

Ranch Update



Shad Cox
Ranch Manager

It is a pleasure to drive down the highway this year, as compared to the last few, because there is green grass everywhere. We have had a phenomenal year thus far with over 6 inches of rain measured across 60 percent of the ranch since January 1 and this puts us 44% above average for the majority of the ranch and at or a little above average on the remainder.

Our annual January Advisory Committee meeting included updates on the ranch and individual research progress reports. Jon Boren gave a presentation highlighting the new mule deer and pronghorn habitat use and population dynamic study that has been implemented. I hope to have an overview of findings included in our next newsletter. The selection of topics of this summer's 'Half Day of College' event was completed and information from our Advisory Committee on their plans to request capital outlay monies from the legislature for a new educational and outreach component for the ranch. This new high-tech educational complex has been named the Southwest Center for Rangeland Sustainability. In March, we found out that the legislature funded NMSU with \$525,000 to use toward the design and construction of this project. Also, in May the NMSU Board of Regent's made this project a 2007-2008 university priority and will help secure final funding for the entire project. The ranch would like to thank Stirling Spencer and Scott Shafer for their insight, hard work and dedication to the CRLRC. This funding would not have occurred without them.

Calving started February 10th with the registered Angus heifers, then all cows and crossbred heifers started the following week. Towards the end of February Ralph Fink, a graduating range masters student, was hired temporarily to lend a hand and help me through the calving season. Ralph turned out to be quite a hand and made my job a whole lot easier through the spring. Ralph has since moved on, and is now a range specialist with the Lincoln National Forest in Cloudcroft. I wish him well and know that he will be an asset to everyone in the district. About the time Ralph left, we were interviewing to fill the vacant position left by Michael Rubio in October. We offered the position to Richard Dunlap and he started to work last week. Richard grew up around Animas and graduated from NMSU with a double major in Animal Science and Range Science back in May of 2006. He and his wife, Amanda, have spent the last year on a ranch along the Texas border on Otero Mesa. They are expecting their first child come July. I feel strongly that Richard will be a great asset to the ranch, with his varied background and an interest in our research program, he will hit the ground running as we are towards the last few days of our lambing season and will mark in two weeks.

I hope the monsoon's find all of you soon and the grass is stirrup high in the fall. I would like to invite everyone to bring a neighbor and join us on July 20th (info on back page) for our Half Day of College. Bring your herd health program and any questions you have to ask our experts. I am available anytime for questions, comments or ranch visits at (505)849-1015 or shadcox@nmsu.edu.

Shad

PASTURE VS. DRYLOT BACKGROUNDING STUDY



Clay P. Mathis, Ph.D.
Extension Livestock Specialist
Ruminant Nutrition and
Reproductive Physiology

Over 3 years, 250 calves were used to compare a low-input pasture backgrounding system to a high-input drylot backgrounding system. Performance and profit of calves during the backgrounding and finishing phase were evaluated.

Treatments: 1) high-input drylot backgrounding system (**DLOT**; corn/wheat midds-based pellet plus 1.5-2.5 lbs of alfalfa hay/day) or 2) low-input pasture backgrounding system (**PAST**; native range pasture plus 1.25 lb/day of a 32% CP range cube delivered 3x/week). All calves qualified as "VAC-45", but premiums for backgrounding were not applied to prices. After backgrounding, all steers were fed at a commercial feedlot (Double A Feeders, Clayton, NM), then sold on an individual carcass basis.

Results

Backgrounding Phase. The drylot backgrounded calves gained 0.32 lb/day more during backgrounding, and were worth \$6.90/hd more. The higher value of the

drylot backgrounded calves was offset by \$52.76 greater cost for drylot backgrounding. **Consequently, net income during backgrounding was \$44.59 greater for pasture backgrounded calves even though they gained less weight than DLOT calves.** A final price premium of \$5.00/cwt would have been required for the drylot backgrounding system to be profitable in the market conditions of the study; however, the pasture backgrounding system was profitable without a premium.

Finishing Phase. There were no differences in overall feedlot average daily gain, finished body weight, days on feed, or any measured carcass characteristics. There was a tendency for drylot steers to have more sickness, with 13 percentage units more treated steer. The drylot backgrounded steers also had greater death loss (7.6% vs. 0%), indicating that the drylot backgrounded steers likely experienced some degree of suppressed immune function as compared to pasture backgrounded steers. **During finishing the pasture backgrounded steers profited \$103/hd more than the**

Item	Backgrounding System	
	Drylot	Pasture
Impact of backgrounding system on performance and profit during backgrounding and finishing phases.		
Backgrounding Phase		
# of head	125	125
ADG, lb/day	1.42	1.10
Total Cost, \$	66.77	14.01
Net Income, \$	(28.87)	15.72
Finishing Phase		
# steers	66	67
% Treated for sickness	47.6	34.3
% Death loss	7.6	0
Net Income, \$	(98.33)	4.68

drylot backgrounded steers. Approximately \$70/hd of the profit difference between treatments resulted from death loss, and the remaining \$33 difference occurred primarily because pasture backgrounded steers had numerically greater carcass weight and prices than drylot backgrounded steers.

Summary: The low-input pasture backgrounding system was more profitable during both the backgrounding and finishing phases.

For more information contact your county extension office or Clay Mathis directly at (505)646-8022 or email: cpmathis@nmsu.edu.



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LOWERING COST OF HEIFER DEVELOPMENT AND ITS EFFECTS ON LONGEVITY



Dean Hawkins, Ph.D.
Reproductive Physiology

Heifer development strategies have typically depended upon high inputs (feed) that are costly. Previous research at the Corona Range and Livestock Research Center has demonstrated that heifers could be developed on rangelands with limited supplemental feed. In these studies comparing a typical cottonseed cake supplement to rumen undegradable protein (also known as bypass protein) cake, the rumen undegradable protein has consistently resulted in the greatest pregnancy rates. These studies also demonstrated that in replacement heifers weaned in October and fed a 36% cube at 1/2 lb. per head per day fed one day a week (i.e. 3.5 lbs/hd fed once weekly), supplementation for gain could be delayed until February (2 lbs

36% cube fed 3 days a week) and heifers could be bred at body weights below 65% of their mature weights (Table 1).

All heifers are moved to rested pastures at the start of the breeding season, which also improves pregnancy rates.

Based on these initial studies, current research is designed to answer the question "Does the type of heifer development program (low input ranch developed versus high input feedlot developed) influence longevity of the cow herd?" (Table 2). Specifically, are heifers raised in the environment they are expected to perform in at an advantage or disadvantage compared to heifers developed in a feedlot when they move into

Table 1. Cumulative body weights (lbs) and pregnancy rates.

	Bypass (122 head)	Control (117 head)
October (weaning)	510	515
January	512	519
March	543	547
May (breeding)	565	573
Pregnancy rate	80%	66%

the cow herd. Our philosophy is to put selection pressure on the developing heifer immediately. The goal is to keep feed inputs low and similar to inputs (supplement) provided to the cow herd in order to achieve optimum (not maximum) pregnancy rates. The ability to remain in the cow herd depends on two factors, getting pregnant and weaning a calf every year.

Table 2. Mean body weight (lbs) and pregnancy rates, 2003-04 and 2005-06.

	Bypass (41 head)	Control (42 head)	Feedlot (40 head)
October/November	531	526	528
January (start of supplementation)	580	576	578
February	573	571	567
March	605	600	629
April	622	618	672
May (breeding; all on control supplement)	634	641	712
July	695	696	746
September	892	900	914
Pregnancy Rate	97%	91%	81%

For more information contact your county extension office or Dean Hawkins directly at (505)646-4135 or email: dhawkins@nmsu.edu.



Join us for: HALF DAY OF COLLEGE

Friday, July 20, 2006
CRLRC Headquarters

Course topics selected by ranchers

Three concurrent sessions:

Quick Books for Ranchers 101

Effective Health Programs 110

SPECIAL TOPICS 199: Stump the Professor

Registration at 9:30 am. Welcome at 9:50 am. First classes start at 10:00 am, second at 11:00 am, lunch served from 12:00 to 1:00 pm. Last classes start at 1:00 pm. Pick and choose the courses you want to attend. Come and visit with your neighbors and researchers from the Corona Range and Livestock Research Center.

Bring your herd health program, any questions and a hearty appetite

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Directions to CRLRC Headquarters: Turn east off of Hwy 54 (north edge of town) at the Field Day sign. Follow county road (thru underpass) for 8 miles. Road ends at gate.



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