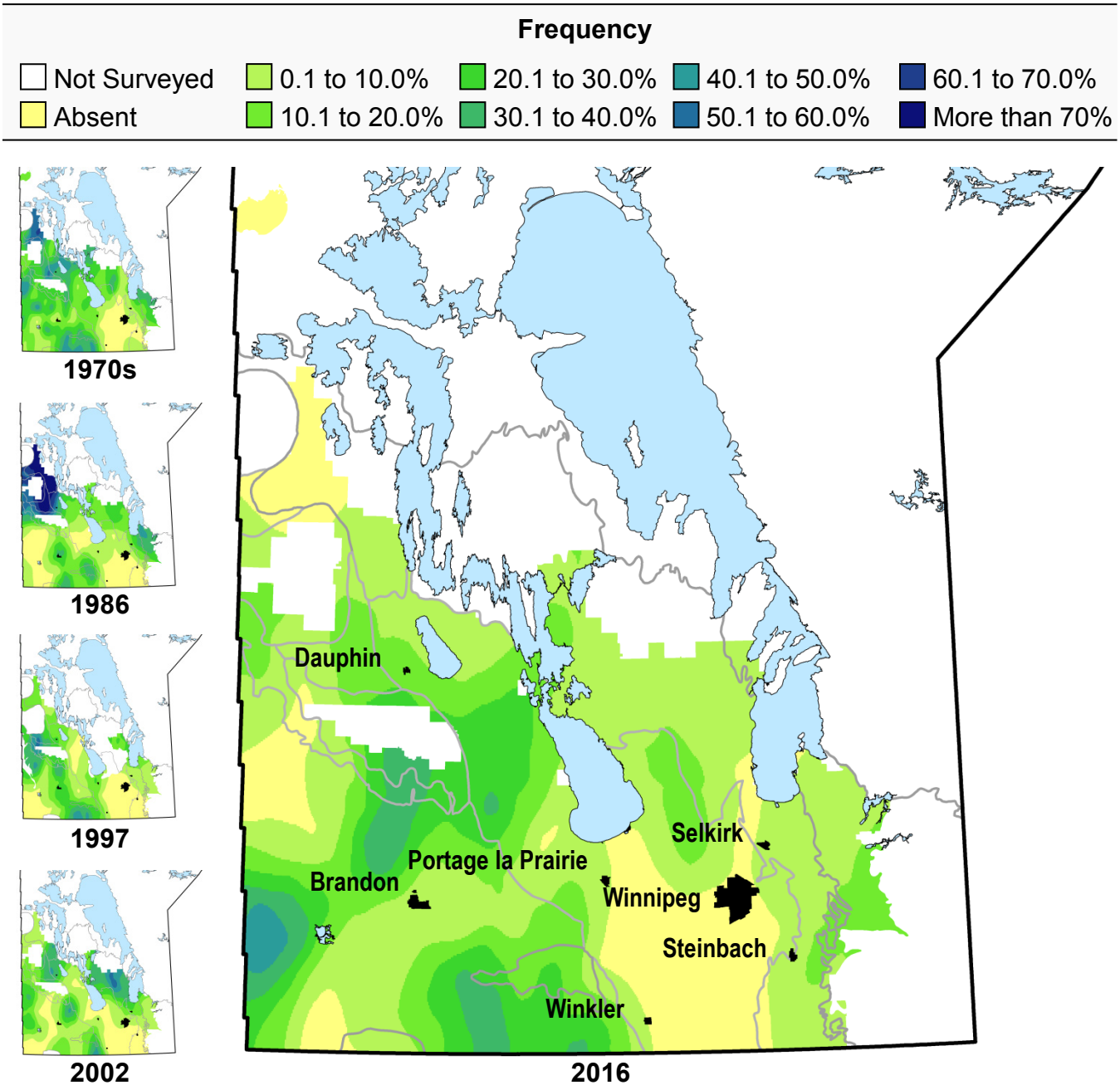
* Includes other goosefoot species (*Chenopodium spp.*)

Marsh yellow cress, *Rorippa palustris*



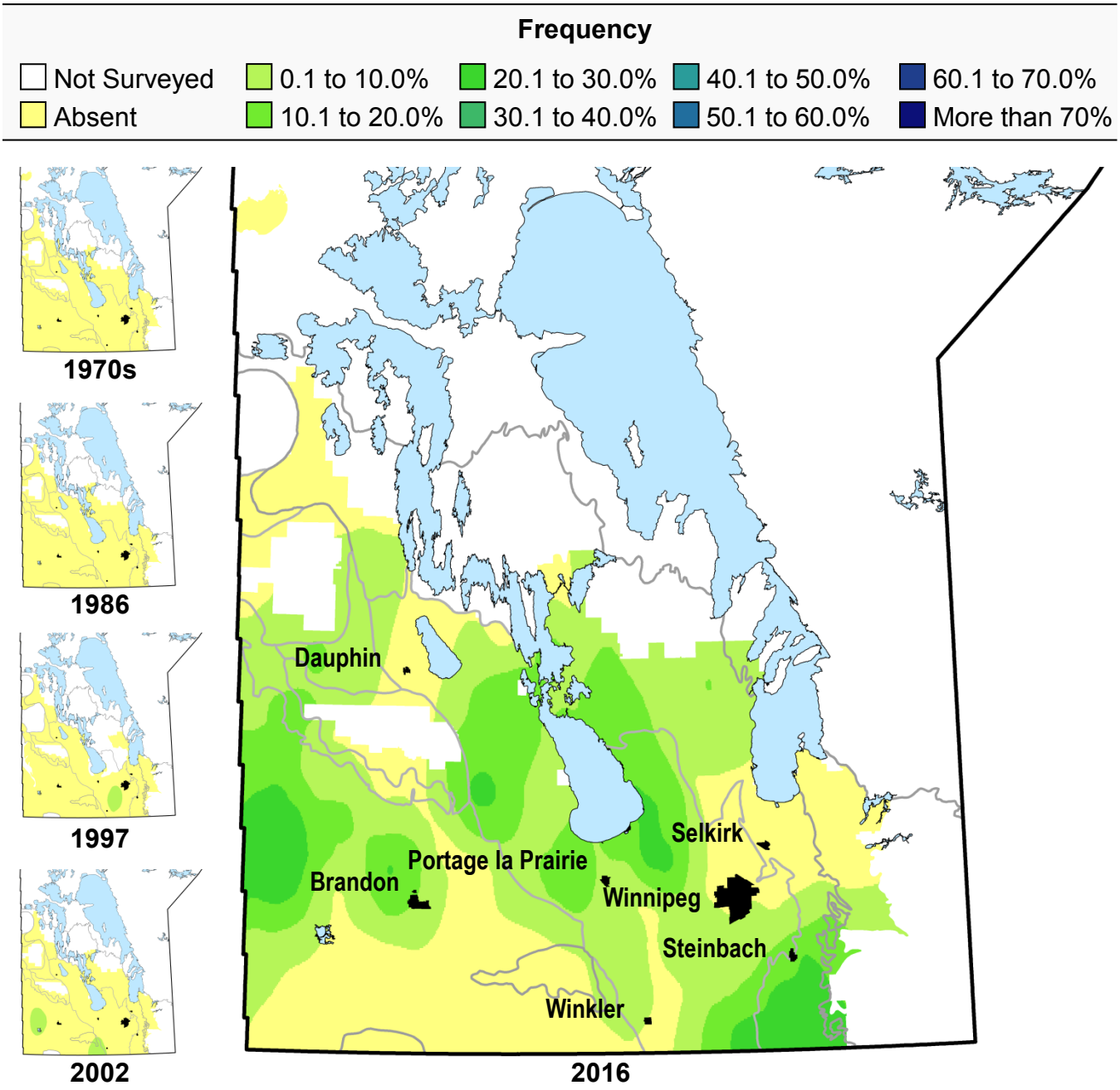
Survey	Rank	Frequency (%)	Field Uniformity All	Field Uniformity Occurrence	Field Density (#/m²) All	Field Density (#/m²) Occurrence	Field Density (#/m²) High	Relative Abundance
1978-81	72	0.3	0.1	20.4	< 0.1	2.3	4.0	0.1
1986	-	-	-	-	-	-	-	-
1997	74	0.3	< 0.1	10.0	< 0.1	0.6	0.6	0.1
2002	-	-	-	-	-	-	-	-
2016	36	2.7	0.5	18.2	< 0.1	1.3	4.8	1.3

Night-flowering catchfly, *Silene noctiflora*



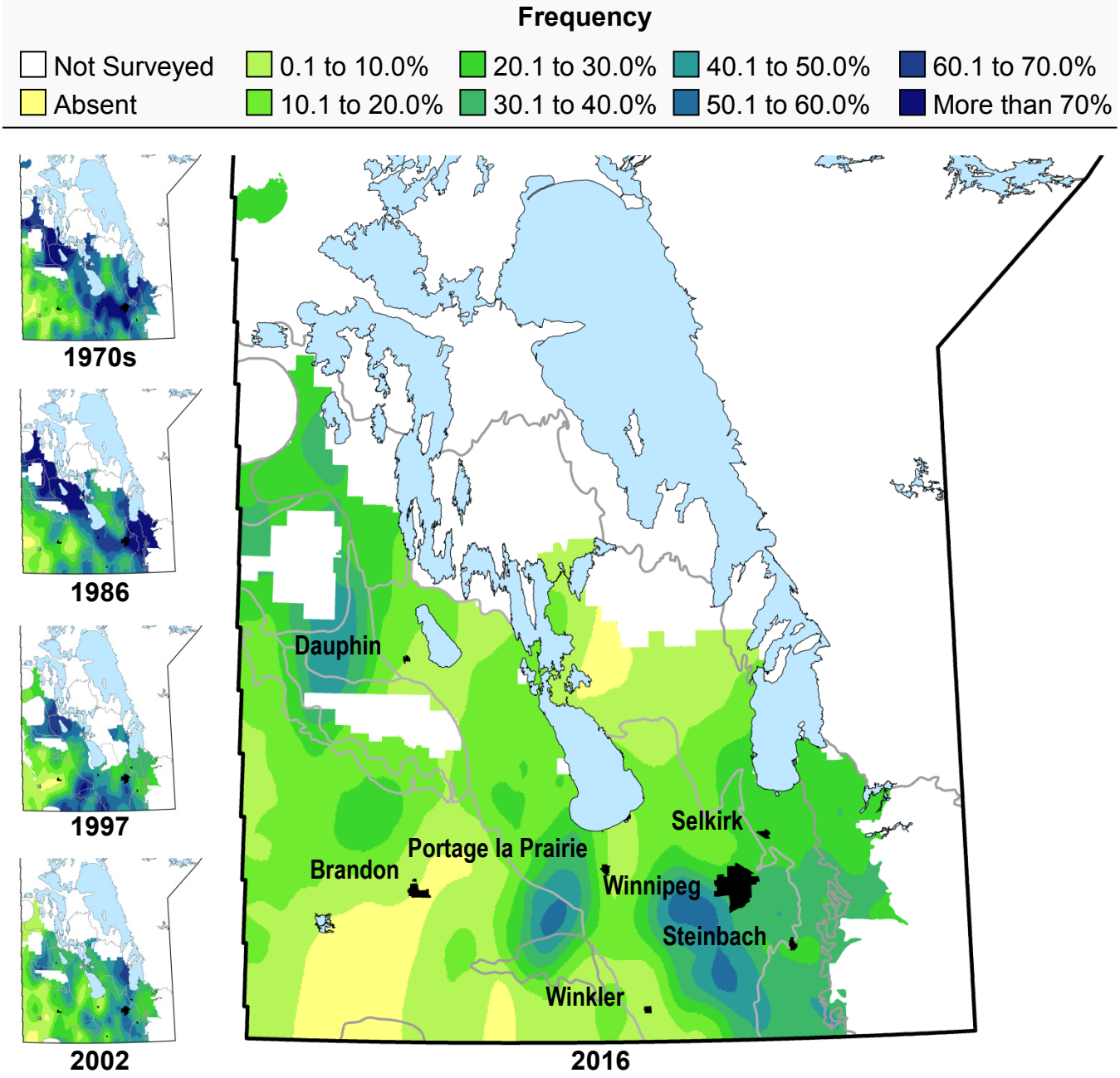
Survey	Rank	Frequency (%)	Field Uniformity		Field Density (#/m²)			Relative Abundance
			All	Occurrence	All	Occurrence	High	
1978-81	10	17.3	5.3	30.7	0.8	4.4	82.8	5.2
1986	13	15.9	4.9	30.7	0.7	4.5	38.0	5.7
1997	15	12.9	3.4	26.7	0.5	4.2	25.6	4.6
2002	18	9.8	1.6	16.5	0.2	1.5	11.0	3.3
2016	16	9.4	1.9	20.4	0.2	2.5	52.0	5.3

Oak-leaved goosefoot, *Oxybasis glauca* subsp. *glauca*



Survey	Rank	Frequency (%)	Field Uniformity All	Field Uniformity Occurrence	Field Density (#/m²) All	Field Density (#/m²) Occurrence	Field Density (#/m²) High	Relative Abundance
1978-81	-	-	-	-	-	-	-	-
1986	-	-	-	-	-	-	-	-
1997	73	0.3	< 0.1	10.0	< 0.1	3.4	3.4	0.1
2002	71	0.3	< 0.1	5.0	< 0.1	0.2	0.2	0.1
2016	24	6.0	0.9	14.3	0.1	1.4	16.2	2.7

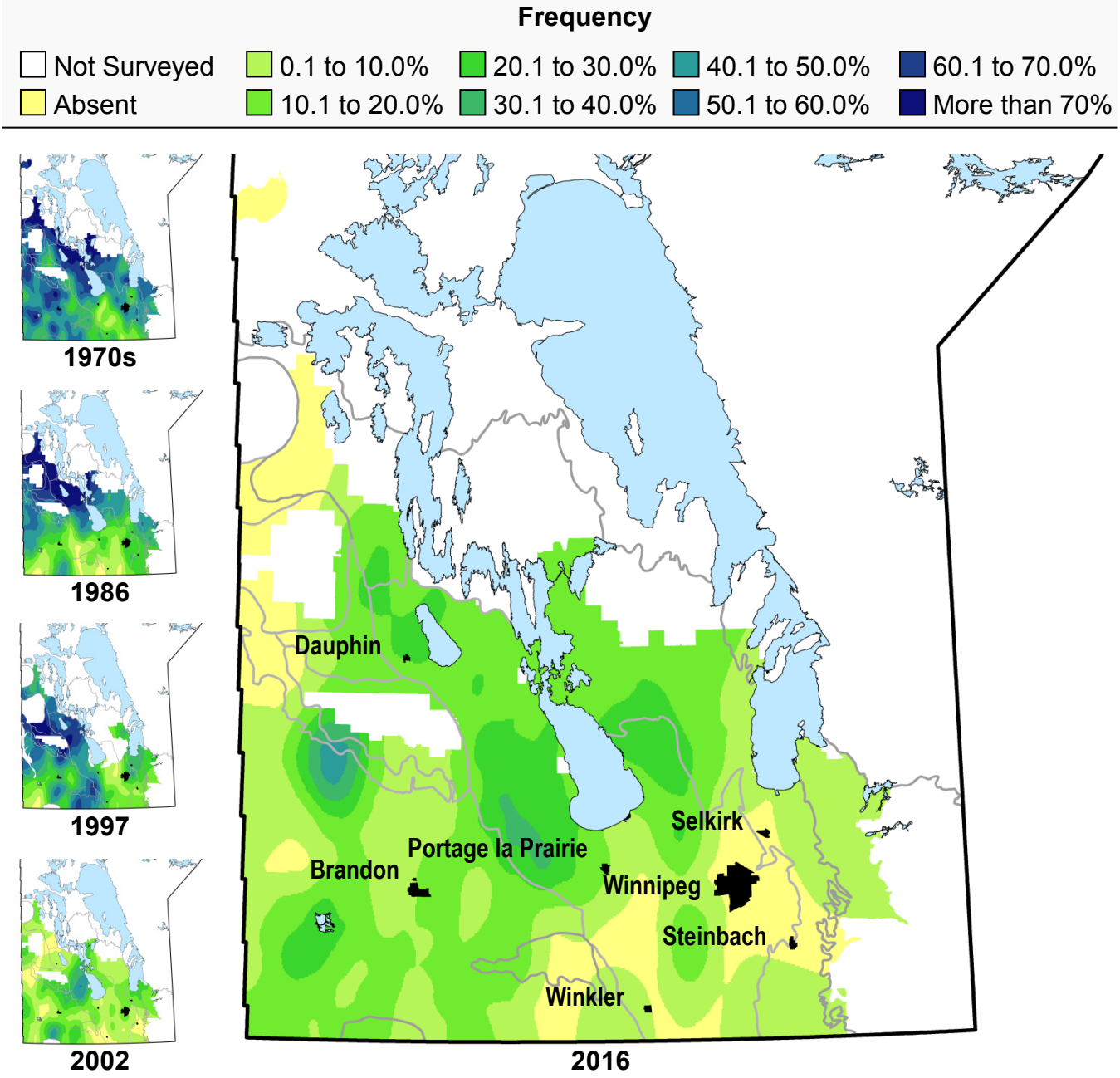
Pale smartweed, *Persicaria lapathifolia**



Survey	Rank	Frequency (%)	Field Uniformity All	Field Uniformity Occurrence	Field Density (#/m²) All	Field Density (#/m²) Occurrence	Field Density (#/m²) High	Relative Abundance
1978-81	4	44.0	15.5	35.1	4.7	10.6	228.8	16.7
1986	5	45.0	13.3	29.5	2.3	5.1	96.4	16.3
1997	7	37.1	8.0	21.7	0.9	2.5	24.8	11.3
2002	8	28.3	5.3	18.7	0.5	1.9	27.0	10.4
2016	12	17.5	3.2	18.3	0.4	2.0	24.8	9.0

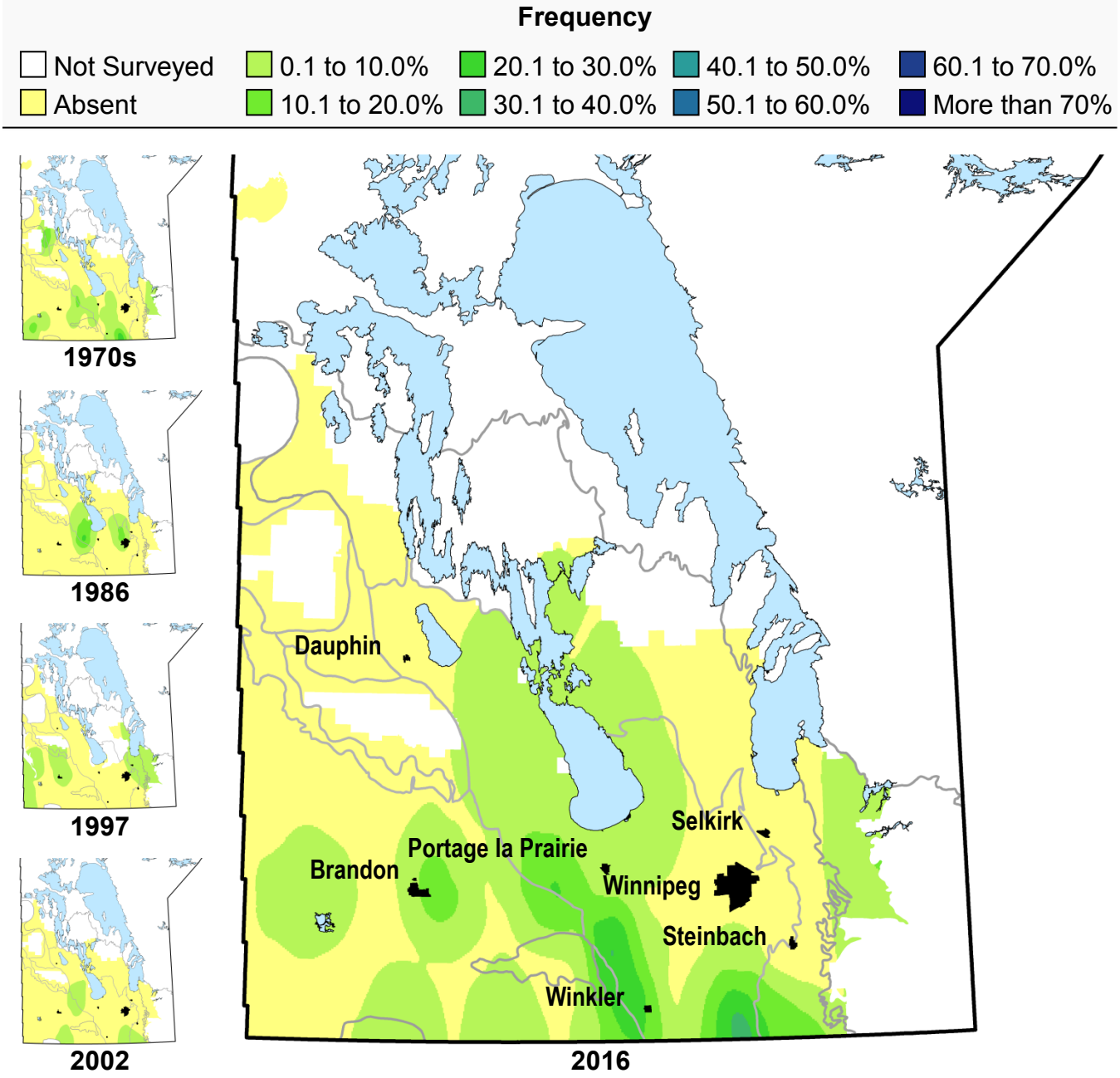
* Includes lady's-thumb (*Persicaria maculosa*)

Perennial sow-thistle, *Sonchus arvensis*



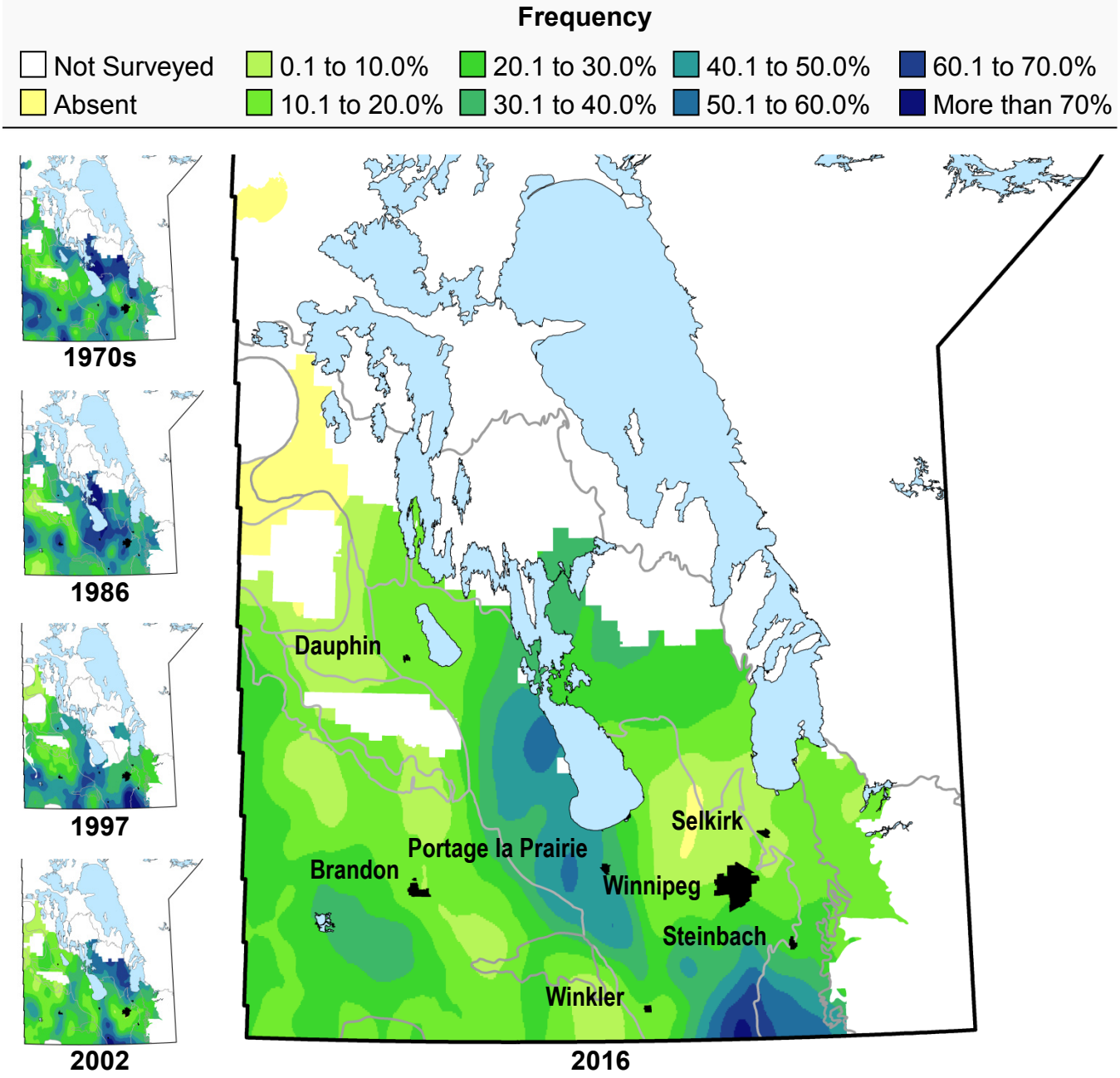
Survey	Rank	Frequency (%)	Field Uniformity All	Field Uniformity Occurrence	Field Density (#/m²) All	Field Density (#/m²) Occurrence	Field Density (#/m²) High	Relative Abundance
1978-81	8	41.9	8.6	20.5	1.1	2.7	104.0	10.3
1986	11	27.1	5.1	18.7	0.7	2.4	58.2	7.3
1997	8	35.1	6.5	18.6	0.8	2.3	35.2	10.0
2002	20	12.2	1.1	9.1	0.1	0.8	6.4	3.2
2016	19	8.5	1.8	21.4	0.2	1.8	24.2	4.5

Purslane, *Portulaca oleracea*



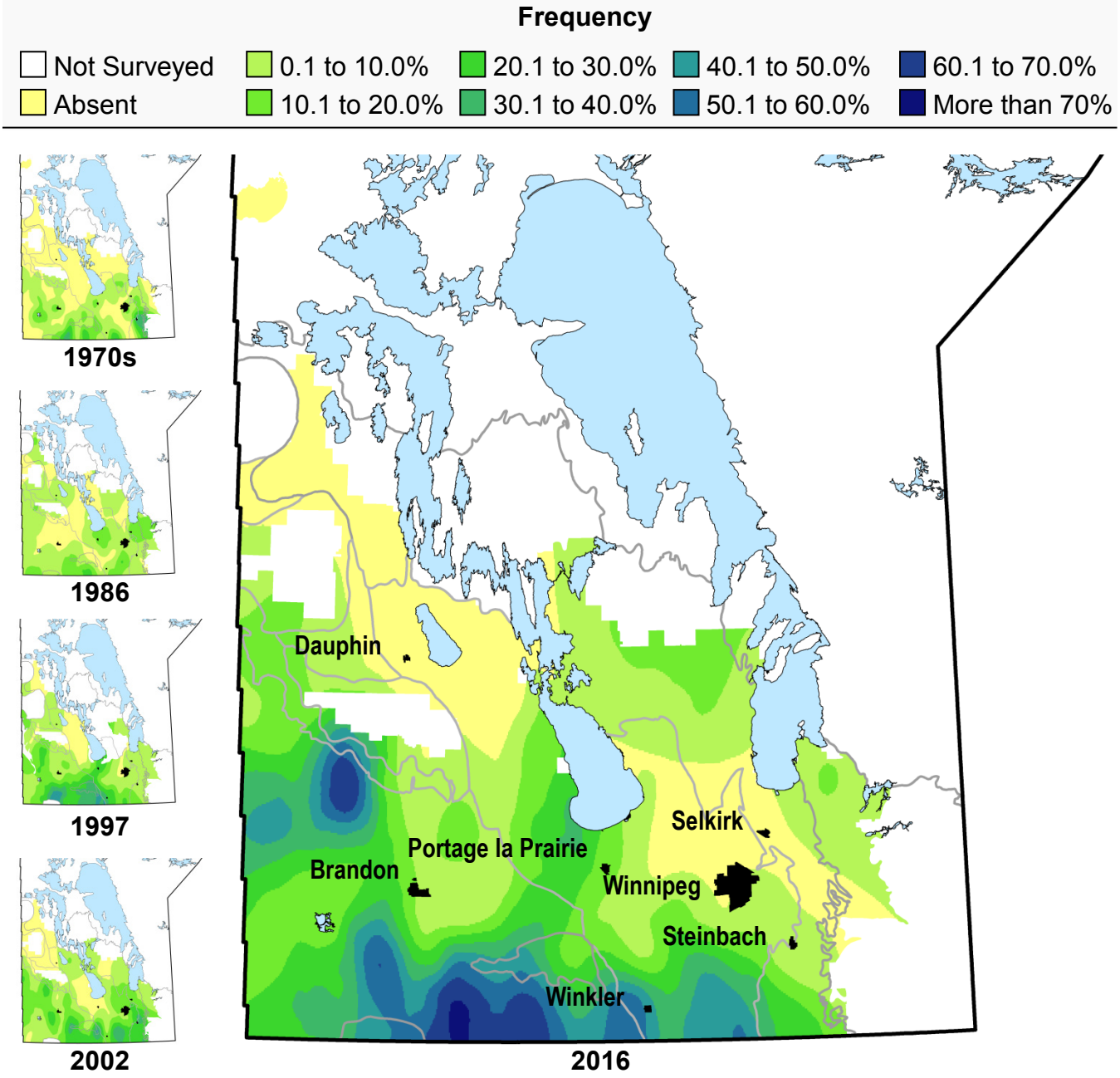
Survey	Rank	Frequency (%)	Field Uniformity All	Field Uniformity Occurrence	Field Density (#/m²) All	Field Density (#/m²) Occurrence	Field Density (#/m²) High	Relative Abundance
1978-81	42	1.8	0.4	19.3	< 0.1	2.3	17.4	0.4
1986	50	1.1	0.2	16.1	< 0.1	2.2	7.2	0.3
1997	52	1.0	0.1	5.9	< 0.1	0.4	1.0	0.2
2002	63	0.5	0.1	10.4	< 0.1	0.8	1.2	0.1
2016	29	3.9	0.8	21.6	0.1	1.9	8.4	2.1

Redroot pigweed, *Amaranthus retroflexus*



Survey	Rank	Frequency (%)	Field Uniformity		Field Density (#/m²)			Relative Abundance
			All	Occurrence	All	Occurrence	High	
1978-81	9	38.3	8.4	21.9	1.2	3.2	77.6	9.8
1986	8	40.0	9.7	24.1	1.6	4.0	86.8	12.8
1997	5	39.8	9.5	23.9	1.6	4.0	63.8	13.6
2002	6	28.6	6.1	21.3	1.0	3.5	48.2	12.3
2016	8	20.9	4.5	21.7	0.4	2.1	22.2	11.6

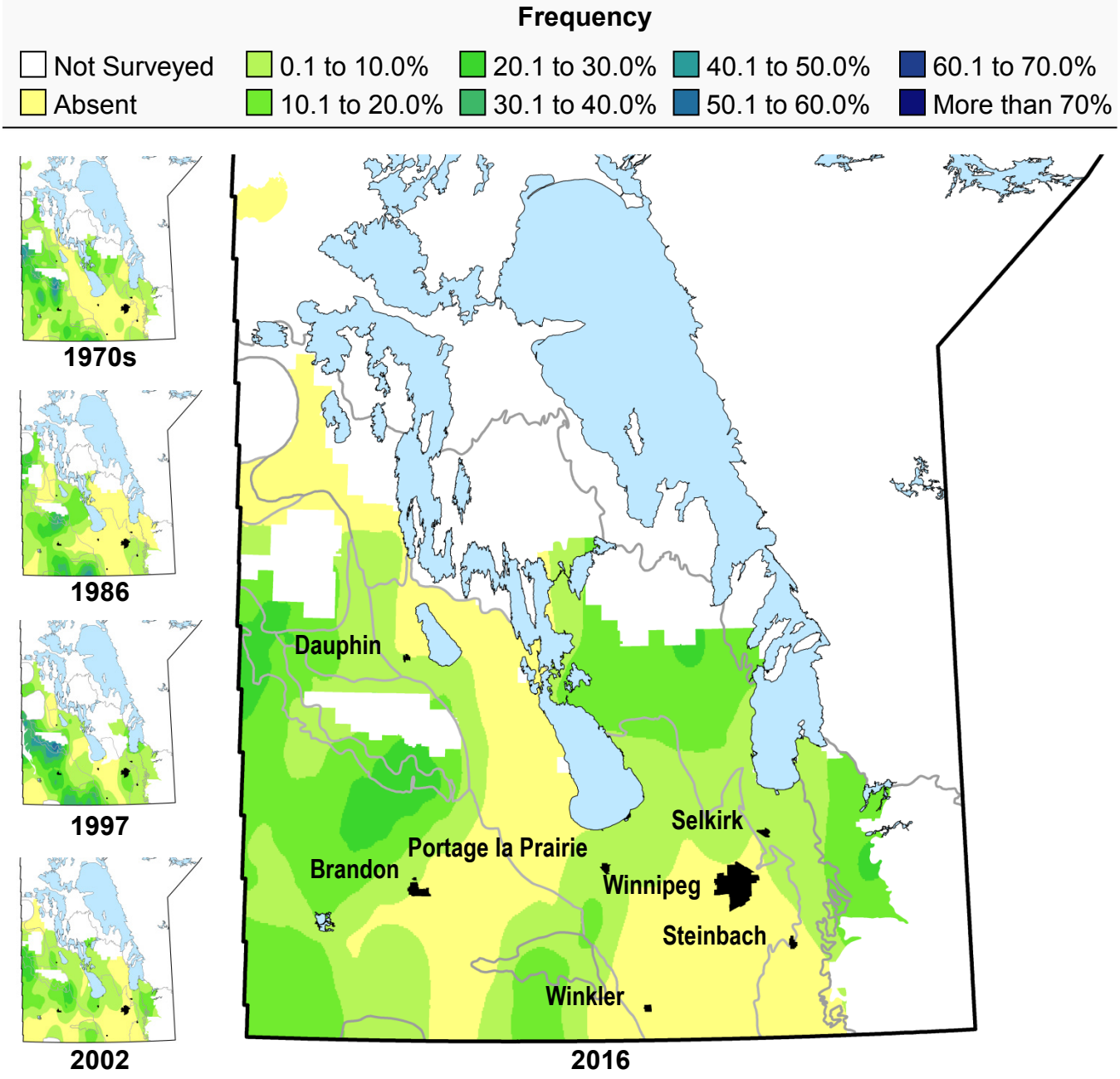
Round-leaved mallow, *Malva pusilla*



Survey	Rank	Frequency (%)	Field Uniformity All	Field Uniformity Occurrence	Field Density (#/m²) All	Field Density (#/m²) Occurrence	Field Density (#/m²) High	Relative Abundance
1978-81	25	5.4	0.9	16.5	0.1	1.8	10.6	1.2
1986	23	5.7	1.4	23.9	0.3	4.6	43.0	1.9
1997	21	13.4	1.8	13.7	0.2	1.2	11.4	3.2
2002	16	11.4	2.0	17.9	0.2	1.6	13.0	4.0
2016	10	20.1	4.1	20.1	0.3	1.7	17.4	10.3

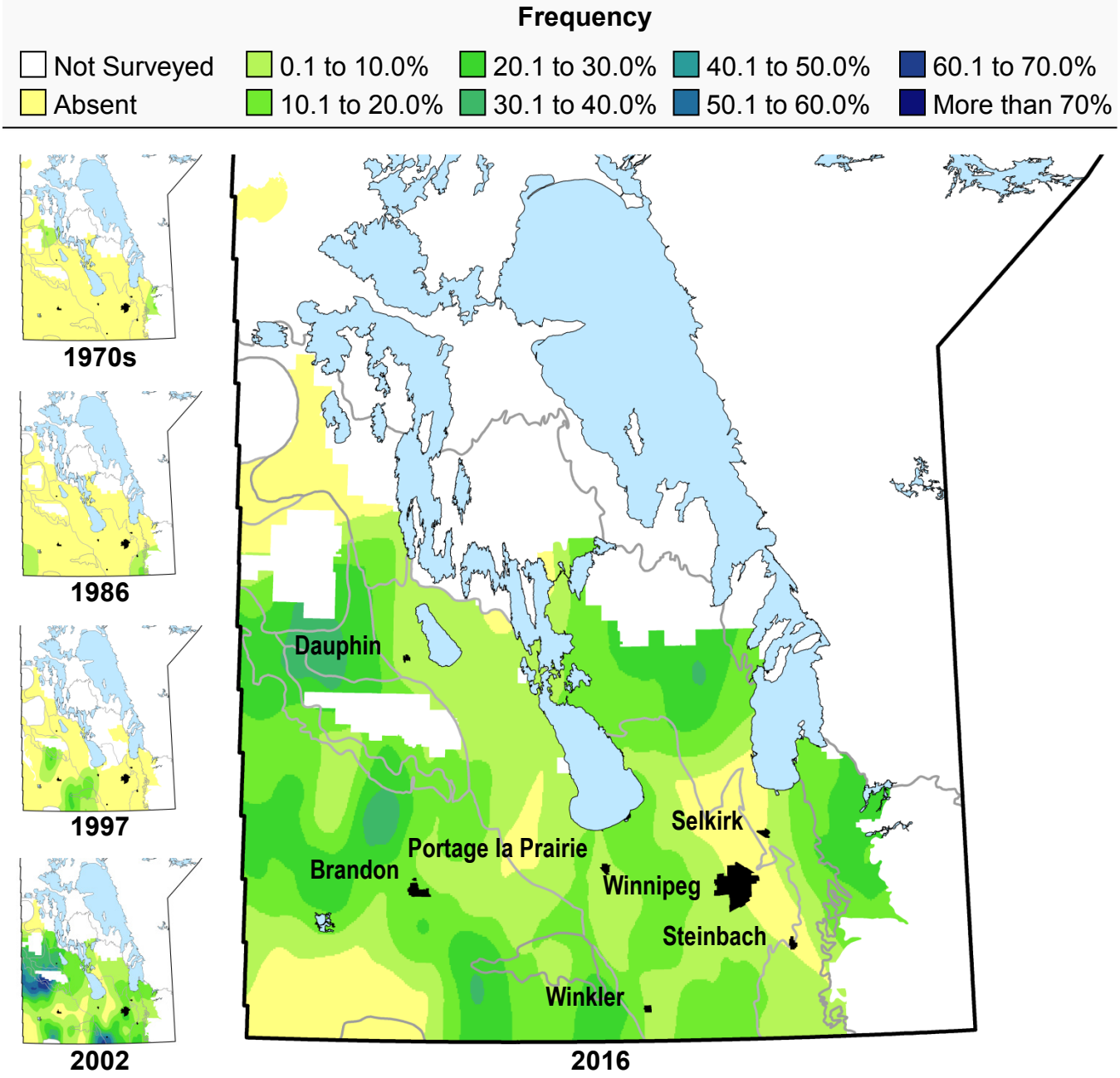
* Includes common mallow (*Malva neglecta*)

Shepherd's-purse, *Capsella bursa-pastoris*



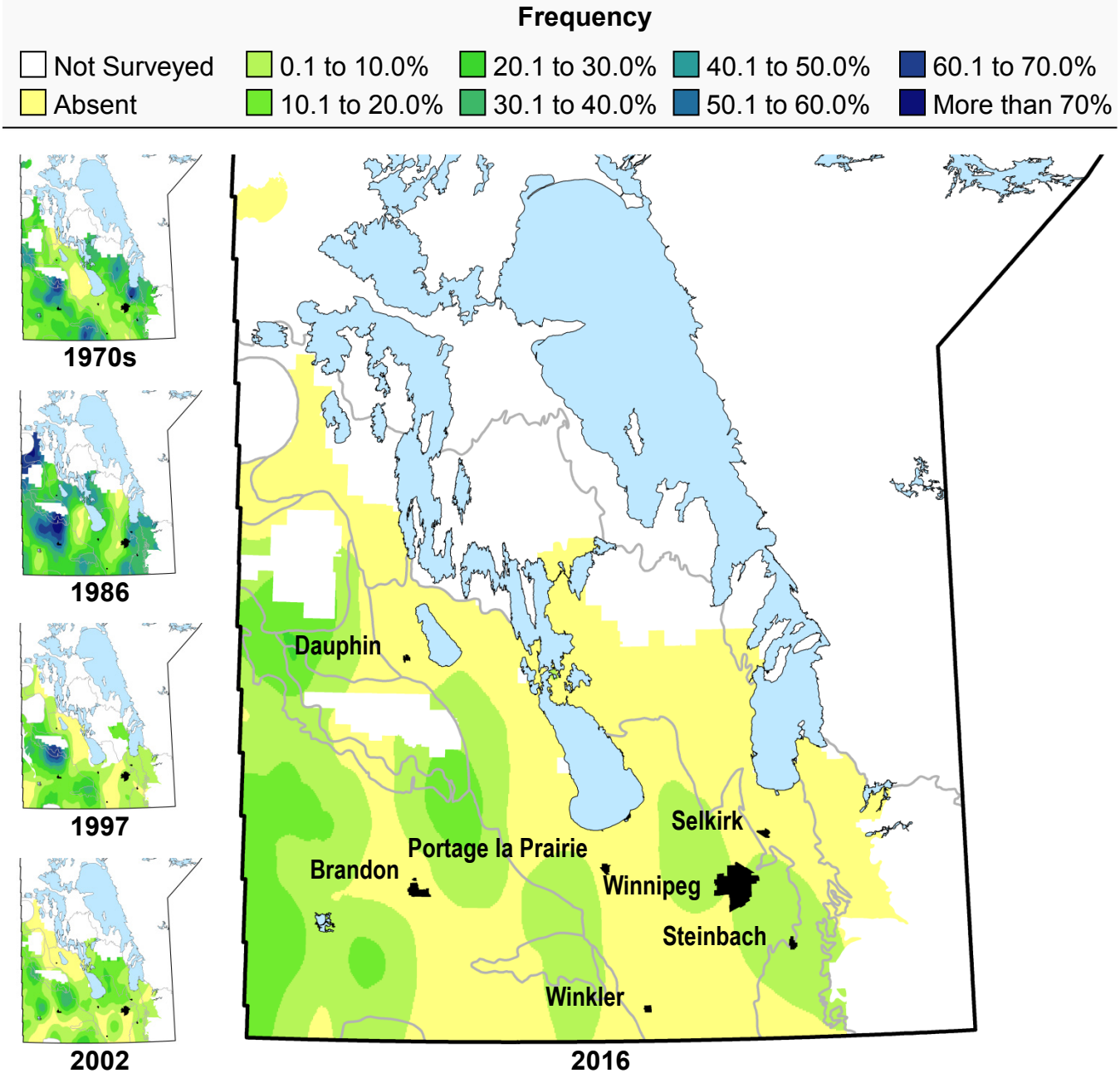
Survey	Rank	Frequency (%)	Field Uniformity All	Field Uniformity Occurrence	Field Density (#/m²) All	Field Density (#/m²) Occurrence	Field Density (#/m²) High	Relative Abundance
1978-81	21	7.7	1.7	22.3	0.3	3.4	49.8	2.0
1986	17	8.7	1.7	19.8	0.8	9.0	231.0	3.3
1997	13	12.9	3.2	24.7	0.7	5.4	66.0	4.8
2002	27	5.3	0.6	12.2	0.1	1.3	8.4	1.6
2016	27	5.4	0.7	13.9	< 0.1	0.9	11.6	2.2

Spiny annual sow-thistle, *Sonchus asper*



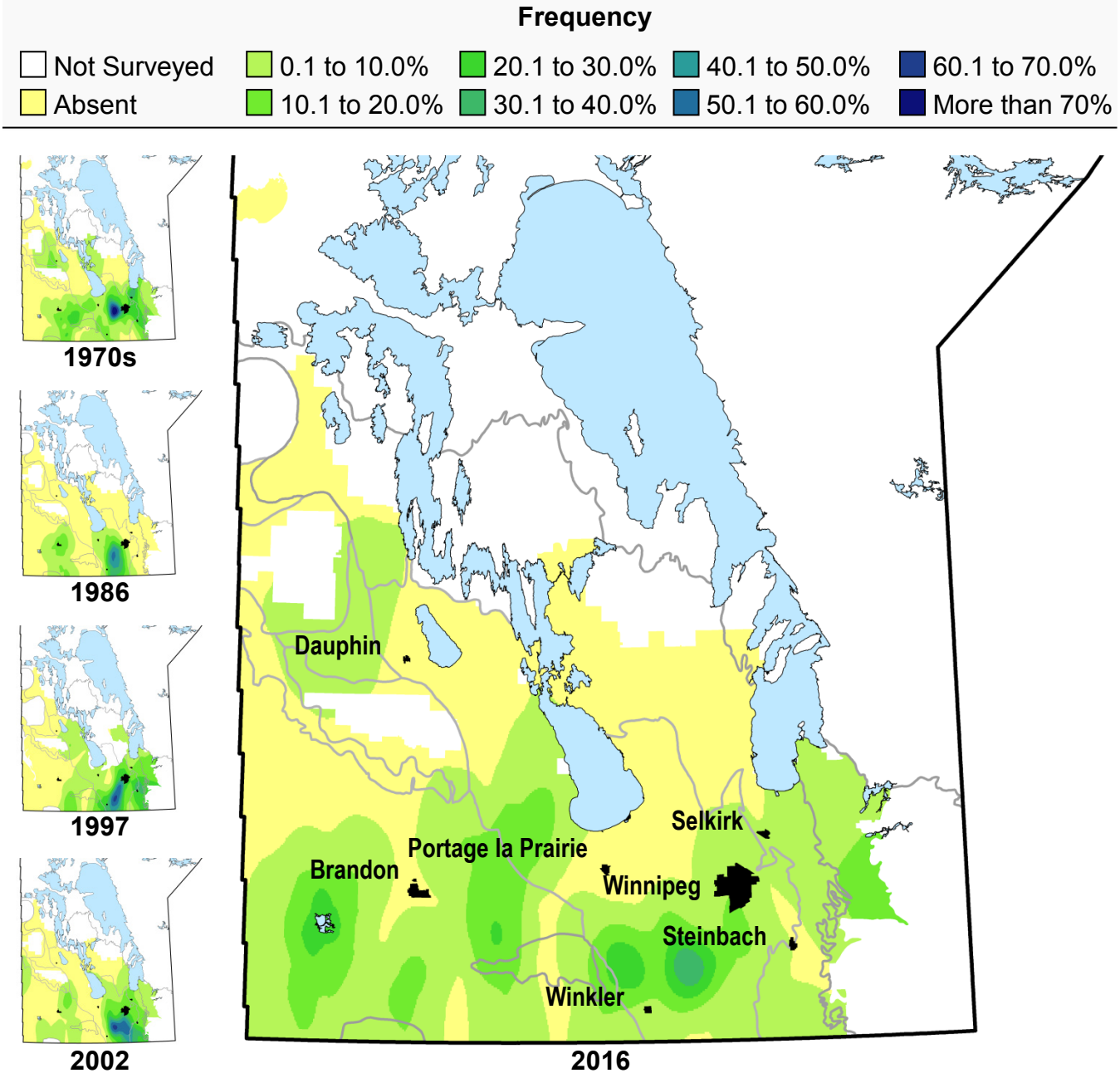
Survey	Rank	Frequency (%)	Field Uniformity All	Field Uniformity Occurrence	Field Density (#/m²) All	Field Density (#/m²) Occurrence	Field Density (#/m²) High	Relative Abundance
1978-81	77	0.2	0.1	45.0	< 0.1	4.9	6.8	0.1
1986	74	0.3	< 0.1	10.6	< 0.1	0.8	1.0	0.1
1997	36	2.0	0.4	17.3	< 0.1	1.3	5.0	0.5
2002	14	17.5	2.4	13.5	0.2	1.1	11.4	5.3
2016	15	11.1	2.6	23.7	0.2	2.0	17.0	6.3

Stinkweed, *Thlaspi arvense*



Survey	Rank	Frequency (%)	Field Uniformity		Field Density (#/m²)			Relative Abundance
			All	Occurrence	All	Occurrence	High	
1978-81	11	20.9	4.0	19.2	0.6	2.9	105.0	5.1
1986	10	27.9	6.4	22.8	1.3	4.5	113.4	9.0
1997	17	13.4	2.4	17.9	0.3	2.5	21.0	3.8
2002	19	8.7	1.3	15.3	0.3	3.1	74.2	3.3
2016	34	2.7	0.5	17.8	0.1	2.0	15.6	1.4

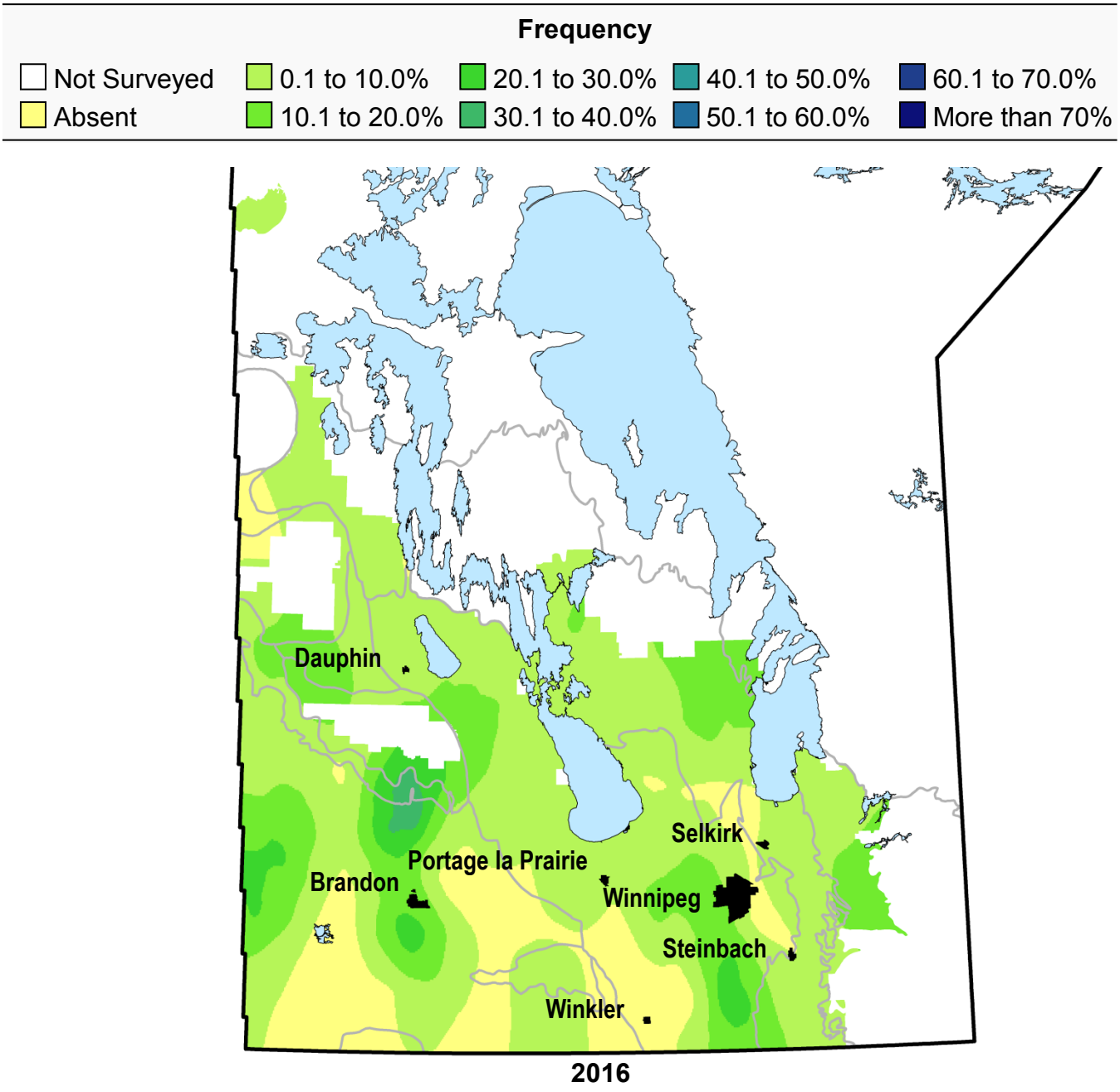
Thyme-leaved spurge, *Euphorbia serpillifolia*



Survey	Rank	Frequency (%)	Field Uniformity All	Field Uniformity Occurrence	Field Density (#/m²) All	Field Density (#/m²) Occurrence	Field Density (#/m²) High	Relative Abundance
1978-81	19	8.1	2.2	27.4	0.3	3.6	66.4	2.3
1986	26	5.4	1.3	24.2	0.2	3.2	31.0	1.7
1997	23	9.2	2.1	22.2	0.2	2.2	17.6	2.8
2002	21	7.3	1.6	21.7	0.2	2.2	14.4	2.9
2016	28	5.2	0.7	13.5	0.1	1.1	32.0	2.1

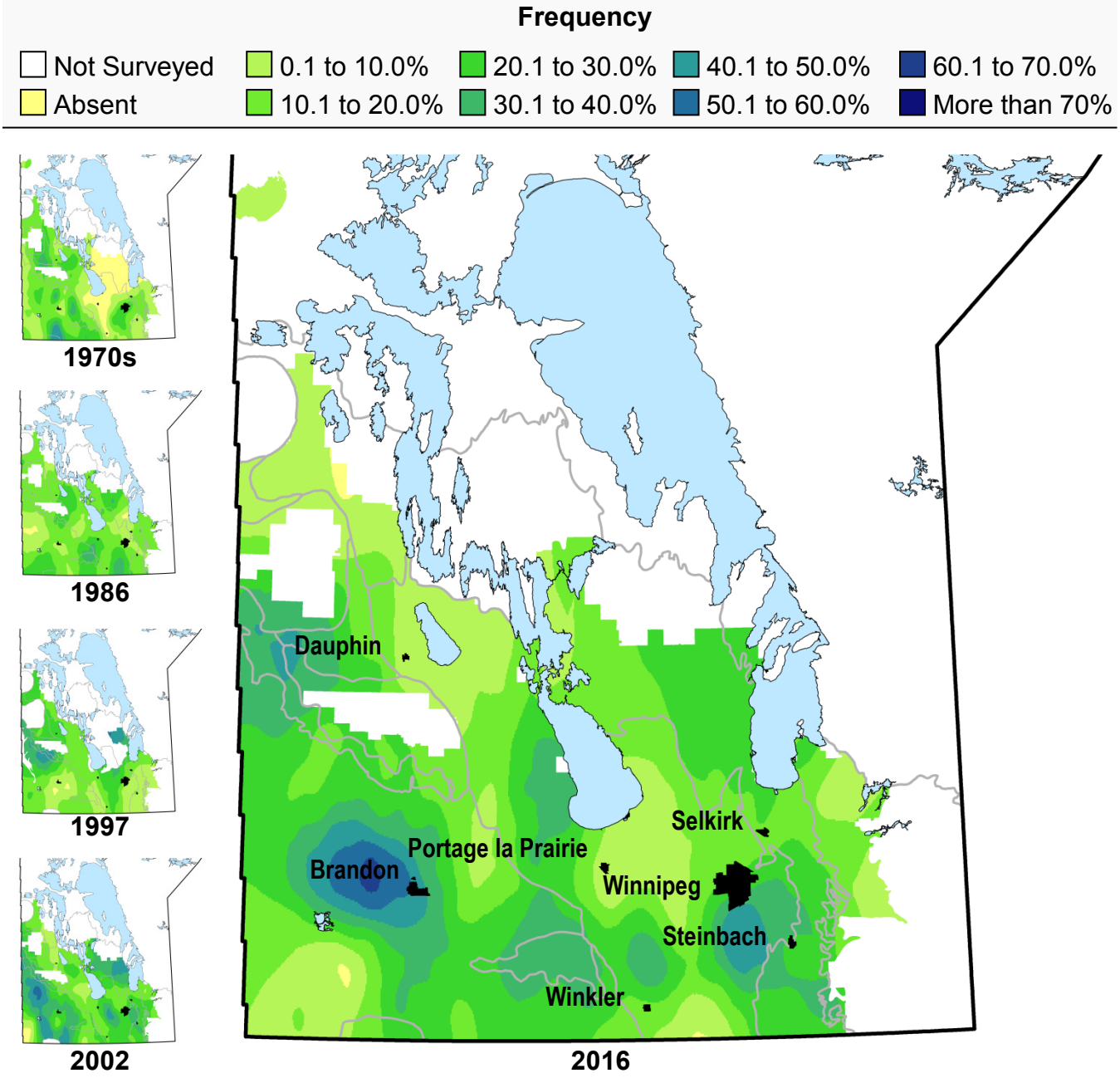
* May include ridge-seeded spurge (*Euphorbia glyptosperma*)

Western barnyard grass, *Echinochloa muricata**



*See barnyard grass species for previous survey maps

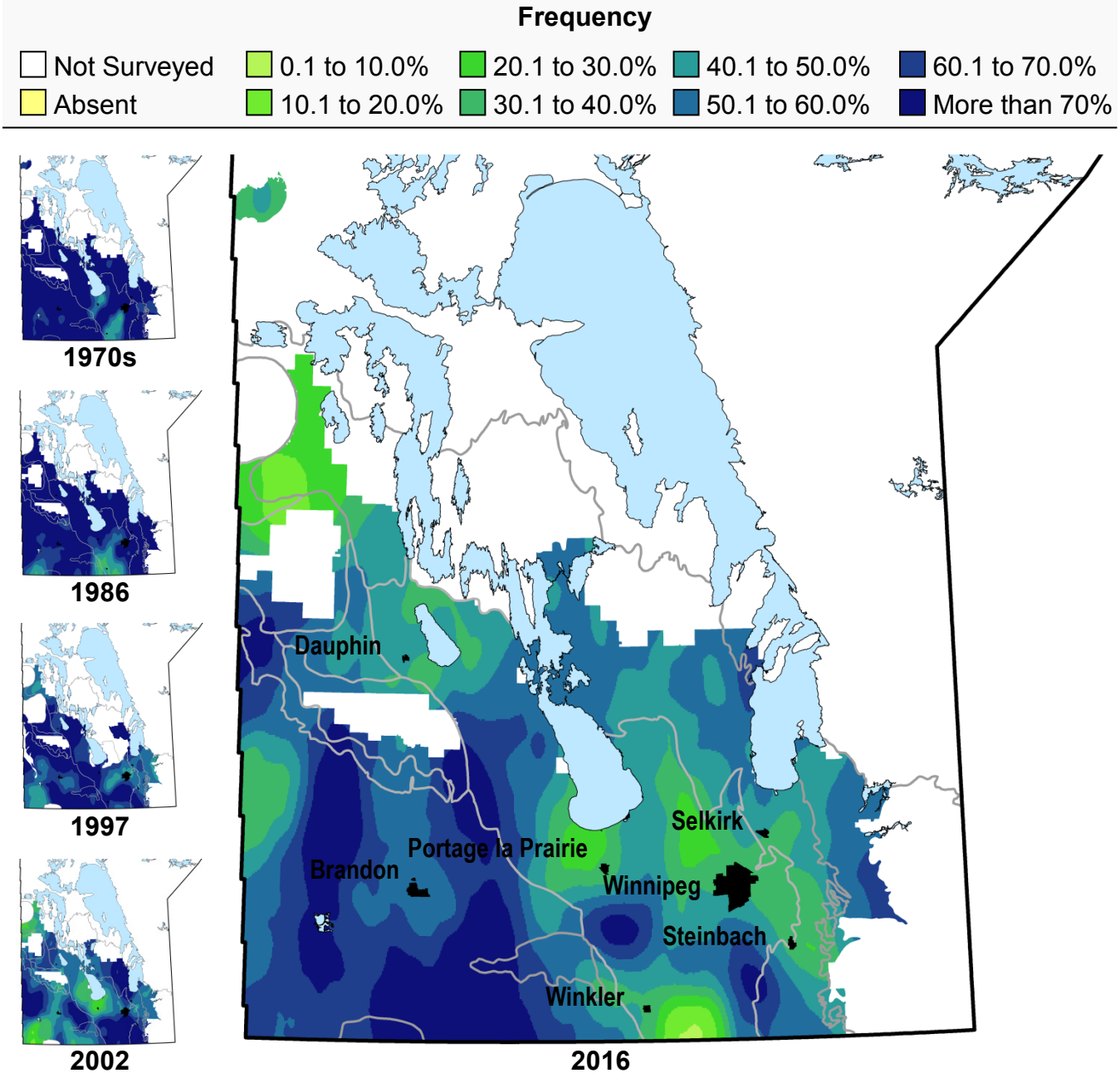
Wheat, *Triticum aestivum**



Survey	Rank	Frequency (%)	Field Uniformity		Field Density (#/m²)			Relative Abundance
			All	Occurrence	All	Occurrence	High	
1978-81	14	14.7	3.7	25.4	0.4	3.0	61.4	4.0
1986	13	16.7	5.1	30.8	0.8	5.1	34.0	6.2
1997	13	18.2	4.0	21.8	0.5	2.6	18.0	5.9
2002	9	24.9	4.7	18.7	0.5	2.1	21.0	9.0
2016	5	20.8	6.1	29.4	0.8	3.7	39.4	15.0

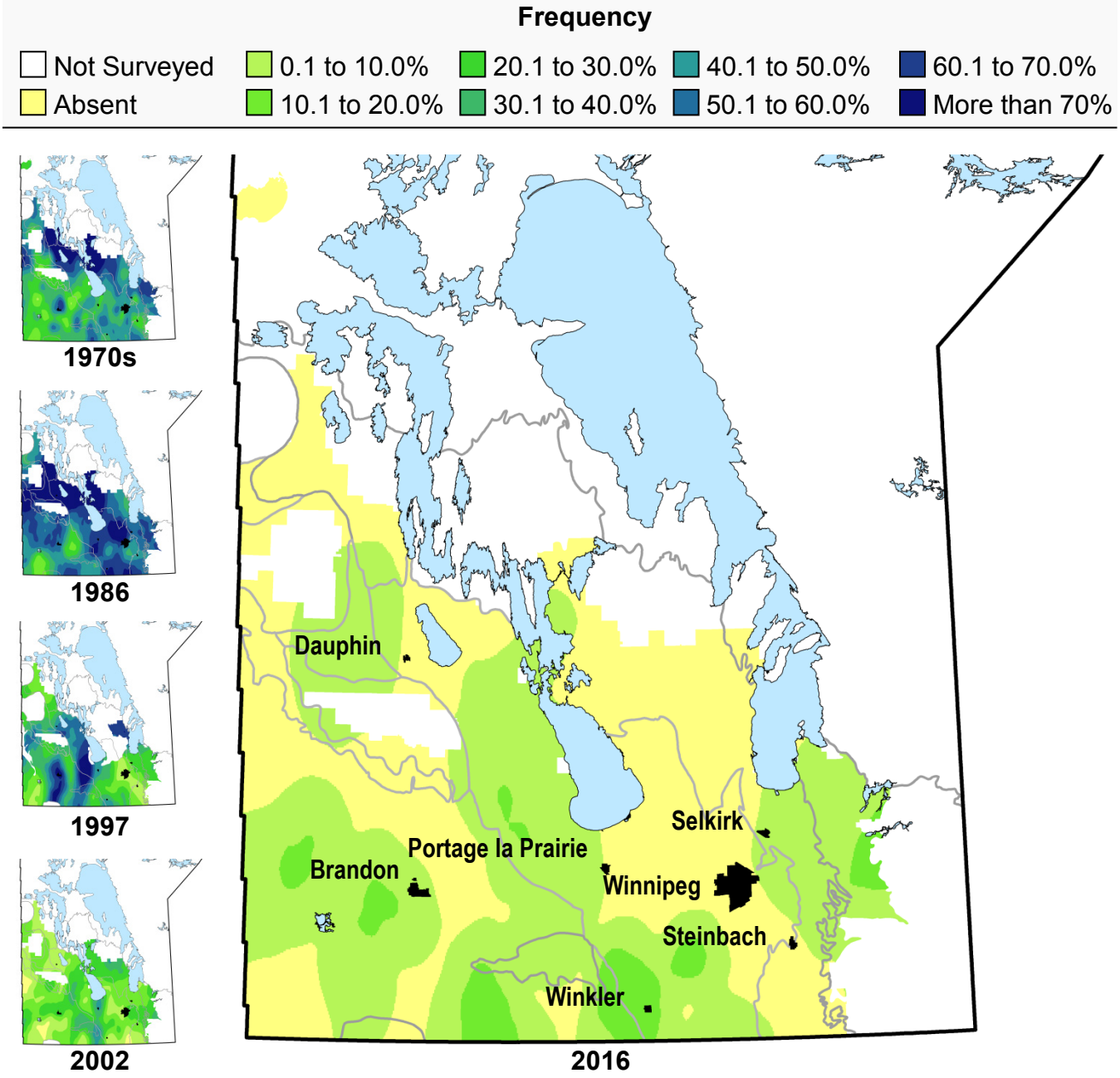
* Data only includes fields not seeded to wheat

Wild buckwheat, *Fallopia convolvulus*



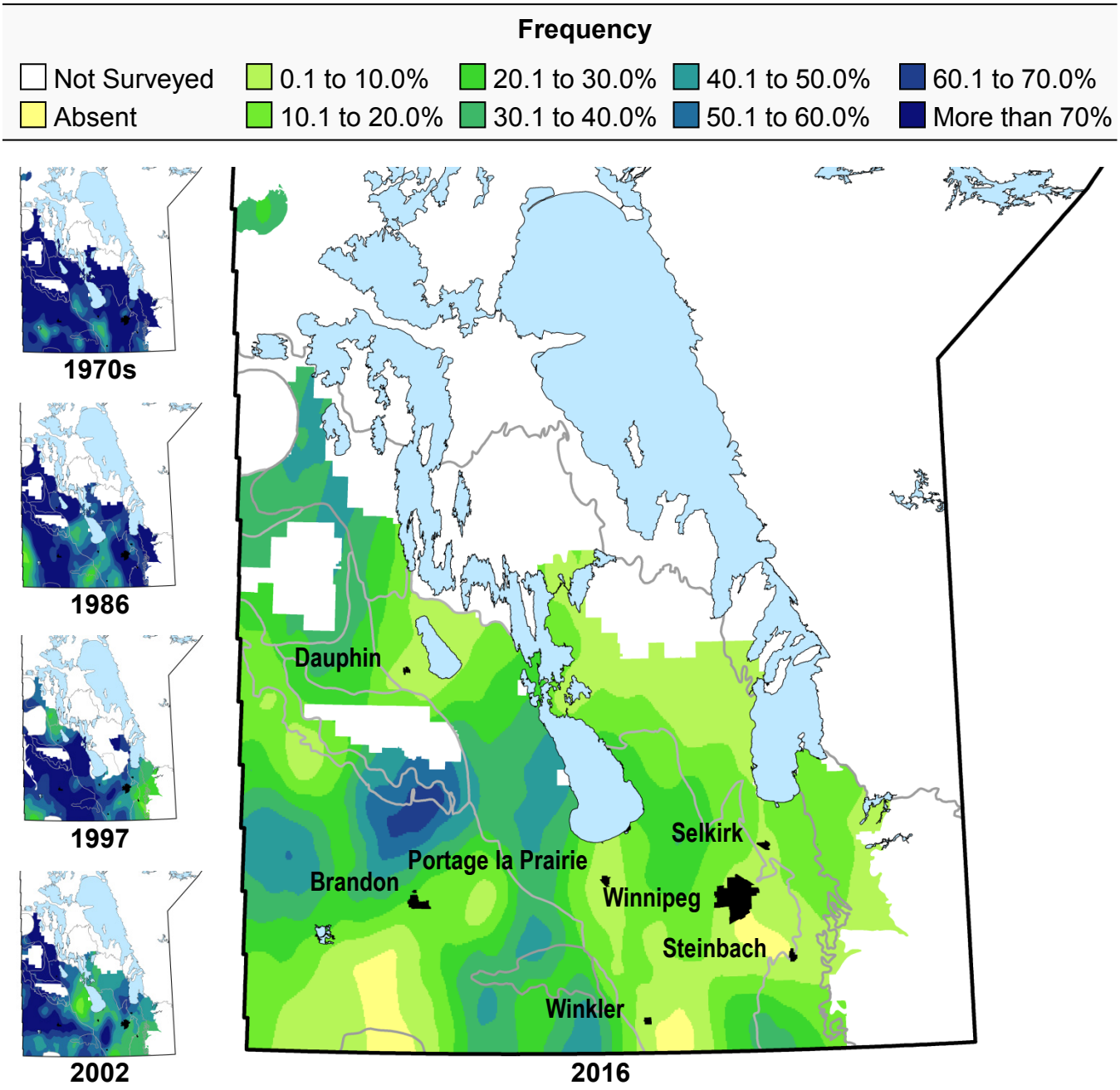
Survey	Rank	Frequency (%)	Field Uniformity		Field Density (#/m²)			Relative Abundance
			All	Occurrence	All	Occurrence	High	
1978-81	3	78.1	34.2	43.8	5.7	7.3	288.8	30.0
1986	3	70.6	26.3	37.3	3.6	5.0	69.6	28.0
1997	3	68.3	24.2	35.5	2.7	3.9	41.0	27.5
2002	3	58.5	15.6	26.7	1.7	2.9	80.6	26.6
2016	2	52.7	13.1	24.8	1.0	2.0	55.2	30.3

Wild mustard, *Sinapis arvensis*



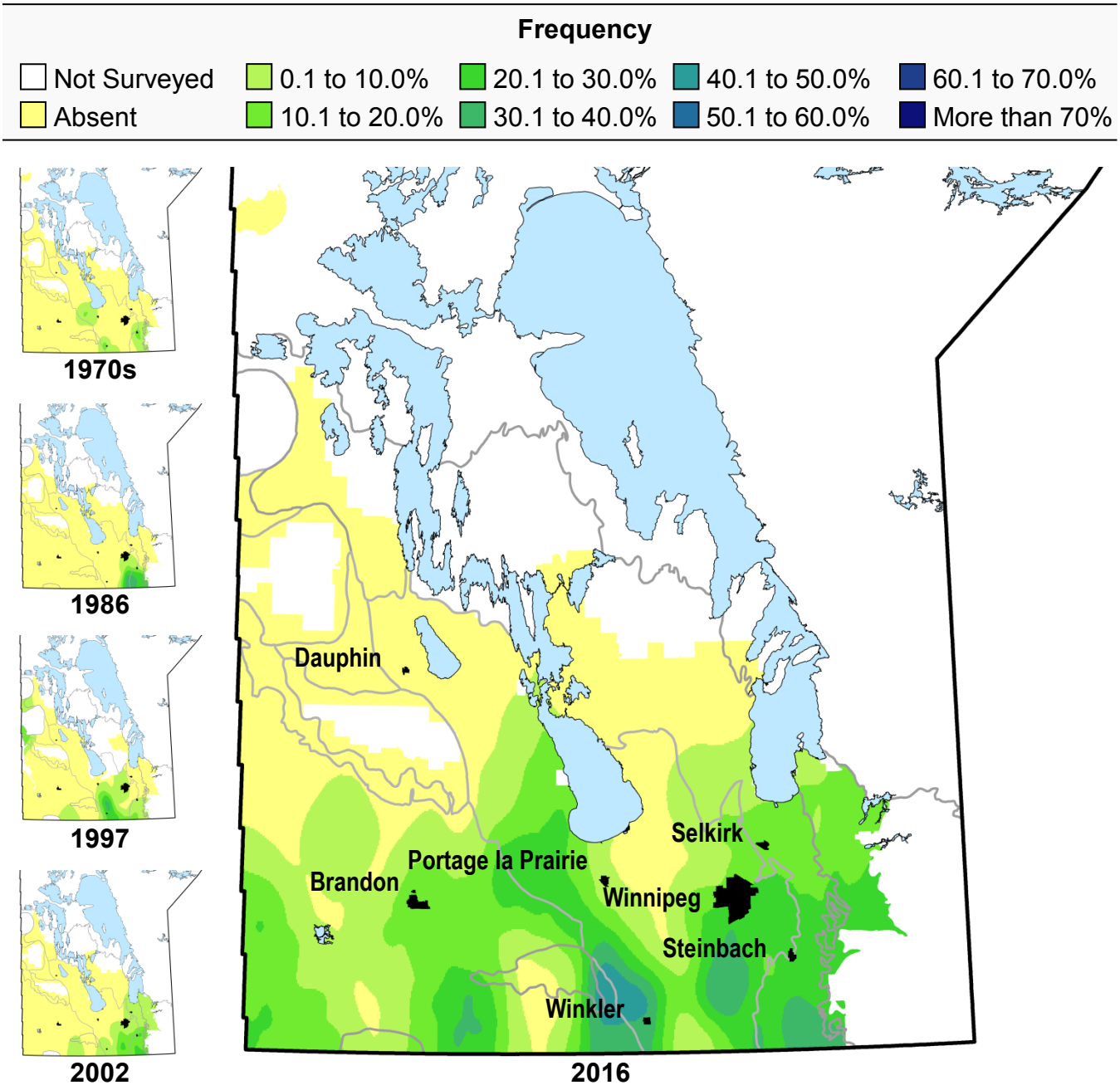
Survey	Rank	Frequency (%)	Field Uniformity All	Field Uniformity Occurrence	Field Density (#/m²) All	Field Density (#/m²) Occurrence	Field Density (#/m²) High	Relative Abundance
1978-81	6	40.4	9.6	23.8	1.4	3.5	262.6	10.8
1986	4	57.7	15.3	26.6	2.1	3.7	65.4	18.8
1997	6	37.1	8.1	21.9	1.0	2.8	40.6	11.5
2002	11	16.6	2.8	17.0	0.3	2.0	45.2	6.0
2016	23	3.6	0.8	23.0	0.2	5.9	89.4	2.9

Wild oats, *Avena fatua*



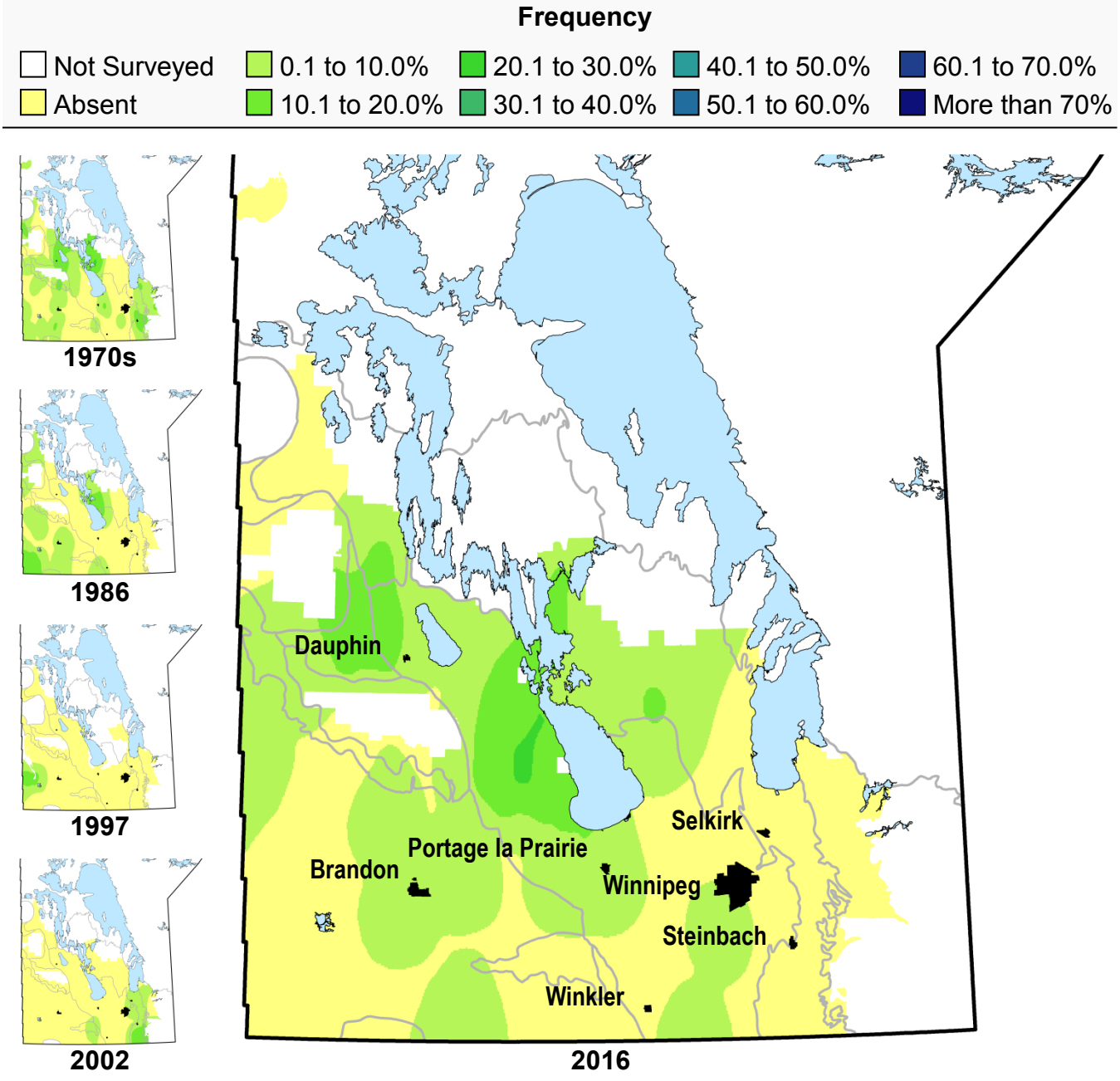
Survey	Rank	Frequency (%)	Field Uniformity		Field Density (#/m²)			Relative Abundance
			All	Occurrence	All	Occurrence	High	
1978-81	2	73.8	32.5	44.1	13.0	17.6	629.8	35.4
1986	2	63.4	22.0	34.6	6.5	10.3	342.2	29.8
1997	2	64.4	22.5	34.9	6.6	10.2	167.6	32.9
2002	2	56.1	19.7	35.1	6.7	11.9	449.8	43.6
2016	4	20.7	5.6	26.8	0.9	4.4	69.6	15.6

Yellow foxtail, *Setaria pumila*



Survey	Rank	Frequency (%)	Field Uniformity All	Field Uniformity Occurrence	Field Density (#/m²) All	Field Density (#/m²) Occurrence	Field Density (#/m²) High	Relative Abundance
1978-81	48	0.6	0.2	40.2	0.2	33.7	157.0	0.4
1986	40	1.3	0.3	25.7	< 0.1	3.8	10.0	0.4
1997	27	4.2	0.6	13.9	0.1	2.6	11.6	1.1
2002	30	2.2	0.3	16.0	0.1	4.6	28.6	0.9
2016	6	11.2	3.9	35.2	1.2	10.6	82.8	13.8

Yellow sweet-clover, *Melilotus officinalis**



Survey	Rank	Frequency (%)	Field Uniformity All	Field Uniformity Occurrence	Field Density (#/m²) All	Field Density (#/m²) Occurrence	Field Density (#/m²) High	Relative Abundance
1978-81	36	2.5	0.5	19.7	0.1	3.5	58.2	0.6
1986	44	1.6	0.2	15.4	< 0.1	0.8	5.2	0.4
1997	61	0.4	0.1	21.4	< 0.1	1.3	2.2	0.1
2002	47	0.7	0.2	22.3	< 0.1	2.1	5.8	0.3
2016	37	2.6	0.5	17.6	< 0.1	1.1	3.0	1.2

* Includes white sweet-clover (*Melilotus albus*)