



SOYBEAN MEAL AND SOY HULLS - DISPELLING THE MYTHS

Dr Mark Barnett (PhD), Owner & Equine Nutritionist for MTB Equine Services,
Nutritional Consultant to Benchmark Horse Feeds.

Soybeans have one of the closest amino acid profiles, found in a plant, to the protein composition in the muscles of horses and soy is a palatable feed source for horses.

There is much conversation and claim that soybean meal is bad for horses due to the presence of phytoestrogens in the bean.

Soybean does contain phytoestrogens, chemical compounds which can mimic the actions of natural estrogens found in all mammals, including horses and humans. There is one little catch though. The phytoestrogens found in soybeans are called isoflavones and these isoflavones are very, very weak estrogen-like compounds. In other words, while there may be many isoflavones in the feed, their impact is very, very small.

It is also important to note that not all isoflavones are the same. Research in recent times has indicated that a particular type of isoflavone called coumestrol exerts a much more powerful effect on animals than the varieties found in soybeans. Coumestrol is commonly found in Lucerne/Alfalfa, one of, if not the, most common horse feeds in the world. The hormone-like activities of this variety of isoflavone has a good likelihood of causing estrogenic or anti-estrogenic activities in horses. The varieties found in soybeans are far less likely to cause an issue compared to Lucerne/Alfalfa while, soybean hulls are even less likely to cause a problem as they contain about one quarter the amount of isoflavones found in the bean or meal. Grasses also contain phytoestrogens but at a lower level than legumes.

It is a MYTH that the phytoestrogen levels found in soybeans will cause infertility and strange behaviour in horses.

Another problem often touted about soybean meal and soybean hulls is the presence of an anti-nutrient factor called “trypsin-inhibiting factor”. Trypsin is an enzyme, naturally produced within the animal to help break protein down into individual amino acids so they can be absorbed and used to build muscle. Trypsin is produced in the pancreas as Trypsinogen and secreted into the small intestine where it is activated by specific enzymes involved in the breakdown of protein into Trypsin. Some plants contain a compound simply called Trypsin-inhibiting factor which, as the name suggests, inhibits the activation of Trypsin in the small intestine. As a result, the protein in the diet isn't completely broken down, meaning much of the amino acid content of the feed isn't absorbed. This can be a real problem.

Soybean does contain Trypsin-inhibiting factor, however Trypsin-inhibiting factor is very easily broken down by heat therefore applying the correct amount of heat for a suitable length of time can destroy the Trypsin-inhibiting factor while preserving the quality of the protein found in the bean. The soy hulls and soybean meal used in Benchmark Horse Feeds are carefully heat treated to negate any Trypsin-inhibiting factors.

Remember, soybeans contain the closest amino acid profile to the protein composition found in the muscles of horses so, this is a very good thing. Treated properly with the right amount of heat for the right length of time, there is no issue with Trypsin-inhibiting factors or unabsorbed protein. It's also important to note that the amount of Trypsin-inhibiting factor found in the soybean hull compared to the bean is tiny.

It is a MYTH that all soybean products cause muscle wastage due to the presence of the Trypsin-inhibiting factor.

IN SUMMARY

- Soybean meal and soybean hulls will not cause a horse to act crazy, become infertile nor will they cause muscle wastage.
- At Benchmark Feeds, we expect only the best and provide only the best quality products for your best friend.

As horse owners, riders and enthusiasts - WE GET IT.

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