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SDSU Cow-Calf Teaching and Research Unit

Dick Pruitt
South Dakota State University

Kevin VanderWal
South Dakota State University

Anna Drew
South Dakota State University

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Dick Pruitt[1], Kevin VanderWal[2], and Anna Drew[3]
Department of Animal and Range Sciences

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The SDSU Cow/Calf Teaching and Research Unit serves as a resource for teaching, research, extension and student organizations. In addition to use in the classroom, cattle are used for the annual SDSU Little International, Block & Bridle activities, field days, and numerous 4-H, FFA, and other educational events. Recent research projects at the Unit include studies on estrus synchronization, winter supplementation, and absorption of colostrum.

For teaching purposes, cattle that vary in calving ease, growth rate, mature size, and maternal value are maintained. It is not feasible to maintain all of the breeds that are important in this region. The herd consists of 100 purebred Angus and Simmental x Angus cows and their calves. Tables 1 and 2 show the average expected progeny differences for the current sires, replacement heifers and the 2002 calf crop.

The general goal of our breeding program is to produce bulls, useful to the commercial beef industry, which fit into the following categories:

- Low birth weight Angus bulls to breed to yearling heifers.
- Higher growth Angus bulls to breed to cows.
- Hybrid bulls that are 50 to 75% Angus and up to 50 % of an early puberty, high cutability breed. These bulls are intended to fit a simplified crossbreeding system that allows production of replacement females with maternal heterosis.

The specific goals of our breeding program are to produce a high percentage of bulls that fit the specifications in Table 3 and 4. At the same time we try to avoid problems that require extra labor and cull cows for foot problems, unmanageable dispositions or udder problems.

In mid-April bulls produced at the Cow/Calf Unit are sold in a "limited auction" managed by the SDSU Seedstock Merchandising Class. The class is responsible for advertising, promoting, organizing, answering customer's questions and conducting the sale. The students employed at the Cow/Calf Unit are responsible for preparing the cattle for sale day and delivering cattle after the sale. The sale provides students an opportunity to learn by interacting with beef cattle producers about the cattle that sell. Table 5 and 6 show the results of our last two sales. There is more information about the Cow/Calf Unit at: ars.sdstate.edu/facilities/ccu/index

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[1] Professor
[2]Ag Foreman/Manager Cow Calf Teaching and Research Unit
[3]Sr. Ag Research Tech

Table 1. Expected progeny differences for Angus[a]

						Ultrasound		
	Birth Weight	Weaning Weight	Milk	Yearling Weight	Scrotal Circum-ference	% Intramus-cular Fat	Rib Eye Area	% Retail Product
2002 AI Sires	+1.1	+41	+22	+82	+.34	+.21	+.35	+.21
2001 born replacement heifers	+1.8	+36	+22	+69	+.39	+.04	+.13	+.04
2002 born calves	+1.8	+38	+21	+72	+.41	+.07	+.15	-.01
National average of non parents	+2.6	+33	+16	+61	+.13	+.02	+.05	+.01

[a] From American Angus Association Spring 2002 evaluation.

Table 2. Multi-breed expected progeny differences for SimAngus[a]

	Birth weight	Weaning Weight	Yearling Weight	Maternal Milk	Maternal Weaning Weight
2002 Simmental & SimAngus AI sires	+.1	+35	+73	+10	+28
2001 born replacement heifers	-1.2	+23	+49	+11	+22
2002 born calves	-2.0	+22	+50	+11	+22
National average for 50% Simmental /50% Angus non parent bulls	-.6	+15	+29	+5	+12

[a] From American Simmental Spring 2002 evaluation.

Table 3. Goals for yearling Angus bulls produced at the SDSU Cow/Calf Unit

	Growth bulls		Low birth weight bulls	
	Specification	Rank within breed[a]	Specification	Rank within breed[a]
Expected progeny differences (Angus)				
Birth weight	< +3.7	top 75%	< +2.1	top 35%
Weaning weight	> +38	top 25%	> +33	top 50%
Milk	> +17	top 50%	> +17	top 50%
Yearling weight	> +70	top 25%	> + 62	top 50%
Scrotal circumference	> +.14	top 50%	> +.14	top 50%
Ultrasound				
% intramuscular fat	> +.00	top 50%	> +.00	top 50%
Rib eye area	> +.04	top 50%	> -.09	top 75%
% retail product	> -.16	top 75%	> -.16	top 75%
Frame score	6		5 to 6	
Scrotal circumference	≥ 34 cm		≥ 34 cm	

[a] Compared to non parent bulls in Spring 2002 evaluation.

Table 4. Goals for yearling SimAngus bulls produced at the SDSU Cow/Calf Unit

	Specification	Rank within breed[a]
Expected progeny differences (ASA Multi-breed)		
Birth weight	< +.5	top 75%
Weaning weight	> +15	top 50%
Yearling weight	> +28	top 50%
Milk	> +1	top 50%
Frame score	6	
Scrotal circumference	> 34 cm	
Marbling	> average	

[a] Compared to 50% Simmental, 50% Angus in the Spring 2002 ASA evaluation.

Table 5. Final bids for 2001 SDSU Limited Auction Bull & Heifer Sale

	Number	Average, $	Range, $
Angus bulls	21	2,390	1,200 – 4,600
SimAngus bulls	8	1,938	1,200 – 3,500
Angus heifers	5	1,220	950 – 1,300
SimAngus heifers	5	1,150	1,150 – 1,150

Table 6. Final bids for 2002 SDSU Limited Auction Bull & Heifer Sale

	Number	Average, $	Range, $
2-yr-old Angus bulls	3	2,067	1,600 – 3,000
Yearling Agnus bulls	19	1,937	1,500 – 3,200
Yearling SimAngus bulls	4	2,475	1,800 – 3,200

SDS Black Destiny 083K
Top selling SimAngus bull in 2001

ASA Multi-Breed EPDs
BW -.2 WW +27 YW +57 Milk + 13 MWW +27
Ratioed 117 for %IMF and 114 for REA