

BISON BENCHMARK PROJECT YEAR SIX - Gerard Woynarski Project Consultant

INTRODUCTION

The Saskatchewan Bison Association (SBA), along with the Bison Producers of Alberta (BPA), support the need to provide updated cost of production and herd performance information for the bison industry. Updated information provides producers an opportunity to compare their bison business performance with the performance of others in the business and identify areas where they could improve and enhance profitability. Current production and financial performance information is important to assist new entrants plan entry into the industry and is helpful for financial institutions to evaluate business proposals as they capitalize the bison industry.

This report summarizes the results of the sixth year of the project, provides suggestions as to how the information can be used, how more producers can get involved and outlines next steps.

The SBA and the BPA acknowledge the financial support from Saskatchewan Agriculture and ALMA (Alberta Livestock & Meat Agency). Without their contribution and the support of bison producers this project would not be possible.

THE PROCESS

Under the continued guidance of an advisory committee an updated plan was established for 2016, the data collection format was enhanced, bison producers to provide data were identified, and data was collected through farm visits from January 1, 2016 to June 30, 2016. The data was analyzed and participants had their information compared to data collected. To preserve the confidentiality of individual producer data, the results of at least three producers were required in each data set.

THE RESULTS & DATA COLLECTED

The number of benchmark project participants continued to grow as producers in 2016 provided information on 158 bison enterprises compared to 151 in 2015. Data was collected from 59 enterprises involved in bison cow-calf operations, 53 enterprises were backgrounding operations, and 46 enterprises were finishing operations. The data included herd profile, production costs and investment requirements.

With six years of data now collected, an ongoing 5-year average comparison is maintained to provide a longer-term perspective of the production costs and performance measures.

COW-CALF ENTERPRISES

Herd profile data for the cow-calf enterprise includes items such as: breeding herd size (cows and bulls), breeding herd death loss, culled animals, replacements, calving and weaning dates, number of calves weaned and weights, average calf sale prices and weights, weaning dates, whether or not a producer pregnancy tests, whether or not a producer de-horns animals and whether or not a producer sells breeding stock. In addition, this year the bull-to-cow ratio data was collected along with the age distribution of cow herd. Below are tables which reflect the performance results for the current production year and the most recent 5-year historic average data.

KEY PERFORMANCE MEASURES

Category (No. of Cows)	COW-CALF				
	2015 <u><100 & 100+</u>	Under 100		100 Plus	
		2015	2015	5-Yr Av	2015
Number of Farms:	59	30	23	29	22
Av # of Cows	123	62	54	186	225
Weaning Rate %	85.7	85.3	87.7	86.0	85.6
Av Wean Weight – Bulls	463	461	476	464	479
Av Wean Weight – Heifers	422	421	429	424	434
Av Days from Birth to Wean	260	268	284	251	275
Mortality % in Cow Herd	2.14	2.71	2.25	1.56	2.05
Total Feed Costs Per Cow	\$403	\$405	\$367	\$402	\$353
Cash Operating Cost Per Cow*	\$807	\$836	\$712	\$811	\$346
Cost of Production Per Cow**	\$971	\$1028	\$862	\$868	\$729
Av Cash Return Per Cow	\$855	\$790	\$391***	\$922	\$445***
Av Net Return Per Cow	\$703	\$598	\$231	\$811	\$346
Av Capital costs per head	\$2412	\$3274	\$3091	\$1520	\$1338

NOTES: * - Cash Operating Costs does not include labor & depreciation

** - Cost of Production includes cash operating costs plus labor & depreciation

*** - 4-Year average only

AGE DISTRIBUTION OF COW HERD (2015)

	<u>Under 100 Cow</u>	<u>% Herd</u>	<u>100 Plus Cows</u>	<u>% Herd</u>
Total No. of Cows	62		186	
No. of Cows < 5 Yrs	19	31%	51	27%
No. of Cows 5-12 Yrs	22	35%	65	35%
No. of Cows 13-17 Yrs	13	21%	48	26%
No. of Cows > 17 Yrs	8	13%	22	12%
No. of Bulls	4 to 5		12	
Av Age of Bulls	6		6	
Bull-to-Cow Ratio	14		16	

WEANING PERFORMANCE (2015)

Early Wean (Prior to Dec 1st)

	All Farms	Under 100	100 Plus
No. of Farms	11	5	6
Weaning Rate %	84.2	85.0	83.5
Av Wean Weight – Bulls	431	393	463
Av Wean Weight – Heifers	395	362	421
Av Days from Birth to Wean	202	191	212
Av Weaning Date	Nov 8	Oct 30	Nov 16

Normal Wean (Dec 1st to End Feb)

	All Farms	Under 100	100 Plus
No. of Farms	43	21	22
Weaning Rate %	86.4	86.0	86.9

Av Wean Weight – Bulls	468	473	463
Av Wean Weight – Heifers	428	435	423
Av Days from Birth to Wean	266	274	259
Av Weaning Date	Jan 2	Jan 1	Jan 2

Late Wean (Mar 1st Plus)

	All Farms	Under 100	100 Plus
No. of Farms	5	4	1
Weaning Rate %	82.5	82.2	n/a
Av Wean Weight – Bulls	484	479	n/a
Av Wean Weight – Heifers	429	420	n/a
Av Days from Birth to Wean	330	334	n/a
Av Weaning Date	Mar 21	Mar 26	n/a

OTHER FACTORS

Pregnant Testing: Of the 59 cow-calf farms for 2015, 37% used pregnancy testing in their cow-calf enterprise. In these farms the overall average weaning rate was 85.9%, compared to an 85.5% weaning rate for those farms that did not pregnancy test in their operation. More data is required to be able to draw conclusions.

De-horning: In 2015, 22% of the total cow-calf entities in the benchmark project de-horned their animals. Again more information is required to draw any conclusions.

Breeding Stock Sold: Of the 59 cow-calf farms for 2015, 20% of the operations sold breeding stock. The average amount of animals sold for breeding was 3% of total animals on the farm.

BACKGROUNDING ENTERPRISES

Herd profile data for the backgrounding enterprise includes: number of acres pastured, number and average weight of backgrounders purchased or retained from own herd, average backgrounder purchase/retained price, days on grass/feed, number of backgrounders sold and retained, average shipping weight, and selling price.

KEY PERFORMANCE MEASURES:

BULLS

Category (No. of Backgrounders)	2015	2015	2011-15	2015	2011-15
	<u><100 & >100</u>	<u><100</u>	<u>5-Yr Av</u>	<u>>100</u>	<u>5-Yr Av</u>
Number of Farms:	27	19	18	8	7
Av No. of Backgrounders	84	50	57	157	174
Av Wt of Purchased & Retained Head	461	468	497	442	449
Av Shipping Weight (Lbs)	794	775	800	838	809
Mortality Rate %	0.59	0.76	0.41	0.20	0.34
Days on Grass &/or Feeders	230	217	216	263	244
Av Daily Gain (Lb/day)	1.45	1.43	1.44	1.51	1.49
Total Cost of Production per Head	\$2119	\$2161	\$1606	\$2003	\$1508
Av Total Cost per Lb Gained	\$1.60	\$1.76	\$1.37	\$1.22	\$1.06
Total Cost of Feed per Head	\$237	\$232	\$202	\$247	\$212
Av Feed Cost per Lb Gained	\$0.75	\$0.80	\$0.68	\$0.64	\$0.62
Total Operating Cost per Head	\$2005	\$2042	\$1533	\$1920	\$1443
Av Cash Return per Head	\$658	\$588	\$346**	\$825	\$425**
Av Net Return per Head	\$544	\$469	\$285	\$723	\$360
Av Capital Costs per Head	\$1816	\$1947	\$1359	\$1505	\$816

NOTE: ** - 4-Year average only

HEIFERS

Category (No. of Backgrounders)	2015	2015	2011-15	2015	2011-15
	<u><100 & >100</u>	<u><100</u>	<u>5-Yr Av</u>	<u>>100</u>	<u>5-Yr Av</u>
Number of Farms:	26	21	18	5	6
Av No. of Backgrounders	77	52	53	179	156
Av Wt of Purchased & Retained Head	416	425	443	383	419
Av Shipping Weight (Lbs)	712	705	687	742	751
Mortality Rate %	0.81	0.83	0.27	0.73	0.40
Days on Grass &/or Feeders	247	234	227	298	282
Av Daily Gain (Lb/day)	1.22	1.22	1.13	1.23	1.20

Total Cost of Production per Head	\$1814	\$1851	\$1324	\$1661	\$1317
Av Total Cost per Lb Gained	\$1.67	\$1.74	\$1.49	\$1.38	\$1.13
Total Cost of Feed per Head	\$211	\$200	\$162	\$260	\$205
Av Feed Cost per Lb Gained	\$0.72	\$0.71	\$0.68	\$0.74	\$0.63
Total Operating Cost per Head	\$1688	\$1716	\$1247	\$1570	\$1253
Av Cash Return per Head	\$576	\$533	\$267**	\$756	\$375**
Av Net Return per Head	\$450	\$398	\$192	\$665	\$310
Av Capital Costs per Head	\$1943	\$2005	\$1471	\$1683	\$836

NOTE: ** - 4-Year average only

FINISHING ENTERPRISES

Herd profile data for the finishing enterprise consists of: number of feeders purchased and placed on feed, average weight of feeders purchased, feeder purchase price, days on feed, number of head sold and retained, average finish/shipping weight at farm, selling price, weight at plant (if available), hot hanging weight, and slaughter age (birth date to slaughter date).

KEY PERFORMANCE MEASURES:

Category (No. of Finish Animals)	BULLS				
	2015 <u><100 & >100</u>	2015 <u><100</u>	2011-15 <u>5-Yr Av</u>	2015 <u>>100</u>	2011-15 <u>5-Yr Av</u>
Number of Farms:	24	17	16	7	7
Av No. of Feeders	86	51	51	170	232
Av Wt of Feeders Purchased	775	758	753	814	801
Av Shipping Wt at Farm (Lbs)	1133	1123	1124	1157	1115
Mortality Rate %	0.49	0.54	0.47	0.37	0.38
Shrinkage %	7.16	7.22	6.92	7.01	6.38
Dressing % at Plant	60.85	60.91	60.58	60.70	60.21
Dressing % Feedlot to Carcass	56.93	56.85	56.19	57.11	56.53
Hot Hanging Weight	646	639	n/a	661	n/a
Slaughter Age (Birth to slaughter - months)	25	26	n/a	25	n/a
Days on Feed	209	214	207	198	176

Av Daily Gain (Lb/day)	1.70	1.68	1.84	1.76	1.81
Total Cost of Production per Head	\$2737	\$2726	\$2298	\$2765	\$2262
Av Total Cost per Lb Gained	\$2.26	\$2.24	\$2.00	\$2.32	\$2.01
Total Cost of Feed per Head	\$375	\$349	\$348	\$437	\$365
Av Feed Cost per Lb Gained	\$1.10	\$1.02	\$0.97	\$1.29	\$1.19
Total Operating Cost per Head	\$2625	\$2612	\$2199	\$2651	\$2184
Av Cash Return per Head	\$635	\$585	\$402**	\$757	\$477**
Av Net Return per Head	\$523	\$470	\$289	\$650	\$367
Av Capital Costs per Head	\$1595	\$1788	\$1806	\$1126	\$851

NOTE: ** - 4-Year average only

HEIFERS

Category (No. of Finish Animals)	2015	2015	2011-15	2015	2011-15
	<u><100 & >100</u>	<u><100</u>	<u>5-Yr Av</u>	<u>>100</u>	<u>5-Yr Av</u>
Number of Farms:	22	17	17	5	5
Av No. of Feeders	66	38	47	163	258
Av Wt of Feeders Purchased	651	633	648	714	715
Av Shipping Wt at Farm (Lbs)	921	908	928	968	937
Mortality Rate %	0.36	0.27	0.21	0.68	0.34
Shrinkage %	7.33	7.41	7.80	7.11	6.71
Dressing % at Plant	62.25	62.57	62.51	61.22	61.51
Dressing % Feedlot to Carcass	58.05	58.16	57.27	57.66	57.60
Hot Hanging Weight	534	528	n/a	557	n/a
Slaughter Age (Birth to slaughter - months)	27	27	n/a	25	n/a
Days on Feed	213	220	211	192	179
Av Daily Gain (Lb/day)	1.29	1.27	1.39	1.33	1.26
Total Cost of Production per Head	\$2166	\$2085	\$1866	\$2441	\$1934
Av Total Cost per Lb Gained	\$2.78	\$2.76	\$2.39	\$2.85	\$2.62
Total Cost of Feed per Head	\$329	\$329	\$294	\$329	\$290
Av Feed Cost per Lb Gained	\$1.32	\$1.32	\$1.13	\$1.29	\$1.35
Total Operating Cost per Head	\$2024	\$1940	\$1759	\$2310	\$1850

Av Cash Return per Head	\$616	\$623	\$374**	\$592	\$375**
Av Net Return per Head	\$475	\$479	\$257	\$460	\$275
Av Capital Costs per Head	\$1956	\$2144	\$1825	\$1314	\$840

NOTE: ** - 4-Year average only

SYNTHESIS

The performance measures above reflect the averages in each category. As a producer you are able to compare your bison business results to the averages in this report. By doing this you will be able to identify areas where you can improve your operations. For instance, if you have a feeder operation, you can compare your daily gains with the averages. This comparison will give you an indication as to how well you are doing. You can compare other variables as well. Be sure you are comparing cost data from the same time periods.

Next Steps

The benchmarking program will continue to demonstrate value to the bison industry and producers as participation increases. To this end, plans are to enhance the benchmarking project by reporting “top producer” performance measures in future Smoke Signals publications.

In 2017, the Saskatchewan Bison Association (SBA), the Manitoba Bison Association (MBA) and the Bison Producers of Alberta Association will continue to work together to further enhance the benchmark project. We will be looking for increased participation in the three provincial associations. The more producers that contribute to the program, the more reliable the information will become.

Thank you to all those producers who have contributed to the benchmark program over the past six years. We look forward to working with you again in 2017. For those interested in participating in the benchmark program, please contact Gerard Woynarski at 306-536-9841 (SK & MB) or Bruce Gordon 403-815-8073 (AB).