



# SISKIYOU STOCKMAN

What's New in the "Top of the State". A report for Siskiyou Livestock Producers put out by the Farm Advisors Office, Cooperative Extension of the University of California, located at 1655 South Main Street, Yreka, California 96097

November 2007

## Carcass EPD Comparisons Across Breeds

Dan Drake, Livestock Farm Advisor



- Carcass EPD Comparisons Across Breeds
- Grass Fed Beef Standards
- Prime, Choice and Select Spread
- New Trichomonosis Laws in California

### Calendar

Nov 20	Shasta All Breeds Bull Sale, Cottonwood, CA
Jan 4, 2008	Special Feeder Sale, Siskiyou County Cattle, Cottonwood, CA.
Jan 22 – 26, 2008	Red Bluff Bull & Gelding Sale, Red Bluff, CA
Jan 31 – Feb 2, 2008	Klamath Bull Sale, Klamath Falls, OR

Is it time to get back to crossbreeding but unsure which bulls to use? Many producers have used black bulls for several generations and have a uniformly black herd. But those producers are missing out on the 10 to 15 percent increase in calf performance and the 10 to 15 percent increase in cow performance that a GOOD crossbreeding program will yield. A GOOD crossbreeding program does not have to be complicated to produce uniform, highly desired calves and efficient long-lived dams.

Producers that want to stay with a predominantly black herd can introduce a single other breed in a planned manner. If they are producing for the high quality market, then staying with an English breed could be a popular option. Angus and Hereford crosses would maintain the black color while reaping the crossbreeding advantages. Continental breeds such as Simmental also make good crosses with Angus bred cows. A good place to start is getting rough EPD values for the current black bulls. These EPDs reflect the performance levels that are in the herd. But how can those performance levels help you select a bull from another breed for crossbreeding? You can convert those Angus EPD values into another breeds EPD values and get bulls that are pretty similar in production.

Converting EPD values into Angus-based EPD values is accomplished with ***Across-breed EPD factors***. These have been available for several years for growth traits and are now available for carcass traits. They work very much like converting English measurements into metric units or metric measurements in English units. An example will

illustrate how a producer could use their current Angus bulls to help determine matching-type bulls from another breed.

Determine the current EPD levels of your bulls. You might look in old bull sale catalogs that list EPDs for the bulls you purchased. If you have registration numbers and are computer savvy you can look up the EPDs by the registration number from the appropriate breed association on the web. In this example (Table 1), EPD levels for ranch bulls are shown in the table in the column labeled "Average of current Angus bulls."

Table 1. Across-breed adjustment factors can be used to convert the EPD values of your current bulls to those of similar value in another breed. This example is for Angus and Hereford.

EPD	Average of current Angus bulls	To convert Angus EPD to Hereford EPD subtract this value (the across-breed adjustment factor) from the Angus EPD	For this example the Hereford EPD equivalent to Angus EPD (in Column 1 Average of current Angus bulls) is:
Birthweight	3	2.7	$3 - 2.7 = 0.3$
Weaning weight, at least	31	-3.1	$31 - (-3.1) = 34.1$
Yearling weight, at least	66	-12.7	$66 - (-12.7) = 78.7$
Milk, at least	19	-15.7	$19 - (-15.7) = 34.7$
Ultrasound Ribeye area, at least	0.12	-1.44	$0.12 - (-1.44) = 1.56$
Ultrasound Ribeye area, no more than	0.4	-1.44	1.84
Fat thickness, no more than	0.01	-0.11	0.12
Marbling as IMF, at least	0.05	-0.40	0.45

The EPD values of the Angus bulls currently used can be converted to EPD values for a different breed association. The numerical values will be different but the expected performance will be about the same. From the example (above), our current Angus bulls have a yearling weight EPD of about 66. If we purchase Hereford bulls with yearling weight EPDs of about 78.7, calves from the Hereford bulls should weigh about the same as those from our current Angus bulls. The same principles would hold true for the carcass traits. For example, Hereford bulls with an ultrasound IMF (marbling) EPD of +0.45 should have calves with about the same marbling as calves from our Angus sires that have ultrasound IMF EPDs of +0.05. The numbers are different in

value, but the results are the same, (example: 1 pound is numerically different from 454 grams), but they are the same weight. EPDs are "measured" in terms of the breed association "units".

Use the following table (Table 2) to convert Angus EPD values into either Hereford or Simmental EPDs by subtracting the factor in the table from the Angus EPD. To convert in the other direction, from Hereford or Simmental EPD, to what it would be in Angus terms, add the factor to the Hereford or Simmental EPD.

Table 2. EPD conversions from one breed to another are made much like converting between metric and English measurement units. This shows conversion **from** Angus EPDs to other breeds and also conversion **to** Angus EPDs from other breeds.

EPD	Convert from Angus <sup>1</sup>		Convert to Angus <sup>2</sup>	
	Hereford	Simmental	Hereford	Simmental
Birth Wt	2.7	5.7	2.7	5.7
Weaning Wt	-3.1	24.4	-3.1	24.4
Yearling Wt	-12.7	17	-12.7	17
Maternal Milk	-15.7	13.7	-15.7	13.7
Ultrasound				
IMF (marbling)	-0.4016	-0.492	-0.4016	-0.492
Fat Thickness	-0.108	-0.5692	-0.108	-0.5692
Ribeye area	-1.4401	6.1197	-1.4401	6.1197
Carcass				
Marbling	-0.383	-0.5436	-0.383	-0.5436
Fat Thickness	-0.1354	-0.6165	-0.1354	-0.6165
Ribeye area	-0.3374	7.0875	-0.3374	7.0875

Carcass across-breed factors adapted from:

- [www.bifconference.com/bif2007/Symposium/074\\_A\\_cross\\_Breed\\_EPD.pdf](http://www.bifconference.com/bif2007/Symposium/074_A_cross_Breed_EPD.pdf) and
- Van Vleck, L.D., L. V. Cundiff, T. L. Wheeler, S. D. Shackelford and M. Koohmaraie. 2007. Across-breed adjustment factors for expected progeny differences for carcass traits J. Anim Sci. 2007. 85:1369-1376.

<sup>1</sup>Subtract these factors from the appropriate Angus EPD to get the equivalent EPD in the other breed association.

<sup>2</sup>Add these factors to the Angus EPD to get the equivalent EPD in the other breed association.

Across-breed adjustment factors for several breeds are shown (Table 3). They are used in the same manner as illustrated in Table 2.

Table 3. Across-breed adjustment factors are used to compare EPDs between different breeds. The table uses Angus as the base herd for comparisons.

Breed	Weaning Yearling Maternal				Ultrasound Angus EPD			Carcass Angus EPD		
	Birth Wt	Wt	Wt	Milk	IMF%	Fat	REA	Marbling	Fat	REA
Angus	0.0	0.0	0.0	0.0	0	0	0	0	0	0
Hereford	2.7	-3.1	-12.7	-15.7	-0.40	-0.11	-1.44	-0.38	-0.14	-0.34
Red Angus	2.5	-4.7	-0.7	-5.1	0.00	-0.12	-0.28	0.00	-0.15	0.84
Shorthorn	7.0	32.5	46.1	16.6	0.09	-0.35	-0.60	0.14	-0.34	0.93
South										
Devon	5.8	23.1	41.7	8.0	na	na	Na	na	na	na
Braunvieh	6.3	30.3	17.4	24.5	na	na	Na	na	na	na
Charolais	9.6	40.9	48.7	3.5	-0.50	-0.62	4.96	-0.50	-0.65	6.12
Gelbvieh	4.4	7.0	-21.2	6.2	-0.55	-0.61	4.66	-0.59	-0.63	6.27
Limousin	4.0	-1.3	-24.0	-12.6	-0.70	-0.50	8.99	-0.75	-0.55	9.96
Maine-										
Anjou	7.1	-2.9	-31.9	-6.2	-0.69	-0.61	3.61	-0.81	-0.66	5.88
Salers	4.2	30.7	43.5	12.8	-0.23	-0.52	4.23	-0.17	-0.52	5.88
Simmental	5.7	24.4	17.0	13.7	-0.49	-0.57	6.12	-0.54	-0.62	7.09
Tarentaise	3.0	31.9	18.3	20.0	na	na	Na	na	na	na
Beefmaster	9.0	42.2	43.7	-4.1	na	na	Na	na	na	na
Brahman	12.1	38.5	2.6	26.7	na	na	Na	na	na	na
Brangus	5.0	24.3	26.5	-3.1	-0.56	-0.32	1.88	-0.53	-0.34	2.91

These across-breed adjustment factors were developed at the Meat Animal Research Center (MARC) in Nebraska. They arise from relatively small populations compared to breed association EPDs. Nonetheless, they are the best estimates available today. Future breed association EPDs will largely be multi-breed evaluations and should result in superior ability to compare across-breeds.

To maximize the benefits of crossbreeding and strive for uniformity in a 2-breed breeding program, replacement heifers (and all females) should be bred to the opposite breed of their sire. In an Angus X Hereford crossbreeding system, females that had Angus sires should be bred to Hereford bulls, females with Hereford sires should be bred to Angus bulls. If you are keeping replacement heifers try to develop an easy method to permanently identify the sire breed of the replacement. Then each year she goes in with a bull of the opposite breed from her sire. Black herds can capture the advantages of crossbreeding while maintaining similar types of cattle and color to their existing herd by selecting bulls from other breeds with similar EPD values after they have been adjusted with across-breed adjustment factors. Producers that are familiar with EPD values from the Angus Association can use across-breed adjustment factors to determine similar values for other breeds.

### Grass Fed Beef Standards

The USDA has announced new voluntary standards for grass fed beef marketing claims that will go into effect November 15, 2007. These voluntary standards apply only to meat products from ruminants. Among the several key points are that these animals will consume diets throughout their lifetimes solely derived from forage (with the exception of milk or milk replacer prior to weaning). Forage in this marketing claim consists of any edible herbaceous plant material that can be grazed or harvested for feeding, with the exception of grain. Animals cannot be fed grain or grain byproducts and must have continuous access to pasture during the growing season. Growing season is defined as the time period extending from the average date of the last frost in spring to the first frost in the fall in the

local area of production. Hay and a variety of non-grain feeds are suitable during this time.

For the complete notice see:

<http://www.ams.usda.gov/lsg/stand/grassclaim.htm>

### Prime, Choice and Select Spread

“SHOW ME THE MONEY” shouted Tom Cruise’s character in the Cameron Crowe 1996 movie *Jerry Maguire*. Put a different way, niche or specialty beef has received the headlines (grass fed, natural, and organic for example), but premium beef has received the money. Price spreads between quality grade Prime and Choice according to the economists have averaged about \$25 per hundred for the past 3 years. During 2007 the spread has hovered near \$35, and more recently over \$40 per hundred. Analysts say demand for beef remains steady but supply of the premium stuff is down nearly 10 percent. Choice grading beef has shown some increase, 3%, while Select is down about 6%. Satisfying this demand for premium beef may not be easy, and especially if the export market to Japan and Korea opens up.

The cow calf producer can jump on this wagon in several ways.

- Immediate steps include using terminal sires that excel in marbling. This might be different breeds or selecting within breeds for high marbling sires.
- Changes in pre- and post-weaning nutrition to enhance marbling, which starts pre-weaning (see last months newsletter).
- Reduced, delayed or no-growth promoting implants.
- Attain standards for specific premiums such as the various certified programs (i.e. Certified Angus Beef).
- Extended, retained or alliance marketing to capture improved genetics and management.

- Develop Process Verification Assurance protocols to qualify for the premium export markets.

## New Trichomonosis Laws in California

*Michael Poulus, DVM,  
California Department of Food and Agriculture*

Over the past couple of years the California beef cattle industry has been working on the development of regulations to help manage Trichomonosis. These updated regulations will take effect on October 5, 2007 and are in addition to regulations that have already been in effect. If you have any questions, please call me at 530-225-2140.

1. **Veterinarians** must be approved to do Trichomonosis testing.  
Approvals will be renewed every two years with the brucellosis contracts.
2. All Trichomonosis tests are **official tests**; bulls will require official identification when samples are taken. That means the veterinarian will place a silver bright tag similar to a bangs tag in the ear unless the bull has an official registration tattoo. **NUMBERED HERD DANGLE TAGS ARE NOT OFFICIAL IDENTIFICATION!!!**
3. Samples must be cultured in approved laboratories.
4. Confirmation of positive test results may be requested, but is not required.
5. Positive trichonomiasis cases must be reported to CDFA: Animal Health Branch (AHB) within two days of diagnosis.
6. All test results, **including negative tests**, must be reported by the veterinarian to your local AHB office on a form supplied by CDFA within 30 days.
7. CDFA will investigate cases, notify owners of potentially exposed cattle, and **quarantine** bulls in **affected** and **exposed** herds.
8. **Bulls from infected herds** require three negative tests at least seven, but not more than 28, days apart to move anywhere except to slaughter.
9. **Bulls from exposed herds** require one negative test before movement anywhere except to slaughter. **Exposed herds** are herds in direct contact (ie: share an allotment or pasture with an infected herd), have fence line contact with an infected herd or herds that can be traced to have co-mingled recently beyond fence line contact.
10. Bulls 18 months of age or older sold at public sale yards in **California** require a negative Trichomonosis test within 60 days prior to sale or be consigned as slaughter only.
11. **Public auction yards** must post a notice in a prominent place stating: *“All bulls 18 months of age and older must have a negative trichomonosis test or be consigned as slaughter only.”*
12. **Bulls 18 months of age and older ENTERING California** require a negative test taken by an approved individual within 60 days prior to entry unless entering for slaughter, semen collection, or exhibition (not to be co-mingled with other cattle).

**Pasture-to-pasture bulls** require a negative test within the past 12 months.

If you are experiencing a higher than usual number of open cows, don't fall into the trap of trying to make excuses for them (it was a tough feed year, it was wetter than usual, etc.). If you have overlooked Trich and it turns out to be the culprit, the impact on next year's calf crop will be devastating. Test your bulls!!

This article originally appeared in Northern California Ranch Update. Vol 1(4), Sept. 2007, UC Cooperative Extension, Redding, CA.

This is your copy of the Siskiyou Stockman, which you requested, or which we thought would be of interest to you.

Sincerely,



Daniel J. Drake, Ph.D., PAS  
Farm Advisor - Livestock & Range  
CE Associate, Animal Science Dept., UC Davis  
530/842-2711



Commercial companies are mentioned in this publication solely for the purpose of providing specific information. Mention of a company does not constitute a guarantee or warranty of its products or an endorsement over products of other companies not mentioned.

### ***What's New in the "Top of the State."***

*A report for Siskiyou Livestock Producers put out by the Farm Advisors Office,  
Cooperative Extension of the University of California  
Yreka, CA*



The University of California, in compliance with the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, and the Rehabilitation Act of 1973, does not discriminate on the basis of race, creed, religion, color, natural origin, sex or mental or physical handicap in any of its programs or activities, or with respect to any of its employment policies, practices or procedures. The University of California does not discriminate on the basis of age, ancestry, sexual orientation, marital status, citizenship, medical condition (as defined in section 12926 of the California Government Code), nor because individuals are disabled or Vietnam era veterans. Inquiries regarding this policy may be directed to the Director, Office of Affirmative Action, Division of Agriculture and Natural Resources, 300 Lakeside Drive, Oakland, California 94612-3550, (510)987-0097.

Cooperative Extension  
University of California  
1655 So. Main Street  
Yreka, CA 96097

Non-Profit  
Standard Mail  
Permit #3  
Yreka, CA 96097