LOW COST COW/CALF PRODUCTION

The Bulletin ***For Alumni Of The School***

August 1997

Skinny Moms

During the School we spoke extensively about the necessity for cows and heifers to be at a particular BCS at the time of calving in order to accomplish satisfactory rebreeding. We related the minimum BCS to the months in which you choose to calve at your particular latitude. Further, we discussed what to do if (by chance) the cattle were below the desired BCS when calving commences. The question looms even larger as more of you breed to calve following a period of lush forage, from which you expect to attain your BCS goal. This program may involve weaning according to a BCS that is approximately two scores below that necessary at calving. The forage quality and quantity must be there. If not, there is trouble in River City.

Groceries

Also during the School, we discussed results of research work dealing with low BCS at the time of calving. You may recall that supplying extra dietary energy postcalving further shortened anestrus in the adequately conditioned cows and heifers. Conversely, there was no help for those lacking flesh at the time of calving. The cattle used in these studies were either in BCS 3 (too thin) or BCS >5 and were calving in March at a latitude of about 44°. Further, the additional energy supplementation was not a tremendous amount.

Try It Again

A study (with first calf heifers in BCS 4.2 at calving) recently was reported by researchers at the U. of Missouri[1]. Beginning 86 days before calving, bred heifers in BCS 5.9 were fed to lose weight and condition to BCS 4.2 at calving. Calving commenced Jan. 12 for 78 days. Columbia, MO. is situated at 38° 56' N. Immediately upon calving, the heifers were fed one of four diets containing 0.43, 0.57, 0.70 or 0.83 Mcal of NEm to achieve different rates of postcalving gain.

What Happened

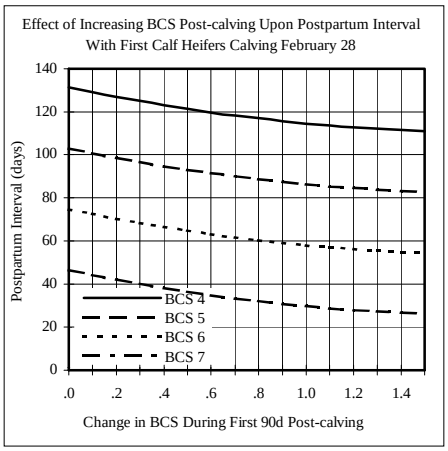
Results are shown in the following table. Cow weight at calving (CWT) averaged 827 lb and condition score at calving (CCS) was 4.2. Even with an increase of 1.17 in BCS, PPI was reduced by only 20 days. The authors point out that when cows experience negative energy balance before parturition, PPI is lengthened. They are right about that and it is a **NO NO**. **Always have cows gaining weight at the time of calving**. They also noted, which isn't shown by the averages in the table above, that the cows calving later had shorter PPIs. Further, they said BCS at calving had a far greater impact upon PPI than increase in BCS after calving.

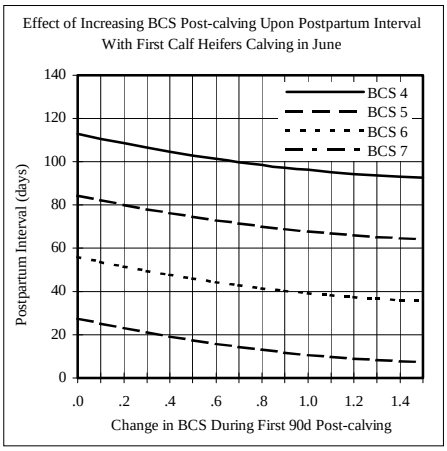
Influence of postpartum diet on weight change (WTCH90), change in BCS (CSCH90) and PPI.

	NEm in Diet (Mcal/lb)			
Item	0.43	0.57	0.70	0.83
CWT	836	823	828	821
CCS	4.27	4.26	4.18	4.10
WTCH90	14	22	57	56
CSCH90	-0.12	0.29	1.03	1.17
PPI, d	134	120	114	114

What If

An equation for predicting PPI, relative to a postcalving increase in BCS, was developed. I took the liberty of combining this prediction model with the OK State U. equation (based on BCS at calving) and the equation for photoperiod. With the average calving date of Feb. 28, situated at 39°, the curves indicate the shortening of PPI when calving at various BCS and increasing BCS after calving. The graph indicates that the only chance for suitable rebreeding is if the heifers are in BCS 7 at calving. This assumes it is most desirable to breed on the third estrus by 85 days after calving. The following chart suggests a scenario of calving June 1 at Columbia, MO. Be mindful that these heifers were experiencing weight loss and a decline in body condition at the time of calving. This was necessary in order to evaluate **only** the effect of increasing postpartum BCS upon PPI.





Schools In 1997-98

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[1] Lalman, D.L., D.H. Keisler, J.E. Williams, E.J. Scholljegerdes and D.M. Mallett. 1997. Influence of postpartum weight and body condition change on duration of anestrus by undernourished suckled beef heifers. J. Anim. Sci. 75:2003.