Read recent research that may help you make good management decisions for your goat!

**Nutrition for your Meat Goats**

- Selenium is an essential micronutrient and can be harmful to goats when deficient or in excessive concentrations. In Ontario Se is largely deficient in many soils and must be supplemented in livestock.
- Meat is made from protein and other good stuff. Harvest for optimum protein content in your hay.
- Although palm and soybean oils have also been tested, it seems as though fish oil is the best supplement for not affecting taste or colour of meat.

**Parasites and Nutrition**

- Stop feeding the parasites. There is no point in maximizing nutrition and not seeing the gain in your goats. Ensure you don’t have a parasite burden. Manage this with pasture rotation and nutrition which can be used as a tool to sustainably control gastrointestinal parasite infections. This reduces chemical controls and is achieved by changing the dynamics of helminth infections and improving resistance.
- Greater resistance and immunity is seen in protein rich (eg. legumes) as opposed to energy rich feeds. Another approach involves the feeding of specific plants because of their antiparasitic properties as opposed to any nutritional benefit. For example, heather can have both anthelmintic and nutritional properties for gastrointestinal nematodes. Evidence also suggests goats may be able to adapt physiological processes and feeding behaviour (such as through dietary tannins, or specific plant secondary metabolites) to reduce parasitism effects. Applicators need to pay particular attention to drug dose and concentration when chemical controls are used.

**Reproduction and Nutrition**

- Nutrition and photoperiod is critical in regulating luteinizing hormone which is essential for triggering ovulation in females.
- Nutritional balance including fibre digestion and feed intake regulation is important for reducing metabolic disorders affecting pregnancy, birthing and lactation.

**Milk Composition and Fatty Acids**

I don’t how many readers have first hand knowledge of lactation but as any child rearing mother or sensitive husband likely knows; if you are lactating you are hungry and thirsty all the time. This is not so different from your milk goat. Water and calcium are main
ingredients in milk. Make sure your goat has fresh water available all the time. Without it they cannot produce milk or they cannot produce as much milk as you want them too.

- Genetics notwithstanding, nutrition is the most important factor regulating the relative composition of fat. High starch and low fibre diets and lipid supplements high in polyunsaturated fatty acids can cause milk fat depression in cows and also milk fat secretions in goats.
- Reduction in fresh grass in dairy goats can significantly degrade the milk quality by changing the fatty acid composition. Increased hay has been shown to increase hypercholesterlemic saturated fatty acids and decrease mono- and polyunsaturated fatty acids (bad). Specifically, there has been a reduction in vaccenic, rumeric and α-linolenic acids which can have positive influences on human health. Grass is good.
- Composition, storage and fat content can all affect the taste and quality of yoghurt, milk, cheese and other products.
- Pasture and alfalfa fed indoor goats can have significant affects on the fatty acid profile in milk. Be aware that depending on your market the correct fatty acid composition is very important to the consumer with respect to human health such as less fatty acids when compared to cows. Consult with a veterinarian or other nutrition experts to maximize desired fats.
- Dry yeast may be used to replace soybean meal in some milk goats without affecting milk yield or feed efficiency while lowering dry matter intake in late lactation.
- Organic milk production is growing globally and with attentive management of parasite control and nutrition management, there may be some opportunities and improvements to production systems.
- Some science indicates that the second lactation may produce much higher daily and total yields however there may be little difference in the composition of total solids, fat, lactose, crude protein, casein, serum protein and ash.
- High moisture corn silage may be used in part or total replacement of dry corn without impacting milk production.
- Earlier harvesting of silage to maximize quality has a greater positive effect on feed intake and milk yield when compared to the equivalent concentrate supplementation.
- From a marketing standpoint, you may consider value added products for human consumption, specifically enriching milk with polyunsaturated fatty acids (eg. soybean oil) or conjugated linoleic acid. Sunflower or linseed oil may have potential benefits for increasing milk content and fat yield. Choline could help too with transition goats.

**Nutrition for your fibre goat**

Fibre goats need specific nutrients to make the lovely locks we so desire. This may require specific supplements to foster health fibre growth.
• Iodine has been shown to increase cashmere production in cashmere goats. Both iodine and selenium are important thyroid regulators.
• Hydrogenated palm oil may benefit certain transition goats. Sunflower or linseed oil may benefit wool quality.

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