Sheep/Goat
Raising sheep and goats is a growing sector in animal production. Genetic improvement of these species has resulted in larger mature sizes, greater lamb or kid numbers, and higher milk production. Nutrition must follow this trend to higher production animals. ISF products for Sheep and Goats were designed having in mind this reality. They provide the animal with optimum levels of vitamins and minerals. In addition, the ISF line of special feed additives can be combined with the base products whenever a special need should arise, providing the ISF customer with a complete line of sheep and goat feeding options.

All products in this line, when fed at the recommended feeding rate, will supplement the base diet with the required quantities of the major minerals – Calcium, Phosphorus, Magnesium and Sodium - and will provide all the trace minerals and vitamins needed for sheep and goat production. Herbs and Spices flavouring has been included in all ISF products with the name Herbageum to help improve palatability and rumination.

**Unique line of Sheep and Goat Vitamin/Mineral Supplements and Specialized Feed Additives**

Raising sheep and goats is a growing sector in animal production. Genetic improvement of these species has resulted in larger mature sizes, greater lamb or kid numbers, and higher milk production. Nutrition must follow this trend to higher production animals. ISF products for Sheep and Goats were designed having in mind this reality. They provide the animal with optimum levels of vitamins and minerals. In addition, the ISF line of special feed additives can be combined with the base products whenever a special need should arise, providing the ISF customer with a complete line of sheep and goat feeding options.

<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISF Sheep</td>
<td>ISF Sheep vitamin/mineral supplement is great for milking sheep. These animals have considerable needs of vitamins and minerals to help them maintain nutrient balances and a strong immune system. ISF Sheep supplement is formulated specifically for sheep taking into consideration their special needs such as low levels of copper in their diets. ISF Sheep supplement is also a very palatable mix, making it easier to supplement the diet either at the parlor or at the feedbunk. Its composition allows using it in all types of production phases (growing, dry, meat animals) just by changing the amount fed/head/day.</td>
</tr>
<tr>
<td>ISF Goat</td>
<td>ISF Goat vitamin/mineral supplement is great for milking goats. These animals have considerable needs of vitamins and minerals to help them maintain nutrient balances and a strong immune system. ISF Goat supplement is also a very palatable mix making it easier to supplement the diet either at the parlor or at the feedbunk. Its composition allows using it in all types of production phases (growing, dry, meat animals) just by changing the amount fed/head/day.</td>
</tr>
<tr>
<td>ISF Lamb Specific &amp; ISF Kid Specific</td>
<td>These minerals are intended to be used in fattening lambs and kids. There is a growing interest in this type of production, and ISF Customers are now able to use specifically developed vitamin/mineral supplements for this purpose. They are designed to be used from weaning till market. Its mineral and vitamin composition is adequate to supplement the typical high grain diets fed to fattening animals and different combinations of forages.</td>
</tr>
<tr>
<td>ISF Lamb/Kid 100 Starter</td>
<td>ISF lamb/kid 100 starter is the ideal product to use in case you want to make your own creep feed on-the-farm. It’s combination of high quality ingredients including milk products, along with a package of additives like yeast and B-Vitamins make this product the perfect match for the ingredients you may have at the farm, like soybean meal and corn or mixed grain. To be fed while lambs/kids are still using mother’s milk or milk replacer.</td>
</tr>
</tbody>
</table>

These Vitamin/Mineral Supplements can be combined with the ISF Specialty Products line to address specific situations. Here are some examples of the commonly used combinations.

<table>
<thead>
<tr>
<th>Product Combination</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sheep / Goat + Yeastpro</td>
<td>This combination is ideal for any stress situation: fresh sheep and goats, heat stress, high grain diets, high milk production. Adding Yeastpro to the already high nutrient base provided by the Sheep and Goat premix will provide Yeast, Organic Zinc, Niacin and extra Vitamins.</td>
</tr>
<tr>
<td>Sheep / Goat + Bufferpac</td>
<td>High milk production sheep and goats, especially after lambing/kidding have very high requirements for energy. Producers correct this by supplying more grain. Sheep and goats are very susceptible to acidosis due to this overload of grain. Bufferpac, with its combination of buffer substances will help to keep the rumen pH at its healthy levels.</td>
</tr>
<tr>
<td>Sheep / Goat + Superlac</td>
<td>High milk production sheep and goats, especially after lambing/kidding have very high requirements for energy. Superlac is an ideal supplement in this situation. Its combination of By-pass Fat, Yeast, Organic Zinc, Niacin and extra Vitamins will help to increase milk production and/or milk butterfat and/or body condition, without the adverse effects of feeding more grain.</td>
</tr>
</tbody>
</table>

Consult your ISF agent for additional feeding program information.
SOME IMPORTANT ASPECTS RELATED TO SHEEP AND GOAT PRODUCTION

Small ruminants require energy, protein, vitamins, minerals, fibre, and water. Energy (calories) is usually the most limiting nutrient, whereas protein is the most expensive. Deficiencies, excesses, and imbalances of vitamins and minerals can limit animal performance and lead to various health problems. Fibre (bulk) is necessary to maintain a healthy rumen and prevent digestive upsets. Water is the cheapest feed ingredient, yet often the most neglected.

Dry matter intake - as a general rule of thumb, sheep and goats will consume 2 to 4 percent of their body weight on a dry matter basis in feed. The exact percentage varies according to the size (weight) of the animal, with smaller animals needing a higher intake (percentage-wise) to maintain their weight. It’s important to maximize dry matter intake. To do this we must pay attention to some aspects, like:

- Supply good quality forage;
- If it’s not a TMR (Total Mixed Ration) diet, feed the forages first and then the grain;
- Feed the grain in small quantities throughout the day. If possible only 400 grams/meal or less;
- Always have free choice forage;
- Always change diets and feeds slowly;
- Don’t forget to have good quality water always available.

Milk production after lambing/kidding is greatly dependent on the dry matter intake at lambing/kidding. The objective in late gestation should be to keep a good volume of forage in the rumen. Save good quality forages for this phase. It is known that the intake of an extra 100 grams of dry matter per day in late gestation corresponds to an extra 120 grams of milk after lambing/kidding.

Start feeding the same feeds the animals will eat after lambing/kidding 6 to 7 weeks before it happens. The quantity of grain should be increased until it reaches around 50% of the quantity they’ll eat at peak lactation. According to the animals, the quantity of grain will vary from 0.5 to 0.7 kg at lambing/kidding. Pay attention to an excessive body condition because that can cause pregnancy toxemia, difficult lambing/kidding and a difficult start of lactation.

Adding by-pass fat to sheep and goat diets may promote an increase in milk butterfat. This is especially true in the beginning of lactation. Add ISF Superlac to encourage this effect.

All lambs and kids must drink colostrum. It’s their life insurance. Feed around 0.25 L in the first 2 hours of life.

Don’t forget to prepare the energy reserves of the animals for breeding. This is called “flushing” and consists of an increase in energy 3 weeks before until 3 weeks after breeding time. This can be done with extra grain (200 to 300 grams/hd/d). The objective is to have more eggs and hence more kids and lambs born.

There are many disease conditions for which sheep and goats may be vaccinated. Most veterinarians recommend flocks should be vaccinated at least for clostridial diseases, specifically enterotoxemia (type C and D) and tetanus. Talk to your veterinarian about a good vaccination program.

Sheep and goats are very susceptible to worms due to their close grazing behavior and slow-to-develop immunity. Goats are more susceptible than sheep when forced to graze (versus browse). The parasites that cause the most damage to sheep and goats are stomach worms and coccidia. The most important time to deworm a sheep or goat is prior to (or at the time of) parturition. When a ewe/does lactates, her immunity to parasites is compromised. She is also the primary source of infection to her newborn lambs/kids. Deworming ewes/does prior to turning them out to spring pasture is also a good strategy because it helps to reduce the contamination of the pasture, as the worms resume their life cycle with the onset of good weather.

Quality forages – remember that forages are the most important feeds on a sheep or goat farm. Normally sheep and goat production is based on hay and more and more on ensiled feeds. ISF recommends Silo Guard II™ to help preserve hay and silage. Silo Guard II™ is an additive that may help improve hay and silage quality, palatability and bunklife. Ask your ISF agent how and where to use it for best results.
**Sheep Specific**  
**Herbageum Vitamin/Mineral Supplement for Sheep**

ISF Sheep Specific supplements the base diet with the required quantities of the major minerals and will provide all the trace minerals and vitamins needed for sheep production. Herbs and spices flavouring has been included to help enhance palatability.

**Typical Use:**
Use with rations including corn or cereal silage along with good quality hay as the forage sources. Can also be used in diets of just good quality hay and grain.

**Feeding Rate:**
Mix 25 kg of ISF Sheep Specific with grain and protein sources to make 1000 kg of supplemental ration. Feed this ration at a rate of 1.2 kg per head per day. This will supply 30 grams of ISF Sheep Specific per head per day. Feed this supplemental ration along with adequate forage and supply clean fresh water at all times.

**TO ORDER**
800 2 3020 .................. 25 kg Bag

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**Lamb Feedlot Specific**  
**Herbageum Vitamin/Mineral Supplement for Lambs**

ISF Lamb Feedlot Specific supplements the base diet with the required quantities of the major minerals, and will provide all the trace minerals and vitamins needed for lamb production. Herbs and spices flavouring have been added to help enhance palatability.

**Typical Use:**
Use with rations including corn or cereal silage along with good quality hay as the forage sources. Can also be used in diets of just good quality hay and grain.

**Feeding Rate:**
Mix 30 kg of ISF Lamb Feedlot Specific with grain and protein sources to make 1000 kg of supplemental ration. Slowly increase this supplemental ration to the lambs to adapt the animals to these high grain rations. Feed this ration at a rate up to 1.3 kg per head per day. This will supply 40 grams of ISF Lamb Feedlot Specific per head per day. Feed this supplemental ration along with adequate forage, and supply clean fresh water at all times.

**TO ORDER**
800 2 3075 .................. 25 kg Bag

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**Lamb 100 Starter**  
**Herbageum Vitamin/Mineral Premix**

This is the ideal product to use in case you want to do your own Creep Feed on the farm. Its combination of high quality ingredients, including milk products, along with a package of additives aimed for these very young ruminants make this product the perfect match for the ingredients you may have in the farm, like soybean meal and corn or mixed grain.

**Typical Use:**
Use mixed with soybean meal, corn and/or mixed grain, to make an 18% CP Creep Feed. To be fed while lambs are still nursing mother’s milk, or being fed milk replacer.

**Feeding Rate:**
Mix 100 kg of ISF Lamb 100 Starter, along with grain and protein sources, to make 1000 kg of supplemental ration. Feed this ration at a rate of 0.35 kg per head per day. This will supply 35 grams of ISF Lamb 100 Starter per head per day. Feed the finished feed with adequate forage and supply clean fresh water at all times.

**TO ORDER**
800 2 3055 .................. 25 kg Bag
**Goat Specific**

**Herbageum Vitamin/Mineral Supplement for Goats**

ISF Goat Specific supplements the base diet with the required quantities of the major minerals, and will provide all the trace minerals and vitamins needed for goat production. Herbs and spices flavouring has been added to help enhance palatability.

**Typical Use:**
Use with rations including corn or cereal silage along with good quality hay as the forage sources. Can also be used in diets of just good quality hay and grain.

**Feeding Rate:**
Mix 25 kg of ISF Goat Specific with grain and protein sources to make 1000 kg of supplemental ration. Feed this ration at a rate of 1.2 kg per head per day. This will supply 30 grams of ISF Goat Specific per head per day. Feed this supplemental ration along with adequate forage and supply clean fresh water at all times.

TO ORDER
800 2 3120 .................. 25 kg Bag

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**Kid Feedlot Specific**

**Herbageum Vitamin/Mineral Supplement for Kids**

ISF Kid Feedlot Specific supplements the base diet with the required quantities of the major minerals, and will provide all the trace minerals and vitamins needed for kid production. Herbs and spices flavouring have been added to help enhance palatability.

**Typical Use:**
Use with rations including corn or cereal silage along with good quality hay as the forage sources. Can also be used in diets of just good quality hay and grain.

**Feeding Rate:**
Mix 30 kg of ISF Kid Feedlot Specific with grain and protein sources, to make 1000 kg of supplemental ration. Feed this ration at a rate of 1.3 kg per head per day. This will supply 40 grams of ISF Kid Feedlot Specific per head per day. Feed the finished feed with adequate forage, and supply clean fresh water at all times.

TO ORDER
800 2 3175 .................. 25 kg Bag

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**Kid 100 Starter**

**Herbageum Vitamin/Mineral Premix**

This is the ideal product to use in case you want to do your own Creep Feed on the farm. Its combination of high quality ingredients, including milk products, along with a package of additives aimed for these very young ruminants make this product the perfect match for the ingredients you may have in the farm, like soybean meal and corn or mixed grain.

**Typical Use:**
Use mixed with soybean meal, corn and/or mixed grain, to make an 18% CP Creep Feed. To be fed while kids are still nursing mother’s milk, or being fed milk replacer.

**Feeding Rate:**
Mix 100 kg of ISF Kid 100 Starter along with grain and protein sources, to make 1000 kg of supplemental ration. Feed this ration at a rate of 0.35 kg per head per day. This will supply 35 grams of ISF Kid 100 Starter per head per day. Feed the finished feed with adequate forage and supply clean fresh water at all times.

TO ORDER
800 2 3155 .................. 25 kg Bag
Specialty Products

**Yeastpro**

**Herbageum Supplement for Sheep and Goats**

A highly specialized supplement containing Yeast culture, Organic Zinc, Niacin, and Vitamin E. Other trace minerals, vitamins and B– vitamins, sugars and herbs and spices flavouring round out this excellent product.

**Typical Use:**
This product is to be fed to sheep and goats during the first 100 days of lactation or in any stress situation. ISF Yeastpro is also very effective when fed to close up sheep and goats along with the regular rate of Sheep or Goat Specific. This makes an excellent close up ration. ISF Yeastpro is also an great choice for show sheep and goats as a supplemental conditioner to their regular ration.

**Feeding Rate:**
Topdress or mix ISF Yeastpro supplement with grain and protein sources to provide specified amounts according to the following table. Provide clean, fresh water at all times.

<table>
<thead>
<tr>
<th>Species</th>
<th>Grams/Head/Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sheep</td>
<td>25-50</td>
</tr>
<tr>
<td>Goat</td>
<td>25-50</td>
</tr>
</tbody>
</table>

**Superlac**

**Herbageum Supplement for Sheep and Goats**

ISF Superlac is formulated with by-pass dry fat. It is an excellent product to use as an energy booster to high producing sheep and goats. Superlac also supplies all the specialized ingredients that are in ISF Yeastpro including yeast cultures, Organic Zinc, Niacin and Vitamin E, as well as herbs and spices flavouring.

**Typical Use:**
Use to optimize milk production in high producing dairy sheep and goats during the first 100 days of lactation. ISF Superlac is also an excellent choice for show sheep and goats as a supplemental conditioner to their regular ration.

**Feeding Rate:**
Topdress or mix ISF Superlac with grain and protein sources to provide specified amounts according to the following table. Provide adequate forage and supply clean, fresh water at all times.

<table>
<thead>
<tr>
<th>Species</th>
<th>Grams/Head/Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sheep</td>
<td>100-200</td>
</tr>
<tr>
<td>Goats</td>
<td>100-200</td>
</tr>
</tbody>
</table>

**Herbageum Bufferpac**

**Herbageum Buffer Feed for Sheep and Goats**

ISF Herbageum Bufferpac contains a combination of buffers designed for high producing sheep and goats. Optimum levels of Bicarbonate Soda, Magnesium Oxide along with other electrolytes, sugars, and herbs and spices flavouring round out this nutritional package.

**Typical Use:**
For early lactating milking sheep and goats or when herd is fed higher levels of grain or corn silage. May also be helpful to use during periods of heat stress.

**Feeding Rate:**
Topdress or mix ISF Herbageum Bufferpac with grain and protein sources to provide specified amounts according to the following table. Provide clean, fresh water at all times. (Only to be used for the ruminant species specified receiving high grain or concentrate rations.)

<table>
<thead>
<tr>
<th>Species</th>
<th>Grams/Head/Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sheep</td>
<td>60</td>
</tr>
<tr>
<td>Goats</td>
<td>60</td>
</tr>
</tbody>
</table>
Ruminant Protein Supplement
Protein Supplement for Sheep and Goats

This product is a combination of several sources of high quality protein, with high rumen bypass content, like fishmeal. Research has shown that the type of fat present in fish meal may have positive effects in reproductive function. This can increase the number of eggs produced and result in more lambs or kids per ewe/doe. This product may be used during the last month of gestation, during the first 2 months of lactation and also during breeding time, as part of the flushing program. It can be fed at 50 to 100 grams/head/day.

**Typical Use:**
Use to optimize milk production in high production ewes/does. It may also be used as part of a flushing program, to help promote higher lambing/kidding rates.

**Feeding Rate:**
Topdress or mix ISF Rumen Protein Supplement with the ewes/goats regular ration according to the following table.

<table>
<thead>
<tr>
<th>Species</th>
<th>Grams/Head/Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ewes/Goats</td>
<td>50-100</td>
</tr>
</tbody>
</table>

**TO ORDER**
800 2 4040 .......................... 25 kg Bag

Vitapac
Vitamin/mineral Supplement for Goats

ISF Vitapac contains additional trace minerals, electrolytes, fat soluble vitamins A, D, E and a full range of water soluble B-vitamins giving goat producers the option to boost their rations nutritionally. Not all commercial rations always contain the full range of nutritional elements provided by Vitapac. **Vitapac contains added copper so it should NOT be fed to sheep due to their susceptibility to copper toxicity.**

**Typical Use:**
Use to supplement and boost the levels of trace minerals, electrolytes, Vitamin A, D, E and B-vitamins in livestock rations with the exception of sheep. **DO NOT FEED TO SHEEP.**

**Feeding Rate:**
Topdress or mix ISF Vitapac with grain and protein sources to provide the specified amounts according to the following table. Provide fresh water at all times.

<table>
<thead>
<tr>
<th>Species</th>
<th>Grams/Head/Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goats - Adults</td>
<td>10</td>
</tr>
<tr>
<td>Goats - Kids</td>
<td>5</td>
</tr>
</tbody>
</table>

**TO ORDER**
800 2 4079 .......................... 20 kg Bag
800 2 4078 .......................... 10 kg Pail
800 2 4077 .......................... 5 kg Pail

Vitamin E & Selenium
Herbageum Supplement for Sheep and Goats

ISF Vitamin E & Selenium supplement allows sheep and goat producers to target just the addition of these nutritional elements without adding other nutrients that may not be necessary. The Selenium provided is in an organic form considered by many Nutritionists and Veterinarians to be more available to livestock especially during stressful times. When adding additional Selenium most livestock professionals would agree that it is wise to add extra Vitamin E with it as the two elements seem to compliment each other in their response.

**Typical Use:**
To optimize Vitamin E and Selenium levels in rations during times of stress or when local conditions produce Selenium deficient feedstuffs. It is important not to exceed the recommended amount provided on the label as Selenium can be toxic to livestock at high levels. Caution should be exercised when weighing out proper amount of this product to be fed.

**Feeding Rate:**
Topdress or mix ISF Vitamin E & Selenium supplement with grain and protein sources to provide the specified amounts according to the following table. Provide clean, fresh water at all times.

<table>
<thead>
<tr>
<th>Species</th>
<th>Grams/Head/Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sheep</td>
<td>17.5</td>
</tr>
<tr>
<td>Goats</td>
<td>17.5</td>
</tr>
</tbody>
</table>

**TO ORDER**
800 2 4165 .......................... 10 kg Pail
800 2 4162 .......................... 5 kg Pail
800 2 4160 .......................... 2.5 kg Pail
Vitamin A, D, E Pak
Herbageum Vitamin Supplement for Sheep and Goats

ISF Vitamin A, D, E Pak allows sheep and goat producers the ability to increase and optimize the level of Vitamins A, D and E fed without having to add additional ingredients that may not be needed. Herbs and spices flavouring have been added to help enhance palatability.

Typical Use:
Use to optimize the levels of Vitamin A, D and E when current rations provide less than optimum levels. May also be used at times when sheep and goats are under stressful conditions.

Feeding Rate:
Topdress Vitamin A, D, E Pak supplement with a balanced complete feed to provide specified amounts according to the following table. Provide clean, fresh water at all times.

<table>
<thead>
<tr>
<th>Species</th>
<th>Grams/Head/Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sheep</td>
<td>2.5</td>
</tr>
<tr>
<td>Goats</td>
<td>2.5</td>
</tr>
</tbody>
</table>

Biotin (Vitamin H)
Herbageum Supplement for Sheep and Goats

ISF Biotin (Vitamin H) supplement gives the option to sheep and goat producers to increase the biotin levels of their rations. Herbs and spices flavouring have been added to help enhance palatability.

Typical Use:
Nutritionists and Veterinarians often suggest adding Biotin to rations to help improve foot health and in some types of livestock to help improve reproduction. Biotin is one of the newest vitamins to be added to livestock feeds and much research is ongoing as to its effects. Some commercial feeds may not contain added Biotin which is another reason a Nutritionist or Veterinarian may suggest adding Biotin to a ration.

Feeding Rate:
Topdress or mix ISF Biotin (Vitamin H) supplement with a balanced complete feed to provide the specified amounts according to the following table. Provide clean, fresh water at all times.

<table>
<thead>
<tr>
<th>Species</th>
<th>Grams/Head/Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sheep</td>
<td>25</td>
</tr>
<tr>
<td>Goats</td>
<td>25</td>
</tr>
</tbody>
</table>

Thiamine (Vitamin B1)
Herbageum Supplement for Sheep and Goats

ISF Thiamine (Vitamin B1) supplement gives the option to sheep and goat producers to increase the thiamin levels of their rations. Herbs and spices flavouring have been added to enhance palatability.

Typical Use:
Thiamine (B1) has received more attention lately by Nutritionists and Veterinarians due to the increased use of corn ethanol and distilling by-products such as corn distillers dried solubles and corn gluten feed in livestock rations. Due to the high sulfur content of these feed stuffs, additional Thiamine (B1) is believed to help offset the negative affects of the higher sulfur levels. It is thought that polioencephalomalacia is one of these negative impacts in ruminant rations that would warrant supplementation of Thiamine (B1) in the ration. Use in all livestock feeds to optimize Thiamine (B1) level of the ration. Use to offset the negative impacts of high sulfur feedstuffs like corn products from ethanol and distiller products and also the negative impacts of high grain diets.

Feeding Rate:
Topdress or mix Thiamine (Vitamin B1) supplement with grain and protein sources to provide the specified amounts according to the following table. Provide clean, fresh water at all times.

<table>
<thead>
<tr>
<th>Species</th>
<th>Grams/Head/Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sheep</td>
<td>1</td>
</tr>
<tr>
<td>Goats</td>
<td>1</td>
</tr>
</tbody>
</table>
Herbageum Condiment
Herbageum Flavouring Agent for Livestock Feeds

ISF Herbageum Condiment is a flavouring agent containing herbs and spices that has been available to Canadian livestock producers from ISF for over 100 years.

Typical Use:
ISF Herbageum Condiment is added to mineral, grain and protein mixes as well as total mixed rations for all classes of livestock, especially livestock experiencing lower intakes or under stress.

Feeding Rate:
Mix Herbageum Condiment with grain and protein sources at a rate of up to 3 kg per tonne of complete livestock feed. Provide clean, fresh water at all times.

TO ORDER
800 2 4024 .................. 20 kg Bag
800 2 4022 .................. 10 kg Pail