



# USPB UPDATE

Volume 11, Issue 2

www.uspremiumbeef.com

February 12, 2007

*Verifying age offers a good return on investment*

## Cashing in on Age Verified Premiums

U.S. Premium Beef's \$25 per head age verified (AV) premium for calves 20 months of age or younger is encouraging producers to record birth dates and verify their records when retaining ownership or selling calves to a cattle feeder.

"We keep calving records anyway," says Reeves Brown, who along with his wife Betsy are USPB unitholders and own and operate 3R Ranch, Inc., Beulah, CO. "The feedyard staff took care of the verification paperwork and provided us with EID tags to put in our calves. It was easy for us to send our calving records along with our calves when we shipped them to the feedyard which was already approved to feed age verified calves. The age verification process was a breeze.

---

*During fiscal year 2007, USPB age verified cattle have averaged grid premiums of \$46.38 per head.*

---

"Our feedyard keeps \$5 of the \$25 premium we get for verifying age to cover the cost of the electronic tag and to handle the paperwork," Brown explains. "But it's worth that to make the verification process so simple."

The Browns' age verified cattle performed well on USPB's grid earning more than \$61 per head above the cash market price. Without the AV premium, they would still have received more than \$36 per head in grid premiums. To put that in perspective, during fiscal year 2007, all USPB AV cattle have averaged \$46.38 per head in total premiums.

"We make sure our customers with age verified cattle understand that they have to keep their calving records for three years and that they are subject to an audit at any given time," explains Sam Hands, with Triangle H Grain & Cattle Co., Garden City, KS, where the Browns' cattle were fed. "We're certified to market age verified calves and have found

...continued on page 2

*Look before you leap*

## Crossbreeding Considerations

By Brian Bertelsen, Director of Field Operations

More and more over the last few years, industry experts have recommended a return to crossbreeding to regain heterosis and improve efficiency. This discussion is not meant to be for or against the concept of crossbreeding. U.S. Premium Beef provides its members value-based pricing with the freedom of utilizing different breeds and production systems to raise their cattle. Instead, this discussion is intended to give commercial cow-calf producers some things to consider if they are thinking about changing their breeding program.

The benefits of crossbreeding have been discussed for many years. However, traditional crossbreeding programs are complicated. They can involve multiple herds within a ranch. There are often calves produced with significantly different breed combinations making it difficult to sell uniform groups of feeder cattle in load lots or to retain ownership through the feedlot and have cattle that will finish together in the same pen.

**As a result, producers decided to experiment** with bulls of different breeds and join the "bull-of-the-year" club without following any program. This resulted in a lot of breed combinations and hide colors within the same herd. Since then, many commercial producers have returned to straightbred herds by simply using bulls of one breed.

**Heterosis** is measured as the performance advantage of crossbreds over the average of their straightbred parents. This is referred to as "hybrid vigor". It affects many traits, but is known for improving traits that are not as heritable the most, such as reproduction, early growth (survivability) and lifetime cow productivity. Traits that are highly heritable, such as **carcass traits, show less improvement from**

...continued on page 2

---

## Natural Cattle Need Reservations

The company's two newest branded product lines, Naturewell™ and NatureSource™, are meeting with good acceptance in the marketplace and by feedlot suppliers. As a reminder, we accept a limited number of cattle into these programs each week. We recommend consigning natural grid cattle **up to 120 days prior to delivery** in order to determine program availability. National Beef needs time to approve the feedyard and has the sole discretion for approval based on geography and annual marketing potential of natural cattle by the feedyard. For more information call USPB at 866-877-2525. ♦

Producers need to plan ahead when deciding to enroll their calves in an age verified program. Most representatives from the companies listed on the enclosed AV fact sheet request 30 days notice before the calves are scheduled to leave the ranch in order to give them time to certify records. USPB also asks members to let our staff know how many AV cattle they intend to deliver this fiscal year as soon as possible so we can plan harvesting volumes and more efficiently market AV product into Japan.

There are two types of USDA programs for age verification: **Feedlot programs** which audit feedlots practices and

can approve a feedlot as a supplier to manage AV cattle and deliver them to a processor; and **Ranch programs** which approve cattle and birth records from the ranch of origin and can be used for feeder cattle and calves, **ideally before they leave the ranch of origin**. Ranch programs are typically the only way cattle can be physically marketed through a traditional salebarn and remain eligible for age verification premiums.

**For more details about these two types of programs** and how you can enroll your cattle in an age verified program visit USPB’s website at [www.uspremiumbeef.com](http://www.uspremiumbeef.com). The programs listed on the enclosed AV fact sheet are approved by USDA. ♦

Crossbreeding Considerations...continued from page 1

**heterosis**. The table below lists average heterosis for beef cattle traits according to Dr. Jim Gosey at the Univeristy of Nebraska. Also, the more different the genetics are between parents, the more heterosis in the offspring. For example, mating British breeds to Continental breeds produces more heterosis than mating Red Angus to Black Angus.

You have probably seen advertisements that talk about a free lunch and they use a slogan like “2 + 2 = 5”. This slogan is not realistic. First of all, genetics are not additive. Since both parents transmit 50% of their genetics, breeding values of the parents are averaged to make an estimate for the progeny.

**A better slogan might be** “2 + 4 = 3.75”. Since heterosis is the difference between the AVERAGE of the parents (the average of 2 + 4 = 3) and the actual performance of the offspring (3.75) then in this example would be a heterosis value of 25% (3.75 is 25% greater than 3). Remember that these 25% values refer to lifetime cow productivity.

The other point to make about this is that carcass traits are much lower in heterosis. So if a herd currently produces straightbred Angus calves that are 80% Choice and the rancher decides to crossbreed those cows with a different breed that grade only 50% Choice, then the new average of the parents is 65%. If heterosis improves that by 3% (see table) then we could expect the crossbred calves to be about 67% Choice. If we assume that the average carcass weight remains the same at 800 pounds, and we use the average Choice/Select spread from last year of \$14.07, then the carcasses would be worth \$14.63 per head less. If the percent Prime and Certified Angus Beef® (CAB) is decreased, this number gets larger.

This leads to complementarity. An example would be mating a high marbling parent to a heavy muscled parent to try to obtain a better overall combination across many traits in the crossbred progeny than either straightbred parent.

British breed cattle tend to excel in marbling, but on average across an entire breed, tend to have higher Yield Grades (YG). Continental breeds tend to be the opposite across an entire breed. Some producers are concerned with increased levels of YG 4 and 5 carcasses within their herd. Keep in mind, however, that USPB grids calculate YG discounts relative to plant averages which have also increased over the years

and that Quality Grade (QG) premiums are typically the main driver of overall premiums, especially on the Base grid.

**Last year, the average YG discount** was \$5.95 per head on the Base grid. Assuming no change in carcass weight, if you changed genetics to decrease that YG discount to zero, any decrease in QG would have to be less than 5.3% for Choice or better, assuming a \$14.07 Choice/Select spread, last year’s average. So, if you eliminated YG discounts but decreased your percent Choice by more than 5.3%, you did not gain any gross income. And this example does not factor in other quality grade premiums such as Prime or CAB.

Data from the U.S. Meat Animal Research Center (MARC), the leading authority on genetic research in beef cattle, shows that breed differences are now much smaller for yearling weight. Dr. Gosey has reported an average heterosis value of 4% for yearling weight (see table below). So crossbreeding may not necessarily increase carcass weight significantly.

Average Heterosis in Beef Cattle Traits

Trait	Heterosis
Calf Crop Weaned	8
Weaning Weight	13
Yearling Weight	4
Carcass Traits	3
Lifetime Productivity	25

There are still strong breed differences in carcass traits, especially between British and Continental breed types and also bos indicus (Brahman) type cattle. But, since heterosis is small for carcass traits, the improvement would be small.

**One area that could potentially be improved** quickly is muscling. This can also be done within a straightbred program, but the results may be slower. It could also mean spending significantly more money for purebred bulls that are predicted to excel in many different traits. However, don’t forget that adding cutability, from any breed, could potentially have a negative effect on marbling. Yet, adding some muscling (ribeye area) will not only decrease YG but it can also add carcass weight and improve dressing percentage.

The primary area where heterosis from crossbreeding can

make a real economic impact is in lowly heritable traits such as reproduction and cow longevity. Research has shown that crossbred females with **maternal heterosis** have earlier puberty, higher conception rates, faster breed back, and stay in production longer resulting in up to 25% greater lifetime production as measured by pounds of calf weaned per cow exposed. They also will pass some heterosis on to their calf. This is **individual heterosis**, or the benefit of an individual calf being crossbred compared to purebred animals.

**Reproduction is the foundation** to building a profitable commercial cow calf operation and its merits cannot be overlooked. You need to assess your cowherd's reproductive performance and how crossbreeding will impact that before making a decision to crossbreed. And finally, you should take a hard look at your current cow size, both frame score and body weight, with body condition scores taken into account. If crossbreeding will involve larger frame breeds, and heifers will be retained, then cow size may be affected.

Hybrids, or composites, can make crossbreeding much simpler. Hybrids are generally the F1 offspring from two purebred parents of different breeds. Composites are generally produced from parents that are crossbred. Purchasing hybrid or composite bulls with a consistent British/Continental breed makeup from a reputable genetic supplier will convert a commercial herd to a consistent, stable blend of British and Continental breeding over time just like purebred Angus bulls have done for "mongrelized" bull-of-the-year herds.

With composites, heterosis will not be maximized to the levels shown in the table on page two, but if the seedstock supplier introduces new blood into the composite often enough, it can be maintained. If not, heterosis will begin to decrease over time. You don't have to maximize heterosis for it to be beneficial.

**Many comments are made about crossbred** cattle being less uniform or consistent. Within a strict crossbreeding program of using composites, research has shown variability to be nearly identical to purebreds. However, if crossbreeding with different purebreds results in calves within a herd that have drastically different combinations of British and Continental breed types then there can be more variability. This is why it is important to follow a planned crossbreeding program and the benefit of composites can make it much simpler.

One of the biggest concerns with purchasing composites is moving away from purebred EPD's. They are the best predictor of overall genetic merit we currently have and the large databases of breed associations have made them valuable. Some breed associations are calculating EPD's for crossbred animals but they tend to be from databases that are much smaller. In the future, with increased use and further development of DNA genetic markers, this may be less of a concern than it is today.

One of the most reliable ways to get consistent, predictable genetic progress is to use highly proven, predictable bulls with EPD's that have high accuracy values in an artificial insemination (AI) program. Today, there are not many

crossbred bulls in that category. However, there are hybrid bulls available for sale that are sired by those predictable, proven, purebred sires.

Above all, remember that **pounds and premiums** are factors in the equation, but **profit is the ultimate answer**. Following a program will provide for more predictability compared to randomly experimenting with different purebreds. When breeding cattle, you still have a certain amount of antagonistic relationships between traits such as quality and yield grade. You still are blending genes together. With crossbreeding, you have some opportunity for the offspring to be slightly better than the average of the parents. It's most valuable for traits that are hard to select for such as reproduction. It's less valuable for carcass traits that are more highly relevant to a USPB member who retains ownership all the way to slaughter.♦

## USPB Non-Conditional Unit Trade Report

	FY 2007 Trades	January Trades
# Units Traded	35,287	500
Ave. Price/Unit	\$131.02	\$120.00

## USPB BENCHMARK PERFORMANCE DATA

Cattle Marketed Between 12/31/06 and 1/27/07				
(Numbers in Percent)	Base Grid		Market Grid	
	All	Top 25%	All	Top 25%
Yield	63.24	63.81	63.51	64.27
Prime	2.83	5.28	3.11	5.18
Choice	65.23	78.67	55.75	66.88
CAB	9.70	14.65	6.84	10.08
NAB	8.44	10.65	0.68	0.32
Black Hided	80.15	82.35	63.48	72.36
Ungraded	2.91	1.07	3.70	1.60
Hard Bone	1.22	0.62	1.45	0.89
YG1	3.64	2.18	8.26	6.18
YG2	26.41	22.96	33.17	30.59
YG3	48.05	52.35	39.85	41.73
YG4	18.87	19.62	14.38	15.27
YG5	3.03	2.90	3.56	3.15
Light Wt.	0.37	0.21	0.58	0.24
Heavy Wt.	1.45	1.45	1.53	1.14
QG Premium	\$27.06	\$51.78	\$14.35	\$34.84
Yield Benefit	\$5.98	\$16.30	\$4.12	\$17.04
YG P/D	-\$7.55	-\$7.72	-\$2.17	-\$2.68
OW Discount	-\$2.31	-\$2.13	-\$3.02	-\$1.90
AV	\$1.09	\$2.45	\$0.00	\$0.00
Natural	\$0.91	\$1.54	\$1.25	\$1.57
S/H Premium	\$0.99	\$1.10	\$3.14	\$3.65
Total Prem.	\$26.17	\$63.32	\$17.67	\$52.52



# National Beef Initiates Pilot Program With AngusSource

National Beef Packing Co., LLC (National Beef) is the first beef processor to work with AngusSource® to identify cattle that could qualify for the Certified Angus Beef® (CAB) premium.

AngusSource is a USDA Process Verified Program program which identifies cattle that have a minimum of 50% Angus parentage—calves must be sired by a registered Angus bull. Cattle are enrolled at the ranch of origin and documented by the date of birth for the firstborn calf in the group.

National Beef has filed paperwork with USDA to allow AngusSource cattle to be considered for CAB premiums. USDA approval would simply mean that cattle which are enrolled in the AngusSource program would then be eligible for CAB premiums provided they meet all of CAB's carcass specifications.

**“Smoky colored cattle that are sired by registered Black Angus bulls from cows with the dilution gene (Charolais or Simmental influence) that will dilute black coat color to gray, would now be candidates to receive CAB premiums,”** explains USPB Director of Field Operations, Brian Bertelsen. “Initially, we don't expect this program to identify a significant number of additional cattle for the CAB brand. Most cattle sired by Angus bulls are already black and therefore already meet the necessary hide color requirement (51% black hided) for the CAB brand.

“However, more importantly, AngusSource includes age verification,” Bertelsen adds. “Right now, it is much more important to potentially get \$25/head on all cattle enrolled in a program like AngusSource, compared to getting a CAB premium on a few more cattle. The only exception would be someone who raises a lot of gray calves that are sired by registered Angus bulls.

“But producers need to remember that being enrolled in An-

gusSource does not change National Beef's requirement that all AV cattle must be delivered from a feedlot that is approved by a Feedlot AV program. In other words, AngusSource cattle must still come from a feedlot that is approved by one of the Feedlot programs (identified on the enclosed AV fact sheet,” Bertelsen notes. ♦

## New Certified Angus Beef Specifications Take Effect

On January 29, beef packers licensed to produce Certified Angus Beef® (CAB) began using new specifications to qualify carcasses for the CAB brand. The three new uniformity specifications approved by the USDA are a ribeye area of 10 to 16 square inches, hot carcass weight less than 1,000 pounds and external fat thickness less than 1 inch.

Those are the three main variables that determine yield grade, John Stika, CAB president, explained in making the announcement.

The CAB Board voted last fall to replace the brand's original Yield Grade (YG) 3.9 limit with more specific consistency requirements. “That was in response to a trend toward heavier cattle, closely trimmed fabrication of cuts and other technical advances since the brand was founded in 1978,” Stika pointed out. “Our original limit of YG 3.9 allowed too many outliers.” The brand's 2005 consist study of 26,700 carcasses at plants in four states found calculated YG 3 carcasses with 1.2 inches of external fat, a ribeye range of 6.9 to 19.0 square inches and carcass weights of up to 1,169 pounds.

**The new specifications will reject an estimated 6.9% of cattle that would have been accepted for the brand in the past.** “On the other hand, more cattle better suited to consumer demand should become eligible,” Stika said. He acknowledged those will include some YG 4 cattle, but that is virtually irrelevant to end-users. “Packers will pay less to producers of YG 4 cattle, so that cost and market signal will be transferred to where it belongs,” he added. ♦

ADDRESS SERVICE REQUESTED

U.S. Premium Beef, LLC  
P.O. Box 20103  
Kansas City, MO 64195

Presort First Class  
US Postage Paid  
Kansas City, MO  
Permit #6412