Final Report, June 2001

High Conjugated Linoleic Acid (CLA)

Grass-based cheese.

Product Development and Niche Marketing.

Applicants:
Valerie Dantoin-Adamski : dairy farmer, watershed education specialist
Rick Adamski : dairy farmer

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Amount of Funding Requested: $ 9412.00

Overview: A grant of $9,412 was awarded to Valerie & Rick Adamski at Full Circle Farm to develop a cheddar cheese made exclusively from the milk of cows that graze on fresh pasture. The premise behind the new cheese is that dairy cows fed diets high in pasture grasses have very high concentrations of CLA (Conjugated linoleic Acid) and Omega-3 fatty acids in their milk. The opportunity exists to create commercial dairy products high in CLA and Omega-3 from milk from grass-based dairies. A unique marketing aspect was to sell the cheese over the internet.

Goals: The broad goals of creating a high CLA/Omega-3 cheese are to 1) make a food available to the public which has widely researched health benefits and 2) promote the sustainable farming practice of grass-based rotational grazing. Goal results: The project has met its goals on a small scale in this first year. We have introduced the new High CLA cheese and we have realized a higher return for our milk, thus increasing our profitability and sustainability. We did not test Omega-3 fatty acids due to budget constraints.

Objectives: Specific objectives of this project include: a) creating a cheese from milk expected to be high in CLA, b) marketing the cheese to health conscious consumers at a premium that is returned to the farmer.

Objectives were met. We created the cheese, measured its CLA content, labeled it, and marketed it. We sold the cheese at $5.00 per pound which resulted in a significant increase in the pay price of the milk used to make the cheese from $12.50 CWT to $16.00 CWT

Work Plan. We carried out all the steps listed in the grant's work plan.

Those items are detailed on the following pages and include:

CLA TEST RESULTS. We collected milk samples from our farm over the course of the grazing season. The milk was tested for its CLA content at the Food Research Institute at the University of Wisconsin Madison. The results are found in Table 1. (Below)

Date or sample type	Mg CLA/ g of fat
April 20 milk	4.6
May 22 milk	6.7
June 22 milk	9.1
June 27 milk	9.2
July 11 milk	11.4
July 20 milk	10.5
June 27 cheese #1	8.8
June 27 cheese #2	9.3
Aug. 22 milk	11.5
Sept. 25 milk	15.9
Oct 21 milk	13.0
Regular milk	4.2

We were able to show, and this was the first time ever anyone has shown, that CLA increased as the grazing season went on. The most surprising outcome was that CLA increased through September before it declined in October. We had expected it to peak at the end of June, with the summer solstice, so that is when we made cheese. Unfortunately, due to lack of funds, we did not test November and December milk to make sure the decline continued - although it would have been extraordinary if CLA levels did not continue to drop after the cows came off pasture at the end of October.

Also, we showed that our pasture milk had double the CLA or conventional milk by June. In September, we had almost four times as much CLA as regular milk (15.9 mg vs. 4.2mg).

CHEESE MAKING. A batch of cheese was made from milk at the end of June and another in the middle of July. Both cheese batches had double the CLA or regular cheddar cheese. (See table 1 above) The cheese was made by Jim Scray at Scray's cheese plant in DePere Wi. We made 1,400 pounds of cheese from 15,000 pounds of milk. That is a yield of about one pound of cheese from 11 pounds of milk, which is higher than the typical 10 pounds of milk usually needed. I recommend that others considering this type of venture work only with excellent cheesemakers rather than a cheap, lesser quality cheese maker. The quality of the cheese, its taste and ability to age out well were crucial to this project and dependent on the skill of the cheesemaker.

We also chose Scray's because the size of his vats matched 2 days of production from our herd. None of the big, 40,000-pound vat companies were able or willing to work with us. We needed to get a second license for our farm to ship milk to a second cheese plant. This was a DATCAP rule and seemed like a silly bureaucratic exercise. To our local district's credit, they worked very hard to make the 2nd license as simple as possible. Apparently,

nobody in Madison had ever heard of one farm shipping to two different places. The Ag Dept. may want to look at that rule since it will probably happen more often as more farms make shipments to different places to add more value to their milk.

We chose to make white (no food coloring) cheddar because it could age well and we would have plenty of time to sell product before it would spoil. We also chose cheddar, rather than a fancy or unusual type of cheese so that we could gauge the effect of the CLA concept on a simple, standard cheese that already had wide acceptance. I think that was a wise decision because we want to focus on the health aspects, rather than taste or farmstead uniqueness.

The cheese was cut into exact weight, one pound blocks and cryovac wrapped at the Green Bay Cheese Company. It has stored very well and has become a sharp cheddar. Everyone who tastes it is enthusiastic about its great taste and sharp, smooth qualities. Next year we will cut the cheese into 8 oz. blocks, random weight. Many buyers for stores told us people would spend more on an 8-oz. block than on a one pound block. on a per pound basis. We cut to exact weight because our order form on the internet could not accommodate variable, random weight cheese pieces. Exact weight leaves a lot of trim, which we eventually sold at regular market prices - it was made into cheese spread.

MARKETING. Just as many others in the value-added area have said, making the product is the easy part, selling it is the difficult part.

Product Identity. We contracted with Idea Studio of Green Bay to help us choose a product name, develop a logo and label. Through consulting with the Idea Studio, we decided to focus on the message of the health benefits of the cheese, rather than a) family farming, b) grazing and "happy cows", or c) environmentally friendly farming. We will use these concepts to help market the cheese but they are not the key. This has since been confirmed by another company we retained to help sell our cheese to delicatessens in grocery stores. The advice they gave was, again, focus on the health benefits because the buyers for the supermarkets have been exposed to lots of family farm/happy cow cheeses and consider them passe'.

With the help of the Idea Studio we chose the name "Healthy Meadows" for our product. Later, the DATCAP Food Safety/ Labeling people said we could not use the word "Healthy" anywhere on the label. We then called it "Northern Meadows". We wanted to include CLA information on the label - but could not indicate that it was beneficial, or healthy or good for you, or anything else that could be construed as a health claim. We were able to state the amount of CLA in the cheese, but then we had to include a nutrition facts panel for cheddar cheese.

We were not sure if it was worth $2,000 **to hire the Idea Studio**, but now think it was **one of our best decisions**. We are very satisfied with the label. All who see it comment on how striking and attractive it is. The label is shown below. I wrote a brochure that uses the color scheme and logo. It is included in this report as Attachment A.

Internet sales. We set up a website, www.fullcirclefarm.net complete with the ability to order online. This was accomplished after I took a beginners web-design class. I had hardly ever even used the internet before. I used Microsoft's web-page maker program, which I would highly recommend to anyone. It took many,many hours of work to get the website up and functional. I hired a programmer to write the interactive order page. It is a secure site, so I can take credit cards online. We needed many "extras" to operate the site: 1) our regular IP, 2) a domain name, 3) and a secure web-host company, 4) accounts with an internet bank.

I am still learning about registering our site with search engines so that people can find us. This is an interesting part of the project, but time consuming. Most of the visitors to our site actually know to type in our site name because they have heard about us through the media or from related web-sites that have information about grass-fed products. Only one or two referrals per week come from search engines.

One can use pre-packaged web-sites, but I'm glad I didn't. They did not have much flexibility to write extensively about the cheese, grazing, and the farm, etc. Pre-packaged sites are more geared to sell multiple products with little background. The ability to change them and update them is limited. Many web-hosts charge you each time they or you make a change to a pre-packaged site. They cost about twice as much as to write your own site. But, you must be a good, organized writer because pages are small and readers can get lost if you don't clearly lead them though different topics. A hard copy of our web-site is included in Appendix A.

All this internet sales costs more per month than we have made through sales online. If I had to do it over again I would still create a web-site, but I would just have it as a resource and information site. I would sell cheese by taking credit card over the phone and skip all the secure web-site expense. The site has gotten about 60 hits per day and is especially busy after a newspaper article about the cheese hits the papers. Its great because people can read all about our farm and cheese and I don't have the time and expense of mailing out literature. **I recommend waiting until a second or third year to sell product online, however**.

Sales. The internet sales have been below expectations. We only have sold about 25 pounds of cheese this way. As indicated above, if I could put more time into writing gateway pages for internet search engines I think we would increase our sales. But, I think internet sales still will not be significant enough to continue. However, we are signed up for accounts for a year and so we'll continue through September of 2001. Table 2 shows where sales came from during the first year of the project.

Table 2, is an accounting of sales to date.

Type of sale	Number of pounds
Beginning Inventory	1,400
Trim	300
Word of mouth	175
Grocery stores	112
Internet	25
Free Samples	25
Total	637
Remaining inventory	767 pounds

Sales summary. We started out with 1,400 pounds of cheese. Because of exact weight cutting we ended up with 300 pounds of trim. That was sold at $2.50 per pound to Laack's Cheese and made into spread. That was an income of 300 x $2.50 = $750. We've sold another 337 pounds at $5.00 per pound for sales of $1,685. Total sales through May 31st are $2,435.

The sales are about what was expected. We do not want to run out of inventory before the next summer's batches of cheese are made and some of that has aged. We have not tried very aggressively to sell the cheese, but are just starting slowly with volumes that we can sustain. The worst thing that can happen is that we run out of inventory and fail to fill an order.

Sales plan for 2001. We plan to retain a private marketing company, DDS, (Deli & Dairy Solutions) to sell cheese for us in 2001. We have met several times and together plan to sell cheese to upscale supermarket's deli departments. We do not have sales projections at this time, but we should know in mid-June what volume of cheese to make and sell in the summer of 2001. We will focus on the health aspects of this cheese. We are testing for CLA in the now-aged cheese as well as several other nutrients that we expect will be higher from our pasture-based milk. We also plan to continue to sell directly to local supermarkets without he help of DDS.

OTHER OBJECTIVES.

Dairy Cooperative. Although this pilot project involved production from just one farm, another objective is to expand production to include a larger volume of milk, more grass-based dairies, and more dairy products such as yogurt and butter. A dairy cooperative based on the CROPP organic coop is possible. We have met with five other grass-based dairy farms and have formed a new cooperative - Wisconsin Dairy Graziers Cooperative. We plan to invest about $80,000 of our own money in this effort. We have applied for a ADD grant, a SARE grant, and help from the UW- Center for Coops & DATCAP to get this started.

INFORMATION TRANSFER. We have a web-site that is probably our biggest resource for getting out the word on High CLA Cheese. We were featured in six newspaper stories; Milwaukee Journal Sentinel, Seymour Times-Press, Agri-view, Wisconsin State Farmer, Creanlime, and GRAZE. In June 2001 we will be in the Country Today. We have a brochure we can mail out.

CONCLUSION

Overall, we accomplished what we set out to do in this project. We made a cheese high in CLA. That was the easy part. We now have an excellent aged cheddar cheese on hand for prospective buyers to sample. We have a name, a logo, a label, test results, a web-site, and other marketing materials. We are poised to make and sell significantly more cheese in the summer of 2001. We feel there is enough promise in the health aspects of this grass-based cheese to continue production and marketing. We learned that the internet sales were not significant so we are changing direction to sell in grocery store deli departments. We expect that one large sales account may make the concept of high CLA cheese really take off and become extremely profitable.

We spent considerable resources of our own on this project, both time and money. However, we would not have attempted the project without the seed money from the Ag Diversification and Development Program. It was crucial to our startup effort.

For more detail on expenses and other developmental aspects of this project contact the Dept. of Ag. For copies of monthly reports.