



WINTER NUTRITION FOR HORSES

by *Josée Lalonde*

With winter just around the corner, this upcoming season tests a horse owners commitment to their equine friends; let's face it, it is a lot more pleasant and easy to take care of our horses in the summer under the sun than in the grey and cold Canadian winter season!

Even if equines are better able to cope with the bitter cold than with extreme heat, it is when the temperature drops that they particularly need our help to face the risks of winter, particularly if they spend this season outdoors. From the nutritional point of view, essential elements must be in plentiful supply for your horse to withstand the harsh winter season.

How to help your horse retain body heat

First, it is important to know that a horse's energy requirements (calories) increase when the external temperature decreases. The colder the horse's environment, the more calories it burns to maintain internal body heat. In winter,

one of the dangers that a horse faces is loss of weight if his soaring caloric needs are not met.

In fact, some studies have shown that it is when the thermometer reaches the turning point of -10°C (14°F) that horses begin to burn additional calories to maintain adequate thermoregulation. Again research has shown that when the thermometer plunges below -10°C , a horse weighing roughly 500 kg experiences an increase in his metabolic rhythm and an increase of 35% in internal heat, just to stay warm. Below this, every loss of 1°C relative to -10°C requires an increase in caloric intake of 2.5%.

Good quality fiber

At this point, let's examine the best way of compensating for this increase in caloric needs by horses. Even if grain and complete feeds offer more calories than hay, it is still recommended to increase the hay intake of horses during the winter months. Why? Because fiber



based food is digested in the caecum of the horse thanks to microbial fermentation, a complex process that produces substantial heat and helps horses withstand the cold. The digestion of grains, that takes place in the small intestine, is a much simpler process and contrary to fiber fermentation, it doesn't result in significant heat production.

Adding a few flakes of good quality hay to the normal ration of the adult horse can thus be sufficient to help it fight the winter risks, provided that the horse is healthy and has an adequate body condition and winter coat. Needless to say, the daily amount of hay added must be directly proportional to the decrease in temperature.

Fiber and fat based concentrates

On the other hand, one must not assume that all horses will be able to go through the winter period without difficulties simply by adding hay to their diet. After all, there is a limit on the quantity of hay which a horse can consume on a daily basis. In some cases, the addition of hay to its ration will not be sufficient and an increase or an addition of concentrates must then be contemplated. Thin horses, be they

in training, sick or old, gestating or lactating mares as well as growing foals are specific cases that, most often, will require an increase in concentrates. Aside from growing foals, the above mentioned horses will benefit in the winter from a complete feed constituted of fiber and fat, particularly if the hay is of inferior quality. Such a feed has many benefits. Because of the high fiber content, it plays a similar role as hay insofar as the production of heat is concerned. Also, it provides more calories due to the superior digestibility of the fiber source it usually contains and because of the high level of fat, another efficient source of calories. Make sure the feed you offer your horse is based on vegetable fat, not animal fat.

For young horses, it is recommended to select a feed specifically formulated for the particular needs of growth. A complete feed specific to foals with high fiber content and with added fat is a good choice.

Whether hay or concentrates are added to the horse's ration to prevent loss of weight in winter, it is recommended to confirm with the feed supplier's nutrition consultant if the vitamin and mineral content of the ration is adequate. In many cases, a balancing supplement needs to be added, particularly if the quantity of concentrates provided is weak.

Water: The most important nutrient

A horse's water consumption is always crucial. Without a sufficient water intake, the horse's body and digestive system can no longer function adequately. With the advent of winter, water consumption may be problematic as water becomes very cold and freezes. As winter approaches, the horse goes from a fiber ingredient with a high level of water (pasture) to a fiber ingredient that contains a low level of water (dry hay). This difference is one of the root causes of a frequent problem in winter: Impaction colic. It is of primary importance for a horse living outdoors to always have access to a water of good quality as it must consume

at least 40 liters (approximately 10 gallons) of water every day. A half frozen water container or a container full of snow is almost useless as it doesn't meet the significant needs of the horse in any way. Furthermore, if the horse consumes very cold water, its body temperature will decrease and it will need to spend a lot of energy to stay warm.

There is one simple way to prevent the water from freezing in winter: Investing in a heated horse waterer. This is the best investment you can make to prevent impaction colic and choking. You will thus save the resulting veterinary costs and the stressful fear of losing a valuable animal. Research has shown that a horse will drink a larger quantity of water when the water temperature is kept around 18°C (65°F).

For horses spending most of their winter time inside the barn, water consumption can become problematic. Even if the water doesn't necessarily freeze in the drinking trough, its cold temperature may discourage the horse from drinking. The use of individual buckets with properly hidden heating elements is crucial for poor drinkers as it will allow you to maintain the water at the desired temperature. To help your horse drink sufficiently and prevent health problems, you can wet the feed with hot water, particularly if it is fiber based. Before offering it to the horse, soak the feed until all water is absorbed.

Finally, it is crucial to carefully monitor your horse's water consumption and verify its hydration level by regularly using the skin pinch test or by keeping an eye on the texture of the manure. If the horse doesn't consume enough water, adding one or two ounces of salt (100% NaCl) per meal, as well as offering a block of free-choice salt, is an excellent way of making sure that your animal will drink.

The Secret: Monitor the body condition

From the practical level, the most scientific calculation pertaining to mega-calories will never replace evaluating the body condition of each horse. We must emphasize the

importance of manual evaluation of body condition since from October to April or May the horse's winter coat is deceptive and will give every animal a fleshy look. Every 15 to 30 days, throughout the winter period, it is essential to palpate the horse to determine the deposit of subcutaneous fat around the rib cage, on the withers, on the spine, at the tail head as well as behind the shoulders and at the neck. This body condition scoring remains the most reliable tool in determining the effectiveness of the ration from the caloric point of view, and will allow adjusting the ration depending on whether the horse is losing or gaining weight. For an adult horse spending the winters outdoors, a body score of 6 to 6.5, on a scale of 1 to 9 (1 for an emaciated horse, 9 for an obese one) will provide the animal with enough fat to more easily withstand the rigors of winter. You will then avoid the unpleasant surprise of finding an emaciated animal in the springtime when it will be shedding its winter coat.

Key points to remember

One myth that needs to be dispelled is that in the winter, when the horses are outdoors, they do not need water because they can eat snow. This is false and cannot be further from the truth! Snow will never replace water for your horse. A heated drinking trough is necessary unless you bring your animal a bucket of warm water several times a day. Yes, meeting the needs of one's animal in the winter involves considerable efforts.

An old horse is particularly sensitive to loss of weight in winter as well as to impaction colic. To prevent impactions, make sure that its teeth and mouth are sound and that it drinks a sufficient amount of water. Most of all, pay particular attention to its body condition and always provide it with nourishment based on your findings, even if this means providing soaked concentrates three or four times a day. To maintain your old companion's health, food supply must be adjusted based on its needs and not ours. An old horse's health tends to decline very rapidly in winter, particularly if it is kept outdoors; any winter loss of body condition may be very hard to regain in the spring. Do not be misled by the winter coat.

Bran Mash that is soaked in hot water will help keep the horse warm. Truth or fiction? Fiction. Bran mash will warm up our heart much more than the body of our horse! If it does warm up its body, it does so temporarily.

Other legend: There is nothing better than adding whole corn to the horse's ration to keep it warm. Yes, it is true that whole corn produces heat when it is fermented in the large intestine but at what price! The starch of whole corn is digested with great difficulty in the horse's small intestine; it reaches the caecum, and produces fermentation and heat. Unfortunately, this fermentation of starch in the horse's caecum affects the organ's bacteria and can cause health problems such as gas colic and laminitis. Be it winter or summer, whole corn is not a food of choice for horses neither is cracked corn which is just as hard to digest.

As winter approaches, it is important to have your horse go through a complete medical checkup, particularly if it is getting older. It is during that time that normal preventative medicine and care are provided, be it vaccines and dewormers or foot, dental and mouth care. It is also a good time to review a horse's diet and, if necessary, make the appropriate changes to it.

The horse's winter coat is very efficient in protecting the animal during the cold season because it retains heat and keeps humidity away. Nevertheless, this natural coat doesn't protect the horse all the time. The worse situation affecting a horse living outdoors in winter is rain with cold wind. An external shelter strategically placed so as to protect the animal from prevailing winds must be provided and made accessible under all weather conditions.

Depending on the level of exercise, it is preferable to completely or partially shave the horse whose regular training continues during winter. Otherwise, the winter coat will trap the sweat and it will be more susceptible to catching "colds" after exercising. When outdoors in the winter season, any shaven horse must wear a solid and properly adjusted blanket to be protected from the cold. During training, particular attention must be brought to warm up and to cooling exercises before and after training. These exercises must typically be long and gradual in nature. ✿

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Obituary



Dr. Ralph Watt

It was with great sadness that the family of Ralph Watt had to announce his peaceful passing at his home on August 3, 2011 at the age of 81. Predeceased by his wife, Joanne (nee Elliott). Dear father of Sandy, Bruce and Peggy (David) and beloved Grandpa to Stephanie and Kyle. Originally from Lancaster, Ontario, he is survived by his sister, Lorna (John) MacLeod and brothers Colan (Gwen) Watt and Donald (Pat) Watt and many nieces and nephews. Pre-deceased

by sisters Alison (Bill) Tett and Helen (Stuart) Upton.

Dr. Watt was a very well respected veterinarian in the Markham and Stouffville areas, and recently celebrated 50 years of veterinary practice. After graduating from the Ontario Veterinary College at the University of Guelph in 1960 he began his career at the Thornhill Veterinary Clinic and later moved to Markham where he established his own equine and small animal practice, the Mount Joy Animal

Clinic. Most recently Dr. Watt owned and practiced out of the Ballantrae Plaza Veterinary Clinic where he will be greatly missed by the wonderful team of Dr. Al Thompson, Dr. Karen Drewell, Joanne George, Lori Tuck, Bene Goodman, and clients. Dr. Watt fully enjoyed his work and was dedicated to his clients to his very last day.

The OEF sends its deepest condolences to Dr. Watt's friends and family. ✿