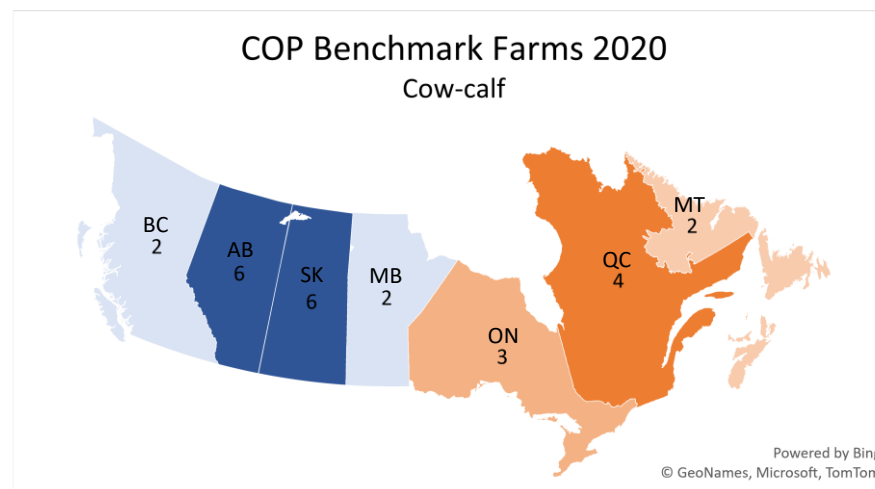




## Case Study - East vs. West

### Introduction

The Canadian Cost of Production Network represents a wide variety of production systems varying in animal performance traits, economies of scale, labour productivity, feeding systems, and financials. There were 25 benchmark cow-calf farms developed with 110 producers participating, using the consensus approach<sup>1</sup>. Data was collected for 2020 and backward indexed to 2016. Sixteen benchmark farms are in western Canada with two farms in B.C., six in Alberta, six in Saskatchewan, two in Manitoba; and nine are in eastern Canada with three in Ontario, four in Quebec, and two in the Maritime provinces.



<sup>1</sup> Read more about the Consensus Approach at <https://www.canfax.ca/report/downloads/Special/Consensus%20Versus%20Individual%20Approach.PDF>

## Animal Performance Measures

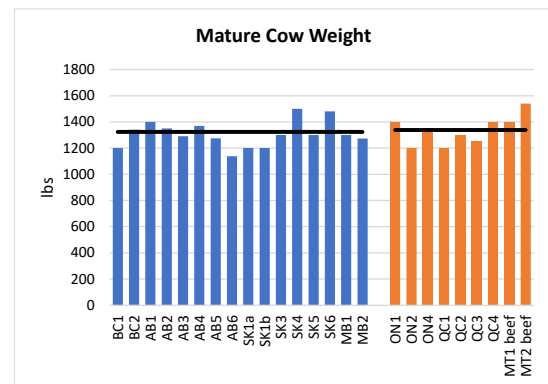
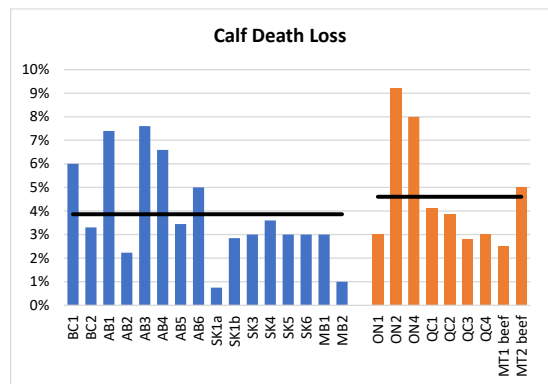
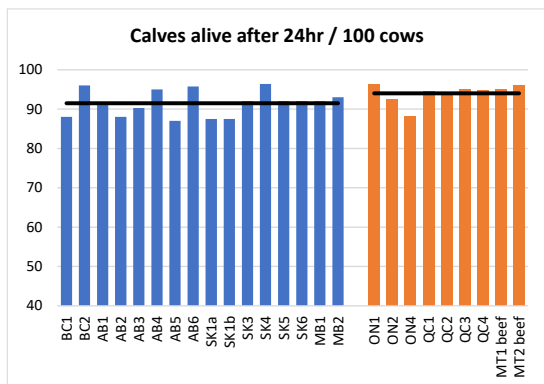
**Calves alive after 24 hours per 100 cow** - The number was slightly higher in the east, driven by higher conception rate and lower death loss at birth.

**Death loss and weaning rate** - The east has a higher death loss on cows and calves with predator problems in a couple of farms. Despite higher calve death loss, the east had slightly higher weaning rate with higher number of calves alive after 24 hours per 100 cows.

**Cow weight and weaning weight** - The east had slightly higher mature cow weight while 205-day weaning weight was similar to the west. Average weaning weight as a percentage of cow weight is lower in the east.

	CDN	West	East	East-West % diff.
Calves alive after 24hr/100 cows	92	91	94	3%
Cow death loss	1.6%	1.4%	2%	40%
Calf death loss	4.1%	3.9%	4.6%	19%
Calves weaned per 100 cows	88	88	90	2%
Weaning weight (male & female)	569	563	579	3%
205-day weaning weight	556	556	556	0%
Mature Cow Weight	1,318	1,307	1,338	2%
WW % of Cow weight	42.4%	42.7%	41.8%	-2%

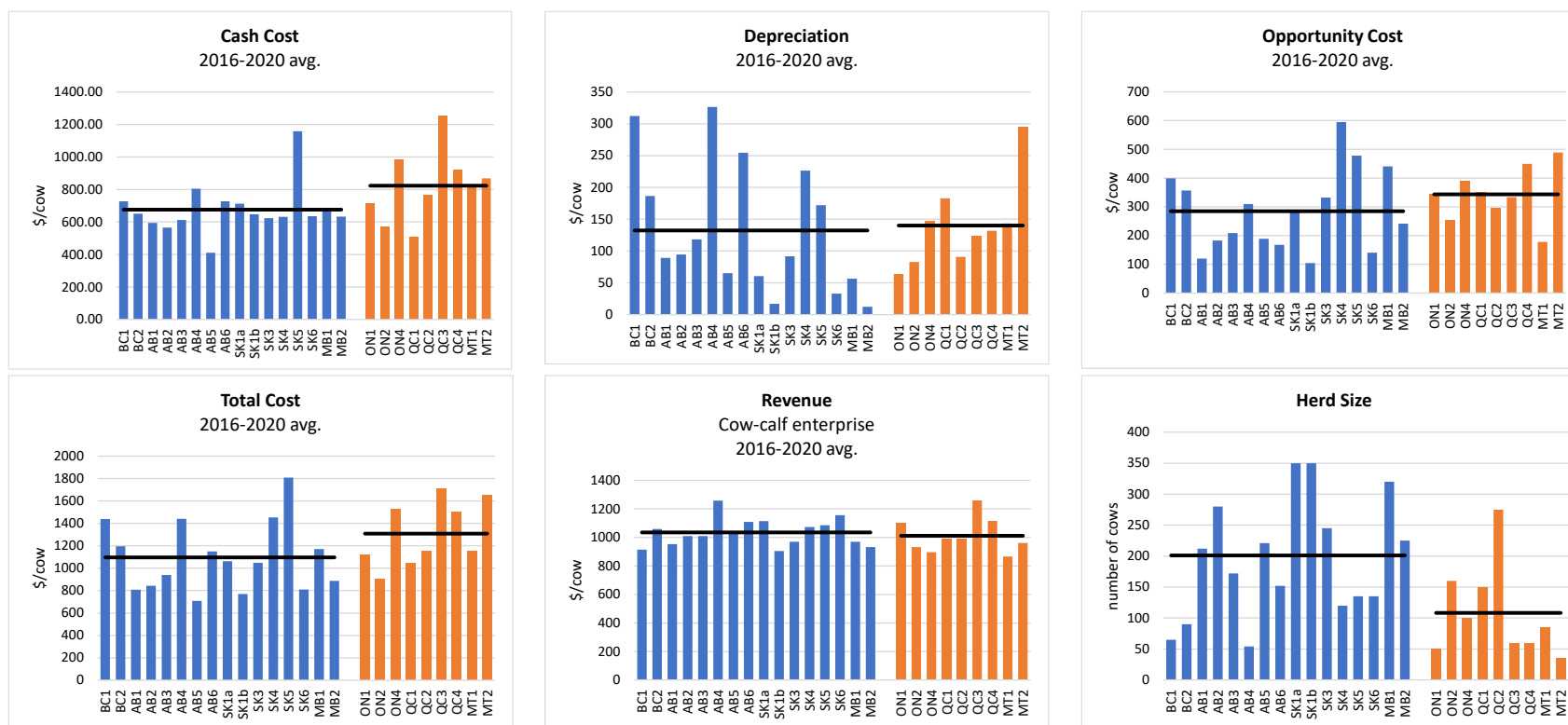
It should be noted that when comparing the CDN averages from the network with the 2017 Farm Management Survey, in general the network has heavier cow weights (1,318 lb. vs. 1,256 lb.) and weaning weights (556 lb. vs. 539 lb.).



## Cost and Profit

The CDN COP Network **total costs** averaged 23 per cent higher in the east at \$1,308 per cow compared to \$1,059 in the west in 2016-2020. This is to be expected as the west has a competitive advantage and that is subsequently where the cow herd is located. The difference in costs is also partly due to economies of scale with a larger average herd size in the west.

The major difference comes from higher cash cost and opportunity cost in the east, while depreciation costs were similar in the two regions.



**Cash cost** includes purchased feed, fertilizer, seeds, fuel, maintenance, land rents, interest on liabilities, wages paid, veterinary costs and medicine, water, insurance, accounting, etc. It accounted for 63 per cent of total cost in both the east and west. Cash costs averaged 24 per cent higher in the east with the highest cash cost of all farms in QC3 as it purchased 100 per cent of its feed and replacement heifers.



**Opportunity cost** is calculated for unpaid family labour, own land and capital. While eastern Canada had lower opportunity cost in land and capital, cost of family labour was 70 per cent higher than the west. Economies of scale is evident when it comes to labour cost. While the east had the same wage for family labour at \$19 per hour on average and fewer total family labour hours per year (1,310 hours vs. 1,348 hours), labour cost on a per cow basis was higher due to smaller herd size.

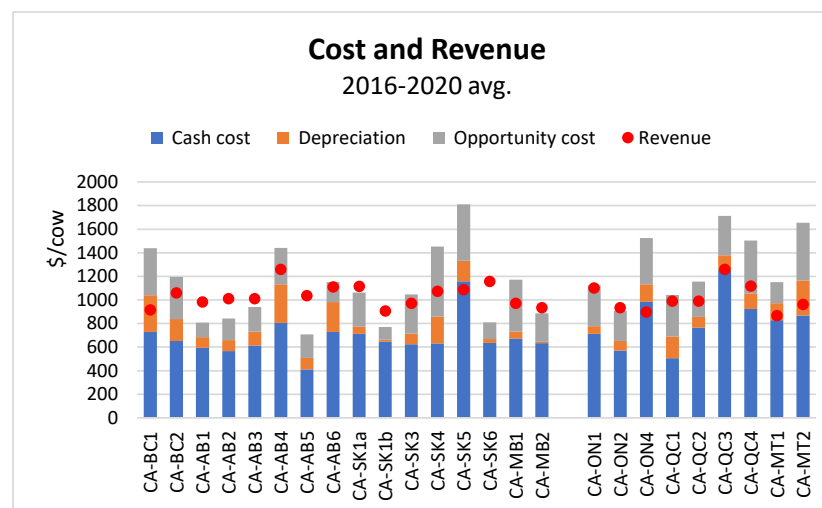
**Revenue** from cattle sales averaged \$1,012/cow in the east, one per cent lower than the average in the west at \$1,027/cow in 2016-2020. The slightly lower revenue coupled with higher total costs means profits in the east were lower.

**Cow-calf enterprise, Short-term profits** (revenue – cash costs) averaged \$188/cow in the east, 48 per cent lower than the west at \$365/cow. All benchmark farms except SK-5 and ON-4 were covering cash cost.

**Medium-term profit** (revenue – cash and depreciation costs) averaged \$48/cow in the east, 79 per cent lower than the west at \$238/cow. Fourteen out of the 16 farms in the west, and five out of nine in the east were covering medium-term cost.

**Long-term profit** (revenue – cash, depreciation, and opportunity costs) averaged -\$296/cow in the east, compared to -\$33/cow in the west. Eight out of the 16 farms in the west and one out of the nine in the east were covering long-term cost.

\$ per cow	CDA	West	East	East-West % diff.
Cash cost	716	662	824	24%
Depreciation	131	127	140	11%
Opportunity cost	295	271	344	27%
<i>Labour</i>	189	153	260	70%
<i>Land</i>	72	81	53	-35%
<i>Capital</i>	34	36	31	-14%
<b>Total Cost</b>	1142	1059	1308	23%
<b>Revenue (calves, culls, breeding)</b>	1022	1027	1012	-1%
Short-term profit	306	365	188	-48%
Medium-term Profit	174	238	48	-80%
Long-term profit	-121	-33	-296	--
<b>Economies of Scale</b>				
Beef Cow herd (head)	168	195	108	-45%



## Cost Structure

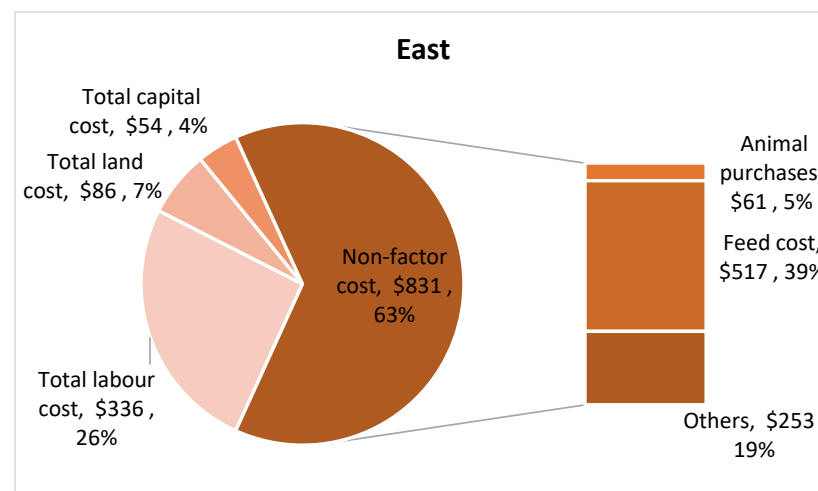
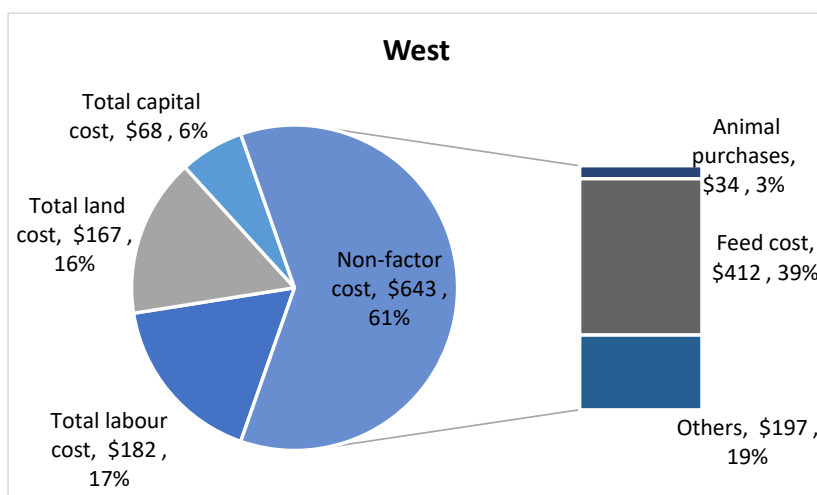
Total costs can be broken down into land, labour and capital with everything else being the non-factor costs. On average, the benchmark farms in the east had lower land cost and capital costs, but higher non-factor costs and labour cost compared to the west.

Despite higher land rents per acre, **land costs** per cow were lower in the east with a lower number of acres and higher productivity.

As noted above, higher **labour cost** per cow in the east were mainly due to smaller herd size despite similar wage level and fewer labour hours on the whole herd.

The big difference was in the non-factor costs which accounted for more than 60 per cent of total cost. **Feed costs** (purchased feed and cost of production for homegrown feed) averaged 26 per cent higher in the east. **Animal purchases** were somewhat skewed in the east with high cost in ON-4 due to higher bull prices and a lower cow to bull ratio, and in QC-3 which purchased all their replacement heifers. Other benchmark farms in the east had similar animal purchase cost with the western average. **Other non-factor costs** were higher in the east with building (maintenance and depreciation), veterinary and medicine, and insurance and taxes being 20, 39 and 52 per cent higher respectively.

\$/cow	CDN	West	East	East-West % diff.
Total Cost	1142	1059	1308	23%
Non-factor costs	706	643	831	29%
Feed Costs	447	412	517	26%
Animal Purchases	43	34	61	78%
Other	216	197	253	28%
Total labour cost	233	182	336	85%
Total land cost	140	167	86	-48%
Total capital cost	63	68	54	-20%



Disclaimer / Copyright Notice: Canfax Research Services (CRS) tries to provide quality information, but we make no claims, promises, or guarantees about the accuracy, completeness, or adequacy of the information. CRS does not guarantee and accepts no legal liability arising from or connected to, the accuracy, reliability, or completeness of any material contained in our publications. Reproduction and/or electronic transmission of this publication, in whole or in part, is strictly forbidden without written consent from CRS.

