

**Implementing Sustainable Agriculture Practices
Producer Grant Program**

FINAL REPORT

I. Project Identification

Name:	Ed Jeanquart 249 Cty. XC Forestville, WI 54213 Tel: 414-856-6889	Kevin Kiehnau 6265 Kiehnau Rd. Egg Harbor, WI 54209 Tel: 414-743-5255
-------	---	--

Grant Title: Alternative Dairy Systems: Labor and Quality of Life Comparison

Date: December 21, 1993

Farm Descriptions:

Name:	Ed Jeanquart	Kevin Kiehnau
Age:	41	31
Yrs. Farming:	17	14
Education:	14+ years	12 years
Type of Business:	Family	Family
Acres owned:	210	100
rented:	85	142
Dairy Herd Size:	60	60
DHIA Herd Ave.:	23000#/cow	22,000#/cow
Crops: Corn	135 acres	33 acres
Small Grain	42	28
Hay	98	94
Sudan Grass		37
Pasture		50

Family members and hired help:

Jeanquart family: Ed, Kay, four children ranging in age from 8 to 19 years. Hired help includes one college student, Darrin.

Kiehnau family: Kevin, Sue, two small children under 3 years of age and a teenage nephew. Hired help includes one full time hired employee, Steve with small amounts of additional labor from Kevin's father and some part-time seasonal hired help for haying.

Additional farm information: Both farms have approved SCS Soil Conservation Plans and hire additional labor beyond family labor. Both wives have part-time off farm jobs. Both farms have sealed storage for high moisture grains and similar silos for storage of winter forage.

Before receiving this grant, did you practice any sustainable practices? If so, what were they and how long had you been practicing them?

o Ed Jeanquart

Yrs. Practiced

Sustainable Farming Practices:

*Transition to four year crop rotation 1 year corn, 1 year small grains, 2 years alfalfa	5
*Manure nutrient crediting	5
*Legume plowdown credits for corn	5
*Corn with reduced/no herbicides and mechanical weed control	5
*Band spraying and liquid fertilizer application in corn	3
*Minimum tillage in corn	2
*Barley seed-down to legume with reduced/no herbicides	5
*Deep Nitrate soil testing for corn	1

o Kevin Kiehnau

Sustainable Farming Practices:

*Pasture establishment	3
*Intensive rotational grazing	2
*Corn with reduced/no herbicides and mechanical weed control	5
*Manure sampling and nutrient crediting	5
*Legume plowdown credits for corn	5
*Frostseeding of pastures and haystands	2

Please list other producers or businessmen who assisted with the project and explain how they were involved.

None

Did you work with personnel from any public agency, such as the Extension Service, Soil Conservation Service, or Soil and Water Conservation Districts, etc? If so, please list who and how they provided assistance.

Consultants retained for the project included:

Dr. George Stevenson, Assistant Director of the University of Wisconsin-Madison Center for Integrated Agricultural Systems. Dr. Stevenson's background is in rural sociology. His expertise was used in helping to develop the methodology and analyze the data collected.

John Bobbe, Coordinator of the Northeast Wisconsin Sustainable Farmers Network, has a Master's Degree in Agricultural Economics, with undergraduate work in agricultural business and farm management. In addition, he has an extensive background in human resource management having done graduate work in this area. He

helped design the on-farm data collection format, compiled the data, developed the data analysis techniques, and helped write the final report.

II. Project Description and Results

1. List the barrier to implementing a sustainable agriculture practice identified in your proposal and your goals to overcome it.

The focus of the proposal was to identify how sustainable farming techniques and methods impact on time and labor management in conventional sized dairy operations. The study helped to identify for a 5 month period (May 1-September 30, 1993) how the available labor pool (family and hired) is used to accomplish various tasks and time is spent on our farms for work and family.

2. Describe what you did to achieve these goals.

--What methods did you use and why did you choose them? (Please be specific so that other producers can consider what would apply to their operation and gain from your experience.)

Daily Logs were kept for each family member and the hired labor on each farm. Data recorded included the time spent on each task and who was involved. The daily logged hours were then transferred to weekly time sheets. The weekly data was then entered into a computer spreadsheet for analysis.

The methodology was adapted from a study done at the University of Wisconsin Department of Agricultural Economics on the Krusenbaum Farm, East Troy, Wisconsin. A similar methodology was used in that study. A copy of the weekly log sheet used for compilation of the data is included in Appendix A, p.1.

In the Jeanquart family, Ed kept a log of his time and for the hired help. Kay logged her hours and that of the children.

In the Kiehnau family, Kevin logged the hours of his time, the hired help and for his nephew. Sue logged her hours.

The method that seemed to work best was simply using a pocket notepad and recording the time of day, task and who was involved. (Appendix A contains a copy of the logged data from each farm for July 1, 1993 and a further illustration of the methodology.) In addition, family members keeping logs were asked to write journal entries beside the log entries where appropriate.

Data was then transferred by John Bobbe, project consultant, to the data sheets and compiled by months. It was then entered into a computer spreadsheet for printout, analysis and graphical presentation. Data by weeks is contained in Appendix B.

Additional methodology employed: "Shadowing" as used in industrial settings was used on both farms for one day. John Bobbe, Project Consultant spent a day on each farm from the beginning of the day to the end. This helped corroborate the data being recorded on a daily basis in the logs and to understand in more detail the tasks each family member or the hired help performed.

The days selected for shadowing were simply two days in October, at the end of the project that fit the schedules of the families.

The time logged from the shadowing is included in Appendix C.

Periodic meetings were held with John Bobbe on each farm to review the log data and assure correct interpretation of the data for recording. Data was exchanged between our two farms. In addition, three meetings were held with our two families, Dr. Stevenson, and John Bobbe. The first meeting was held in April, to plan the methodology and approach to be used. The second meeting was held in mid-July to review the project to date and a final meeting was held in November to review the data and analyze the findings and conclusions.

Project results:

**Labor task categorization: Based on the log sheet used in the Krusenbaum Study at the University of Wisconsin, tasks were divided up into four main categories with subcategories in each. The hours devoted to each task based on log entries were then allocated to each category.

1. Dairy Enterprise Tasks--specific tasks included:

- a) Barn Chores--tasks included such things as milking preparation, some feeding, scraping and liming barn allies, clean up, letting cows in and out of the barn.
- b) Cow Care--working with veterinarians, routine health and medical care tasks for animals.
- c) Dairy Management--herd records analysis, DHIA.
- d) Manure Management--barn cleaning, cleaning calf pens, hauling manure out of storage.
- e) Machinery Repair (Barn)--any repairs related to activities in the barn such as mangers, drinking cups, milking systems, barn cleaner, silo unloaders.
- f) Feeding--calves and youngstock and in the case of the Jeanquart farm, tasks involved with the TMR Mixer and feeding the dairy herd. In the case of the Kiehnau farm, it also included some, but not all of the tasks for intensive rotational grazing.

Dairy Enterprise Tasks cont'd:

g) Miscellaneous-tasks that were not routine that didn't readily fit the other categories.

~~2. Cropping Enterprise Tasks~~-subcategories and associated tasks that specifically supported the dairy enterprise included:

a) Corn-tasks associated with corn from tillage and planting to harvest. Not all of the corn harvest was completed by the end of September which was the end of the period for which the logs were kept.

b) Small Grain-tasks from tillage and planting through harvest.

c) Hay-harvesting and ensiling or mowing.

d) Machinery Repair-all machine repair tasks that supported the cropping enterprise.

e) Crop Management-crop records, field scouting.

d) Miscellaneous-tasks that were not routine in nature and could not be specifically assigned to one of the cropping categories such as hay or corn.

3. Household Tasks-tasks directly or indirectly related to family life on the farm:

a) Personal Time-personal discretionary time.

b) Family Time-time spent with other family members.

c) Recreation.

d) Kid Support-tasks related to supporting the kids in the family such as helping with homework, 4-H Projects, errands such as to the doctor, school functions

e) House Support-this category was not on the original sheet, but was added to include tasks that support family living such as laundry, meal preparation, minor repairs

f) Miscellaneous-tasks that did not occur routinely or fit any of the other categories.

4. General Tasks-specific tasks included:

a) Errands-any trip that supported the farm such as getting repair parts, feedmill, etc.

b) General Farm Management-farm records, attendance at some farm meetings and functions that supported the farm generally.

General Tasks cont'd:

c) Permanent Fence and/or Building Repair-tasks did not include moving the paddock fences on a daily basis for intensive rotational grazing (IRG), but did include any type of permanent fencing to contain livestock and building repairs. Fence building related to IRG was included in the Dairy Enterprise tasks.

d) Project-a time factor was allotted for keeping the logs. The amount of time recorded probably underestimates the actual time in keeping the logs. It generally involved 15-30 minutes per day.

The actual data for each family is included in Appendix B.

For graphical and timeline analysis purposes, each month was divided into four 7 day weeks. The short week of the month was deleted. Doing this simplified the analysis process and does not appear to have affected the time series analysis.

Data Analysis:

Both farms were similar in dairy herd size with the dairy herd being the primary source of income on the farm. A comparison of the farms is included at the beginning of this report on page 1.

The analysis will focus on giving an overview of both farming operations, look at specific task areas that consume large amounts of labor, namely dairy and crops and finally how individual family members spend their time. In addition, the study looked at how hired labor is utilized on each farm.

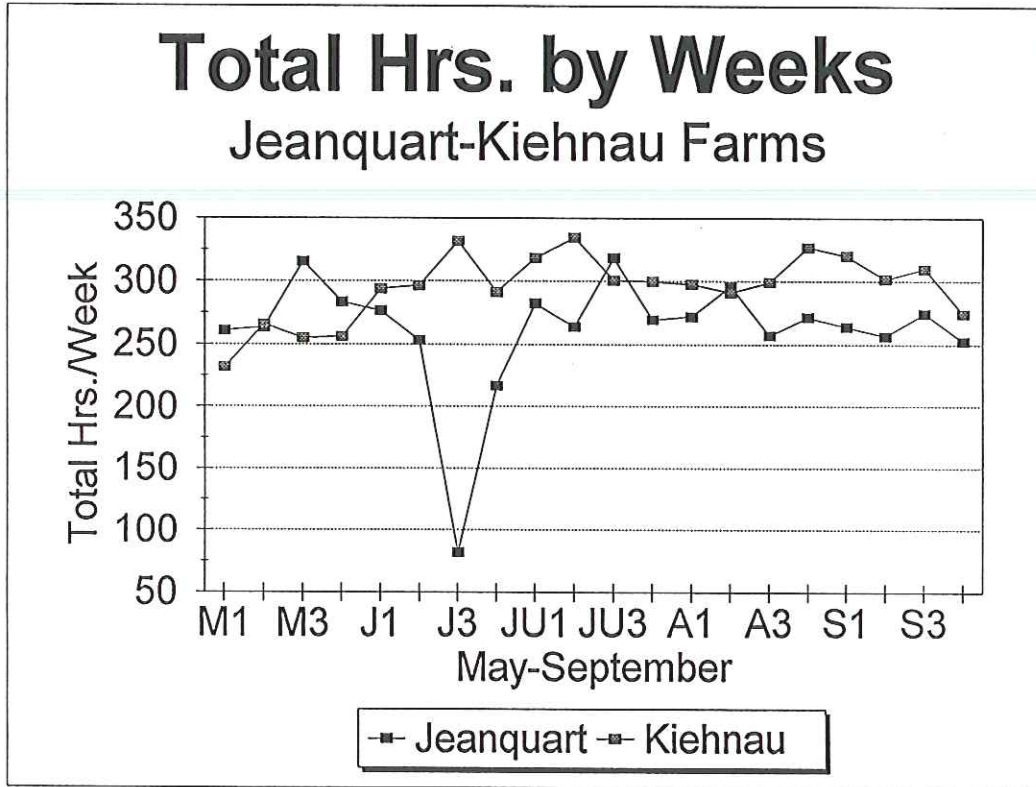
Overall View

For the five month time period of this study total hours per month are listed in **Table 1 and Graph 1** for each farm. Graph 1 compares the total hours by weeks on the Jeanquart and Kiehnau Farms. It includes the hours spent for all tasks in the four major logged categories, Dairy, Crops, Household, and General.

Table 1: Total Farm, Household and Average Hours/Day

Month	Farm Hours		Household Hours		Farm Hours/Day	
	Jean-quart	Kiehnau	Jean-quart	Kiehnau	Jean-quart	Kiehanu
May	732	643	346	473	23.6	20.7
June	588	672	337	598	21.2	26.5
July	768	720	436	595	26.7	28.5
August	685	693	525	567	22.1	27.5
Sept.	664	644	299	552	23.3	26.4
Ave.	687	675	389	557	23.5	26.0

Graph 1:*



*The large decline in hours for the Jeanquart farm during the last part of June was due to taking a family vacation. During that time mostly Dairy Tasks were performed.

The total hours (including time spent on household tasks) on both farms ranges between 250-300+ hours per week on average.

Dairy Tasks

Dairy Tasks are analyzed in Table 2 and Graphs 2-5. Table 2 shows the average time per day devoted to Dairy Tasks on the two farms.

Table 2: Average Time Per Day Devoted to Dairy Tasks

Month	Jeanquart	Kiehnau
May	15.1	13.5
June	13.4	18.5
July	15.2	18.6
August	12.1	18.6
Sept.	11.7	11.7

Graph 2:

