

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 2010

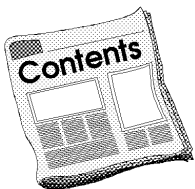
New Cooperative Extension office hours

The Yreka office of the University of California Cooperative Extension has new office hours. They are Monday through Thursday from 8 am to 12 and 1 pm to 5 pm. During these hours the office will be open to walk up visitors and will be answering the phone at 530/842-2711. On Friday, Advisors Steve Orloff and Drake Drake and 4-H Program Representative Jacki Zediker will be working but the office will be closed to walk up visitors. They can be reached by mobile phone:

Steve Orloff 530/598-0670

Dan Drake 530/598-9037

Jacki Zediker 530/598-9034



- New Cooperative Extension office hours
- Coping with constraints: Crossbreeding
- Coping with constraints: Cow size
- Red Books Available

Calendar

Nov 6	Siskiyou County Cattlemen's and CattleWomen's Fall Dinner, Yreka, CA.
Nov 17-19	California Cattlemen's Association Annual Convention, Reno, NV http://www.calcattlemen.org/
Dec 1-2	California Alfalfa and Forage Symposium, Visalia, CA: http://ucanr.org/sites/Alfalfa_Forages/
Dec 5-9	California Farm Bureau Federation Annual Meeting, Monterey, CA: http://www.cfbf.com/am2010/
Jan 7	Siskiyou County Cattlemen's Association Feeder Sale, Cottonwood, CA.

Coping with constraints: Crossbreeding

As we finish the first decade of the 21st century some indicate the non-agricultural businesses in the U.S. find themselves in much the same condition and dealing with the same issues as agriculture: increasing regulations and unknown issues stifling profit and expansion. The only difference is agriculture has been dealing with the issues for years. Whether health care or water rights, regulations extract a cost. Not knowing the exact nature or extent of new regulations is not a good atmosphere for agricultural or non-agricultural businesses. Interestingly for agriculture, signs point for a tremendous growth in demand for food, including beef. Some people are predicting food production will

need to double in the next 40 years to feed the world. The need to increase production is constrained with roadblocks to production expansion. Many predict grain supply will remain tight and prices high or higher due to expanded uses, especially biofuels, and continuing restrictions on acreage and water. This will increase the cost of finishing cattle. We have to remember the feedlot era developed due to relatively inexpensive feed grains. They are an excellent process to greatly increase meat capacity without large increases in land use. The supply chain is essential to process and distribute vast quantities of meat both in the US and abroad. Larger cattle enhance the supply chain. Generally mature cows of 1,200 or more pounds in conventional breeding schemes are needed to generate the most desired carcass weights. Higher feed costs likely will encourage heavier feedlot in-weights to minimize the finishing period. Smaller cows are probably better suited to potential reductions in feed supplies resulting from reduced water for irrigation and less land of generally lower quality available for cattle. Smaller cows in conventional breeding schemes are not well suited to the supply chain. Smaller cows do require less feed and may therefore lower feed costs but lighter weaning weights and price discounts likely more than offset the reduced nutrition and feed costs of smaller cows. Currently cattle herds have become increasingly more Angus, more straightbred. There have been several generations to practice herd improvement under straight bred conditions. For the cow and calf herds, reproduction is still king as well as uniformity and numbers. There are a number of technological breakthroughs on the horizon.

Since the cowherds are generally more straightbred improvement due to crossbreeding could be very large. Crossbreeding is a very old and worn out subject, but it is still not being implemented. One of the least costly and best returns is introducing crossbreeding. An immediate increase in weaning weight should be seen but more importantly it is one of the few and best ways to improve reproduction. Equally important a second breed can be introduced and black calves can still be sold.

If or when crossbreeding is started a few simple actions will help to insure a smooth introduction. When the time comes to actually put cows into breeding groups, decide which mature cows go with the new breed of bull(s) and in some way identify those females during the breeding season. This might be as simple as placing a different color ear tag or putting the ear tag in a different ear or even writing down the number if already identified. During the NEXT breeding season

put these same cows back with the second breed bulls. If they are easily identified sorting them into their own breeding group is easy. At the same time as you are working their calves (for example calfhooD vaccinations) put a different tag in the heifer calves. For example put a blue tag in the heifers. If you keep replacement heifers you now have a relatively permanent record of the sire of the replacements. When it is time for their breeding you can sort based on the blue tag and those cattle for their lifetimes are bred to the opposite bull breed from their sire.

When it comes to selecting the second breed for crossbreeding many people will already have a short list of potential breeds. It is easiest if the second breed is similar in mature size to the current breed. It also simplifies things if the second breed is only used on mature cows then we don't have to worry much about calving problems. Again to simplify things it is easiest to select individuals within the desired second breed that have similar weaning weight potential to your current breed. So start by looking at the weaning weight EPD of your existing bulls. If the average weaning weight EPD of your current bulls is +25 then you can use across breed EPD adjustment factors to find bulls of other breeds that are about the same genetic potential for weaning weight. To compare another breed to Angus add the across breed adjustment factor to the EPD of the bull to get the equivalent EPD in terms of Angus. For example, add 0.5 (Table 1) to the weaning wt EPD of a Hereford bull to get the EPD in terms of the Angus breed. For a Charolais you would add 41.9 pounds (Table 1) to the Charolais bull weaning wt EPD. For the Hereford example, if the average weaning wt EPD for your Angus bulls was +25, you would need to find Hereford bulls with a weaning wt EPD of 24.5 to get about the same genetic potential for weaning wt. You don't really care what the average Angus or average Hereford weaning wt EPD is. You want to compare to the EPDs of your bulls. Bulls with similar EPDs will produce similar wt calves when bred to similar cows. But there will be some variation. The similarity will be based on the average: the average of a large number of calves will be similar.

Table 1. Across-breed adjustment factors¹.

	weaning wt.	birth wt	yearling wt
Hereford	0.5	3.4	-15.5
Charolais	41.9	9.3	50.8
Simmental	28.4	5.2	28.3

¹ other breeds and additional adjustments at <http://www.angus.org/Nce/AcrossBreedEpdAdjFactors.aspx>

When trying to make a decision don't get delayed looking for the perfect bull in another breed. You may have spent years improving the current bull group so don't expect miracles overnight. Secondly, you are purposely narrowing your selection to bulls of similar mature size and growth potential to minimize the changes in your breeding pastures and groups. You are really looking for the replacement heifers that will provide superior reproduction and for which you do not have any other good way to make rapid and significant genetic improvement.

Coping with constraints: Cow size

With continuing constraints and regulations that reduce or threaten to reduce feed supply cattlemen are thinking about ways to cope with less feed. One plan is to reduce the size of the cows. Smaller cows will definitely need less feed and lower feed costs. But they will also wean a smaller calf selling for more per pound. Are smaller cows more profitable? Several comparisons were made:

Option 1	100 cows mature size 1,200 lbs. bred to medium frame bulls (bulls same frame size as cows)	Status quo feed conditions – adequate feed for this size and number of cows.
Option 2	100 cows mature size 1,000 lbs bred to small frame bulls (bulls same frame size as cows)	Less feed
Option 3	100 cows mature size 1,000 lbs. bred to medium frame bulls (bulls larger frame size than cows – a terminal cross)	Less feed – same as option 2
Option 4	90 cows mature size 1,200 lbs. bred to medium frame bulls (bulls same frame size as cows)	Less feed – same as option 1 and 2
Option 5	90 cows mature size 1,200 lbs bred to large frame bulls (bulls larger frame than cows – a terminal cross)	Less feed – same as options 2, 3 and 4

These comparisons were for a fall calving herd that sells weaned calves in September. Crop aftermath is fed in the fall with hay supplementation starting in December. Basically full feeding of hay during the

winter appropriate for the cow. One month of non-irrigated range is used. Irrigated pasture is used in the summer at \$25 per pair per month.

The results of these comparison should not be surprising (Table 2). Option 2 with less feed available and smaller cows shows lower feed requirements and reduced feed costs with the smaller (and fewer) cows. Calves are lighter in weight and due to a discount (\$0.10) for frame size return less money. Overall after paying for feed costs income declines by \$6,186 (27%). In this comparison a reduction of about 10% in total feed available resulted in a substantial decline in income by switching to smaller cows. Option 4 shows results for keeping the same 1,200 lb. cows but reducing them to 90 head. With 90 head of 1,200 cows the total feed requirement would be about the same as 100 smaller cows in option 2, for the herd total the hay equivalent would be 638 tons compared to 639 tons. By reducing to 90 head of 1,200 lb. cows the income would drop from \$22,421 to \$20,448 a decline of \$1,973 (8.8%). Clearly reducing the number of cows would be a better response to less feed than switching to smaller cows. Smaller cows would look better if the discount for their small frame calves was not as large. A discount of \$0.02 instead of \$0.10 used in the example would result in the small frame cows equaling the economics of the larger cows. Historically small frame calves have received discounts of much more than 2 cents.

It would be more complicated breeding (terminal sire breeding) but option 3 compared using a medium frame bull on the small frame cows to get a slightly larger frame size calf. With option 3 a the discount for small frame was \$0.05 (instead of \$0.10) and the income was similar to that seen by using fewer larger cows (option 4). The terminal sire option is effective in increasing income for the 1,000 lb. cows but it is about the same as just using fewer larger cows, which would be less complicated. If terminal sire breeding were an option then option 5 using 90 cows 1,200 lb in weight with a large frame bull and less feed would be the option returning the most money (when feed is reduced). These models are not surprising in their general results; it takes feed to raise cattle and less feed is less pounds to sell. Under the conditions of these comparisons responding to less feed by reducing the number of head was economically better than reducing the size of the cows. A management alternative such as terminal sire breeding can help to reduce the impact of less feed, but may not be suitable for all herds and managers.

Table 2.

Option	Wt. of cows	Number of cows in herd	Frame size of bull for breeding	Feed	Cow total TDN used /mon	Calf Total TDN from forage /month	Cow + calf TDN intake from forage /mon LBS	Accum Cow+calf TDN intake from forage assuming shipping	Total hay equivalent used as tons of 54% TDN hay	wt of calf	Total wt of calves	Price of calves \$/lb (frame adjusted)	Total value of calves \$	Accumulated rent + feed cost \$	Value of calves - accumulated feed cost
1	1,200	100	Medium (same as cow)	Status quo	42,977	31,234	74,211	686,228	706	863	73,806	83.83	61,868	39,448	22,421
2	1,000	100	Small (same as cow)	Less	37,661	30,701	68,362	620,435	638	830	70,945	74.63	52,944	36,709	16,235
3	1,000	100	Medium (larger than cow)	Less	37,661	30,975	68,637	625,956	644	847	72,389	78.96	57,157	36,709	20,448
4	1,200	90	Medium (same as cow)	Less	38,894	28267	67,161	621,037	639	863	66,794	83.83	55,991	35,700	20,291
5	1,200	90	Large (larger than cow)	Less	38,894	28488	67,382	625,707	644	879	68,053	83.83	57,045	35,700	21,345

Red Books Available

Red Books for recording typical cattle production activities are available at the Cooperative Extension office. Red Books may serve as a tool to help with age or process verification and other management activities. The cost of a 2011 Red Book is \$6.00.

Upcoming Meetings

Opportunities to meet with fellow livestock producers and agriculturalists are upcoming.

- Locally, the Siskiyou County Cattlemen's and CattleWomen have their fall dinner at the Community Center in Yreka on Saturday, November 6. For further information contact Joe Sammis, President, 530/397-2476.
- Reno, NV is the place, November 17-19, for the annual meeting of the California Cattlemen's Association (<http://www.calcattlemen.org/>).
- Hay and grass growers will be interested in the California Alfalfa and Forage Symposium in Visalia, CA December 1-2 http://ucanr.org/sites/Alfalfa_Forages/.
- The California Farm Bureau Federation is meeting in Monterey December 5-9 (<http://www.cfbf.com/am2010/>).
- The Siskiyou County Cattlemen's Association will hold their annual cattle feeder sale on Jan 7, 2011 at the auctionyard in Cottonwood, CA.

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

Sincerely,



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