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OVER-CONDITIONING DRY COWS

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Cows during the dry period should be slightly heavier than normal body condition or slightly over-conditioned for maximal milk production during the subsequent lactation. Feeding systems should be designed so that cows in mid to late lactation will be maintained in the desired body condition.

The ideal body condition for dry cows is not well understood. Over-conditioned cows may suffer from the "fat cow" or "fatty liver" syndrome or disease at calving. There is a higher incidence of "downer" cow or milk fever, ketosis or acetonemia, retained placenta and metritis, and coliform mastitis. During the next lactation, these cows' milk production is reduced, the peak in daily production may occur at 70 lb rather than 90-100 lb, and cows lose very little body weight. Also they may suffer a displaced abomasum or "twisted stomach."

Overfeeding is a primary cause of over-conditioning. Causes include free-choice feeding of corn silage or excessive amounts of corn silage and overfeeding of grain, concentrates, or high moisture grains during late lactation or the dry period, and allowing dry cows to stay with the milking herd and enter the milking facility during milking. Cows with breeding problems often are over-conditioned. Under-conditioned cows will not produce as well during the next lactation. They have insufficient body energy stores to utilize during high production.

What Body Condition? Body condition was scored for 659 dry cows in 29 Virginia dairy herds. The effect of body condition score during the dry period upon milk production during the next lactation was measured. The body condition scoring system was described in detail in Dairy Guideline Series 100.

The most desired condition in dry cows is when the ends of the spinous processes on the backbone can be felt by applying minimal pressure and yet show very little overhanging shelf effect. The chine and loin areas are rounded and continue into the rump. The back is beginning to show some fat deposition. The hips and

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pins are smooth and rounded. Some fat has been deposited around the tailhead and pin bones. This corresponds to an upper 3 or low 4 body condition score. These cows produce more milk than cows with greater than or less body condition (Table 1). In these 29 herds, with DHI rolling herd averages ranging from 9,000 to 19,000 lb milk, there were more under-conditioned than over-conditioned cows.

For greatest milk production during the subsequent lactation, dry cows should have upper normal (3 score) or be slightly over-conditioned (low 4 score). Feeding systems for milking cows in mid to late lactation and dry cows should be designed so that cows can be maintained in this desired condition. Special precautions are needed for cows who were problem breeders.

Table 1. Milk production during various stages of the subsequent lactation as affected by body condition during the preceding dry period.

Body condition score	No. cows	Stage of lactation (days)				Total
		Less than 80	80-159	160-239	Over 239	
		4% Fat corrected milk (lb/day)				(lb)
2	37	58.4	50.1	47.3	44.5	15,356
3	354	64.0	55.7	44.5	36.2	15,489
4	250	66.8	55.7	44.5	39.0	15,895
5	18	61.2	50.1	39.0	33.4	14,195

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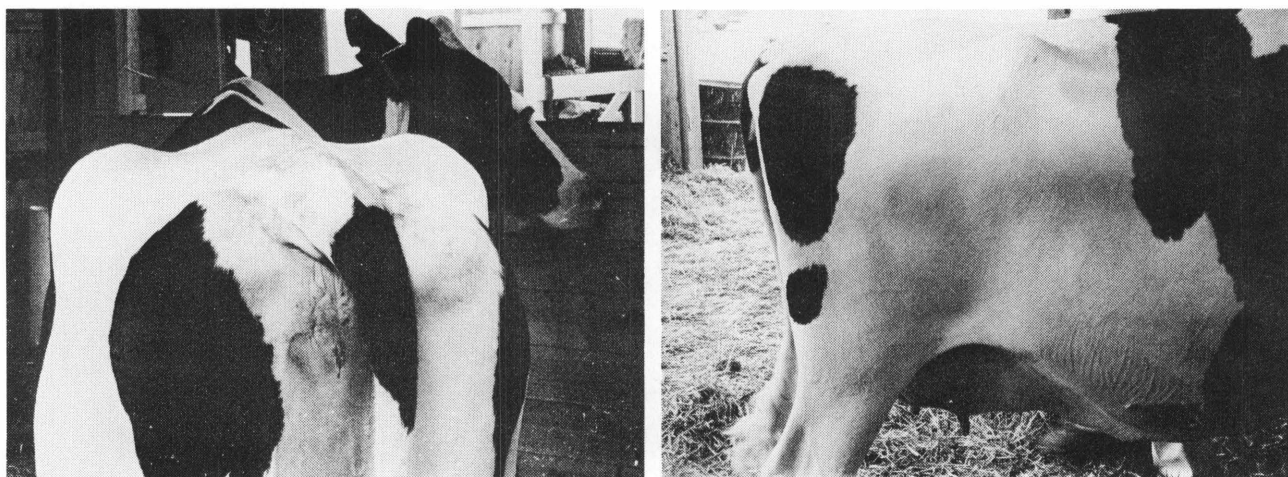


Figure 1. Robby Judge Kelda Mystic was first-place dry cow at the 1980 Virginia PDCA Show. She produced 24,566 lb in 367 days (305 d = 21,938 of 3.8% milk). She produced 40 lb at last test before drying-off and had an ERPA of +3180. Her condition score would be 3.