Steps to Evaluating Safe Feeds for IR and Cushings Horses

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There is an ever increasing number of feeds being advertised as low, reduced or controlled sugar, starch and carbohydrate, and many senior or complete feeds are billed as "high fiber" and also said to be appropriate or “safe”. It’s very important to realize that "lower" simple carbohydrate (sugar, starch) or "higher" fiber may very well be true, but most are not low or high enough.

The term ***NSC*** refers to nonstructural carbohydrates - and has been generally used to include most of the plant’s available carbohydrates (NFC = nonfiber carbohydrates and is *not* the same thing as NSC).

NSC is composed of

- WSC – water soluble carbohydrates (may include fructose)
- ESC – ethanol soluble carbohydrates (simple sugars)
- Starch – plants store glucose as starch which can readily convert to simple sugars

While the term NSC has been a convenient “shorthand”, ***what is of primary importance for the horse is Simple Sugars(ESC) and Starch. To be safe for all insulin resistant horses, ESC + Starch should be 10% or lower and it is the total simple sugar + starch levels you need to know.***

Some can tolerate up to 12 to 13%, especially if they are getting lower sugar/starch hay for the bulk of their diet and the 12 to 13% sugar/starch "feed" is given only in small amounts.

Having the minerals carefully balanced is an advantage, especially if you are considering a complete feed and won't be feeding any hay. If they're correctly balanced, you won't need to add any additional mineral supplementation. If they're not, you'll have to adjust but just having a safe sugar/starch level is itself a big plus.

To make sure the feed you are considering is truly going to be safe, follow these rules:

Call the company and ask:

1. What is the actual/analyzed sugar and starch of the product?
2. Is the sugar/starch checked by analysis on all individual ingredients before the feed is made?
3. Is the sugar/starch checked by analysis on the finished product after every production run/batch?
4. What are the actual (not average, estimated or guaranteed minimum) mineral levels in the finished product? You need to know:

Major Minerals	*Trace Minerals*
Calcium	Iron
Phosphorus	Copper
Magnesium	Zinc
Potassium	Manganese
Sodium	Selenium

and, preferably, sulfur, cobalt and molybdenum

5. Are the mineral levels checked on every production run/batch of the product?

If this level of quality control isn't in place, you're playing Russian roulette with every bag you buy. It won't help much to analyze some yourself since the ingredients, and therefore the results, may be different with the next bag. For example, I have a client that bought several tons of a Mountain Sunrise product after having a sample analyzed and returning looking very good, with low sugar/starch, only to have the horses get cresty within two weeks and repeat analysis showing very high sugar/starch in the batch which was delivered.

The day may come when we can get a consistently safe product from large manufacturers, but it's going to take a level of very good and consistent quality control.