

1992

Chaps Summary for South Dakota, 1991

D. L. Boggs

South Dakota State University

Follow this and additional works at: http://openprairie.sdstate.edu/sd_beefreport_1992



Part of the [Animal Sciences Commons](#)

Recommended Citation

Boggs, D. L., "Chaps Summary for South Dakota, 1991" (1992). *South Dakota Beef Report, 1992*. Paper 3.
http://openprairie.sdstate.edu/sd_beefreport_1992/3

This Report is brought to you for free and open access by the Animal Science Reports at Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange. It has been accepted for inclusion in South Dakota Beef Report, 1992 by an authorized administrator of Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange. For more information, please contact michael.biondo@sdstate.edu.



CHAPS SUMMARY FOR SOUTH DAKOTA 1991

D.L. Boggs¹
Department of Animal and Range Sciences
CATTLE 92-2

Summary

Calving distribution and calf performance data were summarized from the CHAPS (Cow Herd Appraisal of Performance Software) analyses of 61 South Dakota cow herds. CHAPS uses beef cow weaning weight records to calculate adjusted 205-day weights and ratios, keep lifetime production records on cows, calculate Most Probable Producing Ability estimates for cows, produce a sire summary and analyze production according to cow age and 21-day calving periods. The 1991 summary represents 6,196 cows for an average of 102 cows per herd. The herds ranged in size from 19 to 277 head. The average midpoint of the calving season for these herds was April 9. The average actual birth and weaning weights were 78.8 and 507.0 lb, respectively, with the average age at weaning 205.3 days. Overall, 82.8% of the females calved by day 42 of their respective calving seasons, although there was considerable disparity in the percent calved by day 42 between the HIGH and LOW (92.9 vs 69.7%) calving distribution herds. This difference is important since actual weaning weights declined 35 to 60 lb for each 21 days later that calves were born. In addition to these data for the state summary, CHAPS provides valuable information for making within herd selection and management decisions.

(Key Words: Cow-Calf, Performance Records.)

Introduction

A computer program for evaluating cow herd productivity was acquired in 1989 by the SDSU Extension Service and placed in most of the county extension offices. The program is called CHAPS which stands for Cow Herd Appraisal of Performance Software. CHAPS uses standard beef cow weaning

weight records to adjust weaning weights and calculate 205-day ratios. In addition, the program keeps lifetime production records on cows, calculates MPPA (Most Probable Producing Ability) for cows, produces a sire summary and analyzes birth dates and weaning weights to give a calving distribution and production analysis by cow age and 21-day calving periods. CHAPS records are summarized to develop a state database to provide producers a basis for comparative analysis of their herds' productivity.

This 1991 CHAPS summary for South Dakota represents 6,196 cows from 61 herds throughout the state. The average herd size was 102 cows with a range of 19 to 277 head. Several interesting trends are apparent in the data. Data of particular interest in the summary were the percentage of calves born in 21-day segments of the calving season. Calving distribution provides an excellent indication of reproductive performance and provides a producer a tool to utilize in troubleshooting reproduction, nutrition and management problems within the various age groups of cows in the herd. CHAPS determines the start of the first 21-day period by using the date when the second 3-year-old or older cow calves. Any cows or heifers calving ahead of that date are considered Early. The calving distribution and performance of the 21 herds with the highest percentage calved by the end of the first 21 days (HIGH) are compared to the 20 herds with the lowest percentage calved by the end of the first 21 days (LOW).

Results and Discussion

1. The age distribution of the cows in the summary appears in Table 1. In these herds, 16.9% were first calf 2-year-olds and approximately 45.4% from 5 to 9 years of age. In these herds, 41.5%

¹Extension Beef Specialist, Associate Professor.

Table 1. Number and percentage of cows by age in 1990 CHAPS summary

Age of cow, yr	Number of cows	% of total	Weaning weight
2	1050	16.9	468
3	825	13.3	473
4	702	11.3	507
5-9	2813	45.4	513
10 and over	832	13.0	491

were under 5 years and 13.0% were 10 years or older. The average cow age was approximately 5.7 years. As expected, actual weaning weights were highest for the 5- to 9-year-old age group.

2. The average start of the calving season for the mature cow herd was March 15. The average midpoint of the calving season for these herds was April 9. The average actual birth and weaning weights for these calves were 78.8 and 507.4 lb, respectively. The averages for age at weaning, weight per day of age at weaning, and adjusted weaning weight were 205.3 days, 2.49 lb/day and 530 lb, respectively. Actual weaning weights became progressively lighter by 35 to 50 lb for each 21 days later that calves were born (Table 2). Note that the HIGH distribution herds averaged 20 lb more at weaning than the LOW distribution herds due to the higher percentage of calves born early in the calving season.

3. In these herds, nearly 83% of the females were calved by the end of the second 21-day period and over 94% were calved by the end of the third 21-day period (Table 2).
4. The calving distribution within age group (Table 3) shows that about a quarter of the 2-year-olds were calved ahead of the mature cows, with the HIGH distribution herds calving 36.4% EARLY versus 15.6% for the LOW herds. There was even greater disparity between the HIGH and LOW groups in the cumulative percentages of 3- and 4-year-old cows calving within the 21-day calving periods. For example, at the end of the second 21-day period, 89.7% of the 3-year-olds in the HIGH herds had calved compared to only 68.7% in the LOW herds. This trend continues for the 4-year-old cows (92.2 vs 59.7) and indicates difficulty in getting 2- and 3-year-olds among the LOW distribution herds to rebreed and a real need for improvement in nutrition and management of these young females. The data also show the value of calving first-calf, 2-year-olds early to allow more time for rebreeding.
5. CHAPS provides valuable information to individual producers as well as the South Dakota beef industry. If you are interested in enrolling your herd in CHAPS, contact your county extension agent or the extension beef specialists at SDSU.

Table 2. Percentage of cows calving and average actual weaning weight by 21-day calving period for all cows and for high and low calving distribution groups

21-day period	All cows		HIGH		LOW	
	%	Weight	%	Weight	%	Weight
Early	5.6	532	8.0	526	3.5	540
1st	47.0	529	63.2	527	29.4	533
2nd	30.2	494	21.7	488	36.8	499
3rd	11.6	443	5.3	431	19.7	454
4th	3.3	394	.8	385	6.9	414
Late	1.7	<u>354</u>	.6	<u>368</u>	3.4	<u>360</u>
Average wt		501		512		492
Avg calving date	April 9		April 5		April 13	
Avg start date for calving cows	March 15		March 20		March 10	

Table 3. Average cumulative percentage calved by 21-day calving periods within age group for all cows and high and low calving distribution groups

Age	Group	% of each age group				
		Early	1st	2nd	3rd	4th
2	All	27.6	70.4	88.6	96.2	98.9
	HIGH	36.4	81.8	94.8	98.3	99.0
	LOW	15.6	52.9	79.9	91.4	97.4
3	All	1.6	49.8	81.8	94.2	98.3
	HIGH	2.0	62.6	89.7	98.5	99.5
	LOW	1.3	30.9	68.7	87.9	96.4
4	All	1.7	47.9	75.9	92.2	97.3
	HIGH	2.6	71.2	92.2	97.4	97.4
	LOW	2.0	26.4	59.7	85.1	95.9
5-9	All	.9	49.7	84.6	95.2	98.2
	HIGH	1.1	70.6	94.5	99.2	99.8
	LOW	1.2	30.5	72.4	90.4	96.4
10 and over	All	1.6	49.3	79.6	95.7	98.7
	HIGH	2.1	69.5	91.8	97.9	99.6
	LOW	2.1	29.3	62.7	92.3	97.6