



## Body Condition Score: Small Ruminants

(\* Jagpal Jogi<sup>1</sup> and Manish Kumar Duria<sup>2</sup>)

<sup>1</sup>Ph.D. Scholar, ICAR- National Dairy Research Institute, Karnal, Haryana

<sup>2</sup>Sri Karan Narendra Agriculture University, Jobner, Jaipur, Rajasthan

\*Corresponding Author's email: [jagpalsknau@gmail.com](mailto:jagpalsknau@gmail.com)

Every goat producer has animals that are either too thin (under-conditioned) or too fat (over-conditioned). Failure to recognize these animals and take corrective actions will cost dearly in terms of decreased fertility, increased disease or internal parasite incidence, decreased milk production, and increased operating costs. Thus, goats need to be maintained with a moderate amount of body condition. When overall body condition starts to decrease in the herd, it is a sign that managerial intervention is needed such as supplemental feeding, deworming, pasture rotation, etc. Conversely, when overall body condition starts to increase in the herd, it is a sign that the producer should reduce supplemental feeding. Ignoring an animal's body condition and waiting to intervene until goats become either too thin or too fat may result in production and/or animal losses or decreased profits from overfeeding. Therefore, producers need to develop skills in assessing body condition of their goats so that a desired moderate body condition can be maintained.

### Body condition score

Body condition score (BCS) has been shown to be an important practical tool in assessing the body condition of cattle, sheep, and goats because BCS is the best simple indicator of available fat reserves which can be used by the animal in periods of high energy demand, stress, or suboptimal nutrition.

### Handling

It is important to note that BCS cannot be assigned by simply looking at an animal. Instead, the animal must be touched and felt. The first body area to feel in determining BCS is the lumbar area, which is the area of the back behind the ribs containing the loin. Scoring in this area is based on determining the amount of muscle and fat over and around the vertebrae. Lumbar vertebrae have a vertical protrusion (spinous process) and two horizontal protrusions (transverse process). Both processes are used in determining BCS. You should run your hand over this area and try to grasp these processes with your fingertips and hand. The second body area to feel is the fat covering on the sternum (breastbone). Scoring in this area is based upon the amount of fat that can be pinched. A third area is the rib cage and fat cover on the ribs and intercostal (between ribs) spaces.

With practice, evaluating the BCS of an animal will only take about 10-15 seconds. By adding BCS as a regular part of your management program, you can more effectively monitor your feeding and herd health program for a healthy and productive herd.

### The Scale

#### BCS 1.0 = Very thin

- The goat looks emaciated (thin).

- Weak with backbone highly visible, hollow flank and clearly visible ribs.
- No fat cover and your fingers can penetrate spaces between ribs.
- Sternal fat easily grasped between thumb and fingers and moved from side to side.

**Needs additional supplementation to have better odds of becoming bred.**

**BCS 2.0 = Thin**

- Slightly better, but the goat still looks bony (slightly thin).
- Backbone is visible with a continuous ridge and ribs can be seen and felt.
- Only a small amount of fat cover.
- Sternal fat wider and thicker than BCS 1, but can still be grasped and lifted.

**Needs additional supplementation to have better odds of becoming bred.**

**BCS 3.0 = Normal**

- Backbone is not prominent.
- Even layer of fat covers ribs.
- Thick tissue layer covers vertebrae.
- Sternal fat is wide and thick. Can be grasped, but has little movement.

**Ideal condition for successfully getting bred and maintaining condition through lactation.**

**BCS 4.0 = Fat**

- Side is sleek in appearance.
- Backbone and ribs cannot be seen.
- Cannot grab hold of spinous processes.
- Sternal fat difficult to grip.

**May still become bred, but producer can save money by reducing supplementation.**

**BCS 5.0 = Very fat**

- Backbone is buried in fat.
- Ribs not visible and covered with excessive fat.
- Reference marks on spinous processes are lost.
- Sternal fat extends and covers sternum, and cannot be grasped.

**Producer has large opportunity to increase profits by cutting back supplementation.**



**Factors Affecting BCS**

- Nutrition
- Level of Production
- Stage of Production
- Age
- Health

**Recommended Ranges**

**Ewes and Does**

Production Stage	Optimum BCS
Breeding	2.5 to 3.5
Prior to wintering and lambing/kidding	3.0 to 3.5
Weaning	2.5 to 3.5
<b>Rams and Bucks</b>	
Prior to breeding season	3.0 to 3.5

### **Thin and Over-Conditioned Ewes and Does are Bad News**

Some amount of fat on all animals is essential for insulation and energy stores. Very thin ewes and does will have decreased fertility, increased disease or internal parasite incidence, decreased milk production, and increased overall operating costs.

Lactation is the most energy expensive stage for small ruminants. Ewes and does can drop 0.5 or more in BCS during lactation, so it's best to score your flock or herd ahead of time. Ewes and does should be scored at breeding to make nutritional preparations for lambing and kidding season.

### **What's the Harm in Over-Conditioned**

Fat is expensive to put on and expensive to maintain. Excess fat on a herd or flock constitutes an unproductive expense in feed. Using BCS to inform nutritional management on the small ruminant operation can potentially save the producer's profits.

A dairy goat with a BCS of 5.0. The spinous process and transverse processes are covered in fat, not able to be seen or felt. The hip and pin bones are poorly defined. A thick layer of fat covers the ribs.

Source: IFAS Extension University of Florida