



Dairy One

Forage Laboratory

March 2015 Newsletter

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Hay at The 2014 New York State Fair

By Julie Hansen - Cornell University, Bill Verbeten - NWNY CCE Dairy Team, Janet Fallon, Sally Flis - Dairy One, and Nancy Weber

Are you a hay producer in New York State? Did you enter a hay sample in the New York State Fair? If not, here's what you missed out on: for a \$10 entry fee, you would have gotten two admission tickets to the NYS Fair good for two days, and a hay analyses valued at \$22, compliments of Dairy One Forage Lab, Ithaca, NY! Whoa, what a value for hay producers! The trick is to get your bale or bale samples to Syracuse the day before the state fair starts.



Judges Bill Verbeten and Sally Flis

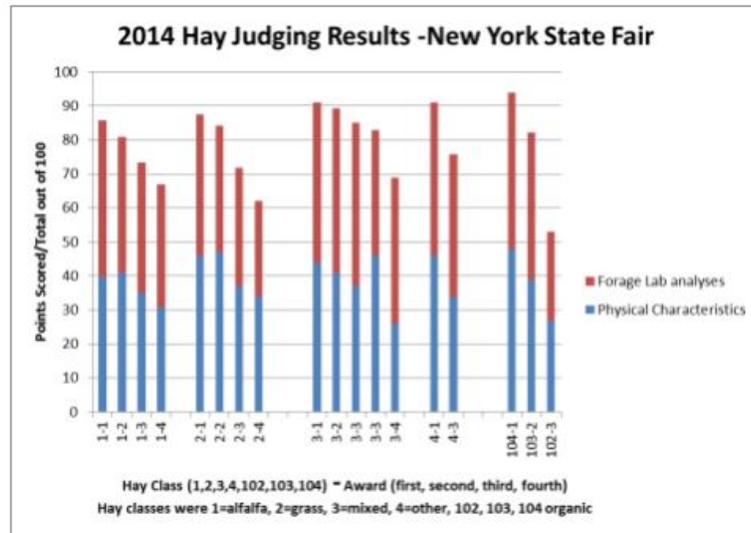
For the 2014 State Fair, hay was entered from farms in Alton, Cazenovia, Central Square, Fulton, Moravia, Richfield Springs, and Tully. Hay was entered in one of the seven classes:

- Class 1 - Alfalfa - Alfalfa content greater than 75%
- Class 2 - Grass - Mostly perennial grasses
- Class 3 - Grass mix - Alfalfa grass mix
- Class 4 - Other
- Class 102 - Organic Grass - Mostly perennial grasses
- Class 103 - Organic Grass mix - Alfalfa grass mix
- Class 104 - Organic Other

Hay was judged based on the physical characteristics (50 points: molding/odor, foreign material, maturity, leaf retention, color) and on forage lab analyses (50 points: dry matter, crude protein, fiber, fiber digestibility). In Class 1 (alfalfa), bales with good maturity (1/10th

bloom) and leaf content received first and second place. In Class 2 (grass), the bale with the lowest fiber content won first place. Mixed alfalfa grass bales (Class 3), bales with the highest fiber digestibility won first and second place. The winning bale in Class 4 (other) had perfect scores for maturity, leaf retention, color, fiber and fiber digestibility. Three organic bales were entered and the bale entered in the organic 'other' class had the best overall score of 94.

Thanks to all who entered hay bales in this contest and congratulations to the winners. Please consider entering your hay next year. Thanks to Dairy One for analyzing the hay samples and providing the analyses to the judges and participants.



Spring Soil and Manure Sampling

As we look out our windows this morning, there is too much snow for field work, but here in Northern NY, the whole next week is going to be about 30°F. If you did not get a chance to soil sample in the fall, spring can be a good time to sample as well. If the ground dries out fast enough, you can get samples in time to spring apply lime and evaluate manure and fertilizer applications. In order to make the best manure application recommendations, getting a manure sample before you start spreading this spring is also very helpful.

Soil Samples

There are lots of options for soil sampling. In general, soil samples should not represent more than 20 acres. One soil sample core should be taken per acre, mixed, and subsampled into the sample box. Also, working with your crop consultant and using protocols for grid sampling or sampling based on information from yield maps can be used to create prescription applications for fertilizer.



Map of grid sampling layout.

Once you have the samples, Agro-One has a variety of analytical packages to choose from based on where you live and what crops you are growing. Soil sampling boxes can be ordered from the website.

Manure Samples

Applying the right amount of manure for crop production needs will save money and reduce the risk of nutrient loss to the environment. Each manure source should be sampled at least once a year, and monitoring results over seasons or years will give you the best information about your manure.

Manure Sampling

The sample should be representative of the entire material being sampled. Storage areas should be sampled each time you are

spreading. Daily spread operations should be sampled four or more times per year throughout the year to obtain a good average nutrient value. Where bedding is used, samples should include both bedding and manure. Sampling is best done from the spreader when manure is being loaded from the barn or storage. This will provide the most representative sample of the nutrient content at time of spreading.

Liquid storage - Agitate and thoroughly mix before sampling. Make a dipper by fastening a plastic cup to a broomstick and take a sample or two from the tank spreader and place in a pail. Do this for multiple loads. Mix and take a subsample into a sample container. For larger liquid manure storages, it is a good practice to take samples at different levels of the pit or each time manure is spread. Nutrient concentrations in the manure will change as depth increases.

Solid manure storage - Sample while loading the spreader. Use a garden trowel and pail to collect a sample of manure from various spots in a load over multiple loads. A minimum of 5 loads should be taken and composited into a pail. Or spread part of 5 loads over a tarp and take a sample from the tarp for each load into a 5-gallon pail. Mix thoroughly and place a subsample into a sample container.

Daily spreading - Use a garden trowel and pail to collect a sample of manure from various spots of the spreader. Sample the load(s) for 2 to 3 consecutive days. Or place a 5-gallon bucket under the barn cleaner 4 or 5 times while loading the spreader. Mix the manure thoroughly in the bucket and take a subsample and place into the sample container.

For all sample types, be sure that the container is at least $\frac{3}{4}$ full, but no more, to allow room for expansion. Wipe container to remove any manure that may have spilled down the sides. The outside of the container should be clean prior to shipping. Secure lid firmly. Tape if necessary to prevent spillage. If the sample is not being shipped immediately, freeze until shipping. Properly preparing the sample is very important to prevent ammonia loss.

An Agro-One manure analysis provides the following information to use as a basis for developing sound nutrient management plans or manure application rates: Total Nitrogen (N), Ammonia Nitrogen, Organic Nitrogen, Phosphorus (P), Phosphate Equivalent as P₂O₅, Potassium (K), Potash Equivalent as K₂O, Total solids (dry matter), and Density. Results are reported as percentages, lbs./ton, and lbs./1000 gallons. Analysis is \$35 per sample and results are generally available in 2 to 3 days. <http://dairyone.com/analytical-services/agronomy-services/manure/>

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