2017 Western Canadian Cow-Calf Survey

Aggregate Results

Fall 2018

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Western Canadian Cow-Calf Productivity Survey

2016 Breeding to 2017 Weaning

This survey is an update of the 2014 Western Canada Cow-Calf Productivity Survey. Some 261 cow-calf producers were asked 58 questions about their cattle operations and management and marketing practices. The survey applied to their 2017 calf crop, starting with breeding in the summer of 2016 and ending with weaning. A total of 261 surveys were completed – representing 34,479 breeding females — that's about 1% of the beef herd in Western Canada as reported by Statistic Canada in January 2018.

Survey respondents could request a complimentary production performance indicator report for comparison with survey benchmarks. A total of 199 (76%) of survey respondents requested a report. See Appendix A for an example of the production performance indicator report.

This is a summary report of a larger comprehensive report developed by the Social Science Research Lab. For a copy of the comprehensive report contact Kathy Larson (kathy.larson@usask.ca) at the University of Saskatchewan.

When possible comparisons to the 2014 WCCCS are provided. However, differences in survey questions sometimes made this infeasible. A large focus of the 2017 survey was understanding adoption rates of recommended management practices and reasons for not adopting.

	2017
% Of Operations Following Recommended Management Practices	
>15 Days Extensive Winter Feeding	88.9%
Calves Vaccinated For Respiratory Diseases	77.1%
Body Condition Scoring Used (visual or hands-on)	76.8%
Bulls Breeding Soundness Evaluation 2x In Last 3 Years	71.9%
Cows And Heifers Vaccinated for Reproductive Diseases	65.2%
Females Pregnancy Checked 2x In Last 3 Years	61.4%
Cattle Feed Tested	60.0%
Low-stress Weaning (i.e. not using traditional separation)	47.6%
Pain Control Used (depending on age/method) While Dehorning	45.8%
Pain Control Used (depending on age/method) While Castrating	28.2%
Calves Implanted	26.5%
Calculate Cost of Production	26%
Breeding Season < 63 days	20.0%
Heifer Breeding Starts At least 14 Days Before Cows	14.0%
Cattle Water Tested 2x In Last 3 Years	12.0%

SECTION 1. ABOUT WCCCS RESPONDENTS & THEIR OPERATIONS

Survey respondents were asked to provide details on their age, location, number of years farming, number of farm labourers (both paid and unpaid) and 2017 farm sales. A total of 261 survey responses were received representing 34,479 bred females with an average of 170 females bred in 2017. [1]

While this survey was open to all cow-calf producers across Western Canada, the majority of respondents were from Alberta (41%) followed by Saskatchewan (28%), Manitoba (25%) and British Columbia (7%).

Table 1. Response Details by Herd Size and Province

	2014	2017
No. of Responses Received	411	261
Average Herd Size (females calved)	167	170
Total Cows Represented (females exposed)	76,088	34,479
Province		
% of Responses From BC	8%	7%
% of Responses From AB	49%	41%
% of Responses From SK	24%	27%
% of Responses From MB	18%	25%

Nearly all survey respondents provided their age, with an average age of 50 years, which is below the average age of Western Canadian farmers (55 years in 2016 Census; StatsCan Table 001-3438). Seventeen percent (17%) of the survey respondents were 35 years of age or younger, while 42% were 55 years of age and older.

The survey showed a shift in demographics with 76% male and 24% female, compared to 2014, which had a split of 86% and 14% respectively. When it came to number of years the survey respondents had been raising cattle, the average number of years was 27 with 54% having 25+ years in the cow-calf industry. Only 19% of the survey respondents were new entrants with 14 years or less in the industry and only 6% had entered the industry in the last five years.

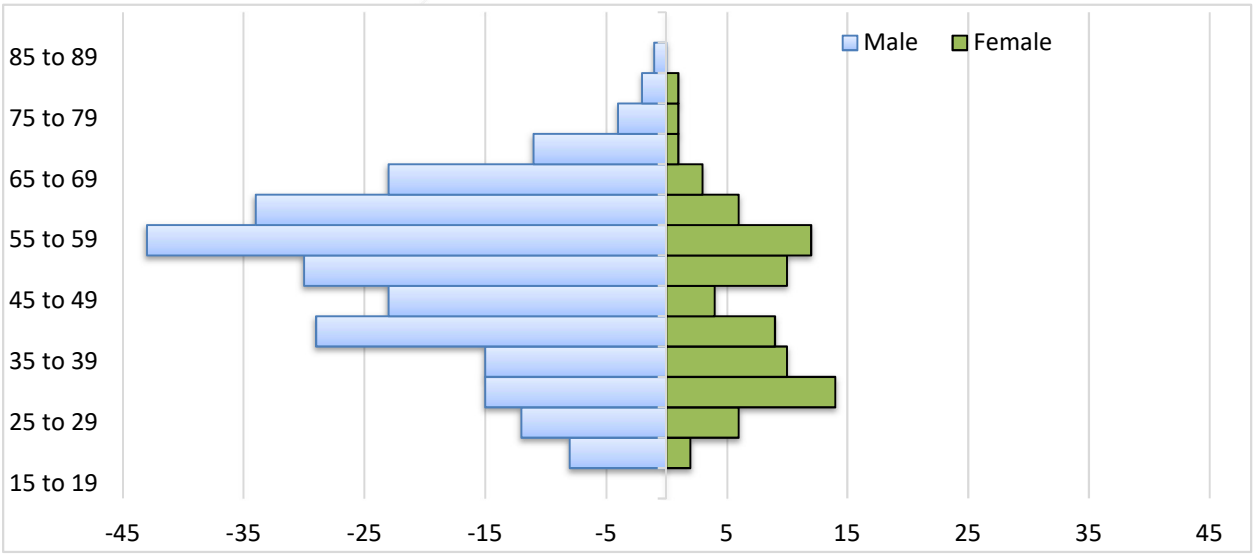
A quarter (25%) of respondents reported more than one decision-maker. Forty-three percent (43%) of primary decision-makers worked off-farm, and 61% of decision-maker #2 worked off-farm; 63% had post-secondary education.

[1] The 1997/98 Alberta Herd Audit targeted producers with over 25 cows, the 2014 and 2017 WCCCS did not have a minimum herd size requirement to participate.

Table 2. Respondent Demographics – Age, Gender, Years Raising Cattle, Off-Farm Work, Labour

	2014	2017
Age of Respondent		
Average Age	50	50
% 35 Years Of Age Or Younger	12%	17%
% 55 Years Of Age Or Older	61%	42%
Gender		
% Of Respondents Male	84%	76%
% Of Respondents Female	16%	24%
Years Raising Cattle		
Average No. Of Years	28	27
% 14 Years Or Less	12%	19%
% 25 Years Or More	57%	54%
Off-Farm Work		
% With Full-time Work Off-farm	N/A	29%
% With Part-time Work Off-farm	N/A	17%
% With No Work Off-farm	N/A	46%
% Other (e.g. seasonal, custom or part-time from home)	N/A	7%
Family and Non-Family Labour		
% Who farm with their spouse	N/A	74%
% Who farm with their parents	N/A	22%
% Who farm with their children	N/A	20%

Figure 1. Age structure for all decision makers



The majority of survey respondents reported that 77% of farm sales came from their beef cattle enterprise, while grains, and oilseeds and pulses made up 16% of sales — forages and other enterprises were 7% combined.

While every survey respondent reported having a cow-calf enterprise, only 53% indicated they raised replacement heifers, 34% backgrounded, and 7% included a feedlot component.

The majority of survey respondents (64%) had commercial herds, while 5% were purebred. Looking at all beef cattle reported in the survey about 86% of all cows were commercial breeds while 14% were purebred breeds. Not surprisingly the larger beef herds were commercial farm operations, while purebred operations were smaller.

Table 3. Beef Cattle Sales, Livestock Enterprises, Herd Composition

	2014	2017
Beef Cattle Sales as Percentage of 2017 Farm Sales		
% With Majority Of Farm Sales From Beef	N/A	77%
% Of Farm Sales From Annual Crops, Forages and Other	N/A	23%
Livestock Enterprises		
% With Cow-calf	100.0%	100.0%
% With Replacements	60%	53%
% With Backgrounders	36%	34%
% With Finishers/feedlot	7%	7%
Percentage of all cows reported Commercial vs Purebred		
% With Entirely Commercial Herd	72%	64%
% With Entirely Purebred Herd	10%	5%
% With Both Commercial And Purebred Stock	N/A	31%
% Of Commercial Cow Breeds Among All Respondents	N/A	86%
% Of Purebred Cow Breeds Among All Respondents	N/A	14%

SECTION 2. IMPORTANT DATES AND COUNTS RELATED TO THE 2016 BREEDING SEASON

Survey respondents were asked to provide dates and head counts related to their 2016 breeding season. Respondents were asked to report dates and numbers separately for cows and heifers. On the question of cow:bull ratio, 95% of survey respondents answered this question with an overall average ratio of 21:1. Depending on the size of operation that ranged from a low of 20:1 to as high as 26:1 in cow herds and from as low as 18:1 to a high of 29:1 for heifers. The average breeding season length for cows was 91 days, while it was 86 days for heifers.

Only 20% of producers had a 63-day breeding season and only 14% exposed heifers at least 14 days earlier than cows, although some bred/exposed heifers between 7 to 14 days earlier. It is recommended to expose cows to breeding for 63 days or less and for heifers to be bred at least 14 days earlier than cows given their longer post partum interval (80-100 days for heifers versus 50-60 days for cows). Producers indicated they were happy with their conception rates and heifer performance.

The calf crop (calves weaned divided by females exposed), which gives an overall indication of reproductive performance, was 84% for cows and 86% for heifers. However, to determine where progress can be made a closer look is warranted. Conception rates at 93% for cows and 91% for heifers indicates that females are getting bred. However, calving rates (females calved divided by females exposed) at 87% for cows and 85% for heifers and weaning rates (calves weaned divided by live births) at 85% for cows and 87% for heifers indicates that losses within the first 24 hours and on pasture could be improved.

Table 4. Reproduction Parameters – Cow:Bull Ratio, Breeding Season Length, Open Rate, Calving Rate

	2014	2017
Cow:Bull Ratio		
Average Cow:Bull Ratio	24.2 : 1	21: 1
Average Heifer:Bull Ratio	17.5 : 1	18 : 1
Average Herd Size		
Average # Females Exposed	203	193
Average # Females that Calved	167	141
2016 Breeding Season		
Avg Breeding Season Length (d) - Cows	92	91
Avg Breeding Season Length (d) - Hfrs	89	86
% With Breeding Season 63 d Or Less	25%	20%
% Who Exposed Heifers Earlier Than Cows	26%	14%
Avg Days Earlier Exposure For Heifers	13	14
Production Performance Indicators		
Open Rate Cows (%)	7%	8%
Open Rate Heifers (%)	10%	12%
Conception Rate ALL Females	93%	92%
Calving Rate Cows (%)	90%	87%
Calving Rate Heifers (%)	92%	85%

Figure 2. Reasons for Breeding Season Greater Than 63 days

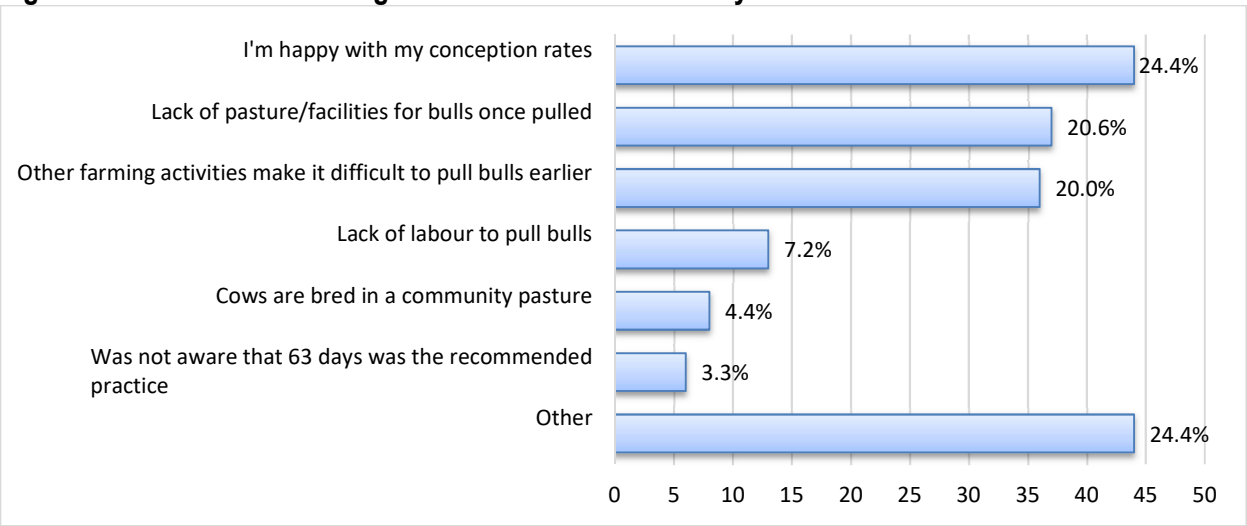
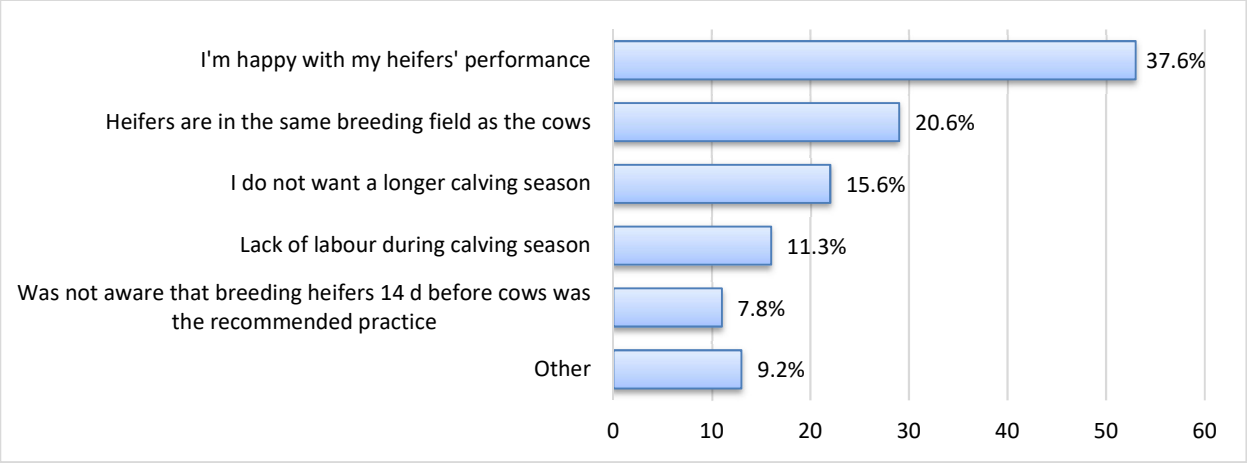


Figure 3. Reasons for Same Breeding Season Start Date for Cows and Heifers



SECTION 3. 2017 CALF CROP

3.1. CALVING SEASON

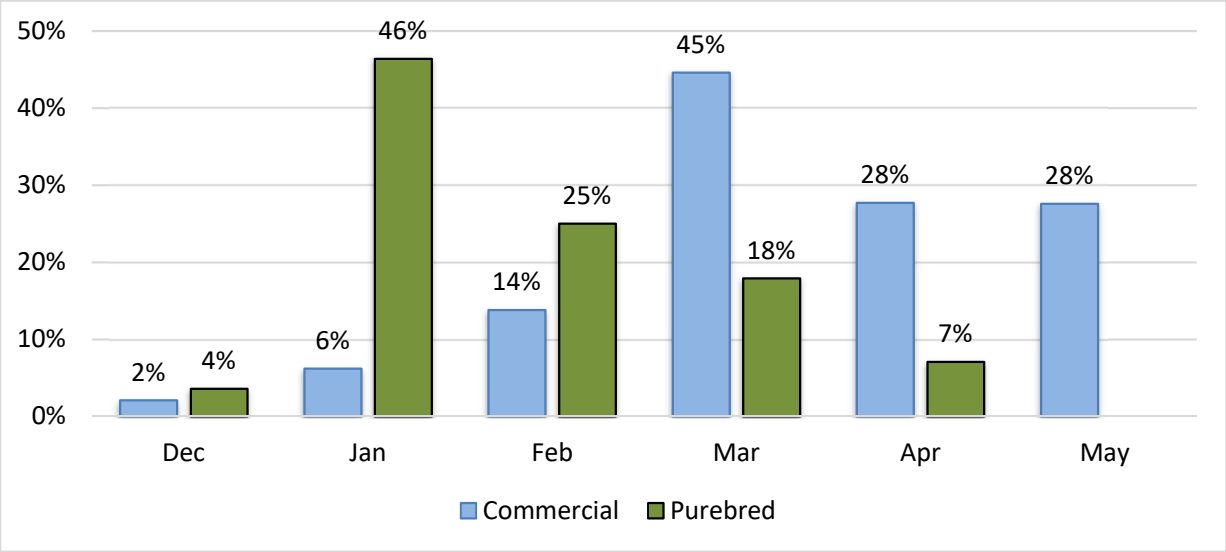
In this section survey respondents were asked to provide information on their 2017 calving season. Average calving span (length of calving season in d) was 86.5 days for cows and 57 days for heifers. Ideally, calving span should be 60 to 80 days for efficient use of labour, a more uniform calf crop, and improved productive and reproductive efficiency.

Nearly 90% of purebred producers who responded to this survey indicated they began calving in January, February and March, while 45% of commercial producers started calving in March. Compared to the 2014 calving season data where about 42% of commercial producers calved in March, April and May, the vast majority of producers in 2017 favoured the later calving months.

Table 5. 2017 Calving Season – Calving Span, Calving Start

	2014	2017
Calving Span		
Average Calving Span (d) For Cows	92	86.5
Average Calving Span (d) For Heifers	66	57
Calving Start For Commercial and Purebred Cow Herds		
% Calving Start For Commercial In January	15%	6%
% Calving Start For Purebred In January	N/A	46%
% Calving Start For commercial In February	19%	14%
% Calving Start For Purebred In February	N/A	25%
% Calving Start For Commercial In March	18%	45%
% Calving Start For Purebred In March	N/A	18%
% Calving Start For Commercial In April	24%	28%
% Calving Start For Purebred In April	N/A	7%
% Calving Start For Commercial In May	5%	28%
% Calving Start for Purebred In May	N/A	0%

Figure 4. Calving Season Start Month for Cows



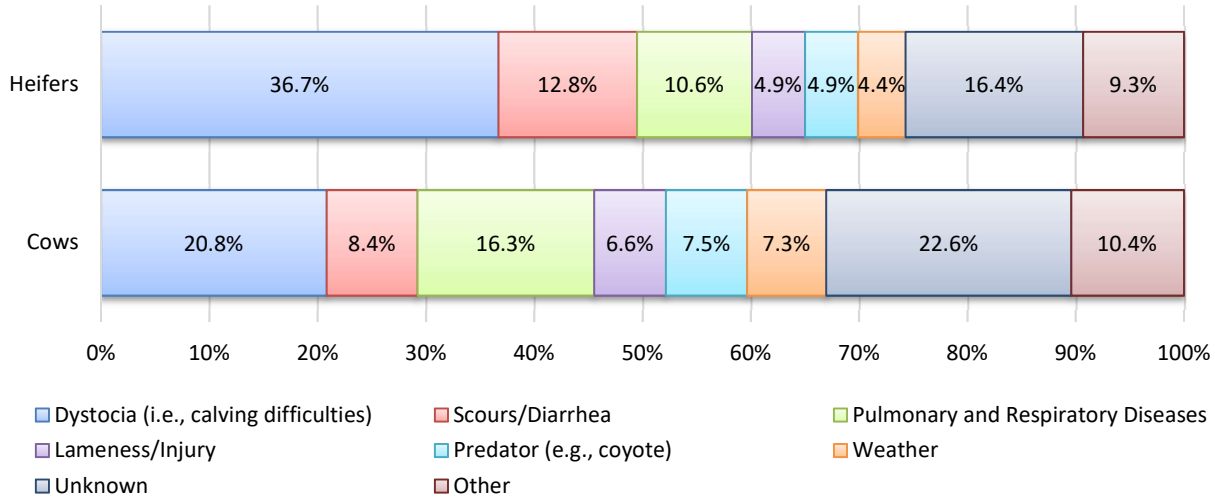
3.2. CALF DEATH LOSS

The average calf death loss was 5.4%, down from 6.9% in 2014 with the 3.1% occurring within the first 24 hours after birth. Causes of death included calving difficulty (21% for cows and 37% for heifers) followed by sickness due to scours and/or respiratory disease (25% for cows and 23% for heifers), and unknown reasons (23% for cows and 16% for heifers).

Table 6. 2017 Calving – Calving Ease, Calf Death Loss

	2014	2017
Calving Ease		
% Unassisted Cows	96%	79%
% Unassisted Heifers	84%	63%
Calf Death Loss		
% Overall Average Calf Death Loss (cows and heifers)	6.9%	5.4%
% Of Cows And Heifers That Aborted	N/A	1.3%
% Calves That Died Within 24 Hrs (cows and heifers)	N/A	3.1%
% Calves That Died after 24 Hrs (cows and heifers)	N/A	2.2%

Figure 6. Causes of calf death between birth and weaning for cows and heifers, WCCCS 2017



3.3. WEANING DETAILS

In this section survey respondents were asked to provide information related to the weaning of their 2017 calf crop – weaning dates, head counts, average weaning weights, and marketing timing and method.

The survey showed a change in weaning methods, with only 49% of producers using the traditional method of separating cows from their calves compared to 70% in 2014. Forty-seven percent used reduced-stress methods: 35% fenceline-weaned, 12% used nose paddles or two-stage weaned and 3% natural weaned (i.e. leave the calves on the cows). The primary reason provided for using traditional separation was the producers intended to sell right after weaning.

The actual average weaning weights reported for steers and heifers calves born to cows at 611 lbs and 584 lbs, were consistently higher than the estimated weights (585 and 535 lbs) at 6.8 months (204 days) of age.[2] The average pounds weaned per female exposed at 533 lbs was steady with the 534 lbs reported in 2014 and up from the 1997/98 survey of 506 lbs.

Table 7. Weaning - Date, Method, Weight, Percentage

	2014	2017
Weaning Time		
% who responded	79%	96%
% Weaning August & September	11%	17%
% Weaning Early October (1-15)	21%	13%
% Weaning Late October (16-31)	21%	23%
% Weaning Early November (1-15)	24%	23%
% Weaning Late November (16-30)	8%	18%
% Weaning December Or Later	15%	6%
Weaning Method		
% who responded	76%	73%
% Who Use Traditional Separation	70%	49%
% Who Use Fence Line Separation	22%	35%
% Who Use Natural Wean	3%	3%
% Who Used Nose Paddle, Two-Stage Wean	6%	11%
% Who Used 'Other' Method	N/A	4%
Weaning Weight		
Average weaning weight steers (actual – off cows)	N/A	611
Average weaning weight heifers (actual – off cows)	N/A	584
Average pounds weaned per female exposed	534	533
Calf Crop		
Average calves weaned per female exposed	85%	85%

[2] Note the appendix provides a weighted average weaning weight that includes both actual and estimated weights and combines calves from both cows and heifers.

Figure 5. Weaning Method, WCCCS 2017

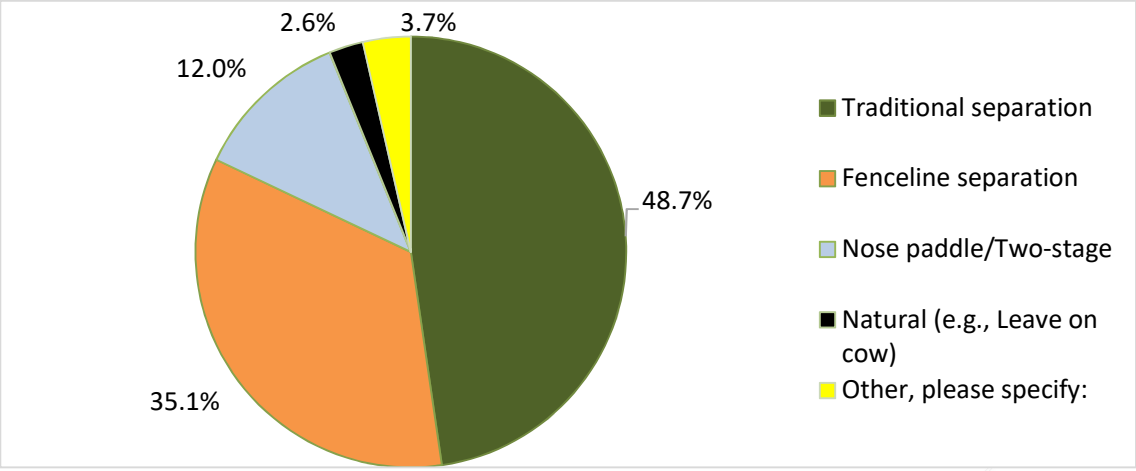
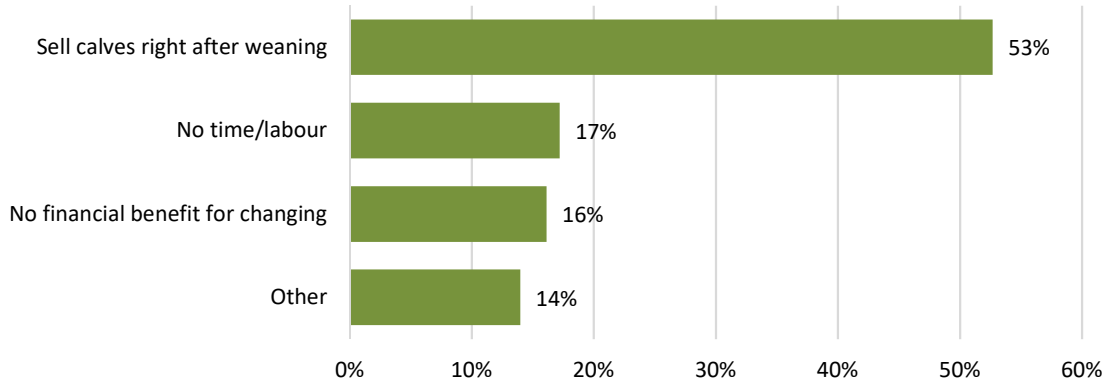


Figure 6. Reasons for Relying on Traditional Separation to Wean Calves (n=93)



3.4. WEANED CALF MARKETING and PRICING

Marketing and selling methods for the 2017 calf crop varied significantly between the proportion of respondents using each method (reported in Table 8) and the proportion of the calf crop being sold by each method. While only 5% locked in a price before weaning and sold at weaning, they sold 53% of their calf crop this way.

The majority of survey respondents provided percentage breakouts on the marketing methods of their 2017 calves. About 80% reported selling calves at or soon after weaning and using the live auction method, 11% sold calves through satellite/video auction, 5% used an order buyer, and 20% sold calves direct (i.e. private treaty). About 45% of respondents retained ownership on a portion of their calves to be sold as either yearlings or fed cattle.

The Western Livestock Price Insurance Program (WLPIP) has been offered to cow-calf producers in western Canada for the last 5 years. Only 30.4% of the 256 respondents had purchased policies for their 2017 calves.

Table 8. Marketing and Pricing of Weaned Calves

	2014	2017
Weaned Calf Marketing†		
% Who Sold Calves At Weaning (or very soon after)	72%	68%
% Who Pre-Conditioned Calves 30-60 d	9%	22%
% Who Background	35%	N/A
% Who Retain & Sell As Yearling Or Fed Cattle	N/A	45%
% Who Retain For Replacements	79%	69%
% Who locked in price before weaning and sold at weaning	N/A	5%
Weaned Calf Marketing Method †		
% Of Calf Crop Sold Via Live Auction	80%	59%
% Of Calf Crop Sold Via Electronic Auction (satellite/video)	9%	11%
% Of Calf Crop Sold Through Order Buyer	7%	5.3%
% Of Calf Crop Sold Direct, Private Treaty	12%	20%
% Of Calf Crop Custom Fed In Feedlot	2%	48%

† Percentages exceed 100% as many producers have more than one marketing strategy and method.

SECTION 4: CULLING AND DEATH LOSS

In this section survey respondents were asked to provide details on their culling practices and death loss for breeding stock. The average culling rate was 11.7% for breeding females and 20.6% for herd sires. Death loss of breeding stock averaged 1.8% for cows, 4.9% for heifers and 3.8% for herd sires.

Table 9. Breeding Stock – Culling and Death Loss

	2014	2017
Breeding Females		
Average % Culled	10.3%	11.7%
Average % Death Loss On Females (cows)	1.4%	1.9%
Herdsires		
Average % Culled	22.6%	20.6%
Average % Death Loss On Herd Sires	2.4%	3.8%

SECTION 5: REPRODUCTIVE MANAGEMENT PRACTICES

In this section survey respondents were asked to provide details related to reproductive management practices on their operations. On average, 18% of respondents utilized artificial insemination (AI) and 5.3% used embryo transfer (ET).

In the 2017 survey more producer's pregnancy checked female animals at least twice in the last three years – 62% of cows and 71% of heifers compared to 2014 (60 and 66%, respectively). This is an improvement from the 1997/98 Alberta Cow-Calf Audit Survey which reported less than half of producers (49.4%) were pregnancy checking. Pregnancy checking allows producers to avoid the cost of overwintering open cows and identify and address herd fertility issues in a timely manner if pregnancy rate abnormalities are detected.

About 77% of producers performed some type of body condition scoring (BCS), which is an evaluation of fat cover on an animal (1 to 5 score). Fewer (13%) performed hands-on BCS scoring; while 64% used a visual evaluation.

When it comes to herd sire reproductive management, 72% of respondents performed breeding soundness evaluations on their herd sires twice in the last three years, another 13% did it occasionally (at least once in last 3 years). Considerably fewer producers regularly or occasionally tested their bulls for trichomoniasis (39%) and vibrio (35%).

Table 10. Reproductive Technology - Use of AI, Embryo Transfer, Preg-Checking, Body Condition Scoring, and Breeding Soundness Evaluations

	2014	2017
Use of Artificial Insemination (AI) and Embryo Transfer (ET))		
Average % Using AI	18%	18%
Average % Using Embryo Transfer	N/A	5.3%
Pregnancy Checking		
Average % Who Checked SOME OR ALL – Cows	60%	62%
Average % Who Checked SOME OR ALL – Heifers	66%	71%
Body Condition Scoring Females – Hands On & Visual		
% Who Regularly Body Condition Score – Hands On	19%	13%
% Who Regularly Body Condition Score – Visually	N/A	64%
Breeding Soundness, Trich and Vibrio Testing		
Average % Who Breeding Soundness Evaluation (always)	64%	72%
Average % Who Breeding Soundness Evaluation (rarely)	N/A	13%
Average % Who always Trich Tested Herd Sires (always)	11.8%	25%
Average % Who always Trich Tested Herd Sires (rarely)	N/A	14%
Average % Who always Vibrio Tested Herd Sires (always)	9.5%	22%
Average % Who always Vibrio Tested Herd Sires (rarely)	N/A	13%

Figure 7. Reasons for Not Pregnancy Checking (n=105)

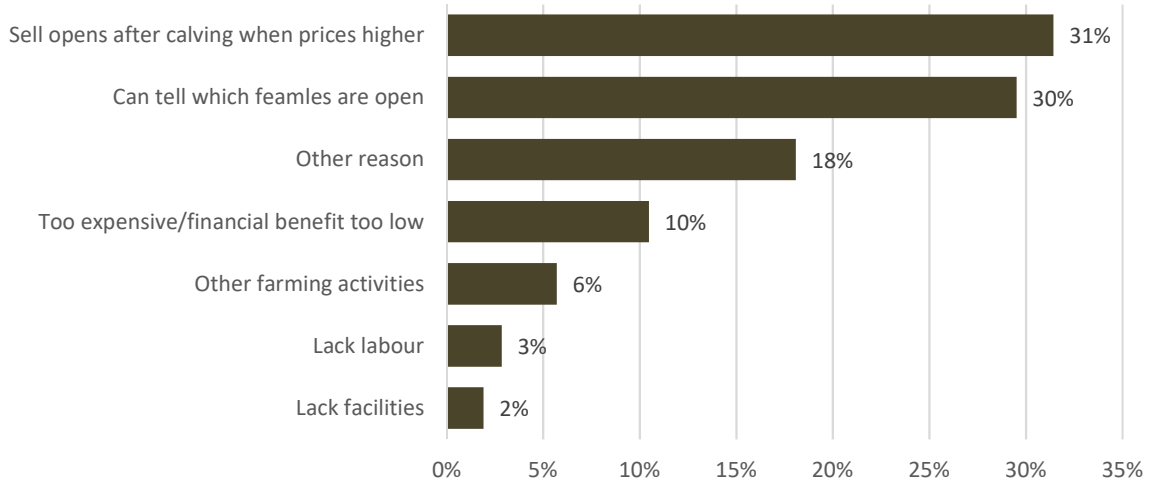


Figure 8. Reasons for Not Body Condition Scoring (n=61)

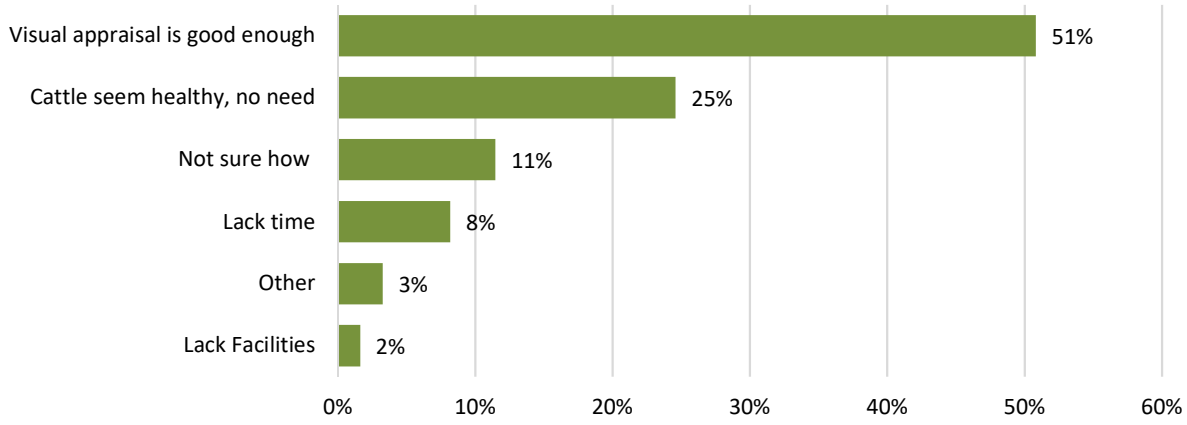
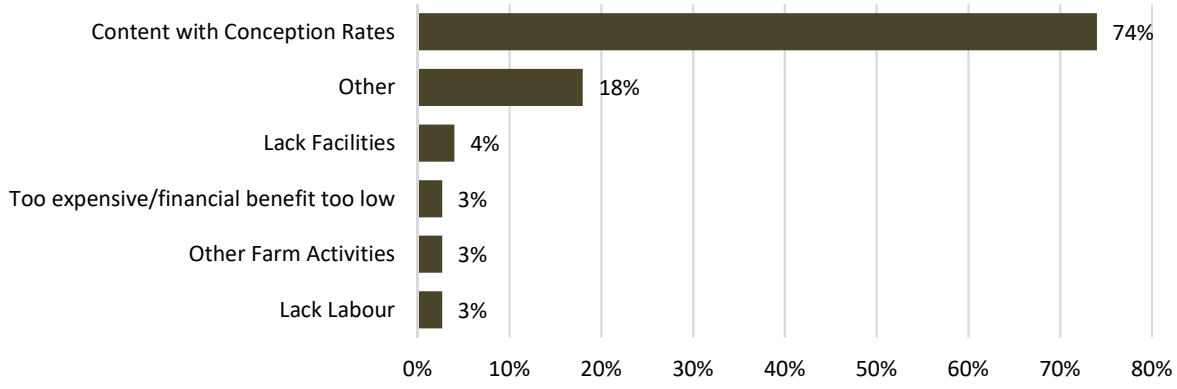


Figure 9. Reasons for Not Performing a Breeding Soundness Evaluation (n=75)



SECTION 6: CALF MANAGEMENT PRACTICES

6.1. DEHORNING

More than half of respondents (58%) rely upon polled genetics with 48% reporting their entire herd was polled and 89% indicating at least 75% of their herd was polled. Having a large proportion of polled cattle greatly reduces, or altogether eliminates, the need for dehorning.

Among producers who did dehorn calves, about 62% dehorn at calving time or at spring processing, 24% do it at weaning. Most respondents (46%) use dehorning paste, while 23% use a debudder (electric), 16% use spoons/cut/gouge and 17% other methods (hot irons, butane disbudder).

About 31% of respondents always use some form of pain mitigation when dehorning, while 14% use it occasionally. Pain killers (86%) were used the majority of time, while 9% used a combination of local anesthetic and painkillers.

Table 11. Calf Management – Dehorning

	2014	2017
Polled Calves		
% Respondents Using Polled Genetics	N/A	58%
Average With 75%+ Calves Born Polled	69%	89%
Dehorning		
% Who Dehorn Calves	71%	67%
Dehorning Timing		
% Who Dehorn Shortly After Birth	43%	54%
% Who Dehorn At Spring Processing	38%	34%
% Who Dehorn At Weaning	11%	9%
% Who Dehorn At Other Time	9%	3%
Dehorning Method		
% Who Use Debudder (electric), Hot Iron	34%	23%
% Who Use Dehorning Paste	40%	46%
% Who Use Spoons, Saw, Wire, Key, Guillotine	22%	16%
% Who Use Other	4%	17%
Pain Control Use When Dehorning		
% Who Responded	40%	56%
% Who Always Use Pain Control When Dehorning	9%	31%
% Who Use Pain Control Depending on Age and Method	N/A	14%
Type of Pain Control		
Pain Killer	N/A	86%
Local Anesthetic plus Pain Killer	N/A	9.4%
Local Anesthetic / Nerve block	N/A	4.7%
Top Reasons for Not Using Dehorning Pain Control		
Too Expensive For Cost/Benefit	N/A	1.3%
Dehorn Calves At Under 3 Months of Age	N/A	83%
Other Reasons	N/A	14%

6.2. CASTRATION

Nearly 94% of respondents castrate their male calves early – within the first 3 months of age - while about 4% castrate within 3 to 6 months of age. The most common method for castration was the elastrator (rubber band) with 81% of respondents indicating they use this method followed by surgical (blade or scalpel) at 15%.

An increasing number used pain mitigation when castrating with 13% always using pain control measures and 15% will use pain control depending on age and method. That is a notable increase over the 4.2% of respondents in the 2014 WCCCS. Some of the 2017 respondents said although they didn't use pain control in 2017, they were planning to include pain control in future calf treatment protocols.

For the majority of those who used pain control measures, nearly 80% treated calves with painkillers, 12% used local anesthetic/nerve blocks to control pain, and 4% used a combination of local anesthetic and painkillers.

Table 12. Calf Management – Castration

	2014	2017
Castration Timing		
% Who Castrate < 3 Months Age	64%	93.5%
% Who Castrate Within 3 To 6 Months Of Age	30%	3.8%
% Who Castrate At Over 6 Months Of Age	3%	1.6%
% Who Castrate At "Other" Time	3%	1.1%
Castration Method		
% Who Use Elastrator < 3 Mos Old	71%	78%
% Who Use Elastrator > 3 Mos Old	5%	2.7%
% Who Castrate Using Scalpel	22%	15%
% Who Castrate Using Other Methods	1.6%	5%
Pain Control Use When Castrating		
% Who Responded	55%	100%
% Who Always Use Pain Control When Castrating	4.2%	13%
% Who Use Pain Control Depending on Age and Method	N/A	15%
Type of Pain Control		
Pain Killer	N/A	79.5%
Local Anesthetic plus pain killer	N/A	4.1%
Local Anesthetic / Nerve block	N/A	12.3%
Top Reasons for Not Using Pain Control Measures During Castration		
Too Expensive, See No Cost/Benefit	N/A	1%
Castrate Calves At < 3 Months	N/A	97%
Other	N/A	2%

6.3. IMPLANTS

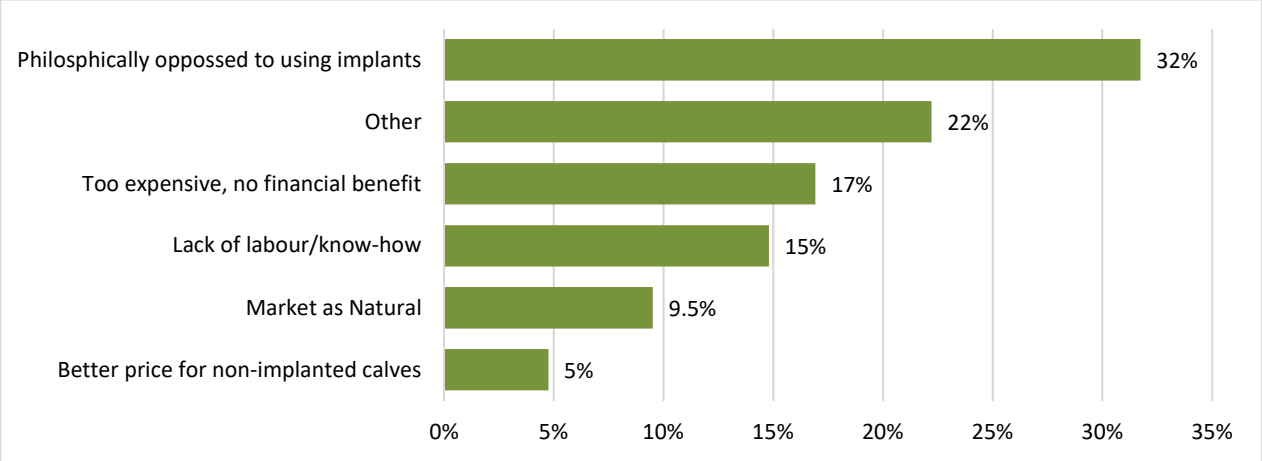
Across all survey respondents, 26.5% implanted their 2017 calves. Looking closer at timing of implants, 58% implanted only non-replacements prior to weaning while 32% implanted all of their calves prior to weaning. At weaning, 7% implanted only non-replacements, and 4% implanted all calves.

The reasons for not implanting included: being philosophically opposed to the idea of using growth promotants (32%); seeing no benefit to implants (17%); either didn't have the labor or didn't know how (15%); producing calves for a natural beef-marketing program (9.5%), and; felt they got a better price for non-implanted calves (5%). In the "other" category (22%) several producers said they didn't implant because cattle were likely to be used for breeding stock.

Table 14. Calf Management – Implants

	2014	2017
Implanting		
% Who Responded	75%	99%
% Who Implanted Their 2017 Calves	24%	26.5%
Implant Timing		
% Who Implant ALL Calves PRIOR TO Weaning	31%	32%
% Who Implant ONLY Non-replacements PRIOR TO Weaning	61%	57%
% Who Implant ALL Calves At Weaning	0%	4%
% Who Implant ONLY Non-replacements At Weaning	27%	7%
Top Reasons For Not Implanting Calves		
Paid Better Price For Non-implanted Calves	N/A	5%
Market Calves Through A "Natural" Program	N/A	9.5%
Lack Of Labor; Or Don't Know How	N/A	15%
Too Expensive, No Financial Benefit	N/A	17%
Philosophically Opposed To Using Implants	N/A	32%
Other	N/A	22%

Figure 10. Reasons for Not Implanting Calves (n=189)



SECTION 7: GRAZING AND FEEDING MANAGEMENT PRACTICES

In this section survey respondents were asked to provide details on their grazing and winter-feeding practices. The majority of producers own (88.5%) or rent (61%) some of their grazing land; while 27% have crown lease and 10% use grazing cooperatives, associations or community pastures.

When it comes to management of grazing lands, rotational grazing is most common for both native (54-62%) and tame (56-62%) pasture. This was slightly lower than what was reported in 2014 with rotational grazing the most common for both native (67%) and tame (70%) pasture. Continuous grazing was more common on rented land. Intensive grazing was mostly seen on owned tame grass (18%).

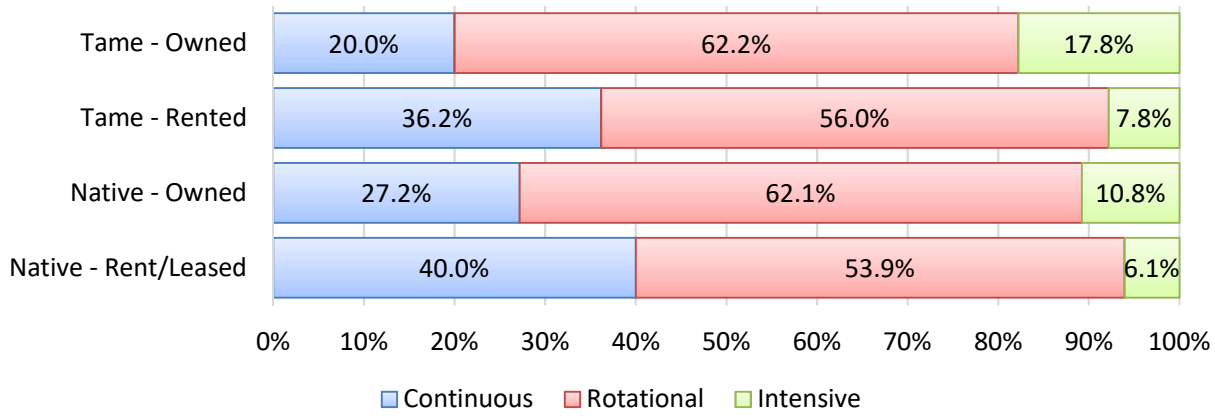
Pasture turn out varies each spring, but respondents indicated this generally occurred between May 1 and June 1.

Table 13. Grazing Practices – Land Tenure, Grazing Management

	2014	2017
Land Tenure		
% Who Own (some) Grazing Land	29%	88.5%
% Who Rent (some) Grazing Land	26%	61%
% Who Have Crown Lease Grazing Land	30%	27%
% Who Use Grazing Co-ops, Associations, Community Pastures	16%	10%
Grazing Management		
% Who Rotational Graze	70%	N/A
% Who Intensively Graze	11%	N/A

ǂ 2014 asked for proportion of land owned/rented, while the 2017 survey only asked if some was owned/rented.

Figure 11. Grazing Management of Native and Tame Pasture, WCCCS 2017 [3]



[3] Percentage of responding operations reporting continuous, rotational, or intensive grazing practices, separated by prairie type and land ownership

7.1 Winter Feeding Management

About 62% of survey participants who responded to questions on winter-feeding management say they have feed tested at least occasionally. Of those about 38% tested their feed at least once a year for quality, another 40% said they tested occasionally. Among those who did test feed, 95% said they used the results to develop balanced rations for their cattle.

Respondents who do not feed test, provided several different reasons for not collecting information on feed quality. More than 60% of the non-testers say their cattle appear to be in good condition on the feed provided, so they see no need to test. Another 8% said feed testing was too expensive, while others rely on feed tests from feed suppliers, and several producers say they aren't familiar with the process of collecting a feed sample and sending it for analysis, rely on visual condition of cattle and check manure consistency, or base feed quality on seasonal growing conditions.

Winter feeding methods were reported by 62% of survey respondents. The vast majority of those that did respond practiced some type of extensive feeding method (i.e. field feeding) most of the winter. All of those who responded used rolled bales (baled hay or straw) as part of their feeding program over the winter-feeding season. A further breakdown shows 47% used bale grazing, 41% used crop residue and 40% used some type of stockpiled grazing. Another 13% said they also grazed standing corn, and 28% practiced swath grazing.

About 30% of respondents used other winter-feeding methods and materials including silage, and feeding hay chopped with a bale processor. A small percentage of producers (6.3%) reported they do not extensively winter feed their cattle at all. The two most common reasons included being concerned about feed waste and secondly producers were concerned about animals losing body condition.

The majority of respondents (77%) reported performing either hands-on or visual body condition scoring. Of these 73% reported that they do manage their breeding females differently based on their body condition scoring.

Winter feeding typically started on November 1, 15, December 1 or January 1. The winter-feeding season ranged between 150 and 210 days, with most respondents reporting a wintering season of around 180 days.

Table 14. Feeding Management – Feed Testing, Winter Feeding Methods

	2014	2017
Lab Testing Feed		
% Who Responded	77%	61%
% Who Lab Test Feed For Quality Annually	47%	38%
% Who Use The Results To Balance Rations	80%	95%
Do You Balance Rations According To Feed Test Results		
% Of Survey Respondents Who Feed Test At Least Occasionally	N/A	62%
% Who Work With Nutritionist To Balance Rations	N/A	38%
% Who Balance Rations On Their Own Using Test Results	N/A	44%
% Who Balance Rations With Help Of Extension Specialist	N/A	12.5%
% Who Have Feed Test Results But Don't Use Them	N/A	5%
Top Reasons for Not Having Feed Tested for Quality		
% Saying Cattle Appear To Be Healthy On Feed Not Tested	N/A	61%
% Saying They Rely On Feed Test Results From Feed Supplier	N/A	9%
% Saying Feed Testing Is Too Expensive	N/A	8%
% Saying They Aren't Sure How To Collect Test Sample	N/A	6%
% Siting other reasons — monitor visual condition of cattle, etc.	N/A	16.5%
Winter Feeding Methods		
% who responded	76%	62%
% Who Swathgraze	17%	28%
% Who Balegraze	33%	47%
% Who Stockpile Graze	18%	40%
% Who Graze Standing Corn	7%	13%
% Who Graze Crop Residue	17%	41%
% Who Utilize a Bale Processor	46%	8%
% Who Roll Forage	28%	7%
% Who Use Bale Feeders	67%	N/A
% Who Feed Using Other Methods ǂ	17%	14%

ǂ Other: Silage, Standing Sorghum, Oats, Barley, Protein Pellets, TMR, Haylage

Figure 12. Winter Feeding Methods, WCCCS 2017 [4]

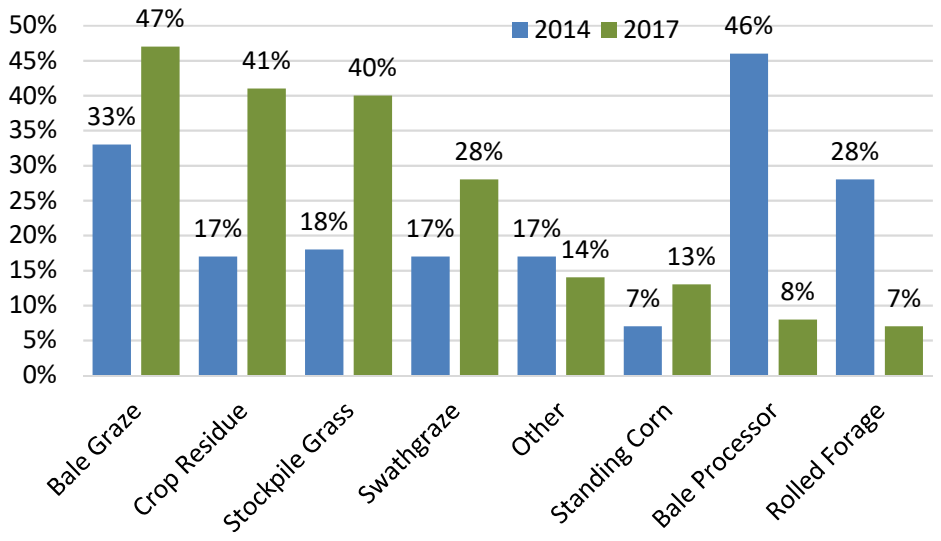
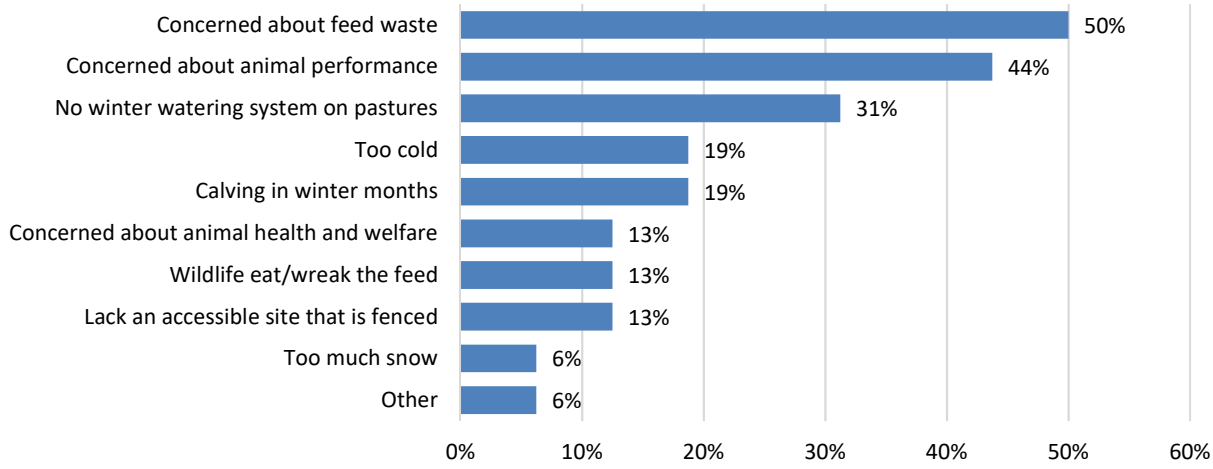


Figure 13. Reasons for Not Extensively Winter Feeding Cows (n=16)



[4] There was no rolled forage reported in 2017, it was called rolled bales

7.2 Water Sources and Testing Water Quality

On average, respondents reported that the largest source of their cattle's water was well water, followed by water gathered in a dugout or slough. Only a small minority of cattle appeared to have regular access to water from a spring (10%) or creek, lake, or river (12%). Of the other sources of water for their cattle, participants listed sloughs, rural water, and water troughs. However, these other sources only accounted for 3% of the total reported drinking water.

Only 5% of producers responding reported testing water every year, about 36% do it every two or three years and 59% never test livestock drinking water.

Of the 59% of participants who reported never having tested their cattle's water, neither cost nor sample collection was seen as a barrier to testing. Rather, respondents were most likely to respond that their cattle seemed healthy and the respondents drink from the same water source as their livestock.

Figure 14. Sources of drinking water

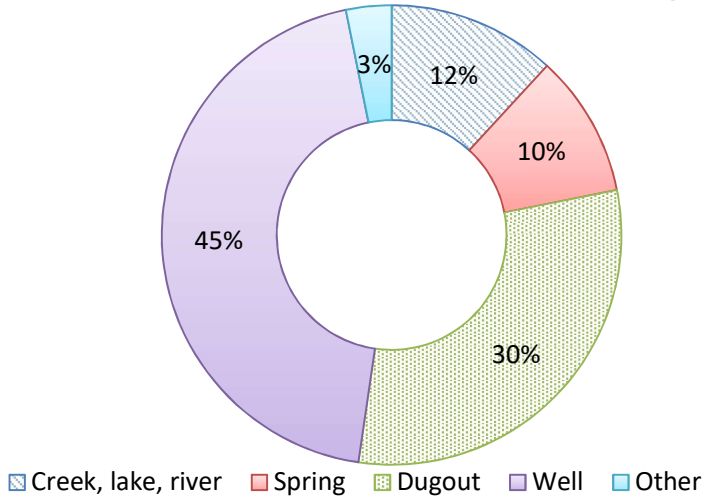


Figure 15. Frequency of Water Testing

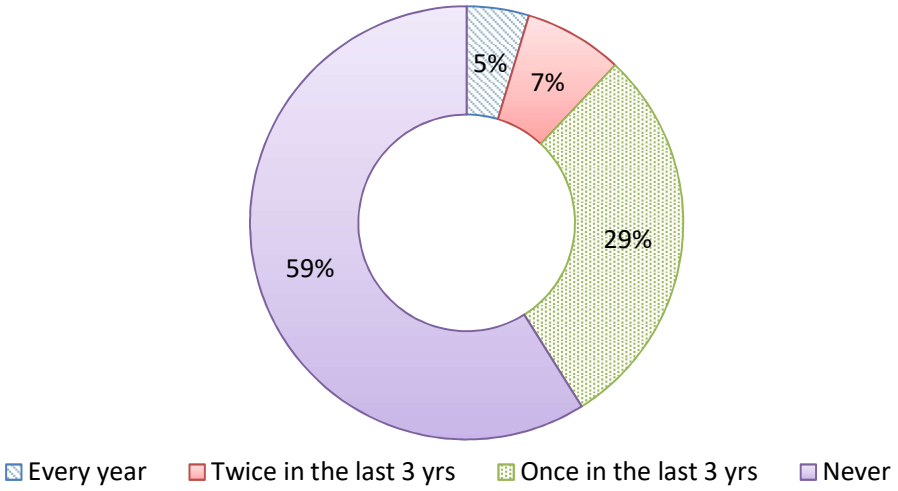
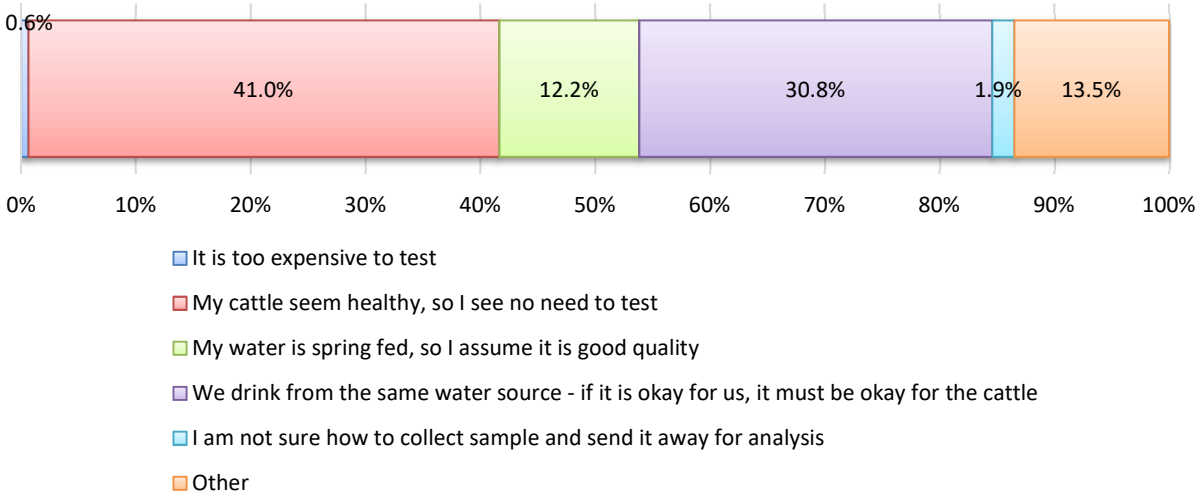


Figure 16. Reasons for never testing livestock drinking water



SECTION 8: ANIMAL HEALTH MANAGEMENT PRACTICES

Overall the vast majority (95%) of survey respondents do vaccinate for at least one disease or condition. For example, depending on the treatment, 64% to 84% of producers vaccinate cows against many of the common clostridial, respiratory and reproductive diseases. Similarly 57% to 80% vaccinate replacement heifers, and 80% to 90% of producers vaccinate calves. About 50% of bulls are vaccinated for common diseases.

The numbers are similar to slightly higher when producers are treating cattle for internal and external parasites.

Table 15. Health Management Practices – Vaccinating, Parasite Treatment

	2014	2017
Vaccination		
% Who Vaccinate Against At least One Disease Or Condition	91.4%	95%
% Who Vaccinate Females Pre-Breeding	69%	N/A
Parasite Treatment		
% Who Treated Cows For External Parasites In Last 12 Months	N/A	91%
% Who Treated Cows For Internal Parasites In Last 12 Months	N/A	74%
% Who Treated Replacement Heifers For Ext. Parasites - Last 12 Months	N/A	83%
% Who Treated Replacement Heifers For Internal Parasites - Last 12 Months	N/A	69%
% Who Treated Bulls For External Parasites In Last 12 Months	N/A	85%
% Who Treated Bulls For Internal Parasites In Last 12 Months	N/A	69%
% Who Treated Calves For External Parasites In Last 12 Months	N/A	73%
% Who Treated Calves For Internal Parasites In Last 12 Months	N/A	63%

The most common vaccines administered to cows were for reproductive diseases (84%) followed by Bovine Respiratory Disease (BRD) at 75% and Clostridial (e.g., blackleg) diseases (62%). The most comment vaccines administered to heifers were for reproductive diseases (82%) followed by Clostridial diseases (80%), and BRD (76%). The most comment vaccines administered to calves were for Clostridial diseases (93%) followed by BRD (84%).

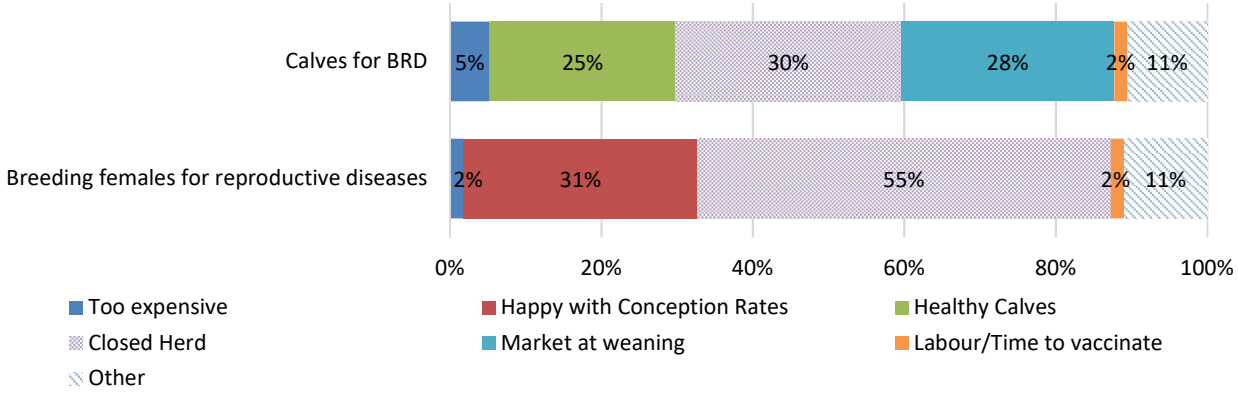
Table 16. Vaccination Used by Animal Type, 2017

% of responding operations	Cows	Replacement Heifers	Bulls	Calves	Did not vaccinate
7,8,9-Way Clostridial Disease	62%	80%	51%	93%	2%
Reproductive Diseases	84%	82%	51%	52%	7%
Bovine Respiratory Disease (BRD)	75%	76%	49%	84%	5%
Scours	66%	57%	2%	21%	17%
Vibrio	29%	27%	17%	7%	65%
Anthrax	10%	10%	9%	5%	85%

The 21% of survey respondents who reported not vaccinating their cows and heifers against reproductive diseases were asked to select the primary reason for foregoing this vaccination. About 55% of those reported that their primary

reason for not vaccinating was because they have a closed herd. A further 31% reported that they are happy with their conception rates, so they see no need to vaccinate. Only one participant suggested it was too expensive to vaccinate their cattle and only one reported they did not have the time or labour to do so. None of the participants reported that they do not have the facilities to vaccinate their cows or heifers. About 1% of respondents who didn't vaccinate cited other reasons.

Figure 17. Reasons for not Vaccinating (n=57 Calves, 55 breeding females)



Similar to the reproductive diseases, the most common reason, 29%, for not vaccinating calves against respiratory diseases was that respondents had a closed herd. This matched the number of respondents reporting that they market their calves right after they are weaned. Additionally, 25% of respondents who didn't treat reported that they do not vaccinate simply because their calves seem healthy. Together these three most common reasons accounted for nearly 83% of the responses to this question. Compared to the reproductive diseases, more participants reported that the cost of respiratory disease vaccines for calves prevented them from being administered.

8.1 Veterinary Communications

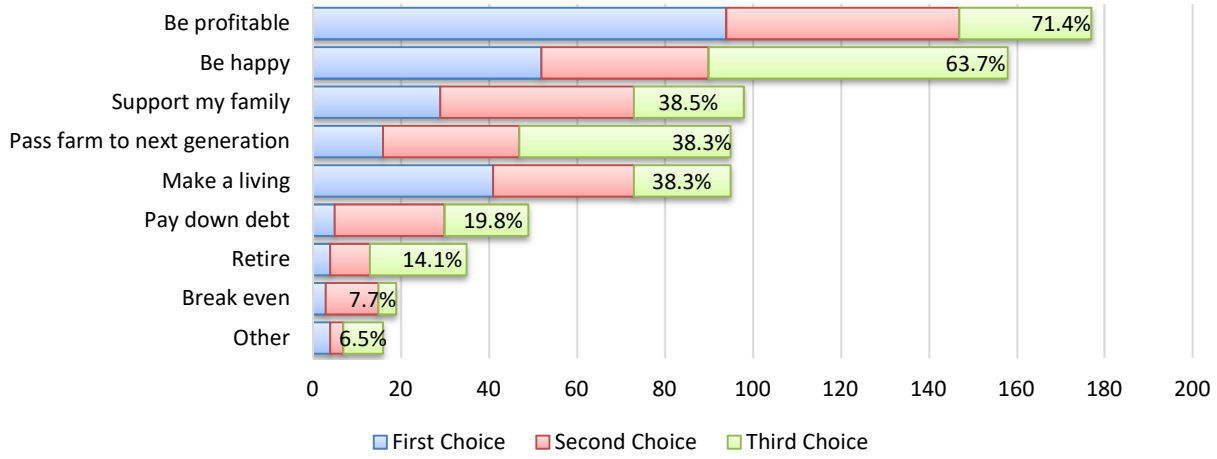
While the 2017 WCCCS indicates that most producers are visiting a veterinarian about 8 times per year, the most common is between 1 to 3 times per year. Respondents reported visiting or calling a veterinarian 1 to 3 times per year, which appeared in turn to result in a veterinarian visiting the farm 1 to 3 times per year.

The most common reason a producer met with a veterinarian was to obtain antibiotics, vaccines or supplies. The next most reported reason was for consultation or advice on a herd health program and the third most common reason was for an emergency animal health issue or calving problem. While few producers made appointments with a veterinarian to discuss recommended management practices and herd health programs, many reported they did discuss these topics with a veterinarian during visits to the office to pick up supplies or during farm visits while the veterinarian was attending to an animal health call.

SECTION 9: ADOPTION AND MOTIVATIONS

In examining what motivates producers and operational goals. The two most commonly expressed operational goals, were to be profitable (71.4%) and to be happy (63.7%), amongst more than half of respondents. The next three highest goals—to support family (39.5%), to pass the farm down to the next generation (38.3%), and to make a living (38.3%)—were also regularly endorsed with more than a third of respondents.

Figure 18. Top Three Operational Goals



Related to the decision to adopt new technologies or techniques, respondents reported monetary benefits as among the most important aspect. Specifically, lower production costs, higher productivity, and monetary cost associated with the new technology were all rated among the most important elements. Apart from these monetary elements, respondents also viewed the health of their cattle and their land as important to their decision-making process.

Only 26% of respondents reported that they regularly calculate their cost of production.

APPENDIX A: Example of Production Indicator Report

2017 PRODUCTION INDICATORS BASED ON WCCCS II SURVEY RESPONSES

Producer: WCCCS Aggregate Responses
Province: BC to MB

2017 REPRODUCTION PERFORMANCE	**COWS**	**HEIFERS**
Start of Breeding Season	**1-Jun**	**1-Jun**
Breeding Season Length (d)	91	86
Calving Span (d)	87	57

	COWS	**HEIFERS**	**TOTAL**
Conception Rate (# bred/# exposed)	93%	91%	92%
Calving Rate (# females calved/# exposed)	87%	85%	87%
Weaning Rate (# weaned/# live births)	85%	87%	86%
Calf Crop (# weaned/# exposed)	84%	86%	85%

AVERAGE FEMALES EXPOSED	**159**	**# OF COWS/HEIFERS THAT CALVED**	**139**
Bred Females Purchased	4.8%	Set of Twins	2.6%
Bred Females Sold	4.5%	Calves Born Dead/Died in First 24 hr	3.1%
Breeding Female Deaths	0.8%	Pasture Loss after 24 hr	2.2%
Open Cows Culled	6.1%	Baby Calves Purchased	0.4%
Open Cows Kept	2%	Abortion Rate	1.3%

FEEDING DAYS		
Winter Days	191	
Pasture Days	174	
Total	365	days

G rowth (weaning weight)	570
O pen Cows	8%
L ength of Calving Period	87
D eath Loss on Calves	5.4%

Pounds weaned / female exposed	533 lbs
Cow:Bull Ratio	21:1
Culling Rate	11.7%

WEANING WEIGHTS*	
Steer Calves	581.4 lbs
Bull Calves	640.7 lbs
Heifer Calves	544.1 lbs

* Weaning weights are averages of actual and estimates for both cow and heifer calves.