



News from Northern New York Agricultural Development Program



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Northern NY Ag Development Research Identifies Economical Corn Substitutes for Dairy Diet

The Northern New York Agricultural Development Program (NNYADP) and Miner Institute have released the results of the first comprehensive analysis of products that can substitute for corn in dairy cow rations in Northern New York.

Corn is an expensive (about \$200/ton), starchy commodity often mixed into dairy cow feed rations. A Cornell University field survey showing that high-production dairies in the northeastern U.S. and upper Midwest were successful feeding lower starch diets prompted interest by farmers in Northern New York to evaluate economically-feasible replacements for corn grain in dairy rations.

With NNYADP funding, the William H. Miner Agricultural Institute conducted a comprehensive inventory and analysis of accessible and appropriate dairy diet substitute products that are easily accessible in the Northern New York region.

Project leader Rick Grant, president of Miner Institute, says, "The Northern New York region is well-situated to take advantage of regional opportunities for purchasing good buys on such products as soybean hulls, distillers' grains, malt sprouts, and gluten feed as well as citrus pulp and whole cottonseed stored in facilities along the St. Lawrence River."

Dairy nutritionists and Northeast Ag and Feed Alliance feed industry representatives serving the Northern New York dairy industry in Clinton, Essex, Franklin, Jefferson, Lewis and St. Lawrence counties participated in a survey to identify the dairy ration byproducts they currently use and where they are sourced.

Product samples were collected and sent to the Dairyland Lab in Arcadia, Wisconsin, to evaluate the digestibility; impact on rumen efficiency; protein, carbohydrate and macromineral content; and other factors using a new technique called Fermentrics.

‘We believe this is the first time Fermentrics has been used to evaluate byproducts that can replace corn grain in the dairy cow diet in Northern New York,’ Grant says. ‘We found good agreement between the Fermentrics analysis and the actual measured cow response in previous studies conducted here evaluating carbohydrate sources.’

Using the various feedstuffs is estimated to increase the income over feed cost (IOFC) by about 44 cents/cow/day compared to a standard higher corn, higher starch diet. The actual savings vary depending on the prevailing price of forage, grains, and the various byproduct feeds. Dairy producers need to work with their nutritionist to monitor byproduct prices and formulate diets that maximize IOFC.

Dairy farmers and dairy nutrition consultants can use the results of the Northern New York Agricultural Development Program-funded corn grain substitutes testing to develop lower-starch dairy rations using the most nutritionally effective and economical replacement products without compromising milk production.

The complete Economical Substitutes for Corn Grain in NNY Dairy Cattle Rations report with results tables is posted 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.