

### ***Short days and cool temperatures can increase sugar and starch content.***

*by Dr. Juliet Getty, Ph.D.*

As temperatures begin to dip, it's time to transition to winter feeding and that means understanding sugar and starch that lurk in your fall pasture growth.

If you have horses that are overweight, insulin resistant, or suffer from equine Cushing's disease, you know about keeping them off of spring grasses. The non-structural carbohydrate (NSC) content is too high for free-choice grazing to be safe, increasing the risk for laminitis.

But don't think you're out of the woods once spring is over. True, summer is safer, but as early fall nights cool down below 40 degrees F for the majority of the night, the dangerous carbohydrates once again increase.

Grass accumulates NSC (sugars and starch) as it is exposed to sunlight. The levels reach a peak in the late afternoon. During the dark hours, the grass uses this fuel for itself, and by morning, the levels are at their lowest. But cold nights prevent grass from using as much NSC, resulting in a higher NSC concentration during the day.

Don't be fooled by the brown grass you see in the late fall. Spread it apart and you'll likely see some green at the base, which is high in sugar and starch. If it hasn't rained in a while, your grass will look dried out; but be careful – dry grass can actually have a higher NSC percentage than long, lush-looking grass.

Testing your pasture every couple of weeks may be a good option this time of year. Equi-Analytical Labs offers their economical "Fast Track" test that provides sugar and starch levels. Though just a snapshot of what is happening to the grass at that moment in time, consistent testing will provide a trend that may offer some peace of mind in determining when the grass has gone dormant for the winter.

## December 2015 - Winter Feeding Tip

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Saturday, 28 November 2015 00:39

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*Dr. Getty's comprehensive resource book, [Feed Your Horse Like a Horse](http://www.GettyEquineNutrition.com), is available at [www.GettyEquineNutrition.com](http://www.GettyEquineNutrition.com)  
-- buy it there and have it inscribed by the author, or get it at Amazon ([www.Amazon.com](http://www.Amazon.com)) or other online retail bookstores. The seven separate volumes in Dr. Getty's topic-centered *Spotlight on Equine Nutrition* series are available with special package pricing at her website, and also at Amazon in print and Kindle versions. Dr. Getty's books make ideal gifts—check her website for holiday specials.*