

CROPS IN MANITOBA 2010-2011



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Data Sources:

Agriculture and Agri-Food Canada
Bank of Canada
Canadian Food Inspection Agency
Canadian Wheat Board
Manitoba Agriculture, Food and Rural Initiatives
Statistics Canada
United States Department of Agriculture

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CROPS IN MANITOBA

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. 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 choose crops best suited to their operation.

Statistical History

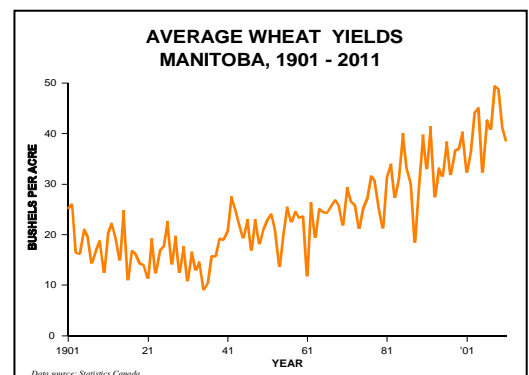
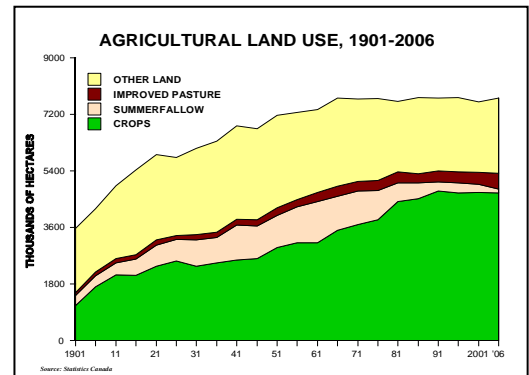
Area: *Statistics Canada* data show that areas planted to wheat, oats and barley in 1883 were 215,000 acres, 87,000 acres and 60,000 acres respectively. Flaxseed, rye, dry peas and potatoes were the only other crops recorded in the province at the start of the twentieth century.

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.

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 oilseed crushing plant was built in 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, and until recently, predominately arid region such as Manitoba results in fluctuations in crop yields, an upward trend can be seen since the 1940s, mainly due to the introduction and increasing use of commercial fertilizer. At the beginning of the 1960s an expected crop yield was 0.4 tonnes per seeded acre. By 2009, the annual harvest of cereal grains, oilseeds and pulse crops yielded more than 1.1 tonnes per seeded acre on average, almost tripling crop yields within 50 years. To some extent, higher crop yields offset lower prices in the mid 2000s.



Number of Farms, Area, Yield, Production and Value by Type of Crop

The traditional grain crops of wheat and barley occupied 26% of the almost 9.5 million acres of seeded crop and tame hay area in the province in 2011 (the seeded area was unusually low as 2.7 million acres were left unseeded in 2011 due to excess moisture), down from 43% in 2001. The area seeded to canola, an even larger area than wheat, was more than 29% of total seeded area in 2011, up from 16% in 2001.

Wheat:

According to the latest *Census of Agriculture*, 7,156 Manitoba farmers planted wheat in 2006 compared to 9,447 five years earlier. (data from the 2011 Census will be available in 2012)

The area seeded to wheat in Manitoba was largest at 5.46 million acres in 1990, of which 5.45 million acres were harvested. Production also peaked in 1990 at 216.2 million bushels.

In 2008, a record average yield of 49.4 bushels per acre from 3.18 million harvested acres produced a crop of 157.3 million bushels.

Due to excess moisture, an area of only 2.17 million acres was planted in 2011 with 2.10 million acres harvested, down from 3.04 million acres seeded in 2010. 2011 wheat production was 80.5 million bushels, a decrease from 119.8 million bushels in 2010 and 152.3 million bushels in 2009, when the average yield was equal to the 2008 record of 49.4 bushels per acre. Normally, Manitoba produces about 12-16% of the Canadian wheat crop annually, but Manitoba's share was less than 9% in 2011.

The value of wheat sales in 2010 was \$734.2 million, down by 13.5% from the record \$848.5 million in 2008.

Barley:

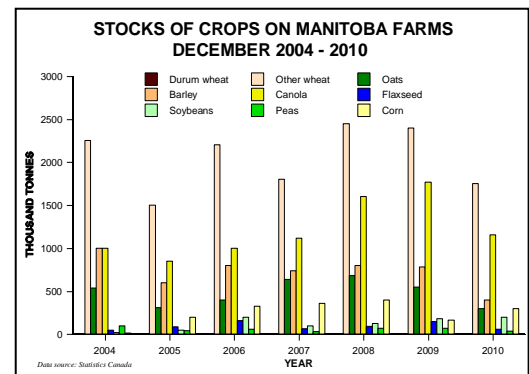
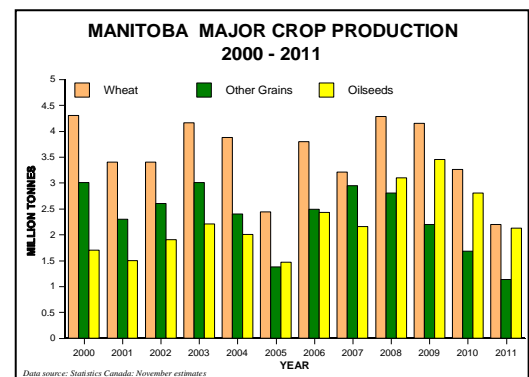
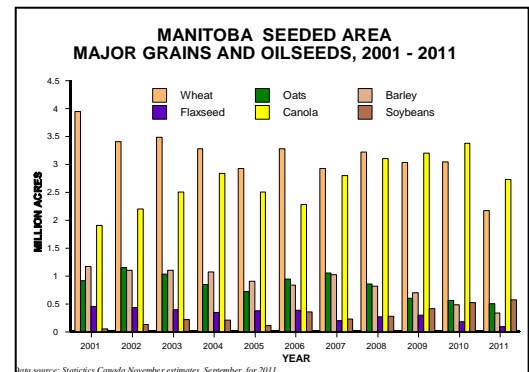
Almost 4,400 Manitoba farmers planted barley in 2006 down from 6,006 in 2001.

The area seeded to barley in Manitoba was largest at 2.4 million acres in 1981, when the crop's value peaked at \$277.3 million. Barley production reached a record level of 116.0 million bushels in 1985.

The area seeded to barley continues to fall with only 0.34 million acres planted in 2011 down from 0.48 million acres in 2010. The area harvested in 2011 was 0.27 million acres with a yield of 44.4 bushels per acre, well below the record yield of 71.5 bushels per acre in 2009.

Barley production fell from 22.4 million bushels in 2010 to only 12.0 million bushels in 2011, which was down by 73% from 44.0 million bushels in 2009. Barley sales (excl. farm to farm) in 2010 were \$59.0 million compared to \$116.4 million in 2008.

Manitoba normally produces 6-12% of the Canadian barley crop, but in 2011, only 3% was produced.



Oats:

According to the *Census of Agriculture*, 5,798 Manitoba farmers seeded oats in 2006 compared to 6,451 five years earlier.

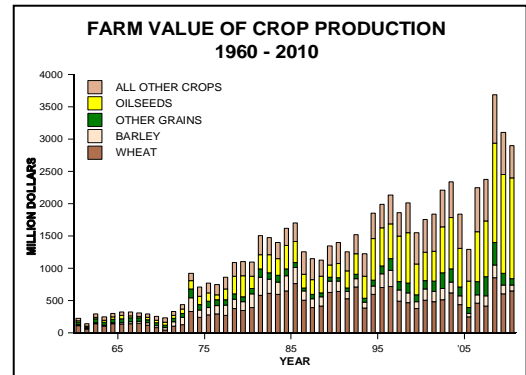
The area of oats seeded and harvested was greatest in 1921 at 2.2 million acres when oats were used mainly for animal feed. The agricultural industry began to rely more on machinery and less on horses, so the area of oats declined. From a low of only 0.27 million acres harvested in 1991, the growing 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 was \$171.0 million that year.

The record average yield of 90.5 bushels per acre occurred in 2008.

An area of 0.50 million acres was seeded to oats in 2011, down from 0.56 million acres in 2010 and 0.86 million acres in 2008. The area harvested in 2011 was 0.415 million acres with an average yield of 65.1 bushels per acre and a crop of 27.0 million bushels.

Farm sales of oats in 2008 were record high at \$184.2 million, but fell by 27% to \$135.3 million in 2010.

Manitoba produces 20-30% of the Canadian oat crop.



Rye and mixed grains:

Manitoba farmers also grow other grains, such as rye and mixed grains.

In 2006, 637 farmers grew rye, up from 473 in 2001, while 314 farmers grew mixed grains in 2006 compared to 351 in 2001. These two crops were grown on 45,000 and 31,000 acres respectively in 2001, but on 96,000 and 44,000 acres in 2006.

By 2010, the area seeded to rye was 55,000 acres with a crop of 2.3 million bushels. The mixed grains area was 15,000 acres. The areas planted in 2011 were 45,000 acres of rye and about 10,000 acres of mixed grains with production of 1.74 million and 0.1 million bushels respectively. Farm sales of rye in 2010 were \$10.3 million compared to \$14.0 million in 2009.

Grain corn:

Very little corn for grain was grown prior to 1978 as most corn was produced for silage and fodder. However, with the development of varieties more suited to the Manitoba climate, the area of grain corn increased over the years. In 1981, a record 225,000 acres were harvested, producing 17 million bushels of corn.

About 110,500 acres of grain corn were planted in Manitoba in 2001 by 542 producers. The planted area rose to 150,000 acres in 2006 when 577 farmers grew corn.

Production of the corn crop peaked in 2003 at 19.5 million bushels worth \$62.5 million.

In 2011, 180,000 acres of grain corn were planted, down from 185,000 acres in 2010. Corn production was 16.3 million bushels in 2011, down from 18.9 million bushels the previous year.

Annual farm sales of grain corn amounted to \$55.4 million in 2009 and \$56.6 million in 2010.

Canola:

According to the *Census of Agriculture*, 5,861 Manitoba farmers planted canola in 2006 compared to 6,413 five years earlier.

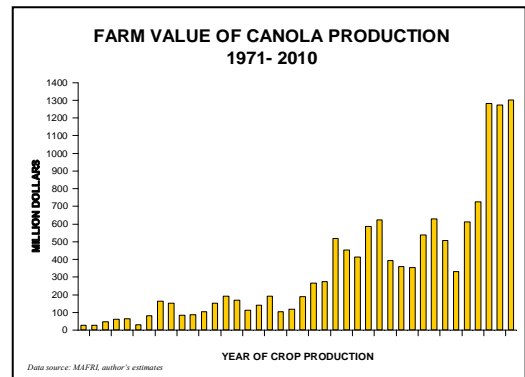
The area seeded to canola rose from fewer than 0.03 million acres in 1961 to over one million acres in 1978. The area first exceeded two million acres in 1994 and three million acres in 2007. Record yields of 39.5 bushels per acre and peak production of 124.7 million bushels occurred in 2009. The area seeded in 2010 was a record 3.37 million acres, but due to excess

soil moisture, the 2011 seeded area was only 2.725 million acres. The harvested area in 2011 was 2.63 million acres with an average yield of 27.8 bushels per acre and crop of 73.0 million bushels.

Annual canola sales reached a record of \$1.117 billion in 2010, up from \$1.064 billion in 2009, making canola once again, not only Manitoba's most valuable crop followed by wheat, but also the most valuable agricultural commodity for the third year in a row.

Canola was also the most valuable crop in the province from 1997 to 1999 and from 2003 to 2008.

Manitoba usually produces 19-25% of Canada's canola crop, but only 12% in 2011.



Flaxseed:

Manitoba is one of three provinces producing flaxseed and was the largest flaxseed-producing province in Canada for most years until 1993, when Saskatchewan took over.

In 1983, Manitoba produced 64% of the national flaxseed crop.

The area seeded to flax peaked at 1.35 million acres in 1965, but has fluctuated significantly over the past forty-six years. In 2001, about 2,800 farmers planted 437,000 acres of flax. The seeded area on 2,212 farms fell to almost 384,000 acres in 2006.

Flaxseed production peaked at 22.0 million bushels in 1985. The largest average yield on record of 26.2 bushels per acre occurred in 2008, but only 7.6 million bushels were produced.

Manitoba farmers planted 95,000 acres of flax in 2011, 68% below the 2009 seeded area of 300,000 acres. In 2011, 87,000 acres of flax were harvested, producing a crop of 1.5 million bushels, which was only 10% of Canadian flaxseed production. Due to rising prices, farm sales of flaxseed in 2010 were valued at \$53.0 million, up by almost 10% from \$48.3 million in 2009.

Soybeans:

The area planted to soybeans rose slowly from fewer than 1,000 acres in 1996 to 50,000 acres in 2001 on 346 farms. By 2006, the area had soared to 350,600 acres on 1,321 farms, with a crop of 9.3 million bushels. A record 575,000 acres were seeded to soybeans in 2011 with 570,000 acres harvested to produce a crop of 15.2 million bushels, almost ten times the 2004 crop. The area seeded in 2010 was 520,000 acres with 510,000 acres harvested and a record crop of 16.0 million bushels. Farm sales for 2010 were valued at \$92.2 million, a new record. In 2003, 2006, 2007 and 2008, Manitoba produced 7-8% of the Canadian soybean crop. The share rose to 9-10% in 2009, 2010 and 2011.

Sunflowers:

By far the largest producer of the three Prairie Provinces, Manitoba's sunflower area peaked at 380,000 acres in 1979, producing a record 460 million pounds of sunflower seed, almost all of the nation's production. 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.

In 2001, 638 farmers seeded about 153,000 acres, while 190,200 acres were planted on 614 farms five years later. The largest average yield on record was 1,825 pounds per acre in 2006.

In 2011, due to adverse weather, the area seeded to sunflowers was only 35,000 acres, down by 26% from 135,000 acres in 2010. The 2011 crop of 43.6 million pounds was only 9.5% of the record 1979 crop. Farm sales of sunflower seed in 2010 were valued at \$26.1 million, down from \$38.8 million in 2009 and the peak of \$68.1 million in 2007.

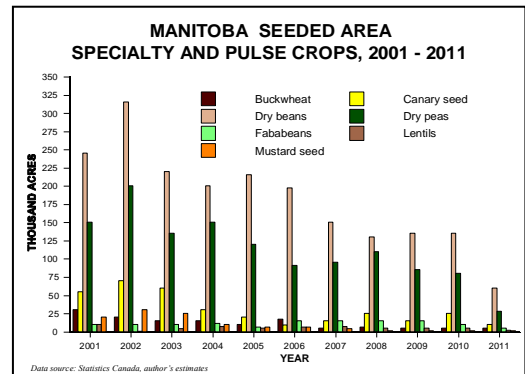
Manitoba, the "Sunflower Capital of Canada", produced almost the entire national sunflower crop from 2006 to 2011 compared to 85-90% in the early 2000s.

Specialty crops:

One of the two major *buckwheat*-producing provinces since 1925, Manitoba's planted area peaked at 135,000 acres in 1979 following the record production of 2.7 million bushels from 120,000 acres in 1978. The crop value peaked at \$17.2 million in 1981.

As recently as 2001, Manitoba supplied 77% of the Canadian crop, but since then the popularity of the crop declined mainly due to adverse growing and harvesting conditions. The seeded area in 2001 was 30,000 acres on 333 farms, but fell to 18,000 acres on 183 farms in 2006. Only a small area of buckwheat was grown in the years that followed.

Roughly 100,000 bushels valued at less than \$1 million were produced from about 5,000 acres seeded and harvested in 2009.



Canary seed production was first recorded in 1963 with the seeded area increasing rapidly in the late 1970s. Fluctuating significantly from year to year, the harvested area peaked at 100,000 acres in 2002, when crop production was record-high at 72 million pounds valued at \$19 million. In 1986, about 23% of the national canary seed crop was produced in Manitoba, but the share fell to only 2% in 2006, rising again to 4% in 2007, 5% in 2008 and 8% in 2010. Only 9,000 acres were seeded by 71 producers in 2006 compared to 54,000 acres by 275 producers in 2001. About 25,000 acres of canary seed were planted and 21,000 acres harvested in 2010, producing 19.1 million pounds of canary seed valued at \$3.1 million. The 2009 crop of 16.35 million pounds was valued at \$2.9 million.

No estimates are available for 2011 yet.

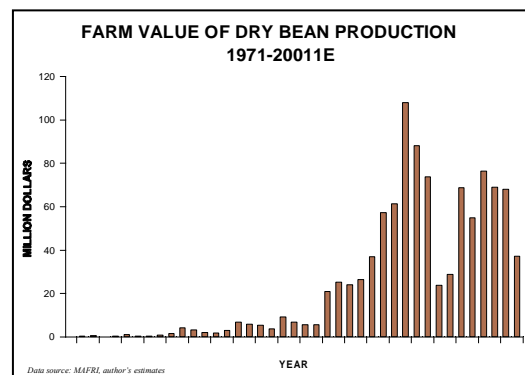
Mustard seed plantings totalled 16,000 acres on 115 Manitoba farms in 2001, but declined to 5,500 acres on 55 farms in 2006. Depending on the season, about 1-6% of Canada's mustard seed came from Manitoba. Very small areas of mustard were planted from 2008 to 2011.

Pulses:

Dry beans: For some years the nation's largest producer of dry beans, Manitoba's harvested area and production were record high at 310,000 acres and 510 million pounds in 2002, valued at \$88 million. Manitoba produced 57% of Canada's crop in 2002, a record. The crop value peaked at \$108 million in 2001.

563 producers seeded 125,000 acres of white/navy beans in 2001, but the number fell to 354 producers and 90,000 acres in 2006. There were 506 growers of coloured dry beans, such as pinto, black, dark red and light red kidney, red Mexican and cranberry beans, with 114,000 seeded acres in 2001. In 2006, 428 farmers seeded 108,000 acres of coloured beans.

In 2010, Manitoba producers seeded 35,000 acres of white/navy beans and 100,000 acres of coloured beans, producing a total of 183.5 million pounds. The total area of dry beans was down in 2011, when 20,000 acres of white/navy beans and 40,000 acres of coloured beans were planted, producing a total of 91.0 million pounds of beans.



Annual farm sales were valued at \$42.5 million in 2010, down from \$52.9 million in 2009.

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. Manitoba farmers produced over 70% of Canada's pea crop in 1981, but the share dropped over time due to factors such as adverse weather and relatively poor profits to a low of 2% in 2005. The value of the crop peaked in 2002 at \$36.1 million. In 2006, 424 farmers seeded 91,000 acres of peas, down from 739 farmers with 148,000 seeded acres in 2001. Only 28,000 acres were seeded in 2011, producing 0.74 million bushels of peas compared to 80,000 seeded acres in 2010, which produced 2.3 million bushels. Farm sales of dry peas in 2010 amounted to about \$13.1 million, down from \$21.2 in 2009.

The plantings of *faba beans and lentils* were 10,600 and 6,300 acres respectively in 2001 with areas in 2006 of 15,000 acres of faba beans and 6,000 acres of lentils. In the early 2000s, 75-100% of Canada's faba bean crop came from Manitoba, while 1-2% of the national lentil crop was grown in the province. The value of the faba bean crop peaked at \$2.9 million in 1987 and was roughly \$2.5 million in 2008 and 2009. The lentil crop was valued at a record \$23.4 million in 1992, but has been \$1 million or less for the past ten years.

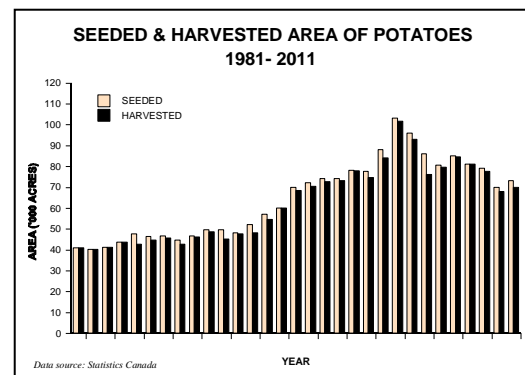
Minor specialty crops:

Small areas of *hemp, safflower seed and triticale* are grown in the province as well as *medicinal, herb, aromatic, spice and essential oil crops*. *Wild rice*, valued at \$0.5 million in 2008, is harvested on lakes and rivers, mainly in areas east of Lake Winnipeg in the Whiteshell and in the northwest near The Pas and Flin Flon.

Potatoes and other vegetables:

Manitoba's potato and other vegetable areas expanded in the early 2000s. Approximately 120 producers grow potatoes for processing, 37 grow table varieties and 28 grow seed potatoes. There were 273 commercial vegetable producers and market gardeners in 2006 with over 5,600 acres of vegetables.

The province is the second-largest *potato* producer in Canada, behind Prince Edward Island, but well ahead of New Brunswick and Alberta. Over 24 varieties are grown, but processing potatoes comprise over 85% of seeded acres. The harvested area of potatoes peaked in 2003 at 101,500 acres. Reduced North American demand for French fries and other potato products led to a smaller area of potatoes grown for processing in 2004, 2005 and again in 2006, when only 80,600 acres in total were planted. The planted area rose to 85,000 acres in 2007, but fell to 70,000 acres in 2010 and 73,000 acres in 2011. In 2007, a record 23.7 million cwt. of potatoes were produced, while the 2010 crop was 19.0 million cwt and the 2011 crop, 18.2 million cwt. Manitoba produced 20% of the Canadian potato crop in 2011. Cash receipts from potato sales fell to \$203.8 million in 2010 from \$254.7 million the previous year. Potatoes are the third most valuable annual crop in Manitoba after canola and wheat. Sales of *other vegetables, fruit, sod, mushrooms, flowers and nursery products* amounted to \$85 million in 2010, 3% below the revised 2009 level.



Forage crops:

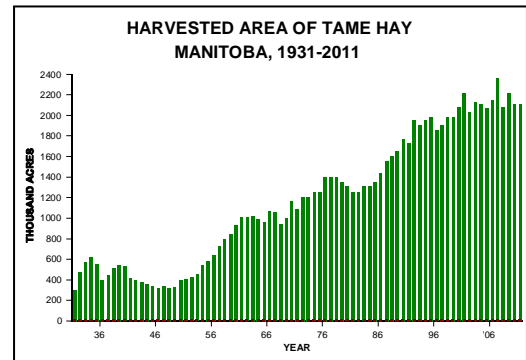
Fodder corn: The first record of corn being grown for fodder (as silage) in the province was in 1910 when 4,600 acres were harvested and 14,000 tons of fodder corn were produced.

Production of fodder corn was 1.26 million tons in 2008 with a value of close to \$40 million. In 2009, the area planted to fodder corn was 90,000 acres with 80,000 acres harvested and production of 1.35 million tons, a new record. The planted and harvested areas declined to 45,000 acres and 41,000 acres respectively in 2011 producing a crop of 0.56 million tons.

Tame hay: Manitoba livestock producers have been using native hay and pasture since homesteading began. The first recorded production of *cultivated or tame hay* was in 1908 when 215,000 tons of hay valued at \$1.6 million were produced from 119,000 acres. In 2006, 9,238 producers cut 1.70 million acres of alfalfa/alfalfa mixture hay and 4,115 producers cut 0.64 million acres of other tame hay compared to 10,105 producers with 1.63 million acres of alfalfa and 3,852 producers with 0.54 million acres of other tame hay in 2001.

In 2009, the total area of tame hay harvested was 2.21 million acres, which produced 3.7 million tons valued at about \$296 million. About 2.10 million acres of hay were cut in 2010 and 2011, producing crops of more than 3.9 million tons in both years.

Approximately 75% of Manitoba's hay is used for beef production with about 25% comprised of various dairy-quality hays. So far in the 2000s, Manitoba has produced about 10-15% of the Canadian hay crop each year.



Forage seed: The first account of commercial forage seed production in Manitoba was in 1936 when the crop was valued at \$108,000. Interest in forage seed production increased and by 1987 the crop was worth \$14.1 million. Production and value declined significantly in the early 1990s. The farm value rose in the late 1990s and 2000s to a reach \$25.7 million in 2004, fell to \$16.4 million in 2005, but rose to a record \$33.8 million in 2008, the latest year of detailed data available from *MAFRI*. According to Statistics Canada, annual farm sales of Manitoba forage and grass seeds were estimated at about \$22-24 million between 2005 and 2010.

Future:

The mix of crops and area seeded each year usually depends on anticipated market prices relative to production costs and spring weather. In 2011, excess soil moisture in spring prevented the seeding of up to 2.7 million acres, which reduced some areas planted to later-maturing varieties. Assuming normal spring soil moisture levels, the area seeded to wheat in Manitoba in the next five years could be about 3 million acres, increasing once new high-yielding feed varieties are licensed. Plantings of flaxseed could rise from current low levels, but the area seeded to canola is unlikely to exceed 3.5 million acres due to agronomic concerns. The area seeded to specialty crops also depends on weather and disease prospects.

Fertilizer, pesticides, etc.

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. Since the beginning of the twentieth century, plant breeding in Canada has developed disease and pest resistant crop varieties.

The introduction of chemical fertilizers in trials in 1928, widespread use of fertilizer after WWII as well as the introduction of pesticides in 1929 improved crop yields and enhanced farm gross incomes, but has also increased farmers' costs.

Commercial fertilizer sold and used in Manitoba steadily increased to 1.002 million tonnes in 2003/04. The cost to farmers in 2004 was close to \$374 million. With higher fertilizer prices, use was down to almost 0.840 million tonnes in 2004/05, but rose to a record 1.041 million tonnes in 2006/07. The farm cost in 2006 was \$395 million. Although use declined to 0.968 million tonnes in 2007/08 and 0.919 million tonnes in 2008/09, higher fertilizer prices raised the farm cost from \$517 million in 2007 to a new record, \$620.4 million in 2008 and to \$614 million in 2009. Use of fertilizer in 2009/10 was up to 1.009 million tonnes, but fell to 0.971 million tonnes in 2010/11. Farmers spent \$522 million on fertilizer in 2010.

Total farm purchases of pesticides in 2010 were \$314 million, down from almost \$346 million in 2009 and \$342 million in 2008.

Future:

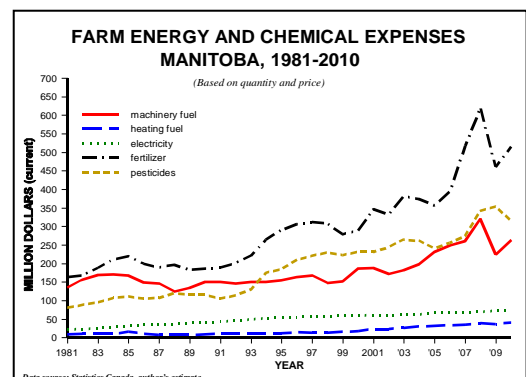
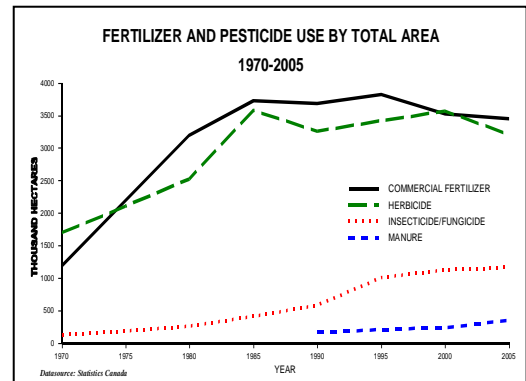
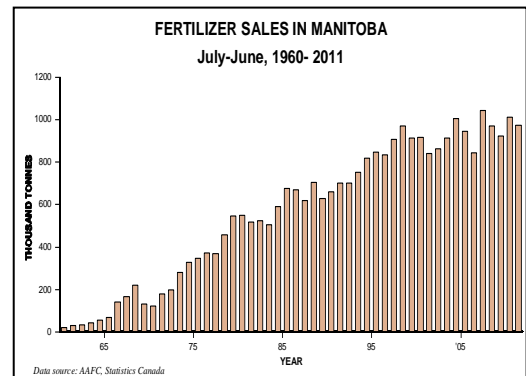
The expanded pig population in the province until 2008 and high fertilizer prices led to a greater use of manure instead of commercial fertilizer, but any further increase in manure use may be limited until pig numbers recover.

Tillage and Soil Conservation Practices

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. 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.

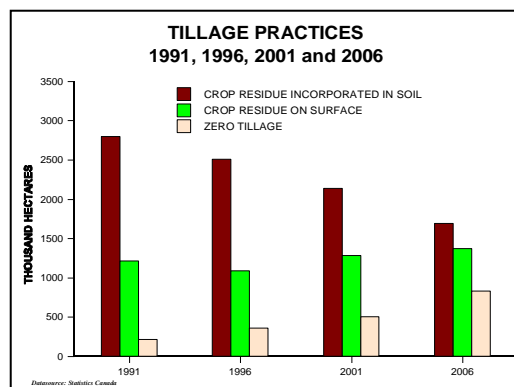
Summer fallow use led to wind and water erosion of soils, so various methods were used to educate farmers about soil conservation, such as the "Save the Soil Campaigns" of the 1950s. The soil survey, begun in 1927, the Prairie Farm Rehabilitation Act (PFRA) in 1935 and other soil conservation and drainage initiatives after WWII also served to conserve Manitoba soils and improve farm land use. 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. 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 150,000 acres in 2008 or about 1% of all cropped land. Excess soil moisture prevented



seeding in many areas in 2009, 2010 and particularly in 2011, increasing the area of crop land left as summer fallow to an estimated 475,000 acres, 710,000 acres and 2,700,000 acres respectively.

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.



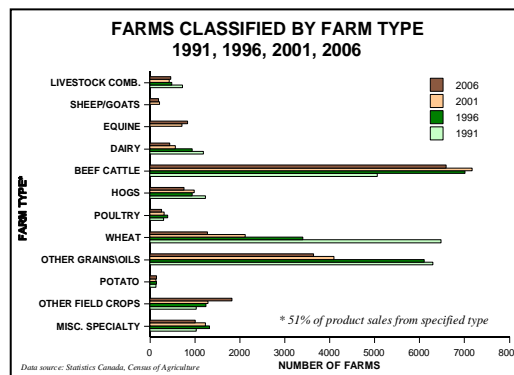
Future:

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 use of organic fertilizers, such as manure and crop residue is expected to continue.

Farm Type and Location

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, often with cattle and forage systems nearby to utilize pig manure.

According to the latest *Census of Agriculture*, almost three-quarters of Manitoba farms were classified as predominantly wheat, other grains and oilseeds or cattle farms in 1996, 2001 and 2006. Wheat farms made up only 7% of Manitoba farms in 2006, other grain and oilseed farms were 19.5% and 9% respectively, whereas cattle farms were 37% of the total. 2011 data are expected to be available in 2012.



Although the major grains and oilseeds, *wheat, canola, oats, barley, flax and rye* are grown in most areas of southern Manitoba, the largest concentrations are in the Central and Southwest regions. *Grain corn, soy beans, dry beans, sunflowers, buckwheat and canary seed* are grown mainly in the south Central region, while *dry peas, lentils and mustard* are concentrated in the Southwest.

Potatoes are grown mostly south and west of Winnipeg in the Portage la Prairie, Winkler-Morden, Treherne, Holland and Carberry areas with smaller areas near Selkirk, Melita, Dauphin and Steinbach. Large commercial vegetable farms are concentrated west, north and south of Winnipeg, particularly in the Portage la Prairie and Marquette areas.

Generally hay and pasture are found on land unsuitable for annual crops throughout southern Manitoba, while fodder corn is grown in more southerly areas.

Crop Prices

Crop prices have always fluctuated, depending on the weather and export markets. However, there have been 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. 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 marketing commission in 1966, helped stabilize and/or increase the prices farmers received for their products.

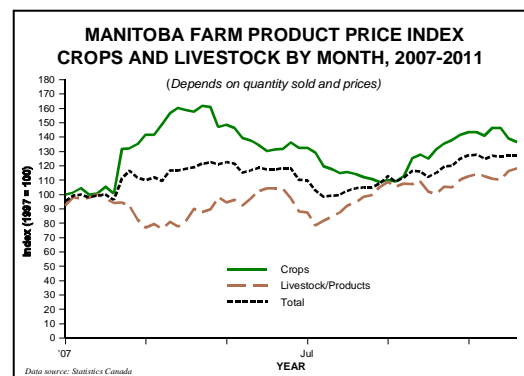
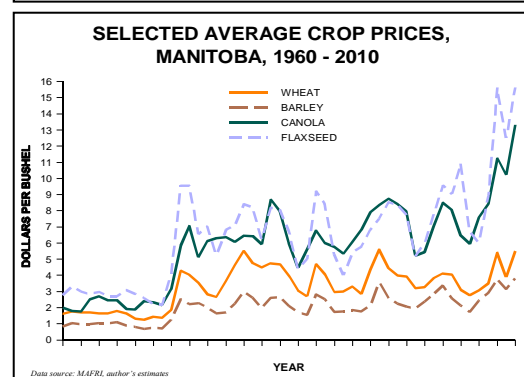
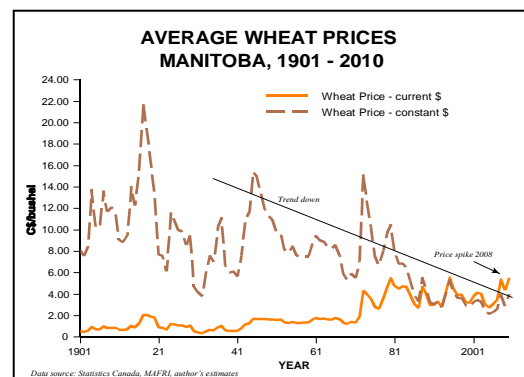
The trend in wheat prices is representative of most Manitoba grain prices. For more than 100 years the price of wheat adjusted for inflation trended down. Various factors interrupted this downward trend, such as World War I, World War II, the excessive importation of wheat by the Soviet Union in 1973, the "speculative" price spike in 2008 and grain-supply-driven rise in 2010-2011. 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.

The low crop prices of the early 2000s were reversed in fall 2006, when increased use of the U.S. corn crop for the production of ethanol for fuel began to affect crop prices around the world. Crop prices rose significantly in 2007 and 2008, but fell in late summer 2008 due to the onset of a world recession. Prices remained constrained until mid 2010 when drought in Russia and Ukraine and excess moisture on the Prairies pushed prices higher. A smaller U.S. corn crop than expected in 2010 raised all crop prices in October 2010 and most prices remained high in 2011.

Average Manitoba crop prices reached record high levels in 2007/08, with the prices of most crops increasing from 10% to more than double year-earlier levels. After falling in the years between, average prices of most major grains and oilseeds crops rose again to possible new records in 2010/11.

Future:

Factors contributing to the level of crop prices in Manitoba in 2011 will be crop production in the United States, the rate of recovery of the global economy, the relatively weak U.S. dollar globally, Canada-U.S. exchange rates and the level of ethanol and bio-fuel production in the U.S. Growing and harvest conditions in Canada and major crop importing and exporting countries will also impact local prices. Some farm input



costs are expected to average higher in 2011 than in 2010, such as fertilizer, fuel oil and transportation, but may be down in 2012.

Processing and trade

Grain processing:

Manitoba has been the centre of the grain trade in Canada for more than a century. Winnipeg is the headquarters of major grain-marketers, such as Richardson International, Cargill Limited, Parrish and Heimbecker and the Canadian Wheat Board. It is also the location of ICE Futures Canada.

Manitoba normally uses less than 20% of the wheat, most of the barley and less than one-half of the oats produced in the province. Although much of the food-quality wheat and other grains are exported in bulk, some are processed locally.

A flour mill was constructed in Elie for *Prairie Flour Mills Ltd.* in 1997, the first new mill in the province for many years. The mill is now owned by *LVB Milling Co.*

There are two oat processing facilities, Can-Oat Milling (a division of *Viterra Inc.*) in Portage la Prairie, one of the largest in North America operating at 66 million pounds of annual capacity, and *Emerson Milling Inc.* established in 1987 near Emerson.

Can-Oat Milling's processed products include old fashioned flakes, quick cooking oats, oat flakes, oat bran, oat flour, whole oat groats (hulled oats) and steel-cut oat groats. Oat products for bird food, small pet food and animal feed rations as well as oat groats, steel cut oat groats, colored oat groats, coloured steel cuts and coloured safflower are produced by Emerson Milling.

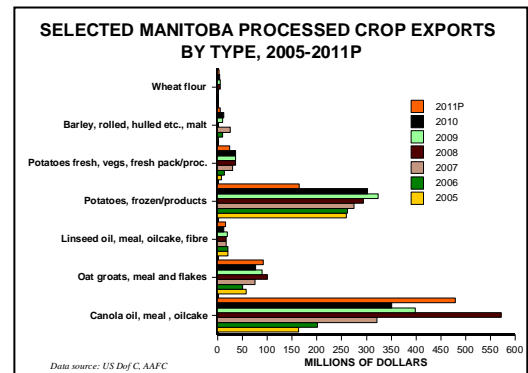
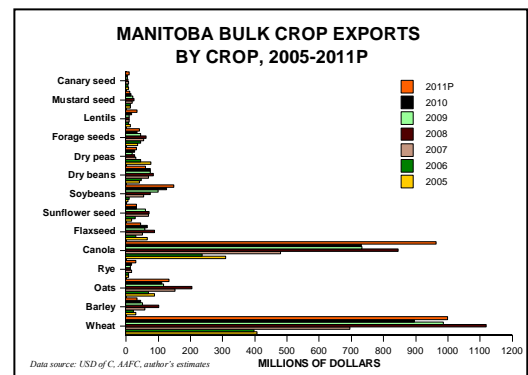
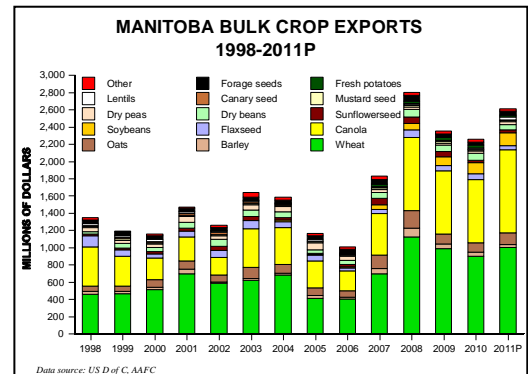
The value of processed oats exported from Manitoba in 2010 was \$77.4 million compared to \$90.6 million in 2009, \$100.3 million in 2008 and \$75.7 million in 2007. Grain, mainly wheat, is used to produce about 130 million litres of ethanol annually at Husky Energy's plant in Minnedosa. The plant also produces as by-product about 126,000 tonnes of distiller's dry grain with solubles (DDGS), a high-grade protein feed supplement for livestock.

Close to 2.5 million bushels of high-quality grain corn, most of which comes from Manitoba, is used for Canadian whisky production in the *Diageo* (was owned by *Seagram's* until 2000) distillery in Gimli.

Feed industry:

Principal inputs for the province's feed industry are barley, feed wheat and canola meal. Smaller amounts of Manitoba-produced soy meal, corn and dry peas are also used. Industry sales fell from \$583 million in 2006 to \$401 million in 2008 and to less than \$400 in 2009.

Significant amounts of grain corn (\$70 million in 2010 - less than half the value in 2008) as well as soybean oilcake and meal (\$68 million in 2010) are imported from the United States to supplement local feed supplies, mainly for pigs.



Oilseed crushing:

Manitoba has three oilseed crushing plants.

A *Bunge Ltd.* (was *CanAmera Foods*) plant is located in Altona and another in Harrowby on the Saskatchewan border. Most of the canola crushed in 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, the new high-stability, high-oleic Nexera canola oil, bulk vegetable oil, retail pack refined oil, hulls and screenings. *Bunge plans to double the capacity of the Altona plant to 2,500 tonnes of seed per day by 2012.*

An oilseed crushing plant was built in 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 was owned by *Associated Proteins LP* until June 25, 2009, when *Associated Proteins* became a subsidiary of *Viterra Inc.* The plant focuses on producing specialty oil products for niche markets. At peak capacity, the plant can process 1,000 tonnes of canola per day and eventually could double capacity. Canola meal, a byproduct of oilseed crushing, is used for livestock feed.

Much of the canola seed, oil and meal Manitoba produces is exported. Exports of canola oil fell from \$489 million in 2008 to \$311 million in 2009 and \$285 million in 2010 due to smaller canola crops and/or lower prices. The value of canola oil exports could rise to \$420 million in 2011, mainly as a result of higher prices. Exports of other processed canola products and bi-products, such as meal and oilcake, amounted to \$67 million in 2010 compared to almost \$89 million in 2009 and \$84 million in 2008. In 2011, the value of these exports could be about \$75 million.

Potato processing:

Over 85% of Manitoba's potato crop is used for processed foods, such as frozen French fries and hash browns, instant mashed potatoes and potato chips. One of four major Manitoba potato processing plants was built in Portage la Prairie by *McCain Foods* in 1977, the second plant in Portage la Prairie was completed in 2003 by *J.R. Simplot Co.*, a third plant, located in Carberry, was built in 1962 and is owned by *Simplot* in partnership with *Nesle Canada* and the fourth plant is the *Old Dutch Foods'* plant built in Winnipeg in 1956. A smaller food processing plant in Winnipeg, owned by *Naleway Foods Ltd.*, began operating in the 1940s.

Processed potato exports increased from \$263 million in 2006 to \$276 million in 2007, \$295 million in 2008 and \$325 million in 2009, but declined to \$302 million in 2010 and may fall to about \$165 million in 2011 due to the smaller crops in 2010 and 2011.

MANITOBA GRAIN AND OILSEED STATISTICS

	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010^R</u>	<u>2011^P</u>
NO. OF CROP FARMS:	9,160	8,605	9,225	8,860	8,685	8,570	
(51+% of income from grains/oilseeds):	7,865	7,315	7,860	7,665	7,605	7,610	
SEEDED AREA (million acres):							
Wheat	2.92	3.28	2.93	3.22	3.08	3.04	2.17
Oats	0.72	0.95	1.05	0.86	0.60	0.56	0.50
Barley	0.90	0.84	1.02	0.82	0.70	0.48	0.34
Rye	0.05	0.09	0.06	0.08	0.08	0.055	0.045
Grain corn	0.11	0.15	0.20	0.20	0.20	0.185	0.18
Canola	2.50	2.48	3.06	3.10	3.20	3.37	2.725
Flax	0.38	0.38	0.20	0.27	0.30	0.175	0.095
Soybeans	0.11	0.35	0.23	0.28	0.42	0.52	0.575
Total major grains/oilseeds	7.69	8.52	8.75	8.83	8.58	8.385	6.63
Sunflowers	0.20	0.19	0.19	0.17	0.16	0.135	0.035
CROP PRODUCTION (million bushels):							
Wheat	89.71	139.44	118.00	157.30	152.30	119.83	80.50
Oats	28.58	62.73	78.10	72.40	50.00	42.50	27.00
Barley	31.30	47.55	54.90	51.50	44.00	22.40	12.00
Rye	1.50	3.40	2.12	3.30	3.90	2.30	1.74
Grain corn	8.33	14.95	19.43	18.65	14.30	18.90	16.30
Canola	55.60	80.50	86.00	113.60	124.70	97.70	73.00
Flaxseed	5.80	7.60	4.15	6.35	7.60	3.20	1.50
Soybeans	2.26	9.27	7.80	8.90	11.80	16.00	16.20
Total major grains/oilseeds:	223.10	365.45	370.50	432.00	408.60	314.83	228.24
Sunflower seed (million lb)	171.00	346.80	264.10	247.30	224.70	149.90	43.60
TOTAL FARM CASH RECEIPTS^R							
(grains and oilseeds) (\$ million):	914	963	1,865	2,414	2,289	1,722	N/A
<i>% of Canada</i>	13.8	12.3	16.2	15.6	15.9	15.2	
AVERAGE PRICES (crop year) (\$/bu):							
Wheat	2.74	3.05	3.47	5.42	3.9	5.5	N/A
Barley	1.74	2.41	2.91	3.73	3.15	3.8	N/A
Canola	5.94	7.56	8.41	11.27	10.2	13.3	N/A
Flaxseed	6.68	6.04	8.92	15.62	12.5	15.6	N/A
TRADE (\$ million):							
Selected bulk grain/oilseed exports:	932	801	1,564	2,371	2,109	2,012	2,363
Wheat	408.3	397.8	696.0	1,121	986.6	896.9	1,000
Oats	90.1	71.3	153.7	204.8	116.9	111.9	135
Barley	31.6	24.0	59.9	103.1	51.9	45.8	34
Canola	311.0	237.4	480.7	846.0	733.1	732.2	965
Flaxseed	67.5	31.3	50.9	90.1	58.6	66.8	46
Soybeans	6.2	10.5	55.9	76.2	100.8	126.3	150
Sunflower seed	17.6	28.7	70.8	72.6	61.2	32.3	33
Selected product exports:	246.3	283.9	445.0	697.9	527.1	459.0	597.5
Wheat flour, meal and bran	1.4	0.4	2.7	5.3	5.8	4.0	3.8
Oat groats, meal and flakes	58.4	50.4	75.7	100.3	90.6	77.4	92
Canola oil, meal, oilcake	163.5	201.7	322.4	573.0	399.6	351.7	480
Linseed oil, meal, oilcake, fibre	21.5	21.4	17.7	17.8	20.6	12.8	16.5
Barley rolled, hulled, etc., malt	1.5	10.0	26.5	1.5	10.5	13.1	5.2
Selected grain and oilseed imports:							
Corn and corn products	44.2	48.1	66.5	157.4	70.7	73.4	56
Soybeans/products	92.5	86.7	99.6	114.0	91.7	78.1	91

PULSE AND SPECIALTY CROP STATISTICS

	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011^P</u>
NO. OF FARMS (est.):							
Canary seed	100	71	25	30	25	30	15
Dry beans	800	700	550	480	500	500	300
Dry peas	600	424	425	500	400	380	100
Mustard seed	30	29	20				
SEEDED AREA ('000 acres):							
Buckwheat	10	17	5	6	5	5	2
Canary seed	20	9	15	25	15	25	15
Dry beans	215	197	150	130	135	135	60
Dry peas	120	91	95	110	85	80	28
Faba beans	6	15	15	15	15	N/A	N/A
Lentils	5	6	7	5	5	N/A	N/A
Mustard seed	6	6	4	1	1	N/A	N/A
Total pulse/specialty crops	382	341	291	292	261		
CROP PRODUCTION:							
Buckwheat (million bu)	0.21	0.34	0.10	0.11	0.09	0.08	0.03
Canary seed (million lb)	17.40	8.27	13.90	24.30	16.35	19.12	N/A
Dry beans (million lb)	140.40	338.40	225.00	212.00	196.50	183.5	91.0
Dry peas (million bu)	2.30	3.80	3.59	4.00	3.68	2.30	0.74
Faba beans (million lb)	10.58	20.94	23.91	24.45	25.00	N/A	N/A
Lentils (million lb)	4.23	5.68	4.00	2.00	2.00	N/A	N/A
Mustard seed (million lb)	2.75	2.56	2.05	0.50	0.50	N/A	N/A
TOTAL FARM CASH RECEIPTS^R (pulses and special crops) (\$ million):	34	56	82	87	77	59	N/A
<i>% of Canada</i>	4.4	6.5	6.4	5.5	4.4	3.7	
AVERAGE PRICES (crop year)^R:							
Buckwheat (\$/bu)	7.26	7.21	7.78	9.66	10.50	N/A	N/A
Canary seed (\$/lb)	0.09	0.16	0.18	0.26	0.21	0.30	N/A
Dry beans (\$/lb)	0.20	0.21	0.24	0.36	0.30	0.26	N/A
Dry peas (\$/bu)	3.53	4.53	6.25	8.43	6.00	8.50	N/A
Faba beans (\$/lb)	0.07	0.07	0.09	0.10	0.09	N/A	N/A
Lentils (\$/lb)	0.12	0.12	0.27	0.30	0.25	0.17	N/A
Mustard seed (\$/lb)	0.15	0.14	0.26	0.30	0.18	0.20	N/A
TRADE (\$ million) (exports may include prod from outside Manitoba):							
Total pulse/spec. crop bulk exports:	159.87	124.04	139.40	155.74	133.18	144.55	152.9
Buckwheat	1.02	0.43	0.97	0.84	0.61	0.75	0.9
Canary seed	9.12	7.61	8.03	6.35	4.07	5.84	10
Dry beans	42.22	47.32	70.18	85.62	75.95	76.32	61
Dry peas	78.19	46.20	31.10	26.92	19.40	27.30	33
Mustard seed	14.52	14.06	19.16	24.97	22.27	16.74	13
Lentils	14.80	8.42	9.96	11.04	10.97	17.60	35
Processed product exports:							
Mustard flour, meal, prepared, etc.	0.17	0.01	0.03	1.19	0.78	0.54	0.4
Total pulse/specialty crop imports:	7.89	9.59	6.56	8.31	12.93	14.58	13.57
Dry beans	5.31	5.40	3.05	6.17	9.34	10.48	12
Dry peas	2.55	4.16	3.34	2.11	3.53	4.03	1.5
Mustard seed	0.03	0.03	0.17	0.03	0.06	0.07	0.07
Processed product imports:							
Mustard flour, meal, prepared, etc.	0.40	0.39	0.40	0.37	0.62	0.66	0.26

MANITOBA FORAGE CROP STATISTICS

	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011^P</u>
NO. OF FARMS:							
Alfalfa and alfalfa mixtures		9,238					
Other tame hay		4,115					
Forage seeds		606					
Improved pasture		5,819					
Native pasture		10,081					
SEEDED AREA ('000 acres):							
Alfalfa and alfalfa mixtures		1,696					
Other tame hay		640					
Total tame hay	2,225	2,336	2,475	2,450	2,440	2,420	2,300
<i>% of Canada</i>		12	12	12	12	12	12
HARVESTED AREA ('000 acres):							
Tame hay (dry hay only)	2,065	2,140	2,358	2,075	2,210	2,100	2,100
Forage seeds	153	146	141	132	N/A	N/A	
<i>% of Canada</i>		21					
IMPROVED PASTURE (000 acres):		1,231					
NATIVE PASTURE ('000 acres):		3,826					
CROP PRODUCTION:							
Tame hay ('000 tons)	3,520	3,470	3,918	3,800	3,700	3,900	3,925
Forage seeds (million lb)	31.3	70.4	65.7	61.2	N/A	N/A	
FARM VALUE (\$ million):	245.4	304.2	266.7	299.2	311.2	334	
Tame hay produced	229.0	270.5	233.5	265.4	277.5	300	
Forage seeds (est)	16.4	33.7	33.2	33.8	33.7	34.0	
FARM CASH RECEIPTS (\$ million)^R:							
Tame hay sales	16.3	15.1	14.9	15.2	17.5	18.2	
Forage seed sales	24.0	22.7	24.1	23.6	23.5	23.8	
AVERAGE PRICES:							
Tame hay (\$/ton)	65	70	60	70	75	78	
Forage seeds (\$/lb)	0.50	0.48	0.51	0.55	0.58	0.70	
TRADE (\$ million):							
Total exports:	42.6	52.8	63.0	66.9	48.4	37.5	43.5
Tame hay	4.7	6.3	6.3	4.5	2.8	2.0	1.5
Alfalfa pellets, cubes and meal	0.5	0.3	0.4	0.05	0.05	0.01	0.03
Forage seeds*	37.4	46.2	56.3	62.3	45.5	35.5	42
*Includes seed from other Western provinces and imports							
Total imports:	3.6	3.3	3.3	3.5	2.8	6.6	8.6
Tame hay	0.0	0.0	0.0	0.01	0.01	0.09	0.08
Forage seeds	3.6	3.3	3.3	3.5	2.8	6.5	8.5