

BODY CONDITION SCORING: GOATS



BASICS

OVERVIEW

- Body condition scoring (BCS) is a subjective technique that estimates lipid and protein stores in order to categorize animals for management purposes.
- BCS does not replace actual weighing, and ideally both are used for herd assessment.
- It is the variation of BCS within an individual animal as well as the herd mean and distribution that are most important.
- BCS is used to evaluate feeding and management systems, particularly through physiologic changes such as lactation, late pregnancy, and weaning.
- Since BCS is a subjective technique, consistency is best achieved by having one person dedicated to this task to limit interobserver variability.

SYSTEMS AFFECTED

- Musculoskeletal
- Nutrition

GENETICS

Genotype effects the amount and location of fat deposition. For example, dairy breeds deposit more omental and perirenal fat whereas meat breeds deposit more fat in the subcutaneous space.

BCS: Technique

- The fat and muscle cover over the following areas is assessed: transverse processes of the lumbar spine, thorax, and sternum.
- Dairy goats: the most accurate body condition scoring method combines lumbar and sternal scores.
- Meat goats: the most accurate body condition scoring method combines lumbar and sternal scores along with fat deposition over the rib cage.
- The sternal scores correlate best with adipose tissue stores while the lumbar scores are indicative of protein stores.
- Goats should be scored while standing evenly on all four limbs
- BCS ideally should be assessed at dry-off, the last two weeks of gestation, at peak lactation (45 days in milk), when turned out onto pasture, at the start of the dry season, and one month prior to the start of the breeding season.
- Female dairy goats should be assessed 1-2 months prior to breeding, at the end of lactation, and at parturition. A group of 15 does encompassing high, average, and low producers should be followed.

Body Condition Scores

- Scores are given from 1 (emaciated) to 5 (obese)
- Generally, intermediate scores in increments of 0.5 are used

Meat Goat Scoring System:

Score 1: Emaciated

Lumbar: easy to feel and see, sharp with deep depression between spinous and transverse processes

Sternal: Sternal fat can be easily grasped and moved. The joints between sternum and ribs are easily palpable.

Ribs: easy to grasp and see

Score 2: Thin

Lumbar: easy to feel but smooth with a slight depression between spinous and transverse processes

Sternal: sternal fat can still be grasped and moved slightly. Joints less palpable.

Ribs: smooth and need to use slight pressure to feel between

Score 3: Moderate

Lumbar: unable to grasp spinous processes and a smooth slope present from spinous to transverse processes

Sternal: wide fat pad which can be grasped but minimally moved

Ribs: smooth, even fat cover with intercostal spaces felt with pressure

Score 4: Fat

Lumbar: individual vertebrae are not palpable and it is rounded between spinous and transverse processes.

Sternal: wide and deep fat pad which is hard to grasp or move

Ribs: individual ribs can not be felt or seen but indent between them is palpable

Score 5: Obese

Lumbar: individual vertebrae are not palpable and a bulge is present between spinous and transverse processes

Sternal: fat pad covers entire sternum and can not be grasped or moved

Ribs: unable to feel separation of ribs

Dairy Goat Scoring System:

Score 0:

Lumbar: skin appears to be in direct contact with the skin

Sternal: sternum and costo-sternal joints are easily felt and callous over sternum is immobile

Score 1:

Lumbar: intervertebral articulations are palpable but hard to visualize

Sternal: costo-sternal joints are easily felt, depression present over sternum but callous is moveable

Score 2:

Lumbar: spinous and transverse processes are prominent and concave between them

Sternal: costo-sternal joints are difficult to feel, sternal fat pad begins to develop

Score 3:

Lumbar: spinous processes are easily felt but muscle fills space between spinous and transverse processes

Sternal: thin and mobile mass of fat present over sternum

Score 4:

Lumbar: spinous and transverse processes are difficult to feel and line between them is convex

Sternal: sternum is no longer palpable but depressions palpable on each side of fat pad

Score 5:

Lumbar: muscle and fat bulge on either side of spinous processes

Sternal: fat pad is no longer mobile and no depressions felt on either side of sternum

**MISCELLANEOUS****PRODUCTION MANAGEMENT*****BCS targets:***

Males: 3 to 3.25 before the breeding season. Males will lose 0.5 to 1.0 point during the breeding season.

Females: 2.5 to 3.25 for open or lactating females; 3.25 to 3.5 in the last trimester of pregnancy. Lactating females should not lose more than 0.5 to 0.75 points.

Dairy Breed Goals:

- Dry-off: 2.5-3.25
- Parturition: 3-3.25
- Peak lactation: > 2
- Before breeding season: 2.25-3

SEE ALSO

- Body Condition Scoring: Beef (www.fiveminutevet.com/ruminant)
- Body Condition Scoring: Cervidae (www.fiveminutevet.com/ruminant)
- Body Condition Scoring: Dairy Cattle (www.fiveminutevet.com/ruminant)
- Body Condition Scoring: Sheep (www.fiveminutevet.com/ruminant)
- Goat Nutrition (www.fiveminutevet.com/ruminant)

ABBREVIATION

BCS = body condition score

SUGGESTED READING

Langston University: Body Condition Scores in Goats.

http://www2.luresext.edu/goats/research/BCS_factsheet.pdf. Accessed January 2, 2016.

Mendizabal, J.A., Delfa, R., Arana, A., Purroy, A. 2011. Body condition score and fat mobilization as management tools for goats on native pastures. *Small Ruminant Research* 98:121-127.

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