MANITOBA

Trends in Employment, Labour Cost and Labour Productivity in the Agri-food Sector

October 20, 2023

Population growth, along with rising incomes in developing countries, are expected to drive up global food demand. To meet this growing demand for food, agricultural output needs to increase, and this requires access to a skilled labour force. Nevertheless, availability of skilled workers has been a long-standing concern in the agri-food sector across the country. This report provides context to the current labour situation in the agriculture and agri-food sector and highlights long-term trends.

Below are important considerations when discussing employment in the agriculture and agri-food sector:

1. ***The number of farms and farm operators in Manitoba continues to decline.*** The number of farms and farm operators in Manitoba has declined by 32.4 and 31 per cent between 2001 and 2021, respectively, while farms are getting bigger, mainly because of farm consolidation. The average farm size in Manitoba has increased by 32.1 per cent from 891 acres in 2001 to 1,177 acres in 2021. On the other hand, the total acreage under crop production barely changed during the same period (only down by 0.3 per cent). Over the past several decades, farm consolidation caused long-term farm de-population. Manitoba's farm population[1] declined by 35.7 per cent since 2001, from 68,445 to 43,995 people.
2. ***The demographics of Manitoba farm operators are changing.*** The average age of farm operators increased by 11 per cent from 49 years in 2001 to 55.4 years in 2021. The proportion of farm operators with an age of 55 years and older increased from 32.8 per cent in 2001, to 55.8 per cent in 2021.
3. ***The number of food processing facilities in Manitoba is on the rise.*** The food and beverage-processing sector is experiencing different dynamics than the primary agriculture sector. The number of food processing facilities in Manitoba have increased over the years, including the recently opened plants Roquette and the Manitoba Dairy Initiatives, while several other food-processing plants have undergone significant expansion. There is also a significant increase in non-residential capital investments in the food sector, where the total non-residential capital investment increased by 184 per cent between 2000 and 2021.

The following are some of the trends in employment in the agriculture and agri-food sector:

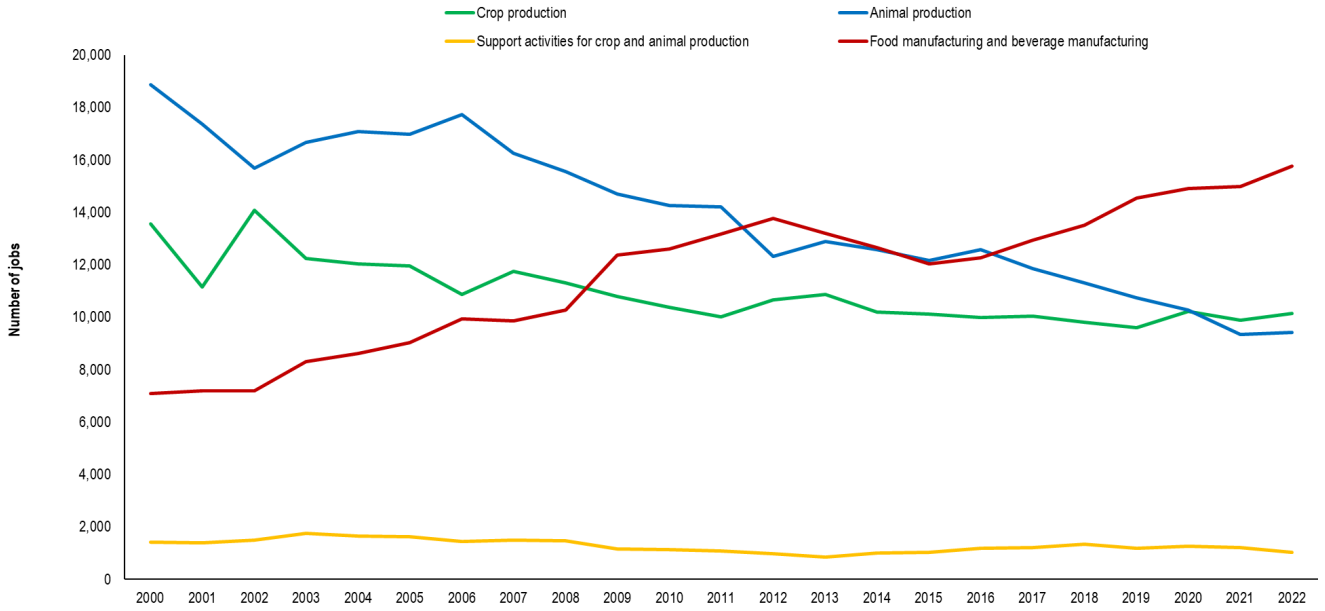
Trend #1. Job numbers in primary agriculture are declining over time.

As shown in Figure 1 and 2, the number of jobs in the crop and animal production sector is on a long-term downward trend, declining by 25.2 per cent and 50.1 per cent between 2000 and 2022, respectively. This follows trends across the Prairie Provinces and Canada where both the crop and animal production sector experience employment contraction. As shown in Figure 3, the degree of job contraction or gains differs among the provinces and industries. Manitoba have seen less contraction in the number of crop production jobs than the other two Prairie Provinces, but much higher contraction than the national average. Both in Saskatchewan and Manitoba, the number of animal production jobs declined by more than 50 per cent since 2000.

In Manitoba, the number of jobs in the support services for crop and animal production has also declined by 27.6 per cent during the same period. Overall, the long-term decline in the number of jobs in the crop and animal production sector is mainly driven by farm consolidation, retirement, and increased adoption of labour-saving agricultural technologies.

[1] The Census of Agriculture "farm population" concept refers to all persons who are members of the households of farm operators.

Figure 1. Number of Jobs in the Manitoba's Agri-food Sector, 2000-2022.



Source: Statictics Canada, Table 36-10-0480-01

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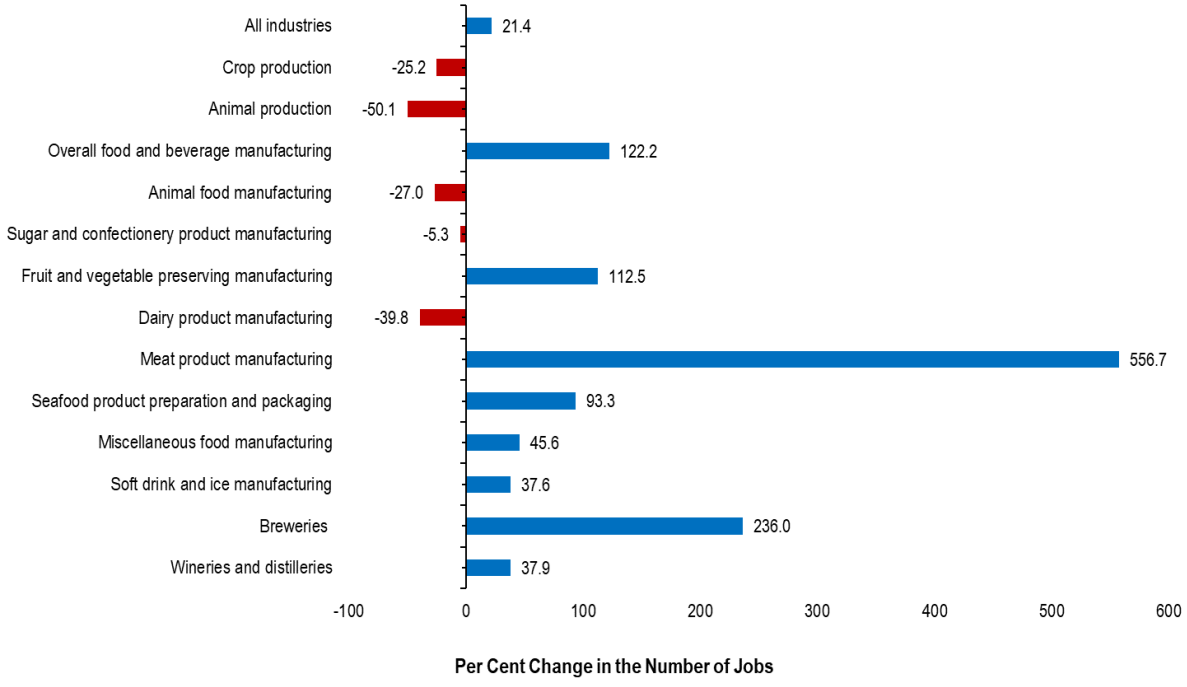
Figure 2. Change in the Number of Jobs between 2000 and 2022 (in percentage).



Source: Statistics Canada, Table 36-10-0489-01

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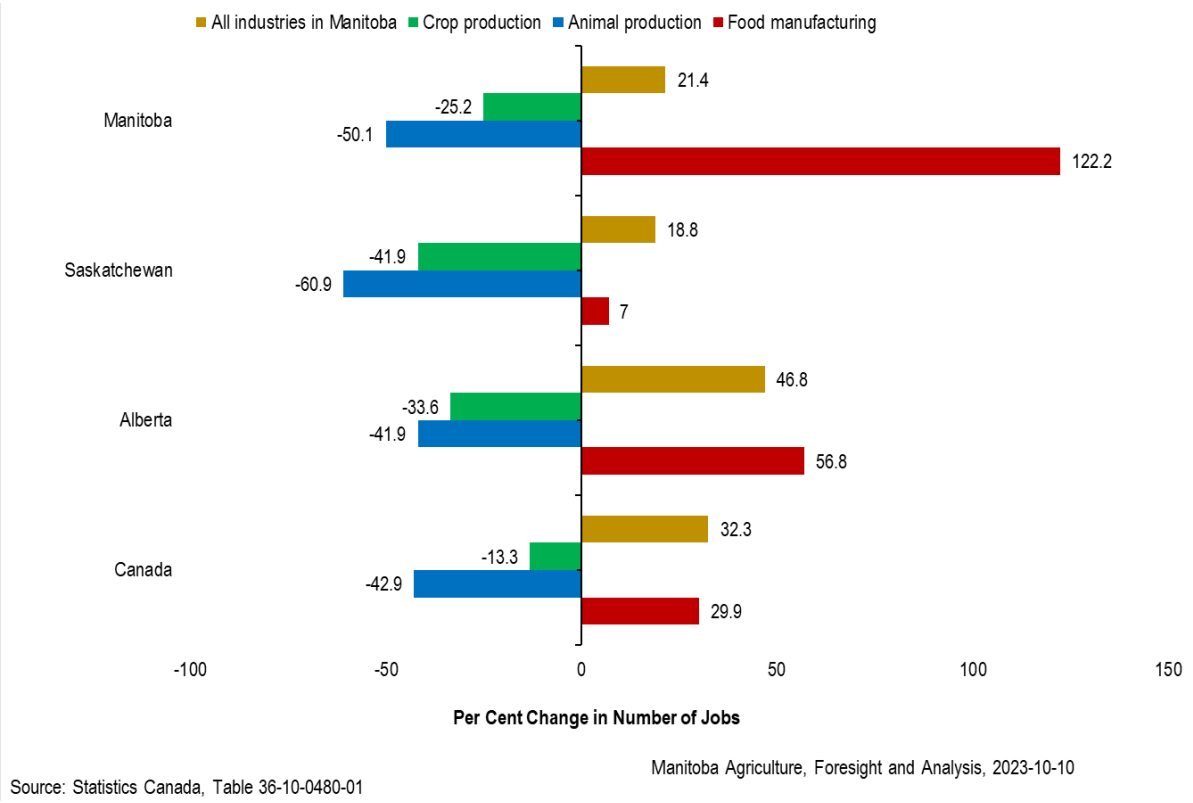
Figure 3. Change in the Number of Agri-food Jobs by Industry and Geography, between 2000 and 2022.



Trend #2. The number of food manufacturing jobs has increased.

As shown in Figure 1 and 2 above, the number of jobs in the food and beverage manufacturing sector increased by 122.2 per cent between 2000 and 2022. The expansion of the food manufacturing capacity in Manitoba, either by the expansion in existing facilities or the establishment of new processing plants, has led to a significant increase in the number of food and beverage manufacturing jobs. Compared to other provinces, Manitoba had a larger increase in food manufacturing jobs than the other Prairie Provinces and Canada (Figure 3).

In Manitoba, meat processing is driving the job growth in the food and beverage manufacturing industry. The number of meat processing jobs increased by over five-fold, from 1,260 jobs in 2000 to 8,275 jobs in 2022 (Figure 2). In 2000, the meat processing industry accounted for only 17.7 per cent of the total food and beverage manufacturing industry, while that proportion increased to 52.5 per cent in 2022. Other food and beverage processing industries that had a large percentage change in job growth were breweries (236 per cent), fruit and vegetable preserving and specialty food manufacturing (112.5 per cent), and seafood product preparation and packing (93.3 per cent). Dairy product manufacturing (39.8 per cent) and animal food manufacturing (27.0 per cent) have seen large contraction in the number of jobs over the years.

Trend #3. Paid jobs are on the rise in agriculture, particularly in the crop sector.

In terms of employment types, there are both paid jobs and self-employed individuals within the agriculture sector. Paid jobs often include formal or informal wage employment, while self-employed individuals operate their own businesses.

Agriculture has the highest rate of self-employment as the main job. However, that rate has declined sharply over the last few years. Farm self-employment has followed a long-term downward trend for a combination of reasons, including fewer but larger farms, rising farm productivity and more non-farm employment opportunities. The proportion of paid jobs in the crop production sector has shown a significant increase over the past two decades (Figure 4), while self-employed jobs are declining. The number of paid crop production jobs increased by 80 per cent, from 3,655 jobs in 2000 to 6,580 jobs in 2022. This has increased the proportion of paid crop production

jobs from just 27 per cent of the total crop production jobs in 2000, to 64.9 per cent in 2022. On the other hand, during the same time, the number of self-employed crop production jobs decreased by 64.1 per cent, from 9,900 jobs to 3,555 jobs.

Similarly, the proportion of paid animal production jobs increased from 24.6 per cent in 2000 to 50.2 per cent in 2022. For animal production, the number of paid jobs barely changed (an increase of only 1.8 per cent) between 2000 and 2022, while the number of self-employed jobs decreased by about two-third from 14,235 jobs in 2000 to 4,690 jobs in 2022.

While a very small percentage of food and beverage manufacturing jobs are self-employed jobs, the proportion of self-employed and paid jobs remained relatively unchanged over time. Paid jobs accounted for 96.1 and 98.4 per cent of food and beverage manufacturing jobs in 2000 and 2022, respectively. About 92.5 per cent of jobs across all industries in Manitoba are paid jobs in 2022, up from 87.3 per cent in 2000.

Figure 4. Proportion of Paid Jobs in the Agri-food Sector.

Source: Statistics Canada, Table 32-10-0480-01

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Trend #4. The job vacancy rate declined, compared to the previous year.

In the second quarter of 2023, the number of job vacancies and vacancy rates[2] has declined across most industries, including the agrifood sector, compared to the same quarter in 2022 (Table 1). In the agriculture, forestry, fishing and hunting sectors, the number of job vacancies has dropped by 44.7 per cent, from 895 job openings in the second quarter of 2022 to 495 in the same quarter in 2023. Similarly, in the food manufacturing sector, job vacancies have decreased by 40.7 per cent between the same quarters, while the number of job openings across all industries declined by 9.1 per cent.

The decline in the number of job vacancies has led to a lower vacancy rates in most industries, which signals that the short-term outlook for labour shortages is improving. The vacancy rate in the agriculture, forestry, fishing and hunting sectors has declined by 42.9 per cent from 6.3 percent in the second quarter of 2022, to 3.6 per cent in the same quarter in 2023. Food manufacturing vacancy rates have also dropped by 37.5 per cent (from 4.8 per cent to 3.0 per cent), while beverage manufacturing saw a 9.3 per cent decline in job vacancy rate. Since 2005, the highest job vacancy rate for crop (6.9 per cent) and animal production (6.6 per cent) was observed in the third quarter of 2022. For food manufacturing, the highest vacancy rate of 4.8 per cent was observed in the first quarter of 2022. The high level of job vacancy rate in 2022 was mainly related to the impact of COVID-19. As COVID-related restrictions lifted in 2022, businesses geared up their hiring processes and increasing job openings, which led to a higher job vacancy rate.

[2] The job vacancy rate represents vacant positions as a proportion of all positions (i.e., vacant and occupied positions).

Table 1. Number of Job Vacancies and Job Vacancy Rate between Second Quarters of 2022 and 2023.

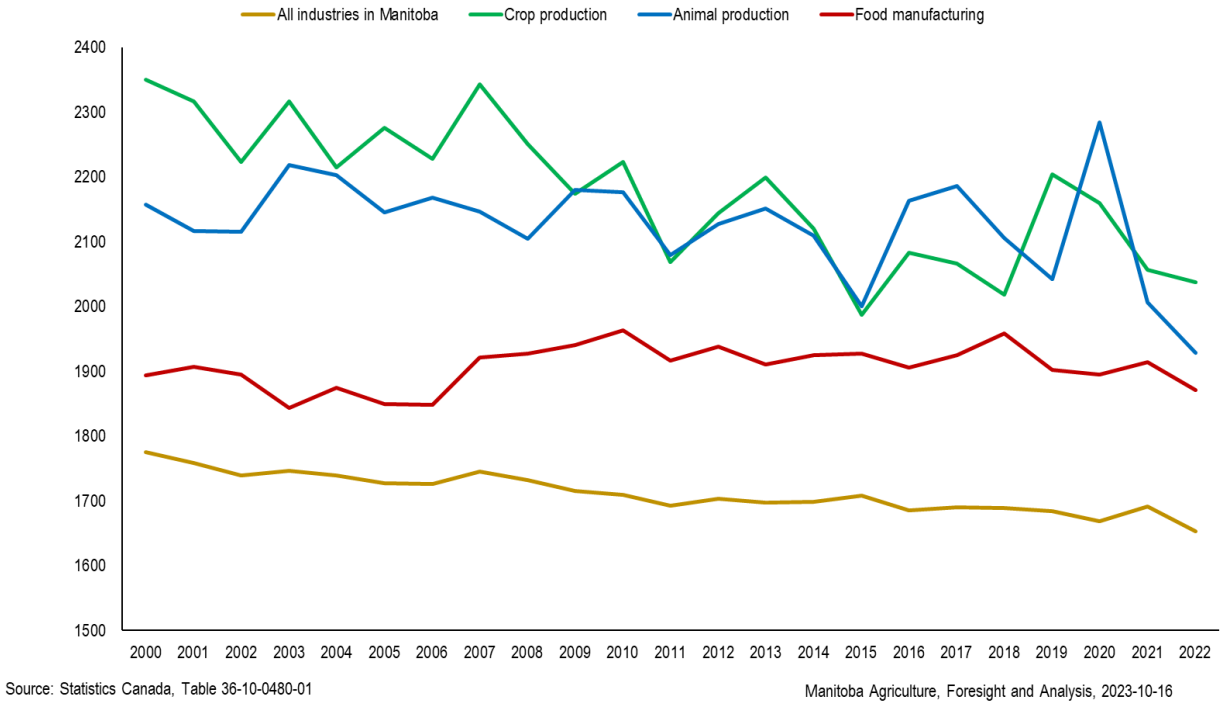
		All industries	Agriculture, forestry, fishing & hunting	Crop production	Animal production & aquaculture	Food manufacturing	Beverage & tobacco manufacturing
Job vacancy number	Second quarter, 2022	29,980	895	445	405	700	F
	Second quarter, 2023	27,250	495	F	F	415	46
	% Change (Q2023/Q2022)	- 9.1	- 44.7	-	-	-40.7	-
Vacancy rate	Second quarter, 2022	4.8	6.3	6.9	6.6	4.8	5.4
	Second quarter, 2023	4.3	3.6	F	F	3.0	4.9
	% Change (Q2023/Q2022)	-10.4	-42.9	-	-	-37.5	-9.3

F too unreliable to be published; x suppressed to meet data confidentiality requirements

Trend #5. Average hours worked per worker is showing a long-term decline.

The average number of hours worked per worker in the agri-food sector is showing a gradual long-term decline (Figure 5). Between 2000 and 2022, the average hours worked per worker decreased by 13.3 per cent in the crop production industry, 10.6 per cent in animal production, 1.2 per cent in the food manufacturing industry, and by 6.9 per cent across all industries in Manitoba. As labour supply has two components (e.g., the number of workers and the number of work hours per worker), the long-term gradual decline in the average hours worked per worker may have negative implications for future labor supply, unless compensated by gains in labour productivity.

Figure 5. Annual Average Number of Hours Worked per Worker.



Source: Statistics Canada, Table 36-10-0480-01

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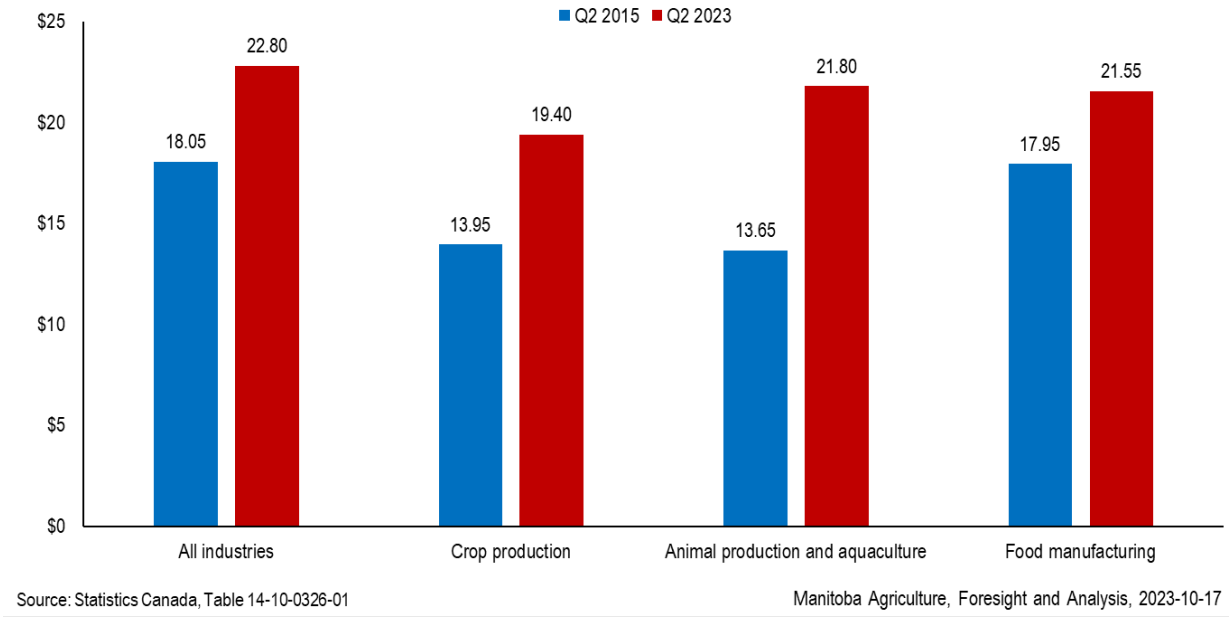
Trend #6. Offered hourly wage is on the rise.

As shown in Figure 6, offered hourly wage across all industries, including the agri-food sector, is increasing as hourly wage increased by 39.1 per cent for crop production, 59.7 per cent for animal production, and 20.1 per cent for food manufacturing between the second quarter of 2015 and the same quarter in 2023. Offered hourly wage increased by 26.3 per cent across all the industries in Manitoba.

Figure 6. Offered Hourly Wage Between the Second Quarters of 2015 and 2023.



Source: Statistics Canada, Table 14-10-0326-01

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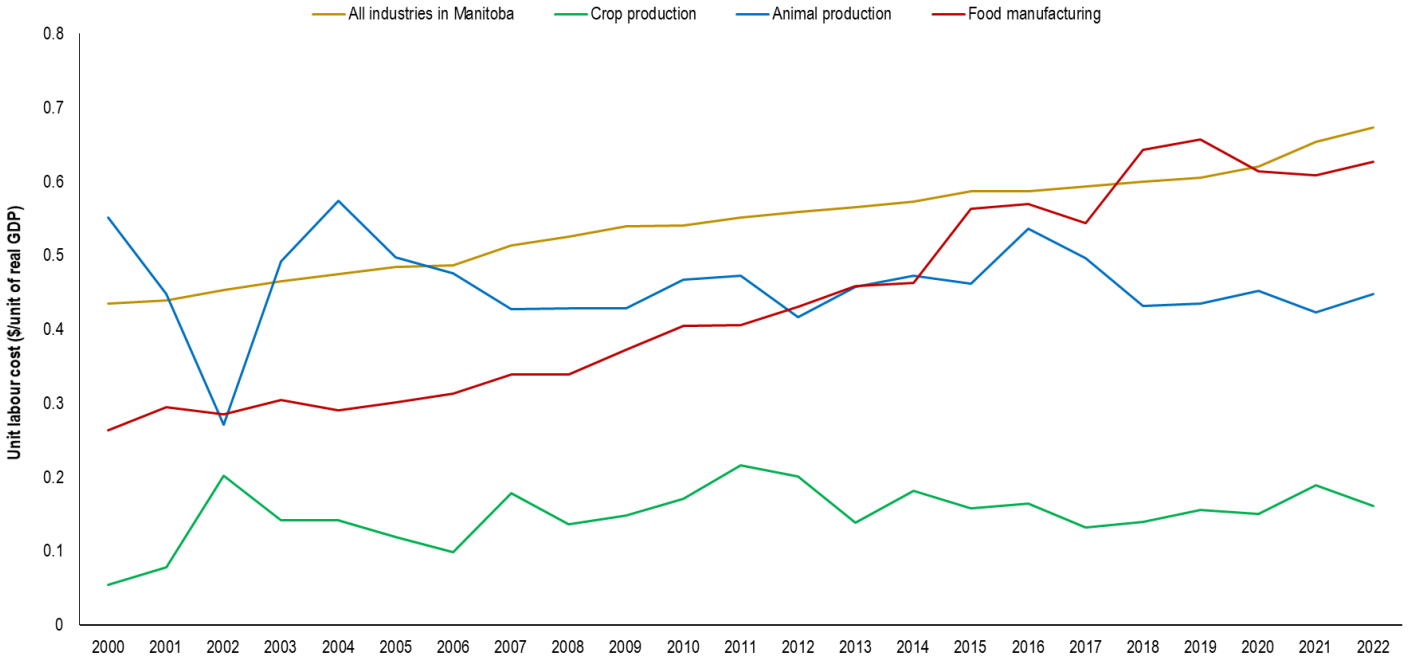
Trend #7. Unit labour cost in the agri-food sector is increasing over time.

Unit labour cost is a widely used indicator to examine the cost pressure on businesses arising from wage growth. Unit labour cost measures the average cost of labour per unit of output (value-added) produced. It increases when labour compensation per hour worked increases more rapidly than real value-added per hour worked. Increases in unit labour cost can negatively affect competitiveness and export growth.

While the crop production industry's unit lower cost is much lower than that of the other agri-food industries, it has grown at a much higher rate over time. Unit labour cost in the crop production industry increased by 198.1 per cent between 2000 and 2022, or at an annual growth rate of 5.3 per cent. Food manufacturing also saw a significant increase in unit labour cost, increasing by 137.5 per cent since 2000, or at a 4.2 per cent annual growth rate. The animal production industry has managed to lower unit labor cost over time, where unit labour cost decreased by 18.7 per cent between 2000 and 2022. Technology adoption (e.g., robotic milking, animal feeders) might have had a larger labour-saving effect, reducing the unit labour cost over time. The average unit labour cost for all industries in Manitoba increased by 54.7 per cent during the same period, or at 2.1 per cent per year.

Figure 7. Unit Labour Cost in Manitoba's Agri-food Sector, 2000-2022.



Source: Statistics Canada, Table 36-10-0480-01

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Trend #8. Labour productivity is on the rise, except in the food manufacturing industry.

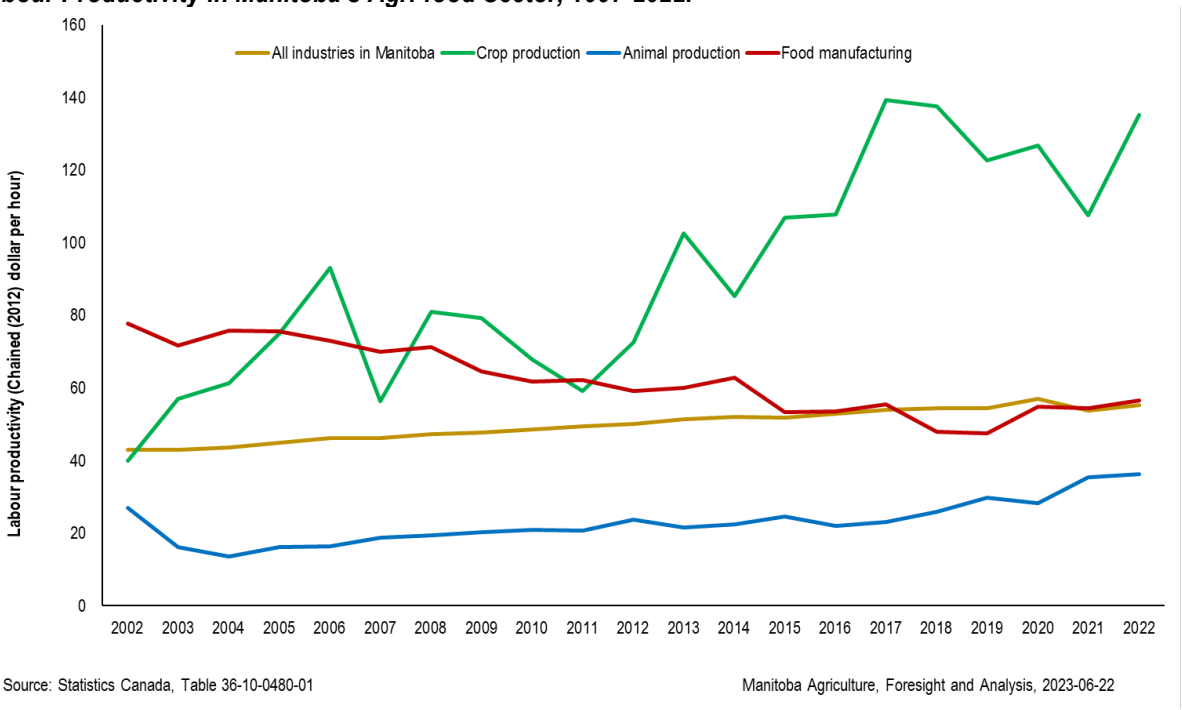
Labour productivity is measured as a ratio of output per unit of labour input (hours worked). The average labour productivity for all industries in Manitoba in 2022 was $55.3 in real GDP output per labour hour worked. The crop production industry in Manitoba has a much higher labour productivity ($135.3 in real GDP output per labour hour worked in 2022), compared to the animal production ($36.2), food manufacturing ($56.5), and all other industries in Manitoba. Technological progress, investment in physical capital and quality education and training are the main sources of labour productivity[3] growth.

The crop production industry's labour productivity has also grown at a much higher rate than that of the animal production, food manufacturing, and the average of all industries in Manitoba. While it shows higher annual fluctuations (Figure 8), labour productivity in the crop production sector has increased by 239.1 per cent, or at 6.0 per cent per year, over the last 20 years. The crop production sector's labour productivity is more susceptible to the effects of both drought and excess moisture than other sector. For instance, the drought in 2021 led to a 15.3 per cent decline in labour productivity in the crop production sector. Between 2002 and 2022, labour productivity in the animal production sector has increased by 34.1 per cent, or 1.4 per cent per year.

Although it is showing signs of recovery in recent years, labour productivity in the food manufacturing sector in Manitoba showed a long-term decline, as it has decreased by 27.3 per cent, from $77.7 in real GDP output per hours worked in 2002, to $56.5 in 2022. In the food manufacturing sector, the increase in unit labour cost is higher than the increase in real GDP output, leading to a decrease in labour productivity.

[3] Labour productivity is the ratio between real value added and hours worked.

Figure 8. Labour Productivity in Manitoba's Agri-food Sector, 1997-2022.



Source: Statistics Canada, Table 36-10-0480-01

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