



# Dairy One

Forage Laboratory

## October 2014 Newsletter

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Click below to take our Candy Byproduct Quiz!



Candy Byproduct Quiz

1. In the picture below are 4 candy byproduct samples we received at the lab in the last four months. How many different categories are the candy byproduct feeds in the picture below?



### Ask The Lab

**Q:** Is it essential to send Corn Stalk Nitrate Test (CSNT) samples overnight?

**A:** No, regular mail is fine. Cornell analyzed "up to 6 days in the mail" and that was still ok. It is preferable to send them in as soon as you can, but it does not have to be overnight, and

### Did you get what you ordered?

Feeding byproducts as part of a dairy diet can be very cost effective to meet dietary needs. However, byproducts can be highly variable. First of all, the category of byproducts includes products like distillers grains, citrus and beet pulps, candy waste, breads, most soy products, and region specific products like coffee chaff and walnut meal. Some of these products are quite consistent and have some guaranteed analysis, like many of the soy products and some of the citrus or beet pulp products. Others, like candy or bakery waste, vary greatly in content and nutritional value.

We see lots of byproduct feed samples in the lab. We have 42 product codes for dry byproducts, ranging from steam flaked corn (435) to tapioca (486). From 5/1/2013 to 4/30/2014, we have had 60 samples of candy waste come into the lab (Table 1). In general, the samples are reasonable sources of CP and excellent sources of sugars and starch. However, the ranges for properties like ESC, Starch, and NFC are large, and not testing your candy product frequently enough will result in very different feeding and performance.

Item	Samples	Average	Range (Low)	Range (High)	Standard Deviation
% Dry Matter	60	88.241	85.359	91.124	2.883
% Crude Protein	59	13.414	9.504	17.324	3.91
% Acid Detergent Fiber	37	18.504	11.116	25.892	7.388
% Neutral Detergent Fiber	54	27.771	19.26	36.282	8.511
% ESC (Simple Sugars)	53	15.444	6.623	24.265	8.821
% Starch	45	16.241	8.683	23.798	7.557

you can store them in a fridge for a day or 2 as well.

Submit your questions for the lab to [sally.flis@dairyone.com](mailto:sally.flis@dairyone.com)

% Non Fiber Carbo. (NFC)	48	42.759	30.259	55.259	12.5
% Crude Fat	59	11.357	7.382	15.332	3.975
% Ash	51	4.912	3.61	6.214	1.302
% TDN	54	85.381	81.057	89.705	4.324
NEL, Mcal/Lb.	54	0.953	0.888	1.018	0.065
NEM, Mcal/Lb.	54	1.01	0.932	1.088	0.078
NEG, Mcal/Lb.	54	0.697	0.632	0.763	0.065

To look up information on feeds you are using or considering, check out our Interactive Feed Library at:

<http://dairyone.com/analytical-services/feed-and-forage/feed-composition-library/interactive-feed-composition-library/>

## Have you seen your first frost yet?

Fall is here and some places saw their first frost in mid-September. Low temperature below 32°F was seen in a few places: Burlington, VT (32°F), Montpelier, VT (30°F), St. Johnsbury, VT (29°F), Plattsburgh, NY (30°F), Massena, NY (28°F), Glens Falls, NY (32°F), and the coldest place in the region, Saranac Lake, NY (21°F). Additionally, with the cool summer and some delayed planting, there is likely to be more cold temperatures before corn is harvested for silage.

So, did you get a frost? Do you have any crop damage? Frosted corn silage can be difficult to manage during harvest. Here are 2 things to evaluate on frost damaged corn:

1. **Moisture Content** - Frosted corn will look much drier than it likely is. The leaves will be brown and dry, but the majority of the moisture is in the stalk. It is important to determine dry matter for harvest using the whole plant chopped and dried and not just the appearance of the plant. Harvesting corn silage too wet will increase runoff, change fermentation, increase losses, and potentially decrease intakes.
2. **Maturity** - How frost damaged corn is managed differs depending on the maturity of the corn. Frosted immature corn will likely still be too high in moisture to harvest right away. Corn in an early dent stage will generally have a low enough moisture to harvest immediately. Ears with a majority of kernels that have been frozen and discolored will

not deposit any more starch. If the upper leaves of the plant and the leaves of the ear are still green and the majority of the kernels are normal, there can still be enough photosynthetic activity to have more starch made.

A big concern in frosted corn is the return of warm weather after the frost. Molds and yeasts that will spoil the feed develop in these conditions. It is important to monitor this during harvest and during feed out. If molds are suspected, separating the feed for storage is highly recommended.

Overall due to differences in moisture and starch composition of frosted corn it is best to store the feed separately. This will allow for better use and monitoring of the feed as it is fed out.

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