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Evaluating Body Condition and Using It to Improve Beef Cow Reproductive Performance

Michigan State University Extension Service
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MICHIGAN BEEF PRODUCTION

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Evaluating Body Condition and Using It to Improve Beef Cow Reproductive Performance

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Body Condition Scores

Body condition (degree of fatness) has been demonstrated to have a very important relationship to rebreeding performance in postpartum cows. In fact, cow condition at calving seems to be the single most important factor in determining how quickly a cow returns to estrus following calving. Research in recent years has shown that beef cows in moderate to good condition exhibit a significantly earlier return to estrus after calving and a higher pregnancy rate than cows in thin condition. Subjective systems for scoring body condition have been developed as a result of this research. The data have shown that subjective condition scores in live cows are highly correlated with carcass fatness.

The most widely adopted system is one based on a 1 to 9 scale.

1. **Severely emaciated.** Rarely seen. All ribs and bone structures easily visible. Very little visible muscle tissue. Physically weak.

2. **Emaciated.** Similar to Condition Score 1, but not weakened. Little visible muscle tissue.

3. **Very thin.** No fat over ribs or in brisket. More apparent muscling than on Condition Score 2. Backbone easily visible.

4. **Thin.** Ribs usually visible with shoulders and hindquarters showing modest muscling. Backbone visible.

5. **Moderate.** Last two or three ribs can be seen. Little evidence of fat in brisket, over ribs or around tailhead

6. **High moderate.** Smooth appearance throughout. Slight fat deposition in brisket and over tailhead. Ribs covered, and back appears slightly rounded.

7. **Good.** Brisket full. Tailhead shows pockets of fat. Back appears well rounded due to fat. Ribs appear very smooth.

8. **Obese.** Back square due to fat. Brisket distended. Heavy fat pockets around tailhead. Neck thick.

9. **Very obese.** Rarely seen. Similar to Condition Score 8, but more extreme. Heavy disposition of udder fat.

The importance of condition at calving time is illustrated in Table 1, which summarizes data from a Texas study.

Table 1. Condition and Rebreeding Performance of Beef Cows

Item	Condition Score at Calving			
	4	5	6	7
Number of cows	25	59	80	23
Pregnant 1st 20 days of breeding, %	4	15	36	65
Pregnant 1st 60 days of breeding, %	24	51	69	87

As shown in Table 1, only 24 percent of the cows with Condition Score 4 were pregnant after 60 days of breeding, compared to 87 percent of the cows with Condition Score 7. Furthermore, a greater percent of the cows with higher condition scores cycled and rebred during the first 20 days of the breeding season.

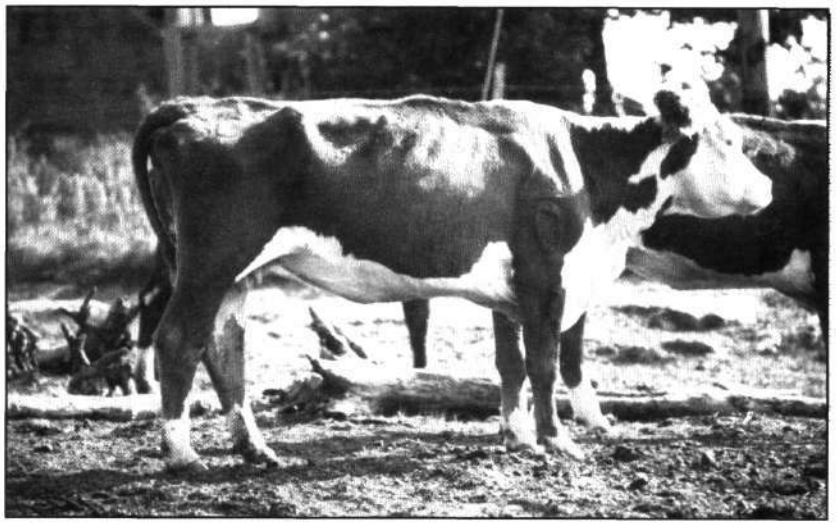
How to Use Condition Scores

Research at Oklahoma State University and several other universities has shown that mature cows need to condition score from 5 to 6 at calving time to consistently rebreed in the 90 percent range by 80 days postpartum. Furthermore, first-calf heifers may need to be in slightly better condition than mature cows.

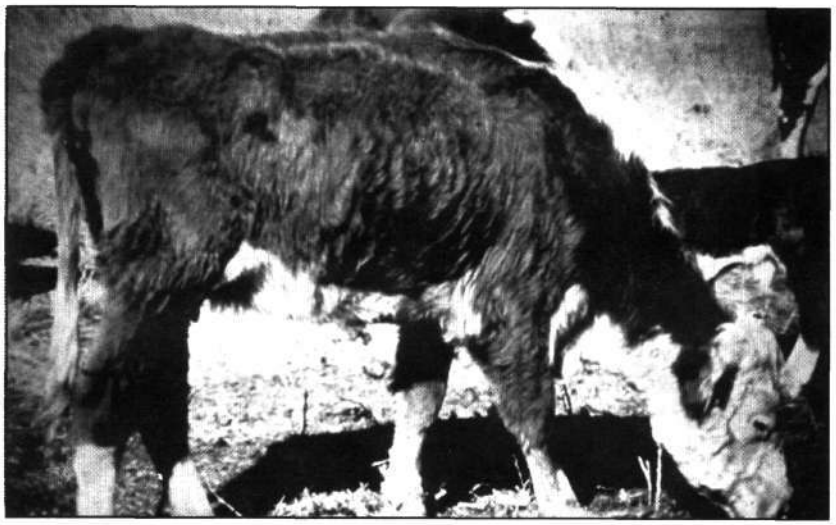
In utilizing condition scores, it is recommended that the condition of the cow herd be evaluated at weaning time or, at the latest, about three months before calving. Thin cows (4 or less) should be sorted out from those in moderate (5) or higher condition and fed to calve in moderate to good condition. Then, at least moderate condition should be maintained from calving to breeding season.

It should be noted that cows with dairy breeding can be as much as one condition score lower than straight beef-type cows and still exhibit comparable rebreeding performance. This is presumably due to the fact that they carry a lower percent of their total body fat as external fat and a higher percent in the form of seam fat and kidney, heart and pelvic fat.

Condition Score 1
(Severely Emaciated)



Condition Score 2
(Emaciated)

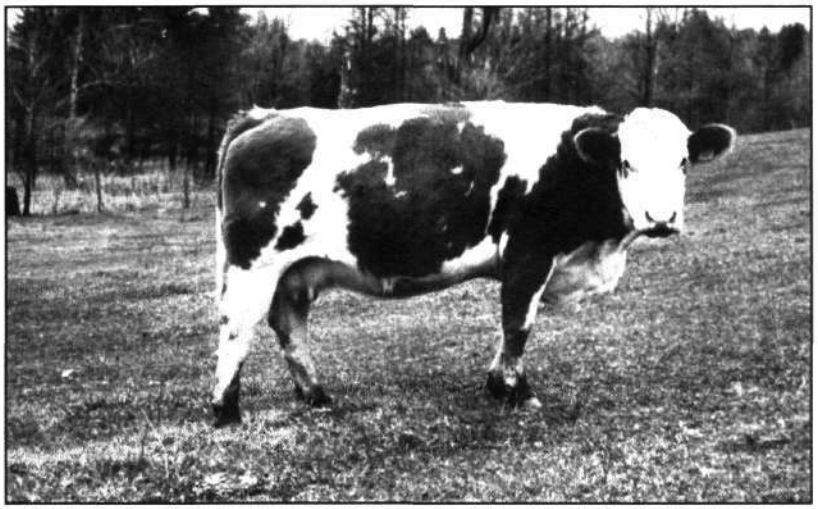


Condition Score 3
(Very Thin)

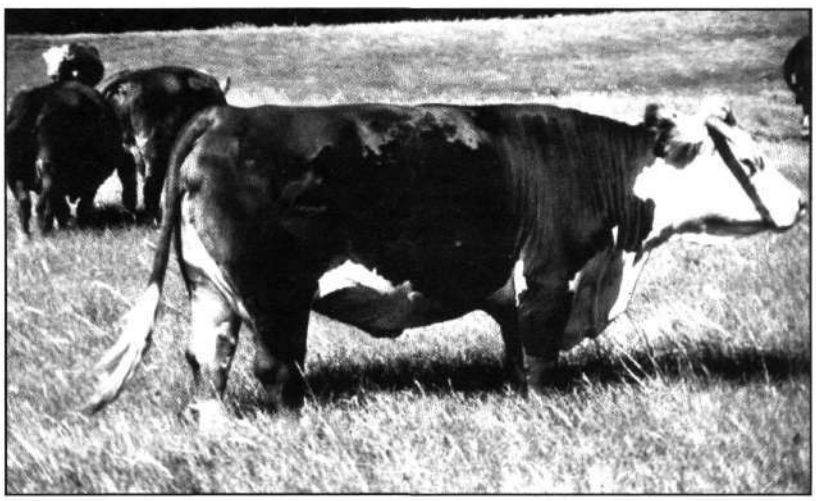
Condition Score 4
(Thin)

Condition Score 5
(Moderate)

Condition Score 6
(High Moderate)



Condition Score 7
(Good)



Condition Score 8
(Obese)

Condition Score 9
(Very Obese)

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