



Body condition scoring of sheep

J. Thompson and H. Meyer

Throughout the production cycle, sheep producers must know whether or not their sheep are in condition (too thin, too fat, or just right) for the stage of production: breeding, late pregnancy, and lactation.

Weight at a given stage of production is the best indicator, but as there is a wide variation in mature size between individuals and breeds, it is extremely difficult to use weight to determine proper condition. Body condition scoring describes the condition of a sheep, is convenient, and is much more accurate than a simple eye appraisal.

A body condition score estimates condition of muscling and fat development. Scoring is based on feeling the level of muscling and fat deposition over and around the vertebrae in the loin region (Figures 1–3). In addition to the central spinal column, loin vertebrae have a vertical bone protrusion (spinous process) and a short horizontal protrusion on each side (transverse

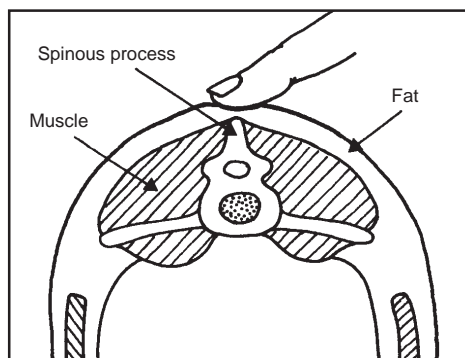


Figure 1.—Feel for the spine in the center of the sheep's back, behind its last rib and in front of its hip bone.

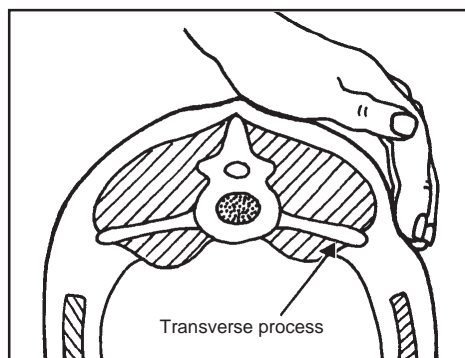


Figure 2.—Feel for the tips of the transverse processes.

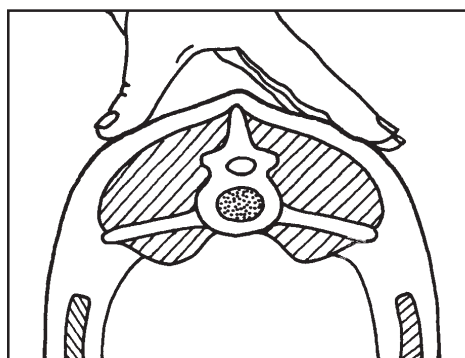


Figure 3.—Feel for fullness of muscle and fat cover.

James M. Thompson, Extension sheep specialist, and Howard H. Meyer, associate professor of animal sciences; Oregon State University.



process). Both of these protrusions are felt and used to assess an individual body condition score.

The system used most widely in the United States is based on a scale of 1 to 5. The five scores (Figures 4–8) are:

Condition 1 (Emaciated)

Spinous processes are sharp and prominent. Loin eye muscle is shallow with no fat cover. Transverse processes are sharp; one can pass fingers under ends.

Condition 2 (Thin)

Spinous processes are sharp and prominent. Loin eye muscle has little fat cover but is full. Transverse processes are smooth and slightly rounded. It is possible to pass fingers under the ends of the transverse processes with a little pressure.

Condition 3 (Average)

Spinous processes are smooth and rounded and one can feel individual processes only with pressure. Transverse processes are smooth and well covered, and firm pressure is needed to feel over the ends. Loin eye muscle is full with some fat cover.

Condition 4 (Fat)

Spinous processes can be detected only with pressure as a hard line. Transverse processes cannot be felt. Loin eye muscle is full with a thick fat cover.

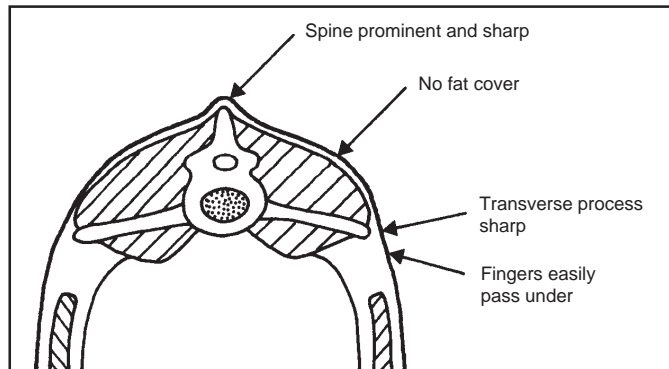


Figure 4.—Condition 1

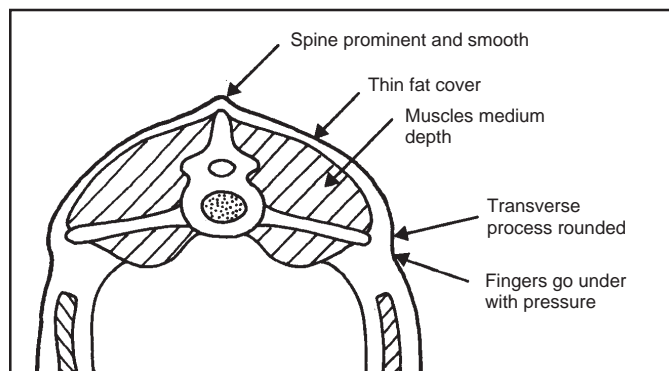


Figure 5.—Condition 2

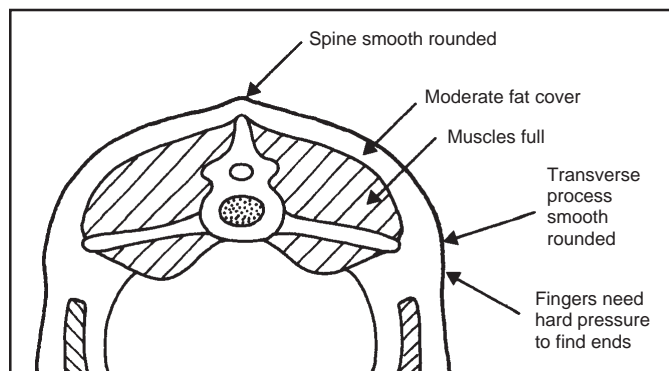


Figure 6.—Condition 3

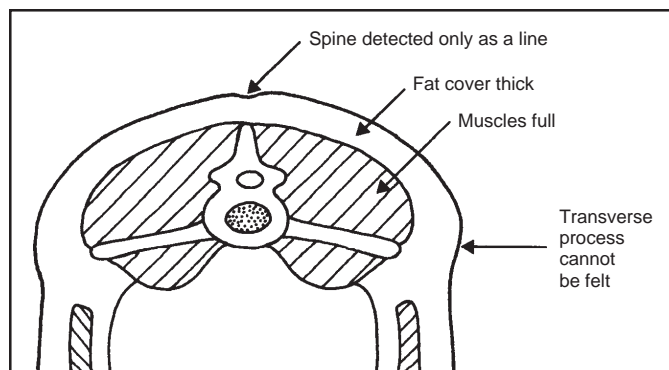


Figure 7.—Condition 4

Condition 5 (Obese)

Spinous processes cannot be detected. There is a depression between fat where spine would normally be felt. Transverse processes cannot be detected. Loin eye muscle is very full with a very thick fat cover.

The system contains everything from emaciated sheep to those that are grossly obese due to overfeeding or being nonproductive. In most typical sheep flocks, over 90 percent of the sheep should have a body condition score of 2, 3, or 4. It is recommended that half scores be used between 2 and 4, giving the following scores: 1, 2, 2.5, 3, 3.5, 4, and 5.

The intermediate half scores are helpful when an animal's condition is not clear. Keep in mind that placing an exact score is not as important as being able to assign a relative score. A body condition score of 3 versus a 3.5 is not such a big deal, but the relative difference between a 2.5 and 4 certainly is of concern.

Other than practical experience, there is little available research comparing condition scores with performance. The majority of the research reported has dealt with the relationship of body condition score at breeding to ovulation rate and subsequent lambing percentage. Generally, the better the body condition score at mating, the higher the ovulation rate and therefore the higher the potential lambing percentage. However, ewes with a condition score greater than 4 at breeding tend to have a higher incidence of barrenness. Ewes with a condition score less

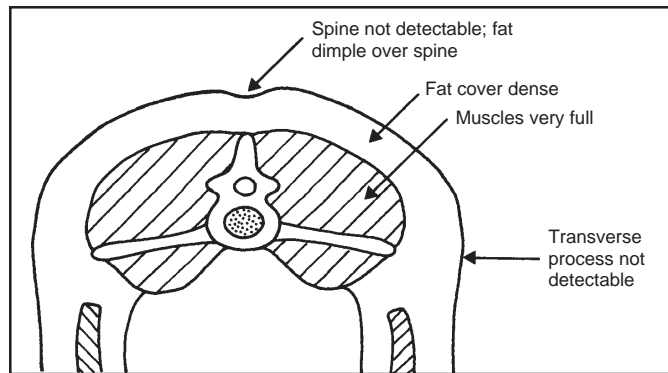


Figure 8.—Condition 5

than 3 at breeding will be more responsive to the effects of flushing than those with condition scores at 3.0–3.5 at mating.

Two research trials conducted by Oregon State University found that ewe body condition score at lambing had an effect on total pounds of lamb weaned per ewe. Ewes with a body condition score of 3 to 4 at lambing lost fewer offspring and weaned more pounds of lamb than those with a condition score of 2.5 or less.

In one study, ewes with a body condition score of 4 at lambing had a total weight of lamb weaned per ewe that was 82 percent greater than ewes with a body condition score of 2.5. The total weight weaned was 113 pounds versus 62 pounds per ewe. The increase in total weaning weight was due to improved lamb survival and heavier weaning weights.

In the other study, there was a 33 percent difference in total weight of lamb weaned (64 versus 85 pounds per ewe) between ewes with pre-lambing body condition scores of 2.5 to 3.5. This increase in pounds of lamb weaned was primarily due to improved lamb survival for offspring from the

ewes with the higher body condition score.

Some suggested (optimum) condition score values for the various stages of the production cycle are:

Production stage	Optimum score
Breeding	3–4
Early–Mid Gestation	2.5–4
Lambing (singles)	3.0–3.5
(twins)	3.5–4
Weaning	2 or higher

The scores suggested above should allow for optimum productivity in highly prolific ewes. On average, a difference of one unit of condition score is equivalent to about 13 percent of the live weight of a ewe at a moderate (3–3.5) body condition score. Thus, a ewe with a maintenance weight of 150 pounds would need to gain approximately 20 pounds to go from a body condition score of 2.5 to 3.5.

Body condition scoring is a subjective way to evaluate the status of a sheep flock—a potential tool for producers to increase production efficiency in their flocks.

For further reading

- Khan, K., H.H. Meyer and J.M. Thompson. 1992. Effect of pre-lambing supplementation and ewe body condition score on lamb survival and total weight of lamb weaned. Proceedings Western Section American Society of Animal Science 43:175.
- Russel, A. 1991. Body condition scoring of sheep. In: E. Boden (Ed.) Sheep and Goat Practice. p 3. Bailliere Tindall, Philadelphia.



Extension Service, Oregon State University, Corvallis, O.E. Smith, director. This publication was produced and distributed in furtherance of the Acts of Congress of May 8 and June 30, 1914. Extension work is a cooperative program of Oregon State University, the U.S. Department of Agriculture, and Oregon counties.

Oregon State University Extension Service offers educational programs, activities, and materials—*without regard to race, color, national origin, sex, age, or disability*—as required by Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, and Section 504 of the Rehabilitation Act of 1973. Oregon State University Extension Service is an Equal Opportunity Employer.
