



*The Newsletter for  
the BEHAVE Research  
and Outreach Program*

### In This Issue

[Native, Naive, Tourist  
Cows](#)

[Range Heifers Take Time  
to Adjust to Pasture](#)



### Contact:

[Beth Burritt](#)  
435-797-3576

[Visit our website](#)



## Naive, Tourist and Native Cows

The ability of livestock to adapt to new environments is critical when they're moved due to drought or other reasons. In this study, three groups of cows were compared:

## Do Dairy Cows Learn How to Graze?

Folks in the dairy industry recently looked at how early experience affects grazing. University of Wisconsin conducted a 3-year study to assess how grazing early in life affects grazing behavior and performance of lactating dairy heifers.



Sixty-four dairy calves were assigned to one of four treatments. Treatment 1 (T1) grazed for two years as calves and yearlings. Treatment 2 (T2) grazed as calves, but not as yearlings. Treatment 3 (T3) grazed as yearlings but not as calves. Treatment 4 (T4) was reared in confinement as calves and yearlings. All animals grazed as 2-yr-old lactating cows that calved from January to April.

On day 1, percent time spent grazing was 62% for T1, 59% for T2, 76% for T3, and 13% for T4. On days one through three of the study, experienced heifers walked greater distances than animals without experience. In addition, milk production was lowest for cows with no grazing experience. Animals that didn't graze in year two of the study (T2) produced less milk than those that did graze in year two of the study (T1 and T3).

Average daily milk production was not different during the 61-day experiment. Previous grazing experience impacted behavior and milk production during the first 3 days on pasture. After day 3, no behavioral or production differences were noted.

*Comment from Beth:* I was pretty surprised by their results because cattle learned so quickly. This study used young animals, 2-years old or younger. Results may be different with more mature cows or on pastures with more variety or complexity.

## Range-reared Heifers Take Time to Adjust to Irrigated Pasture

Moving cattle from rangeland to pasture in Western Australia enables producers to get beef ready for market year-round. It also can reduce the time it takes to finish rangeland animals to meet market

1) Native: spent their lives on the Chihuahuan Desert (CD), 2) Tourist: born and raised in the CD but moved to Leona, TX three years prior to the study because of drought; 3) Naive: reared in a humid-subtropical region near Leona. Cows ranged in age from 3 to 10 years and had similar breeding.

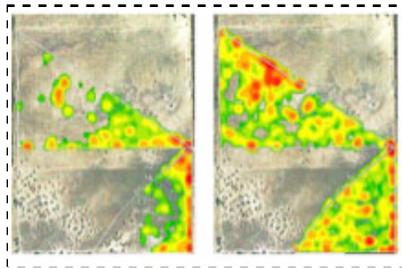
Study pastures ranged in size from 2500- 9100 acres. Trials were run in winter, early summer, and late summer. Native and tourist cows previously grazed pastures near the study site, but no group grazed the experimental pastures before the study.

In winter, naive cows used less area and stayed closer to water than cows born and raised in the CD. Native cows traveled farther from water and spent less time at water than cows that spent their lives elsewhere. During winter and early summer (drought), naive cows selected diets lower in crude protein (CP) than cows born in the CD. Late in summer after rain, naive cows selected diets higher in CP than other groups.

Although Brangus cows are very adaptable, cattle raised on the CD on pastures near the study site appear to have an advantage over naive animals when grazing

specifications. Dean Thomas studied the behavior and growth of two groups of yearling cattle reared in different locations then moved to a pasture-based grazing system.

The first group (pasture), 122 Limousin-cross heifers raised on pasture in Western Australia, was moved to the experimental site from a neighboring property about six miles away. The second group (range), 95 Brahman-cross heifers raised on rangelands of Western Australia, was also moved to the experimental site.



Distribution of range raised cattle - week 1 (left) and week 3 (right) - after relocation to pasture. Density is depicted by color from green to red indicating increasing visitation frequency by cattle.

Average daily gain (ADG) in the pasture group remained consistent (2.6 lb/day) during the experiment. Pasture cattle increased their grazing activity over time, but other behaviors change little during the experiment.

In contrast, range cattle gained less weight during the first four weeks after relocation than before the move. From weeks two to four, range cattle gained 0.68 lb/day, only a quarter of their

ADG four weeks later (2.7 lb/day). During the first six weeks, the behavior of range group changed. Horizontal head movements increased by 61%, suggesting more grazing activity. The range group increased the area used daily in the pasture by 32% in week six compared to week one and during daylight hours (0600-1900) they travelled more (23%) and were more active (16%).

Thomas concluded that rangeland-raised Brahman-crossheifers take from four to six weeks to adapt to new pastures. Losses in productivity for rangeland cattle moved to pasture is partly due to initial lower grazing activity as they become familiar with their new environment.

**Ref:** Thomas, D.T., M.G. Wilmot, R.W. Kelly, and D.K. Revell. 2011. Adaptation behaviour of local and rangeland cattle relocated to a temperate agricultural pasture. *Anim. Prod. Sci.* 51:1088-1097

Bailey, D.W., M.G. Thomas, J.W. Walker, B.K. Witmore, and D. Tolleson. 2010. Effect of previous experience on grazing patterns and diet selection of Brangus cows in the Chihuahuan Desert. *Range Ecol. Manage.* 63:223-323.

---

Let me know what I can do to improve the newsletter!!

rangeland in the  
Chihuahuan Desert.

Sincerely,

*Beth Burritt*

Beth Burritt

Utah State University - Department of Wildland Resources

Utah State University is an affirmative  
action/equal opportunity institution



[Forward email](#)



Try it FREE today.

This email was sent to beth.burritt@usu.edu by [beth.burritt@usu.edu](mailto:beth.burritt@usu.edu) |  
[Update Profile/Email Address](#) | Instant removal with [SafeUnsubscribe™](#) | [Privacy Policy](#).

Utah State University - Department of Wildland Resources | 5230 Old Main Hill | Wildland Resources Department | Utah State  
University | Logan | UT | 84322