#14 March 2025

Labour Costs in Cow-Calf Operations

Key Takeaways

- Labour intensity averages 15 hours per cow, with significant variation based on herd size, and management practices.
- Larger herd sizes benefit from economies of scale, reducing labour hours per cow from 26 hours in small herds (<50 cows) to just 3 hours in large herds (500+ cows).
- Higher profitability is associated with lower labour intensity, with low-profit farms averaging 23.9 hours per cow, compared to 8.8 hours in high-profit operations.
- Labour costs represent a significant portion of production expenses, averaging $327 per cow and accounting for 18% of total costs.
- Accurately tracking and valuing both paid and unpaid labour is essential for making informed financial decisions, enhancing labour efficiency, and improving overall financial performance.

Introduction

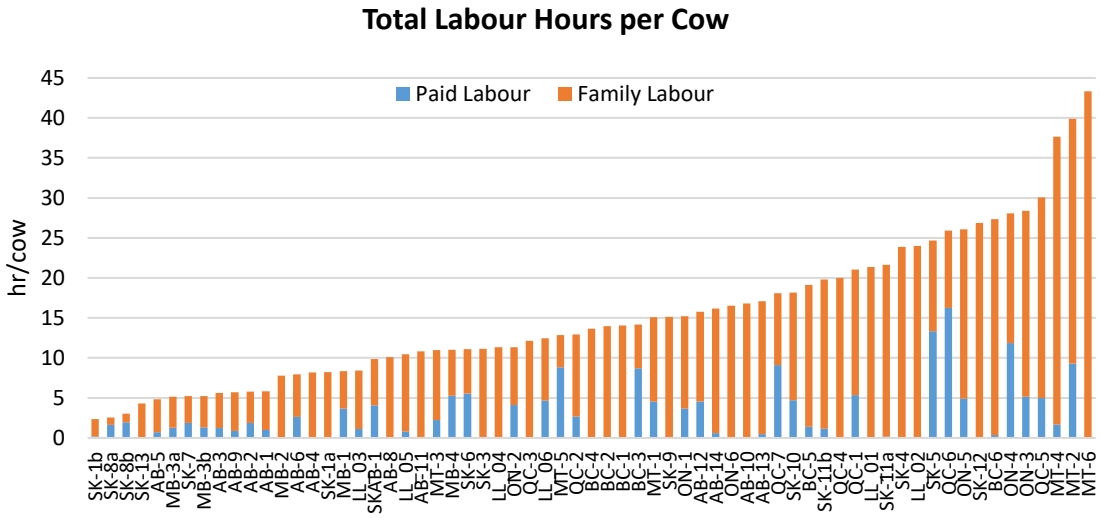
Labour (composed of hours per cow and wages) is a critical component of cow-calf operations, impacting overall efficiency and profitability. This report examines the 65 benchmark farms in the Canadian Cow-calf Cost of Production (COP) Network and the Alberta Agrisystems Living Lab in 2023, comparing them to external benchmarks and exploring the relationship between herd size, calving season, profitability, wages and overall labour costs.

Labour Hours

Labour intensity, measured in labour hours per cow, averaged 15 hours per cow, with a broad range from 2.3 to 43.3 hours (Figure 1). In comparison, a 2018 USDA study by Gillespie et al. (2023)[1] based on the Agricultural Resource Management Survey reported an average of 19.2 total labour hours per cow, including both paid and unpaid labour.

A possible factor contributing to the lower labour intensity in the COP Network is its larger average herd size. The COP Network's average herd size is 190 head, compared to 100 head in the US study.

[1] Gillespie, J., Whitt, C., & Davis, C. (2023). Structure, management practices, and production costs of U.S. beef cow-calf farms (Report No. ERR-321). U.S. Department of Agriculture, Economic Research Services https://ers.usda.gov/sites/default/files/_laserfiche/publications/107013/ERR-321.pdf?v=39030 . Accessed on February 28,2025



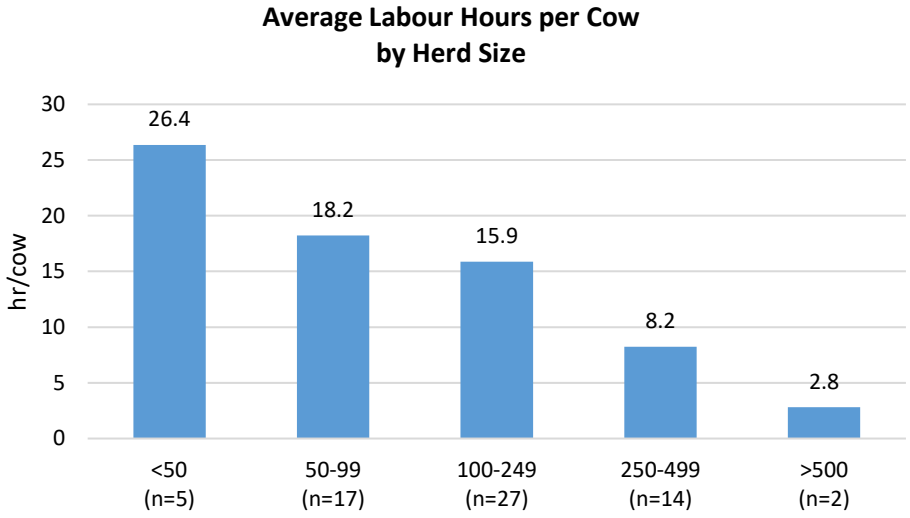
Source: Canadian Cow-calf Cost of Production Network

Figure 1. Total Labour Hours per Cow

Beef cattle operations rely heavily on family labour, with 83% (12.6 hours) of total labour being unpaid family labour and only 17% (or 2.6 hours) being paid labour. Over one third (35% or 23) of benchmark operations reported having no paid labour at all. This means that the implications are mostly on opportunity costs for producers and if there is a return to labour on the operation.

Herd size

Economies of scale are a major driver, where operations with less than 50 cows invest an average of 26 hours per cow, while herds of 500 or more cows averaged 3 hours per cow. Similar trends are observed in Gillespie et al. (2023), with labour hours dropping from 43.7 hours per cow on farms with 20-49 cows to just 7.2 hours on farms with more than 500 cows. This consistency across studies reinforces impact of herd size on labour intensity.



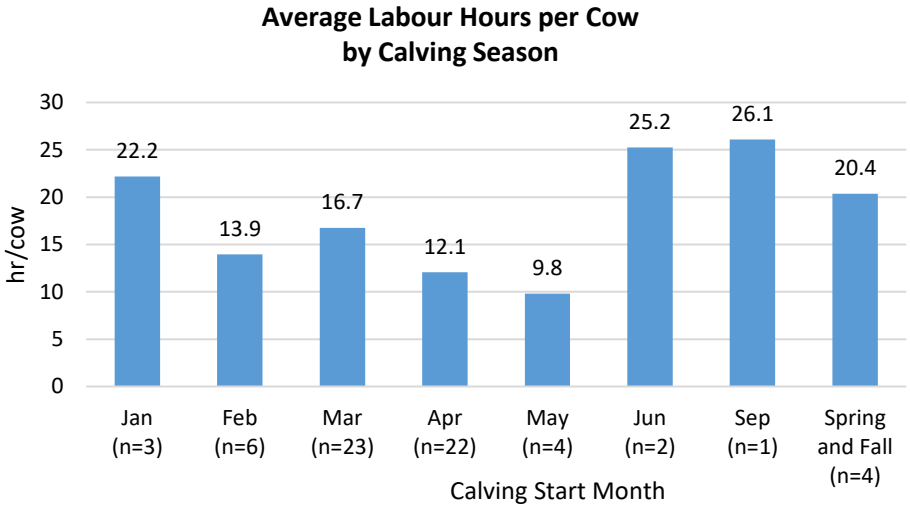
Source: Canadian Cow-calf Cost of Production Network

Figure 2. Average labour hours per cow by herd size

Labour-intensive tasks such as feeding, health management, and record-keeping frequently take the same amount of time regardless of herd size. In addition, to spreading time over more animals, larger herds may also adopt more streamlined processes, utilize specialized equipment, and distribute labour more efficiently. Producers expanding their herds must also consider infrastructure capacity, labour availability, and management complexity.

Labour intensity by calving season

Labour intensity can be influenced by the calving season, as different seasons require varying levels of management. According to Manitoba Agriculture, total labour requirements are highest for winter-calving operations. Fall-calving operations require approximately 10% less labour, spring-calving operations 20% less, and summer-calving operations about 25% less.[2]



Source: Canadian Cow-calf Cost of Production Network

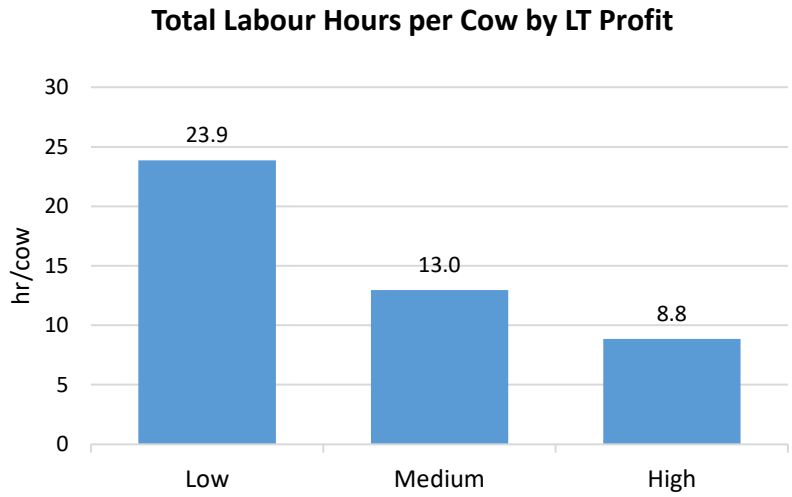
Figure 3. Average labour hours per cow by calving season

The COP Network data has a downward trend from January to May calving. But showed a jump in labour intensity for June, September and Spring/Fall calving (Figure 3). This is likely because other factors, such as herd size, play a more dominant role in determining overall labour requirements. Additionally, regional differences and infrastructure could also impact labour intensity, potentially overshadowing the impacts of calving season in the COP Network data.

Labour intensity by profitability

The benchmark farms were divided into Low, Medium and High profit groups based on long-term profitability (Figure 4). Long-term profitability is revenue minus total production costs including cash cost, depreciation, unpaid labour and opportunity cost on land and capital.

[2] Manitoba Agriculture, When Should I Calve My Cows? https://www.gov.mb.ca/agriculture/livestock/beef/when-should-i-calve-my-cows.html#:~:text=Estimates%20on%20infrastructure%20costs%20would,with%20about%2025%25%20less%20labour. Accessed on February 28, 2025



Source: Canadian Cow-calf Cost of Production Network

Figure 4. Total labour hours per cow by long-term profit

The difference in their means, for each of these groups, is statistically significant. Suggesting that more profitable operations achieve greater efficiency, likely due to factors such as improved herd management, economies of scale, better infrastructure, or the adoption of labour-saving technologies.

Reducing labour intensity can enhance profitability by lowering overall production costs and allowing producers to allocate time and resources more effectively. However, labour efficiency alone does not guarantee higher profits; other factors such as herd size, management practices, market conditions, and input costs also play a role in overall financial performance.

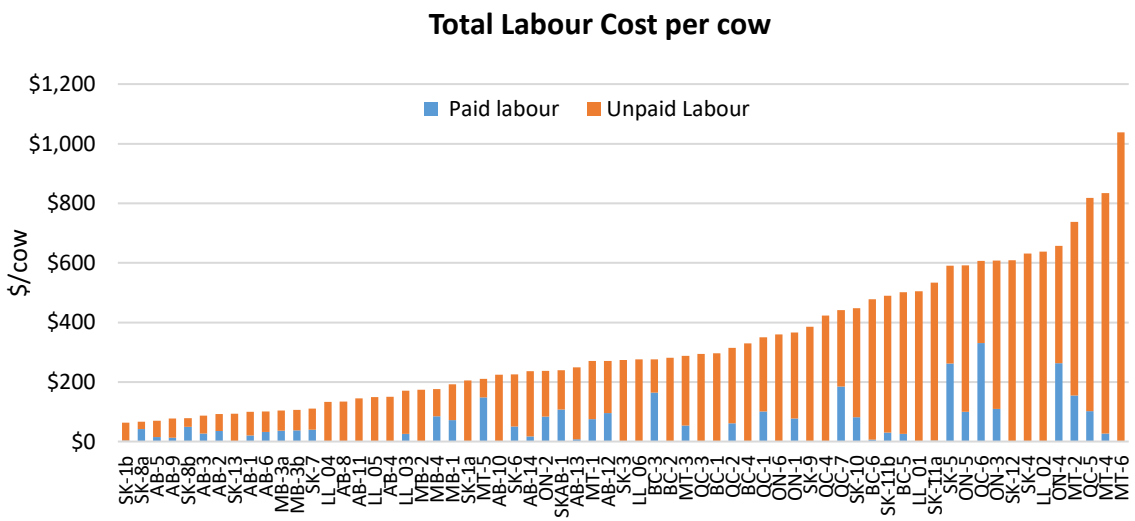
Wage

Paid labour wages averaged $21 per hour in 2023, with a range from $13 to $29. Unpaid family labour wages were estimated by asking producers what it would cost to hire someone to perform the same tasks. The average wage for unpaid family labour was also $21 per hour in 2023, with a range from $11.70 to $35.00.

However, it is important to note that many producers do not consistently track their own labour hours, making it challenging to assign a precise value to their work. Additionally, producers often find it difficult to quantify the value of their own labour, as it involves a blend of managerial, operational, and hands-on tasks that are not easily comparable to market wages. This subjectivity can introduce variability in labour cost estimates, particularly for unpaid family labour.

Labour Cost

On average, total labour costs for the 65 benchmark farms are estimated at $327 per cow, with 15% (or $50) attributed to paid labour and 85% (or $276) to unpaid family labour. Labour costs varied significantly, ranging from $64 per cow to over $1,000 per cow. The lower end of the range is associated with larger herd or farms that purchased all or a portion of their winter feed, reducing the labour required for forage production. However, this comes with the trade-off of higher feed purchasing costs. Conversely, farms at the higher end of the labour cost spectrum are driven by more labour hours associated with small herds and/a longer calving window.



Source: Canadian Cow-calf Cost of Production Network

Figure 5. Total Labour Cost per Cow

Labour costs also vary by profitability group, following a pattern similar to labour intensity. As shown in Table 1, low-profit farms have an average labour cost of $544 per cow, while medium-profit and high-profit farms report significantly lower average costs of $263 and $170 per cow, respectively. The difference in their means, for each of these groups, is statistically significant.

Table 1. Average labour cost per cow for Low, Medium and High profit groups

Group by **LT-Profits**	Avg Labour Cost/Cow	*P-value*	Statistically Significant Difference between the Means of the Groups
Low-Profit	544.70	--	--
Medium-Profit	263.10	0.000	Yes, between Low and Medium groups
High-Profit	170.50	0.016	Yes, between Medium and High groups

Total labour costs—both paid and unpaid—represents a significant portion of total production costs. On average, it accounts for 18% of the total production costs, with a range from 5% to 37%. This highlights the substantial impact that labour costs have on the overall financial performance of farm operations, underscoring the importance of effectively managing and tracking both paid and unpaid labour to optimize farm profitability.

Bottomline

Labour costs and intensity are critical factors influencing the profitability and sustainability of cow-calf operations. Accurately tracking and valuing both paid and unpaid labour is essential for making informed financial decision, enhancing labour efficiency, and improving overall financial performance.