

# FEEDING YOUR PERFORMANCE HORSE

BY JEN OSGOOD

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Today I want to talk about feeding your performance horse and what it takes to get the energy that they need to perform at their best.

## Where does the energy come from?

This is a very common question that very few people truly know the answer to. Let's pretend that the horse's body is an engine in a truck, the truck needs fuel to run and so does the horse. Stored fuels (primarily carbs and fats) are what fuel the horse's body or "engine". The faster the engine runs the greater the amount of fuel required.

So now that we have that in our minds, let's get technical. Digestible Energy or DE refers to the actual energy in feeds that is available to the horse and is not lost in the manure. Carbs, Lipids (or Fats) and Protein nutrients ultimately provide the energy needed to

maintain body functions during rest and physical activity. So let's take a quick look at what common and essential carbs, fats (lipids) and proteins are found in the diet of the horse.

## Carbs:

Carbs are the most important part of a horse's diet and they consist of hay or forage (e.g. grass, grass hay, or legume hay) and grains. Forage, however, should make up 90% of the overall diet.

### Did you know??

**That early to mid-cut hay (before budding or seeding) is higher in VFA's (volatile fatty acids) which in turn is higher in DE. On the other hand, more mature hay is 30-40% lower in DE content and higher in lignin which is a completely non-digestible fiber! Non-forage fiber sources such as sugar beet pulp or soya hulls are highly digestible and, weight for weight, provides almost as much energy as oats!!**

Now that we've talked a bit about hay, the major part of the horse's diet, let's talk about what is going to fuel the after-burners of our engine! To give ourselves fuel or a "pick me up" we drink coffee or energy drinks which are both packed full of sugars and they give us a quick boost throughout the day. This is the same for the horse. The quickest way for the horse to get "right now" energy is sugar. The major source of simple sugars for the horse is grains, which is in the form of starch. Starch is the

primary component of cereal grains comprising 50-70%. The starch content of oats is 50% while the starch content of corn and barley is between 65-70%, which is why corn and barley are "hotter" feeds and tend to make horses slightly hotter (it's similar to giving children pure sugar). It is also why corn and barley are used to make moonshine and beer! So therefore,

**Remember: Hay that is fibrous and has few leaves is high in fiber and low in energy. Hay that is very leafy is high in energy and low in fiber. Very stemmy tough hay is of poor quality and may contribute to colic.....CHECK YOUR HAY!!!**

## **Feeding Your Performance Horse.....cont.**

this is why more horses are fed oats rather than barley or corn. Also, something that many people did not know is that rolled grains have fewer nutrients than whole grains. The grains lose their nutrients every day that their hulls are crushed! So imagine a bag of oats that were crushed over a year prior to feeding! Not many nutrients left!! Another great source of dietary sugars for the horse is molasses in its purer form (like cooking molasses).

Now here is something that might surprise people. Lipids or fats (includes oils, fats, and waxes) are extremely high in energy density! To give you

some perspective, sugar and starch provide approximately 4kcal/gram whereas lipids or fats provide approximately 9kcal/gram! Huge difference, right?? Well then why doesn't everybody feed fats?? Well that's because it doesn't give a quick instant boost of energy. Horses' bodies have to learn how to use it and convert it into energy by consuming it every day. Vegetable oils are highly palatable and digestible and provide the best source of energy in the form of fats for the horse.

Fat supplementation in the diet of the performance

horse can also be beneficial for providing calories to an otherwise "hard keeper" during hard training and helps with energy provisions during prolonged exercise events. This all being said, however, fats and lipids will not give the quick energy that grains give for sprinting events. BUT a tablespoon of oil mixed into a horse's feed will help maintain your horse's body condition and energy stores while traveling and the stresses of hauling.

### **DID YOU KNOW??**

**For every hour your horse spends in the trailer traveling is equivalent to your horse running for 25km. This is the toll it takes on their muscles energy stores. Feed Accordingly!!**

### **Protein:**

And lastly the third major part of a horse's diet is protein. A mature horse's body is made up of 12% protein and 60% water, which means that if you take away the water, 1/3 of the horse is protein! Protein is needed to build strong healthy horses. Beet Pulp is about 7% crude protein however, is very poorly digested. Whey products or soybean products are highly digestible and of the highest quality for protein. However, protein is a very expensive way to provide energy to horses. It can also result in respiratory problems by creating

higher ammonia levels in the urine, making it especially bad for stalled horses. The mature horse does not need the same amount of protein levels as a growing horse does, therefore a high protein diet for the performance horse is not recommended.

Of course, there are so many other things that need to be included in the performance horse's diet such as vitamins, minerals, salts, and even preventable maintenance supplements

for joints, intestinal support, and electrolytes etc. just to name a few! But that is another whole other article on its own. The major thing to consider when feeding your performance horse or any horse for that matter is to make sure they have forage as much as possible and everything is balanced so that they get the best nutrients possible.

*Jen*

MontacreFarms@hotmail.com

**Remember: The horse's digestive system is designed for the continual intake of fiber through almost constant grazing. When we restrict the intake of fiber and impose large grain feedings only twice a day we increase the risk of colic! A horse is always hungry; food only stays in the stomach for about 15 minutes and then moves on to the small and large intestines for digestion.**