



# Canadian Potato Production

Statistical bulletin

January 2006

Statistics Canada  
Agriculture Division

Vol. 3, no. 3

This publication contains the revised estimate of the 2005 potato area harvested, yield and total production.

## Highlights

This release makes minor revisions to some provinces' 2005 potato estimates as a result of additional survey information. Canada's 2005 potato production declines slightly to 94,413,000 cwts. (4 282 500 tonnes). This is mainly as a result of a 900 acre (400 hectare) decrease in the area harvested. An increase in the yield in Saskatchewan did not offset the decrease in area harvested.

Revisions were made to Newfoundland and Labrador, Quebec, Saskatchewan and Alberta

## Release schedule

This publication is now available on the day of release, free of charge, from Statistics Canada's web site at [www.statcan.ca](http://www.statcan.ca). The Canadian Potato Production bulletin is released three times a year in January, July and November. The release dates for the upcoming year are as follows:

July 21, 2006  
November 24, 2006  
January 19, 2007

## Concepts and definitions

### Area planted

Planted area refers to potato area planted in the spring of the reference year.

The preliminary potato area estimate for the current year is released in mid-July. It is based upon data from sample surveys or consultation with provincial vegetable or potato specialists.

Quebec, Ontario and Alberta – The preliminary area estimate is provided by consultation with provincial potato specialists and departments of agriculture.

Prince Edward Island and New Brunswick – Estimates are produced using the Potato Area and Yield Survey. This survey is a two phase telephone probability survey. Calls are made in June for area and again in October for area harvested and production.

Newfoundland and Labrador, Nova Scotia, Manitoba, Saskatchewan, British Columbia – Estimates are produced using the Spring Fruit and Vegetable Area Survey, and the June Atlantic Agriculture Survey, the June Crop, as well as consultation with the provincial potato and vegetable specialists.

Revisions may be made to July's area estimate the following November. The sources for these revised estimates are as follows:



Prince Edward Island and New Brunswick – The previous year's area may be revised as a result of Agriculture and Agri-Food Canada's disposition data indicating a significantly different production. Area planted estimates for the current year may be revised in relation to the previous year's adjusted area. The Potato Area and Yield Survey also asks for confirmation of planted area when calls are made for the yield in the fall.

Quebec, Ontario and Alberta – Area planted is collected through each province's own survey program.

Newfoundland and Labrador, Nova Scotia, Manitoba, Saskatchewan and British Columbia – The Potato Area and Yield Survey confirms the information on the area planted.

### **Area harvested**

This series was incorporated in 1985 for all provinces except Quebec and Ontario, where the series became available beginning in 1993. It is calculated by subtracting unharvested area from area planted. Revisions to area planted will automatically result in revisions to area harvested if area lost remains constant. It indicates the area not harvested because of poor harvest conditions, crop failure or disease. For years prior to 1985 and for Quebec and Ontario prior to 1993, unharvested area was accounted for in the total production with production for that area placed at zero.

Area harvested is released in November of the current year. Revisions can be made to the previous year's area harvested at the same time.

Newfoundland and Labrador, Nova Scotia, Prince Edward Island, New Brunswick, Manitoba, Saskatchewan and British Columbia - The Potato Area and Yield Survey determines the area lost.

Quebec, Ontario and Alberta - Area lost is collected through each province's own survey program.

### **Yield**

Yield is a measure of production from the harvested area based on the volume produced, including cull potatoes, but excluding product left in the field.

Both current and revised yields are released in the November issue of the Canadian Potato Production Bulletin.

Sources of data for each province are:

Newfoundland and Labrador, Nova Scotia, Prince Edward Island, New Brunswick, Manitoba, Saskatchewan and British Columbia - Estimates are based on responses to the Potato Area and Yield Survey. Calls are made in late October and early November of the current year.

Quebec, Ontario and Alberta - Yield is collected through each province's own survey program.

Yields may be revised the following January. Later survey results from the provincial ministries or administrative data might indicate a revision is necessary. Only unusual circumstances would indicate another revision to this production the following July.

### **Total production**

Total production, the product of area harvested by the average yield, is the volume of potatoes harvested out of the field, including culls, but excluding gleanings.

The production estimate is released in November of the current year. Any revisions to production resulting from new information or supply disposition data can be made the following January or one year later in the following November. (See concepts for yield).

### **Amount sold, consumed, seeded or fed to livestock**

This series was established in 1982. From 1986, the series includes the amount fed to livestock. It measures the volume of potatoes sold, consumed on farm, seed for own use, plus potatoes fed to livestock. If potatoes were destroyed and producers received funds as part of a diversion program, these potatoes would be considered sold and included in the amount utilized. Starting with the 1999 crop, all

potatoes that are being shipped to French Fry processors are being included in the volume sold, consumed, seeded or fed to livestock. No cullage is being deducted from these marketings. These numbers are released each November for the previous crop year.

Newfoundland and Labrador - The amount is set at 90% of the harvested production.

Prince Edward Island and New Brunswick - The Canadian Food Inspection Agencies inspection staff provides a monthly estimate of cullage and marketings.

Nova Scotia, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia - The amount is based on consultation with provincial specialists and marketing agencies.

Quebec - The amount is collected through their province's survey program

### **Average price**

The average price for potatoes is based on the transaction price received by the producer. If a portion of the crop is being utilized but the producer is receiving no compensation for that portion of the crop, the price is averaged into the average price at a zero value. The price is net of all deductions made before the producer is paid. The average price is released each November for the previous year's crop.

Newfoundland and Labrador and Nova Scotia – Annual prices are established in consultation with provincial specialists and as a result of the Fall Survey of Fruit and Vegetables.

Prince Edward Island, New Brunswick, Ontario, Manitoba, Saskatchewan, Alberta and British Columbia - Statistics Canada conducts a monthly survey of potato prices received by producers. These prices are then multiplied by the monthly disposition of each of the grades of these potatoes to create an annual weighted price.

Quebec - The average price is collected through the provincial survey program and the Farm Product Prices Survey.

### **Farm value**

Farm value is the product of the amount sold, consumed, seeded or fed to livestock by the average farm price. (See concepts section on amount sold, consumed, seed or fed to livestock and prices). The farm value is released each November for the previous year's crop.

## **Methodology and data quality**

### **Potato area and yield survey**

#### **Survey frame and sample selection**

The target population includes all potato farms in Newfoundland and Labrador, Nova Scotia, Prince Edward Island, New Brunswick, Manitoba, Saskatchewan and British Columbia except those on Indian Reserves and institutional farms.

The Census of Agriculture provides a list of farms and their potato area. This list is updated annually from various available sources. The list frame is stratified on the basis of Census potato area and provincial geographic boundaries.

A sample of approximately 825 farms (57 Newfoundland and Labrador, 32 Nova Scotia, 272 in Prince Edward Island, 168 in New Brunswick, 170 in Manitoba, 85 in Saskatchewan and 41 in British Columbia) is drawn from the list frame for the Potato Area and Yield Survey.

The yield portion of the survey is conducted in October to confirm area planted and to ask for area harvested and production. Operations that had reported no potatoes in June are not contacted a second time.

### **Data collection**

Data collection for the seeded potato area was done by telephone interview, from June 18 to June 27, 2005 and for the yield portion between October 11 to November 4, 2005.

By the end of the collection period, about 85% of the questionnaires had been completed. The refusal rate to the survey was 5.0%. Non-contact and non-response can explain the difference between the completion rate and the refusal rate. Initial sample weights are adjusted (a process called raising factor adjustment) in cases of non-response. No imputation is performed.

### **Estimation**

The survey data collected from the Potato Area and Yield Survey are weighted in order to produce level indicators which are representative of the population. These level indicators then undergo a validation process, based on subject matter analysis and consultation with provincial specialists, before an estimate is determined.

### **Sampling and non-sampling errors**

The statistics contained in this publication are based on a random sample of agricultural operations and, as such, are subject to sampling and non-sampling errors. The overall quality of the estimates depends on the combined effect of these two types of errors.

Sampling errors arise because estimates are derived from sample data and not the entire population. These errors depend on factors such as sample size, sampling design and the method of estimation.

Non-sampling errors are not related to sampling and may occur throughout the survey operation for various reasons like coverage, differences in interpretation of questions, incorrect information from respondents, mistakes in recording, coding or processing of data.

### **Data quality**

Sampling error can be estimated from the sample itself by using a statistical measure called the coefficient of variation (cv). Over repeated surveys, 95 times out of 100, the difference between a sample estimate and what should have been obtained from an enumeration of all potato farming operations would be less than twice the coefficient of variation. This range of values is referred to as confidence interval. While published estimates may not exactly equal the level indicators (due to the validation and consultation process), these estimates do remain within the confidence interval of the survey level indicators.

For the 2005 area estimates, the cv's from the Potato Area and Yield Survey ranged from 4.0% to 24.9%.

For the 2005 yield estimates, the cv's ranged from .6% to 8.8%.

## **Farm Product Prices Survey**

### **Survey frame and sample selection**

The target population for Prince Edward Island, New Brunswick, Ontario, Manitoba, Saskatchewan, Alberta and British Columbia consists of all agricultural operations in these provinces which grow potatoes. The Census of Agriculture provides a list of such farms and is updated from various available sources. The list frame is stratified on the basis of the area of potatoes reported on the 2001 Census. A sample of approximately 500 farms is drawn from the list frame and is rotated as required.

### **Data collection**

Data collection is carried out by telephone interview five business days following the 15th of every month with a reference date of the 15th. The refusal rate is usually less than 5%. No imputations are performed. Editing is done following data capture and outliers are verified and removed if necessary from the sample. A simple average is calculated on the remaining data.

## **Fall Survey of Fruits & Vegetables**

### **Survey Frame and Sample Selection:**

Newfoundland & Nova Scotia - This new national annual survey contacts about 1000 fruit or vegetable growers in Newfoundland and in Nova Scotia.

The target population is all agricultural operations in Newfoundland and Nova Scotia. The Census of Agriculture provides a list of farms which is updated from various available sources.

#### Data Collection:

Data collection is carried out using a CATI application in November. No imputations are performed. Editing is done and outliers are removed. A high response is expected.

#### Fall Survey of Fruits & Vegetables

##### Survey Frame and Sample Selection:

Newfoundland & Nova Scotia - This new national annual survey contacts about 1000 fruit or vegetable growers in Newfoundland and in Nova Scotia.

The target population is all agricultural operations in Newfoundland and Nova Scotia. The Census of Agriculture provides a list of farms which is updated from various available sources.

#### Data Collection:

Data collection is carried out using a CATI application in November. No imputations are performed. Editing is done and outliers are removed. A high response is expected.

#### Revision procedures

Area, yield, production, price or value are all subject to revision when more information becomes available. The policy is to revise the estimates when:

- supply/disposition analysis at the end of the crop year indicates under or over-estimation of production; or
- a new benchmark for area becomes available from the Census of Agriculture; or
- new sources of administrative data would suggest errors to any survey results.

The tables below contain some statistics which indicate the magnitude and direction of past revision from the preliminary to the final (following intercensal revisions) seeded potato area and total production. The magnitude is measured by the average percent change between the preliminary and final estimates. The direction of revisions is indicated by counting the number of years that the preliminary estimate is above or below the final revised estimate.

The data indicates that the preliminary estimates of seeded area have been revised upward 10 years out of the past 10 by an average of 1.10% at the Canadian level.

Magnitude and direction of past revisions to Canadian seeded potato area 1995-2004		
	Number of years seeded area was revised	
Average % change	Upwards	Downwards
1.10	10	0

The data indicates that the preliminary estimates of harvested production at the Canadian level have been revised upward by an average 2.62% over the past years. In 8 of the past 10 years, the revision has been upwards.

Magnitude and direction of past revisions to Canadian harvested production 1995-2004		
Average % Change	Number of Years Harvested Production was Revised	
	Upwards	Downwards
2.62	8	2

## Conversion factors

The following metric conversion factors are used in this publication:

Area: 1 acre = 0.4047 hectare

Production: 1 cwt = 0.04536 tonne

To convert area from imperial to metric, provincial acreages are first converted, then the individual provinces are added for the Canadian total area in hectares. The Canadian acreage may not directly convert to the Canadian area in hectares.

The same method is used for production. Provincial cwts. are converted to provincial tonnes, which are then added for the Canadian production in tonnes.

The Canadian yield in tonnes is the result of the total production in tonnes divided by the Canadian hectares. The yield in cwts/acre may not be directly convertible to the yield in tonnes/hectare.

The average farm price at the Canadian level in \$/tonne is the farm value divided by the marketed production in tonnes. The price in \$/cwt may not convert directly to the price in \$/tonne.

## Data confidentiality

Data confidentiality is ensured under the Statistics Act, which prohibits the divulging of individual or aggregated data where individuals or businesses might be identified.

## Standards of service

Statistics Canada is committed to serving its clients in a prompt, reliable and courteous manner and in the official language of their choice. To this end, the Agency has developed standards of service which its employees observe in serving its clients. To obtain a copy of these service standards, please contact Statistics Canada toll free at 1 800 263-1136. The service standards are also published on [www.statcan.ca](http://www.statcan.ca) under About Statistics Canada > Providing services to Canadians.

## Note of appreciation

Canada owes the success of its statistical system to a long standing partnership between Statistics Canada, the citizens of Canada, its businesses, governments and other institutions. Accurate and timely statistical information could not be produced without their continued cooperation and goodwill.

Published by authority of the Minister responsible for Statistics Canada.

© Minister of Industry, 2006.

All rights reserved. The content of this publication may be reproduced, in whole or in part, and by any means, without further permission from Statistics Canada, subject to the following conditions: that it is done solely for the purposes of private study, research, criticism, review, newspaper summary, and/or non-commercial purposes; and that Statistics Canada be fully acknowledged as follows: Source (or "Adapted from", if appropriate); Statistics Canada, name of product, catalogue, volume and issue numbers, reference period and page(s). Otherwise, no part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopy, for any purposes, without the prior written permission of Licensing Services, Marketing Division, Statistics Canada, Ottawa, Ontario, Canada K1A 0T6.

Cette publication est disponible en français (Numéro 22-008-XIF au catalogue).

### How to obtain more information

Specific inquiries about this product and related statistics or services should be directed to: Client Services Unit, Agriculture Division, Statistics Canada, Ottawa, Ontario K1A 0T6 (1-800-465-1991)  
Internet; [agriculture@statcan.ca](mailto:agriculture@statcan.ca).

For information on the wide range of data available from Statistics Canada, you can contact us by calling one of our toll-free numbers. You can also contact us by e-mail or by visiting our website.

National inquiries line	1 800 263 1136
National telecommunications device for the hearing impaired	1 800 363 7629
Depository Services Program inquiries	1 800 700 1033
Fax Line for Depository Services Program	1 800 889 9734
E-mail inquiries	<a href="mailto:infostats@statcan.ca">infostats@statcan.ca</a>
Website	<a href="http://www.statcan.ca">www.statcan.ca</a>

This publication was prepared under the direction of:

Mark Elward, Chief, Livestock Section, Ottawa  
Barb McLaughlin, Truro, Nova Scotia  
Bernadette Alain, Truro, Nova Scotia

	Area planted	Area harvested	Yield	Total production	Amount sold, consumed, seeded or fed to livestock	Average farm price	Farm value
	acres	acres	hundredweight per acre	hundredweight	hundredweight	dollars / hundredweight	thousands of dollars
<b>2005</b>							
Canada	399,000	379,000	249.1	94,413,000	..	..	..
Newfoundland and Labrador	700	600	166.7	100,000	..	..	..
Prince Edward Island	95,500	93,500	260.0	24,310,000	..	..	..
Nova Scotia	5,100	4,900	215.0	1,054,000	..	..	..
New Brunswick	56,500	55,500	260.0	14,430,000	..	..	..
Quebec	44,700	43,500	235.4	10,240,000	..	..	..
Ontario	36,300	35,500	162.0	5,751,000	..	..	..
Manitoba	86,000	76,000	210.0	15,960,000	..	..	..
Saskatchewan	10,000	9,900	265.0	2,624,000	..	..	..
Alberta	56,000	51,500	344.0	17,716,000	..	..	..
British Columbia	8,200	8,100	275.0	2,228,000	..	..	..
<b>2006</b>							
Canada	..	..	..	..	..	..	..
Newfoundland and Labrador	..	..	..	..	..	..	..
Prince Edward Island	..	..	..	..	..	..	..
Nova Scotia	..	..	..	..	..	..	..
New Brunswick	..	..	..	..	..	..	..
Quebec	..	..	..	..	..	..	..
Ontario	..	..	..	..	..	..	..
Manitoba	..	..	..	..	..	..	..
Saskatchewan	..	..	..	..	..	..	..
Alberta	..	..	..	..	..	..	..
British Columbia	..	..	..	..	..	..	..
<b>2007</b>							
Canada	..	..	..	..	..	..	..
Newfoundland and Labrador	..	..	..	..	..	..	..
Prince Edward Island	..	..	..	..	..	..	..
Nova Scotia	..	..	..	..	..	..	..
New Brunswick	..	..	..	..	..	..	..
Quebec	..	..	..	..	..	..	..
Ontario	..	..	..	..	..	..	..
Manitoba	..	..	..	..	..	..	..
Saskatchewan	..	..	..	..	..	..	..
Alberta	..	..	..	..	..	..	..
British Columbia	..	..	..	..	..	..	..
<b>2008</b>							
Canada	..	..	..	..	..	..	..
Newfoundland and Labrador	..	..	..	..	..	..	..
Prince Edward Island	..	..	..	..	..	..	..
Nova Scotia	..	..	..	..	..	..	..
New Brunswick	..	..	..	..	..	..	..
Quebec	..	..	..	..	..	..	..
Ontario	..	..	..	..	..	..	..
Manitoba	..	..	..	..	..	..	..
Saskatchewan	..	..	..	..	..	..	..
Alberta	..	..	..	..	..	..	..
British Columbia	..	..	..	..	..	..	..

.. - not available for a specific reference period



	Area planted	Area harvested	Yield	Total production	Amount sold, consumed, seeded or fed to livestock	Average farm price	Farm value
	hectares	hectares	tonnes/ hectares	tonnes	tonnes	dollars/tonne	thousands of dollars
<b>2005</b>							
Canada	161 500	153 400	27.92	4 282 500	..	..	..
Newfoundland and Labrador	300	200	22.50	4 500	..	..	..
Prince Edward Island	38 600	37 800	29.17	1 102 700	..	..	..
Nova Scotia	2 100	2 000	23.90	47 800	..	..	..
New Brunswick	22 900	22 500	29.09	654 500	..	..	..
Quebec	18 100	17 600	26.39	464 500	..	..	..
Ontario	14 700	14 400	18.12	260 900	..	..	..
Manitoba	34 800	30 800	23.50	723 900	..	..	..
Saskatchewan	4 000	4 000	29.75	119 000	..	..	..
Alberta	22 700	20 800	38.63	803 600	..	..	..
British Columbia	3 300	3 300	30.64	101 100	..	..	..
<b>2006</b>							
Canada	..	..	..	..	..	..	..
Newfoundland and Labrador	..	..	..	..	..	..	..
Prince Edward Island	..	..	..	..	..	..	..
Nova Scotia	..	..	..	..	..	..	..
New Brunswick	..	..	..	..	..	..	..
Quebec	..	..	..	..	..	..	..
Ontario	..	..	..	..	..	..	..
Manitoba	..	..	..	..	..	..	..
Saskatchewan	..	..	..	..	..	..	..
Alberta	..	..	..	..	..	..	..
British Columbia	..	..	..	..	..	..	..
<b>2007</b>							
Canada	..	..	..	..	..	..	..
Newfoundland and Labrador	..	..	..	..	..	..	..
Prince Edward Island	..	..	..	..	..	..	..
Nova Scotia	..	..	..	..	..	..	..
New Brunswick	..	..	..	..	..	..	..
Quebec	..	..	..	..	..	..	..
Ontario	..	..	..	..	..	..	..
Manitoba	..	..	..	..	..	..	..
Saskatchewan	..	..	..	..	..	..	..
Alberta	..	..	..	..	..	..	..
British Columbia	..	..	..	..	..	..	..
<b>2008</b>							
Canada	..	..	..	..	..	..	..
Newfoundland and Labrador	..	..	..	..	..	..	..
Prince Edward Island	..	..	..	..	..	..	..
Nova Scotia	..	..	..	..	..	..	..
New Brunswick	..	..	..	..	..	..	..
Quebec	..	..	..	..	..	..	..
Ontario	..	..	..	..	..	..	..
Manitoba	..	..	..	..	..	..	..
Saskatchewan	..	..	..	..	..	..	..
Alberta	..	..	..	..	..	..	..
British Columbia	..	..	..	..	..	..	..

.. - not available for a specific reference period