

04 - 0235

Agricultural Utilization Research Institute

2004 Legislative Report



I. Overview

This report is intended to provide a summary level overview of activities and organizational changes that have recently taken place at the Agricultural Utilization Research Institute (AURI). Current programs are also summarized in order to provide a review of the services that AURI offers to producers and entrepreneurs across the state.

Operating Environment

The past 18 months have been challenging for AURI as for other organizations that receive state funding. In state fiscal year 2003, spending on project activities was suspended on three different occasions in an effort to preserve resources. 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 needed to ensure the continued viability of the organization. After a review of programs, services, existing projects and the strategic direction of the organization, a re-organization took place and adjustments were implemented in the summer and fall of 2003.

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

2. Commodity Utilization – Food/Non-food uses
 - Limited Technical Assistance (On-site)
 - Project Development Services

3. Meats Processing & Product Development
 - Technical Assistance (On-site)
 - Lab Development Services
 - Project Development Services

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, but the level of service has been adjusted to match the potential impact.

III. Re-organization Activities

A re-organization took place over the summer and fall of 2003 in an effort to manage a significant budget reduction. Positions were eliminated, facilities were reduced, and a top to bottom review and realignment of operations was undertaken. The result is a much smaller organization, but also an organization that is positioned to continue to help Minnesota producers and entrepreneurs.

A. Primary Objectives of the Reorganization

- Streamline programs and services.
- Further streamline management functions.
- 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

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: 18

Re-organization staff reductions:

Crookston:

Eliminated Positions:

Laboratory/Pilot plant Coordinator
Dir. of Technology & Client Development
Application Software/Network/Web Specialist
Director of Information Technology

Re-aligned Positions:

Scientist, Microbiology & Industrial Ag Products (½ time)
Scientist, Food Product Development & Cereal Grains (½ time)

Morris:

Position Eliminated:

Project coordinator

Marshall:

Positions Eliminated:

Meat Scientist

Waseca:

Position Eliminated:

Project Developer

Position Unfilled/Eliminated:

Engineering Services

C. Facilities Impacted

- **Crookston:** Closed pilot plant; reduced office space,
 - All pilot plant equipment had been placed in storage and is under review for possible use in pending and future projects
- **Marshall:** Reduced office space
- **Morris:** Office closed
- **St. Paul:** Office closed
- **Waseca:** Reduced pilot lab space and storage space

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 proposes to create an independently governed Center for Producer-Owned Energy. The mission of the Center will be 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 & Conversion Devices
- Process Development, Utilization of Excess Plant Heating Capacities
- DDG Alterations to Enhance Flowability

V. Summary of Client Services, Post Re-organization

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.

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 a grant program, which focuses 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.

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.

VI. Project Activity, FY 2003

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 Detail of Funded Projects

Project Title	Dollars Disbursed
BEANS-DD Value Added IP	\$750.00
BEEF-Value Added Beef	\$19,561.43
BEEF-Market Study	\$1,550.00
BISN-Packaging Design Mainstream	\$1,152.57
BRLY-Barley Beta Glucan Consumption	\$10,137.22
COLLAB-Biodiesel Initiative	\$22,628.33
COLLAB-Berkshire Marketing	\$4,173.75
COLLAB-Economic Impact	\$5,951.65
COLLAB-AURI Initiative-Peoria Collaboration	\$3,497.58
COLLAB-MSRPC/AURI	\$1,324.03
COPROD-Liquid Compost	\$800.00
COPROD-Product Development and Marketing	\$1,125.15
COPROD-Value Addition of Corn	\$4,726.00
CORN-Feed Trials	\$2,499.90
CORN-Assessment/commercialization	\$100,000.00
CORN-E-Diesel Project	\$5,000.00
DAIRY-Package Design and Marketing	\$1,707.74
DAIRY-Sheep Milk Cheese	\$4,674.83
DUCK-Specialty Foods Market Development	\$4,505.62
INITIATIVE-Opportunities for Functional Foods in Cereal	\$14,695.83
INITIATIVE-Meat Lab Brochure	\$702.11
INITIATIVE-Small Species Processing Plant	\$1,380.00
INITIATIVE-Marketing	\$30,612.24
INITIATIVE-Digesters for Managing Animal	\$1,000.00
INITIATIVE-FFA Product Development Competition	\$500.00
INITIATIVE-Value Added Forums	\$881.14
INITIATIVE-2nd Biennial Meat Processing Shortcourse	\$6,345.41
INITIATIVE-Characterizing Ag Residues	\$6,394.74
LAMB-Product Development and Marketing	\$970.00
MULTI-Bakery Mix Business	\$7,500.00
MULTI-Beef & Lamb Market	\$1,087.16
MULTI-Nutritional Labeling and Marketing	\$12,062.50
MULTI-Medicinal Herbs	\$6,293.65
MULTI-Multi Species Market Assessment	\$6,433.33
MULTI-Product Line Expansion	\$841.09
MULTI-Specialty Bird Feed Products	\$1,370.54
MULTI-Tom (Turkey) Study DDGs	\$4,959.72
MULTI-Utilization of Fibrous A	\$49,318.38
MULTI-Wheat Ethanol	\$41,742.26
SOYB-Design of Packaging and Marketing	\$1,000.00
SOYB-Soy-based Meat Analogue	\$3,125.30
SOYB-Soybean Processing	\$52,359.50
WOOL-Wool Mattresses	\$1,500.00
Hybrid Poplar	\$376,525.96
Reduce Pesticide Use for Flea Beetle on Canola	\$4,800.00
Impact of Crop Rotation on Canola Diseases	\$2,786.06
Impact of Crop Rotation on Canola Diseases	\$492.75
On Farm Pesticide Reduction Strategies	\$7,980.00
Management of Black Vine Weevil, <i>Otiorhynchus sulcatus</i> (F.) With <i>Beauveria bassiana</i> ((Balsamo) Vuillemin	\$7,095.84
Site-Specific Management of Green Peach Aphid in Potato	\$36,248.50

Detail of Funded Projects (Continued)

Integrated Pest Management of Fungus Gnats <i>Bradysia</i> spp. In Commercial Greenhouses	\$4,511.13
New Pest Management Strategy-Strawberries	\$15,585.63
Organic Pest Management Cucumber Beetle	\$16,440.70
Honey Bee Resistance to Disease and Parasitic Mite, <i>Varroa destructor</i>	\$15,556.53
Resistance of Barley Germplasm to Septoria Speckled Leaf Blotch	\$12,688.53
Implementation of Biological Control and Compatible Pesticides in Minnesota Interiorscapes	\$33,542.41
Novel Seed Treatments for Vegetable Crop IPM	\$11,816.17
Integrated Pest Management of Fungus Gnats <i>Bradysia</i> spp. In Commercial Greenhouses - Phase II	\$14,679.75
Reducing Insecticide Use in Cabbage: Soybean as a Trap Crop	\$9,009.01
Management of Cottonwood Leaf Beetle in <i>Populus</i> Plantations in Minnesota	\$22,458.91
Bio-Based Weed Control in Strawberry Using Sheep Wool Mulch, Canola Mulch, and Canola Green Manure	\$4,045.00

Total Funds Disbursed**\$1,045,103.58**

Appendix B

Project Time Logged, FY '03 Technical Services, Pilot Plant, Laboratory

Project Title

AG RESIDUES-Characterizing Ag.
AIC (Agriculture Innovation Center)
ALF-Alfalfa Feed Additive
ALF-Alfalfa Processing/Horse H
ASPEN-Pet Products
BEANS-DD Value Added IP
BEEF-Beef Snack
BEEF-Meats/Product Development
BEEF-Natural Beef
BEEF- Utilization of Chuck and Round
BEEF-Value Added Beef
BEEF-Effects of High Pressure
BEEF-Gourmet Beef
BEEF-Market Study
BEEF-Mechanism of Rinse&Chill/Vacuum Packaged Ground Beef
BEEF-Pre-harvest ultrasonic
BEEF-Product Consultation
BEEF-Test Marketing of Pepper Sticks
BEEF-Value Added Products
BISON
BISON-Packaging Design Mainstream
BISON-Value Added Bison
BISON-Value Added Product
BRLY-Barley Beta Glucan Consumption
BRLY-WHT
BUKWT-Development and Marketing of Buckwheat
CATNIP OIL-Yield Analysis
COLLAB-Biodiesel Initiative
COLLAB-Bio-Energy Institute
COLLAB-Value Added Beef Process
COLLAB-Pet Snack
COLLAB-Animal Fats/Rendered
COLLAB-Berkshire Marketing
COLLAB-Diagnostic Testing
COLLAB-Economic Impact
COLLAB-Goat Processing Plan
COLLAB-Market Research Library
COLLAB-MSRPC/AURI
COLLAB-Renewable Energy Model
COLLAB-Small Plant Export
COLLAB-Technical Consultant
COPROD-Dry Mill Ethanol Co-Product
COPROD-Ethanol Co-Products
COPROD-Sludge Utilization For Energy
COPROD Utilization of DDGs
COPROD-Value added Utilization of DDG
COPROD-Ag Co-Product/Renewable Fuel
COPROD-Ag Fiber Pellet
COPROD-Animal Co-Products Utilization
COPROD-Biomass
COPROD-Certified Milk Replacer
COPROD-Composting Co-product

Project Time Logged, FY '03 (Continued)

COPROD-Co-Product Lab Brochure
COPROD-Expelled Soy Oil/Biodiesel
COPROD-Fiber Opportunities for Grasses
COPROD-Liquid Compost
COPROD-Methane Digester Feasibility
COPROD-Poultry Bedding
COPROD-Product Densification
COPROD-Renewable Ag Biomass
COPROD-Renewable Ag Biomass
COPROD-Renewable Ag Fuels
COPROD-Treat Wastes & DAF
COPROD-Value Added Manure
COPROD-Value Addition of Corn
COPROD-Value-Added Processing
COPROD-Waste Conversion
CORN-Feed Trials
CORN,POULTC,PORK-Tamales
CORN-Analysis of Blue and Red Popcorn
CORN-Certified Organic Herbicide
CORN-Corn Cob Pelleted Fuels
CORN-Corn Frantionization
CORN-Corn Process Technology
CORN-Distiller Grain Protein
CORN-Dyeing of Polylactic Acid
CORN-Fuel Assistance/Boiler Application
CORN-New Forms of Feed & Marketing
CORN-Specialty Corn
DAIRY-Retail Cheese
DAIRY-Specialty Cheese Feasibility
DAIRY-Commercial of Cheesecake
DAIRY-Dairy Development
DAIRY-Digester/Energy
DAIRY-Organic/BST Free Milk Product
DAIRY-Package Design and Marketing
DAIRY-Product Development
DAIRY-Sheep Milk Cheese
DAIRY-Shelf Study of Chocolate
DAIRY-Whole Farm Cooperative
DUCK-Specialty Foods Market Development
EDUCATION-Small Scale Animal Processing Brochure
ELK-MN Elk Meat Market
ETH-Feed Lot/Ethanol Plant Feasibility
FED-Grant Development
FIBR-Biomass Diversity
FIBR-Expansion of High-Protein
FIBR-Fiber Evaluation
FIBR-Fiber Lanscape Mats
FIBR-Fire Starter Formulation
FIBR-Mulch Development
FISH-BaitDevelopment
FISH-Frozen Fish Shear Force
FLAX-Market Assessment of Whole and Ground Organic Flax
FLAX-Product Development and Marketing
FPEAS-Value Added Bean
GOAT-Goat Cheese
GRAPES-Produce Wine for Tourist Area

GSORG-Bakery Product Expansion
GSORG-Highly Refined Cellulose
HACCP-HACCP Plan Development for Meat Products
HACCP-Advanced HACCP Course
HACCP-Beef HACCP Plans
HACCP-HACCP Training
HACCP-Meat Processing HACCP Plan
HACCP-St. Cloud HACCP Workshop
HAY-Hay Development
HERB-Herb Coop
HONY-Commercialization of Hot Wing Sauce
HONY-Honey Processing
HYBRID POPLAR
HYBRID POPLAR
INITIATIVE-Corn Burners
INITIATIVE-2nd Biennial Meat Processing
INITIATIVE-Analysis of B2-B20/Industry Service
INITIATIVE-AURI Initiative-Peoria Collaboration
INITIATIVE-Direct Marketing Brochure
INITIATIVE-FFA Product Development Competition
INITIATIVE-HACCP Workshop
INITIATIVE-HACCP-Intro Workshop/Oct. 8-9
INITIATIVE-HACCP-Intro Workshop -Nov. 19-2
INITIATIVE-HACCP-Sept.02 Web Intro Course
INITIATIVE-HACCP-Web Intro Course-Feb. 03
INITIATIVE-HACCP-Web Intro Course-May 03
INITIATIVE-HACCP-Web Intro Course-Nov.02
INITIATIVE-Impact of Forestry
INITIATIVE-Making Biomass Energy
INITIATIVE-Southwest Minnesota State University, Marketing
INITIATIVE-Marketing
INITIATIVE-Marketing
INITIATIVE-Meat Lab Brochure
INITIATIVE-Meat Marketing Workshop
INITIATIVE-New Project Development
INITIATIVE-New Project Development
INITIATIVE-Opportunities for Functional Foods in Cereals
INITIATIVE-Small Species Processing Plant Development
INITIATIVE-Oilseed Study
INITIATIVE-Preparing for Grant Writing Processes and Research
INITIATIVE-Southwest Minnesota State University, Marketing
LAMB-Help Launch Reduced Fat Lamb Products
LAMB-Lamb Co-op Marketing
LAMB-Lamb Marketing
LAMB-Lamb Products Marketing
LAMB-Product Development and Marketing
MULIT-Wild Animal Feed
MULTI-Organic Fertilizer
MULTI-SUGR,WHT,DAIRY-Gourmet Health
MULTI-WHT,BRLY-Use of Grain and Straw for Home Construction
MULTI-Biomass Power Plant
MULTI-Certified Organic Entrée
MULTI-MEAT-Meat & Poultry Fill
MULTI-OATS,WHT-Hot Cereal and Soup Mix
MULTI-Organic Milling Project
MULTI-Seed Feasibility
Project Time Logged, FY '03 (Continued)

MULTI-Shippers Association
MULTI-Analysis of Cull Beans
MULTI-Arrowwood Gluten-Free Product
MULTI-Bakery Mix Business
MULTI-Bakery Products
MULTI-BBQ Sauce Nutrition Labels
MULTI-Beef & Lamb Market
MULTI-Beef, Pork, & Poultry Market
MULTI-Beet Co-Products Utilization
MULTI-Biodiesel
MULTI-Commercialization of Gnochie
MULTI-Dairy and Beans
MULTI-Developing Minnesota Onions
MULTI-Dog Food Development
MULTI-Evaluation of Oils as Fuels for Turbines
MULTI-Food and Pet Food Development
MULTI-Food Processing
MULTI-Food Product Development Workshop
MULTI-Gluten Free Products
MULTI-Gourmet Food Mixes
MULTI-Gyros, Lunch Meat
MULTI-Halal Slaughter of Goats
MULTI-Healthy Organic Eggs
MULTI-Horse Feed Product
MULTI-Informational Services
MULTI-Informational Services FY2003
MULTI-Jams & Jellies Line Expansion
MULTI-Marketplace of Ideas Workshop
MULTI-Meat Process Development
MULTI-Medicinal Herbs
MULTI-MN Meat Processors
MULTI-Multi Species Marketing Assessment
MULTI-Natural Food Basics
MULTI-Nutritional Labels for Frozen Pizzas
MULTI-Nutritional Labeling and Marketing
MULTI-Oat Cakes Manufacturing
MULTI-Omega-3 Fatty Acids Feed
MULTI-Organic Certification
MULTI-Organic Oilseed Market
MULTI-Pet Food Product Expansion
MULTI-Product Line Expansion
MULTI-Production/Marketing
MULTI-Salsa Project
MULTI-Soup Marketing and Development
MULTI-Soup Stock
MULTI-Specialty Bird Feed Product
MULTI-Tom (Turkey) Study DDGs
MULTI-Utilization of Fibrous A
MULTI-Vegetable Shelf Life
MULTI-Wildlife Feeds
OATS-Commercialization of Oat Cookies
OSTR-Ostrich Market Development Program
PORK-Asian Ham Product Development
PORK-Concept Development
PORK-Cured Meats
PORK-Health Benefits of Extruded Soybeans
Project Time Logged, FY '03 (Continued)

PORK-Hmong Processing
PORK-Light-weight Pork Market
PORK-Pork Marketing
PORK-Pork Marketing
PORK-Pork Marketing and Development
PORK-Pork Processing
PORK-Pork Spare Ribs
PORK-Pork Spare Ribs
PORK-Prevention of Color Defects
PORK-Reduced Fat Bratwurst
POULT-Natural & Organic Poultry
POULT-Organic Valley Sausages
POULT-Poultry Litter Burner
PRO-Pesticide Reduction
PRO-Pesticide Reduction
PTATO-PotatoProcessing, Blanching
PTATO-Stardardization, Potato Salad
RASP-Raspberry Greenhouse Products
RHUB-Rhubarb Processing
RHUB-Rhubarb Product Development and Processing
RICEW-Analization and Nutritional Labeling of Wild Rice Product
RICEW-Heart Healthy Rice
SOY-All Natural Soy Candle Directions Brochure
SOYB-Evaluation of Soybean Varieties
SOYB-Product Development and Marketing
SOYB-LCMR '99 Biodiesel
SOYB-LCMR/Improving Air Quality
SOYB-Manure Odor Control
SOYB-Marketing of Soy Drinks
SOYB-Organic Foods Development
SOYB-Seed Processing
SOYB-Snack Foods/Marketing
SOYB-Soy-based Meat Analogue
SOYB-Soybean Processing
SOYB-Soybean Product Expansion
SOYB-Soybean Soapstock as a Dust Suppresant
SOYB-Soynuts Development
SOYB-Study of Oilseeds
SOY-Remediation Media
SUGAR BEETS-Value Added Feeds
SUGR,DAIRY-Nutritional Labeing of Truffles
SUGR-Commercialization
SUGR-Flavored Hot Teas
SUGR-Unique Flavored Jams, Jellies
TMATO-Bar-B-Que Sauce
TMATO-Green Salsa
TMATO-Sauces and Rubs
U of M-New Feed Alternatives
WHT-Improved Cat Litter
WHT-Commercialization of Gravy Mix
WHT-Marketing and Product Development
WHT-Reformulation and Commercialization
WOOL-Wool Mattresses and Pillows