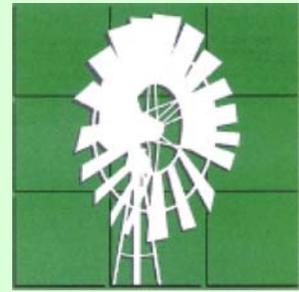




Service bulletin

Canadian Potato Production

July 2006



Highlights

This publication contains the preliminary estimate of the area planted to potatoes in 2006.

- Canadian farmers appear to have reduced their area planted in potatoes this year, thanks to substantial declines in two western provinces, according to preliminary survey data.
- Potato producers in both Manitoba and Alberta, which together account for about a third of national potato area, have cut their plantings. Manitoba has declined 4.7% to about 82,000 acres (33 200 hectares), while in Alberta it is down 2.7% to 54,500 acres (22 100 hectares).
- However, in eastern Canada, the situation is reversed. Farmers in Prince Edward Island, the nation's biggest potato producer, increased their area up 1.6% to 97,000 acres (39,300 hectares).
- Similarly, acreage in New Brunswick is 1.8% higher, and in Ontario, about 1.9% higher.
- As a result, total acreage nationwide has declined by about 1% to 351,100 acres (142 100 hectares). This total excludes preliminary acreage data for Quebec. Updates to Quebec's list of producers resulted in the addition of some farm operators to the province's 2006 survey.
- Consequently, it is not possible at this point to directly compare estimates for the entire 2006 potato crop with data for previous years. This is because it cannot be determined how much of the increase in acreage reported by Quebec producers this year is due to an actual increase in plantings, or the increase in producers.

Statistical tables

Table 1

Area, production and farm value of potatoes (imperial measures), Canada and provinces

	Seeded area	Harvested area	Average yield	Production	Amount sold, consumed, seeded or fed to livestock	Average farm price of potatoes sold, consumed, seeded or fed to livestock	Total farm value
	acres		hundredweight per acre	hundredweight		dollars per hundredweight	thousands of dollars
2003							
Canada	457,500	447,000	260.5	116,458,000	110,441,000	7.99	882,765
Newfoundland and Labrador	700	700	214.3	150,000	139,000	16.40	2,280
Prince Edward Island	106,000	105,500	265.0	27,958,000	27,661,000	5.87	162,248
Nova Scotia	5,300	5,200	215.0	1,118,000	1,060,000	9.23	9,785
New Brunswick	59,000	58,500	255.0	14,918,000	14,312,000	6.37	91,198
Quebec	49,900	48,900	237.7	11,625,000	11,080,000	7.84	86,849
Ontario	44,900	43,900	205.0	9,000,000	8,010,000	11.01	88,194
Manitoba	103,000	101,500	245.0	24,868,000	21,955,000	7.44	163,384
Saskatchewan	13,500	13,000	315.0	4,095,000	3,925,000	15.35	60,255
Alberta	66,000	61,000	330.0	20,130,000	19,826,000	8.54	169,375
British Columbia	9,200	8,800	295.0	2,596,000	2,473,000	19.89	49,197
2004							
Canada	433,200	424,400	271.9	115,409,000	108,844,000	7.63	830,448
Newfoundland and Labrador	700	600	190.0	114,000	106,000	16.27	1,725
Prince Edward Island	106,000	105,500	275.0	29,013,000	28,548,000	5.79	165,376
Nova Scotia	5,500	5,300	235.1	1,246,000	1,185,000	9.12	10,804
New Brunswick	58,500	58,000	285.0	16,530,000	14,667,000	5.68	83,241
Quebec	47,700	46,200	265.5	12,266,000	11,230,000	7.87	88,349
Ontario	40,000	39,000	202.0	7,878,000	6,702,000	9.82	65,838
Manitoba	96,000	93,000	245.0	22,785,000	22,068,000	7.61	167,980
Saskatchewan	12,000	11,500	280.0	3,220,000	2,585,000	12.86	33,245
Alberta	58,000	57,000	350.0	19,950,000	19,596,000	8.58	168,103
British Columbia	8,800	8,300	290.0	2,407,000	2,157,000	21.23	45,787
2005							
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	..	..	..
2006							
Canada	399,300	..	..	..	..	..	..
Newfoundland and Labrador	700	..	..	..	..	..	..
Prince Edward Island	97,000	..	..	..	..	..	..
Nova Scotia	4,900	..	..	..	..	..	..
New Brunswick	57,500	..	..	..	..	..	..
Quebec	48,200	..	..	..	..	..	..
Ontario	37,000	..	..	..	..	..	..
Manitoba	82,000	..	..	..	..	..	..
Saskatchewan	9,500	..	..	..	..	..	..
Alberta	54,500	..	..	..	..	..	..
British Columbia	8,000	..	..	..	..	..	..

.. not available for a specific reference period

Note: Figures may not add due to rounding.

Table 2
Area, production and farm value of potatoes (metric measures), Canada and provinces

	Seeded area	Harvested area	Average yield	Production	Amount sold, consumed, seeded or fed to livestock	Average farm price of potatoes sold, consumed, seeded or fed to livestock	Total farm value
	hectares	tonnes per hectares	tonnes		dollars per tonne	thousands of dollars	
2003							
Canada	185,150	180,901	29.20	5,282,535	5,009,604	176.15	882,765
Newfoundland and Labrador	283	283	24.02	6,804	6,305	361.55	2,280
Prince Edward Island	42,898	42,696	29.70	1,268,175	1,254,703	129.41	162,248
Nova Scotia	2,145	2,104	24.10	50,712	48,082	203.48	9,785
New Brunswick	23,877	23,675	28.58	676,680	649,192	140.43	91,198
Quebec	20,195	19,790	26.64	527,310	502,589	172.84	86,849
Ontario	18,171	17,766	22.98	408,240	363,334	242.72	88,194
Manitoba	41,684	41,077	27.46	1,128,012	995,879	164.02	163,384
Saskatchewan	5,463	5,261	35.31	185,749	178,038	338.40	60,255
Alberta	26,710	24,687	36.99	913,097	899,307	188.27	169,375
British Columbia	3,723	3,561	33.06	117,755	112,175	438.49	49,197
2004							
Canada	175,316	171,755	30.48	5,234,952	4,937,164	168.21	830,448
Newfoundland and Labrador	283	243	21.30	5,171	4,808	358.69	1,725
Prince Edward Island	42,898	42,696	30.82	1,316,030	1,294,937	127.65	165,376
Nova Scotia	2,226	2,145	26.35	56,519	53,752	201.06	10,804
New Brunswick	23,675	23,473	31.94	749,801	665,295	125.22	83,241
Quebec	19,304	18,697	29.76	556,386	509,393	173.50	88,349
Ontario	16,188	15,783	22.64	357,346	304,003	216.49	65,838
Manitoba	38,851	37,637	27.46	1,033,528	1,001,004	167.77	167,980
Saskatchewan	4,856	4,654	31.38	146,059	117,256	283.51	33,245
Alberta	23,473	23,068	39.23	904,932	888,875	189.15	168,103
British Columbia	3,561	3,359	32.50	109,182	97,842	468.03	45,787
2005							
Canada	161,475	153,381	27.92	4,282,574	..	..	..
Newfoundland and Labrador	283	243	18.68	4,536	..	..	..
Prince Edward Island	38,649	37,839	29.14	1,102,702	..	..	..
Nova Scotia	2,064	1,983	24.10	47,809	..	..	..
New Brunswick	22,866	22,461	29.14	654,545	..	..	..
Quebec	18,090	17,604	26.38	464,486	..	..	..
Ontario	14,691	14,367	18.16	260,865	..	..	..
Manitoba	34,804	30,757	23.54	723,946	..	..	..
Saskatchewan	4,047	4,007	29.70	119,025	..	..	..
Alberta	22,663	20,842	38.56	803,598	..	..	..
British Columbia	3,319	3,278	30.82	101,062	..	..	..
2006							
Canada	161,597	..	..	..	..	..	..
Newfoundland and Labrador	283	..	..	..	..	..	..
Prince Edward Island	39,256	..	..	..	..	..	..
Nova Scotia	1,983	..	..	..	..	..	..
New Brunswick	23,270	..	..	..	..	..	..
Quebec	19,507	..	..	..	..	..	..
Ontario	14,974	..	..	..	..	..	..
Manitoba	33,185	..	..	..	..	..	..
Saskatchewan	3,845	..	..	..	..	..	..
Alberta	22,056	..	..	..	..	..	..
British Columbia	3,238	..	..	..	..	..	..

.. not available for a specific reference period

Note: Figures may not add due to rounding.

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, the June Crop Survey and the June Atlantic Agriculture Survey, 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 supplies 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 (Survey 3436).

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 "**Amount sold, consumed, seeded or fed to livestock**" and "**Average price**"). The farm value is released each November for the previous year's crop.

Methodology and data quality

Potato area and yield survey (Survey 3446)

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 3436)

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 and vegetables (Survey 3407)

Survey frame and sample selection

Newfoundland and 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 10 years out of the past 10 by an average of 1.10% at the Canadian level. See table 3.

The data indicates that the preliminary estimates of harvested production at the Canadian level have been revised by an average 2.62% over the past years. In 8 of the past 10 years, the revision has been upwards. See table 4.

Table 3
Magnitude and direction of past revisions to Canadian seeded potato area 1995 to 2004

	Number of years seeded area was revised		Average percent change
	Upwards	Downwards	
	years		percentage
Magnitude and direction of past revisions	10	0	1.1

Table 4
Magnitude and direction of past revisions to Canadian harvested production 1995 to 2004

	Number of years seeded area was revised		Average percent change
	Upwards	Downwards	
	years		percentage
Magnitude and direction of past revisions	8	2	2.62

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, both the Canadian total and the provincial acreages are directly converted. The individual provinces area measured in hectares may not add to the Canadian total area in hectares.

The same method is used for production where the Canadian and the provincial production in cwts. are converted directly to tonnes. The provincial productions in tonnes may not add to the Canadian production in tonnes.

The yields in tonnes are the result of the un-rounded productions in tonnes divided by the un-rounded areas in hectares. The yield in cwts/acre may not be directly convertible to the yield in tonnes/hectare.

The average farm prices in \$/tonne is the farm value divided by the un-rounded 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.

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