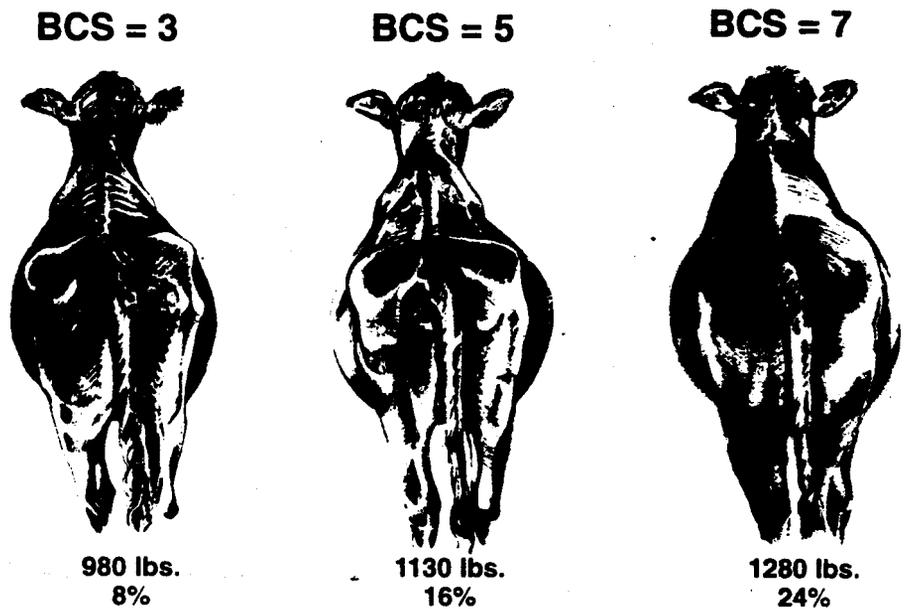


Adequate  
Nutrition is  
Required  
Before  
Reproduction  
is Possible

Priorities of  
Nutrient  
Allocation:

Maintenance

- Lactation
- Growth
- Reproduction



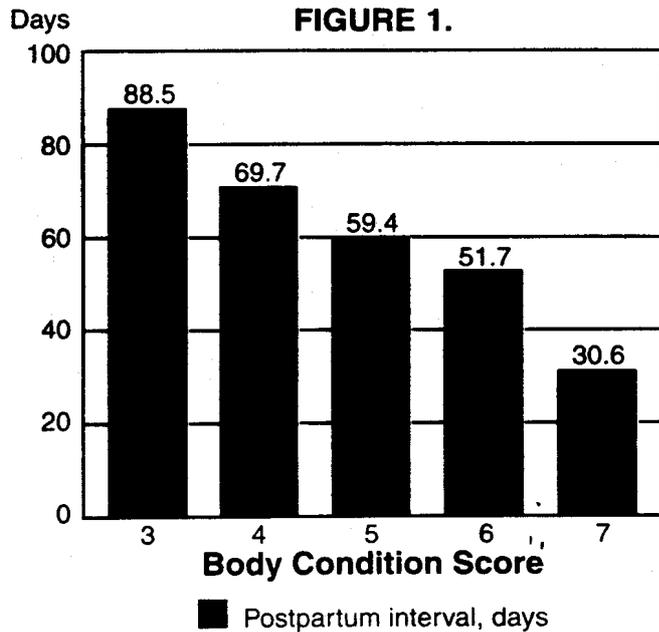
Herd & Sprott, 1986

## Reproductive Efficiency—Linked to Body Condition Scores

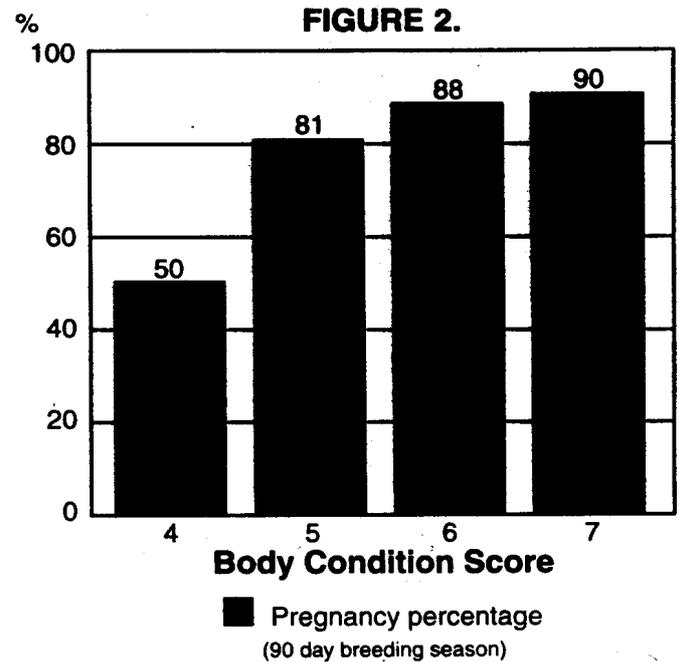
Nature dictates a specific priority for the utilization of nutrients by the beef cow: body maintenance comes first, followed by lactation and growth (in young cows), with reproduction last. In many ways, reproduction is truly a luxury trait that occurs only during periods of nutrient adequacy. During times of nutrient deprivation, which can occur as a consequence of inadequate feeding level and/or harsh environmental conditions, reproductive performance is the first to suffer and the last to recover.

The clearly defined relationship of body condition score on reproductive performance is illustrated in results obtained from Purdue University, Oklahoma State University and the Padlock Ranch. At calving, thinner cows experience a longer period of time from calving to rebreeding (post-partum interval) compared to adequately conditioned or fleshy cows (Figure 1; Houghton et al., 1986). Selk et al. (1986) clearly demonstrated the negative impact of thin body condition at calving on pregnancy rate unless there was sufficient time to recover lost body tissue stores (Figure 2). These data are in agreement with actual ranch records collected at the Padlock Ranch (Table 1).

## Effect of Body Condition Score at Calving on Postpartum Interval and Pregnancy Percentage



Houghton et al., 1986. Purdue University



Seik et al., 1986. Oklahoma State University

**TABLE 1.**  
Relationship of Body Condition Score at Weaning and Pregnancy Rate

	Body Condition Score				
	<3	4	5	6	>6
Total Cattle	3,415	23,811	37,970	26,213	9,654
% of Herd	3.4	23.6	37.6	25.9	9.5
% Pregnant	75.7	85.4	93.8	95.6	95.6

# How to Utilize Body Condition Scores at Various Stages of Production

## Factors Affecting BCS

- Climatic conditions
- Stage of production
- Cow age
- Genetics
- Calving date
- Weaning date
- Forage management

### PRODUCTION PERIOD

### MANAGEMENT

---

#### Late lactation (2 months prior to weaning)

Depending upon current forage availability, supplementation and/or a modified weaning strategy may be necessary. Wean thin cows, especially thin, young and older cows.

---

#### Weaning

Pay particular attention to young cows weaning their first calf and cows beyond their prime age; they are most likely to be thin at this time.

---

#### 100 days before calving

Last opportunity to gain body condition. This would be a good time to separate thin cows from cows in good condition and increase feed to thin cows.

---

#### Calving

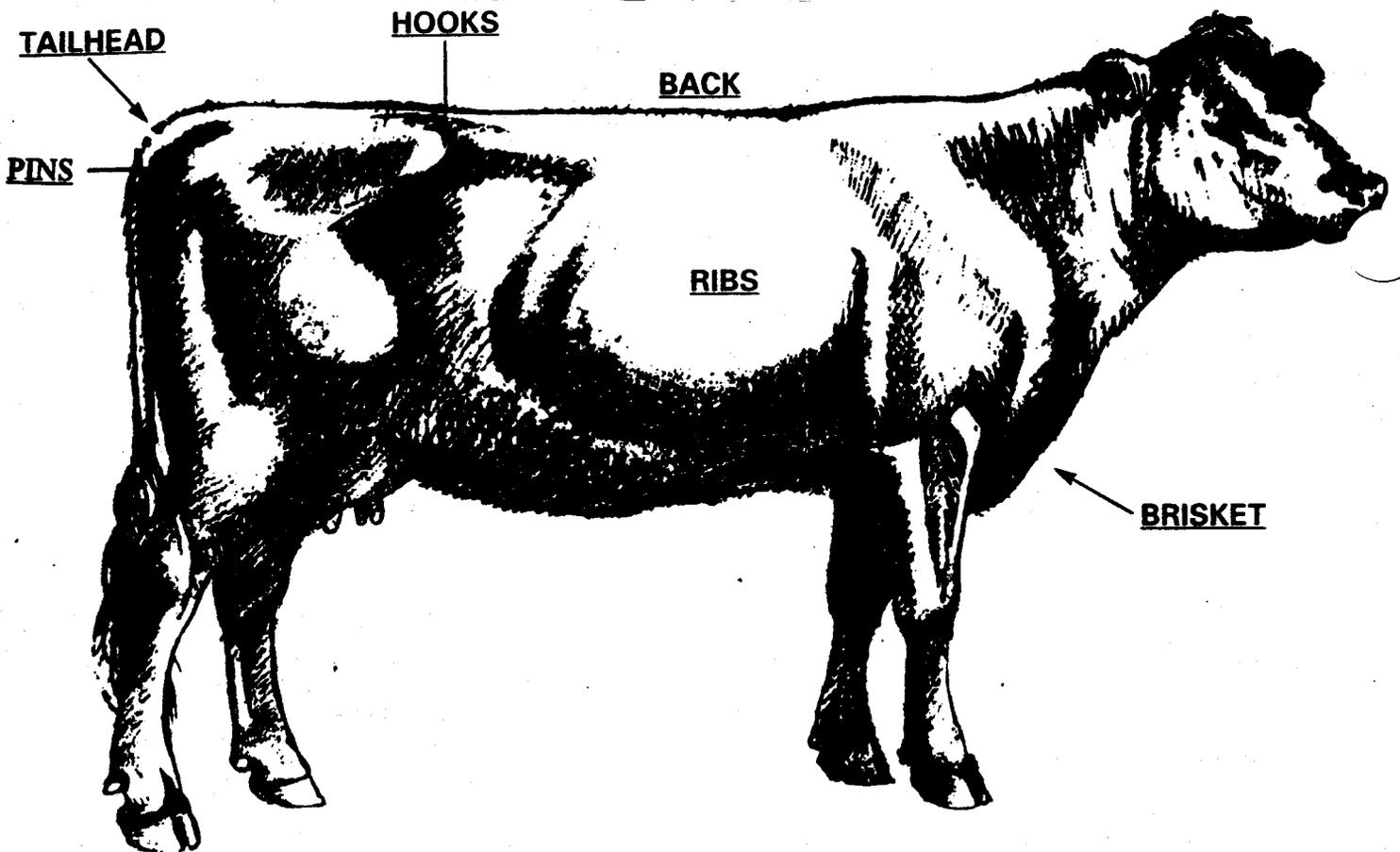
If cows are thin, a change in the feeding program is needed. It is expensive to increase condition on thin cows after calving.

---

#### Breeding season

If cows are thin at this time, additional supplementation and/or implementation of an early weaning strategy may be necessary.

---



## Description of Body Condition Scoring (BCS)

### Body Condition Score

<b>1</b>	Severely emaciated. Bone structure of shoulder, ribs, back, hooks and pins is sharp to the touch and easily visible. Little evidence of fat deposits or muscling.
<b>2</b>	Emaciated. Little evidence of fat deposition but some muscling in the hindquarters. The backbone feels sharp to the touch.
<b>3</b>	Very thin, no fat on ribs or brisket, and some muscle still visible. Backbone easily visible.
<b>4</b>	Thin, with ribs easily visible but shoulders and hindquarters still showing fair muscling. Backbone visible.
<b>5</b>	Moderate to thin. Last two or three ribs can not be seen unless animal has been shrunk. Little evidence of fat in brisket, over ribs or around tailhead.
<b>6</b>	Good smooth appearance throughout. Some fat deposits in brisket and over tailhead. Ribs covered and back appears rounded.
<b>7</b>	Very good flesh, brisket full. Fat cover is thick and spongy and patchiness is likely. Ribs very smooth.
<b>8</b>	Obese, back very square, brisket distended, heavy fat pockets around tailhead. Square appearance.
<b>9</b>	Rarely observed. Very obese. Animal's mobility may actually be impaired by excessive fat.