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Agricultural Utilization Research Institute

2005 Legislative Report



Agricultural Utilization Research Institute

I. Overview

This report is intended to provide a summary level overview of activities and organizational initiatives that have taken place at the Agricultural Utilization Research Institute (AURI) over the past year. AURI is the economic development catalyst for value added agriculture, providing vital connections between producers, manufacturers, universities and economic developers across Greater Minnesota. Current programs are geared to meet this mission and are summarized in order to provide a review of the services that AURI offers to producers, medium-sized businesses and entrepreneurs across the state.

Operating Environment

The past year has been both challenging and rewarding for AURI. In state fiscal year 2004, spending on project activities was dramatically curtailed due to reduced resources. In addition, staffing levels were reduced from a high of 36 employees to an organizational low of 14 staff members. This created many challenges for AURI staff and clients, and ultimately slowed operations relative to project activities.

With the uncertainty of state funding at the end of the last biennium, and the recent budget reduction of nearly 60%, budgetary and programmatic changes were required to ensure the continued viability of the organization. After a review of programs, services, existing projects and the strategic direction of the institute, a reorganization took place and adjustments were implemented in the summer and fall of 2003. During the planning, several components of the organization were closely evaluated. Specifically, each program and function of the institute was closely scrutinized not only for effectiveness, but to ensure provided services were not offered by other organizations. Management carefully measured the mission of commodity group and research and promotion councils, universities and economic development entities across the state. Consideration was also given to potential funding possibilities that could be leveraged with state dollars. After one year of implementation, the Board of Director of AURI strongly feels that the organization has emerged more viable than ever. The organization has become the example for other states to follow in value-added agriculture programs.

During the 2004 operating year, major steps were taken to operationalize the improved strategic intent of AURI. Additionally, the Institute was awarded two major grant opportunities: The USDA Agricultural Innovation Center grant, utilized to establish the Minnesota Center for Producer-Owned Energy (\$1,000,000), and the Xcel Renewable Energy Development Fund grant for \$760,000. The awarding of these two grants means that AURI has effectively leveraged the \$1,600,000 state appropriation one to one. (All current AURI funding programs require a 1:1 match. Obtaining this level of outside funding in less than one year is a major accomplishment for the organization.

II. Organizational Priorities

AURI staff and programs place an emphasis on activities that have a greater chance of making a substantial impact on the utilization of Minnesota commodities, and projects are evaluated to ensure that resources are directed to allow for the maximum benefit to Minnesota agriculture. Further, AURI staff works with other partners to ensure efforts are not duplicated and that the client gets the best service possible.

A. Critical Value Added Priorities

1. Energy & Co-Products
 - Co-products, Fats & Oils Tech Assistance
 - Analytical/Process/Pilot Plant Services
 - Project Development Services across Greater Minnesota
 - Establishment of the Minnesota Center for Producer-Owned Energy
2. Commodity Utilization – Food/Non-food uses
 - One-Site Technical Assistance in labs located in rural Minnesota
 - Project Development Services across the Greater Minnesota Region
3. Animal Product Processing & Product Development
 - Technical Assistance On-Site in the Marshall Facility
 - Lab Development Services in Crookston, Marshall and Waseca
 - Project Development Services across Greater Minnesota

B. Targeted Clients and Projects

AURI project development priorities are placed on producer-owned cooperatives and on established agricultural processors. While these are not the exclusive focus of AURI activities, these broad groups offer some of the greatest potential producer impact. AURI continues to assist with start-up and entrepreneurial projects which could be considered smaller scale.

III. Administrative Activities

A. On-Going Objectives of AURI Administration

- Streamline programs and services.
- Seek additional funding opportunities that leverage state dollars.
- Address critical budget constraints; ensure the long-term viability of the organization.
- Focus resources on efforts with the largest potential commodity impacts.

B. Staffing Impact of State Budget Reductions

Through a combination of not filling open positions, as well as staff reductions, the AURI staffing levels have been significantly reduced.

2003 Staffing level: 28

2004 Staffing level: 14 full-time and 3 part-time employees

Although staff levels were critically reduced due to budget cuts, additional funding sources have generated a need for an increased staff level, particularly in the technical and project services areas.

IV. Agriculture Innovation Center - Center for Producer Owned Energy

In the fall of 2003, AURI applied for a USDA Agriculture Innovation Center grant to fund the "Center for Producer Owned Energy." In October of 2003, AURI was notified that its proposal was selected to receive a \$1 million grant to fund the center. This \$1 million requires at least a on-to-one match in funding from AURI and other partners.

Focus

AURI created the Minnesota Center for Producer-Owned Energy. The mission of the Center is to support the creation and development of producer-owned value-added businesses related to the production of renewable energy and the utilization and marketing of related co-products and byproducts.

Collaboration

Over 50 different partners have offered support and assistance in the development and implementation of the Center for Producer Owned Energy. Collaboration is a key component of the development of and future operation of the center. Partners span the range of state, federal, public and private organizations.

Projects Identified

- Biodiesel Generator/Wind Hybrid System
- Ethanol Fuel and Conversion Factors of Side Streams
- Process Development, Utilization of Excess Plant Heating Capacities
- DDG Alterations to Enhance Flowability

V. Summary of Client Services

AURI scientists and technicians provide a wide range of expertise including feasibility evaluation, product development, co-products utilization, process and product evaluation, and product scale-up. In addition, AURI laboratory and pilot plant facilities are equipped to help with a variety of technical issues facing value added projects. AURI can also assist with collaborative efforts and referrals to other organizations that may be of assistance.

Technical and business development assistance is offered by AURI's various professional and technical staff including, but not limited to:

A. Applied Technology Services (ATS) program is intended to bring agriculturally-based products or processes to commercialization by using AURI technical personnel, labs and pilot plant services.

Technical Feasibility: A project may focus on a new or improved process technology or on development of new value-added food or non-food agricultural products. The project may include an evaluation of the product's technical soundness and quality.

AURI technologists/scientists are available to provide consulting and technical services with respect to product and process development; product evaluation and testing; and sourcing materials, equipment and services. These services are provided directly in Greater Minnesota.

AURI pilot plants and labs are available to assist in product and process development, scale-up, nutritional assessment and production for market assessment.

B. Product Development Services (PDS) program is intended to produce value-added products. The PDS program is focused on developing, in concert with AURI staff, a salable product, process or production technology to enhance a feasible product. AURI personnel, labs and pilot plants are available to assist a Minnesota-based client by:

- Providing entrepreneurial resources with respect to value-added start-ups
- Providing informational and technical assistance
- Providing high quality process and product development
- Fostering project development through collaboration

In addition to obtaining grant funding for services that AURI can not provide, clients utilizing this program must be actively involved in a team project with AURI technical and scientific staff. All AURI grants require a one-to-one match contribution by the client or other funding entity.

C. Distribution Enhancement Program (DEP) is intended to bring agriculturally-based value-added products or processes to market at an introductory level. DEP is a grant program which focuses on enhancing an active AURI project that demonstrates a need for assistance in the distribution environment.

D. Green Field Energy Program is a technical assistance services program available to agricultural producer groups to evaluate the market and technical feasibility of developing and producing agriculturally-based renewable forms of energy or co-products. Green Field promotes the establishment of producer-owned energy entities that don't currently exist or were only recently organized. A network of specialized technical assistance providers, working in concert with and coordinated by the Center, will provide the core services for this program on a cost-share basis with applicants. All proposed projects must have needs related to market feasibility and business development to be eligible for the program.

Determining feasibility is the ultimate goal in evaluating potential new renewable energy ventures. Renewable energy and co-product technologies that will be considered for feasibility evaluation and further development under this program may include:

- New technology development
- Adapting or perfecting existing technology; or
- New value-added energy products development.

E. Renewable Technology Assessment Program (RTAP) is a technical assistance services program available to existing agricultural producer-owned organizations to evaluate the market and technical feasibility of developing or perfecting technologies related to the production of agriculturally-based renewable forms of energy or co-products. A network of specialized technical assistance providers, working in concert with and coordinated by the Center, will provide the core services for this program on a cost-share basis with applicants.

Determining feasibility is the ultimate goal in technology evaluation and development. Renewable energy and co-product technologies that will be considered for feasibility evaluation and further development under this program may include:

- New technology development
- Adapting or perfecting existing technology; or
- New value-added energy products development

VI. Project Activity, FY 2004

A. Detail of Funded Projects, Appendix A

B. Project Time Logged, Appendix B

a. Technical Services, Pilot Plant, Laboratory

Appendix A

Agricultural Utilization Research Institute Projects Funded during State Fiscal Year 04

Project Title	Funding
LAMB-Lamb Products Marketing	\$ 1,591.13
BRLY-Barley Beta Glucan Consum	\$ 21,615.59
Bio-Energy Institute of Standa	\$ 24,383.43
MULTI-Specialty Bird Feed Prod	\$ 4,449.38
COLLAB-Economic Impact	\$ 2,612.00
COLLAB -Dog Food	\$ 1,606.50
Making Biomass Energy A	\$ 1,203.59
COPROD-Methane Digester Feas	\$ 8,000.00
AG RESIDUES-Characterizing Ag.	\$ 19.35
BEEF- MN Enhanced Beef-Phase 2	\$ 600.00
Evaluation of Soybean Varieties	\$ 9,400.00
HACCP-Food Safety Inform Piece	\$ 274.77
HACCP-Food Safety Inform Piece	\$ 23.38
HACCP-Food Safety Inform Piece	\$ 43.54
COPROD-Mississippi Topsoil Exp	\$ 7,539.66
BRLY-Barley Beta Glucan Consum	\$ 10,505.36
COLLAB-Berkshire Marketing	\$ 2,610.00
ALF-Alfalfa New Products Initiative	\$ 882.33
MULTI-Eval. Oils As Fuels/Turb	\$ 16,364.97
On Farm Pesticide Reduction	\$ 2,653.23
Bi-Based Weed Cont. Strawberry	\$ 4,045.00
Honey Bee Resist	\$ 5,554.78
Mgmt. Green Peach-Aphid	\$ 3,746.49
Resistance of Barley Germplasm	\$ 17,770.71
Imp Bio. Control & Comp Pest	\$ 5,629.58
Novel Seed Treatments Veg Crop	\$ 28,183.83
Int Pest Mgmt Fungus Gnats-P2	\$ 4,421.25
Reduce Pesticide Use-Cabbage	\$ 2,783.09
Mgmt Cottonwood Leaf Beetle	\$ 7,187.13
Crop Rotation Canola Disease	\$ 19,095.22
Strawberry Production System	\$ 11,849.52
Reduce Pesticide Use Greenhouse	\$ 16,130.08
Reduce Pesticide Use-Cabbage	\$ 1,519.35
Genetics/Blotch Resistance	\$ 1,745.95
Control Aster Yellows	\$ 17,548.37
Minnesota Hybrid Poplar Project	\$ 256,486.23

Appendix B

Agricultural Utilization Research Institute Project Technical Assistance Fiscal Year 2004

Project Number	Team Leader	Project Title	Hours Expended
2000001T	MSPARBY	Produce wine for tourist area	11.00
2000023T	CWADHAWA	MULTI-Bakery Products	16.00
2000044T	LGJERSVI	MULTI-Product Line Expansion	0.50
2000053T	EWENE	FPEAS-Crookston Bean	4.00
2000055T	JCRAWFOR	COPROD-Value Added Manure	171.00
2000062T	MSPARBY	BRLY-Barley Beta Glucan Consum	19.50
2001003T	MSPARBY	LAMB-Country Meadow Farms	13.00
2001005T	MSPARBY	CORN-Distiller Grain Protein	4.00
2001007T	ADOERING	MULTI-Specialty Bird Feed Prod	56.50
2001017T	MNORRIS	COPROD-Value-Added Processing	18.00
2001018T	DTIMMERM	BEEF - Hancock Quality Meats	0.70
2001031T	ADOERING	MULTI-Analysis of Cull Beans	2.50
2001032T	CWADHAWA	MULTI - Soup Line Expansion	0.65
2001034T	CWADHAWA	FIBR-Expansion of High-Protein	0.15
2001045T	ADOERING	CORN-Corn Cob Pelleted Fuels	16.50
2001046T	CWADHAWA	MULTI-Bakery Mix Business	10.15
2001059T	DTIMMERM	MULTI-Minnesota Enhanced Beef	22.10
2001060T	MNORRIS	DUCK-Frnch Spec Foods Mkt Dev	0.60
2001063T	ADOERING	COPROD-Renewable Ag Biomass fr	8.50
2001065T	DTIMMERM	BEEF-Kim Vig Inc. Market	18.50
2001067T	JCRAWFOR	SOYB-Soybean Product Expansion	8.50
2001070T	MSPARBY	COLLAB-Economic Impact	0.50
2001071T	MSPARBY	COPROD-Poultry Bedding	18.00
2001073T	ADOERING	Making Biomass Energy A	94.00
2001074T	CWADHAWA	MULTI-Food Advantage, Inc.	0.15
2001084T	DTIMMERM	COLLAB-Berkshire Marketing	57.50
2001092T	ADOERING	COPROD-Ag.Co-Prod./Renew Fuel	2.50
2001093T	KSANNES	MULTI-Utilization of Fibrous A	8.00
2001094T	MNORRIS	PORK-Pastures Pork	2.00
2001095T	DTIMMERM	ELK-MN Elk Meat Market	8.00
2001098T	DBARTHOL	MULTI-Countertop Tumbler	1.00
2002003T	LGJERSVI	DAIRY-Cedar Summit Dairy, LLC	28.50
2002008T	MSPARBY	SOYB-Marketing of Soy Drinks	3.50
2002011T	CWADHAWA	MULTI-Oat Cakes Manufacturing	0.15
2002018T	ADOERING	ALF-Alfalfa Feed Additive	13.50
2002020T	ADOERING	FIBR-Fiber Lanscape Mats	0.75
2002021T	DBARTHOL	BEEF - Pioneer Snacks, Inc.	12.25
2002023T	CWADHAWA	TMATO-Sauces and Rubs	0.15
2002025T	ADOERING	FIBR-Agri Mulch	4.00
2002027T	DTIMMERM	PORK-Hmong Processing Center	2.00
2002028T	MSPARBY	COPROD-Methane Digester Feas	12.75
2002029T	ADOERING	CORN-New Forms of Feed & Marke	0.75
2002037T	ADOERING	SUGAR BEETS-Value Added Feeds	5.00

2002039T	DTIMMERM	CORN-French's Specialty Corn	63.00
2002040T	BREUTER	BEEF-R&P Gourmet Beef	374.50
2002041T	DBARTHOL	SOYB-Soy-based Meat Analogue P	0.70
2002049T	ADOERING	AG RESIDUES-Characterizing Ag.	68.00
2002051T	ADOERING	U of M - New Feed Alternatives	33.00
2002055T	CWADHAWA	MULIT-Specialty Bread	0.15
2002061T	DTIMMERM	BEEF- MN Enhanced Beef-Phase 2	17.25
2002063T	DTIMMERM	South West Min. Natural Beef	24.00
2002069T	ADOERING	Bio-Energy Institute of Standa	9.00
2002070T	RPATZER	COLLAB-Animal Fats/Rendered Gr	65.00
2002072T	MSPARBY	COPROD-Value Addition of Corn	12.00
2002076T	ADOERING	Fact Sheet - Corn Burners and	23.50
2002078T	CWADHAWA	WHT-Product Dev. for line exte	2.15
2002081T	CWADHAWA	WHT-Reformulation and Commerci	2.15
2002084T	ADOERING	Value added Utilization of DDG	26.00
2002086T	CWADHAWA	Evaluation of Soybean Varietie	15.50
2002087T	CWADHAWA	Opp. for Funct. Foods in Cerea	8.15
2002090T	DTIMMERM	Small Species Processing Plant	36.00
2002091T	ADOERING	Utilization of DDGs	17.00
2002093T	MSPARBY	Small Food Processors Training	3.00
2002094T	CWADHAWA	Value Added Ag Challenge	4.50
2002103T	ADOERING	SOYB-Knewtson Seed Co	315.00
2002106T	DTIMMERM	COPROD-Animal Co-Products Util	2.00
2002108T	MNORRIS	BEANS-DD Value Added IP	48.50
2003001T	DTIMMERM	MULTI-Horse Feed Product	4.00
2003002T	CWADHAWA	BUKWT-Dev. & Marketing of Prod	52.65
2003005T	DTIMMERM	POULT-Natural & Organic Poultr	195.00
2003009T	CWADHAWA	OATS,WHT-Hot Cereal & Soup Mix	0.15
2003010T	CWADHAWA	SUGR,WHT,DAIRY-Gourmet Health	2.15
2003011T	TSISSON	CORN-Corn Meal Fish Coating	1.00
2003013T	DBARTHOL	PORK-Dombrovski Meats-Cured	3.20
2003014T	MNORRIS	LAMB-help launch reduced fat	2.70
2003015T	CWADHAWA	BISN-Buffalo Pass Ranch VA Pro	1.75
2003016T	MSPARBY	WHT,BRLY-Grain straw/home cons	2.00
2003017T	DTIMMERM	BEEF-MN Beef Ind. VA Products	7.00
2003018T	CWADHAWA	FLAX-Product development Marke	13.40
2003021T	CWADHAWA	OATS-Commercialize Oat Cookies	7.40
2003023T	ADOERING	DAIRY-Willmar Digester/Energy	4.50
2003028T	CWADHAWA	Nutritional Labeling-Brochures	88.78
2003030T	BREUTER	EDUCATION-Sm. Scale Animal Pro	15.55
2003031T	DBARTHOL	HACCP-Food Safety Inform Piece	23.05
2003033T	MNORRIS	PORK-P G Reduced Fat Bratwurst	11.50
2003036T	DTIMMERM	MULTI-Lamb shop Gyros, Lunch M	4.50
2003038T	LGJERSVI	Direct Marketing Brochure	1.50
2003039T	ADOERING	HAY-Kandi Hay Development	10.00
2003040T	ADOERING	WHT - Improved Cat Litter	28.00
2003042T	MNORRIS	MULTI-Eval. oils as Fuels/Turb	25.75
2003044T	CWADHAWA	MULTI-Certified Organic Entree	55.28
2003047T	LGJERSVI	MULTI-Info Services FY2003	0.50
2003048T	CWADHAWA	MULTI-Dairy & Beans	4.15
2003050T	MSPARBY	COLLAB-Renewable Energy Model	7.50
2003051T	CWADHAWA	RICEW-Anal/Nutrit. Label/Wild	0.15

2003052T	DTIMMERM	PORK-Health Ben/Extruded Soybe	235.00
2003053T	CWADHAWA	CORN,POULTC,PORK-Tamales	0.40
2003055T	DBARTHOL	MULTI-Beef, Pork, & Poultry	7.50
2003056T	CWADHAWA	FLAX-Market Assess/Whole/Groun	0.15
2003057T	ADOERING	COPROD-Ag Biomass Fuel Evaluat	9.00
2003059T	ADOERING	COPROD-Certified Milk Replacer	0.75
2003060T	DTIMMERM	FED-FSMIP Grant Time	1.50
2003062T	CWADHAWA	BEEF-test Market.Pepper Sticks	8.15
2003064T	CWADHAWA	DAIRY-Commercial of Cheescake	2.15
2003065T	CWADHAWA	MULTI-Nut. Labels/10 froz pizz	0.78
2003066T	CWADHAWA	POULTT,POULTC-Gai Yoh testing	1.15
2003068T	CWADHAWA	WHT-Commercialize Gravy Mix	6.15
2003070T	MSPARBY	MULTI-Moorhead Biodiesel	31.00
2003074T	ADOERING	COPROD-Fiber Opp. for Grasses	2.50
2003076T	CWADHAWA	MULTI-Gluten Free Products	0.65
2003077T	CWADHAWA	BRLY-WHT	1.15
2003078T	MNORRIS	PORK-Pork Spare Ribs	13.90
2003079T	KSANNES	ETH-Feed Lot/Ethanol Plant Fea	19.00
2003080T	CWADHAWA	WHT-Dry Weather Creek	57.65
2003081T	CWADHAWA	TMATO-Green Salsa	0.15
2003082T	CWADHAWA	HONY-Commercial of Hot Wing Sa	3.28
2003084T	ADOERING	FIBR-Fiber Evaluation	62.50
2003085T	ADOERING	COPROD-NGP MN Biomass (willow)	15.50
2003086T	CWADHAWA	SUGR-Flavored Hot Teas	11.28
2003087T	CWADHAWA	MULTI-BBQ sauce nutrit. labels	0.15
2003088T	CWADHAWA	SUGR,DAIRY-Nut. Label/Truffles	0.15
2003089T	ADOERING	COPROD-Ag. Fiber Pellet	15.00
2003090T	CWADHAWA	SUGR-Unique flav/Jams, Jellies	6.15
2003093T	MNORRIS	S.W. MN. State Un.-Mike Rich	0.50
2003095T	ADOERING	COPROD-Ag. Fiber Carriers	135.25
2003096T	MSPARBY	RASP-Raspberry Greenhouse Prod	0.50
2003097T	MSPARBY	MULTI-Hallock Biodiesel Plant	59.50
2003099T	DTIMMERM	PORK-Light-weight Pork Market	94.00
2003100T	ADOERING	COPROD-Product Densification	34.00
2003105T	TSISSON	MULTI-White Earth Production	2.00
2003107T	DTIMMERM	BEEF-Pre-harvest ultrasonic	10.00
2003108T	CWADHAWA	MULTI-Gourmet Food Mixes	0.30
2003109T	CWADHAWA	MULTI-Organic Certification	45.75
2003110T	CWADHAWA	BEEF-Gelbvieh Breed Nutritiona	255.50
2003112T	DBARTHOL	BEEF-Summer Sausage PH	4.00
2003113T	DTIMMERM	POULTT-Shelf Stable Turkey Jer	35.50
2003114T	DBARTHOL	MULTI-Meat & Poultry Shelf lif	44.50
2003115T	ADOERING	CORN-Advanced Corn Stover Tech	9.00
2003117T	ADOERING	ETH-Ethanol Co-Prod./Livestock	81.75
2003118T	CWADHAWA	MULTI-Small Business Dev. Cent	9.00
2003GRANT	MNORRIS	Preparing for Grant Writing Pr	97.00
2003T	MNORRIS	Discovery 2003	124.50
2004001T	MNORRIS	MULTI-HACCP/SOP Cert. Maint.	172.25
2004002T	MSPARBY	COPROD-Mississippi Topsoil Exp	24.50
2004003T	ADOERING	COPROD-Energy Generation Thru	38.00
2004004T	DTIMMERM	MULTI-Corn & Soybean Energy Re	54.00
2004005T	DTIMMERM	CORN-Ultra-Sonic Processing	83.50

2004006T	DTIMMERM	POULTT-Turkey Co-Product Dev.	107.00
2004007T	DTIMMERM	CORN/SOYB-SW.MN.Biopolymers	112.50
2004008T	DTIMMERM	PORK-Ultrasonic Imaging	29.50
2004009T	MNORRIS	COLLAB-AURI/NCBA Collaboration	1.00
2004010T	CWADHAWA	WHT-Co-Man. Indian Flat Breads	1.30
2004011T	EWENE	MULTI-Mulch Development	49.00
2004012T	EWENE	SBEET-Sugar Beet Pre-processin	27.00
2004013T	JCRAWFOR	EDUC-Omega 3 Conference presen	55.25
2004014T	JCRAWFOR	COPROD-Market/omega3 chick&egg	6.00
2004015T	ADOERING	COPROD-Envirogro Solutions, In	12.25
2004016T	DBARTHOL	FFA-Sci Competition-2004	34.75
2004017T	MNORRIS	SOYB-Soymor: tests/Biodiesel	44.50
2004019T	DTIMMERM	BUFF-Buffalogal Bison	7.00
2004021T	MSPARBY	SOYB-Low Carb Bakery Goods	28.00
2004022T	ADOERING	COPROD-Ag. Biomass Collection	6.00
2004023T	DTIMMERM	BEEF-Value-Added Beef Cuts	2.50
2004024T	MNORRIS	COPROD-Value-Added Co-Products	22.00
2004026T	DTIMMERM	SOYB-Environmental Dust Contro	255.50
2004027T	CWADHAWA	DAIRY, SUGAR-Organic Ice Cream	12.00
2004028T	MNORRIS	COLLAB-2003 Client Survey	26.50
2004029T	CWADHAWA	MULTI-Meat Product Labels	1.25
2004030T	DTIMMERM	FSMIP Time	182.00
2004031T	MSPARBY	FIBR-Pelletization/Grass Fiber	40.50
2004032T	MSPARBY	WOOL-Raw wool/landscape mulch	77.50
2004033T	CWADHAWA	PORK/POULTRY-Cooked Sausage	54.30
2004034T	ADOERING	COPROD-Swine Odor Analysis	12.50
2004035T	ADOERING	MULTI-Aqua Innovations	22.00
2004036T	CWADHAWA	SUGR,DAIRY-labeling/Chocolates	13.20
2004037T	MSPARBY	COPROD-Industrial Degester	72.00
2004038T	CWADHAWA	WHT-Nutrit.Labeling/Pita Bread	5.00
2004039T	CWADHAWA	WHT-Dev./Low Carb Bread	18.75
2004040T	CWADHAWA	WHT/FLAX-Low Carb Breads	38.00
2004041T	MSPARBY	SOYB-Central MN Soybean Proces	40.50
2004042T	JCRAWFOR	SOYB-Cheryl Niemela	11.00
2004044T	DTIMMERM	BEEF-Rhine Lake Product Develo	12.50
2004045T	DTIMMERM	ELK-Elk Meat Marketing	119.50
2004046T	ADOERING	HAY-Native Prairie Grass Hay	22.00
2004047T	ADOERING	CODROD-Bio-Mat for Livestock	21.50
2004048T	DTIMMERM	CORN-Corn Utilization Research	99.50
2004049T	ADOERING	COPROD-EnvirGro Solutions, Inc	8.50
2004050T	DTIMMERM	BEEF-Scottish Highland Organic	5.00
2004051T	DTIMMERM	MULTI-Pork & Beef Process Meat	56.50
2004052T	MNORRIS	MULTI-Recycled Grease/An. Fats	133.00
2004053T	MSPARBY	MULTI-Feas/Optimal size Biodie	52.00
2004054T	DTIMMERM	MULTI-Hybrid Biodiesel/Wind Ap	41.00
2004055T	ADOERING	MULTI-EC2	39.50
2004057T	DTIMMERM	POULTT-Utiliz.turkey litter	14.50
2004058T	CWADHAWA	TRANS FATS-Information Brochur	4.75
2004059T	ADOERING	FLAX-Blue Ribbon Foundation	18.00
2004060T	DTIMMERM	GOAT-Meat Processing Plant	28.00
2004061T	MSPARBY	MULTI-Energy Alley	17.00
2004062T	MSPARBY	FIBR-Fiber Consortium	22.50

2004063T	ADOERING	COPROD-Biomass Feedstock Engin	8.00
2004064T	DTIMMERM	COLLAB-Berkshire Marketing	21.00
2004065T	DTIMMERM	BEEF-SW MN. Natural Beef	12.00
2004066T	MSPARBY	SOYB-Fuel Additive	24.00
2004067T	MSPARBY	CORN-Cellulose Conversion	20.00
2004068T	DTIMMERM	BEEF-Sausage Development	69.00
2004069T	CWADHAWA	DAIRY,SUGAR-Creamy Creations	4.50
2004070T	MSPARBY	CORN-Stover Test Burn	3.00
2004073T	ADOERING	BEANS-Bean Waste Evaluation	1.00
2004074T	ADOERING	FIBR-Prep & Sourcing Agricultu	7.50
2004075T	ADOERING	NUT-Badgersett Research	0.50
2004076T	RPATZER	BIODIESEL-Sm Biodiesel Process	4.50
2004GRANT	MNORRIS	Preparing Grant writing Propos	924.00
2004T	MNORRIS	Discovery 2004	3,829.50
99020T	MSPARBY	DAIRY-Whole Farm Cooperative	0.50
99022T	DBARTHOL	LAMB-Lamb Products Mktg	12.00
99024T	MNORRIS	PORK-Prairie Farmers Coop	0.50
99025T	DBARTHOL	COLLAB-Camas Diagnostic	1.75
99028T	LGJERSVI	MULTI-Medicinal Herbs	0.50
99030T	DBARTHOL	LAMB-Prairie Lamb Co-op	5.00
99032T	JCRAWFOR	COPROD-Liquid Compost	21.50
99039T	MNORRIS	SOYB-Soybean Soapstock as a	176.75
99041T	LGJERSVI	DAIRY-Sheep Milk Cheese	0.50
99056T	MNORRIS	MULTI-Minnesota Slim	93.50
99072T	LGJERSVI	OSTR-Ostrich Market Dev. Prog.	0.50
AIC	EOLSON	AIC Administrative Work	93.75
AIC002TD	MSPARBY	Energy-Animal Waste to Biogas	7.00
AICFEDTIME	MNORRIS	AIC Direct Employee Salaries	264.00
AICTIME	MNORRIS	AIC Staff In-Kind Salaries	1,746.75
PREAIC	EOLSON	PREAIC	18.50
PREAICLABOR	EOLSON	Pre-Aic Labor	1,017.50
PRO1003T	EWENE	Genetics/Blotch Resistance	1.00
PRO1006T	EWENE	Control Aster Yellow	1.00
PRO2003T	EWENE	Pro Time for 2003	56.50
PRO402G	EWENE	On Farm Pesticide Reduction	5.50
PRO806T	EWENE	Resist of Barley Germplasm	3.50
PRO807T	EWENE	Imp of Bio Control & Comp Pest	2.00
PRO901G	EWENE	Novel Seed Treatments Veg Crop	1.00
PRO901TP	EWENE	Novel Seed Treatments Veg Crop	2.00
PRO903T	EWENE	Reduce Insecticide Use-Cabbage	2.00
PRO904T	EWENE	Mgmt Corronwood Leaf Beetle	1.00
PRO905T	EWENE	Crop Rotation Canola Disease	1.00

Total Projects:

245 Total Direct Project Hours:

14,956.75