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**Name** Gerald and Elise Heimerl

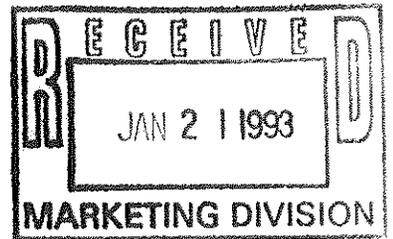
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**FEASIBILITY ANALYSIS**

**FARMSTEAD CHEESE PRODUCTION ON A WISCONSIN DAIRY FARM**

**FINAL REPORT**

**JANUARY 12, 1993**

**GERALD & ELISE HEIMERL**

**SAXON HOMESTEAD FARM**

**15621 S. UNION ROAD**

**CLEVELAND, WISCONSIN**

## **PROGRAM SUMMARY**

We have been granted the rare opportunity by our State Department of Agriculture to study the feasibility of farmstead cheese production. After 18 months of marshaling the experts to draw up data, and from first hand observations with successful operators, we feel confident that there are attractive opportunities for small scale cheese production.

Whether its in France, England, Vermont or California, we felt convinced that quality handcrafted speciality cheese is a shining star. There is much to be said about busloads of tourists celebrating milks story.

In March we narrowed a list of 30 cheeses to one which fits our German heritage marketing theme. This washed rind semi-soft cheese was developed by Auro Techs master cheese makers using our own milk.

During the summer, our accountants "crunched" these specific cheese numbers and worked up "what if" scenarios. In the past few months we have gotten in hand detailed construction plans for our building, and estimates on material and equipment costs.

All this information points to a major hurdle, and that is like so many other businesses, the high amount of operating capital needed in the market development stage of beginning this business. We understand, now more than ever, that this business requires a great deal of hard work and risk.

Simply stated by Dan Carter, Inc., "Farmstead Cheeses have a significant opportunity to exploit the positive consumer perceptions and awareness for Specialty Cheese via application of packaged goods marketing techniques".

## **DISCRIPTION OF WORK COMPLETED**

Evaluation of the Specialty Cheese Market.

We have to say that with the guidance of Dan Carter, Inc. we have developed a perspective of the cheese industry, which has become a very valuable asset to us in trying to understand the marketing of specialty cheese. To try and enter the marketplace one must be up to speed with as much knowledge as possible to minimize risks.

Some facts of the market. All 88 million households in the U.S. consume commodity cheese, but within this universe, an emerging 30 million household market is causing a long term increase in the specialty cheese market. About 30 million households above \$25,000 yearly income are purchasing specialty cheese. Commodity cheese is projected to increase its sales by 2-3% to the end of the 90's. While specialty

cheese is expected to grow at a rate of 7-8% per year.

We found that there is not a standard definition for specialty cheese, it is usually referred to "as all other cheese". This has made it very difficult to get a hold on particular volume figures. In fact what we found is that producers are reluctant to offer information on their specialty cheese production.

What we have accomplished with the funds of the grant is to select and have developed by Auro Tech, Inc. a cheese which will allow value-added pricing. The cheese we believe has a particularly desirable flavor and appearance, has a connection with our ethnic background, giving it a special image which we think will offer people a new experience.

To assay the market volumes we looked at the data on cheeses with similar characteristics. Cheeses which are in the surface ripened family, which include brick, butterkases, farmers, harvarti and tilsiter. A total estimated volume for these cheeses is 30 million pounds, with an average wholesale price at \$1.95 per pound.

Disappearance of approximately 60% of this 30 million pounds of cheese occurs in three regions of the U.S. The upper central midwest, New York/New Jersey, and the Eastern Strip. National Foods Distributors Assn. reports that 78% of specialty foods go to super-markets, and 22% goes to specialty food stores. We also found that 96% of all supermarkets feature specialty cheeses, and that the most profitable shelf space in a supermarket is the dairy case and within the dairy case the shining star is the cheese segment.

For conclusions on our projected products, prices, volumes, and distribution please see attached sheet, Saxon Farms Semi-soft.

#### **Evaluation of the case studies.**

The ability to view other operations and meet with the people running farmstead cheese factories was very enlightening. The grant allowed us to visit three farmstead operations. Maytag Farms in Newton, Iowa. Shelbourn Farms near Burlington, Vermont. And Hawathorn Valley Farm in Ghent, New York. These three operations were similar in many respects. Each were using the milk from approximately 65 cows per herd, Maytag and Hawathorn black and white Holsteins, Shelbourn using Brown Swiss. All three were common in a major regard, and that is that they have an internal source of capital, this is much different than our situation of total lack of capital.

In each situation we received similar responses to our questions. Yes, we are profitable and the operation is making more profit than the herd alone. Yes, there is a demand for our product, and yes there is room in the market place for high quality farmstead cheese. No, the market is not waiting, you must pay the dues of time, experience, patience and hard work to be allowed into the market place. Since visiting Maytag Farms they have sold the herd and buy in the milk that they need. The reason that they gave is that they could not justify the cost of labor to produce the milk, and non co-mingled was not an important factor with them.

We were also in touch with some of the people who were involved with the Minnesota Farmstead Cheese Project of the late 1970's. After reflecting on what some of the people that we talked to had to say, we feel that it wasn't a success as expected because of a two major problems.

1. They underestimated the amount of labor that is required. They had a single family attempt to tend the herd and to make the cheese. It was never planned to hire in help to accomplish the task.
2. Lack of marketing knowledge or proper approach to marketing. They had seven farms with seven very small plants, and seven herds trying to make one specific cheese (Gouda). This didn't work because buyers could not be assured of consistency. What we found, is that to cheese brokers and distributors consistency is as important as quality, if not more important.

We visited Eichten's farmstead cheese operation in Center City, Minnesota which is still in business but not milking cows, they sold the herd in 1986. They buy there milk in to make cheese, and market it via a retail store that they own and farmers markets in the Twin Cities. After a long conversation with them their advice to us was to forget our idea, " marketing the cheese is just to difficult".

When we reflect on our visits with these operations we feel our approach to farmstead cheese has gained us immense insight. It has shown us that it is critically important to develop a well thought out plan for both labor and marketing management of a farmstead cheese operation.

#### **Evaluation of Regulations.**

Wisconsin requires that both the plant and the cheesemaker be licensed to produce cheese for wholesale distribution. Wisconsin is the only state in the union that requires a license for a cheesemaker. One could make cheese from his herds milk without a license but you could only sell cheese

retail from the farm, no wholesale marketing of the product. The plant would need to be inspected and licensed yearly by the State. One could also get a USDA license, but it is not necessary unless you intend to sell directly to the U.S. Government. The advice that I received is to design and build the plant to meet USDA requirements for food safety reasons, but save the license fee.

To become a licensed cheesemaker in Wisconsin you must have 18 months training with a licensed cheesemaker, and pass a written test.

We found that you must comply with Federal Milk Marketing Order Regulations. These regulations are mainly proper reporting of product utilization, which in other words is, what has happened to the milk that you produced and manufactured. We found that the regulations are not a problem to comply with, and that there assistance is very forthcoming and helpful.

#### **Evaluation of environmental considerations.**

We ran into some problems here. For every 1000 pounds of cheese that you produce, you can look at 4000 gallons of water needed for the manufacturing process, and about 1000 gallons of whey. If you can utilize the whey as cattle feed, then whey does not become a major problem. In order to sell whey you must keep it cool and have enough to fill a truck, this becomes a cost. Another option is to ground dispose the whey which requires a permit from the DNR. I believe this not to be a good option. In our case we intend to use it for animal feed.

The major problem is waste water disposal. On our farm the soils are heavy clay, and to get a permit to install a filter bed disposal system or holding system would be very expensive. For this reason we feel the cheese plant would be better if built in a village or city where there is a waste water treatment facility. Most small treatment plants will accept waste water but not whey, the BOD of whey is too high for small plants. Recommendations are that one checks with the planning boards and or sewage boards early in the process to gain the proper permits.

#### **Evaluation of plant design and cost.**

When one looks close at plant design you realize that not all plants are the same. The criteria that must be taken into account are:

1. The type of cheese or cheeses that you intend to produce.
2. The volume of cheese that you need to produce.

3. Amount of storage that is required for both the curing and the aging of your products.

With the help of Auro Tech, Inc. they detailed the plant size and layout. Proper layout of the plant is very important in trying to keep the cost of labor to a minimum. They also included a list of the equipment that would be needed for the production of a salt brine semi-soft cheese production facility.

Siegel Engineering has developed construction plans for the plant and retail store. Construction costs run at approximately \$35./sq.ft. for the plant. We feel confident that 6000 sq.ft. will be required for the plant. Cost would then be at \$210,000 for the manufacturing facility. Our marketing plan calls for a retail area. We feel 2400sq.ft. will be sufficient retail space. Again \$35./sq.ft. will be required building cost for the retail store, which gives us another \$80,000 in building cost.

For equipment, we will be able to acquire some of the needed equipment used, but much of the equipment is preferred new for sanitation reasons and to avoid potential maintenance breakdown cost. For \$137,000 we will be able to purchase the equipment needed for the manufacturing plant.

This sum of \$427,000 is very large indeed, it is the biggest surprise that we encountered in the analysis of this project. The experts were not surprised and said that this was to be expected. In the end, trying to cut cost in these areas will be looking for trouble further down the road, they say that the lack of space will be detrimental to the quality of product.

#### **Evaluation of Financials.**

As with all business startups, the development and understanding of a financial plan is most crucial. I'm going to highlight some of the major findings from our financial analysis.

In the first scenario we looked at how long it would take to break even producing our semi-soft cheese only at the rate at which we think we can enter the market place. That is 75,000# of cheese the first year gradually increasing to 300,000# the fifth year. The data shows that at this rate we would begin to make a profit in the fifth year, and require \$280,000 of operating capital to keep operating the first four years. In this first scenario we assumed we had working capital in a cash account. This gave us base line data to continue work from.

The next scenario was to borrow the operating capital and to pay interest on it at the same time. This would require

another \$100,000, to a total of \$380,000 operating capital. By the end of the fifth year we still would not be making a profit, in fact we would still be short \$7,700. One can see that the operating capital and the interest to borrow it is crippling. Often I have heard that in business start-ups it is the lack of operating capital that most often forces one into bankruptcy. This has been made clear to us.

With these first two scenarios we would not have been operating the plant efficiently, our data showed that we were paying labor and some fixed cost as if the plant were operating at full potential. To change this our third set of data included along with the speciality cheese the production of cheddar cheese to keep the plant operating at full potential. The cheddar was priced at \$.03 over Green Bay Cheese Exchange price. At this rate we reduced the amount of working capital to \$62,000. By the end of the third year we would be making a profit of \$33,000. By the end of the fifth year we were able to project a profit of \$47,000. This begins to make it look more viable, but still laced with problems. We had worked up more financial plans and are at present trying some more ideas out on paper.

Probably the most promising "what if" was one we had produced using Blue-Cheese. With information from Dan Carter, Inc., in which they feel there may be more room in the market place for high quality blues, they felt that we could be up to full production of 300,000# in three years. With Blue cheese the first year would require \$125,000 of operating capital, \$62,000 the second year and by the third year a profit of \$39,000 could be expected. Some major problems with Blue cheese are that it will require more labor, in a blue plant only blue cheeses can be produced, and blue cheese requires aging time, minimum of 60 days but the cheese is a better product at 180 days. Aging time cost much money, it would take \$126,000 to carry and develop this needed inventory. Granted, this money for inventory will come back later on, but it does show again the need for large sums of operating capital.

This overview of the financials expresses the dilemma that one has in trying to get a handle on production levels and the need for operating capital.

## Conclusion.

This brings us to "where are we". At present we are trying to approach this plaguing operating capital problem.

I firmly believe that given strong long term support that farmstead operations are capable of appearing and staying in the Wisconsin Agricultural Landscape.

This analysis has shown us that marketing is far more important than manufacturing. Although this gives us a "catch 22" situation where how do we enter and understand the market before production begins. We must have product to predict how the market will react.

Our approach to this problem at this time is the building of a retail store with the facilities to finish (cure and package) cheese which is manufactured in some other plant. The French word for this is Affinage, the art of aging cheese. At present time we are in touch with two plants that are considering manufacturing our milk, (remembering non co-mingled milk) into a semi-soft cheese. We have been unable to find a plant that would manufacture a blue cheese with our milk. This approach could greatly reduce the overhead cost of production, reduce by some degree the operating capital requirements and at the same time really allow us to test the market place with a almost farmstead cheese.

From this approach the major findings maybe a real surprise, imagine if the retail outlet would show us that a local support for a aged cheddar maybe more viable than we think, by the way we did see that in Vermont.

RESEARCH PROPOSAL MAY, 1992

Submitted to

WISCONSIN MILK MARKETING BOARD

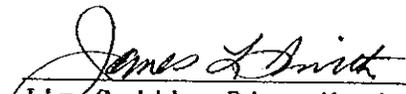
BY

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Gerald & Elise Helmerl  
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With Approval

  
Mr. Jim Smith Dir. Marketing DATCP

  
Mr. Erwin Sholts Dir. (ADD) Program DATCP

Dr. Richard Klemme Dir. (CIAS) UW-Madison

Dr. Brian Gould (CDR) UW-Madison

Mr. Dan Carter CEO Dan Carter, Inc. Mayville, Wi.

Dr. N.R. Gandhi CEO Auro Tech, Menomonee Falls, Wi.

RESEARCH PROPOSAL MAY, 1992  
TO WISCONSIN MILK MARKETING BOARD; BUSINESS DEVELOPMENT UNIT

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Submitted Saxon Homestead Farm, since 1850.  
By: 15621 S. Union Rd.  
Cleveland, Wis. 53015 (Manitowoc County)  
Gerald & Elise Heimerl (414) 693-8300

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Title: ANALYZING SMALL-SCALE SPECIALTY CHEESE PLANT  
STARTUP, MANUFACTURING AND MARKETING.

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SUMMARY OF CURRENT PROJECT:

All of us recognize that Wisconsin's overall well-being has a tremendous linkage to the vitality of our agriculture. In order that "America's Dairyland" maintain it's historical leadership in the cheese industry, our 1991 DATCP funded project proposes to analyze and adapt the time-honored European specialty cheese-making concept to Wisconsin's dairy industry.

As of May, 1992, this grant has given us the ability to hire four consultants. 1. Dan Carter, Inc. with their impeccable national reputation, has revealed a remarkable list of small scale potential specialty cheese niches.

2. Auro Tech, Inc. with Dr. N.R. Gandhi being a foremost leader in cheese culture technology, has already developed a specialty cheese using our own farm produced milk. The marketers believe this "exceptional" cheese will be able to enter the market place with assurance.

3&4. At this time, our other two consultants (dairy plant design engineer and accountant), are waiting for more exact numbers on equipment needs, plant size and design layout. After these numbers are completed, a detailed financial business plan will be completed.

Preliminary data indicates that small-scale production cheese offers a coveted window of opportunity to compete in the market which is now pressured by European cheese imports and its cheese related businesses. If Wisconsin is to remain the national leader in cheese production not only in the large scale category, but also in the small-scale gourmet class, it seems "a natural" to turn some of our over-production into a class of its very own. Understanding that this premise comes not without risk, the time has come for Wisconsin, America's Dairyland, to address the issue.

WMMB RESEARCH PROPOSAL OBJECTIVE:

Specialty cheese manufacturing is being viewed as an integral component in the maintenance and expansion of dairy product sales. This research would generate further understanding of cheese market development, particularly, Wisconsin Specialty Cheeses developing new markets.

Dr. Rick Klemme, Director of the Center For Integrated Agricultural Systems (CIAS), U.W. Madison, has agreed to try and coordinate a team of interdisciplinary researchers to case study our whole-farm diversification transition strategies.

Dr. Brian Gould, Economist in the Center For Dairy Research, U.W. Madison, with the aid of his newly developed software, has agreed to a dairy plant analysis.

Mr. Jim Smith, Marketing Division Director, DATCP, and Mr. Erwin (Bud) Sholts, Director of Agriculture Development and Diversification, "ADD" program, DATCP, have enthusiastically agreed to support this project with their respective departments research and expertise.

From the private sector side of cheese marketing/technology, Mr. Dan Carter and Dr. N.R. Gandhi have only encouraged us with unabated loyal support as to the merit of this project. They believe this will serve as a dairy industry showcase example for the entire state of Wisconsin.

Now where does the WMMB fit into this proposal? The major hurdle to the start-up of this small specialty cheese business is the capital required. The banking industry requires principle and interest payments to begin 30 days after startup, as if production is at 100%. All indicators point to requiring a slow-growth entrance into this market, and up to five years to reach full production. Understanding this premise explains the European expansion of their businesses into Wisconsin. They realize the slow-growth, long-term potential of the largest specialty cheese market opportunity in the world. What we respectfully request of the WMMB is financial support in the form of a \$200,000 revolving grant, to be returned at the end of five years.

#### EXPECTED RESULTS:

This study will research a market niche that we believe has never seen documentation. We expect that the results of this project will show the "how to" for starting a specialty cheese business. This study will surely broaden the existing knowledge base of WMMB's visionary value-added Wisconsin Specialty Cheese program. Of major importance, this proposal will show no displacement of other manufactured dairy products. To the contrary, increasing cheese varieties will create greater competition for raw milk. Ultimately, our wonderful dairy state of Wisconsin will sell more milk, utilize butterfat and of great significance, we will retain more dollars at home.