

Miscellaneous and Specialty Feeds: Sheep, Goats and Hogs



Small Ruminant Animals

- Ruminant animals, such as sheep and goats have a unique digestive system with a four- compartment stomach. Of the four compartments, the rumen is the largest and main digestive center.
- These animals chew and regurgitate their food multiple times into different stomach compartments.
- The rumen microbes break down plant matter, ferment feed and then produce volatile fatty acids. These are a great energy source for ruminant animals.
- Rumen fermentation allows ruminants to convert fiber into calories (energy).



Sheep In Your Care

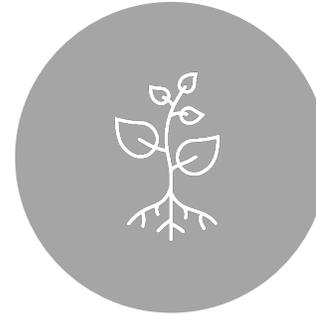
- Sheep should be kept with other sheep and require protection from predators and inclement weather. A good shelter is necessary for this.
- Spending time with your flock will make them easier to manage in the instance of a veterinary visit (otherwise they can be very nervous when being handled by humans).
- Sheep don't tend to need large pasture space, but this should be managed based on the quality of the soil and pasture growth.
- It is important to decide what you are looking to achieve with your flock before you choose a breed. Factors include milk, meat, wool and rarity.



Things To Know About Sheep



It is important to note that ewes, rams and lambs in different stages of the production cycle will vary in nutritional requirements, but all will require a clean source of water, forage and fiber source, and a source of vitamins and minerals.



Supplemental feeds are designed to provide sheep that eat forage with the extra protein and energy they need to complete their diet, which is typically seen with lambs and ewes.



Sheep and lamb supplements also provide animals with additional minerals, vitamins and other compounds they may require in order to meet specific needs.



It is important to monitor your sheep as they are susceptible to both copper toxicity and deficiency!



Too Much Can Be A Bad Thing

- It is always important to offer a good source of forage with any concentrate to avoid health problems (Acidosis).
- Acidosis is when the rumen microbes are fed too much starch and sugars, and certain ones produce acid. This stops the microbes from functioning correctly.
- For an adult sheep, even just 1 kg of a cereal such as wheat, fed without any forage or fodder, could lead to the death of the animal. Be careful not to let them break into your grain storage space!
- And be careful not to feed too much concentrate feed – it is a balance you need, not just “lots.”

Keeping It Straight Forward With Sheep

- Starting lambs off on the 18% Starter gives them an opportunity to have increased protein and energy to help them grow. It is also important to have a balance of the appropriate vitamins and minerals to help them develop properly.
- A 14% Grower/Finisher ration is the next step in sheep production and helps to further the development of the sheep's frame. They will be eating more at this stage, which is why the protein content can be dropped. The feed still provides trace minerals and vitamins for a balanced diet.
- Mineral options are available for those with feeding programs that use a grain-based protein source and need to complete the diet with the appropriate vitamin and mineral combinations.



Age	Product	Typical Consumption
2 - 6 weeks	Lamb Starter	Free Choice
6 weeks - market	Lamb Grower/Finisher	1-2 lbs/day

Feeding Rates

Feeding Tips

- Access to fresh clean water all the time.
- Good quality forage is necessary for a balanced ration.
- Refer to product tags and your feed rep for any questions or inquiries.



Keeping Goats On Your Farm

- Goats are very social animals and you should always have more than one, as they depend on the herd for safety.
- Goats are more comparable to deer than cattle. They are considered browsers, which means they snack on shrubs, trees and forage. They can also find their way out of a less secure enclosure, so make sure you check your fences!
- It is best to choose what you would like to raise your herd for, so you can manage them accordingly.
- Having a suitable shelter is important to provide protection from the elements. They are particularly susceptible to pneumonia in cold, wet weather.



What Makes Goats Different



Goats, much like sheep have different feed requirements for varying stages of development. They need a clean source of water, free choice salt, forage and fiber source, vitamins and minerals.



Unlike sheep, goats are not as sensitive to copper.



Goats require certain minerals and vitamins for the proper maintenance of their physiological systems. Unlike vitamin B, the rumen does not produce vitamins A, D, E, K or C. These vitamins need to be provided in supplemental form. It is also important to have trace minerals to support bone strength, immune system, reproductive health, the nervous system, etc.

Feeding Your Goats

- It is important to balance the forage diet with an appropriate blend of vitamins and minerals to allow for proper health and immune system development in your herd.
- Having a mineral on hand that is formulated to meet your goats' needs is a great addition to feed programs using grains.
- When looking to finish your goats, a great option is a goat grower/finisher ration. The ration provides good protein levels and a full complex of vitamins and minerals so your goats will be supplied with several key building blocks for their development.



Feeding Rates

Feeding Tips

- Access to fresh clean water all the time.
- Good quality forage is necessary for a balanced ration.
- Refer to product tags and your feed rep for any questions or inquiries.



Stage	% Protein	Amount daily (per head)
Weanling	16%	0.5 - 0.75 lbs
Growing/Finishing	14%	1 lb
Gestation	14-16%	0.5 - 2 lbs
Lactation	14-16%	0.75 - 1.25 lbs
Billy (adult, non-breeding)	14%	< 0.5 lb

*Note that dairy goats require 1lb of complete ration for maintenance and 1 lb of complete ration for every 3 lbs of milk produced.



Managing Backyard Hogs

- Pigs should have a good fenced space, much like goats they can evade a poorly structured fence. Having a good shelter, bedded with straw helps to protect them from the elements and provide an absorbent bedding option to help manage their unique aroma.
- They drink a lot, so make sure to have an abundant source of clean water. They also appreciate a pool or mud pit that they can cool off in. Pigs do not have many sweat glands to help them manage temperature change.
- Unless you are looking into breeding, it is recommended to castrate male pigs by 14 days.
- Pigs have their own personalities so be mindful when working with them, because they can grow to be a large animal.

Swine And Their Feeding Program

- Feeding troughs should be cleaned out daily and have adequate space for each pig to avoid competition. You should feed them at the same time every day. Pigs are monogastric, meaning single chambered stomach, and are different from goats and sheep in digestive processes.
- Start your pigs on a starter pellet when they reach approximately 8 kg. Appropriate protein levels allow them to grow, while vitamins and minerals support healthy bone and tissue development.



Continuing Swine Nutrition

- When hogs reach approximately 25kg, transition them to a hog grower/finisher diet. This feed nutritionally supports further growth.
- If your feeding program consists of straight grains, supplement with a multi-purpose pig and sow supplement to balance the diet with the appropriate combination of protein, vitamins and minerals.



Hi-Pro Feeds Hog Feeding Program

This Hog Feeding Program is available at Hi-Pro Feeds' dealers residing in the Peace River and East Kootenay regions of BC, Alberta, Saskatchewan, & Manitoba.

Hog Growers

Weight	Product ID	Product	Typical Feed Intake
8 kg - 25 kg	513661	Pig Starter (Non-Medicated)	500 - 1,000 g/day
25 kg - market	520221	Hog Grower/Finisher	Free Choice

Making Feed on the Farm

Hog Grower

- Feed to pigs weighing 25-50kg
- Mix 150 kg of #540201 Multi-Purpose Pig and Sow Supplement with 650 kg of # 010251 rolled barley and 200 kg of #011401 cracked wheat.
- Use 4.5 bags of rolled barley and 1.5 bags of cracked wheat for every 1 bag of supplement.

Hog Finisher

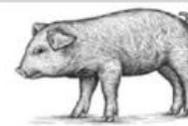
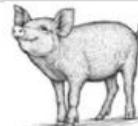
- Feed to pigs weighing 50kg – market
- Mix 125 kg of #540201 Multi-Purpose Pig and Sow Supplement with 675 kg of #010251 rolled barley and 200 kg of #011401 cracked wheat.
- Use 6 bags of rolled barley and 1 bag of cracked wheat for every 1 bag of supplement.

Dry Sow

- Feed mixed ration to dry sows at a rate of 2-2.5kg per sow per day
- Mix 125 kg of #540201 Multi-Purpose Pig and Sow Supplement with 775 kg of #010251 rolled barley and 100 kg of #011401 cracked wheat.
- Use 6 bags of rolled barley and 1 bag of cracked wheat for every 1 bag of supplement.

Nursing Sow

- Feed mixed ration to nursing sows at a rate of 2.5 kg per sow per day and 0.5 kg per nursing piglet per day.
- Mix 150 kg of #540201 Multi-Purpose Pig and Sow Supplement with 500 kg of #010251 rolled barley and 350 kg of #011401 cracked wheat.
- Use 3.5 bags of rolled barley and 2.5 bags of cracked wheat for every 1 bag of supplement.



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Feeding Tips

- Feeding troughs should be cleaned out daily and have adequate space for each pig to avoid competition.
- To get your pigs on a feeding regime, you should aim to feed them at the same times daily.
- Consistency is key.
- When it's time to increase feeding rates, do so in small increments over 3 - 6 days
- When transitioning from Starter to Grower/Finisher rations, adjust feed in increments of 2 -3 lbs/day across 3 - 6 days
- Provide access to freshwater at all times
- Refer to the product tags and your feed rep for any questions or inquiries



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This chart is available at your local Hi-Pro Feeds dealer or for download on the Trouw Nutrition website

Self Reflection

In this section, each question is followed by a slide providing the answer, but before looking at the answer why not challenge yourself first to see what you have learned!



Self Reflection - Question

1) Which ruminant animal is considered a browser?

- A) Goats
- B) Sheep
- C) Swine

Self Reflection - Answer

A) Goats

Goats are classified as an intermediate type or browser ruminant animals, as they have adapted to eating grass/roughage, as well as shrubs and woody type plants. They have bacteria in their rumen that can detoxify anti-nutritional factors like tannins, which can be found in higher levels in browse.



Self Reflection - Question

2) Which vitamin does a ruminant animal produce in the digestive flora?

- A) Vitamin A
- B) Vitamin B
- C) Vitamin D

Self Reflection - Answer

B) Vitamin B

Bacteria in the rumen can synthesize B vitamins. The microbes in the rumen are also able to digest fiber and utilize protein, as well as detoxify toxic compounds. One of the main by-products of the fermentation process of rumen digestion is energy that is used by the animal.



Self Reflection - Question

3) Why is a forage-based diet with the appropriate grain based supplementation important for ruminant animals?

- A) They like eating
- B) Provide the proper balance of nutrients
- C) Ensure adequate fibre consumption
- D) Both B and C

Self Reflection - Answer

D) Both B and C

Ruminant animals require a certain level of fiber in their diet to maintain proper ruminal function. Although it is not common for inadequate fiber consumption to occur, it should be noted that it can lead to several diseases. The most serious, being acidosis where an extremely low pH in the rumen can lead to decreased feed consumption.



Self Reflection - Question

4) Which of the following is considered a monogastric animal?

- A) Sheep
- B) Swine
- C) Goats

Self Reflection - Answer

B) Swine

Swine are monogastric, meaning a single chambered stomach. They are omnivores, much like us and process food by chewing and swallowing it, where it flows into the stomach. From there digestion begins with proteins being disassembled and moving into the small intestine, where nutrients are absorbed.



Self Reflection - Question

5) Which animal has an extremely low tolerance for copper?

- A) Sheep
- B) Goats
- C) Swine
- D) All of the above

Self Reflection - Answer

A) Sheep

Sheep are susceptible to copper toxicity, but this does not mean that they do not still have a very low daily requirement. Sheep have difficulty excreting excess copper, but still require it for proper nutrition. It is important to check your feed and mineral to make sure it is safe or has been formulated with sheep in mind. It's also necessary to keep your sheeps' copper tolerance in mind if they share a space with other animals who have different nutritional requirements.



Thank you for completing this e-Support Module. Please reach out to your local Hi-Pro dealer to find answers to additional questions or connect with us directly at:

<https://www.trouwnutrition.com/en/contact/>

