

Horse Hay Buying and Feeding Tips

In our Maritime climate, making quality horse hay can be very challenging and some years hard to find. It is important to put good hay in front of your horse. Forage (either hay or pasture) is a basic necessity for a normal functioning equine digestive system, where it supplies both nutrients and fibre. Optimally, most horses should get 40-100% of the daily dietary requirements from good quality forage.

When it comes to digesting low quality – over-mature hay, horses are not as efficient as cattle or sheep. Cattle and sheep have a stomach with four compartments where digestion can take place, whereas in horses most of the digestion takes place in the large intestine (the secum). Horses are also not tolerant of hay moulds which can cause serious respiratory problems or digestive upset.

What are the visual signs of good horse hay?

- **Maturity:** Plants have more fibre, but less % protein and % digestible energy as they mature. Signs of maturity are seed heads in grasses and flowers in alfalfa/clovers. A good time to cut timothy (even our latest varieties) is late June-mid July for most areas of Nova Scotia (all other grasses and legumes mature earlier than timothy).
- **Leaf width and leafiness:** Most of the feed value in hay is in the leaf (protein, digestible energy and vitamins). A good cutting date produces hay with a better leaf to stem ratio and more nutrients. Leaf width is an indicator of two key things; 1) the age/species in the forage stand and 2) whether the hayfield has had reasonable amounts of nitrogen fertilizer or manure which boost feeding quality.
- **Touch:** A horse's mouth, lips and tongue is very soft, hence, softer hay will be consumed more readily and there will be less waste. This is particularly important with old timers that have worn teeth.
- **Dust:** Hay that is dusty or smelly could have some mould problems. As already mentioned, moulds are serious from both a respiratory and digestive standpoint when it comes to horses, plus not good for humans to inhale either. Dusty hay that needs to be wetted or mixed with clean hay to feed is a nuisance. Moulds result when hay is baled too wet (15-18% moisture is maximum for small square bales for horses), when harder to wilt legumes/weeds are mixed in the grass or when hay is stored improperly. As horse hay consumers you can often save \$0.25-0.50 per bale by buying hay out of the field; however, it then needs to be stored properly. Proper hay storage is on a cement or wooden floor, in an area where each end of the storage can be opened up for adequate airflow during the summer months (closed up during wet or very humid days). Proper stored hay holds its nutritive value (energy, protein, calcium and phosphorous) for several years and should only lose some vitamin A over time.
- **Smell:** A sweet smell is appealing to horses and is a good indication of readily available energy (sugars). Also, that it wasn't rained on during the wilting process.
- **Color:** Green color is appealing and a good indicator of well made hay. Bleached hay indicates overexposure to sunlight or rain, but unless there has been excessive rain the essential nutrients are still there. Yellow hay can also be a sign of heating. Heated hays will have a dusty or mouldy smell.
- **Composition:** For green and clean trouble free hay we are recommending high percentage grass hay, with few legumes and fairly weed free. Legumes such as clovers

and alfalfa, along with thicker stemmed weeds like dock, wild carrot, thistles, etc. are tough to wilt and often produce dust in hay.

What is the value in having a lab analysis done on your hay?

We've discussed the visual signs of quality hay, but an actual chemical analysis will measure feeding value in terms of crude protein, ADF (which is Acid Detergent Fibre: a measure of fibre content and an indicator of digestible energy), phosphorous, calcium and other minor minerals. All Maritime agricultural labs will do hay or feed analysis; the Nova Scotia Department of Agriculture Lab at 176 College Road, Box 550 Truro, NS, B2N 5E3 or 902-893-7444 charges \$23 for an (F3) Feed Analysis. With this hay analysis and knowing the nutritional specs of the commercial feed or grain that is being fed (and amounts) you can determine if your horse's dietary requirements are being met. Check this with an independent nutritionist, feed representative or veterinarian if any calculations are in doubt.

What quality of hay do horses need?

In strictly looking at % crude protein and % ADF, here are some general requirements that Tom Gallagher, Cornell Co-op Extension, New York has listed:

- Mature horses (infrequent use), brood mares (1st eight months gestation) and overweight horses need hay that is 8-10% crude protein and 40-45% ADF
- Competition horses need 8-10% crude protein and ADF below 36%
- Brood mares (in last three months of pregnancy) need 14% crude protein and less than 38% ADF. *This would likely need to be 2nd grass hay in Nova Scotia.*
- Weanlings and yearlings need the best hay, with 14% crude protein and an ADF below 35%

What is a reasonable price for good horse hay?

These comments come from having spent over 25 years in giving both forage production advice to farmers and making horse hay for my own horses or sale. To make good quality and reasonably high yielding horse hay in Nova Scotia, growers need to re-seed to late maturing timothy varieties every 5-7 years, use lime occasionally, apply fertilizer or manure yearly and have 2.5-3 straight days of sunny haymaking weather. Farmers making any amount of horse hay in late June-mid July usually have some hay rained on before baling, and then have to sell it at a reduced price to cattle farmers. Hay growers have encountered big increases in diesel fuel and fertilizer (manufactured with natural gas) in the past few years.

Based on production costs and weather risks, good quality horse hay (8-11% crude protein, 38-42% ADF) made from June 20th- July 12th is reasonably priced at \$130-145 per tonne (1 tonne= 2200lbs or about 55-63 bales) out of the field and \$160-175 out of storage. Good quality 2nd cut grass hay (10-14% crude protein and under 36% ADF) prices at about \$170-185 out of the field. Horse hay makers and buyers need to establish a rapport with each other to understand both the hay making process and horse feeding needs. There also needs to be some buying loyalty and horse hay pricing consistency both in the good and bad years.

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