

## 1. HISTORICAL OUTLINE

Starting in 1896, a separate census of agriculture (CA) was taken every five years in Manitoba and, beginning in 1906, in Alberta and Saskatchewan. Since 1956, the five-year agricultural census was extended to the entire country, and conducted in conjunction with the Census of Population (CP). The metadata review and data presented here refer to Canada's CA 2011.

## 2. LEGAL BASIS AND ORGANIZATION

### **Legal framework**

The Constitution Act of 1867 (formerly, the British North America Act) determined that a census would be taken every ten years, starting in 1871. The Statistics Act of 1971 stipulates that a CP and a CA shall be taken every five years, in years ending in one and six. The provisions of the Statistics Act (amended in 2005) on conducting the CA are: (i) Subsection 19(1) and Section 20; (ii) Subsection 21(1); and (iii) Subsection 21(2). According to the Act, the CA and the CP should be conducted in the same month.

### **Institutional framework and international collaboration**

Statistics Canada, a centralized statistical agency, is in charge of conducting the CA and the CP. The development, testing, processing, data validation and preparation for data dissemination for the CA and the CP are mostly handled by different groups within Statistics Canada.

### **Census staff**

No enumerators were directly involved in field data collection. In 2011, for the first time, all known farm operations received their questionnaires by mail through Canada Post rather than through a local enumerator. Farm operators either mailed back the form directly to Statistics Canada in the National Capital Region, or completed and submitted an electronic form on the Internet.

## 3. REFERENCE DATE AND PERIOD

**Reference day:** 10 May 2011, for livestock, management decisions, the value and inventory of farm machinery and equipment, etc.

### **Reference periods:**

- reference year 2011, for land tenure, net area, hay and crops, etc.;
- the calendar year 2010, for farm labour, financial information, information on agricultural production methods, etc.

## 4. ENUMERATION PERIOD

Questionnaires were posted on 2 May 2011. Respondents were asked to complete and return their questionnaires on "census day" (10 May 2011). Data collection was closed on 25 November 2011.

## 5. SCOPE OF THE CENSUS AND DEFINITION OF THE STATISTICAL UNIT

The **census scope** covered agricultural activities (crop and livestock production).

The **statistical unit** was the agricultural operation, defined as "a farm, ranch or other agricultural operation that produces at least one agricultural product intended for sale".

## 6. GEOGRAPHIC COVERAGE

The CA 2011 covered the entire country.

## 7. CUT-OFF THRESHOLD AND OTHER EXCLUSIONS

Only market-oriented agricultural operations were covered by the CA 2011.

## 8. METHODOLOGY

### **Methodological modality for conducting the census**

The classical approach was used in the CA 2011. The CA 2011 was conducted in conjunction with the CP. The two censuses were conducted concurrently and shared a common "census day" (see section 4).

### **Frame**

The CP questionnaire, which was received by all households, including agricultural households, included a question asking if any household member was the operator of an agricultural operation, as defined by the census scope. This information was provided to the CA staff during the enumeration period, to supplement the frame.

### **Complete and/or sample enumeration methods**

The CA is a complete enumeration of all agricultural operations, including those operated by agricultural households and corporate farm enterprises.

### **Sample design (if sampling was used)**

No sampling was used.

**Data collection method(s)**

Paper, Internet and telephone collection methods were available. Questionnaires were either completed on paper and mailed back to Statistics Canada's Data Operations Centre, completed online via Computer-assisted Web Interviewing (CAWI), or completed over the phone via Computer-assisted Telephone Interviewing (CATI) by calling the toll-free Census Help Line.<sup>1</sup>

**Questionnaire(s)**

The CA used a single questionnaire, available in both English and French. The CA 2011 questionnaire covered 14 of the 16 core items<sup>2</sup> recommended in the WCA 2010.

**9. USE OF TECHNOLOGY**

The CAWI and CATI methods were applied for census data collection. Optical scanning was used for the data capture of paper questionnaires. An online database enables users to retrieve customized tables with census data at the national, state and county levels.

**10. DATA PROCESSING AND ARCHIVING**

The CA and CP questionnaires were separately dealt with once they arrived at Statistics Canada's Data Operations Centre. They were sorted, electronically scanned and the data automatically captured using Intelligent Character Recognition (ICR). Any responses that were not recognized by the ICR process were sent to a Statistics Canada employee, who reviewed the questionnaire image and entered the correct data into the system. Questionnaires completed and submitted on the Internet also went to the Data Operations Centre.

Once captured, the data were loaded onto an automated processing system that took them through detailed edit, follow-up and imputation processes. The data were first subjected to a series of rigorous quality control and processing edits to identify and resolve problems related to inaccurate, missing or inconsistent data. A Statistics Canada employee then followed up on the problematic records that could not be resolved in editing, to clarify the missing or incomplete data. Finally, situations that could not be resolved through either editing or follow-up were handled with an imputation procedure that replaced each missing or inconsistent response either with a value consistent with the other data on the questionnaire or with a response obtained from a similar agricultural operation.

**11. CENSUS DATA QUALITY**

After closing the data collection period, a data validation and certification process was conducted.

A coverage evaluation study was undertaken during the period of follow-up collection, to determine the level of CA 2011 undercoverage in three important dimensions: farm count, land area and total sales. The resulting undercoverage estimates inform the data certification process and are published to advise users on data quality.

**12. DATA DISSEMINATION**

The CA 2011 had three major data releases, online and free of charge:

- basic counts and totals for all farm and farm operator variables were released on 10 May 2012;<sup>3</sup>
- selected historical farm and farm operator data (some series covering 1921–2011) were released on 10 December 2012; and
- selected data on the socio-economic characteristics of farm operators, farm families and the farm population, based on the agriculture-population linkage database were released on 27 November 2013.

**13. DATA SOURCES**

**Statistics Canada.** 2012a. 2011 Census of Agriculture. In: *Statistics Canada* [online]. Ottawa, Canada. [Cited 19 August 2019]. <https://www.statcan.gc.ca/eng/ca2011/index>

**Statistics Canada.** 2012b. *Overview of the Census 2011, Census year 2011*. Catalogue No. 98-302-XIE. Ottawa, Canada. (also available at <https://www12.statcan.gc.ca/census-recensement/2011/ref/overview-apercu/98-302-XIE.pdf>).

**14. CONTACT**

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<sup>1</sup> A "reminder questionnaire" was posted in mid-May to farm operators from whom a response had not yet been received. Starting from 1 June 2011, outstanding questionnaires were followed up on by telephone, with the data collection period continuing through the summer and early autumn until the close of collection on 25 November 2011.

<sup>2</sup> The following items were not covered: (i) "Presence of aquaculture on the holding"; and (ii) "Other economic production activities of the holding's enterprise".

<sup>3</sup> These data are tabulated at the national, provincial and three subprovincial levels of geography: (i) census agricultural region; (ii) census division; and (iii) census consolidated subdivision.

# CANADA – CENSUS OF AGRICULTURE 2011 – MAIN RESULTS

NUMBER OF HOLDINGS AND AREA, BY LEGAL STATUS		
	Holdings	Area (ha)
<b>Total</b>	<b>205 730</b>	<b>64 812 723</b>
Sole proprietorship	114 006	25 018 970
Partnership without a written agreement	39 663	9 898 859
Partnership with a written agreement	10 672	3 175 933
Family corporation	35 749	20 659 199
Non-family corporation	4 965	3 033 436
Other operating arrangements	675	3 026 327

LAND TENURE		
	Holdings	Area (ha)
<b>Total</b>	<b>205 730</b>	<b>64 812 723</b>
Owned area	197 227	41 865 023
Leased from governments	17 591	8 936 156
Rented or leased from others	69 737	14 905 736
Area crop-shared from others	10 611	1 776 891
Land area used through other arrangements	10 564	643 341
Total area of land used by others <sup>1</sup>	34 686	3 314 424

DISTRIBUTION OF HOLDINGS BY LAND SIZE CLASSES		
	Holdings	Area (ha)
<b>Total</b>	<b>205 730</b>	<b>64 812 723</b>
Less than 4 ha	12 991	22 749
4–28 ha	32 705	449 350
28–53 ha	24 205	942 272
53–73 ha	21 705	1 363 291
73–97 ha	11 719	976 636
97–162 ha	24 974	3 124 294
162–227 ha	15 053	2 858 013
227–308 ha	11 781	3 086 078
308–453 ha	13 413	4 944 602
453–647 ha	10 831	5 779 083
647–906 ha	9 222	6 974 869
906–1 165 ha	5 230	5 315 922
1 165–1 424 ha	3 482	4 440 041
1 424 ha and over	8 419	24 535 523

LAND USE		
	Holdings	Area (ha)
<b>Total</b>	<b>205 730</b>	<b>64 812 723</b>
Agricultural land	194 438	57 699 763
Arable land	166 161	37 285 042
Land under temporary crops	116 923	28 343 023
Land under temporary meadows	109 417	6 856 822
Land temporarily fallow	20 221	2 085 196
Land under permanent crops	17 599	178 739
Permanent meadows and pastures	114 640	20 235 982
All Other land	165 404	7 112 960

HOLDERS, BY SEX AND AGE <sup>2</sup>		Number
<b>Total</b>		<b>293 925</b>
Male		213 265
Female		80 665
Under 35 years		24 120
Male		17 870
Female		6 245
35–54 years		127 895
Male		89 630
Female		38 260
55 years and over		141 920
Male		105 755
Female		36 170

HOLDERS, BY SEX		
	Number <sup>2</sup>	Area operated (ha) <sup>3</sup>
<b>Total</b>	<b>293 925</b>	<b>64 812 723</b>
Male	213 265	63 439 903
Female	80 665	20 087 279

EMPLOYEES WORKING ON THE HOLDING		Number
<b>Total paid employees</b>		<b>297 683</b>
Permanent employee		112 059
Seasonal employee		185 624

LIVESTOCK		
	Holdings	Head
<b>Holdings with livestock</b>	<b>n.a.</b>	
Cattle	85 890	12 789 965
Bison (buffalo)	1 211	125 142
Sheep	10 111	1 108 574
Goats	5 949	225 461
Pigs	7 371	12 679 104
Equines	50 668	434 880
Horses and ponies	47 454	392 340
Llamas and alpacas	4 107	31 499
Other equines	4 715	11 041
Poultry (1 000 head)	21 791	144 654
Chickens	20 645	133 026
Turkeys	2 767	8 022
Other	4 480	3 607
Other animals	n.a.	
Rabbits	2 792	184 935
Deer (excluding wild deer)	380	20 939
Mink	284	783 185
Elk (wapiti)	572	31 112
Wild boars	150	9 788
Insects		
Bees (colonies)	3 272	561 297

MACHINERY AND EQUIPMENT USED ON THE HOLDING		
	Holdings	Units
<b>Total tractors of all kind</b>	<b>190 162</b>	<b>685 914</b>
Tractors under 60 hp	141 853	311 782
Tractors over 149 hp	53 429	85 681
Other	n.a.	
Pick-ups and cargo vans	164 784	272 769
Other farm trucks	82 127	162 206
Cars and other passenger vehicles	81 316	96 711
Combines	70 007	90 903
Swathers and mower-conditioners	102 469	142 246
Balers	91 883	123 072
Forage harvesters	18 387	20 765
Tillage, cultivation, seeding and planting equipment	123 526	n.a.
Irrigation equipment	16 453	n.a.
All other farm machinery and equipment	158 016	n.a.

<sup>1</sup> Area of land used by others is excluded from total farm area.

<sup>2</sup> Holder counts have been independently randomly rounded to a multiple of 5. As a result, some totals may not be equal to the sum of their parts.

<sup>3</sup> Land areas corresponding to male and female holders do not add up to the total farm land area as some farms include both male and female operators.