

NUTRIENTS FOR SHEEP

- WATER
- ENERGY
- PROTEIN
- MINERALS
- VITAMINS

WATER

- Provide free access to high quality clean water
- Have water analyzed to determine if there are harmful levels of Sulfates, Nitrates and other harmful chemicals
- Keep at a temperature that optimizes intake
- Sheep will drink 1.0-1.5 gallons of water for every 4.0 pounds of dry matter consumed

ENERGY

- Carbohydrates, fats and excess protein make up the energy requirements
- Carbohydrates are the major source of energy
- Grains are high in carbohydrates (during the winter months they can be the cheapest source of energy)
- Roughages (hay & grazed forages) are high in fiber. These are broken down by rumenal micro flora and provide energy and protein

- Control the energy intake to prevent excessive fattening, which lowers milk production, increases reproductive failure and can lead to pregnancy toxemia
- Inadequate energy intake will result in weight loss, reproductive failure, decreased milk production, lowered resistance to diseases and parasites and pregnancy toxemia.
- Energy requirements vary with the production phase



ALFALFA AND CORN ARE EXCELLENT SOURCES OF:

VITAMINS A
PROTEIN
ENERGY

PROTEIN

- Sheep have the highest protein requirement of all ruminants
- Protein is essential in developing the fetus, producing protective antibodies, colostrums milk and wool
- Protein requirements are highest during late gestation and lactation
- Adjust protein intake to meet the requirements. Excess protein is expensive. Too little protein reduces lamb survivability, decreases wool production, decreases protective antibodies in the colostrums and decreases milk production

- Excellent sources of protein are: A good grass/legume pasture during the grazing season – Good quality alfalfa hay – soybean, cottonseed, sunflower, linseed and peanut meals
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MINERALS

- There are 17 minerals essential for healthy sheep production
- Those required in large amounts (macrominerals).
Na, Cl, Ca, P, Mg, K, S
- Those required in small amounts (microminerals).
I, Cu, Fe, Mn, Zn, Mo, Co, Se, F
- **Salt** has a regulatory function. A lack of salt will result in lower feed consumption, water intake, milk production and growth. Keep loose salt available and protected from the elements at all times. A mature ewe will consume 0.25 – 0.5 ounces per day.
- A good balanced mineral mix is necessary. This may need to be formulated for your particular area

- **Calcium** and **Phosphorus** work together in the development and maintenance of the skeleton. Most forages are a good source of Ca. Grains are relatively high in P. Keep the ratio of Ca:P at 2:1. Excess Ca can cause deficiencies of P, Mg, Fe, I, Zn and Mn
- **Magnesium** is involved in maintenance of the skeleton and muscle integrity.
- **Potassium** aids in maintenance of osmotic pressure within the cells and acid-base balance.
- **Sulfur** plays a role in wool production and the B-vitamins
- **Iodine** plays a role in synthesis of thyroid hormone preventing goiter and weak or dead lambs and without wool
- **Copper** functions in the nervous system. It is essential for nerve and muscle coordination. It plays an important role in the immune and reproductive systems
- **Iron** is a part of red blood cell hemoglobin, which maintains oxygen transportation.
- **Manganese** is important in bone, hair and wool
- **Molybdenum** is in all tissues and fluids in the body. Its relationship with Cu and S is critical. Excess with cause Cu and S to be unavailable to the tissues
- **Selenium** is essential to healthy cardiac and skeletal muscles. A deficiency leads to "White Muscle Disease"
- **Zinc** plays an important role in reproduction and immunity.

VITAMINS

- **Vitamins A, D, & E** are all required by the sheep
- **Vit. A** is essential in the development of the lining of the gastrointestinal and respiratory tract, bone formation, and reproductive functions. Green feeds and yellow corn are good sources of Vitamin A. If good green feeds are not available Vitamin A must be supplemented
- **Vitamin D** works together with Ca & P in bone development. The sun is a good source of vitamin D
- **Vitamin E** plays an important role in cell membrane integrity. Deficiencies lead to "White Muscle Disease"

The **B vitamins** are synthesized in the rumen and are essential in maintaining metabolic equilibrium

For assistance in water and feed analysis and balancing a ration for your producing ewes, contact your local:

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