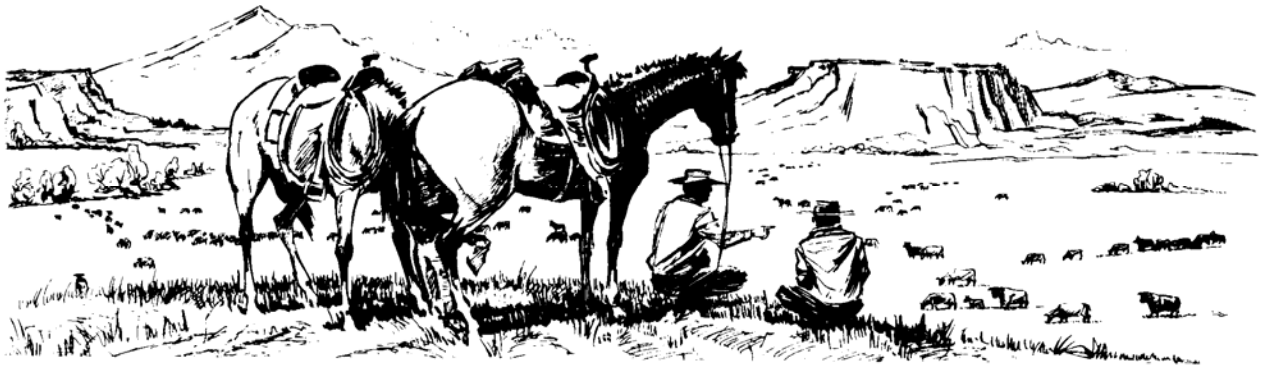

SISKIYOU STOCKMAN

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

January 2007

Calendar

Jan 27	Red Bluff Bull Sale, Red Bluff, CA
Feb 3	Klamath Bull Sale, Klamath Falls, OR
March 8	Cattle Health and Pie Meeting, Montague, CA. 7 p.m.

Fall 2008

No, that is not a mistake. What does "Fall 2008" have to do with the start of the new year 2007? Fall 2008 is a long way away. That's exactly the problem! Breeding season is just starting for Fall calving beef herds but they won't really know results of the breeding until the fall of 2008. A lot will happen between now and then; cows will be shipped, cows will die, abortions, and calves will die. The most important indicators of production are the number of calves sold and/or the pounds of calves sold in the fall of 2008 divided by the number of females exposed to breeding in January 2007. If you really want to know about the success of the calf crop sold in 2008, get a reasonably accurate count of the number of females exposed to breeding. Keep that number someplace where you will remember to find it.

Spring grazing of triticale

Producers growing triticale should consider the possibility of grazing in the spring. This will help reduce feed costs by grazing instead of feeding hay. Depending on the specific situation spring grazing can provide critical spring feed and not impact subsequent hay production. Some producers that have ample alternate hay supplies may want to consider more intensive spring grazing that will reduce or eliminate hay production, but also provide additional spring feed.

Management of spring grazing on triticale (or other small grains) depends on whether the field will be irrigated or not irrigated. Irrigated fields can be grazed more intensively because soil moisture will not limit subsequent growth as it may on non-irrigated triticale.

Local research results indicate irrigated triticale that is quickly grazed when about 6-inches tall (usually about April 1), will yield about the same tonnage of hay when allowed to regrow as if it is not grazed. (A quick grazing refers to grazing over an approximate 2 week period.) If the grazing period extends for multiple weeks, then the subsequent hay yield will be depressed. Starting the grazing period when the triticale has more growth (taller) will also reduce subsequent hay yields. In some cases, it may be more economical to extend the grazing period for several weeks or wait until forage is taller for more Spring grazing, even though the subsequent hay production is reduced. The potential to spring graze and not reduce subsequent hay yields is dependent on having irrigation to allow the triticale to regrow.

Spring grazing of non-irrigated triticale is more problematic. Basically the same grazing management used for irrigated triticale could apply, but the problem is that soil moisture may be depleted before comparable regrowth has occurred. In those cases, hay yield will be depressed. In some years of very limited rainfall, there may not be sufficient soil moisture for any spring grazing on non-irrigated triticale, and even the hay yield is reduced. Therefore, it is usually safer to not graze non-irrigated triticale in the spring when hay yield is important. If grazing does occur the research work on irrigated triticale suggests an early quick grazing (when it is about 6-inches tall) would be less likely to reduce subsequent hay production.

No triticale for spring grazing?

If you want to have triticale for spring grazing, it should be planted like typical grain production. For fields with irrigation water available in the late summer it should be planted between August 15 and early September. This works well for alfalfa stands that need to come out and go into grain production. A few light irrigations will bring the triticale along and permit some fall grazing. The crop goes mostly dormant during the winter and then starts growing in the late winter for early spring grazing and then a hay yield in June. For non-irrigated fields, triticale can be planted like dryland grain. It should generally be in the ground before Thanksgiving. With relatively normal winters, it could be grazed lightly in the spring, and then cut for hay, without any irrigation.

Buying Heifer Bulls

A progression in buyer's preference is readily apparent when it comes to selecting and buying bulls for heifers. Use of performance information in the selection/purchase decision has evolved from considering the actual birthweight of a potential sire to birthweight EPD. We recognize that difficult births occur almost exclusively in heifers calving for the first time as 2 year olds. In addition, while we use birthweight (or the EPD) in our decision process, we are not interested in birthweight, but rather having our heifers calve without assistance. Birthweight is an *indicator* of calving ease. It is the largest single factor predicting calving problems, but other factors such as sex and shape of the calf are also important. Calving ease, historically a trait that is scored as a category 1, 2, 3, 4 or 5 (1=no assistance, 2=assisted, easy pull, 3=hard or mechanical pull, 4= cesarian section, 5= abnormal presentation), has been developed into an EPD that uses both the historical calving ease scoring and birthweights. By using Calving Ease EPDs you can incorporate all of these factors into a single value. Calving Ease is reported by most breed associations as Calving Ease Direct or Calving Ease Maternal. The American Angus Association uses these definitions to describe each type of Calving Ease EPD.

> **"Calving Ease Maternal (CEM)**, is expressed as a difference in percentage of unassisted births with a higher value indicating greater calving ease in first-calf daughters. It predicts the average ease with which a sire's daughters will calve as first-calf heifers when compared to daughters of other sires."
>
> **"Calving Ease Direct (CED),** is expressed as a difference in percentage of unassisted births, with a higher value indicating greater calving ease in first-calf heifers. It predicts the average difference in ease with which an sire's calves will be born when he is bred to first-calf heifers."

To help illustrate the differences in the use of birthweight (BW), calving ease direct (CED) and calving ease maternal (CEM) EPD, I simulated the use of several actual Red Angus yearling bulls on a Red Angus cowherd. The simulation was conducted using the Decision Support Software operated by the National Beef Cattle Evaluation Consortium (NBCEC) and Colorado State University (try it yourself at: http://ert.agsci.colostate.edu/). The simulation starts with a stable cowherd and considers the results of using a different bull overtime. The net income change reflects the change from the stable base herd to a new herd with an age structure in equilibrium consisting of the daughters of the existing herd sired by the relevant bull. The feed supply is kept constant so changes in cow size, milking potential, etc. must be addressed by running more or less cows. This example focuses on the changes in net income which reflects the changes in the number of calves for sale, sale weights, feed costs and other income and expense items.

The bulls in the simulation have very similar weaning (WW) and yearling (YRLG) weight EPDs (Table 1). Other new important EPDs were also similar. The likelihood of their heifers becoming pregnant (HPG), the longevity of their replacements staying in the cowherd (STAY) and their daily energy (ME) requirements were similar. These factors are important in determining the number of calves for sale each year, the number of replacements required each year, feed costs and other factors that all impact the net income. ***The factors that were different between the bulls were BW, CED and CEM EPDs.***

Table 1. Actual yearling Red Angus bulls listed by birthweight EPDs with similar growth, feed and reproductive EPDs, but different birthweight and calving ease EPDs. Bulls were used in simulations to show the relative change in net income when used over time in a herd raising replacement heifers and keeping a constant feed supply (no increases in feed to maintain larger cattle).

	Expected Progeny Differences, EPDs									
Bull No.	BW	CED	CEM	HPG	ME	STAY	WW	YRLG	Change in Net Income	Income Rank
A	-1	3	6	9	5	12	31	56	$6,673	2
B	-0	9	5	9	5	12	32	56	$7,508	1
C	0.2	7	7	9	6	11	32	56	$6,084	4
D	1.7	0	1	9	5	11	32	55	$5,790	5
E	2.7	0	3	9	5	11	32	55	$4,251	6
F	3.6	-1	2	10	5	12	32	56	$6,482	3

Table 1 shows the simulated net income for each bull. The bulls are listed in order of lowest BW EPDs (the other EPDs are nearly the same). Note that the lowest BW EPD bull did not generate the highest increase in income. These simulations use the calving ease data to simulate calving problems and the impacts of those problems throughout the herd. Bull A had the lowest BW EPD (-1) and compared to the original herd increased net income by $6,673. This was the second largest increase. Bull B who has the second smallest BW EPD (-0) resulted in the largest increase in net income, $7,508. The results for the other actual yearling bulls are shown.

Table 2 shows the ranking for net income if we selected the bulls based only on CED EPDs. Bull B had the best CED EPD. This is taken from Table 1 where the CED EPD for Bull B is 9 meaning 9 percent fewer of his calves would need calving assistance. The increase in net income by using Bull B is $7,508 the largest for any of the bulls. The second best CED EPD (7) was for Bull C (from Table 1) but the net income was only increased $6,084, the fourth highest increase.

Table 2 also shows the expected calving problems based on the CED EPD. When averaged out over a large number of calves, Bull B would be expected to have 6 percent fewer assisted calvings in his progeny than Bull A. Note that this occurs even though Bull A has a lower BW EPD than Bull B. For a herd of 500 cows this would be 30 fewer assisted calvings. The value of 6 percent is calculated by finding the difference in CED EPD between the two bulls. Bull A's CED EPD is 3, Bull B's CED EPD is 9, so 9-3 = 6.

Table 2. Comparison of bulls from Table 1 for impacts on net income and calving assistance when selected on Calving Ease Direct, instead of birthweight EPD. Comparisons are between these bulls and Bull A, the lowest birthweight EPD bull.

Income effects due to selection for CALVING EASE DIRECT

		Impacts of bull selection on calving			
"Best" Bull based on CED	Income Rank	% Fewer calves assisted	No. fewer calves assisted	% Fewer Assisted in Replacements	No. fewer assisted in replacements
B	***1***	***6***	***30***	***-1***	***-5***
C	4	4	20	1	5
A	2	0	0	0	0
D	5	-3	-15	-5	-25
E	6	-3	-15	-3	-15
F	3	-4	-20	-4	-20

"No. fewer…" represent the number of fewer calves requiring assistance in a herd of 500 calving females.

CEM is important when replacement heifers are kept. It indicates the degree of calving assistance in replacements from a sire. In the comparison between Bulls A and B, Bull A has a slightly better CEM EPD, 6, compared to 5 for Bull B. For calving of replacements, Bull B will have 1 percent more assisted calvings than Bull A.

The comparison between Bull A and Bull B indicates that using Bull A because he has the lower birthweight EPD would result in somewhat less net income, 6 percent more assisted calvings and, long term, slightly more replacements requiring assistance. This is in spite of the fact we would expect on the average the calves from Bull A to weigh 1 pound less than Bull B's calves (due to the BW EPD difference for A and B). Table 2 shows the results for the other bulls.

We could also select our yearling heifers bulls based on CEM EPDs (Table 3). Bull C had the "best" CED EPD (7). The resulting income ranks only 4th, but assisted calvings are 4 percent lower than Bull A and his replacements need 5 percent fewer assists.

Table 3. Comparison of bulls from Table 1 for impacts on net income and calving assistance when selected on Calving Ease Maternal, instead of birthweight EPD. Comparisons are between these bulls and Bull A, the lowest birthweight EPD bull.

Income effects due to selection for CALVING EASE MATERNAL

		Impacts of bull selection on calving			
"Best" Bull based on CEM	Income Rank	% Fewer calves assisted	No. fewer calves assisted	% Fewer Assisted in Replacements	No. fewer assisted in replacements
C	***4***	***4***	***20***	***1***	***5***
A	2	0	0	0	0
B	1	6	30	-1	-5
E	6	-3	-15	-3	-15
F	3	-4	-20	-4	-20
D	5	-3	-15	-5	-25

"No. fewer…" represent the number of fewer calves requiring assistance in a herd of 500 calving females.

Simulations, like EPDs, are useful tools and do not apply to a specific individual calf or ranch. But they are useful for identifying general trends, and expected results over a large number of observations, just like we expect half males and half females but never get it. The simulations suggest:

1. Calving ease direct or maternal alone will provide a better estimate of a sires potential for producing unassisted calvings than birthweight alone.

2. Calving Ease Direct or Calving Ease Maternal are different, decide which is more important in your situation, and how much importance to give each EPD.

3. Even when growth rates, feed requirements and reproductive function are held similar, small differences in calving problems due to different sires have significant impacts on net income.

4. It is not easy to evaluate the impact of birth weights and calving ease on net income, and simulations provide a method to compare those impacts over a wide range of factors that ultimately impact profit.

Most cattlemen readily recognize that calving problems don't occur just due to a large calf. Why select heifer bulls based solely on breed, actual birthweight or birthweight EPD? Calving Ease EPDs use both birthweight EPD as well as calving ease scores to more completely describe the expected results of a potential sire on calving problems.

Cloning

Cloning has been in the news with press releases from the FDA regarding clones and an assessment of safety of foods derived from animal clones The following information was written by Dr. Art Craigmill, UC Davis, and provides a description of a "clone". Dr. Craigmill's full editorial comments can be found in his newsletter at: http://extoxnet.orst.edu/newsletters/ucd2006/nltrDecember06.html.

> "Their assessment was related to cloning done using somatic cell nuclear transfer (SCNT), a process in which the nucleus of an unfertilized egg (ovum) is removed and replaced with the nucleus of a somatic (body) cell from the animal to be cloned. An unfertilized ovum contains half the genes usually found in the normal animal cell. When fertilized by a sperm to give the full number of chromosomes, the ovum then begins to divide to form an embryo.
>
> After transfer of the somatic nucleus into the ovum, the ovum has to be coaxed to begin the process of division and formation of an embryo, but once this starts, the process runs its course to form an animal fetus. For a cow, the bovine ovum cell body is half of what is needed to make an fetus. The other half is a nucleus with the full complement of chromosomes. In natural reproduction, half of the chromosomes in the nucleus come from the mother cow, and half from the bull. In SCNT, all of the chromosomes come from the nucleus donor (cow or bull). Either way, the ovum is 100% cow, and nothing but cow! The cloned animal is essentially a twin of the nucleus donor, there are no extra chromosomes added or genetic alterations made, SCNT clones are NOT transgenic animals. These animals are 100% cow, pig, sheep or goat."

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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

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

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