Factsheet

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Dairy Goat Body Condition Scoring

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INTRODUCTION

Body condition scoring is used to assess a goat's muscle and fat reserves through hands-on and visual assessment. It is typically used as a herd management tool and for welfare purposes. There are many benefits to body condition scoring throughout different stages of the production cycle, including: improved productivity, reproduction and health.

BODY CONDITION SCORING

Body condition scoring is a management tool used to assess a goat's fat and muscle reserves. These fat reserves are important during times such as the onset of lactation, which is when animals experience a negative energy balance. A negative energy balance occurs when the energy needed for physiological functions is greater than the nutritional intake. This occurs during the end of gestation and early lactation due to the increased energy demand due to the growing fetus(es) or the onset of lactation.

Body condition scoring should be done frequently and before management decisions are made. Some recommended times to body condition score are at the time of mating, during pregnancy and at the time of kidding. Body condition score for goats is assessed based on a scale from 1 (emaciated) to 5 (obese) and includes half scores.

SITES OF ASSESSMENT

Body condition scoring in goats involves both visual and physical assessment of three sites. The first site is the lumbar spine, the second is the ribs and the third is the sternum, as shown in Figure 1.

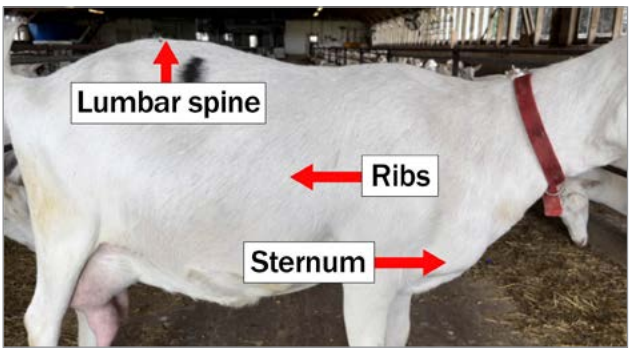

Figure 1. The side of a dairy goat showing the sites used to body condition score. *Source:* Marlene Paibomesai.

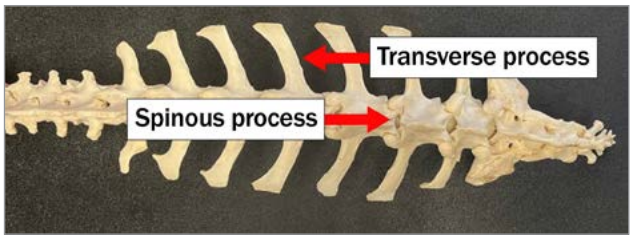

Figure 2. The spine of a goat showing the spinous and transverse process. *Source:* Marlene Paibomesai.

The lumbar spine is located behind the ribcage and in front of the tail. It consists of three processes (Figure 2): two short ribs that stick out on the side (transverse processes) and one that sticks out the top (the spinous process). These processes are used to assess the amount of muscle and fat in this region. The ribs are assessed by measuring the fat coverage on the ribs and the intercostal spaces. The sternum is the region between the goat's front legs. It is assessed by using the cartilage and fat pad located in this region.

Visual assessment involves assessing the visibility of the lumbar spine and ribs:

- When visually assessing the lumbar, judge the visibility of the top of the spine and the roundness from the spinous to transverse processes.
- When assessing the ribs, note how visible the ribs are. It's important to keep coat thickness in mind while doing your assessment as this may affect the visibility of the ribs and other areas.

Physical assessment involves the lumbar spine, ribs and sternum:

- When assessing the lumbar spine, move your fingers along the vertebrae. Assess the space between the spinous and transverse processes. Feel for the fat and muscle coverage between these processes. Try to place your fingers under the short ribs and lightly touch the top of the spine.
- When physically assessing the ribs, feel how much pressure it takes to press into the intercostal spaces.
- The sternum has cartilage and a fat pad. Assess how easily the cartilage is felt and how easily the fat pad moves, as well as its size.

RECOMMENDED BODY CONDITION SCORE TARGETS

Body condition scores vary between lactation stages and are expected to be lowest between the time of kidding and the peak of lactation. Body condition should not drop during the dry period to accommodate for this loss. The *National Code of Practice for the Care and Handling of Goats* requires that a goat's body condition score falls between a 2.0 and 4.0. Goats below BCS 2.0 or above 4.0 require immediate action to bring them back into an optimal range (Table 1).

Table 1. Acceptable Body Condition Score Ranges for Various Stages of the Production Cycle

Body Condition Score	Nutritional Demand	Target BCS	Acceptable Range
For most stages of production	Low to moderate	3.0	2.5–4.0
Does at kidding, or before winter	High	3.5	3.0–3.5
Does at peak lactation	Very high	2.5–3.0	2.0–3.5
Does at breeding	High	3.0	2.5–3.5
Bucks at breeding	High	3.5	3.0–4.0

Adapted from *The Code of Practice for the Care and Handling of Goats*.

GOAT BODY CONDITION SCORE CHART

Adapted from *The Code of Practice for the Care and Handling of Goats*.

Body Condition Score 1

Visual Assessment

The spinous process and ribs are clearly visible.

Physical Assessment

Lumbar Region — The spinous process has depressions between each pair of vertebrae and can be easily pinched. The transverse process forms a continuous shelf and can be easily grasped. The transverse processes have deep depressions between each pair of vertebrae. There is little muscle felt in the space between the spinous and transverse processes.

Ribs — Fingers are able to easily penetrate the intercostal spaces.

Sternum — The sternum's fat pad can be easily moved and held between the thumb and forefinger. The cartilage is easily felt.

Body Condition Score 2

Visual Assessment

The spinous process and some of the ribs are visible.

Physical Assessment

Lumbar Region — Some muscle can be felt on the spinous process. Short ribs can be grasped and form a shelf. There is a deep depression between the transverse and spinous processes.

Ribs — Fingers can easily penetrate the intercostal spaces.

Sternum — The sternum's cartilage cannot easily be felt. The fat pad can still be grasped and can move slightly.

Body Condition Score 3

Visual Assessment

The spinous process is not prominent, and the ribs are difficult to see.

Physical Assessment

Lumbar Region — The spinous process cannot be easily grasped, and the area between each pair of vertebrae is slightly hollow. The transverse processes cannot be grasped, and the shelf is slightly noticeable. There is a smooth slope from the spinous to transverse processes.

Ribs — The intercostal spaces can be felt with pressure.

Sternum — The sternum's cartilage can be barely felt. The fat pad barely moves and is thick and wide.

Body Condition Score 4

Visual Assessment

The spinous process and ribs are not visible. The side of the animal has a flat appearance.

Physical Assessment

Lumbar Region — The spaces between the pairs of vertebrae do not have any indents. The spinous process cannot be grasped. There is no ridge or shelf present on the transverse process. The area between the spinous and transverse processes is rounded.

Ribs — The intercostal space can be felt when strong pressure is applied.

Sternum — The sternum's cartilage cannot be felt. The fat pad is difficult to grasp and cannot move.

Body Condition Score 5

Visual Assessment

The ribs are not visible, and the spinous process is buried in fat with a slight indent. The rump of the goat has an indent at the location of the spinous process.

Physical Assessment

Lumbar Region — The individual vertebrae of the spinous and transverse processes cannot be felt. Fat bulges out in the area between the spinous and transverse processes.

Ribs — The intercostal spaces cannot be felt.

Sternum — The sternum's cartilage cannot be felt. The fat pad cannot be grasped and cannot move.

CONCLUSION

There is a positive correlation between optimal body condition score and improved production, health and reproduction. Body condition scoring allows for producers to ensure that animals are within the optimal body condition score to see these benefits.

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