



News from Northern New York Agricultural Development Program

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NNY Ag Development Program Funding Dairy Cow Diet Corn Substitute Analysis

Northern New York farmers are interested in properly and cost-effectively feeding their dairy cows. To help them evaluate economically-feasible replacements for corn grain in dairy rations, the Northern New York Agricultural Development Program (NNYADP) has provided funding to the William H. Miner Agricultural Institute to conduct a comprehensive inventory and analysis of accessible and appropriate dairy diet substitute products.

High corn prices are driving farmer interest in favor of feeding more high quality forage in place of grain to their cows.

'This research is timely in responding to the need for farmers to reduce the use of corn in feed rations. Corn prices have reached all-time highs in recent years and although they may trend downward due to high yields in 2013, prices are expected to remain higher than historical averages,' said Miner Institute President Dr. Rick Grant.

Grant adds that a lower corn/starch diet does not compromise milk production.

'Research by Cornell and Miner Institute has shown that high milk production can be obtained with lower dietary starch as long as rations are properly formulated. A lower starch diet can be successfully fed to early to mid-lactation cows, dry cow and fresh cows without compromising any aspect of performance,' Grant said.

The search for acceptable corn grain substitutes goes beyond simply increasing the dairy ration with grass/legume forage grown on regional farms.

'Northern New York weather and growing conditions can create a major constraint in assuring high quality forage harvest each year. Milk production suffers if the increased forage fed to cows is not of high quality and increases the real cost of production in spite of reducing the use of corn grain, thus we are in search of acceptable nonforage alternatives and the proper formulation of rations using those substitutes,' Grant said.

Nonforage sources of fiber (NFFS) and fermentable carbohydrates for dairy rations include soybean hulls, beet pulp, and wheat midds.

With the NNYADP-funding, Miner Institute is collaborating with Northeast Ag and Feed Alliance feed industry representatives to look at regional factors influencing dairy ration development. For example, large storage facilities along the St. Lawrence River offer citrus pulp, hominy, and whole cottonseed supplies as potential dairy diet sources.

The NNYADP dairy diet corn substitute project researchers are also evaluating sources of distiller and wet brewer grains, and malt sprouts produced in Quebec, gluten feed produced in Ontario, and New England bakery by-products.

The first survey of the project will identify the current use of corn substitutes in NNY dairy herd diets over the past five years, what products are used as substitutes and the sources of those substitute products. The data will be analyzed to determine the most economically-feasible products.

The research team will analyze samples of the most economically-feasible products to determine how well their nutrient composition will work in developing dairy cow rations to support strong milk production.

The analysis protocol will evaluate digestibility by the cows, rumen digestion efficiency, and other factors that influence the proper formulation of the lower starch dairy cow diet.

'We have found good agreement between the Fermentrics analysis and actual measured cow response to different types of diet rations in previous research studies conducted at Miner Institute' Grant said.

Once the research surveys and analysis are complete, an updatable database will be developed for use by Northern New York dairy producers to encourage the best nutrition and economic gains from consistently feeding a less corn, lower starch substitute diet.

When completed, the Economical Substitutes for Corn Grain in NNY Dairy Cattle Rations report and database will be available on the NNYADP website at www.nnyagdev.org.

The NNYADP is a farmer-driven research, technical assistance, and outreach small grants program supporting the diverse agricultural sectors in Clinton, Essex, Franklin, Jefferson, Lewis and St. Lawrence counties. The program receives funding support from the New York State Senate.