

A Century of Agriculture in Manitoba

A Proud Legacy



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This publication is a brief statistical description of primary agriculture in Manitoba and its impact on the province over the past century, the current situation and predictions for the near future.

Agriculture in Manitoba – Statistical Summary and Highlights:

- Manitoba has 18.8 million acres of farm land, 13.5 million acres suitable for annual crops
- About 62% of farmland was operator-owned in 2001
- There were 21,070 farms in 2001
- Average farm size was 891 acres in 2001
- Over 68,100 people lived on farms in 2001, only one Manitoban in 17
- Almost 23% of farm operators were female in 2001
- The average age of farm operators was 48.8 years in 2001
- About 46% of farm operators had paid non-farm work in 2000
- Total agricultural-related employment was almost 8% of Manitoba's employed labour force in 2005
- Canola and wheat are Manitoba's most valuable crops
- Manitoba is the largest dry bean and faba bean producer in Canada
- Manitoba is the nation's largest producer of sunflower seed
- Manitoba is the largest buckwheat producer in Canada
- Manitoba is Canada's second largest potato-producing province
- Manitoba is Canada's largest pig producer (more than 8.8 million head in 2005) and pig exporter (4.8 million head)
- The value of pig production in Manitoba was \$1 billion in 2005, about 30% of total value of agricultural production.
- Manitoba is Canada's third largest beef cattle producer
- The value of agricultural production, farm cash receipts, agri-food processing and agri-food exports are each more than \$3 billion annually
- Farm capital value in Manitoba was \$15.76 billion in 2005
- Agriculture's direct contribution to Manitoba's GDP was 3.5% in 2005, the total direct and indirect contribution was 11%

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Agriculture and Agri-Food Canada
 Bank of Canada
 Canadian Egg Marketing Agency
 Canadian Food Inspection Agency
 Canadian Turkey Marketing Agency
 Canadian Wheat Board
 Canfax
 Chicken Farmers of Canada
 Faculty of Agricultural and Food Sciences, University of Manitoba
 Manitoba Agricultural Credit Corporation
 Manitoba Agriculture, Food and Rural Initiatives
 Manitoba Bureau of Statistics
 Manitoba Egg Producers
 Manitoba Hydro
 Statistics Canada

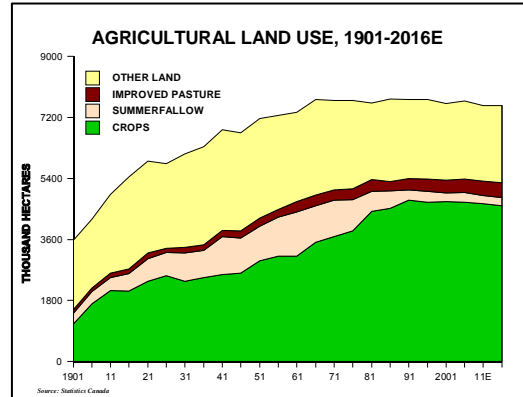
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Land Resource

Agricultural land potential and land use:

Manitoba extends 761 miles (1,225 kilometres) from the U.S. border to the Northwest Territories with a total area of 160 million acres (64.8 million hectares). The land area is 135.3 million acres (54.8 million hectares), of which 36.2 million acres (14.6 million hectares) or 26.6% have some agricultural potential. Over 23.6 million acres (9.6 million hectares) of this area are non-organic soils and 13.5 million acres (5.5 million hectares) are suitable for sustained annual production of cultivated crops.



Past: Early settlement of the province encouraged the development of lands with agricultural potential. The first agricultural development, Lord Selkirk's Red River Settlement from 1832 - 1852, was discontinued by the Hudson's Bay Co. (HBC) following numerous financial losses. However, an HBC reassessment of their holdings in 1857 concluded that most of the area draining into the Assiniboine and Red Rivers possessed excellent agricultural potential. The river lot farming system was popular during the early years. The Dominion Lands Policy of 1870 offered settlers the title to 160 acres (65 hectares) for \$10 if they cleared and cultivated the land.

The first wheat exported via an all-Canadian route was a 1,000 bushel (27 tonne) shipment in 1884. The transcontinental railway was completed in 1885. The first Dominion Experimental Farm site in western Canada was located at Brandon in 1886. In 1896, the railways and HBC were encouraged to sell their holdings of 30 million acres in Western Canada to facilitate settlement. From 1896 onwards, the North Atlantic Trading Company was paid \$5 for every man, woman and child who reached Canadian shores from continental Europe. The federal government's plan in 1896 was to settle the prairies with practical farmers from northern Europe and the United States. The Crow's Nest Pass Agreement (1897) between the Canadian Pacific Railway and the Canadian government reduced, in perpetuity, eastbound rates (about 15%) on grain and flour and westbound rates on specified "settlers' effects" in exchange for a cash subsidy of \$3.3 million to the CPR and title to pass into B.C. The rate drop coincided with the beginning of the influx of immigrants and was a key component of economic strategy at the time.

By 1901, over 25 million acres (10 million hectares) of Manitoba had been surveyed for land titles and 8.8 million acres (3.6 million hectares) were deeded to Manitoba farmers, less than half of the land base of 20 million acres (8 million hectares) deemed suitable for agriculture. The ease with which prairie grasslands could be converted to grow grain and the ability to market and export all surplus wheat led to the rapid transition from subsistence to commercial farming. Land farmed increased to 14.6 million acres (5.9 million hectares) in 1921.

Present: According to Statistics Canada, land use for agriculture in 2001 (both improved and unimproved land) totalled over 18.8 million acres (7.6 million hectares) or close to 50 percent of total lands with agricultural potential. About 0.5 million acres (0.2 million hectares) of organic soils are currently under cultivation.

Future: The opportunity to expand the agricultural land resource base exists, especially greater use of organic soils. However, development costs for new lands would be substantial. About 2.0 million acres (0.8 million hectares) of organic soils could be used for crop production. It is more likely that agricultural land use will decline over time as more land is purchased for conservation, recreational and urban uses.

Highlight of the Century: The introduction of the Crow's Nest Pass Agreement in 1897 and its removal in the mid 1990s affected the use of farm land and the types of agricultural commodities produced in Manitoba throughout the twentieth century.

Farm numbers and farm size:

Past: The earliest statistics from Statistics Canada for agriculture in Manitoba show that the number of farms in the province increased rapidly from 9,077 farms with an average size of 263 acres in 1881 to 32,252 farms with an average area of 274 acres in 1901. An influx of immigrants contributed to rising farm numbers, which peaked at 58,024 in 1941. The trend towards farm consolidation that began during WWII continued over the next sixty years with numbers falling to 21,071 farms averaging 905 acres in 2001, the most recent Census of Agriculture results available.

During the early 1920's, farm numbers stabilized as farmers entered the industry to replace those who had left.

The existing farms in Manitoba had added close to a million acres to their operations, of which half was cleared. Over 3 million tonnes of grain were harvested for the first time in 1922. Despite the significant decline in commodity prices as well as drought, farm entrants exceeded those exiting the industry during the 1930s. This was due to minimal employment and business opportunities in other sectors during the depression-affected economy. Almost 390,000 people lived in rural areas in 1946, which was the last year the number of people living in rural Manitoba would exceed the residents of cities.

Present: In 2001, there were 21,071 farms in Manitoba, a decrease of 13.6% from 1996. The decline in farm numbers from 1996 to 2001 was the largest ever over a five-year period, while 1991 to 1996 saw the smallest decrease in 45 years. The average size of Manitoba farms rose from 784 acres in 1996 to 891 acres five years later.

In 2001, smaller farms, or those with annual sales under \$50,000, comprised 46% of all farms.

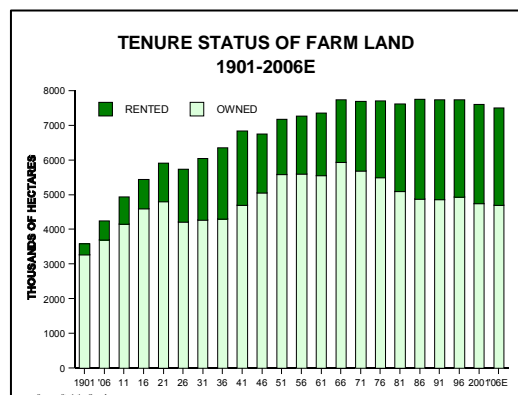
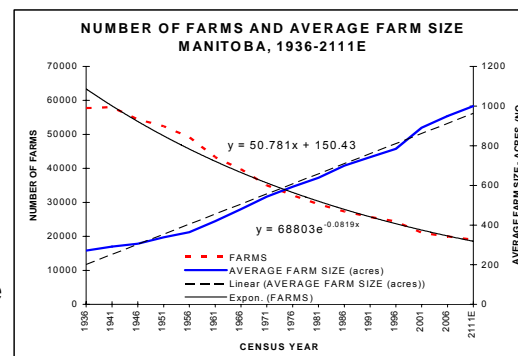
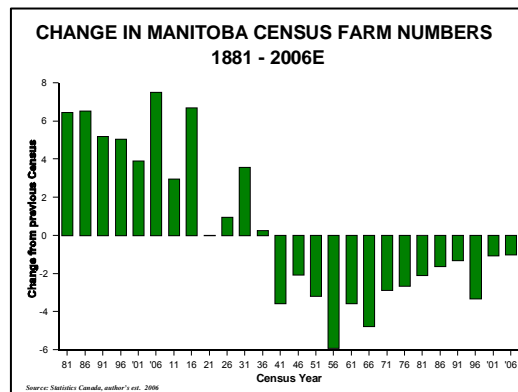
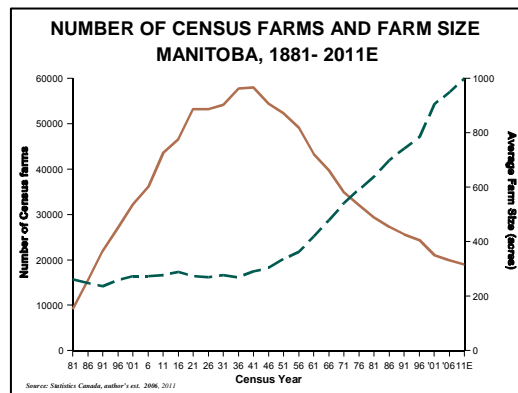
Future: It is likely that the number of farms will continue to decline to below 19,000 by 2011, while the average farm size rises to almost 1,000 acres.

Highlight of the Century: An influx of immigrants to Manitoba contributed to an increasing number of farms, which peaked at 58,024 in 1941. The trend towards farm consolidation that began during WWII continued over the next sixty years with numbers falling to 21,071 farms, averaging 905 acres, in 2001.

Land Tenure:

Past: Early in the twentieth century, most farm land in the province was owned by the farm operator. According to Statistics Canada, in 1901, 8,074,000 acres (91%) were owned, while 769,000 acres were rented. By 1921, total land farmed and the area owned had increased, but the percentage owned had fallen to 81%. During the depression, bank foreclosures and economic hardship caused the percentage of land owned to decline further to below 70% in 1936. After WWII, improved farm prosperity led to more land being owned in the 1950s and 1960s. By 1966, 77% of farm land was owned. Rising interest rates in the 1970s and 1980s made it more feasible to rent rather than own land.

Present: By 2001, 62 % of farmland was operator-owned, while 38% was rented.



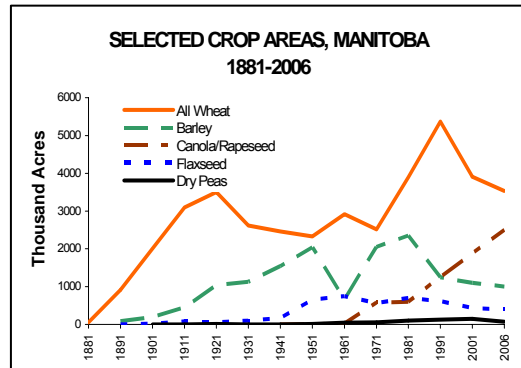
Future: Despite current low interest rates, the trend to renting, rather than owning is expected to continue until the economics of crop production improve sufficiently.

Highlight of the Century: Farmers owned more of their land in 1966 (77%) than they have since then.

Crop area, production and value:

Southern Manitoba has the climate and soil to grow a wide range of crops, but grains such as wheat and barley have dominated since farming began. In more recent years, the area planted to canola has increased significantly.

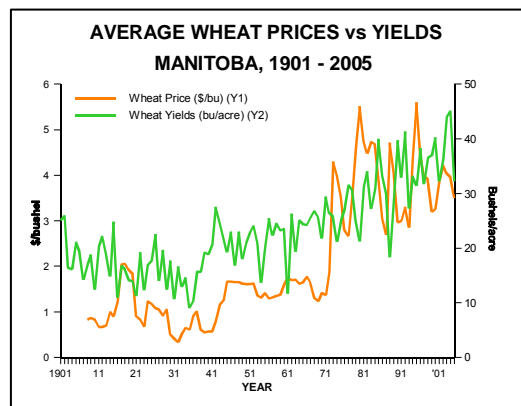
Past: There was significant growth in crop production in the twentieth century, not only due to expanded crop area, but also due to improved, but fluctuating, yields. Statistics Canada data show that areas planted to wheat, oats and barley in 1883 were 215,000 acres, 87,000 acres and 60,000 acres respectively. Flaxseed, rye, dry peas and potatoes were the only other crops recorded in the province at the start of the twentieth century. Rapeseed was introduced as an alternative crop for Manitoba farmers during World War II, but only increased in significance in the late 1960s-early 1970s when canola was developed to produce oil more palatable for human consumption.



Flaxseed was a viable alternative to grains following World War II, but other oilseed crops, such as sunflowers and soybeans, have gained prominence since the early 1970s. Sunflowers were initially grown in Manitoba as a silage crop around 1920, but that was discontinued until the 1940s, when an oil crushing plant was built at Altona. Manitoba is not only an important source of grains and oilseeds, but is also a major producer of pulses, specialty crops and potatoes in Canada. Dry peas were grown as far back as 1907. Buckwheat was first reported in 1925. Sugar beets were planted in 1940 and the area varied from 20,000 to 31,000 acres from 1950 until 1996 when the last crop was seeded. Although the area seeded to dry beans was small until the 1980s, the area increased significantly from the mid 1990s. Potatoes were originally grown on almost all farms for home use. However, the construction of five processing plants following WWII to 2003 led to more potatoes grown for processing until Manitoba became the second largest potato producer in Canada in the 1990s.

Yields:

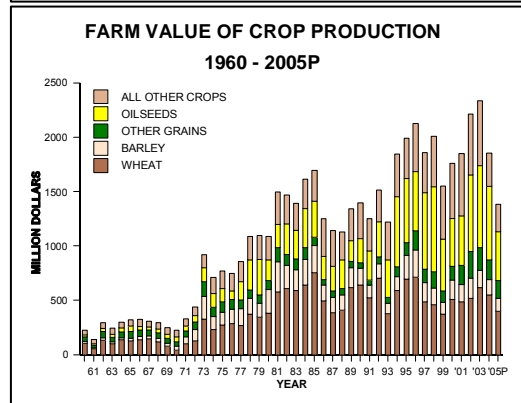
Although producing crops in a cool, predominately arid, region such as Manitoba results in fluctuations in crop yields, an upward trend can be seen since the 1940s. At the beginning of the 1960s an expected crop yield was 0.4 tonnes per cultivated acre. By the 2000s, the annual harvest of cereal grains, oilseeds and pulse crops was likely to yield 0.85 tonnes per acre, a doubling of crop yields within 40 years. Higher crop yields have to some extent offset lower prices.



Present: The traditional grain crops of wheat and barley occupied 36% of the more than 11 million acres of harvested crop area in the province in 2004 and a similar percentage of the weather-reduced 10 million acres in 2005.

Wheat:

The area seeded to wheat in Manitoba peaked at 5.46 million acres in 1990, of which 5.45 million acres were harvested. Production also peaked that year at 216.2 million bushels. The total value of the crop was highest in 1985 at \$757.8 million. In 2004, an area of 3.16 million acres was harvested from 3.28 million acres seeded. A



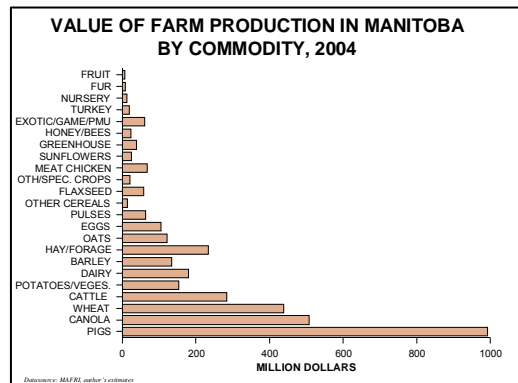
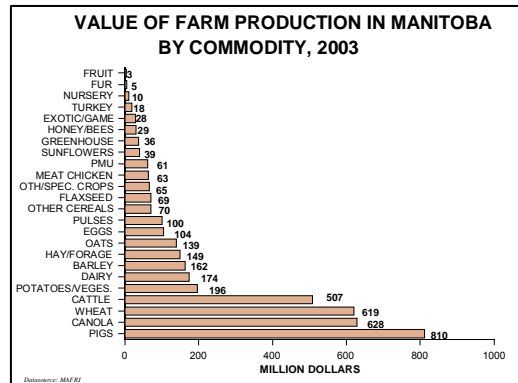
record average yield of 45.1 bushels per acre resulted in wheat production of 142.5 million bushels in 2004. Poor weather caused the harvested area to decline to 2.8 million acres in 2005 producing 89.7 million bushels. The area seeded to wheat increased back to over 3.5 million acres in 2006. Normally, Manitoba produces about 12-16% of the Canadian wheat crop annually.

Barley:

The area seeded to barley in Manitoba was largest in 1981 at 2.4 million acres, when the crop's value peaked at \$277.3 million. Barley production reached a record level of 116 million bushels in 1985 as the average yield was the third highest on record at 62.7 bushels per acre. In 2004, an area of 0.93 million acres was harvested from 1.07 million acres seeded. The record average yield of 67.9 bushels per acre in 2004 resulted in barley production of 62.8 million bushels. Excessive moisture in 2005 reduced the harvested area to 0.7 million acres, which produced only 31.3 million bushels of barley. The seeded area in 2006 was back to 1 million acres. Normally, Manitoba produces 9-12% of the Canadian barley crop.

Oats:

The area of oats seeded and harvested was greatest in 1921 at 2.2 million acres when oats were used mainly for animal feed. As the agricultural industry began to rely more on machinery and less on horses, the area of oats declined. From a low of only 0.27 million acres harvested in 1991, the growing popularity of oats for human consumption and pet food led to an increase in oat area seeded to 1.15 million acres by 2002. The value of the crop peaked at \$180.4 million that year. An area of 0.68 million acres was harvested from 0.85 million acres seeded in 2004. The record average yield of 86.2 bushels per acre in 2004 resulted in oat production of 58.6 million bushels. The adverse weather in 2005 meant 0.57 million harvested acres produced a crop of only 28.6 million bushels. The 2006 area seeded to oats rose to 1 million acres. Manitoba produces about 20-30% of the Canadian oat crop.



Rye and mixed grains:

Manitoba farmers also grow other grains, such as rye and mixed grains. These two crops were grown on 70,000 and 20,000 acres respectively in 2004, but only on 55,000 and 10,000 acres in 2005 due to excess moisture. The seeded areas rose to 80,000 and 25,000 acres in 2006

Grain corn:

Very little corn for grain was grown prior to 1978 as most corn was produced for silage and fodder. In 1981, a record 225,000 acres were harvested, producing 17 million bushels of corn. The value of the corn crop peaked in 2002 at \$52.7 million. Although 170,000 acres of corn were planted in Manitoba in 2004, only 10,000 acres were harvested for grain due to the cool, wet weather. The planted area rose from 140,000 acres in 2005 to 150,000 acres in 2006. Over 8.3 million bushels of corn were harvested in 2005.

Canola:

The area seeded to canola rose from fewer than 30,000 acres in 1961 to 0.58 million acres ten years later. The canola area seeded was largest in 2004 at 2.84 million acres, but the harvested area peaked at 2.73 million acres in 1998. The record canola crop of 78.4 million bushels in 2004 resulted in a crop value of \$507 million, which although well below the 1997 record of \$631 million, made canola once again Manitoba's most valuable crop, followed by wheat. Canola was also the most valuable crop in the province from 1997 to 1999 and in 2002 and 2003. Manitoba produces about 20-25% of Canada's canola crop. Poor weather reduced the seeded and harvested areas to 2.50 and 2.16 million acres with a crop of 55.6 million bushels in 2005. The seeded area remained at 2.50 million acres in 2006.

Flaxseed:

Manitoba is one of three provinces producing flaxseed. The seeded area peaked at 1.35 million acres in 1965, but has fluctuated significantly over the past forty years. The largest average yield on record of 25

bushels per acre occurred in 1996. In 1983, Manitoba was the largest flaxseed-producing province in Canada with 64% of the crop. Flaxseed production peaked at 22 million bushels in 1985, well above the 2004 level of 5.2 million bushels or 25% of Canadian flaxseed production. The 2005 crop was 5.8 million bushels from 0.33 million harvested acres. The seeded area rose to about 0.4 million acres in 2006.

Soybeans:

Seeded/harvested soybean areas rose slowly from fewer than 1,000 acres in 1996 to 50,000 acres in 2001, but soared to 220,000 acres by 2003. Adverse weather meant that only about half of the 210,000 acres planted to soybeans in 2004 were harvested with production falling to 1.65 million bushels, down from 5.5 million bushels in 2003. In 2003, Manitoba produced 7% of the Canadian soybean crop. Only 110,000 acres were seeded to soybeans in 2005, producing a crop of 2.3 million bushels. However, a record 365,000 acres were seeded in 2006.

Sunflowers:

The largest producer of the three Prairie Provinces, Manitoba's sunflower area peaked at 380,000 acres in 1979, producing a record 460 million bushels. Since then, problems due to weather, disease and insects reduced the area of sunflowers harvested down to 57,000 acres in 1986 and to 63,000 acres in 1996. The value of the crop was a record \$65.3 million in 2002. In 2004, about 170,000 acres were seeded and 110,000 acres were harvested to produce only 97,000 bushels of sunflower seed, only 21% of the record 1979 crop. Sunflower production rose to 171,000 bushels from 200,000 planted and 160,000 harvested acres in 2005. The seeded area declined to 175,000 acres in 2006. From 2000 to 2005, Manitoba, the "*Sunflower Capital of Canada*", produced 81-89% of the national sunflower crop.

Specialty crops:

One of the two major ***buckwheat***-producing provinces since 1925, Manitoba supplied 58% of the Canadian crop in 2002 and 55% in 2003. Only 70,000 bushels, less than one-third of normal, were produced from the 10,000 acres harvested in 2004 due to adverse growing and harvesting conditions. However, production from the same harvested area tripled to 210,000 bushels in 2005. The seeded area in 2006 doubled to 20,000 acres.

Canary seed: Canary seed production was first recorded in 1963 with the seeded area increasing rapidly in the late 1970s. Although fluctuating significantly from year to year, the seeded area peaked at 70,000 acres in 2002. Production was record-high at 70 million pounds in 2003 when 14.5% of the national canary seed crop was produced in Manitoba. Only 25,000 acres were harvested in 2004, producing 25.1 million pounds of canary seed, while in 2005, 20,000 acres produced only 17.5 million pounds of seed. Only 10,000 acres were planted in 2006.

Mustard seed plantings totalled 8,000 acres in 2004. Depending on the season, about 1-6% of Canada's mustard seed comes from Manitoba. Very little mustard was planted in 2005.

Pulses:

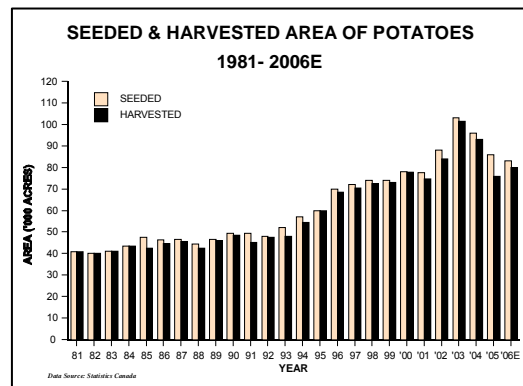
Dry beans: For some years the nation's largest producer of dry beans, Manitoba's production was record high at 0.51 million pounds in 2002 valued at \$128.1 million and 57% of Canada's crop. Production from 200,000 seeded and 110,000 harvested acres in 2004 was a weather-reduced 85,000 pounds, only 18% of national production. The crop improved to 130,000 pounds from 215,000 planted and 160,000 harvested acres in 2005, but, with favourable weather, production of beans could be even higher in 2006 despite a 35,000 acre decline in seeded area.

Dry peas: Small areas of dry peas were grown mainly for pig feed in the 1880s and early 1900s. After that, the area seeded to dry peas varied from none just before and during WWI to 260,000 acres in 1998, when a record crop of 8.3 million bushels was produced. The value of the crop peaked in 2002 at \$35.7 million. In 2004, seeded and harvested areas of 150,000 and 145,000 acres produced a crop of 5.9 million bushels. Manitoba farmers produced over 70% of Canada's pea crop in 1981, but the share dropped over time to 5% in 2004 and only 2% in 2005 due to adverse weather. Only 75,000 acres were seeded in 2006, down from 120,000 acres in 2005.

The plantings of ***fababeans and lentils*** were 10,000 and 7,000 acres in 2004 with even smaller areas in 2005. In past years, 75-100% of Canada's fababean crop came from Manitoba, while less than 1% of the national lentil crop was grown in the province.

Potatoes and other vegetables:

Manitoba's potato and other vegetable areas expanded in recent years. The province is the second-largest potato producer in Canada after P.E.I. The harvested area of potatoes and other vegetables peaked in 2003 at 101,500 acres and about 4,700 acres respectively. Production of potatoes was record-high in 2003 at 25 million cwt. with a value of \$163 million. However, the reduced North American demand for french fries and other potato products led to a smaller area of potatoes for processing in 2004, 2005 and again in 2006, when only 82,000 acres were planted. Excess moisture meant only 76,000 acres of potatoes were harvested in 2005. Cash receipts from potato sales fell to \$154 million in 2005 from \$156 million the previous year. Other vegetables, **fruit, mushrooms, sod, flowers and nursery products** were valued at about \$72.3 million in 2005, an increase of 5.7% from \$68.4 million in 2004.



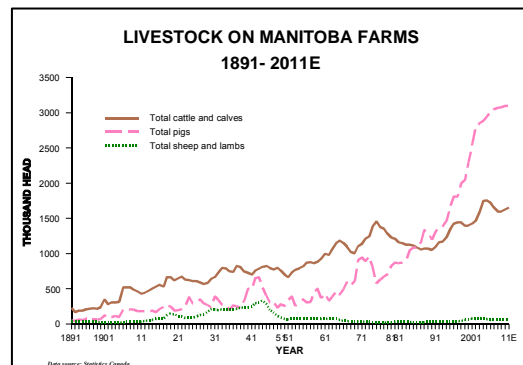
Future: The mix of crops and area seeded each year usually depends on anticipated market prices relative to production costs. The area seeded to wheat in Manitoba in the next ten years could range from 3.2-3.8 million acres, unless new high-yielding feed varieties are licensed, while the barley area could remain at about 1.0-1.1 million acres. Plantings of flaxseed could increase to the 0.5 million acre level by 2011, but the area seeded to canola is unlikely to exceed 3 million acres due to agronomic concerns. The area seeded to specialty crops also depends on weather and disease prospects.

Highlights of the Century: The development in the 1920s and introduction in the mid 1930s of rust-resistant wheat varieties and, later, of other disease-resistant crops as well as the development of canola in the mid 1960s allowed Manitoba farmers to chose crops best suited to their operation. The area seeded to wheat peaked at 5.46 million acres in 1990, producing a record 216.2 million bushels, while the area sown to canola was largest in 2004 at 2.84 million acres, producing 78.4 million bushels.

Livestock

The Manitoba livestock industry contributed \$1.77 billion or 58% of total farm cash receipts from the marketplace in 2005, up from 48% in 2004. Prices for Manitoba's cattle, pigs and sheep depend on prices in the United States and, to a lesser extent, in Alberta and Ontario as well as on the Canada-U.S. exchange rate. Thus, local prices tend to vary, depending on the supply and demand for red meats mainly in the major markets of the U.S., Ontario and Quebec. The price and income instability makes management decisions a challenge for many livestock producers.

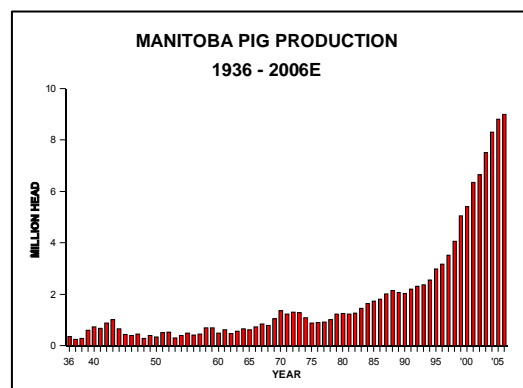
In 2005, the province had 10.3% of total cattle and calves in Canada, 12.5% of the beef cows, 3.8% of the dairy cows, over 6% of the sheep and lambs and about 10% of the horses. Manitoba produces more than 29% of Canadian pigs, about 4% of the broiler chickens, 7% of the turkeys and 15% of Canada's chicken egg production. As less than four percent of Canada's population lives in Manitoba, the province is a surplus supplier of livestock products.



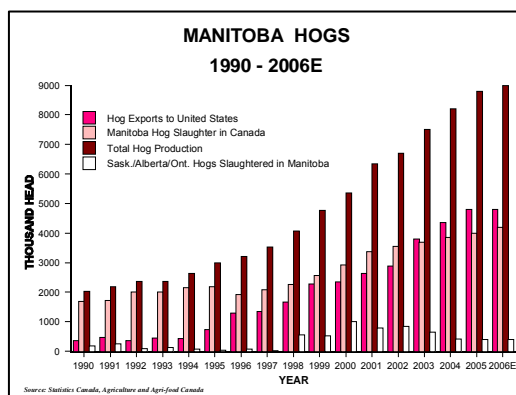
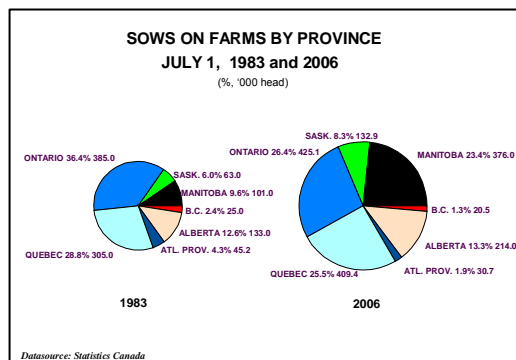
Pigs:

The swine industry is by far the largest source of farm cash receipts (almost \$1 billion in 2005) of any agricultural commodity sold in the province.

Past: Manitoba farmers had 17,000 pigs on farms in 1881, but increased their inventories to between 200,000 and 400,000 pigs in the 1920s and 1930s. The need for more pork and beef during World War II led pork production in the province to triple between 1938 and 1943, when the pig inventory rose to 668,000 head. After the war, the number of pigs declined to the pre-war level and did not surpass the



war time inventory until 1970. As one of Canada's most cost-effective areas for pig production, the swine industry in Manitoba grew significantly in the 1990s. Annual production more than quadrupled from 2.03 million pigs in 1990 to over 8.8 million pigs in 2005. Recent industry growth initially began in the 1970s after Manitoba lost its cattle feeding and slaughter industry to Alberta. The province needed to expand its hog industry to utilize feed grains produced as well as to provide new jobs in pig production, pork processing and other value-added activities, such as construction and transportation. Part of the latest pig industry expansion can also be attributed to both the anticipation of and the elimination of the Crow's Nest Pass grain transportation subsidy in 1995 and depressed grain prices since 1985. About half the industry expansion which has taken place since the mid 1990s was in response to an open market and new slaughter facilities in the province and half to increased demand for feeder pigs and weanlings in the U.S. Corn Belt. Improving pig-production efficiency in Manitoba as well as an expanding market for weanling pigs in the U.S. virtually eliminated the four-year production cycle in Manitoba. Historically, the cycle was due to farmers expanding pig inventories when prices rose only to contract production when hog prices fell.

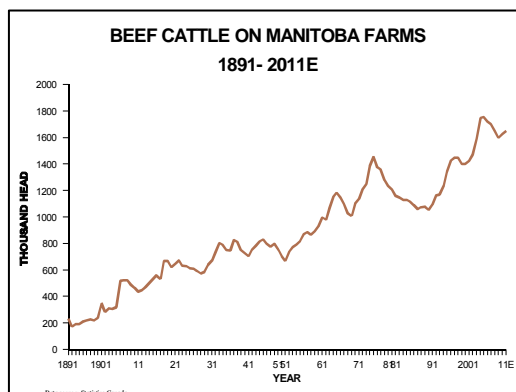


Present: Manitoba is the largest pig-producing and pig-exporting province with 29% of national pig production. The number of pigs on Manitoba farms in mid 2005 had grown to 2.94 million head including 366,600 sows, from which over 8.8 million pigs were produced during the year. There was an increase in pig feeding facilities in the province in 2005. By July 1, 2006, the herd had risen to a record 3.02 million head with 376,000 sows. Despite higher energy costs and the increased cost of exporting pigs, producer profits improved in 2004 due to higher prices, but tightened in 2005 due to lower average prices and rising energy costs offsetting lower feed costs.

Future: Capacity at the Brandon hog slaughter plant may double as planned from one to two shifts sometime in the next few years. Olywest plans to build a new plant in Winnipeg by 2008. The plant will have the capacity to kill 2.25 million hogs annually and will employ 1,100 people. This could result in even more weanling pigs being finished and slaughtered in the province. Pork exports are expected to continue their upward trend. The U.S. demand for Manitoba weanling pigs is unlikely to fall in the next five years as U.S. hog slaughter rises in response to increasing world demand for pork. It remains to be seen whether Manitoba pig production exceeds 10 million head by 2011.

Cattle:

Past: Beef cattle have always been an important farm commodity in Manitoba. Early cattle were dual purpose for meat and milk. By the 1950s, the breeds of cattle being produced were for beef only, early maturing, stocky and fat. This changed in the late 1960s and 1970s in response to consumer demand for less fat in beef, when larger exotic-cross cattle were developed to provide leaner meat and a higher dressing percentage. Cattle production in North America tends to conform to 10-14 year cycles. At the peak of the cycle in the 1940s, there were 0.83 million cattle and calves on Manitoba farms in 1945, while the peaks in 1965 and 1975 were 1.184 million and 1.458 million head respectively. It took until 2002 for the 1975 level to be overtaken.



The total number of cattle slaughtered in Manitoba packing plants peaked at 581,000 head in 1976. However, the closing of five major cattle slaughter facilities since 1979 reduced local slaughter capacity to 15,950 head in 2001. Sales of cattle and calves to the United States and Alberta have risen over time.

Present: Manitoba has the land base to support cow-calf production. Fewer than one-quarter of the calves produced in the province were fed to slaughter-weight in 2005, the remainder being sold as calves, stockers or heavy feeders. The Manitoba beef cow herd, the third largest in Canada, was 574,000 head in mid 2002, but increased to 679,000 head in mid 2005 because of the American border closure to Canadian cattle in May 2003 due to BSE in a Canadian cow. Manitoba's reliance on the U.S. market for almost all of its slaughter cattle sales made it difficult for producers to find alternative markets in Canada, particularly for cull cows and bulls, during the border closure. The annual value of cattle production fell from over \$0.5 billion in 2002 to \$0.28 billion in 2004. When the U.S. border re-opened to cattle under 30 months in mid July 2005, Manitoba cattle prices rose significantly. Sales of calves in the fall increased more than usual as producers sold animals to improve cash flow.

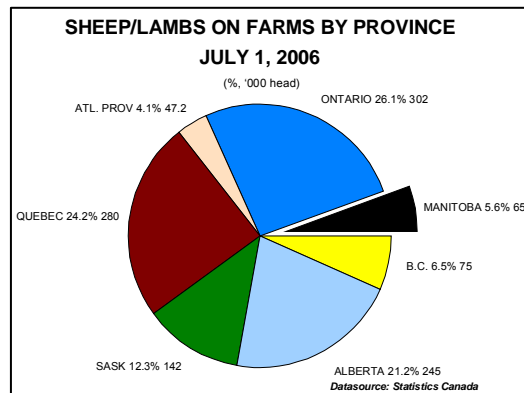
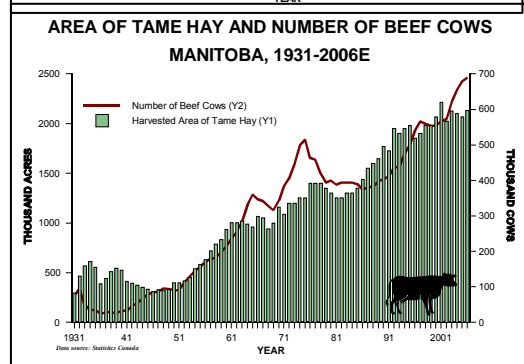
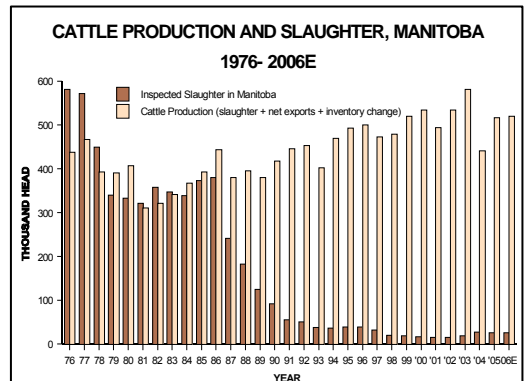
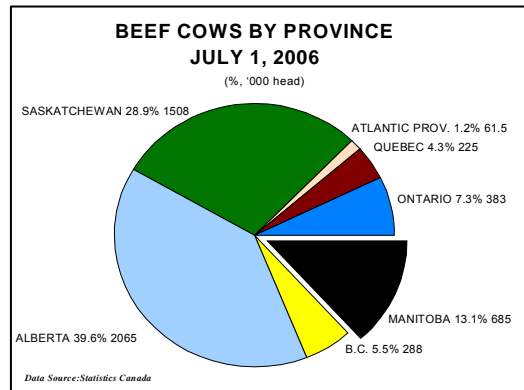
Future: Over the years, the size of Manitoba's cattle herd has been influenced by factors such as North American beef supply and demand and the variable profitability from cattle production and this is not expected to change despite increasing slaughter capacity in the province since 2003. The cow herd may be close to its potential with the existing land base of pasture and forage. However, the potential does not take into account raising the carrying capacity of this land or seeding some poorer grain land to forage. It is likely that once the backlog of cull cows and bulls, resulting from the border closure, is reduced, the cow herd could stabilize at about 600,000 head. There is also the potential to increase the number of calves finished to slaughter weight.

Sheep:

Past: Sheep production was popular in the two decades preceding World War II, when the inventory reached a high of 340,000 head in 1944, but declined rapidly after the war to 74,000 head in 1950. The industry reached a low of 20,000 head in 1976. Higher prices in the 1990s increased interest in lamb production and feeding, raising the number of sheep to 84,000 head in 2001.

Present: The sheep industry in Manitoba is much smaller than that of cattle and hogs, declining in 2006 to the sixth largest in Canada with only 5.6% of the national flock. The sheep and lamb inventory was 65,000 head on July 1, 2006, down by 17% from the previous year. Only about 5% of the lambs produced in Manitoba are processed in local provincially-inspected plants. A number of producers sell their sheep or lambs privately to the consumer or through brokers mainly to Ontario and, prior to May 2003, to the United States. No sheep or lambs were shipped to the U.S. in 2004 and 2005 or for the first half of 2006. Wool sales provide a small income for some producers.

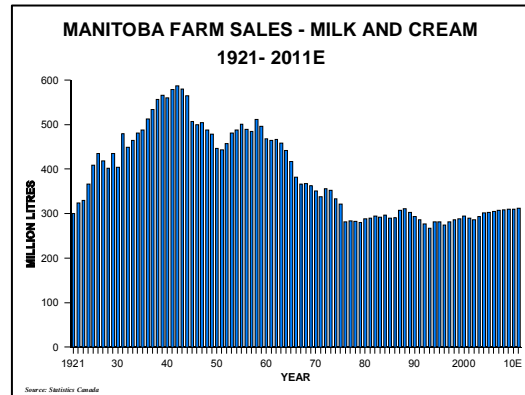
Future: There are opportunities to significantly expand the Manitoba sheep industry as local lamb consumption is mainly of product imported from outside the province. There is also the potential for meat sales to other provinces. However, a viable federally-inspected slaughter plant is needed in Manitoba so that meat can be sold through major chain stores in Manitoba or to other provinces.



Dairy:

Past: Since farming began in Manitoba, cows have been milked for human consumption. The number of dairy cows peaked in 1937 at 405,800 head, but as dairy cow productivity improved and per capita milk consumption fell, the cow herd declined to below 200,000 head in 1960, 82,000 head by 1980 and 41,000 head in 2000. In 1937, dairy cows produced an average of 1.3 kilolitres of milk and cream for sale per cow, whereas in 1977 and 2002, the average was 3.1kl/cow and 6.9 kl/cow respectively. At first, cheese production was only cheddar, but later developed into the production of a wide variety of specialty cheeses. Almost 40% of milk sold is for fluid use and 60% for industrial uses, such as cheese, butter, ice-cream and yogurt.

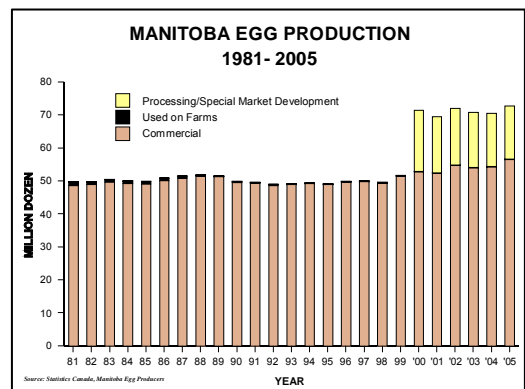
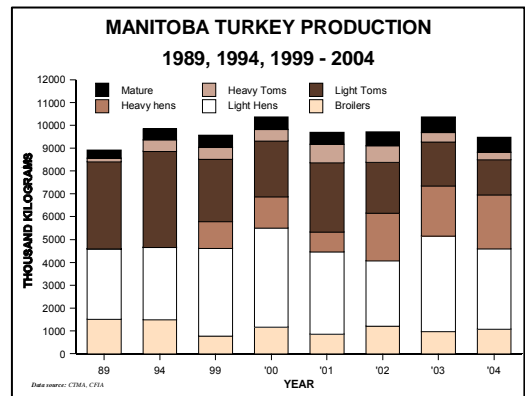
Present: Manitoba has Canada's fifth largest dairy cow herd with almost four percent of the nation's dairy cows in 2005. Most dairy herds are located east and south of Winnipeg. About 95% of all dairy cows in Manitoba are Holsteins. The remainder includes breeds such as Jersey, Brown Swiss, Guernsey and Ayrshire. About 34,000 Manitoba dairy cows within the supply management (quota) system produced 302.6 million litres of milk/cream valued at \$184 million in 2005, up from 300.9 million litres valued at \$178.8 million in 2004. Milk and cream sales were 4.9% of total farm cash receipts for the province.



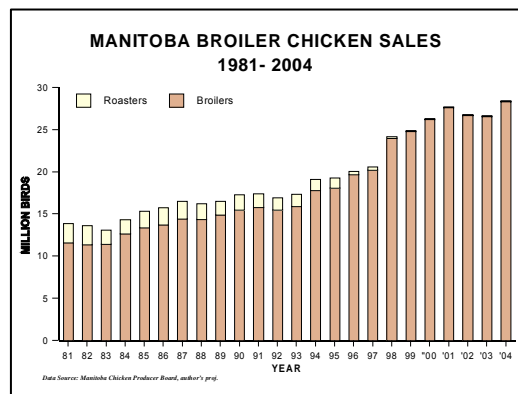
Future: Under the supply management system, the production of milk for domestic use and traditional export markets is controlled by quota allocations so unless the demand for milk products surges, there is little room to increase milk production significantly for domestic use. However, in 1995, a system was introduced (Special Classes) whereby processors, who want to access export markets for various types of cheese and other dairy products, are able to purchase milk at lower prices to enable them to compete on world markets.

Poultry:

Past: Since farming began in Manitoba, the province's poultry industry changed progressively from flocks kept on farms mainly for home consumption to highly-specialized, efficient, commercial enterprises. The earliest year statistics of Manitoba poultry and egg production were published was 1941, when 21.9 million dozen eggs were valued at \$5.2 million, 18.3 million lb of chicken were valued at \$2.3 million and 6.6 million lb of turkey were valued at \$1.1 million. Canada's supply management systems were introduced in the 1960s and 1970s to balance production and domestic demand, enabling producers to receive a fair price for their products without having to rely on subsidies. Major fluctuations in farm, processing and retail prices are eliminated and an efficient and secure supply of poultry and egg products is ensured. Production of eggs in Manitoba rose until 1970 and remained relatively stable under the supply management system until 2000, when the Eggs for Processing and Special Market Development program allowed local egg producers to expand their flocks to provide eggs under contract to processors to supply the growing market for processed products. Although Manitoba's goose industry declined from about 150,000 birds on farms in 1969 to about 60,000 birds in 2001, it was still one of the largest in Canada. Annual production of geese and ducks is valued at less than \$1 million.



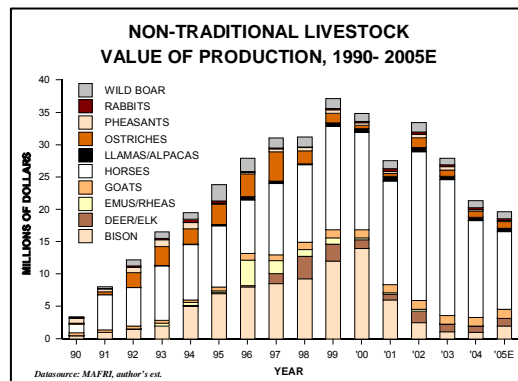
Present: Each poultry sector includes hatcheries, chicks/pullet/poult producers, feed production and processors. There is a high degree of organization, co-operation and co-ordination from hatchery through to processing. The quantity and farm value of Manitoba poultry products sold in 2005 were over 10 million kilograms (eviscerated) of turkey worth \$18 million, 40.4 million kilograms (eviscerated) of broiler chicken worth \$67 million and about 72 million dozen eggs valued at \$71 million. Manitoba has over 4% of total Canadian chicken production, about 7% of turkey production and 15% of egg production nationally.



Future: Most expansion in the poultry sector is expected to occur to supply new markets for processed products.

Other Livestock and Products:

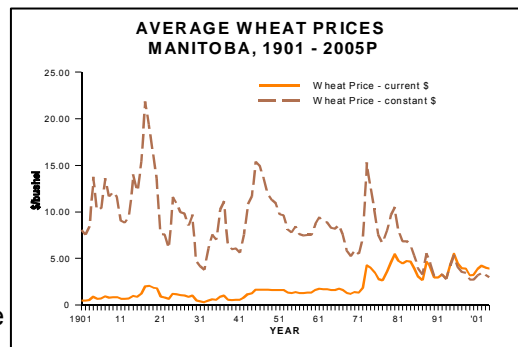
Manitoba farmers also produce such diverse commodities as honey and beeswax (\$17 million in 2004), alfalfa leafcutting bees (about \$4 million), fox and mink (\$3 million) as well as pregnant mare's urine and horse sales (\$53 million). Other livestock produced in Manitoba include bison, elk and deer, goats for milk and meat, llamas and alpacas, ratites (ostriches, emus and rheas), pheasants, rabbits and wild boars (total value of about \$6 million in 2004).



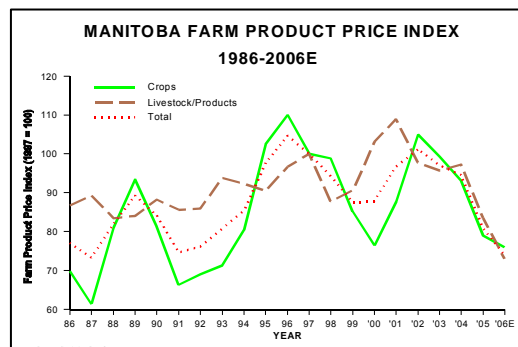
Highlights of the Century: The development of leaner, more efficient pigs and beef cattle led to the significant expansion of the beef cow-calf industry from the mid 1980s, and the pig industry mainly in the 1990s and 2000s. Manitoba's cattle slaughter industry suffered a loss of 97% of capacity from 1979 to 2000. The introduction of marketing boards led to stability and profitability in the dairy and poultry industries.

Commodity Prices

Past: Crop prices have always fluctuated, depending on the weather and export markets. However, there were periods when crop prices were depressed for prolonged periods, forcing farmers to seek changes. Prices in the 1920s were lower than during the preceding 20 years. To try to increase their share of the revenues from grain sales, farmers organized the first major grain co-operative in Manitoba in 1924, the Manitoba Pool Elevators. While the economic conditions of the 1920s were hard, they preceded greater problems in later years. From the end of the 1920s during the Depression, drought affected crop yields and commodity prices fell to the lowest recorded levels at the time. The trend in wheat prices is representative of most Manitoba grain prices. For more than 100 years the price of wheat adjusted for inflation has trended down. Three factors interrupted this trend downward, World War I, World War II and the excessive importation of wheat by the Soviet Union in 1972 and 1973.



Present: Wheat prices in the 1920s and 1930s were relatively low compared to the early 1900s, but the price drop was not as great as that experienced in the early and late 1990s.



Highlight of the Century: Marketing boards and producer associations, beginning with the formation of Manitoba Grain Growers' Association in 1903, Manitoba Pool Elevators in 1924, the Canadian Wheat

Board in 1935 and the vegetable, poultry, egg, dairy and hog marketing boards in the 1960s and 1970s, helped stabilize and/or increase the prices farmers received for their products.

Farm Product Price Index (FPPI):

The FPPI, produced by Statistics Canada since 1986, compares, in percentage terms, prices producers received for agricultural commodities sold off the farm in any given time period to prices in the official base year, which is 1997=100.

Present: The FPPI shows that prices Manitoba producers received for all commodities in 2005 were 19.4% below those received in 1997 and 14.5% lower than a year earlier as overall prices for both crops and livestock declined. Continuing a downward trend since the high point in 2002, the crop price index in 2005 was 21.1% below the level in 1997, 24.9% below 2002 and 15.3% below 2004. Farmers received lower average prices for all crops in 2005, except potatoes and vegetables.

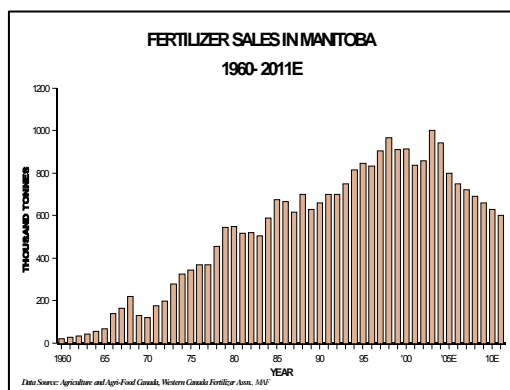
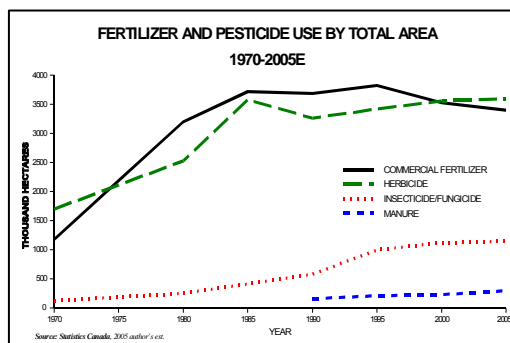
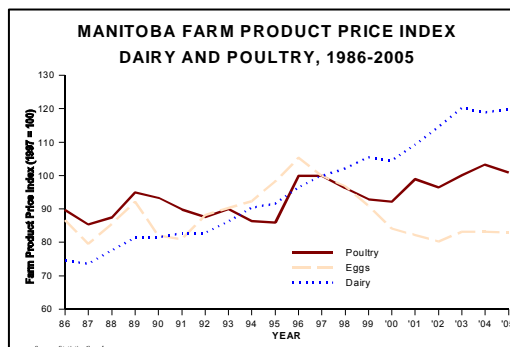
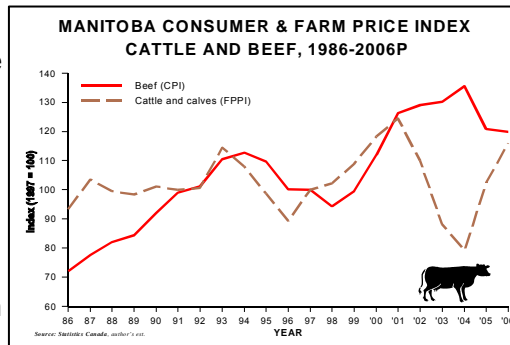
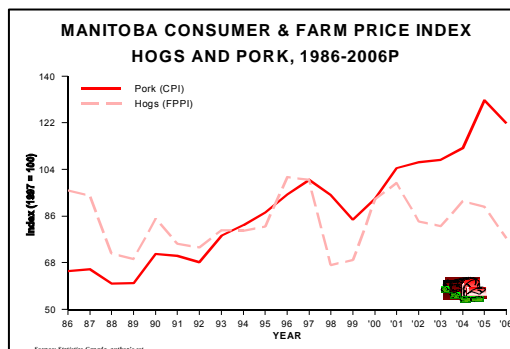
The price index for Manitoba livestock and animal products in 2005 fell by 14.2% from a year earlier, 16.5% from the 1997 level and 23.4% from the peak in 2001. Pig and poultry prices declined in 2005 to more than offset higher cattle and dairy prices.

Comparing the Manitoba Consumer Price Index (CPI) for meat to the FPPI for livestock, it can be seen that meat prices trended up over the 1986-2004 period, while livestock prices had an almost horizontal trend line. For example, the CPI for pork showed a steep upward trend and did not fluctuate to the same extent as the FPPI for pigs. While consumers paid 73% more for pork in 2004 than in 1986, pig producers received slightly less for their animals. Similarly, consumers paid 88% more for beef over the 18-year period while beef cattle producers got less for their cattle.

Highlights of the Century: The crop price index peaked in 1996, while the livestock price index was highest in 2001.

Fertilizer, pesticides, etc.

Past: During the first half of the twentieth century, farmers relied upon animal manure and household waste to fertilize their fields. There wasn't much they could do to eliminate pests. Scientific discoveries, such as obtaining nitrogen fertilizer from the atmosphere, or finding mineral deposits of potassium and phosphate, presented farmers with a low cost source of plant nutrients after WWII. In the twentieth century, commercial fertilizer use steadily increased from the 1950s to reach 966,400 tonnes in 1998, but pesticide use continued to rise into the twenty-first century. Since the beginning of the twentieth century, plant breeding in Canada has developed disease and pest resistant crop varieties. However, the amount spent on pesticides has increased over time. Chemicals developed to improve crop production over the years have increased yields, but have also increased farmers' costs.



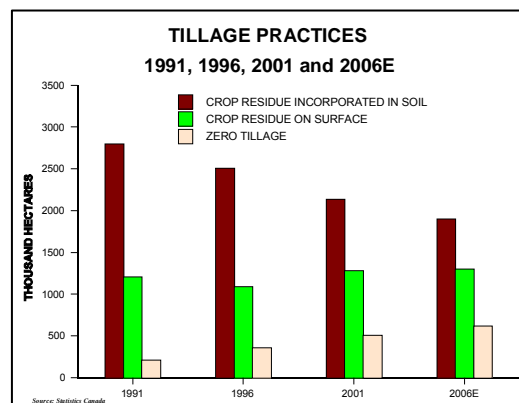
Present: The amount of fertilizer sold in Manitoba rose to a record 1.0 million tonnes in 2003, but declined to 943,200 tonnes in 2004 valued at \$382.3 million. Fertilizer costs fell to \$366.6 million in 2005. Total farm purchases of pesticides in 2005 were estimated at \$238.3 million, down from \$247.5 million in 2004, but up from \$201.4 million in 2002.

Future: The expanding pig population in the province in the past twenty years has led to an increased use of manure instead of commercial fertilizer and this trend is expected to continue for at least the next five years.

Highlights of the Century: The introduction of chemical fertilizers in trials in 1928 and widespread adoption after WWII as well as the introduction of pesticides in 1929 improved crop yields and enhanced farm incomes. Fertilizer sales may have peaked in 2003 as farmers try to reduce costs by using alternatives.

Tillage and Soil Conservation Practices

Past: When homesteading began in the nineteenth century, land broken from prairie sod had high organic content and was highly fertile, so as much of the newly broken area as possible was used for crops without concern about soil conservation. Later, the practice of using summer fallow for moisture conservation and weed control was developed and continued as the dominant method of conservation until later in the twentieth century. Summer fallow as a percentage of annual cropped land ranged from 8.4% in 1884 to peak at 29.6% in 1961. Summer fallow use led to wind and water erosion of soils, so various methods were used to educate farmers about soil conservation, such as the “Save the Soil Campaigns” of the 1950s. Planting trees and bushes as field shelter belts controlled wind erosion and trapped snow. Soil erosion was reduced and soil fertility improved by growing legumes, grasses and grass-legume mixtures. These crops increased from 1% of crop area in the 1880s to about 20% in the early 2000s. To continue the “care and conservation” of Manitoba soils, farmers reduced the use of summer fallow from 1961 to 1991. Summer fallow went from 10% of annual cropped land in 1986 to 4% in 2004.



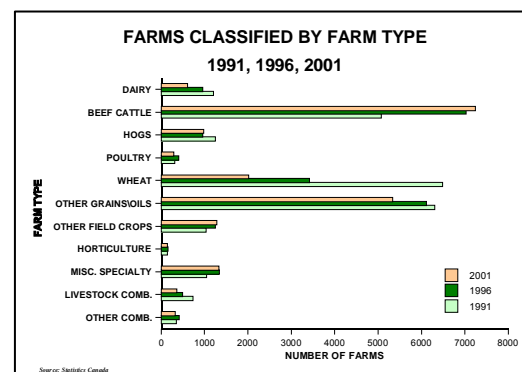
Present: In the 1990s and early 2000s, an increasing number of farmers changed from using conventional tillage, when crop residue was incorporated in the soil, to greater use of conservation tillage, when crop residue was left on fields, or not tilling at all, zero tillage. Although the summer fallow area rose to 1.6 million acres in 2005, due to weather-induced idling of more crop land, the area dropped to an historically-low 320,000 acres in 2006, less than 3% of all cropped land.

Future: The soil is the backbone of Manitoba agriculture and most farmers realize that they are the stewards of the land and will continue their efforts to enhance soil fertility and conserve top soil. The trend to greater use of organic fertilizers, such as manure and crop residue will continue.

Highlights of the Century: The soil survey, begun in 1927, the Prairie Farm Rehabilitation Act (PFRA) in 1935 and other soil conservation and drainage initiatives after WWII all served to conserve Manitoba soils and improve farm land use. The percentage of crop area sown to legumes and grasses, which would improve the soil, went from 1% in late 1880s to about 20% in the early 2000s.

Farm Type

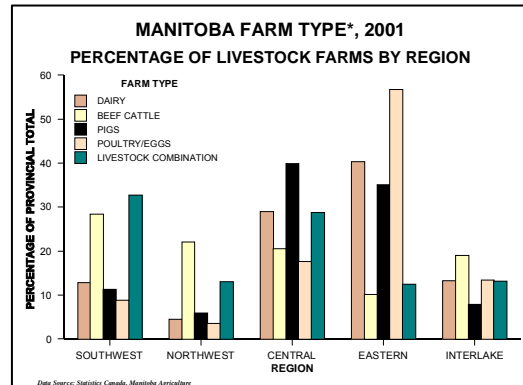
Past: In the early twentieth century, most farms were diversified with a mixture of wheat, oats, barley, potatoes, draft horses, cattle, pigs and poultry. Farm size increased and farms became more specialized after WWII. The development of improved varieties of specialty crops and canola and rising prices for good land for annual crops led to crops-only farms, while cheaper, poorer land was used for forages for cattle and



sheep operations. In the 1980s and 1990s, to take advantage of the benefits of producing pigs for processing or export, many new large pig production units were built, sometimes with cattle and forage systems nearby to utilize pig manure.

Present: According to the Census of Agriculture, almost three-quarters of Manitoba farms were classified as predominantly wheat, other grains and oilseeds or cattle farms in 1996 and 2001 and the share is expected to be similar in 2006. Wheat farms made up only 10% of all farms with gross sales over \$2,500 in 2001, other grain and oilseed farms comprised 27%, whereas cattle farms were 36% of the total.

Most of the large commercial poultry farms can be found south-east of Winnipeg. Dairy farms are close to the major urban areas, Winnipeg and Brandon. Pig farms are concentrated in the eastern and central regions, while beef cattle operations are located in all agricultural regions of the province.



Highlight of the Century: Almost three-quarters of Manitoba farms are classified as predominantly wheat, other grains and oilseeds or cattle farms.

Human Resource

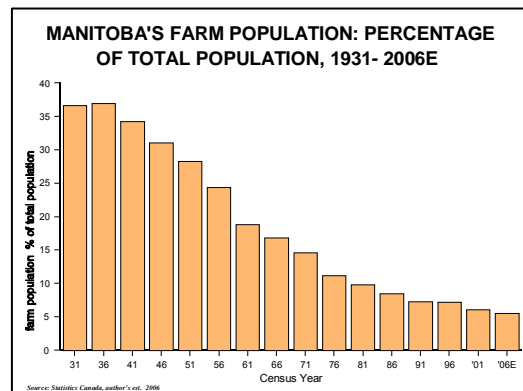
Farm operation

Statistics Canada data show that family-operated farms accounted for 98% of farms in 1996 and 2001, while non-family corporations represented 1.7% and other types, 0.3%. In 2001, proportionately more farm families had partnerships or other operating arrangements than in previous years, with almost 40% of farms being part of a partnership or family corporation.

Farm population

The total Manitoba farm population was 79,840 in 1996, a rise of 0.7% from the 1991 level. This was the first time in sixty years that the farm population increased. About one Manitoban in 15 lived on a farm in 1996. By 2001, the farm population had declined to 68,135, a decrease of 14.7% from five years earlier. Only one Manitoban in 17 lived on a farm in 2001.

Before 1931, the average farm family was a household of five. Between 1931 and 1971 the size of the family dropped to an average of four people. By 1976, the average farm family consisted of three people and remained there for the next twenty-five years. The decreasing size of the farm family is mainly due to lower birth rates.



Farm operators

The 2001 Census of Agriculture reported 28,800 farm operators in Manitoba, 13.5% fewer than the 33,300 reported in 1996 and down from 34,780 in 1991.

Prior to 1991, personal information for only one farm operator per farm was included on the Census of Agriculture questionnaire. From 1991 on, all farm operators were included, so the socio-economic information for farm operators can not be compared to prior years.

Sex:

In 2001, 6,500 or 22.8% of Manitoba farm operators were female, compared to 7,855 or 22.6% in 1991 and 7,155 or 21.5% in 1996.

Farm type:

In 2001, 37.7% of farm operators were primarily cattle ranchers or dairy producers, 34.4% had grain and oilseed farms, 1.8% had vegetable and fruit farms, 9.1% grew other crops, 4.8% had pig operations, 1.6% had poultry and egg operations, 1.1% produced mainly sheep and goats, while 7.7% kept other livestock. About 1.7% of operators had greenhouse and nursery operations.

Farm and non-farm work:

In 2000, 54% of Manitoba farm operators worked on the farm operation for more than 40 hours per week and did no off farm work. Proportionately, more operators worked off the farm in 2000 than in 1995. Almost 13,170 or 45.7% of operators had paid non-farm work that year compared to 10,680 or 32.1% of the total farm operators in 1995. About 11% of all operators worked for less than 20 hours per week in paid non-farm employment in 2000, 19% for 20 to 40 hours per week, while 16% worked over 40 hours per week off-farm. The average age of farm operators who worked off the farm was 45 years, lower than the age of those who did not work off the farm, which was 52 years. About 51% of female farm operators worked at non-farm jobs in 2000 compared to 44% of the male operators.

Age:

Almost 13.8% of farm operators were less than 35 years old in 2001, down from 17.8% in 1996 and 20.4% in 1991. Over 53.7% were aged 35 to 54 in 2001 and 32.5% were 55 years and over. In 1996, 31.0% of farm operators were over 55 years, while in 1991 the percentage was 32.3%. The average age of Manitoba farmers declined from 48.4 years in 1971 to 46.3 years in 1981, but increased to 48.8 years in 2001.

Education:

More than 34% of Manitoba farmer operators in 2001 had a University degree or other post-secondary education compared to 30% ten years earlier. Over half the farmers, or 52.4%, had achieved grade 9 to 13 education and 13.5% had less than a grade 9 in 2001 compared to 47.2% and 22.8% in 1991.

Marital Status:

Over 83.4% of Manitoba farm operators were married in 2001, 10.9% were never married, 1.1% were separated, almost 2.5% were divorced and 2.1% were widowed. In 1996, the percentages were similar with 83.1% married, 11.7% never married, 1.2% separated, 1.8% divorced and 2.2% widowed.

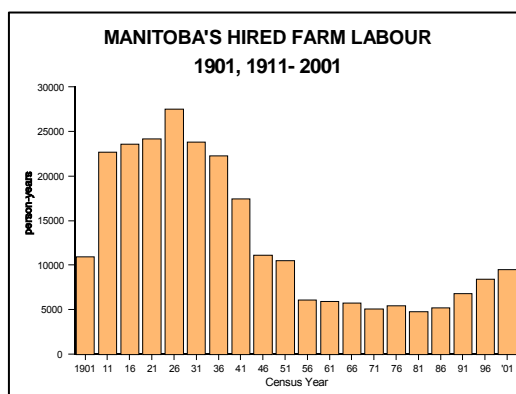
Ethnicity:

In 1996, more than 70% of Manitoba's farmers were English-speaking, 14% spoke German, while almost 6% spoke Ukrainian and close to 6% spoke French. By 2001, over 72.5% of Manitoba's farmers spoke English, 13% were German-speaking, more than 5.2% spoke Ukrainian and 5% spoke French.

Highlight of the Century: Although fewer in number, on average, Manitoba farm operators are more highly educated, older and more likely to be female today than fifteen years earlier. However, more farm operators need paid non-farm work to supplement their farm incomes.

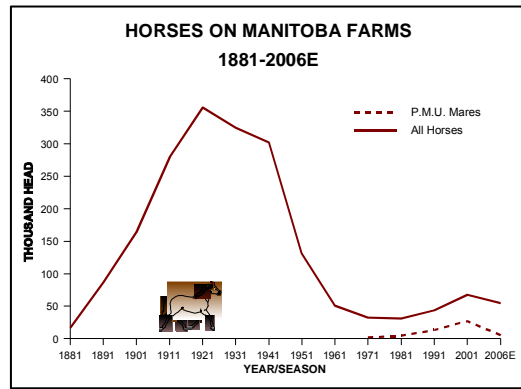
Hired labour

Past: In the early days of farming in Manitoba, farmers relied upon family labour and animal power to operate their farms. As farm size increased, hired labour became an important component of agriculture in the province from the early 1900s until the start of WWII, when farm employment dropped significantly. Many farms needed employees on a year-round basis, about one quarter of which were domestic workers. During harvest, each farm depended on roving teams of labourers, many of whom came from eastern Canada or Winnipeg to join harvesting and threshing crews. The dependence on hired labour began to decline when tractors started to replace draft horses in the 1920's and combines eventually replaced threshing machines and crews. Farm employment fell from 27,532 hired workers in 1926 to 6,089 workers in 1956, forcing in excess of 21,000 people to find employment off the farm. The increased use of farm machinery



also reduced the need for draft and other horses and during the same thirty-year period, the number of farm horses declined by more than 80%. Between 1956 and 1986, the hired farm labour force remained at around 5,000 person-years.

Present: Farm consolidation has meant that many farm families and family corporations have again become dependent on hired labour, but most of the jobs now require well-trained, skilled employees. This trend is expected to continue due in part to the expansion of the pig industry. According to the 2001 Census of Agriculture, 8,669 Manitoba farms hired a total of 493,462 weeks of full-time and part-time labour. This represents a 13.0% increase in the number of weeks of hired labour since 1996, but a 15.4% decrease in the number of farms reporting hired labour. Almost 45% of those hiring help did so on a full-time basis.



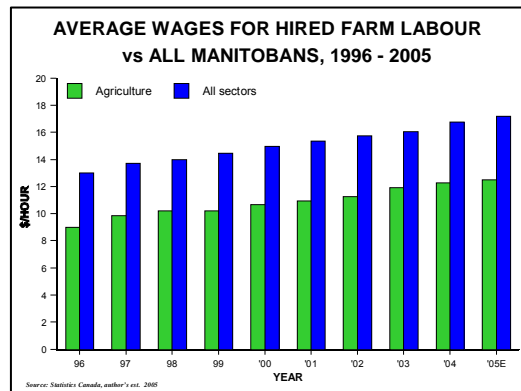
Future: The shortage of workers for the higher-wage oil and construction industries in Western Canada is expected to draw labour from agriculture in Manitoba in the near future making it more difficult for agricultural industries, which rely on hired workers, to find the number of workers they need.

Highlight of the Century: Tractors and other machinery, which started to replace labour and draft horses in 1920s, led to farm consolidation and farm depopulation after WWII.

Wages

Past: In 1943, farm workers earned \$50-75 per month in summer and \$35-40 in winter. The daily wage for stooking was \$3.50-4.00 in 1943, compared to \$1 per day during the Depression in the 1930s.

Present: By the end of the twentieth century, general farm workers earned about \$9 per hour or \$1,400 per month. Although below average wages of all Manitobans, average farm wages have outpaced inflation. Managers of large pig operations can earn over \$70,000 per year. Wages, room and board paid to farm and family workers amounted to \$295.5 million in 2005, \$286.9 million in 2004, \$275.8 million in 2003, \$257.8 million in 2002 and \$243.2 million in 2001.

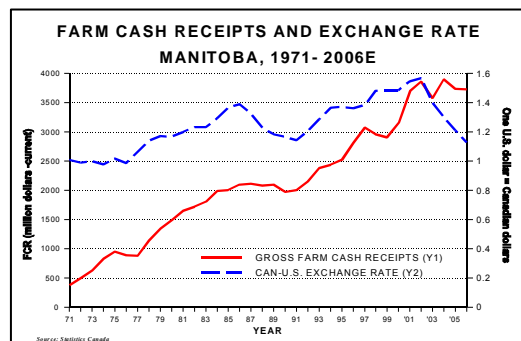


Future: As farm work becomes increasingly specialized and more training is required and if labour shortages increase, farm wages and benefits are expected to rise accordingly.

Farm Economy

Farm income

Farmers have very little control over the prices they receive for most of the commodities they produce. Changing production costs, dependence on the weather and variable commodity prices make farming a risky business. Besides risks due to weather, farm income has also been affected by government policy in Canada, the United States and other countries. As Manitoba farmers rely on export markets for most of the commodities they produce, the relative value of the Canadian and U.S. dollars affects crop and livestock prices and farm cash receipts as well as the price of



imported farm inputs. In years when the Canadian dollar value was weak, farm prices benefited, but input costs rose. In years when the dollar was strong, prices declined, but costs for inputs also fell.

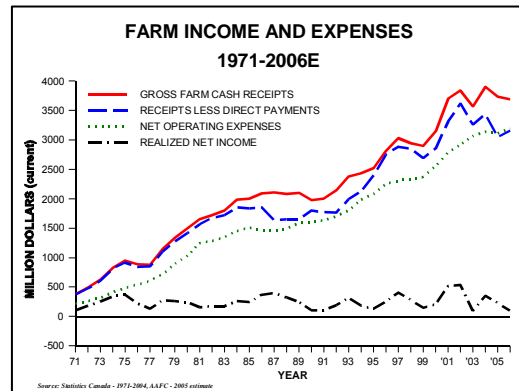
Farm cash receipts:

Statistics Canada's total farm cash receipts are made up of three components, receipts from crop sales, receipts from livestock sales and direct program payments. Farm cash receipts and income data are basically estimates, which are revised periodically when new information is received.

Past: Total farm cash receipts in the province have trended upwards over the years, more than keeping up with inflation. However, in order to keep individual farm cash receipts high enough to try to ensure realized farm income remained at least steady over time, farms have had to increase in size.

Present: Manitoba's farm cash receipts were \$3.74 billion in 2005, down from a record high at \$3.90 billion in 2004 and \$3.85 billion in 2002, but up from \$3.57 billion in 2003. About 45.7% of 2004 receipts were derived from crop production, while 42.5% came from livestock production, including the production of honey, fur and P.M.U. The remaining 11.8% came from direct payments to producers, including those from Crop Insurance, Net Income Stabilization Account (NISA), Canadian Agricultural Income Stabilization Program (CAIS), BSE-related programs, etc. The significant reduction in crop receipts in 2005 meant only 34.3% of total receipts that year came from crop production, while the re-opening of the U.S. border to younger cattle and other ruminants helped raise livestock receipts to 47.1% of the total. Direct payments made up the remaining 18.6%, the largest contribution to total farm cash receipts since the 1980s.

Wheat and barley contributed about 40% of total farm cash receipts in the early 1980s. However, low grain prices and increasing returns from livestock production caused this contribution to be lower in the 1990s and early 2000s, resulting in shares of between 13% and 19%. Reduced plantings and poor yields further reduced the percentage to 11% in 2005.

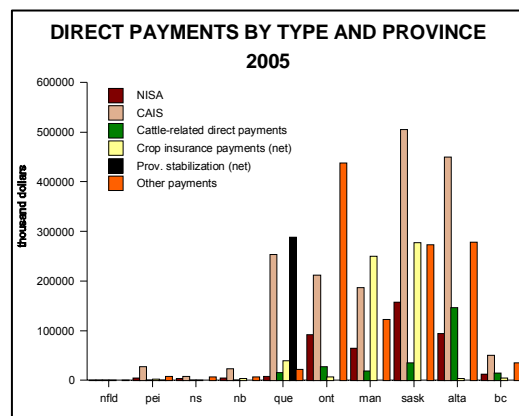
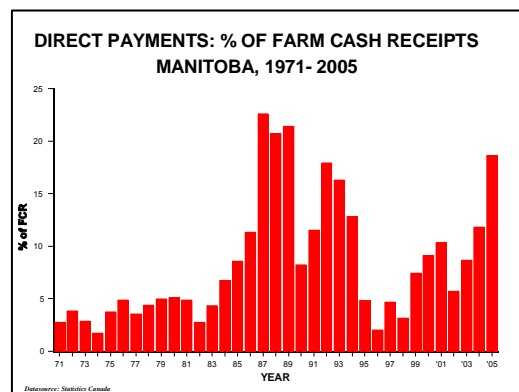


Direct payments:

Government-assisted stabilization and insurance programs have helped moderate fluctuations in farm incomes over the years. Other assistance has been provided by governments on an ad-hoc basis to help farmers cover significant loss in income due to factors out of farmers' control, such as subsidized grain exports from the United States and European Union and closure of the American border to Canadian cattle between 2003 and 2005.

Past: The percentage of farm cash receipts received as direct payments remained at or below 5% until the mid-1980s. The Western Grain Stabilization Program and other stabilization and insurance programs raised direct payments' share of total cash receipts to a record 23% in 1987. Commodity prices and farm incomes improved in the mid-1990s to the point that direct payments fell to less than 2% of farm cash receipts in 1996.

Present: Direct payments to farmers in 2005 totalled \$694.5 million, a rise of \$236 million from 2004 and up by \$386 million from 2003 as the result of greatly increased Crop Insurance payments and higher income stabilization program payments, such as the Canadian Agricultural Income Stabilization Program (CAIS). There were reduced withdrawals by producers from the Net Income Stabilization Account (NISA) in 2005.



Future: The attempt to manage the risk to farm incomes with government-assisted programs will probably continue. Until the World Trade Organization can eliminate all unfair (mostly subsidized) competition in export markets, some Manitoba commodities could still be affected.

Expenses:

Manitoba farmers have substantial operating expenditure requirements for such items as feed, pesticides, fertilizer, wages, interest, machinery repairs and fuel.

Present: In 1994, total net farm expenses (which included net operating expenses and depreciation) were \$2.28 billion. Ten years later, the 2004 total net farm expense was up 55% to \$3.54 billion. Total net farm operating and depreciation expenses decreased slightly to \$3.53 billion in 2005, but they are expected to rise in 2006.

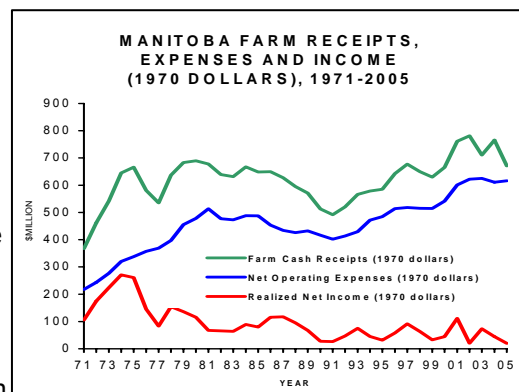
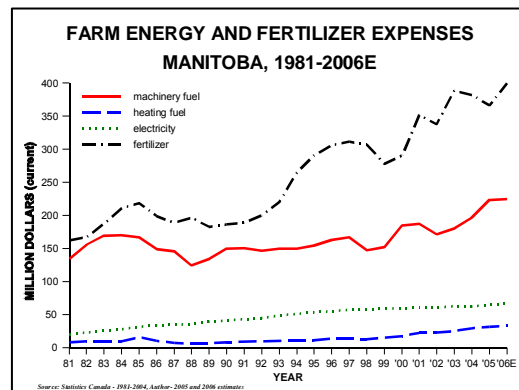
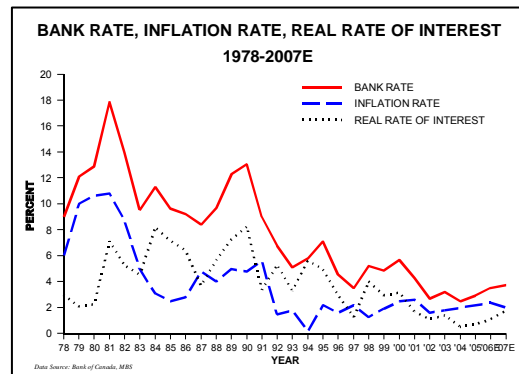
The interest paid on farm debt in 2005 was estimated at \$238.5 million, up by 6.9% from 2004. Interest on debt as a percentage of farm operating expenditure fell from 16.8% in 1981 to 6.7% in 1997, but rose to 8.3% in 2001. The percentage fell to 7.5%, 7.3% and 7.1% in 2002, 2003 and 2004, but was up again to 7.7% in 2005. After remaining relatively low from 2002 to early 2005, Bank of Canada interest rates rose by a percentage point during fall 2005. Oil prices rose by a third in 2005 and natural gas prices more than doubled, significantly increasing the cost of operating a farm.

Future: Average annual costs for fuel oil, electricity and natural gas are expected to continue their upward trend in 2006. Manitoba farmers may try to offset high fuel costs by using less or substituting cheaper alternatives. Interest rates will also be higher in 2006 than in 2005. Increased demand for chemical fertilizer by China is expected to keep fertilizer prices up in 2006 and 2007. It is likely that Manitoba farmers will reduce the use of chemical fertilizers and utilize more manure. Farm expenditures on livestock and feed are expected to be down in 2006.

Realized net farm income:

Realized net farm income is derived from farm cash receipts plus income-in-kind less operating expenses and depreciation charges. Realized net income has not kept up with inflation. In constant 1970 dollars, farm realized net income peaked in 1974 and has remained within a narrow band from 1981 to 2005.

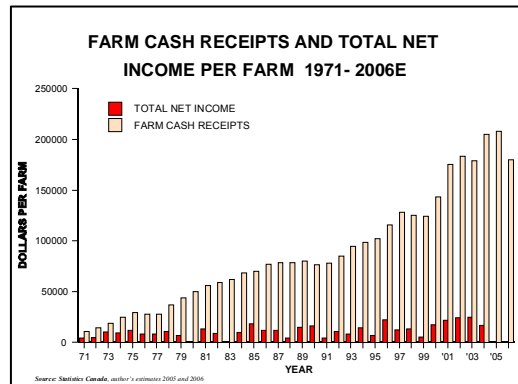
Present: In the 1990s, Manitoba realized net income varied from \$106 million in 1990 and 1991 to \$316 million in 1993 due to increased government assistance. As returns from the market place improved and assistance to farmers declined, higher farm cash receipts offset rising expenses. As a result, realized net income rose from \$134 million in 1995 to \$432 million in 1997. Declining crop cash receipts contributed to the drop in income to \$263 million in 1999. Realized net farm income increased in 2002 to a new record level of \$541 million, mainly due to higher crop receipts, but dropped to \$101 million in 2003 due to reduced livestock receipts. Improved crop and livestock receipts and increased program payments raised realized net income to \$368 million in 2004. Poor crop production and declining crop prices were partly offset by higher crop insurance and other direct payments and lower expenses in 2005 to produce realized net income of \$227 million.



Total farm net income:

Total farm net income is realized net income adjusted for the value of inventory change over the year. As farm inventories at the end of each year can vary significantly, total net income can change dramatically from year to year.

Past: In the last four decades of the twentieth century, total net income per farm ranged from a low of \$500 in 1980 to a high of \$22,100 in 1996. In the 1990s, the variation in factors such as cash receipts, farm expenses, on-farm inventories and depreciation resulted in total net income decreasing to \$4,100 per farm in 1991, but rising to \$14,400 per farm in 1994. In 1995, rising expenses and lower crop inventory contributed to a significant drop in total net income per farm to \$7,000. This was followed by \$22,100 in 1996. Excess soil moisture prevented about ten percent of the crop from being seeded in 1999, which together with lower prices for most crops, caused total net income per farm to drop to \$5,400.



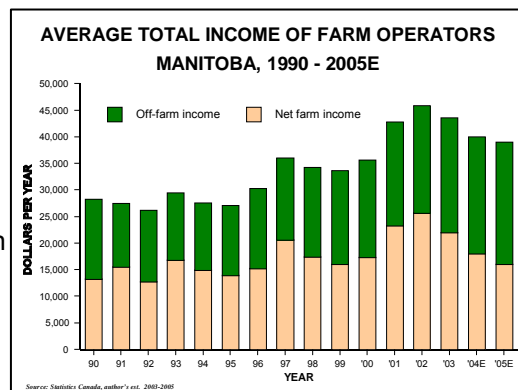
Present: Successively higher farm cash receipts from 2000-2002 and a large positive value of inventory change in 2003 contributed to total net income per farm of about \$17,500 in 2000, \$21,700 in 2001, \$24,500 in 2002 and a new record of about \$25,100 in 2003. Income fell to close to \$16,700 per farm in 2004 and to less than \$1,000 in 2005 due mainly to low crop inventories and prices.

Future: Lower prices for oilseeds and livestock and increased expenses could be offset by a higher value of inventory change to raise total farm net income in 2006.

Highlight of the Century: The Crop Insurance Act in 1959 and other government-assisted insurance/stabilization programs from the 1970s helped stabilize net farm incomes.

Total income per farm operator:

Derived from income tax returns of individuals operating unincorporated farms with total operating revenues of \$10,000 and over and incorporated farms with total operating revenues of \$25,000 and over, total income is net farm operating income plus off-farm income. According to Statistics Canada, based on farm size, those operating medium-size farms posted the largest percentage decline in average total income and saw their dependence on off-farm income increase the most.



Present: Average net operating income per farm operator rose from \$16,040 in 1999 to \$25,644 in 2002, but dropped to \$22,007 in 2003. Operator's off-farm income rose from an average of \$17,535 in 1999 to \$21,602 in 2003. Combining the two income components resulted in total income per operator (not adjusted for capital cost allowance) rising from \$33,575 in 1999 to \$45,833 in 2002, but declining to \$43,609 in 2003.

Farm family income:

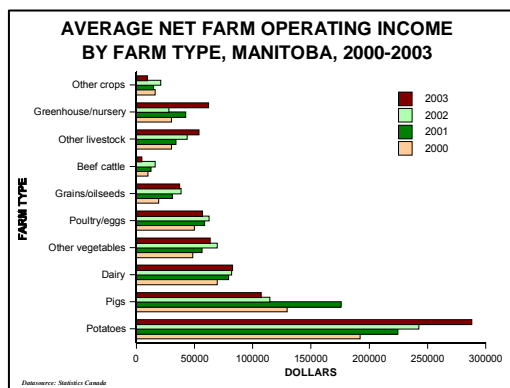
The off-farm income earned by unincorporated farm families in Manitoba averaged \$36,577 in 1998, increasing to \$45,960 in 2003. Average family net farm income climbed from \$16,321 in 1999 to \$23,893 in 2002, but dropped to \$18,842 in 2003. On average, farm family total income (including net farm income, family farm wages and non-farm income, but excluding capital cost allowance) was \$54,228 in 1998, rising over the next four years to \$68,220 in 2002, but declining to \$64,801 in 2003 when *off-farm income* comprised 71% of total income. This was up from 65% a year earlier.

Average net farm operating income by type of farm:

Farms are classified by a commodity type if they have 50% or more of farm sales from the specified type of product. The relative average income farms receive are not only affected by the type of commodity

produced, but also could be impacted by the average size of farm operation and weather/market situation in any given year.

According to Statistics Canada data, of all farm types, potato farms generally have the largest average net farm operating income, which rose from \$242,200 in 2002 to \$287,700 in 2003. Pig operations were next with average net incomes of \$114,500 in 2002 and \$107,100 in 2003. Dairy operations netted \$81,700 on average in 2002 and \$82,300 in 2003, while beef cattle farming had the lowest average net income at \$15,900 in 2002 and \$4,500 in 2003 (even lower than usual because of the difficulty of marketing cattle due to the BSE-induced closure of the U.S. border in May 2003). Poultry and egg operations averaged \$62,500 in 2002 and \$56,800 in 2003. Grain and oilseed farms had average net farm operating income of \$38,200 in 2002 and almost \$37,000 in 2003.

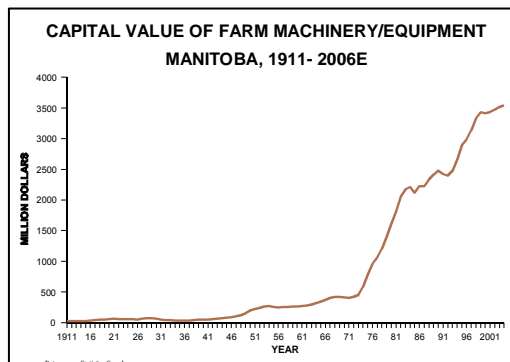
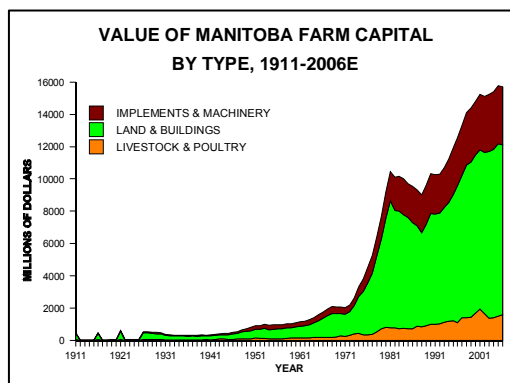


Capital investment

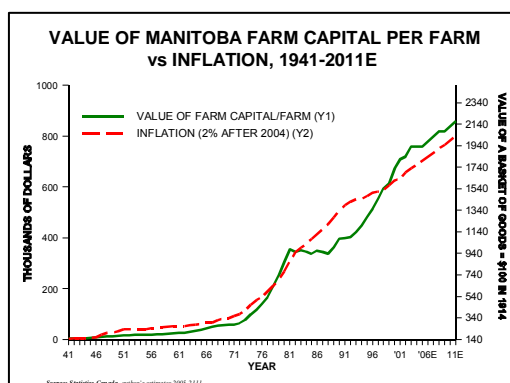
Comprising land and buildings, machinery and implements and livestock and poultry, the total value of farm capital in Manitoba estimated by Statistics Canada has increased from \$151,355 in 1901 to \$15.76 billion in 2005.

Past:

Machinery: Capital investment in farm machinery and equipment by Manitoba farm operations has gone through a few five-year periods where significantly more or larger machinery, such as tractors, seed drills, combines, balers and trucks were purchased. Some of the increase in value was inflationary, but between 1946 and 1951, there were tens of thousands more pieces of machinery purchased by Manitoba farm operations and the total value of machinery and equipment rose by \$140 million or 146%. With about 12,000 additional pieces of machinery, the capital invested in farm machinery rose by about \$550 million or 133% between 1971 and 1976, again partly due to inflation. However, replacement of old or outdated machinery and equipment was mostly responsible for the \$550 million or 23% increase in value between 1991 and 1996 as the number of tractors, trucks, combines and swathers actually declined by about 13,000 over the five years. In the first two five-year periods, the number of farms decreased by about 3,000, farm population fell by about 17,000 and many hired farm workers had to find employment off the farm, but there was little change to farms and almost no change to farm population between 1991 and 1996.



Land and Buildings: Between 1971 and 1981, rising land prices caused the value of Manitoba farm land to more than double every five years. However, between 1981 and 1988, high real interest rates and low commodity prices affected land prices, resulting in a 14% decrease in the total value of agricultural land. Farm machinery sales in the province also suffered during these years. Crop prices improved in 1988, and from 1988 to 1990, the value of farm land rose by 18%, declined again by one percent in 1991 before rising by 58% over the next 14 years in response to the improved profitability of many farms. Since the slump in 1988, the average price of farmland in Manitoba has risen to a high of \$565 per acre in 2005, up by about 7.6% from 2001 and



86% higher than in 1988.

Variable commodity prices and the significant fluctuations in farm profitability from year to year have resulted in a shift in the distribution of farm capital value. Land and buildings accounted for 68% of the total value in 2005, compared with 65% in 2001 and 75% in 1981 for the same components.

Present: The value of capital used by Manitoba farmers rose by about one percent per year from 2002 to 2004, but climbed by 2.4% to almost \$15.8 billion in 2005, more than \$850,000 per farm operation. This included over \$10.6 billion (67.5%) for land and buildings, \$3.6 billion (22.8%) for machinery and equipment and more than \$1.5 billion (9.7%) for livestock and poultry.

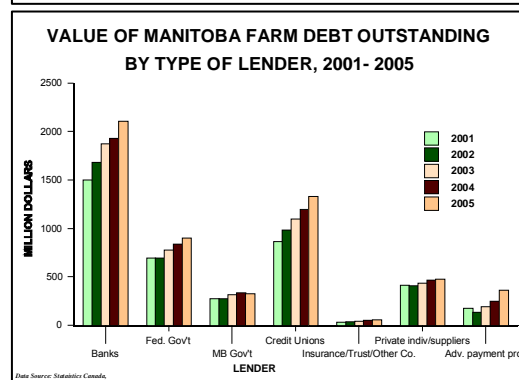
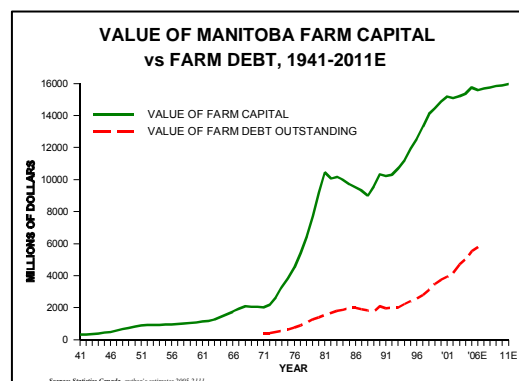
Highlight of the Century: The introduction of agricultural credit and loans at reduced interest rates starting in the early 1900s, but officially as the Manitoba Farm Loans Act in 1917, the Rural Credits Act in 1917 and the Agricultural Credit Act in 1958 assisted farmers finance capital purchases and operating costs.

Debt

Established farmers, who own their land and have low debt-to-asset ratios, are better equipped to survive the variability of agricultural profitability, particularly during periods of low commodity prices. Younger and beginning farmers with low equity and high debt face a more difficult financial situation. New operators may have limited finances and their low equity makes them a high risk to lending institutions.

Chartered banks financed 37.9% of the total farm debt of \$5.55 billion in Manitoba in 2005 compared to 39.9% of the \$4.20 billion farm debt in 2002. The provincial and federal governments, through agencies such as MACC (Manitoba Agricultural Credit Corporation) and FCC (Farm Credit Corporation), financed 5.9% and 16.2% of provincial farm debt respectively in 2005, whereas government advanced payment programs accounted for 6.5%. In 2002, the shares were 6.4%, 16.5% and 3.2% respectively. Credit unions financed 23.9% of farm debt in 2005, up from 23.4% in 2002. Personal sources of credit, along with trust and insurance companies, amounted to 8.6% and 1.0% in 2005 and 9.7% and 0.9% in 2002.

As farms became larger, operating debt financing became more important in the cost of operation. In years when interest forms a fairly large portion of total farm operating expenditures of some farms, a high equity position could be as important as operating efficiency to assure continued solvency.



Net worth

Most recent Statistics Canada data show that Manitoba farm families had total assets of almost \$17.6 billion, liabilities of over \$4.7 billion and equity/net worth of \$12.8 billion in 2004. Net worth was down by 7% from 2002. In 2004, long-term liabilities were 72% of total liabilities, up from 70% in 2001. Return on equity was 3.7% in 2004 compared to a high of 7.8% in 1985, 5.8% in 1990, 5.7% in 1989, 5.5% in 1981, 5.3% in 1986, 5.2% in 1987 and 5.0% in 1996 and 2002. According to Statistics Canada, in 2004 the "ratio of loans outstanding to cash income" for Manitoba farmers was 4.6, the third lowest in all provinces after British Columbia and Alberta, but well above the 1985 "ratio" of 3.2.

According to most recent data, the average net worth of pig farms was \$1,231,395 in 1999, while the average net worth of grain and oilseed farms was \$645,391. The growth of various livestock sectors and the potato industry resulted in average net new investment of \$52,605 per farm in 1997 and \$40,477 per farm in 1999.

In 2004, the "ratio" of farm equity to total assets was 0.73, down from 0.80 in 1999 and 0.78 in 2002 and 2001. By enterprise type, grain, potato, dairy, hog, poultry and beef operations had equity to asset ratios of 0.81, 0.74, 0.82, 0.72, 0.81 and 0.82 respectively in 1999, the most recent data available.

Net Value Added

Statistics Canada estimated that Manitoba farm operations had total net value added of \$993.3 million in 2004, distributed as cash and share rent to non-operators of \$149.4 million (15.0%), interest of \$223.0 million (22.5%), non family wages of \$133.7 million (13.5%), family wages (unincorporated farms) of \$69.6 million (7%), family wages (incorporated farms) of \$83.6 million (8.4%), corporation profits of \$175.3 million (17.6%) and unincorporated operator returns of \$158.8 million (16%).

Bankruptcies

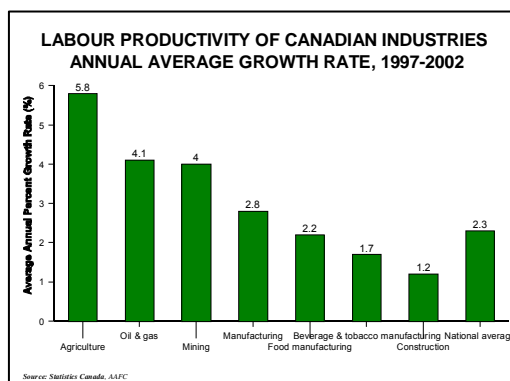
Despite the difficult financial times, Manitoba had only 28 farm bankruptcies in 2003, 27 in 2004 and 26 in 2005, whereas both Saskatchewan and Alberta suffered an increasing number of farm bankruptcies over the three years. Of the Manitoba farmers in financial difficulties, most were able to make arrangements with their financial institutions to continue farming or were able to sell their operations.

Efficiency

Improved productivity in all sectors of the food system greatly increased food production and lowered food prices over the last half of the twentieth century. Much of this increased efficiency was due to farmers. In 2000, each Manitoba farm fed about 350 people, seven times as many as sixty years earlier.

In addition, prices of unprocessed foods have not increased as much as wages, so Manitoba consumers only had to work about a third of the time in 2000 as they did sixty years earlier to buy Manitoba-produced beef, milk, eggs, vegetables and bread.

A basket of food that cost \$100 in 1914 would cost almost \$1,200 in 2005.



Percentage spent on food:

Manitobans spent \$1,970 per capita, or only 9.2% of their disposable income, in food stores in 2004, down from 10.0% in 2001 and 2002.

Trade

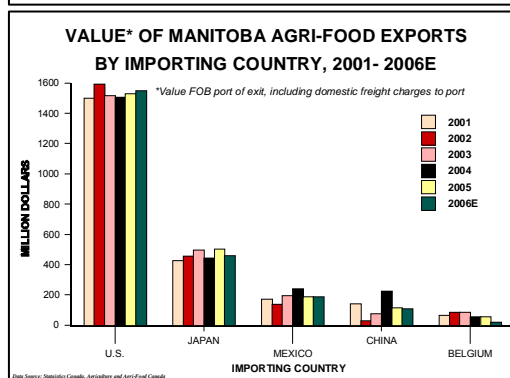
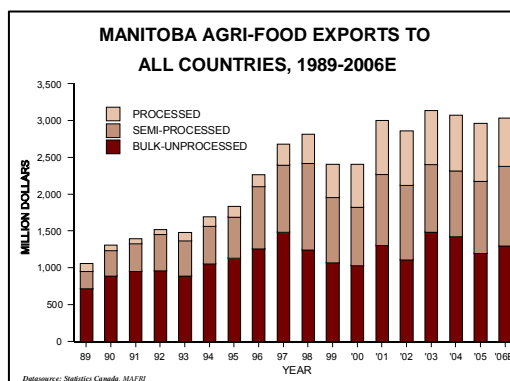
Exports

Agri-food exports are one of the largest single sources of foreign exchange earnings in Manitoba with shipments to 140 countries as well as the rest of Canada in 2005.

The value of agri-food exports increased to \$2.4 billion in 1998, declined for the next two years before increasing to almost \$3 billion in 2001. Exports remained near that level for the next four years with a record high of \$3.13 billion set in 2003. The 2005 total was \$2.96 billion, down by 3.6% from \$3.07 billion in 2004. About \$1,197 million of Manitoba livestock and livestock products were sent out of the country in 2005, while \$1,763 million of unprocessed and processed grains, oilseeds and other crops were exported. Exports are expected to exceed \$3 billion in 2006.

By country:

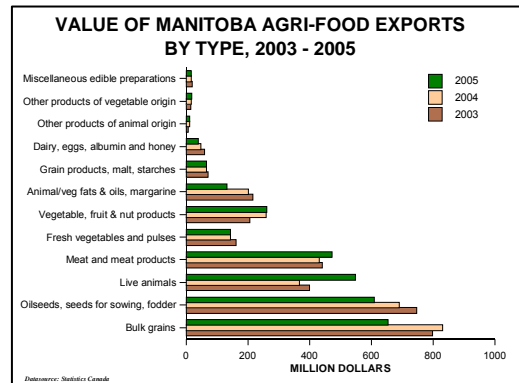
The United States is Manitoba's most important trading partner. In each of the years 2001 to 2005, Manitoba exported more than \$1.5 billion of agri-food products (not including pharmaceuticals or building products derived from



agricultural commodities) to the U.S. This level is expected to be reached again in 2006. Trade with Japan is a distant second as \$400-500 million of Manitoba agri-food products were shipped to Japan for each of the same five years. Manitoba's third largest trading partner is Mexico.

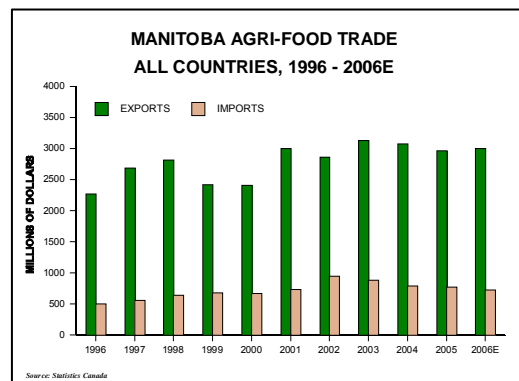
By commodity:

Manitoba uses less than 20% of the wheat, more than half of the barley and less than one-third of the oats produced in the province, the remainder being sold in various forms to other Canadian provinces or other countries. Much of the canola seed, oil and meal Manitoba produces are exported. Over 90 percent of Manitoba cattle and calves marketed and more than 95 percent of the pigs produced were sent out of the province, either live or as meat or meat products. Almost all of the turkeys, chickens and eggs produced in Manitoba are consumed or processed locally. Hatching pullet chicks and poults and processed egg products, including albumin and enzymes, were exported to the United States and Japan with small amounts sold to other countries.



Imports

Manitoba imported \$768 million of agri-food products from 110 countries in 2005, almost 87% of which came from the United States. Colombia and Mexico ranked a distant second and third with 2.3% and 1.4% of Manitoba's agri-food imports respectively. After increasing from \$504 million in 1996 to over \$941 million in 2002, agri-food imports declined for the next three years due mostly to the strengthening Canadian dollar. A further decline to \$725 million is estimated for 2006.



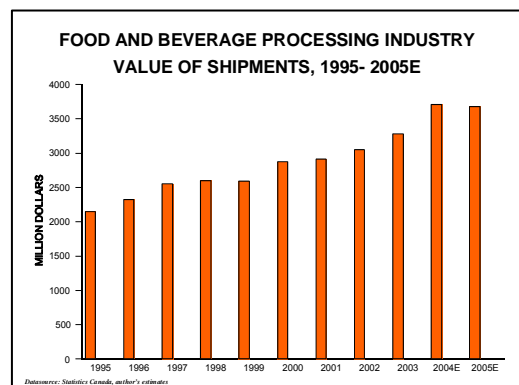
About \$20 million of poultry and dairy products, \$80 million of animals, meat and meat products and \$170 million of processed animal feeds were imported in 2005. The province also imported \$70 million of fresh and processed vegetables and dry legumes, \$180 million of unprocessed grains and oilseeds and oilseed, cereal and bakery products. Much of these imports could have been produced in Manitoba. However, given the lower labour costs and better weather in exporting countries, it may not be economically feasible to reduce imports of some foods, such as fresh vegetables in winter.

Future: As its burgeoning population is expected to outpace its agricultural production, India will join China as one of the largest markets for wheat, pulses and vegetable oils.

Highlight of the Century: The lower-valued Canadian dollar relative to the U.S. dollar in the mid 1980s and early 2000s gave Manitoba exporters an added advantage, not only in the American market place, but also in competition with American products in world markets.

Agricultural and Related Processing

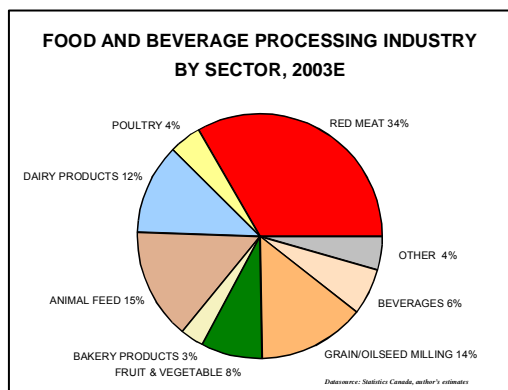
Manitoba's food and beverage processing industry includes the slaughtering and/or processing of red meat and poultry, fruit and vegetables, cereal products, seed, dairy products, vegetable oils, feed and beverages. It is one of the most important manufacturing industries in the province, producing over \$3.0 billion of goods in 2002 and close to \$3.3 billion in 2003, or almost one-quarter of the total manufacturing output in the province. About \$2.4 billion worth of inputs went into the industry in 2003 and generated an added value of \$0.9 billion. The food



processing industry employed about 8,000 administrative, production and related workers in 2003. The value of shipments rose to an estimated \$3.7 billion in 2004 and 2005, despite the stronger-valued Canadian dollar affecting prices.

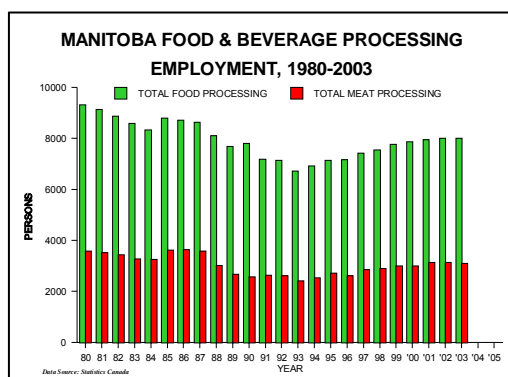
In Manitoba, the manufacture of pharmaceutical and medicinal products often involves the use of agricultural products, such as pregnant mares' urine, eggs, horseradish and other crops. Not included in the statistics are sectors such as the processing of nutraceuticals or pharmaceuticals from farm commodities, clothing and furniture manufacture from skins and hides, energy production from crops and the manufacture of building materials from farm products.

A straw particle-board plant built at Elie had the potential to utilize about 185 000 tonnes of straw per year from the surrounding area. The plant employed about 100 people when it became fully operational in 1998, but closed in 2004 due to lack of profitability.



Red meat slaughtering and processing:

Past: Technological changes in animal slaughter and meat production have contributed to the rationalization of the meat packing industry over the years. A hog slaughter plant, Springhill Farms, Ltd., was built in Neepawa in 1986. Canada Packers closed its Winnipeg slaughter plant in early 1987, which reduced Manitoba's cattle slaughter capacity by about 40 percent. Further reduction in cattle and hog slaughter capacity occurred in March 1990 when East West Packers was forced to close. Burns Meats (purchased by Maple Leaf Meats) closed its Brandon cattle slaughter plant in November 1990 and shut down its Winnipeg cattle kill line in late 1997. Maple Leaf Pork and J.M. Schneider Inc. significantly increased their hog slaughter and processing capacity respectively in the late 1990s with new plants in Brandon and Winnipeg. Maple Leaf Pork purchased both the Schneider/Smithfield slaughter plant and processing plant in Winnipeg in March 2001.



Present: Red meat slaughter and processing, Manitoba's largest food processing sector, produced \$1.1 billion of meat and meat products in 2003. This was more than one-third of the value of total food and beverage processing in the province. The sector employed over 3,000 people. Raw inputs, cattle, hogs and sheep, accounted for about 90 percent of the meat processing industry's total cost of materials and supplies of \$810 million in 2003. About 90 percent of the hogs and almost all of the cattle slaughtered in the province originate in Manitoba. A very large portion of the sector's output consisted of pork, most of which was sold to other provinces, U.S.A., Japan, Mexico, Australia and 21 other countries in 2005. Pork exports of 174 million kg were valued at \$468 million in 2005, compared to 169 million kg in 2001 worth a record \$519 million. Due to the relatively small size of the cattle slaughter industry, Manitoba beef exports were valued at \$4.0 million in 2004 and 2005, down from \$4.7 million in 2001.

Poultry processing:

Despite the closure of a poultry slaughter facility in late 1995, one in 1997 and a secondary processing facility in 1998, the amount of poultry meat processed in the province continued to expand in the early 2000s. Statistics on chicken and turkey processing have not been available since 1999 as there are only two primary processing companies, Dunn-Rite Food Products Ltd. and Granny's Poultry Co-operative, and one secondary processor. More than \$2 million of Manitoba edible poultry (chicken, turkey, goose, duck and pheasant) products are shipped out of Canada annually.

Egg processing:

Egg processing in Manitoba is mainly carried out by Canada's largest processor, Inovatech Egg Products, and the other major processor in the province, Burnbrae Farms Ltd. Exports of eggs and edible egg products amounted to \$23.1 million in 2005, down from \$25.2 million in 2004 and \$31.7 million in 2003.

Feed industry:

The province's feed industry employed about 700 production and administrative staff with sales of \$483 million in 2003. Principal inputs for the industry are barley, feed wheat and canola meal. Smaller amounts of Manitoba-produced dry peas and corn are also used. Grain used to produce ethanol at a plant in Minnedosa provides mash for feed as by-product. Some of the corn and canola meal produced in Manitoba is used locally by the feed industry. However, significant amounts of corn (441,000 tonnes in 2005) as well as soybeans and soybean meal (290,000 tonnes in 2005) are imported from the United States to supplement local feed supplies, mainly for pigs.

Potato processing:

About 86 percent of Manitoba's potato crop is used for processed foods, such as frozen french fries and hash browns, instant mashed potatoes and potato chips. Exports by the three major and one smaller potato processing plants, which employed about 1,300 people, were over \$260 million in 2004 and 2005.

Dairy processing:

Three fluid milk and thirteen industrial milk and cheese plants employed about 500 workers to produce fluid milk valued at \$158 million in 2003 and cream, cheese, butter, ice-cream and other dairy products valued at over \$250 million. Estimated cost of inputs was \$360 million.

Oilseed crushing:

Manitoba has three oilseed crushing plants. One CanAmera Foods plant is located at Altona and another at Harrowby on the Saskatchewan border. Most of the canola crushed at Altona comes from Manitoba. Output from the two plants, which can crush about 2,500 tonnes of seed per day, includes bulk crude and refined oil, bulk vegetable oil, retail pack refined oil, hulls and screenings. An oilseed crushing plant was built at Ste. Agathe in 1997, but was out of production for most of the time until January 2005, when the plant began crushing canola to produce oil and meal. The largest solvent-free crushing plant in the world, the plant is owned by Associated Proteins which has partnered with Canterra Seeds. The plant is focusing on producing specialty oil products for niche markets. At peak capacity, the plant can process 1,000 tonnes of canola per day and eventually can double capacity if needed. Exports of canola oil and bulk vegetable oil declined from \$206 million in 2003 to \$127 million in 2005, mainly due to the smaller canola crop and falling prices.

Grain processing:

Although most of Manitoba's food-quality wheat and other grains are exported, some are processed locally. The province's wheat flour mills and bakeries employed about 1,200 people to produce an estimated \$60 million worth of flour and cereals and \$100 million of bread and other bakery products in 2003. A flour mill was constructed at Elie for Prairie Flour Mills in 1997, the first new mill in the province for many years.

There are two oat processing facilities, Can-Oat Milling at Portage la Prairie, one of the largest in North America, and Emerson Milling at Emerson. Processed products include old fashioned flakes, quick cooking oats, baby oat flakes, oat bran, oat flour, whole oat groats and steel-cut oat groats.

Beverage manufacturing:

Manitoba's beverage manufacturing industry employed over 600 people and produced beer, wine, soft drinks and spirits valued at \$207 million in 2002. The Diageo (was Seagrams) distillery at Gimli used 40,000-45,000 tonnes of grain corn annually or 215 tonnes per day, but is expanding capacity. Establishment of the plant at Gimli was based on the availability of high quality and abundant supplies of water and the use of top quality grain corn, most of which is supplied by Manitoba farmers.

Future:

Considerable interest is being directed by industry toward increasing Canadian and export markets for nutraceuticals and functional foods as well as fuels made from agricultural products. These efforts in response to market opportunities are complemented by research into the linkages between agricultural products and health, which is conducted at the National Centre for Agri-Food Research in Medicine. The University of Manitoba has a new \$25 million facility for research in nutraceuticals and functional foods.

Highlights of Century: The significant increase in pig slaughter in Manitoba in the 1990s and early 2000s and increased production of agricultural products for processing in the 1990s contributed to Manitoba's expanding agri-processing industry.

Other Contributions to the Manitoba Economy

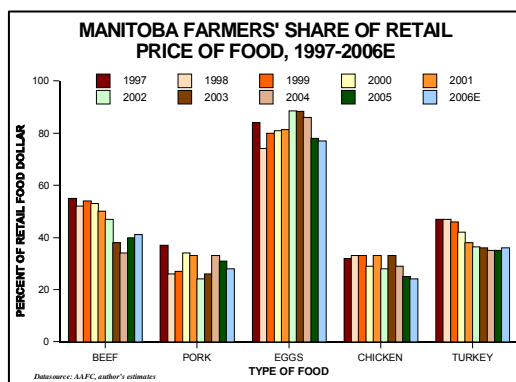
Use of Services

Manitoba agriculture depends on various service industries. These industries include transportation, finance, insurance, construction and real estate. In addition, federal and provincial governments provide farmers with services such as extension, regulatory, research and development, financial and infrastructure. An estimated one-quarter of total provincial transportation expenditures involves the movement of raw or processed Manitoba agricultural products. Farm expenditures on financial, insurance and real estate services amount to approximately nine percent of total expenditures for these services. About 8% of Manitoba's construction takes place on farms or is for agriculture-related industries. Manitoba farms and agri-food industry use 9% of the total electric power, about 40% of the chemicals and almost 20% of total gasoline and fuel oil consumed in the province.

Retail Food Sector

Although a portion of the food consumed by Manitobans is imported from other provinces or countries, about half of the food sold by Manitoba's grocery and other food stores is derived from products grown and processed in Manitoba. Thus, a portion of the retail margins from these stores can be included with agriculture's contribution to the provincial economy. In 2004, Manitoba's almost 1,500 grocery and other food stores had about \$2.8 billion in food sales volume, up from \$2.42 billion in 2002. Gross margins and net profits amounted to about 22% (\$600 million) and one percent (\$30 million) respectively. Value added to foods purchased by retailers is an indirect contribution of agriculture to the economy. Food wholesaling activities also contribute to the economy.

For livestock products such as beef, pork, chicken, turkey and eggs, 40%, 31%, 25%, 35% and 78% respectively of the consumers' food dollar in 2005 went to the Manitoba livestock producer, depending on relative prices and processing and merchandising for each commodity. An egg producer received more than 78% of the retail price of eggs, while a chicken producer received 25% of the amount a consumer paid for chicken. Processing and merchandising costs and wastage are greater for chicken than for eggs.



Agricultural Service Sector

In 2001, there were 42 agricultural implement manufacturing companies in the province. The companies employed almost 1,760 workers and produce close to \$0.36 billion worth of equipment. For the manufacture of these implements, the companies in turn purchased \$180 million in inputs and contributed \$170 million in value added to the final product. The total value of this contribution to the provincial economy is not solely attributable to Manitoba agriculture. However, it indicates the significance of this sub-unit to the agricultural sector of Manitoba's economy.

In addition to the 42 companies directly linked to agricultural equipment manufacturing, numerous firms are more indirectly associated with the agriculture equipment industry. These firms produce inputs for agriculture as a secondary output of their operation or as input into a larger agricultural manufacturing operation. The total value of this contribution to the agriculture sector is estimated at over \$100 million. The associated labour force is estimated at about 1,000.

There were 152 licensed dealer establishments selling farm machinery and associated equipment and providing service facilities in March 2002. In addition, 93 licensed vendors supplied farm machinery and equipment repair parts to licensed dealers in the province, ten fewer than a year earlier. A number of unlicensed facilities provided repair services for farm equipment. The total value of repair and servicing of farm machinery contributed an estimated \$229 million to the provincial economy in 2002, up from \$222 million a year earlier.

Bio Energy Sector

Bio-diesel, new-generation hydroelectric power, geothermal, wind and ethanol are the pillars of Manitoba's clean-energy strategy.

Wind power stations on farms:

The expansion of wind power is the latest achievement in Manitoba's strategy to develop clean, affordable energy. Wind turbines provide a source of stable income for rural farmers and add more clean power to Manitoba's sources of renewable energy. Manitoba's first wind farm in St. Leon will be one of the largest wind farms in Canada, producing 99 megawatts of power. Over the next ten years the province plans to expand wind-power capacity to 1,000 megawatts, enough to run over 350,000 homes.

Ethanol production using wheat:

Various biological sources that contain sugar, starch or cellulose, such as sugar beets, sugar cane, wheat, corn, wood chips, grasses or straw can be used to produce ethanol. Marketable by-products from the production of ethanol include value-added fibre and protein foods for human consumption and distillers dried grain with solubles (DDGS) for use as animal feed. There is a potential market for 140 million litres of ethanol or 1.4 billion litres of gasohol per year in Manitoba as well as significant market opportunities in other Canadian provinces and the United States.

Ethanol to be used in gasoline was first produced in Manitoba in 1981 at Mohawk Oil's Minnedosa plant, which produced 10 million litres of pure ethanol per year. Husky Energy Inc. acquired Mohawk Oil in 1998. In October, 2005, Husky Energy announced it would build a \$145-million ethanol plant on its site at Minnedosa, replacing the existing plant. The plant, to be completed by mid-2007, will utilize 350,000 tonnes of wheat to produce 130 million litres of ethanol annually. The plant will also produce 126,000 tonnes of DDGS high-protein animal feed per year.

Bio-diesel production using oilseeds and waste oil/fat:

About 850 million litres of diesel fuel is used in Manitoba annually, most of which is used in the transportation and agriculture sectors. Any diesel vehicle can use bio-diesel, which can be used in pure form or in blends. There were two pre-commercial bio-diesel production facilities in Manitoba in 2005, Bifrost Bio-Blends in Arborg and Celtic Power in Rapid City.

An action plan to promote the development of bio-diesel as a new economic opportunity for Manitoba producers and rural communities and a clean-energy alternative to fossil fuels was announced by the province in November 2005. Bio-diesel provides an opportunity for Manitoba farmers and rural communities to capture economic benefits. The two main components of the program are geared towards increasing production in Manitoba. Effective November 2005, the province no longer collects the 11.5 cents per litre fuel tax on 100% pure bio-diesel. This will offer a Manitoba bio-diesel tax advantage over regular diesel of approximately 5.5 cents per litre after provincial sales tax has been applied. The province and Natural Resources Canada will also work together to provide a \$1.5-million request for proposals (RFP) support package to Manitoba bio-diesel producers who wish to either increase production of bio-diesel or to start a new venture. Livestock producers may benefit from research on feed stocks and alternative markets for bio-diesel by-products and a study of the feasibility of using specified risk materials (SRMs - those parts of livestock remains that are restricted due to BSE) for bio-diesel.

Construction of the Prairie Gold Biodiesel plant east of Winnipeg is planned for 2007. The plant is expected to produce up to 114 million litres of fuel annually and employ 30 people. Another firm, Border Chemical Company, Ltd., proposes to build a 30 million litre bio-diesel plant in Winnipeg,

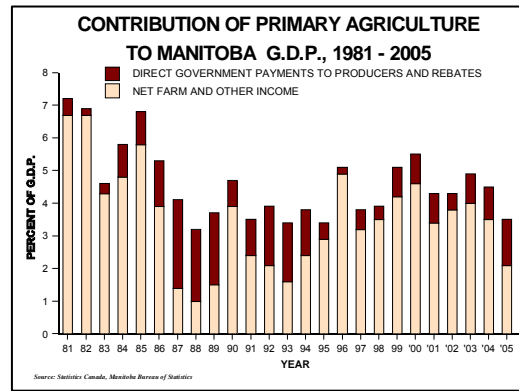
Pelletized grass:

Pelletized grass is also being considered as an alternate fuel (Manitoba could produce 10 million tonnes of grass, which is equivalent to 36 million barrels of oil).

Gross Domestic Product

One measure of provincial output is the Gross Domestic Product (GDP), which is an aggregate of net profits and incomes, including wages, depreciation and investment income. Agriculture's direct contribution to the GDP was about 3.5% in 2005, down from 4.5% in 2004, 4.9% in 2003, 4.3% in 2002 and 2001 and 5.5% in 2000 respectively. The lower contribution in 2005 was due mainly to reduced crop production and prices.

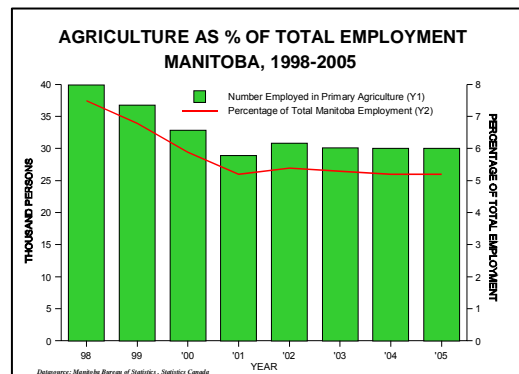
During the past two decades, the contribution to the GDP fell from 7.2% and 6.9% in 1981 and 1982 to 4.6% in 1983. Net farm income increased so that agriculture's contribution to the GDP rose to 5.8% and 6.8% in 1984 and 1985, but declined to 5.3% in 1986. Despite increased government assistance, particularly to grain producers, the contribution to the GDP further declined to between 3.2% and 4.7% during the period 1987 to 1995. With improved net farm income in 1996 the contribution rose to 5.1%, but declined at the end of the decade when net farm incomes fell. Without government assistance, agriculture's contribution to the GDP ranged between 1.0% and 3.8% for the years 1987 to 1995, but rose to 4.9% in 1996 as government payments to producers fell when returns from the marketplace increased. Primary agriculture's share of the GDP decreased to between 3.2% and 4.6% for 1997 to 2004. Returns from the market place fell further in 2005 so the share of GDP without government assistance declined to about 2.1%.



Agriculture also makes an indirect contribution to the provincial economy through income derived from agriculture-connected industries. These include the food and beverage processing industry, industries which supply inputs to agriculture, as well as wholesale, retail and other service sector components which supply services to farmers and other agriculture-related workers. When agriculture's indirect contribution to the GDP was added to its direct contribution, an estimated 11% of Manitoba's GDP was attributed to agriculture in 2005 compared to over 12% in 2001, 2002 and 2004, 10% in 2000 and 1999 and a twenty-year high of 14% in 1996.

Employment

In 2005, about 30,000 people were directly employed in Manitoba's agricultural industry. In addition, it is estimated that 17,000 persons were employed in other areas of the provincial economy as a direct result of the agricultural industry, bringing total employment generated by agriculture to almost 8 percent of Manitoba's employed labour force in 2005. This means that about one job in twelve was the result of agricultural production. For every two jobs created on farms in 2005, more than one job was created in other areas of the Manitoba economy. In addition to stimulating employment locally, agriculture in Manitoba is directly responsible for thousands of jobs in other parts of Canada.



Value-added

For every dollar of net income produced by primary agriculture in Manitoba, between \$1.70 and \$1.90 is generated in the overall Manitoba economy.