

How leading Canadian commercial cow-calf producers use production and financial records: A qualitative analysis

Brooklyn Wong, Kathy Larson and Eric Micheels

Department of Agricultural and Resource Economics

College of Agriculture and Bioresources

University of Saskatchewan

Saskatoon, CANADA

Corresponding author: Brooklyn Wong, brooklyn.wong@usask.ca

Abstract:

Cattle ranching is an industry characterized by narrow margins and low rates of return. As a result, it is important to track performance and make necessary adjustments in order to achieve desired financial and productivity goals. Record keeping enables ranchers to track many different areas of their ranch and monitor progress towards their goals. While record keeping is a recommended management practice there is no 'one size fits' all approach on which records to keep and how to use the records to make decisions and assess performance. Interviews conducted with fourteen leading commercial cow-calf ranchers across Canada showed that record-keeping helps inform decision-making and is closely related to the individual and business goals and values of each rancher. Therefore, it is important for ranchers to first identify their goals and tailor record-keeping methods to effectively monitor progress toward those goals.

Key Words: record-keeping, benchmarking, goals, decision-making, cow-calf, interviews

Purpose

The cow-calf sector is characterized by narrow margins and low rates of return (Alberta Agriculture and Forestry, 2008). The nearly 54,000 beef cattle operations in Canada (StatsCan, 2016a) are essentially price takers, which means that increases in margin generally must come from managing costs and improving productivity. Recent Canadian cow-calf cost of production benchmarks have reported a \$1000 per cow range between the lowest and highest cost operations (CRS, 2022). Location, herd size, animal performance, winter feed type and delivery method, depreciation, and

opportunity costs (i.e., unpaid labour, owned land and capital) all influence economic costs and profitability (CRS, 2021).

Record-keeping and goal setting are important tools that can help producers achieve success. It has been said that reviewing historical records and using the data in the decision-making process is what separates top managers apart from those who just 'do a good job' (Bullock and Burdine, 2021). Bharadwaj and Wilkening (1974) found that goal setting and goal achievement were important determinants of perceived success for farm families, and this satisfaction depends on performance relative to goals in both production and financial performance. In a South African context, Faber (2019) states that goal setting and performance measurement are key factors in maintaining and increasing efficiency. As goals can vary from ranch to ranch, Doye (2013) provides a framework for outlining goals and determining steps to achieve these goals.

In this paper, we present findings from recent interviews with a non-random sample of Canadian cow-calf producers identified by provincial beef associations as leaders in the maintenance and application of production and financial records. This work is part of a larger project funded by the Beef Cattle Research Council and the Saskatchewan Agriculture Development Fund interested in examining the link between record-keeping and ranch performance. With heterogeneity among beef operations (Alemu et al, 2016) we expect differences in goals and objectives, so we started the project with interviews of ranchers nominated by provincial associations to understand how leading ranchers keep and use records of their operations.

The results from this small sample of ranchers show that a one-size-fits all approach to record-keeping is not ideal for ranchers across Canada. Depending on location, experience, size of the herd, and enterprises, ranchers can have different goals and motivations that cause them to focus on different decisions and areas of ranch management than other ranchers.

Methods

Review of Literature

The value of record-keeping is closely linked to goal setting and goal achievement, and the nature of the goals established by farm managers. Harper and Eastman (1980) showed that there is a

hierarchy of goals among farm managers, encompassing both quality of life and financial characteristics. Whatever the goal of the operation, research suggests that record-keeping is needed to make accurate decisions about future directions and can determine the level of success a rancher finds within their operation (Bullock and Burdine, 2021).

While it is important that ranchers are collecting data, it is even more important that ranchers analyze that information to make informed management decisions (Burt, 2007). Benchmarking is a common management technique used to analyze records that helps drive profitability (Canfax, 2017). Research has shown that ranchers in Canada who maintain records and benchmark their performance see significant productivity benefits (Manglai, 2016). Many other business management practices that have been found to increase financial success complement using accurate data to make decisions (i.e., use of advisors, business planning, cost of production) (Siren and Stiefelmeyer, 2015).

While research also suggests that “basing management decisions on carefully collected and evaluated data allows ranchers to measure the differences associated with management changes and maximize the operations’ profitability” (USDA, 2011), there are gaps in the literature about whether every producer is looking to maximize their operation financially or if they have other goals on their ranch they are trying to reach. What type of decisions ranchers are using information to help them make is uncertain as well as whether all ranchers are looking to satisfy financial, production or environmental maximization.

Data collection

In 2021, provincial beef associations across Canada were asked to recruit leading commercial cow-calf producers in the area of record-keeping in their respective provinces to participate in a phone interview about how they viewed record-keeping as integral to their success. In May and June of 2021 14 phone interviews (one written) were conducted with ranchers across Canada; BC (2), AB (4), SK (2), MB (2), ON (2), QC (1) and ATL (1).

Semi-structured interviews were used to ask respondents about their operation, their goals, the types of records that are kept, and how ranchers use records on their operations. The strength of

semi-structured interviews is the ability to ask not only the “how” but also the “why” of a research question. In this case, we wanted to understand the “how” and “why” ranchers collect and use data in relation to their goals. The interviews were conducted over the phone and transcribed by the Canadian Hub for Applied and Social Research at the University of Saskatchewan. The Quebec producer opted to provide typed feedback in French which was translated to English for analysis. This research project was approved on ethical grounds by the University of Saskatchewan Research Ethics Board.

All interviewees were asked the same 17 base questions. Opening questions asked the interviewee to share demographic details (age, years of experience, education) and operation characteristics (number of breeding females, typical production year, marketing). Next ranchers were asked about their motivation for record-keeping and their goals for their operation. They were then asked which records if any were collected in the areas of animal health, animal production, grazing, forage production, genetics, and finances. Interviewees were asked to elaborate on how collected records were used to make decisions and assess goals. We also asked about the use of benchmarking and paid consultants and whether they faced barriers in conducting benchmarking and record-keeping on their ranch and in their region.

Results

The youngest rancher interviewed was 25, the oldest 61 with a median age of 42 (Table 1). The average age of the interviewees was 10 years below the average age for farmers in the 2016 Census of Agriculture (Jelinski and Waldner, 2018). Years of experience ranged from 10 years to 40+ years with an average of 21 years. Entrance paths varied among interviewees. Every interviewee had post-secondary education with eight attaining their diploma or degree in an agriculture discipline. Fifty-seven percent (8 of 14) currently have off-farm employment and three others worked off-farm for many years. The largest herd was 550 cows in Saskatchewan with the smallest being 15 head in Atlantic Canada. According to the 2016 Census of Agriculture, 61% of farms with beef cows have less than 47 head and only 4% of farms have over 273 head (StatsCan 2016b). The average herd size for interviewees was 300 females with 50% reporting over 273 cows.

Table 1: Demographics of Interviewees compared to 2016 Census of Agriculture

	Min	Max	Mean	2016 Census
Age	25	61	45	55 ^a
Years of experience	10	42	21	n/a
Herd Size (beef cows)	15	550	300	69 ^b

^a Jelinski and Waldner, 2018

^b Canada Beef, 2021

From the interviews, we wanted to identify the major themes and importance of record-keeping to these top innovative ranchers. As one rancher shared “We need accurate data to feel secure in our decision-making. Cow production is not very profitable and requires tight management to remain competitive.” When asked about overall goals, the ranchers gave a large range of answers: growth of land, infrastructure or herd (6), animal health/productivity (5), forage resources/usage (2), improve financials (5), improve environmental stewardship (3). This wide range of answers shows that, similar to the earlier work by Harper and Eastman (1980), heterogeneity in goals among farm managers remains. A rancher from Alberta shared their goal is to figure out how to make money in the grazing business “...I am much more interested in the grass, than I am the cows. Cows are interesting but the grass is where I think our actual money is”. This rancher’s interest in grass meant he kept detailed electronic grazing records by field to monitor rest period and intensity of grazing year over year.

When asked how these ranchers planned to achieve their goals, the answers included increasing infrastructure, using regenerative agriculture, monitoring progress through self-benchmarking, managing cashflows (2) and creating projections, increasing the productivity of the “bottom half of the herd”, and increasing productivity of weak areas of the operation. Some plans were as simple as fencing more land, retaining more replacement heifers, and relying on rental grass to rest their own (2). These answers demonstrated that some ranchers use measurable benchmarks, cashflow projections and SWOT analysis to track their progress in their specific plan to achieve their goals while others have more subjective measures of progress.

Another question asked to the leading producers was what they considered the most important decision(s) on their ranch. The answers included: how to change their marketing program (3),

nutrition-related decisions (how much to feed/balancing rations) (4), how to manage cashflows (2), cropping fertility adjustments based on soil sampling results, calf health (vaccine) protocols (2), which parts of the enterprise are most profitable, culling/replacement decisions (6), and land rental decisions. Many of these answers are decisions that are related to data and records from the operation, whether that be tracking cash flow, feed decisions, or looking at weaning weights for a cow's progeny. These answers show that for many decisions, ranchers value having objective data to supplement their decision-making process. To quote one of the ranchers interviewed "...the previous generation probably did a lot more gut feel...not necessarily projecting it out." A producer from Alberta shared that he thinks if he was just a cowboy he could be the labourer, but he is the rancher, so he needs to focus on the management.

When asked how their record-keeping habits have changed the most common answer was records are now more in-depth and accurate, and they are able to make useful decisions by analyzing them. A producer from Ontario stated that the biggest change was "writing things down... when my parents moved up here, they had 20 cows in 1999 and things were pretty easy to keep count of", but with the operation now exceeding 300 females written records are a necessity. These innovative and successful ranchers realize that it is hard to "financially succeed or grow the farm if you don't know what areas you're profitable in." However, while some ranchers still have measurable goals, they may also have subjective goals. A producer from Manitoba shared that his goal for environmental sustainability was gauged by wildlife observed on the farm, forage and grazing production and his happiness. He said, "If I drive to my pasture and I see my cows and it makes me happy, that is a lot of my rating right there." The differences in these two ranchers show that how they manage their ranch is very dependent on their goals and values. Others answered that they are trying to be more innovative with their record analysis and use records to be more goal-oriented in order to access niche and emerging markets. Programs such as Verified Beef Production Plus (VBP+), where producers demonstrate their adherence to food safety, animal care and environmental stewardship provide an opportunity for producers' animals to be marketed under Canada's certified sustainable program (CRSB, n.d.)(VBP+, 2022). All but one of the interviewees participates in VBP+. As of September 2021, there were only 1,250 certified VBP+ operations in Canada suggesting these interviewees are leading adopters of this industry initiative (VBP+, 2021). As consumer demands change in domestic and surrounding

markets (e.g., Europe), programs like this can be used to verify production practices that can be linked to marketing claims, ensuring market access further down the supply chain.

While maybe not be true for the entire industry, leading producers appear to have developed their management styles to be more analytical and to include their whole operation, not just their cow/calf enterprise. This is necessary when ranches increase in size, but labour is not easily available. One ranch with both commercial and purebred herds stressed that efficiency motivates them, “We are running a lot of cows and green land, and don’t have a lot of available labour, we must do whatever it is we have to do to become super-efficient in our management”.

To assist in making more accurate decisions, some ranchers use consultants or extension personnel to assist in their management. Eleven of the interviewees reported using an accountant. Two said they regularly contacted their vet to help make decisions, two said they used an agribusiness consultant and three mentioned using a nutritionist. There was also one rancher who said they did not use any outside consulting to help them make decisions. This decision behavior can be influenced by experience and training within the cow-calf industry or return on investment. The one producer had a very small herd and did not see the return on investment from using a paid consultant to help make decisions, but agreed there could be value in doing so in the future as their operation grew.

Besides record-keeping, benchmarking is also a best management practice that is common among top-performing ranchers. Of the fourteen ranchers interviewed, thirteen said they compared their own records to previous years to establish a benchmark of their own, but only seven stated they compared their performance to an industry benchmark. This could be due to the size and geographical differences found among ranches across Canada, which could mean there is not enough relevant benchmarks to accommodate the variety of ranches in Canada.

When asked which decisions were most important in specific areas of the ranch as well as what type of records were used to make decisions in that area, the interviewed ranchers had a variety of answers. Valued animal health and production records for decision making included: vaccinations and treatments (9), calving ease (3), cow records (5) and individual animal weights (5). Uncommon, but advanced records included: carcass scores, wean weight as a percentage of dam weight, specialized procedures (dehorning), water testing, body

condition scoring and udder scores. Animal health and production records were said to be used when making decisions about: treating sick calves (5), culling (6), replacement selection (3), shortening the calving span and feeding program revisions.

When considering the importance and value of records relating to decisions about forages and grazing, the most common responses were feed tests (4), which cattle are grazing where and how long the rotation is (8), and forage yields (6). Common decisions made with these records were how to develop rations (4), fertility requirements for forage land (3), grazing period/stocking density (4), winter feeding strategies, improving forage COP (2), and land rental decisions.

When asked about genetics, the most useful records for decision-making were sire availability (2), bull selection, sale records, parentage (2), and pregnancy checking. One producer shared that they do not keep genetic records they “just turn their bulls out with their cows come breeding time”. Some records kept that may not be common among many commercial ranchers but were mentioned by this sample were genomic information, expected progeny differences (EPDs), hybrid vigor score, and genetic testing to determine if an animal should be culled. This is an example of how some ranchers have different goals on their ranch that could influence their management style and the records they keep to determine performance relative to their goals. Some of these ranchers (6 of 14) also had purebred cattle which may make them more inclined to conduct genetic testing on their commercial herd as well. This type of testing may be unrealistic in a fully commercial herd, where it is not required by the industry. While some producers may keep genetic records as it is seen as valuable by the purebred industry, some ranchers such as one Alberta participant, may find keeping advanced animal health records are more valuable from a stakeholder standpoint. “We feel that following food safety guidelines is a value statement for our operation. We use those records to have conversations with our veterinarian on what we treated last year, what we anticipate treating this year, and come up with protocols.”

Common financial records included feed costs, repair costs and cost of production (4). Interviewees tended to use accounting software such as AgExpert (accounting software by Farm Credit Canada) (4) and cashflow budgets to make financial decisions. Decisions on purchasing (3), cashflow (4), marketing, and capital investment (6) all used financial records. Additionally, three interviewees shared that financial records help them assess their operation’s equity position. Some ranchers prefer to keep detailed financial records, understanding their financial ratios and working capital. One rancher said they use their net

worth to determine whether they are getting ahead or if they are just “fighting and clawing and taking out more debt.” Some ranchers said they spend less time on the financial records because their off-farm jobs are relied on to pay bills. Management style and values varied between the ranchers interviewed yet all were considered to be leading producers within their provinces.

Conclusion

Extensive literature has found that to remain competitive in today's ranching industry it is important for ranchers to use record-keeping to help make analytical decisions to achieve productivity and financial success. Since ranching is commonly a business passed down through generations of families it is important to keep a dynamic mindset with innovative and optimizing ideas. Constant learning about one's operation and measurement of its progress toward stated goals is key to finding success. While not only does keeping in depth records allow ranchers to make more analytical decisions, keeping the records needed to make accurate decisions allows more confidence in a rancher's ability to handle external stressors.

However, as seen from the responses of these top ranchers across Canada, there is no one-size-fits-all approach to record-keeping. While record-keeping remains a best management practice, it is difficult to definitively say which records are best for each ranch to collect. Since many ranchers have different goals and values in their production, they will have different factors that motivate the establishment of goals, the decision-making process relating to these goals, and the measurement of their progress towards these objectives. The motivations to establish goals and maintain records may be influenced by financial and environmental goals, the stage of their business life-cycle (new entrant, nearing retirement) or a range of other factors. Therefore, it is important to encourage ranchers to pinpoint the strengths and weaknesses of their ranch and make “SMART” goals to increase their success in those areas using management techniques such as record-keeping and benchmarking (BCRC, 2022). Goals are SMART when they are specific, measurable, attainable, realistic, and time-bound. Encouraging ranchers to create goals using this approach helps them to measure their progress and share their goals with others as well as have a sense of direction. Even though the producers suggested for these interviews were considered top innovative producers, it was unclear whether some of them were following SMART goals. For example, one producer shared that their goals were to increase conception rates, increase the number of calves born in the first cycle and increase their cattle health, but they did not share if they had a specific value to increase

to or what specific action they were going to take to achieve their goal. They did share that because of the partnership of family ranching, it was difficult to all be on the same page to achieve goals. With goals being so varied for ranches across Canada, industry organizations can focus on proper goal setting versus telling ranchers what records they should keep to succeed as those might not even correlate to the needs of the ranch.

References

Alberta Agriculture and Food. (2008) *The Beef Cow-Calf Manual*. [Online] Available at: <https://open.alberta.ca/dataset/6840d8ec-4fe5-41a1-9b67-a5ca909f23cb/resource/d6bfc3bf-b1a3-4e17-8423-874c9ef4f600/download/4075690-2008-beef-cow-calf-manual-agdex-420-10.pdf> (Accessed: 24 February 2022)

Alemu, A.W., B.D. Amiro, S. Bittman, D. MacDonald and K.H. Ominski. (2016) A typological characterization of Canadian beef cattle farms based on a producer survey. *Can. J. Anim. Sci.* 96(2): 187-202.

Beef Cattle Research Council. (2022) *Introduction to Record-keeping and Benchmarking*. [Online] Available at: <https://www.beefresearch.ca/resources/recordkeeping/record-keeping-and-benchmarking-overview.cfm> (Accessed: 28 February 2022)

Bullock, D. and K. Burdine. (2021) Chapter 12 - *Record-keeping for Management Decisions* in The Kentucky Beef Book. *University of Kentucky Cooperative Extension Service*. [Online] Available at: <http://www2.ca.uky.edu/agcomm/pubs/ID/ID108/ID108.pdf> (Accessed: 24 February 2022)

Bharadwaj, Lakshmi K., and Eugene A. Wilkening. (1974) "Occupational satisfaction of farm husbands and wives." *Human Relations* 27(8): 739-753.