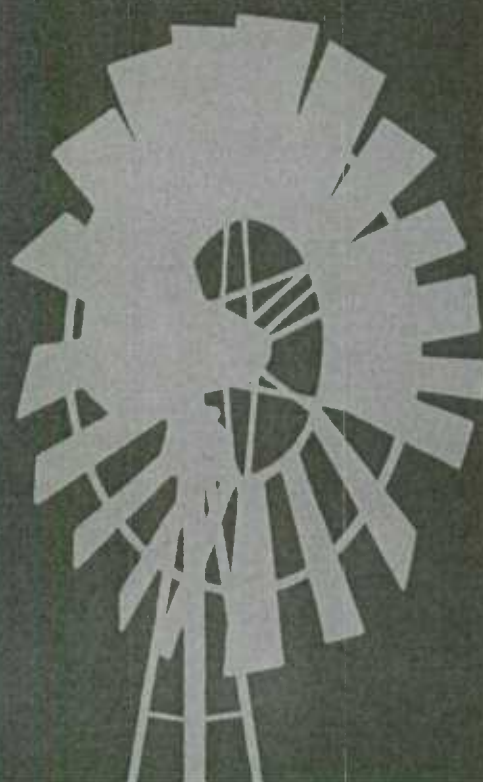


21-601E  
no. 23  
c. 3

# Agriculture Division

# Division de l'agriculture



Statistics  
Canada

Statistique  
Canada

Canada



Statistics Canada  
Agriculture Division



## **WORKING PAPER #23**

### **Potatoes: A Comparison of Canada/USA Structure**

Glenn Zepp and Charles Plummer, U.S. Department of Agriculture  
Barbara McLaughlin, Statistics Canada

Cat. No.: 21-6010MPE23000

Price: \$5.00

The responsibility for the analysis and interpretation of the data is that of the authors and not of Statistics Canada.

© Minister of Industry, Science and Technology, Statistics Canada, 1992. All rights reserved. No part of this paper may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise.



## Potatoes: A Comparison of Canada/USA Structure

### INTRODUCTION

Throughout their early agricultural histories, the majority of United States's and Canada's potato production occurred on diversified small farms where self-sufficiency was often a first priority. The size of potato enterprises averaged less than an acre per farm in Canada during the 1920's, and just over one acre in the United States (U.S. Dept. of Commerce, 1930 and Dominion Bureau of Statistics, 1921). As recently as 1960, potato enterprises averaged less than 2 acres per farm in both countries. Potato farming has specialized considerably since 1960, not only in the production of potatoes, but in the production of potatoes for each of the three principle end uses: seed, tablestock, or processing. This paper outlines the development of the potato industries in Canada and the United States, and compares and contrasts their current structure.

### Development of the Industry

Several trends highlight change in the Canadian and U.S. potato industries over the last 50 years: 1) increased farm size, 2) increased yields per acre, 3) concentration of production into specialized potato growing areas, and 4) the rise in consumption of processed potatoes.

The most evident trend in both Canada and the United States is the shift to fewer farms having larger average potato enterprises. Farms reporting potato acreage in the United States declined from 2.6 million in 1939, averaging 1 acre each, to 14,782 in 1987, averaging 88 acres each (Table 1). Although the number of farms dropped in all regions, production declined only in the South and Northeast.<sup>1</sup>

---

<sup>1</sup>The term Eastern and Western Canada and Northeast, South, Central, and West United States, used throughout the paper, are defined as follows: Eastern Canada - Newfoundland, Prince Edward Island, Nova Scotia, New Brunswick, Quebec, Ontario; Western Canada. Manitoba, Saskatchewan, Alberta, British Columbia; Northeast U.S. - Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Pennsylvania; South U.S. - Delaware, Maryland, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, and Texas; Central U.S. - Ohio, Indiana, Illinois, Missouri, Michigan, Wisconsin, Minnesota, Iowa, North Dakota, South Dakota, Nebraska, and Kansas; West U.S. - Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Oregon, California, Hawaii, and Alaska.





In Canada, the number of farms reporting potatoes dropped from 217,137 in 1961 to 4,885 in 1986. Meanwhile the average size of potato operations rose from 1.4 acres to 56 acres. Although the number of farms declined in both Eastern and Western Canada, production rose in both areas.

Despite a decline in the number of farms with potatoes and in the area planted, total output increased because of greater productivity. In the late 1930's and early 1940's, the combined yield for Canada and the United States averaged 73 cwt per acre. By the 1990's, the average approached 270 cwt. Twice as many potatoes were being produced on nearly half as much land.

Several reasons can be cited for the increased productivity. Improved cultural practices, such as the increased use of fertilizers, pesticides, and irrigation were a major contributing factor. Another reason was the introduction of improved varieties, especially the Russet varieties which were well adapted to both fresh and processing uses. A third was the shift of production from diversified small farms to large commercial farms located in areas having an advantage in potato growing.

In 1939, U.S. potato production was located largely in the eastern half of the country. The South reported the greatest number of farms and the Northeast and the Central region accounted for the largest output. By the late 1980's, potato production had shifted to the western United States. In 1987, the West accounted for 61 percent of U.S. production, compared with less than 23 percent in 1939. Almost all potato acreage in the West is under irrigation and yields average higher than the nonirrigated eastern areas.

In Canada, the distribution of production between the Eastern and Western regions remained relatively constant between 1940 and the present, at about 80 percent Eastern and 20 percent Western. A shift in acreage within the Eastern region of Canada has occurred, however, from Ontario and Quebec to Prince Edward Island.





The westward movement of acreage in the United States was accompanied by an increase in the share of potatoes used in processing and a decline in the share going for table use. About 61 percent of total U.S. production was marketed for table use in 1959 while 19 percent was sold for processing (predominately for chips). By 1991, the share going for table use fell to 31 percent while the share to processing (predominately for frozen products) rose to 54 percent (U.S. Dept. of Agriculture, various-b).

The switch from largely fresh use to predominately processing in the United States was accompanied by an increase in potato use per person. Use of potatoes per person rose from 110 pounds (farm weight equivalent) during the 1960's to 131 pounds in 1990 and 1991 (Table 2).<sup>2</sup> The amount used fresh fell from 72 pounds a person in 1960-69 to 50 pounds in 1990-91, while the amount used in processing rose from 39 pounds to 83 pounds.

Potato use per person in Canada is substantially higher than in the United States. Per capita use of potatoes remained relatively flat in Canada from the 1960's through the 1980's at around 150 pounds. The drop to 137 pounds during 1990-91 could indicate declining per capita consumption in Canada, but it may be only a statistical deviation caused by one year in which the estimate of consumption was unusually low.

## **The Production Sectors**

### **Specialization**

Potatoes tend to be grown on farms that specialize in potato production. In both Canada and the United States, the predominate farm type reporting potatoes is "other field crops" (Table 3). Farm type is determined according to which enterprise accounts for the majority of receipts. Other field crops farms include those on which potatoes, sweet potatoes, sugarcane, sugarbeets, or field crops other than cash grains account for half or more of gross receipts.

---

<sup>2</sup> Actual potato consumption is less than farm-weight utilization because of losses occurring during processing and during marketing and food preparation. Farm weight utilization is a useful indicator of change in per capita potato consumption, however, because similar weight losses likely occur between the farm and consumer for both fresh and processing uses.



In Canada, a substantial number of farms classified as "other livestock" report some potatoes. The practice of feeding cull potatoes to livestock appears to be more prevalent in Canada, where potato growing on livestock farms is more commonplace, than in the United States.

### **Capitalization**

Farms with potatoes in the United States have larger average capital investment in land and buildings than those in Canada (Table 4). The bigger U.S. investments probably reflect the larger average farm size in the United States.

In both countries, both potato type farms and all farms reporting potatoes have larger capital investments than all farms. This may reflect the value for specialized buildings and equipment for storage and packing on farms with potatoes.

Investment in machinery and equipment is quite similar in both countries. For potato farms, the average value of machinery and equipment per farm and the average per acre for land, if adjusted for inflation, would be nearly the same.

### **Type of Ownership**

Individuals and partnerships are the predominate type of ownership among farms reporting potatoes in both Canada and the United States (Table 5). Among farms with sales of US\$100,000 or more, however, corporate ownership is common in Canada. Potato growers in Canada are more inclined to incorporate than in the United States. Thirty-seven percent of Canadian potato farms with \$100,000 or more in sales were incorporated compared with 23 percent in the United States. Differences in income tax rates may explain the higher rates of incorporation in Canada. Tax rates in Canada for small corporations for the most part are less than their U.S. counterparts. Also, some of the 6 percent of other farms in Canada with sales greater than \$100,000 are Hutterite Colonies--groups of smaller farms run by religious sects as communal operations and reported as a single business.



### **Cost of Production**

The Canadian International Trade Tribunal, in a comparison among selected U.S. and Canadian areas, reported higher 1991 production cost for processing and tablestock potatoes in the United States than in Canada (Table 6). In general, cost estimates per unit of output were lowest for irrigated areas, because of higher yields per acre.

### **Crop Utilization**

All potatoes in Canada and most in the United States are harvested during the late summer and fall and stored until used. The United States harvests potatoes throughout the year, however, with 1, 5, and 5 percent of the 1992 crop being harvested in the winter, spring, and summer. Potatoes harvested during the off-season and marketed as "new potato" often command higher prices than stored potatoes.

Processing is the largest use for potatoes in the United States, while the processing and tablestock uses account for nearly equal proportions of the crop in Canada. Fifty-four percent of the U.S. potato crop was used for processing during 1987-91, compared with 36 percent in Canada (USDA, Various-b and Agriculture Canada, annual). In Canada, however, 36 percent of the crop went for tablestock potatoes compared with only 31 percent in the United States.

Seed and livestock feed are more important uses in Canada than in the United States. Fifteen percent of Canada's potato crop went to livestock feed and cullage (including potatoes diverted under various diversion programs) during 1987-91 compared with only 8 percent in the United States.

### **Industry Organizations**

The national umbrella organizations for potato growers are the National Potato Council in the United States and the Canadian Horticultural Council in Canada. Both Councils serve as a forum for producers from all regions to discuss and act on common problems. The Councils enable potato growers to be more effective at the national level by presenting a united front on many issues affecting their industries. In addition, there are state grower organizations in the United States and provincial organizations in Canada which promote the interests of their growers.





In the United States, the National Potato Promotion Board is the national industry organization charged with management of promotion activities. Its purpose is to increase demand for potatoes and potato products through an integrated national promotion program. Canada has no comparable organization, leaving the various promotional activities to the provincial organizations.

Several industry organizations, in addition to the grower groups, exist to promote the interests of potato manufacturing and potato marketing firms. The Canadian Potato Chip/Snack Food Association promotes the interests of snack food firms in Canada. In the United States, the Frozen Potato Products Institute, the National Food Processors Association, the Snack Food Association, and the United Fresh Fruit and Vegetable Association promote the interests of firms involved in manufacturing and marketing of potatoes and potato products.

### **The Marketing Sector**

There are three principal markets for potatoes in the United States and Canada: seed, fresh tablestock, and processing. The following describes these markets.

#### **Marketing seed potatoes**

Although a larger share of the Canadian potato crop is used for seed than in the United States, the portions actually marketed as seed are nearly the same (about 6 percent during 1987-91) in both countries. A substantially larger share of Canada's potatoes are used for seed on the farm where produced than is the case in the United States.

While a small amount of seed may be produced under contract, the majority of seed potatoes in both Countries are sold on the open market. Seed normally is the highest priced end use for potatoes, but it does have additional costs associated with production. Some seed potatoes may be sold for tablestock or processing during years of low seed prices. In Canada, 80 percent of the acreage passing seed certification is located in the Atlantic Provinces. Idaho, Maine, Minnesota, North Dakota, Wisconsin, and Colorado had the largest approved seed acreages in the United States during 1991.





## **The Tablestock Market**

Most tablestock potatoes are sold on the open market in both the United States and Canada. Tablestock producers experience wide swings from one season to the next and within the same marketing year due to short-term gluts or shortages. For this reason, there has been some discussion in Canada of a National marketing plan to set production quotas for potatoes, but the idea has never been widely accepted by producers.

In both the United States and Canada, tablestock production during the 1960's was centered in the Eastern provinces and States. Although Canada's production has largely remained in the eastern provinces, much of the tablestock production in the United States has moved westward.

Improved storage helped western U.S. growers to capture a larger share of the tablestock market. At one time "new" potatoes, usually grown in the East and South, were preferred over stored potatoes during the spring and summer because of their superior quality. Improved storage allowed for marketing high-quality Russet Burbank potatoes during the spring and summer of the following year, which helped western producers to penetrate eastern markets late in the marketing season.

Effective promotion and the maintaining of high quality standards for fresh potatoes also helped western growers boost their share of the U.S. tablestock market. Federal marketing orders in Colorado, Idaho, Oregon, and Washington, requiring strict minimum size and grade requirements for potatoes marketed for fresh use, maintain uniformly high quality. The promotion of Idaho-grown Russet Burbanks as a baking potato has created the perception among many consumers of Russet Burbanks as a superior baking potato. Idaho remains the largest western shipper of fresh potatoes, and other western states such as Colorado are pursuing similar marketing strategies.



## **Marketing Processing Potatoes**

Although the processing industry in the United States is concentrated most heavily in the West, a substantial amount of potatoes are grown in the Central and Northeast regions. State utilization figures are not published for the United States, but various sources estimate that 65 to 70 percent of the Idaho crop and 85 to 90 percent of the Washington crop are processed. Most of the processing potatoes in Idaho and Washington are used for freezing, with french fries being the primary product. In Canada, the french fry industry is located mostly in Manitoba and the Atlantic Provinces.

Although some processing potatoes are sold on the open market, contracting between producers and processors accounts for the larger share of purchases. Processing prices generally average lower than prices for fresh and seed potatoes, but production costs also tend to be lower.

## **Trade Issues**

The major potato trade issues between the U.S. and Canada revolve around 1) the perceived negative effect of Canadian trade on U.S. fresh potatoes prices and 2) perceived unfair trade practices.

U.S. producers, particularly those in Maine who compete most directly with Canadian producers, contend that potatoes from Canada compete unfairly with U.S. potatoes in Eastern U.S. markets, depressing fresh potato prices. They claim that Canadian producers receive more Government assistance than U.S. producers and, therefore, have an unfair cost advantage.

Both U.S. and Canadian producers contend that they face unfair trade barriers in exporting to the other country. Canadian producers claim that U.S. marketing order regulations unfairly exclude some Canadian potatoes from the U.S. market and that arbitrariness in the administration of spot-inspections is a harassment in selling to the United States. U.S. producers, on the other hand, claim that Canada's standard container laws for both fresh and processed potatoes effectively act as a nontariff trade barrier in exporting to Canada. Both U.S. and Canadian producers claim that phytosanitary regulations have been administered arbitrarily by the others' Governments.



The U.S. and Canadian potato industries have formed the Joint U.S.-Canada Potato Council to examine mutual concerns. The Council, made up of growers from Canada and the United States, meets annually to share information on their industries and on government programs and policies and try to find areas of agreement on potato trade issues. Joint recommendations for resolution of disputes are forwarded to the two Governments for appropriate administrative action.

Through the Council, the two industries have initiated a number of actions to insure that programs and policies are clear and that they do not negatively affect trade. Both the U.S. and Canada have reviewed grade requirements and inspection procedures, for example, and have made or are considering making changes to facilitate trade between the two countries.

### **Trade Patterns**

Canada and the United States are each others largest trading partners for tablestock potatoes (table 7). The trading pattern for fresh potatoes is such that premium priced late spring and summer potatoes from the United States move into all parts of Canada. In addition a substantial amount of stored fall potatoes move from the western United States into British Columbia. Fifty percent of the potato unloads into Vancouver are potatoes from California and Washington (Agriculture Canada, annual). The Maritime Provinces, in turn, move stored potatoes into the New England States during the winter and spring. About 5 percent of total potato unloads in eastern U.S. markets during 1980-84 were from Canada (Buckley and Mai, 1986).

Over half of Canada's seed exports in 1992 went to the United States. Canada's seed exports were down in 1992, due partly to the identification of PVYn virus in some Canadian growing areas. Although a minor export item, the United States exports a few seed potatoes, mostly to Canada.

Processed products (mostly frozen french fries) represent the largest volume and highest value potato export item for both Canada and the United States. The United States is Canada's major export market for potato products. Japan is the United States biggest market.





## **Government Assistance**

The United States has no direct price and income support programs for potatoes. Nevertheless, a number of Federal activities, which facilitate the production and marketing of agricultural crops in general, apply also to potatoes (table 8). In Canada, several cooperative Federal-Provincial programs help develop international markets for Canada's potatoes and accelerate technology transfer from the research level to producers. Some programs, such as seed inspection services, which have been free to producers in the past, now have user fees attached. Programs such as crop insurance and the Net Income Stabilization Act also have producer premiums attached.

### **Value of Government Assistance**

A study conducted for the Canadian Government in 1991 estimated that Government assistance to potato producers was equivalent to 18.8 percent of total potato farm cash receipts and direct income transfers in Canada and 15.7 percent in the United States (Canadian International Trade Tribunal, 1991).<sup>3</sup> When assistance provided by import tariffs are eliminated, which will be the case by 1998 as a result of the U.S.-Canada trade agreement, estimates of Government assistance declines to 13.4 percent for Canadian producers and 7.7 percent for U.S. producers. The difference between the amount of assistance provided by the two countries following full implementation of CUSTA widens, however, from 3.1 percent of potato receipts to 5.7 percent.

### **Trade Agreements**

Trade between Canada and the United States is governed by both the General Agreement on Tariffs and Trade (GATT) and by the Canadian/United States Trade Agreement (CUSTA). The tariffs on fresh potatoes and potato chips traded between the two countries are very similar, but frozen potatoes going from Canada to the United States carry a 12 percent tariff, while U.S. frozen potatoes entering Canada carry a 7 percent tariff. CUSTA will reduce these tariffs by 10 percent a year until they reach 0 percent in 1998.

---

<sup>3</sup>The study measured "Producer Subsidy Equivalents" (PSE). PSE's measure the financial outlay for specific programs as well as the benefits of tariffs, import quotas and permits, and variable levies.



Safeguard provisions under CUSTA, intended to protect domestic producers from import surges, temporarily allow the reintroduction of the Most Favored National tariff rates of GATT if certain price and acreage criteria are met. This provision has not been used for potatoes since the agreement.

According to the CUSTA, neither country will use direct export subsidies on agricultural products being sold to one another and the two countries are to consider the export interests of the other when subsidizing potato exports to third countries. CUSTA also created technical groups to cover the harmonization of standards in the phytosanitary, packaging, labeling and health and safety regulation.

The United States, Canada, and Mexico ratified a North American Free Trade Agreement (NAFTA) in 1993 covering the terms of trade among the countries. It is expected that NAFTA would have little or no effects on trade between the United States and Canada beyond those resulting from CUSTA.



### References

Agriculture Canada. Annual. Potato Market Review. ISSN-0833-1324.

Buckley, Katharine C. and Brent Mai. 1986. "Fresh Potato Market Shares in Eastern U.S. Cities, 1960-84," in Vegetable Situation and Outlook Report. TVS-239, U.S. Dept. of Agriculture, Economic Research Service, September.

Canadian International Trade Tribunal. 1991. An Inquiry into the Competitiveness of the Canadian Fresh and Processed Fruit and Vegetable Industry. GC-90-001 Minister of Supply and Services, Canada, December.

Canada Department of Trade and Commerce, Dominion Bureau of Statistics. 1921. Sixth Census of Canada.

Statistics Canada. Quinquennial. Census of Agriculture, unpublished tabulation.

\_\_\_\_\_, 1992. Census Overview of Canadian Agriculture: 1971-1991 (Ottawa: Statistics Canada, Catalogue No. 93-348).

U.S. Dept. of Agriculture, Economic Research Service. various-a. Vegetable and Specialties Situation and Outlook Report.

\_\_\_\_\_, National Agricultural Statistics Service. Various-b. Potatoes.

U.S. Dept. of Commerce, Bureau of the Census. 1933. Fifteenth Census of the United States, Agriculture.

U.S. Dept. of Commerce, Bureau of the Census. 1943. Sixteenth Census of the United States, Agriculture.

\_\_\_\_\_. 1962. 1959 Census of Agriculture.

\_\_\_\_\_. 1989. 1987 Census of Agriculture.



Table 1--Potatoes: Number of farms reporting, acres, and production, Canada and United States, selected years

Region <sup>1</sup>	1939 US/1940 Can	1959 US/1961 Can	1978 US/1976 Can	1987 US/1986 Can
Number of farms reporting				
Canada <sup>2</sup>	na	217,137	9,134	4,885
Eastern	na	110,365	7,989	3,932
Western	na	106,772	1,145	953
United States	2,631,334	684,853	28,578	14,782
Northeast	282,022	35,553	5,016	2,914
South	1,196,921	426,754	13,335	4,711
Central	1,068,283	201,231	5,522	3,323
West	84,108	21,315	4,705	3,834
Acres reported <sup>3</sup>				
Canada <sup>2</sup>	503,875	305,692	264,313	275,589
Eastern	394,582	242,232	200,739	194,917
Western	109,293	63,460	63,574	80,672
United States	2,644,098	1,200,431	1,395,154	1,309,963
Northeast	590,974	291,945	211,142	151,951
South	572,739	148,646	120,170	111,425
Central	1,115,144	329,722	369,848	373,447
West	365,241	430,068	693,994	673,140
Production in cwt				
Canada <sup>2</sup>	40,191,933	44,108,000	51,738,000	60,876,000
Eastern	32,622,012	38,173,000	40,918,000	44,619,000
Western	7,569,921	5,935,000	10,820,000	16,257,000
United States	190,953,893	224,140,272	353,080,846	367,198,793
Northeast	55,601,444	63,421,041	47,333,398	38,115,230
South	29,982,542	18,522,340	17,840,808	19,212,273
Central	61,779,751	46,698,492	75,921,202	84,323,462
West	44,590,156	95,498,399	211,985,438	225,547,828

na = not available.

\* = less than 0.05.

<sup>1</sup>Eastern Canada = Newfoundland, Prince Edward Island, Nova Scotia, New Brunswick, Quebec, Ontario. Western Canada = Manitoba, Saskatchewan, Alberta, British Columbia. Northeast U.S. = Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Pennsylvania. South U.S. = Delaware, Maryland, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, and Texas. Central U.S. = Ohio, Indiana, Illinois, Missouri, Michigan, Wisconsin, Minnesota, Iowa, North Dakota, South Dakota, Nebraska, and Kansas. West U.S. = Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Oregon, California, Hawaii, and Alaska.

<sup>2</sup>Excludes Northwest Territories and Yukon.

<sup>3</sup>Acres planted for Canada. Acres harvested for the United States. Canadian data for 1976 and 1986 excludes potatoes produced on farms for home consumption.

Source: Canada Census of Agriculture, Historical Potato Series, Agriculture Division Statistics Canada and Bureau of the Census, 1943, 1962, 1989.





Table 2--Potatoes: Per capita utilization, United States and Canada, 1960-69 to 1990-91

United States								Canada
Total	Fresh	Processing					Total	
		Total	Freezing	Chips and shoestrings	Dehydrated	Canning		
Pounds per capita (farm-weight equivalent)								
1960-69	110.9	71.8	39.1	15.4	14.6	7.5	1.8	152.2
1970-79	120.0	52.6	67.5	36.0	16.4	12.9	2.1	157.2
1980-89	121.0	48.5	72.5	42.8	17.4	10.4	1.9	150.1
1990-91	131.4	48.8	82.6	49.9	17.6	13.2	1.9	136.9

Source: U.S. Department of Agriculture, various-a and Apparent Per Capita Food Consumption in Canada Part II - Catalogue 32-230.

Table 3-- Farms reporting potatoes: Distribution by farm type, 1987 US/ 1991 Can<sup>1</sup>

Region <sup>2</sup>	Cash grains <sup>3</sup>	Cotton and tobacco	Other field crops <sup>4</sup>	Vegetable and melons	Other crops <sup>5</sup>	Dairy	Cattle	Other livestock
Percent of farms reporting potatoes								
Canada	2.6	n.a.	53.1	12.8	3.3	5.1	6.4	16.8
Eastern	1.6	n.a.	55.2	13.4	3.7	6.1	6.2	13.9
Western	6.0	n.a.	46.5	10.9	2.1	1.9	6.8	25.7
United States	7.0	0.4	56.4	10.2	12.4	4.2	3.6	5.9
Northeast	3.1	*	48.9	15.2	12.4	3.0	6.8	10.6
South	1.3	4.1	34.8	22.0	14.8	17.3	0.0	5.6
Central	13.6	0.0	54.7	9.0	8.6	4.5	5.0	4.6
West	6.7	0.4	66.4	5.4	14.4	2.7	0.9	3.1

n.a. = not applicable.

\* = less than 0.05.

<sup>1</sup>Farms are typed according to which of their enterprises generates the majority of sales. The Canada Census of Agriculture calls it "farm type", while the U.S. Census of Agriculture refers to SIC (Standard Industrial Classification).

<sup>2</sup>Eastern Canada = Newfoundland, Prince Edward Island, Nova Scotia, New Brunswick, Quebec, Ontario. Western Canada = Manitoba, Saskatchewan, Alberta, British Columbia. Northeast U.S. = Maine, New York, and Pennsylvania. South U.S. = Florida and Texas. Central U.S. = Michigan, Wisconsin, Minnesota, and North Dakota. West U.S. = Idaho, Colorado, Washington, Oregon, and California.

<sup>3</sup>Includes wheat, small grains, and oilseeds in Canada. Includes wheat, rice, corn, barley, oats, sorghum, soybeans, dry field and seed beans and peas, cowpeas, flaxseed, lentils, milo, popcorn, rye, safflower, sunflowers, and other small gains in the United States.

<sup>4</sup>Includes field crops other than grains in Canada. Includes sugar crops, potatoes, alfalfa, other hay, peanuts, broomcorn, clover, hops, mint, sweetpotatoes, yams, grass seed, and timothy in the United States.

<sup>5</sup>Includes fruit, nursery, and greenhouse in Canada. Includes fruit, tree nuts, horticultural specialty crops, and general crop farm in the United States.

Source: Statistics Canada, 1992 and U.S. Department of Commerce, 1989.



Table 4--Average capital investment per farm and per acre, United States and Canada

Item	Canada (1991)			United States (1987)		
	All farms	All farms reporting potatoes	Potato type farms	All farms	All farms reporting potatoes	Potato type farms <sup>1</sup>
<u>US\$</u>						
Value of land and buildings:						
Average per farm	301,971	468,888	479,923	289,387	563,591	609,378
Average per acre	505	946	1,082	627	838	939
Value of machinery and equipment per farm	72,703	114,570	154,004	41,227	104,572	146,732

<sup>1</sup>Farms with more than 50 percent of sales from potatoes.

Source: Statistics Canada, 1992 and U.S. Dept. of Commerce, 1989.

Table 5--Farms reporting potatoes: Type of ownership arrangement, United States and Canada

Type ownership	Canada (1991)		United States (1987)	
	Farms with sales of \$100,000 US or more	All farms reporting potatoes	Farms with sales of \$100,000 US or more	All farms reporting potatoes
<u>Percent distribution</u>				
Individual	31	53	55	77
Partnership	26	27	21	13
Family corporation	32	15	21	8
Non-family corporation	5	2	2	1
Other types	6	3	1	1
Total	100	100	100	100

Source: Statistics Canada, 1992 and U.S. Department of Commerce, 1989.



Table 6--Potatoes: Estimated cost of production for selected areas, Canada and United States, 1989

Expense item	Tablestock potatoes		Processing potatoes	
	Alberta	North Dakota	Maine	New Brunswick
	<u>Can.\$ per acre</u>			
Land rent	68	101	132	139
Fertilizer, chemicals	146	104	340	291
Seed	97	239	194	136
Water	6	0	0	0
Trucking and custom work	0	28	7	0
Crop insurance	11	22	0	21
Fuel, repairs, and maintenance	121	57	240	181
Hired labor	126	59	275	87
Mkt. board and inspection fees	7	11	0	31
Mach. and building overhead	271	134	208	115
Other miscellaneous	84	9	339	129
Total all costs	937	764	1,735	1,130
Average yield (metric tons/acre)	10.0	7.0	14.5	10.9
Cost per metric ton	94	109	120	104

Source: Canadian International Trade Tribunal, 1991.

Table 7--Potatoes: Canada and U.S. exports, 1992

Country of Destination	Volume, fresh-weight equivalent				Value		
	Tablestock	Seed	Processed	Total	Tablestock	Seed	Processed
<u>Total</u>							
	<u>Metric tons</u>				<u>US\$1,000</u>		
U.S. exports to:							
Canada	208,554	14,443	61,204	284,201	59,520	2,957	34,794
97,271							
Japan	0.0	0.0	392,909	932,909	0	0	103,130
103,130							
Other countries	18,197	2,814	353,407	374,418	5,694	576	140,725
146,995							
Total	226,751	17,257	807,519	1,051,527	65,214	3,533	278,649
347,396							
Canada exports to:							
United States	121,374	56,665	195,047	373,086	21,076	8,762	51,875
81,713							
Japan	0	0	39,695	39,695	0	0	13,064
13,064							
Other countries	74,951	53,235	30,736	158,922	19,668	14,741	11,454
45,862							
Total	196,325	109,900	265,478	571,703	40,743	23,503	76,393
140,639							

Conversion is 1 pound for fresh and seed, 2 pounds for frozen, 3 pounds for chips, 7 pounds for dried, 1.6 pounds for canned, and 9 pounds for starch.

Source: Statistics Canada and U.S. Department of Commerce.





Table 8--Government programs pertaining to potatoes , United States and Canada

Program activity	United States	Canada
	Program/Agency name	
Marketing assistance	Foreign Market Development Program	Economic and Regional Development Program
	Market Promotion Program	Consumer Packaging and Labelling Act and Regulations
	Export Credit Guarantee (GSM-102)	Canadian Agricultural Products Act
	Intermediate Export Credit Guarantee (GSM-103)	Program for Export Market Development
	Export Enhancement Program	
	Food for Peace (P.L. 480)	
	School Lunch and other domestic feeding	
	Federal marketing orders	
	Perishable Agricultural Commodities Act	
	Commodity promotion and research	
	Federal grading and inspection	
	Federal market news and economic information	
Production assistance	Animal and Plant Health Inspection Service (APHIS)	Economic and Regional Development Agreements
	Bureau of Reclamation (water subsidy)	Crop Insurance
	Farmers Home Administration (credit assistance)	Farm Credit Corporation
	Crop insurance and disaster assistance	The Food and Drug Act
Employment laws	Migrant and Seasonal Ag. Worker Protection (labor conditions)	Workers' Compensation Act
	Occupational Safety and Health	Employer Health Tax Act
	Administration (worker safety and health)	Unemployment Insurance Act
	Fair Labor Standards Act (minimum wages, overtime pay requirements, and child labor standard)	Commonwealth Caribbean Seasonal Ag. Workers Program
	Federal Insecticide, Fungicide and Rodenticide Act (worker safety and pesticides)	Mexican Seasonal Agricultural Workers Program
	Immigration Reform and Control Act - protect jobs and wages of domestic workers	Canadian Human Rights Act
	Workers' Compensation -provide workers benefits for job related injury.	
	Equal Employment Opportunity - prohibit employment discrimination.	
Tax laws	Federal Insurance Contributions Act - old age and survivors benefits.	Canada Pension Plan Act
	Federal Unemployment Tax Act - unemployment benefits	Net Income Stabilization Act (NISA)
	Federal Income Tax code	Canadian Income Tax Act
		Investment Tax Credits

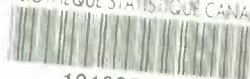


## **Potatoes: A Comparison of Canada/USA Structure**

### **ABSTRACT**

The development of the potato industries in Canada and the United States is traced from the 1930's to the present. Potato production evolved over this period, from a dominantly low productivity, farm self-sufficiency enterprise to a highly capitalized, highly productive commercial enterprise. In the United States, production became more concentrated in the West (61 percent of production in 1987, compared with 23 percent in 1939). In Canada, production remained 80 percent in the East and 20 percent in the West; but Eastern production tended to concentrate in New Brunswick and Prince Edward Island. The rise in consumption of processed potatoes and decline in fresh tablestock use greatly changed the marketing sector over this same period. Trade issues stemming from different levels of government assistance in the two countries and potential impacts of the GATT, NAFTA, and CUSTA are explored.

STATISTICS CANADA LIBRARY  
BIBLIOTHEQUE STATISTIQUE CANADA



1010277068

d. 3

Ca OOS

JA

