



SDSU Cow/Calf Teaching and Research Unit

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Summary

The SDSU Cow/Calf Unit (CCU) provides cattle and facilities for numerous Animal Science and Range Science classes and a variety of research projects. The CCU also provides cattle for the SDSU Little International, Block & Bridle Club activities, numerous judging team workouts, and other activities that bring potential students to the SDSU campus. Kevin VanderWal and Anna Drew along with part-time student employees, manage the herd, collect research data, and assist with numerous beef cattle activities throughout the year.

Faculty members that have conducted or contributed to research at the CCU during the year include: Dick Pruitt, George Perry, Sandy Smart, and Jeff Clapper in the Animal and Range Sciences Department; Bill Epperson, Chris Chase, and Mike Hildreth from the Veterinary Science Department; and Vance Owens from the Plant Science Department. Studies on fenceline weaning, control of estrus and ovulation, corn germ as a source of supplemental fat before calving, extending the grazing season with small grain pasture, and interseeding legumes in grass pastures are reported in this publication.

About 130 Angus and SimAngus females are bred each spring and 100 calves starting in February. Although it is not feasible to maintain all the breeds that are important to this region, two breeds provide variation for teaching purposes and allow us to still use the herd for research where limiting variation is important. The goal of our breeding program is to produce bulls that fit into one of the following categories:

1. Low birth weight Angus bulls to breed to yearling heifers.

2. Higher growth Angus bulls (purebred and high percentage) to breed to cows.
3. SimAngus hybrid bulls for a simple crossbreeding system.

To accomplish that, proven sires are used by artificial insemination that represent below average birth weight and above average milk EPDS along with high yearling weight EPDs. In recent years, high marbling (or % IMF) and rib eye area sires have been used to increase carcass value as long as other important production traits are not sacrificed. The average expected progeny differences for the herd and sires used in 2005 are shown in Tables 1 and 2.

Each fall about 20 bred females are sold by phone auction. Yearling bulls produced are sold in a limited auction held in early April at the unit. The major goal of the sale is to provide a learning opportunity for students interested in the beef industry. Students are involved in producing the sale catalog, developing advertising, creating a promotional video, and answering questions from potential customers. Practice in communication, teamwork, and listening to customers is an important part of the process as well. Selection of sires each year is based heavily on what we learn from our customers on sale day and what has the most value to them.

On April 8, 2005 students from the CCU crew, the Seedstock Merchandising Class, and the Block & Bridle Club hosted bidders and answered questions from Colorado, Iowa, Nebraska, North Dakota, Nebraska, Minnesota and South Dakota. Table 3 shows the sale averages and range in prices. Fifty percent of the bulls sold to repeat customers. There is more information and pictures from our 2005 sale on the web at: ars.sdstate.edu/facilities/ccu.

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Tables

Table 1. Expected progeny differences of Angus cows, replacement heifers and AI sires at the Cow Calf Unit.

	Angus Expected Progeny Differences (Spring 05)								\$ Wean	\$ Beef
	BW	WW	YW	SC	Milk	%IMF	REA	%RP		
Angus AI sires used in 2005	+2.1	+50	+93	+0.39	+28	+0.33	+0.57	+0.01	+45.57	+28.16
Angus cows	+1.7	+40	+75	+0.56	+22	+0.10	+0.15	-0.01	+23.99	+28.89
Angus replacement heifers	+1.5	+44	+82	+0.53	+25	+0.16	+0.24	+0.05	+25.76	+33.97
Avg. non-parent Angus bull in Angus Assn. database	+2.4	+37	+69	+0.32	+19	+0.09	+0.16	+0.08	+21.95	+27.82

Table 2. Expected progeny difference of SimAngus cows, replacement heifers, and Simmental AI sires at the Cow Calf Unit

	ASA Multibreed Expected Progeny Differences (Spring 05)						
	BW	WW	YW	Milk	YG	MB	REA
Simmental AI sires used in 2005	+1.9	+28	+70	+6	+0.00	+0.08	+0.24
SimAngus cows	-2.4	+19	+46	+7	+0.11	+0.22	-0.11
SimAngus replacement heifers	-2.3	+25	+59	+9	+0.17	+0.31	-0.18
Average non-parent SimAngus bull in Simmental Assn. database	-0.7	+22	+44	+5	+0.13	+0.26	-0.15

Table 3. Final bids at the 2005 SDSU Bull Sale

	Average	Range
19 Angus bulls	\$3,468	\$1,500 - \$9,600
9 SimAngus bulls	\$2,656	\$2,000 - \$3,300