BISON BENCHMARK PROJECT YEAR ELEVEN - Gerard Woynarski Project Consultant

INTRODUCTION

The Saskatchewan Bison Association (SBA) and the Canadian Bison Association (CBA) collect current cost of production and herd performance information for the bison industry. Updated information provides producers with the ability to compare their bison business performance with the performance of others and identify areas where they could improve and enhance production and profitability. Current production and financial performance information is important to assist new entrants plan entry into the industry, present producers to expand their business, and is helpful for financial institutions to evaluate business proposals as they capitalize the bison industry. This information is also valuable to support further research and to develop agricultural policy impacting the bison industry.

The SBA and CBA acknowledge the financial support from the Saskatchewan Ministry of Agriculture. Without their contribution and the support of bison producers this project would not be possible. Thank you to all those producers who have contributed to the benchmark project over the past eleven years. Without your support the programs success would not have been possible.

This report summarizes the results of the eleventh year of the project and provides suggestions as to how the information can be used.

THE PROCESS

On the foundation of feedback from producers participating in the program as well as people and organizations using the information, an updated plan was developed for 2021. For this eleventh year, the program was focused on improving the quality of the data gathered. With the resources available, the number of participants was reduced with a focus on Cow-calf and Finishing bison enterprises.

The data collection format was refined, bison producers were identified, and data was collected between March 1, 2021, and July 15, 2021 mainly through long distant phone conversations with farm visits as required. The data were 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

A total of 29 farms participated in the benchmark project in 2021 and provided information on 45 bison enterprises. Data was collected from 29 enterprises involved in bison cow-calf operations and 16 enterprises were finishing operations. The data included herd profile, production costs and investment requirements.

In addition to the current year's benchmarking results, the most recent 3-year average production costs and performance measures are represented in this report. The 3-year average is considered a reasonable historic comparison as it represents the more recent economic and market conditions in the bison industry.

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 a producer pregnancy tests, de-horns, sells breeding stock; bull-to-cow ratio and age distribution of cow herd. In addition, the pasture acre average per cow and the breeding herd value per cow performance measures were collected and are reported in this article.

KEY PERFORMANCE MEASURES COW-CALF

Category (No. of Cows)	2020 <100 &100 Plus	Under 100 2018-20 2020	Under 100 2018-20 3-Yr Av	100 Plus 2018-20 2020	100 Plus 2018-20 3-Yr Av
Number of Farms:	29	13	22	16	20
Av # of Cows	144	63	60	211	204
Weaning Rate %	86.4	89.1	86.7	84.2	84.2
Av Wean Weight – Bulls	501	508	513	494	490
Av Wean Weight – Heifers	451	449	462	449	445
Av Days from Birth to Wean	269	279	284	261	265
Mortality % in Cow Herd	1.96	2.09	1.97	1.86	1.71
Total Feed Costs Per Cow	$529	$569	$558	$496	$504
Cash Operating Cost Per Cow*	$963	$1079	$1081	$870	$889
Cost of Production Per Cow**	$1128	$1271	$1257	$1013	$1033
Av Cash Return Per Cow	($29)	($105)	$70	$89	$444
Av Net Return Per Cow	($194)	($297)	($107)	$32	$341
Av Capital costs per head	$2857	$3840	$4178	$2058	$2286
Av Breeding Herd Value Per Cow	$3175	$3170	$3927	$3179	$3794
Av Pasture Acres Per Cow	8.6	9.5	9.1	7.9	7.5

NOTES: * - Cash Operating Costs does not include labor & depreciation
** - Cost of Production includes cash operating costs plus labor & depreciation

AGE DISTRIBUTION OF COW HERD (2019 vs 2020)

	Under 100 Cows				100 Plus Cows			
	2019		**2020**		**2019**		**2020**	
Total No. of Cows	60		63		207		211	
No. Cows < 5 Yrs	25	41%	25	40%	71	34%	83	40%
No. Cows 5-12 Yrs	23	38%	26	41%	83	40%	73	35%
No. Cows 13-17 Yrs	10	16%	10	16%	34	17%	42	20%
No. Cows > 17 Yrs	3	5%	2	3%	18	9%	11	5%
Av Age of Bulls	6		6		6		7	
Bull-to-Cow Ratio	16		16		16		16	

WEANING PERFORMANCE (2018 vs 2019)

	Early Wean (Prior to Dec 1st)					
	All Farms		Under 100		100 Plus	
	2019	**2020**	**2018**	**2019**	**2019**	**2020**
No. of Farms	4	5	n/a	n/a	3	4
Weaning Rate %	86.0	89.8	n/a	n/a	82.4	87.9
Av Wean Weight – Bulls	483	481	n/a	n/a	457	483
Av Wean Weight – Heifers	436	436	n/a	n/a	411	435
Av Days - Birth to Wean	220	216	n/a	n/a	221	217
Av Weaning Date	Nov 10	Nov 15	n/a	n/a	Nov 10	Nov 17

Normal Wean (Dec 1st to End Feb)

	All Farms		Under 100		100 Plus	
	2019	**2020**	**2019**	**2020**	**2019**	**2020**
No. of Farms	33	23	19	11	14	11
Weaning Rate %	86.8	85.5	88.2	88.2	84.9	83.0
Av Wean Weight – Bulls	508	506	520	515	493	498
Av Wean Weight – Heifers	462	456	471	458	450	454
Av Days - Birth to Wean	273	277	272	279	275	275
Av Weaning Date	Jan 17	Jan 23	Jan 18	Jan 25	Jan 16	Jan 21

Late Wean (Mar 1st Plus)

	All Farms		Under 100		100 Plus	
	2019	**2020**	**2019**	**2020**	**2018**	**2020**
No. of Farms	9	n/a	6	n/a	3	n/a
Weaning Rate %	86.7	n/a	89.9	n/a	80.3	n/a
Av Wean Weight – Bulls	525	n/a	525	n/a	527	n/a
Av Wean Weight – Heifers	475	n/a	478	n/a	470	n/a
Av Days - Birth to Wean	337	n/a	338	n/a	334	n/a
Av Weaning Date	Mar 18	n/a	Mar 23	n/a	Mar 9	n/a

NOTE: n/a = less than 3 farms in data set

OTHER FACTORS

Weaning Rates Comparisons With And With Out Pregnancy Testing

	2018	2019	2020	3-Yr Av
All Cow-Calf Farms	51	51	29	43
% of Preg Testing	25%	24%	21%	23%
Wean Rates w/Preg Test	84.8%	91.7%	88.1%	88.2%
Wean Rates w/oPreg Test	84.0%	85.1%	86.0%	85.0%

De-horning:

In 2020, 7% of the total cow-calf entities in the benchmark project de-horned their animals, compared to 7% in 2019, 8% in 2018, and 18% in 2017. The average over the most recent past 3 years is 7.3%.

Breeding Stock Sold:

In 2020, 7% of the total cow-calf operations in the benchmark project sold breeding stock, compared to 15% in 2019, 16% in 2018, and 18% in 2017; an average of 12.7% from 2018 to 2020, inclusive. The average number of animals sold for breeding was 1.1% of total animals on the farm in 2020, compared to 1.7% in 2019, 3.7% in 2018, and 4.0% in 2017. This is an average of 2.2% over the most recent past 3 years.

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).

Please note that the increased number of days on feed and the increased shipping weights can be attributed to the consequences of BSE.

KEY PERFORMANCE MEASURES:

		BULLS			
Category (No. of Finish Animals)	2020 <100 & >100	2020 <100	2018-20 3-Yr Av	2020 >100	2018-20 3-Yr Av
Number of Farms:	16	10	11	6	65

Av No. of Feeders	114	62	54	201	188
Av Wt of Feeders Purchased	836	828	802	850	828
Av Shipping Wt at Farm (Lbs)	1281	1288	1238	1269	1217
Mortality Rate %	0.76	0.78	0.74	0.72	0.94
Shrinkage %	6.74	6.67	6.56	6.85	6.94
Dressing % at Plant	59.85	59.67	60.42	60.16	60.41
Dressing % Feedlot to Carcass	55.82	55.69	56.45	56.03	56.21
Hot Hanging Weight	716	719	699	710	684
Slaughter Age (Birth to slaughter - months)	28	29	28	27	25
Days on Feed	296	319	285	258	216
Av Daily Gain (Lb/day)	1.55	1.46	1.59	1.71	1.89
Av. Feeder Cost Per Head	$1844	$1798	$2335	$1919	$2360
Total Cost of Production Per Head	$2949	$2975	$3366	$2905	$3211
Av Total Cost per Lb Gained	$2.65	$2.73	$2.48	$2.51	$2.27
Total Cost of Feed Per Head	$646	$700	$585	$554	$463
Av Feed Cost per Lb Gained	$1.54	$1.61	$1.38	$1.42	$1.24
Av Cash Return Per Head	$872	$822	$679	$954	$741
Av Net Return Per Head	$718	$669	$523	$798	$615
Av Capital Costs Per Head	$1924	$2066	$2360	$1689	$1722

HEIFERS

Category (No. of Finish Animals)	**2020 <100 & >100**	**2020 <100**	**2018-20 3-Yr Av**	**2020 >100**	**2018-20 3-Yr Av**
Number of Farms:	15	9	11	6	4
Av No. of Feeders	96	50	52	165	189
Av Wt of Feeders Purchased	718	698	700	748	708
Av Shipping Wt at Farm (Lbs)	1035	1037	1016	1033	991
Mortality Rate %	1.60	1.49	0.90	1.75	0.31
Shrinkage %	6.75	6.72	6.63	6.79	7.21
Dressing % at Plant	61.01	60.93	61.42	61.13	62.20

Dressing % Feedlot to Carcass	56.90	56.84	57.34	56.98	57.71
Hot Hanging Weight	588	588	582	589	571
Slaughter Age (Birth to slaughter - months)	28	28	28	28	26
Days on Feed	302	303	290	299	243
Av Daily Gain (Lb/day)	1.08	1.14	1.12	1.00	1.21
Av. Feeder Cost Per Head	$1305	$1259	$1828	$1374	$1809
Total Cost of Production Per Head	$2313	$2324	$2755	$2296	$2608
Av Total Cost per Lb Gained	$3.41	$3.37	$3.07	$3.46	$2.91
Total Cost of Feed Per Head	$517	$510	$466	$529	$436
Av Feed Cost per Lb Gained	$1.75	$1.58	$1.52	$2.00	$1.58
Av Cash Return Per Head	$751	$826	$546	$639	$561
Av Net Return Per Head	$537	$562	$348	$500	$433
Av Capital Costs Per Head	$2768	$3316	$2840	$1947	$1748

SYNTHESIS

The performance measures above reflect the averages in each category. As a producer you can compare your bison business results to the averages in this report. By doing so you will be able to identify areas where you are doing very well, and areas where you can improve your operations. For instance, if you have a finishing 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. When doing so, be sure you are comparing cost data from the same time periods.

Next Steps

The benchmarking program will continue for another year after which time the future of the program and its funding will be explored. The production and financial benchmarks are important to producers, as well as all stakeholders. The plans are to continue to use the benchmarking data to support the Bison Forecasting Tool which was developed in 2017 and made available in early 2018. The Forecasting Tool allows producers to input their own bison farm data, compare it to the benchmark results, and then create “what-if” scenarios to determine how changes in production and performance factors will impact returns. The Bison Forecasting Tool can be found on the SBA and CBA websites.

We look forward to working with those who will continue to participate in the program. in the future. For those who have questions about the benchmark project, please contact Gerard Woynarski at 306-536-9841 or the SBA/CBA office at 306-522-4766 for additional information.