

# Snowville Creamery Starts GMO-Free Feed Testing for Producers

by Warren Taylor

Snowville Creamery (Pomeroy, Ohio), has embarked on a GMO-free feed testing program for its producers. Snowville was featured in the March 2014 issue of *The Milkweed*. Warren Taylor is president of Snowville Creamery.

Snowville Creamery is a pivot between dairy farmers and dairy consumers. Our function is to help meet the perceived needs of both. This role requires a continuing, two-way conversation. With both farmers and consumers, Snowville leads by informing and follows by being informed. Our customers have been informing us that they prefer milk from cows eating non-GMO feeds and forage.

Snowville Creamery just announced that the ten farms supplying our raw milk have started using feeds and forages that do not include GMO crops. Hamm Valley Farms, the largest of our dairies, began feeding non-GMO grain last fall. Hamm Valley Farms is a fifth-generation dairy farm outside Racine, Ohio – along the Ohio River.

Tom Hamm and his son, Chris, believe their cows are in the finest condition ever – a result of switching to feeding non-GMO grain. Other farms attest to animal health improvements. Perhaps humane treatment of animals should include non-GMO feed?

At Snowville Creamery we see the United States' "traditional" dairy industry about to be stunned by a one-two punch: non-GMO feeds and heavily grass-based rations. These two go together hand-in-hand. One: avoiding the toxic-based agriculture of GMO crops, which utilize more pesticides at higher levels across increasing acreage. Two: growing, popular recognition that grass-fed animals produce milk, eggs, and meat superior in taste and nutritional value.

This dual awareness is creating demand beyond the grass-fed supply chain for every single livestock product – just like the current scarcity of organic milk relative to consumer demand. Many food animals prefer and thrive grazing on grass.

Clearly, animal livestock farming that reduces grain requirements by increasing the proportion of grass will make transitioning away from cheaper GMO grains easier. Additionally, a non-GMO claim or label will add value in the marketplace. Product claims such as "grass-fed" and "non-GMO" may seem like niche markets today. However, those attributes are being driven by growing consumer sentiments. GMO labeling of foods may soon be a must for some consumers. Recent years' state referenda on GMO-labeling, plus recent legislation introduced in Congress for federal control of GMO labeling, indicate strong consumer issues behind these political battles.

## Snowville buys GMO-testing equipment

Snowville Creamery recently acquired equipment to conduct tests for GMO presence in feeds. To date, Snowville's costs are about \$7,000 for the testing equipment, plus materials needed for 100 tests. That's \$70 per test – considerably better than the whopping \$600 per test figure an outside laboratory quoted to us. That \$7,000 investment represents is about 1% of last year's grain cost. We will spend perhaps another \$7,000 each year, testing every batch of grain supplied. Fortunately, lower corn prices since late summer 2013 have resulted in non-GMO corn prices for farmers that are comparable to last year's GMO corn price, at about \$400 per ton.

Our QuickScan 131 GMO test system is made by Envirologix (<http://envirologix.com/artman/publish/index.shtml>) and is comprised of 3 parts. The test comb is designed to detect and quantify the presence of certain proteins at the levels typically expressed in genetically modified bulk grain. The QuickScan reader and a desktop computer are used to scan and interpret the results.

In order to detect the proteins expressed by genetically modified bulk grain, the sample must first be extracted to solubilize the protein. To do so, we grind the sample to the consistency of coffee grounds, then, add water to make a solution. The test comb is inserted into the solution for 5 minutes, and is then scanned and interpreted quantitatively with

the QuickScan system. Results are returned as

"% GMO" or "<LOD" (below the Level of Detection).

The sensitivity of the test is different for each of the 9 proteins/trade names we test for, and ranges from 0.25% (2 in 800 kernels) to 1.0% (8 in 800 kernels), with the majority having a sensitivity of 0.5% (4 in 800 kernels).

Envirologix' regional representative demonstrated how to use the testing equipment to Snowville employees. The testing equipment arrived approximately a week later – reasonably easy to set up, calibrate, and use. Snowville's lab personnel have not had any problems adding the testing procedures to their repertoire.

To assist our farmers' transition to a GMO-free feed supply, Snowville Creamery has retained the services of an experienced and respected Organic Certification Inspector, Mark Cohen. Snowville Creamery's producers are not organic at this time, but that could be a future path. Cohen will be formalizing Snowville's grain sampling and testing protocols, to be consistent with the National Organic Program's record keeping and documentation. He will also be working with individual producers to define the practices which must be altered for possible future organic certification. Just as we began incentivizing our producers' non-GMO grain sourcing by paying a premium, Snowville Creamery will reward our farmers that upgrade their practices and record keeping towards meeting organic requirements.

At this point, we are in the information gathering phase. We are on a steep learning curve, and not inclined to make pronouncements of exact requirements and specifications at this time. We need to work with, and gain the trust of, local feed and forage growers. We need to give local grain suppliers a chance to learn by doing "GMO-free" and practice continuous improvement themselves. That's farming!

Our hope is that the fundamental model of grass-grazed dairy, in combination with GMO-free feed, is one that numerous other small- and medium-sized dairy operations across America can replicate and use to thrive. The same can be said about all sorts of livestock food products: eggs and chicken, goats and sheep, pigs and beef cows.

At Snowville Creamery, we do not discount the underlying strength of many consumers' desires to have GMO-free foods. In tandem with grass-fed livestock products, we see such opportunities as far more than a niche.

## Snowville Creamery's GMO-free journey

Snowville's journey to GMO-free feed is recounted in the timeline below. Any changes to be made within a group of dairy farmers will require at least two years' time. That is the way farming works.

**Summer 2012:** Snowville Creamery began serious discussions about achieving non-GMO supply, based on repeated inquiries by customers through email, social media, and our in-store product samplings.

**November 2012:** Snowville representatives attended the Annual Ben Stinner Sustainable Agriculture Conference and received a nominal \$1,000 grant to investigate non-GMO grain, particularly focusing on corn alternatives such as barley, triticale, and sorghum.

**March 12, 2013:** Snowville wrote a comprehensive explanation for our website about what our farms feed and how they compare to the rest of the dairy industry. This analysis included a breakdown on how much pasture and preserved grass the cows receive – compared to dairy operations relying on heavy amounts of grain in the rations. This posting explained Snowville's efforts to transition to GMO-free and the roadblocks Snowville Creamery had encountered along the way, see:

<http://www.snowvillecreamery.com/pasture-grazing-gmo-feed-and-feeding-grain-to-cows.html>

**August 23, 2013:** Snowville sent the Non-GMO Project its official Product Verification Pro-



Here's the package of technology that comprises the GMO-testing "Quick Scan 131" system from Envirologix. Snowville Creamery has recently purchased and started using this system to test for GMO materials in the feeds of its ten dairy producers. More information about Envirologix may be found at the firm's Web site: <http://envirologix.com/>

gram Cost Analysis for review and evaluation. An email reply stated that group could not provide a full cost-analysis until all of our farmers had switched to a non-GMO rations.

**September 12, 2013:** Snowville hosted a producer meeting at the Snowville Creamery plant. Farmers and their families attended to meet with Snowville and discuss our current policies and any potential issues. Snowville gave the farmers ideas and goals for the next year, including switching to non-GMO feed completely. At this meeting, Snowville Creamery first laid out the Non-GMO Project. Snowville then gave the farmers a questionnaire to find out each farmer's specific feeding programs to determine their current situation.

**November 1, 2013:** Hamm Valley Farms started feeding non-GMO grain. While some of our farmers already grew their own non-GMO corn, the Hamms were the first to buy a mixed, non-GMO feed.

**March 10, 2014:** Snowville Creamery hosted a producers meeting in Pomeroy, Ohio. Bob Hendershot, a retired Ohio USDA NRCS [Natural Resources Conservation Service] Grassland Conservationist, spoke to the farmers about typical pasture issues and topics. He gave them a rundown on common types of grasses and forages to plant and how to improve overall forage quality. At this time, Snowville confirmed the goal to be completely non-GMO in one month's time.

**March 12, 2014:** Snowville contacted Mary-Howell Martens of Lakeview Organic Grain (Penn Yan, New York) via email seeking her advice on GMO testing for corn and overall non-GMO practices. Mary-Howell responded with numerous handouts on their own policies for handling non-GMO grain and directed Snowville to the Envirologix company in Lincoln, Nebraska for GMO testing kits.

**April 3, 2014:** Ben Weaver, the Midwest representative for Envirologix, traveled to Snowville Creamery to demonstrate their testing system and how that assay could work for Snowville.

**April 10, 2014:** Snowville ordered the Envirologix QuickScan Reader System as well as the QuickComb kit for bulk corn grain. The testing equipment is specific for each individual type of grain. For instance, separate equipment is required for corn versus soy beans. The test gives a result of the percentage of GMO grain.

**April 17, 2014:** Bob Hendershot hosted a pasture walk at Hamm Valley Farms for Snowville's farmers. He guided them through pastures to point out different varieties of the forages and weeds in the pasture and what that indicates about soil health. He was able to tell the farmers just how to maximize and improve their land.

**April 21, 2014:** Snowville ran our first corn sample on the QuickScan system and now has the capacity to prove Snowville's farmers are growing non-GMO corn. So far, all our testing of non-GMO corn has resulted in a below detectable level result, meaning there is no detected GMO content.