



Browser's Bulletin 57:

Nutrition in Late Gestation

Did you know that 70% of the kid(s) weight is acquired between day 100 of gestation and parturition at day 150 (i.e. in the last third of pregnancy)? As the foetus(s) grows, the uterus occupies an increasing amount of space within the abdominal cavity, reducing the capacity of the rumen to expand and hence limiting food intake, illustrating the importance of feeding nutrient-dense feeds (higher MJ/kg DM) in the final trimester. It is common for does to be carrying multiple kids, with some breeds more prolific than others. It is ideal to scan and separate does carrying multiple foetuses, as they will require an increase in nutrient requirements.

Issues seen with does that are undernourished during late gestation.

- Placental insufficiency leading to abortion, stillbirths, birth of weak kids.
- Weak small kids prone to hypoglycaemia, hypothermia, infection, slow growth rates and increased mortality.
- Poorly developed udder, inadequate quality colostrum, poor milk quality, yield and lactation length.
- Pregnancy toxemia and lactational ketosis
- Lowered immune system of the doe leading to increased susceptibility to other diseases such as internal parasites and infections e.g. mastitis, chronic infections



It is important to have an idea of the nutrient requirements of your goats at various stages of their life. The National Research Council (NRC) have recommended daily intake, energy and protein requirement guidelines for small ruminants, different breeds, daily weight gains, stages of gestation, does carrying multiples and early lactation. These recommendations should only be used as a guideline, as they do not take into consideration the weather and climatic conditions, the animal's activity, the topography of the land, the water availability. The NRC have acknowledged that these guidelines require more field evaluations. The MLA 'Going into Goats' Module 7 on Nutrition has some excellent resources and tables listing recommendations for dry matter intake, energy and protein requirements and the value of different feeds. <https://www.mla.com.au/globalassets/mla-corporate/extensions-training-and-tools/documents/module7-nutrition-mar2019-web.pdf>

Now that you have established the nutritional requirements of your goats, you need to establish the feed value in your available ration. Pasture quality will vary with seasonal conditions, soil fertility, day length, temperature, macronutrients, age of the pasture and stocking pressure but you can find rough guidelines in some of the resources listed at the end of this document and online. For accurate assessment of ration value, feed samples need to be sent off and analysed by a laboratory.



Roughage is also an essential part of the diet, stimulating the production of saliva. Saliva has a buffering effect on the rumen pH, combatting a rising acidity when small ruminants are on a high concentrate diet. Roughage also assists in maintaining healthy microflora in the rumen to aid in digestion. Roughage should be fed at approximately 3% of the goat's body weight, but this obviously becomes tricky in late gestation when the rumen is unable to expand to the same level due to a huge gravid (pregnant) uterus filling most of the abdomen. Therefore, it is important to ensure the roughage provided in late gestation is of good nutrient value and not restricting intake when the animal has high energy demands.

Improper feeding of pregnant does is the most common cause of abortion, usually involving under-feeding and a shortage of energy. This can also occur because of high worm burdens decreasing their ability to absorb nutrients. In the last month of gestation, their immunity to worms (which is poor at the best of times) will wane and the intestinal worms will increase their egg output and increase contamination of the paddocks. **It is very important to drench for worms and vaccinate with a clostridial vaccine one month prior to kidding**, which will not only assist with the health of the doe but also pass immunity onto the kid.

If you have any more questions on nutrition in late gestation then please don't hesitate to drop me an email at kylie.greentree@lls.nsw.gov.au

References

- Goat Nutrition in Australia- Literature review https://www.mla.com.au/contentassets/67031db5d0ec4211ac0373fa410d3adb/b.goa.0055_final_report.pdf
- MLA. Going into Goats Module 7 Nutrition <https://www.mla.com.au/globalassets/mla-corporate/extensions-training-and-tools/documents/module7-nutrition-mar2019-web.pdf>
- Matthews, J; 2009. Diseases of the Goat
- *National Research Council. 2007. Nutrient Requirements of Small Ruminants: Sheep, Goats, Cervids, and New World Camelids. Washington, DC: The National Academies Press*
- Smith, M.C. Sherman, D.M. 2009. Goat Medicine 2nd Edition.

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