



# RESEARCH SHOWS SOAKING BEET PULP REDUCES SUGAR CONTENT

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## Background

It is recommended that beet pulp, both pellets and shreds, be soaked in water prior to feeding them to horses. Beet pulp is a low moisture, dehydrated product capable of quickly absorbing a large amount of water. This rapid absorption of water causes beet pulp to swell to a volume many times normal, potentially resulting in digestive upset if the product is not soaked prior to feeding. Many sources of beet pulp have molasses or molasses product added to them to aid in the pelleting process or to minimize dust. Molasses and molasses products contain sugar, which may not be a desirable nutrient in the diet for horses sensitive to sugar.

## Hypothesis

It was hypothesized that normal soaking and rinsing of beet pulp would decrease the sugar content of the product.

## Process

To test this hypothesis, two pints of water were added to both one pint of Standlee Premium Western Forage® Beet Pulp pellets and one pint of beet pulp shreds. The pulp was then allowed to

soak for approximately 2 hours in their containers at a mild room temperature (about 75°F). After soaking, the excess water was strained from the pulp and the beet pulp was thoroughly rinsed in a strainer with additional water. Prior to soaking and again after soaking, samples of beet pulp pellets and beet pulp shreds were sent to Equi-Analytical laboratory for sugar analysis.

## Conclusions

From this experiment, we were able to draw the following conclusions. It was determined that soaking beet pulp on the volumetric basis of two parts water

to one part beet pulp results in adequate rehydration of both pelleted and shredded forms of beet pulp. In this experiment, beet pulp was soaked for a total of 2 hours to ensure the maximum amount of water was absorbed. It was noted the majority of water was absorbed within the first 30 minutes of soaking, and we did not observe a significant advantage of soaking beet pulp for longer than 30 minutes. Soaking beet pulp followed by rinsing with additional water significantly reduced the non-structural carbohydrate content of both pelleted and shredded forms of beet pulp. The majority of carbohydrate represented in the non-structural carbohydrate content of beet pulp consists of water soluble carbohydrate (WSC). It is the WSC content of beet pulp which is reduced in the soaking and rinsing process.

For horses sensitive to the sugar content of the diet, it appears that beet pulp with added molasses is acceptable as a low sugar fiber option if the beet pulp has been soaked and rinsed prior to feeding.



**Standlee Premium Western Forage® recommends soaking 1 part beet pulp product to 2 parts water for a minimum of 15 minutes**

## The following table represents the results of soaking beet pulp on non-structural carbohydrate (NSC) content

NSC Values (WSC + Starch), Dry Matter Basis

Physical Form	Pre-soak	Post-soak	% Change
Beet pulp pellets	10.9%	5.6%	-48.63%
Beet pulp shreds	16.7%	6.3%	-62.28%