

Nutritional Flushing for Small Ruminants

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Introduction

Nutritional flushing is the practice of increasing the nutritional plane to ewes or does pre- and postbreeding. This management tactic helps increase body condition which in return could possibly boost reproductive capabilities. Since feeding management is highly influential, this practice should be considered for producers that are trying to maximize their breeding season potential with their ewes and does.

Why Flush?

If a small ruminant's nutritional priorities could be ranked, first would be maintenance, second growth, third lactation and fourth reproduction. Since reproduction isn't needed for survival of the ewe or doe herself, it is pushed to the bottom of the priority list. Nutritional flushing is proven to be most beneficial in accelerated breeding programs. These females are expected to rebreed after just a short recovery period. Studies show that lactating ewes need two to three times greater nutritional requirements than during maintenance. If these requirements are not met during the lactation period, body condition score (BCS) is drastically reduced. When coming off lactation and weaning offspring, if body condition is not returned to an acceptable level (2.5-3.0), reproductive failure and difficulties should be expected. Having an acceptable body condition score and practicing nutritional flushing can help:

- Increase conception
- Increase prolificacy
- Increase ovulation rates
- Increase embryo implantation rates
- Induce and more distinguished signs of estrus
- Reduction of early embryonic death

How to Flush?

To accomplish the benefits of nutritional flushing, the plane of nutrition prebreeding must be increased. However, there are a multitude of different options and routes that a producer can choose to accomplish this depending on the operation's management type, grazing strategies and forage quality already in use. Supplementation could include high-quality hay; rotation to a fresh, lush pasture; or most commonly, addition of grain. During flushing, producers should focus on increasing the amount of energy/concentrates fed to ewes and does. This can be accomplished by feeding a ration higher in carbohydrates, such as cereal grains (corn, oats, barley), or to a lesser extent including fats, such as soybean oil. It's recommended that

producers feed 1/2 to 1 pound of grain per head per day. On the forage side of things, it's important to have a forage analysis test conducted on your hay to ensure that it is greater than 58% total digestible nutrients. Alfalfa hay or pellets can also be utilized to increase the nutritive plane. One important consideration is to try avoiding legume pasture for flushing. Fresh alfalfa, clovers and other legumes contain phytoestrogens, an estrogen-like compound, that can potentially affect reproductive processes like ovulation and conception success. However, legume and grass hay do not contain those compounds.

When to Flush?

Ideally, the right time to begin nutritionally flushing your does and ewes is two to four weeks before and after breeding. This is largely dependent on the current BCS of your females. It's recommended to start earlier with thinner animals compared to those that are in better condition or have more body fat. More often than not, early fetal loss or spontaneous abortions commonly occur within a month after fetal recognition and embryo attachment. Therefore, after the first month of pregnancy, females can return to maintenance requirements until the final third of gestation.

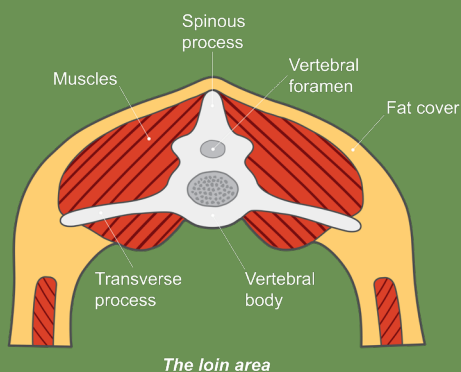
Considerations

- Flushing has the greatest effect on below-average BCS animals.
- It has a greater effect in mature females.
- There is a greater effect in terminal breeds.
- No effect is noticed with good or excessive BCS.
- No effect is noted with ewe lambs due to them already on a high plane of nutrition.
- Adequate bunk space is key that all animals have opportunity to have access to grain.
- Introduce new grain or feedstuff slowly and gradually.
- Keep a watchful eye for bloat and scours.

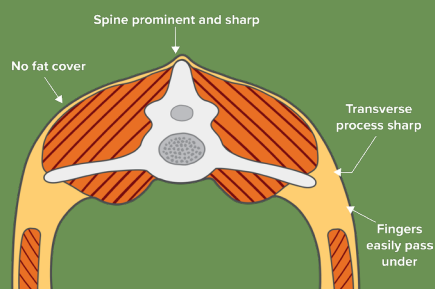
Conclusion

Implementing and successfully establishing a flushing program for your ewes and does can maximize reproductive success and prolificacy of your flock. Having high-quality feed or hay can help you obtain the optimum level of energy needed to see positive effects of flushing. In addition, body condition scoring your animals quarterly is key to good animal husbandry practices, pinpointing nutritional challenges and improving the overall performance of your animals. Using a flushing program can increase your percentage of lambs on the ground and in turn increase your bottom line as producer.

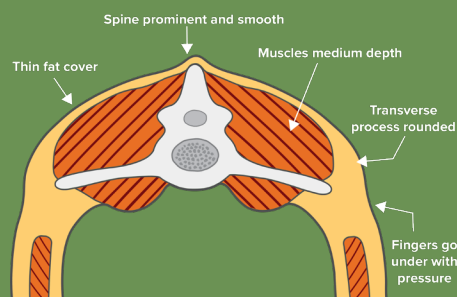
Body Condition Scores – Sheep/Goats



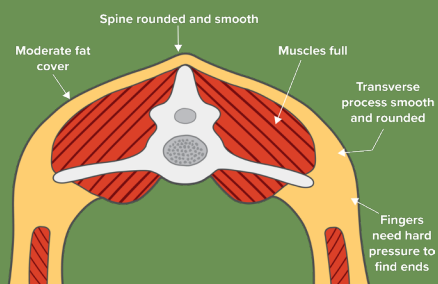
Condition 1 – Emaciated



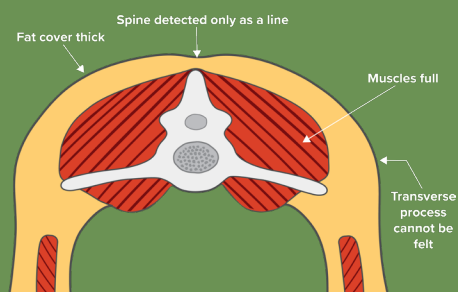
Condition 2 – Thin



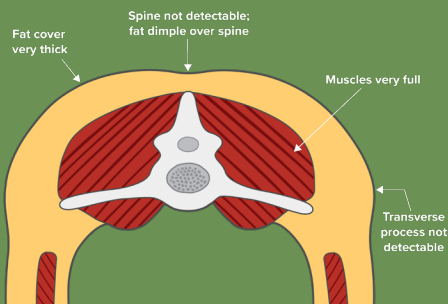
Condition 3 – Average



Condition 4 – Fat



Condition 5 – Obese



Adapted from "Body Condition Scoring of Sheep" by J.M. Thompson and H. Meyer, Oregon State University

References

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