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Review Article

Overview of Body condition score (BCS) in sheep

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Abstract

By this study Body condition score (BCS) is a subjective way to evaluate the status of a sheep flock and it acts as a potential indicator for sheep owners to increase production efficiency in their flocks. It is also a subjective scoring method that can be used to evaluate the energy reserves of ewes which can provide better understanding of biological relationship between body fat, milk production and health status. In the present study the scale developed by Maurya et al. (2008) was used for scoring the body condition of ewes.

Introduction

Body condition is defined as the ratio of the amount of fat to the amount of non-fatty matter in the body of the living animal (Murray 1919). Body condition score (BCS) in sheep is a commonly used subjective measure (Morris et al. 2002) to help the farmers to make flock nutritional and managemental decisions. It subjectively quantifies the amount of soft tissue along the lumbar spine (Jefferies 1961 and Kenyon et al. 2014) and assesses the proportion of fat and muscle in the live sheep (Jefferies 1961 and Russel et al. 1969). The method is used as an on-farm tool to monitor and inform changes in flock management and nutrition (Jefferies 1961) and a set of target scores have been recommended for certain life stages in the sheep production calendar (Russel1984). In addition, body condition scoring of sheep is a key animal-based outcome that is applied as part of routine veterinary clinical examinations (Lovatt 2010) and on-farm welfare assessments protocols (Phythian et al. 2012).

Procedure of BCS:

Body condition scoring of sheep was based on manual palpation of the loin region in order to assess the degree of longissimus dorsi muscle (eye muscle or loin) and fat cover over the spinal and transverse processes of the lumbar vertebrae. The loin region is the last area of the growing animal to develop and is thought to reflect rapid gains and losses in body fat (Jefferies 1961).

A five point ordinal scoring scale for body condition assessments was developed based on the muscle over skeleton and hollow in the flanks below the loin for assessing the fat cover. Alternative methods of body condition scoring of sheep rely on palpation of the degree of fat cover over the ribs.

Advantage of BCS:

Body condition scoring has the advantages of being readily learned and used and of not requiring any equipment. It is also particularly useful in situations where live weight is difficult to interpret, e.g. during late pregnancy when the weight of foetuses and fluids contribute substantially to ewe live weight.

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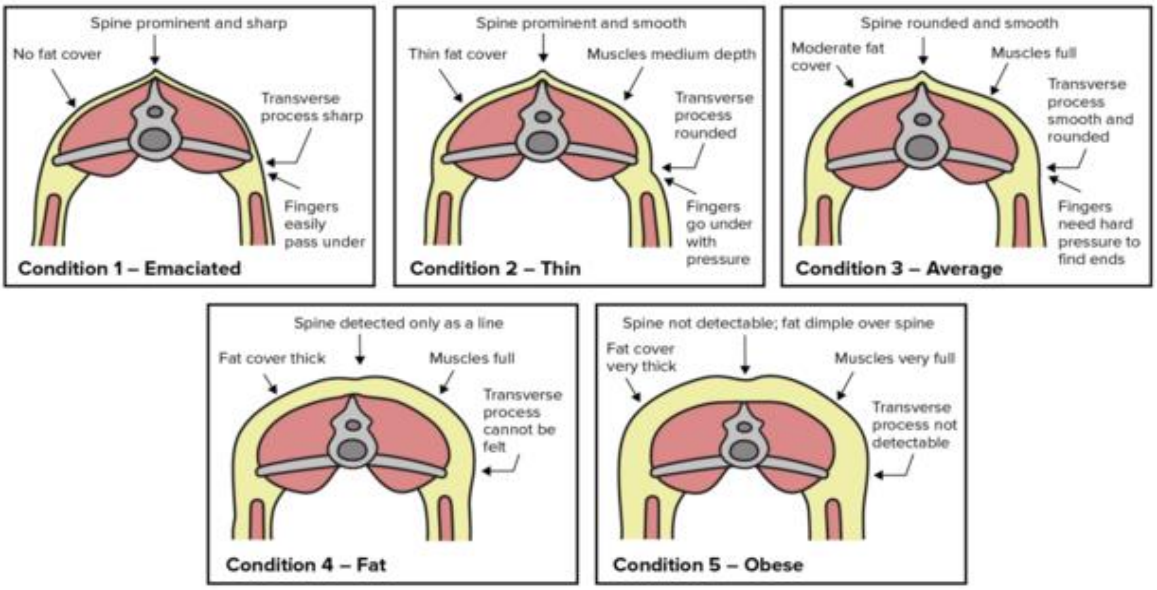

Uses of BCS:

Body condition scoring is used as a cross-farm assessment tool (Phythian et al.2012). At both ends of the scoring scale a very thin or a fat animal can indicate a potential compromise for the health and welfare of the individual sheep and the flock. For example, emaciation may result from inadequate feed intake and other diseases(Sargison and Scott 2010). At the other extreme, obesity is a particular welfare concern for pregnant ewes, which may experience reduced appetite and could be at risk of developing pregnancy toxaemia (Jefferies 1961).

One of the advantages of using condition scoring as a tool in flock management is that it overcomes differences in body size and weight which exists between individuals within a flock and between flocks of different breeds. The condition or fatness of ewe has a major effect on its productivity. With individual animals live weight is a good index of fatness, but difference in frame size between individual ewes within a breed and between different breeds makes it difficult to formulate general recommendations as to appropriate live weights at different stages of the annual cycle. Some generalisations can, however, be made on the basis of body condition score. The times when condition scoring is particularly useful as an aid to flock management are before mating and during the period of pre-lambing feeding. Condition scoring before mating is thus essential for the achievement of high lambing percentages.

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