

Is Soy Making our Horses Insulin Resistant?

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There has been a lot of chatting about this on the net recently, and the answer is NO.

Soy is not the root of the problem. There are probably some special individual horses that are allergic to soy and may show various symptoms, including laminitis, when they are fed soy, but the vast majority are not. Insulin resistance (IR) and Equine Metabolic Syndrome (EMS) are far more likely due to obesity, lack of exercise and possibly mineral imbalances.

In what forms do we usually find Soy?

Soy has been used in animal feeds for a many years, long before the current 'epidemic' of IR and EMS.

Soy Bean Meal is the most common form of soy found in animal feeds. It is the remains of soy beans after the oil has been extracted. Soy Bean Meal has a high level of protein, so it is commonly added to animal rations to increase the amount of protein.

Soy Hulls are also found in animal feeds. These are the external cover of soy beans, and are a high fiber addition that is very useful for horses who need a low glycemic diet. Soy hulls contain little or no soy bean meal.

Whole Roasted Soy Beans are occasionally added to feeds to raise the fat content. Soy beans are high in oil (extracted to make soy bean oil) and the whole roast beans make a useful high fat feed.

Soy oil is sometimes added to animal rations to increase the fat and calorie content. Soy oil is more palatable than corn

oil to equines.

The current increase in cases of Insulin Resistance and Equine Metabolic Syndrome that we are observing comes from a number of different causes:

- A) The rise in popularity of commercial sweet feeds which contain molasses as well as soy bean meal. Some of these feeds contain as much as 20% molasses. This high inclusion of sugar is more likely to be at the root of the obesity problem, rather than soy in its many forms.
- B) Large numbers of horses that are not in hard work and are being over fed, reflecting their status as pets rather than working animals.
- C) IR/EMS is the latest fashionable disorder; so many horses are getting diagnosed with it even if they are only showing marginal symptoms.

So, if your horses are showing signs of Insulin Resistance or Equine Metabolic Syndrome (weight gain, cresty neck, sore feet etc.), put them on a low glycemic diet. It is pretty easy to make the low glycemic diet soy free if you want to. The following diet should produce a considerable improvement in your horse's appearance and way of going.

Easy keepers in very little work (less than 2hrs exercise per week)

- Feed grass hay 1-2 lbs per 100 lbs body weight.
- One good quality vitamin/mineral supplement without soy. Example: LinPro, feed 1oz. per 250lbs bodyweight.
- 1-4 oz Flax Seed.

- A magnesium/chromium source.
Example: Quiessence, give 1-2 oz per day.
- To carry the supplements, use sugar beet pulp (1-2lbs weighed dry), or 1 lb of grass pellets.

Horses in medium work (2-4 hrs exercise per week)

- Feed diet recommended above.
- Add ½ lb per 250 lbs body weight of whole oats.

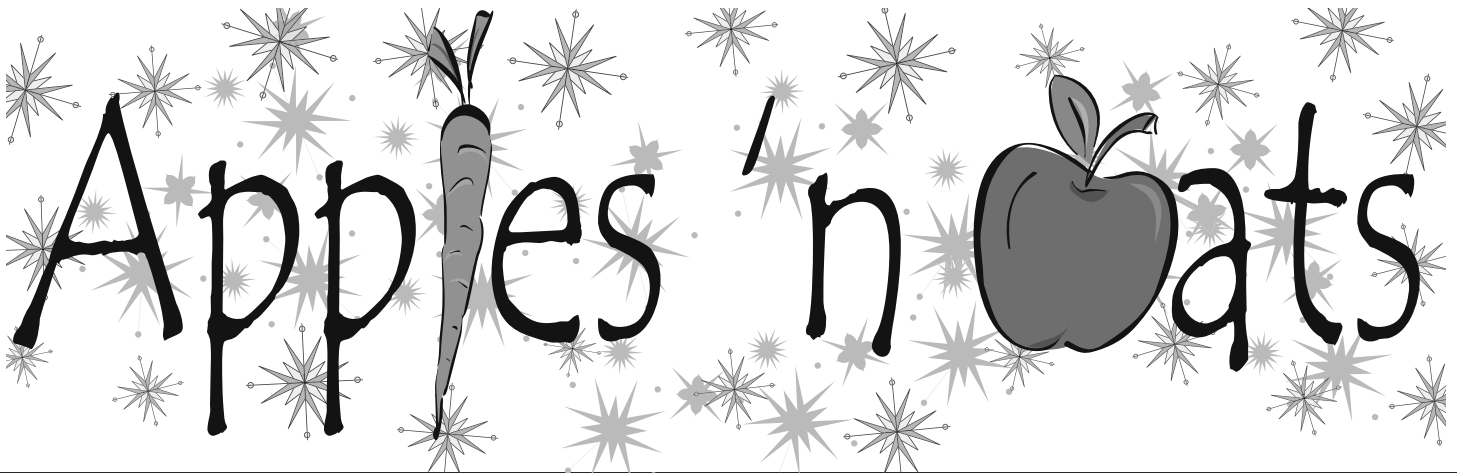
Horses in hard work (4hrs or more exercise per week, at least 50% of that time trot or canter)

- Feed diet recommended above.
- Add in 1-2lbs of whole oats per 250lbs bodyweight.

Because most of the soy in horses' diets is coming from commercial feeds where it is one of many ingredients, it is hard to say that soy is the main source of problems. Many horses are given too much feed, plus very few horses work hard these days and don't need nearly the amount of calories that they are getting.

Good luck! And remember, exercise is key to managing IR and EMS in horses (as in humans). Get 'em out and get 'em moving! Walk them if nothing else, but get them moving for 20-40 minutes per day.

Melyni Worth PhD, PAS, received her PhD in equine nutrition and exercise physiology from Virginia Tech and has taught equine management and physiology at the college level. She is author of Storey's Guide to Feeding Horses. Her Foxden Equine (www.foxdenequine.com), established in 1996, develops and manufactures equine supplements in Stuarts Draft, VA.



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