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MEMORANDUM

TO: Governor Perpich
Members of the Minnesota Legislature
Minnesota Congressional Delegation

FROM: Terry Montgomery
President
Greater Minnesota Corporation

DATE: July 11, 1989

Following is an update of recent Greater Minnesota Corporation program activities. I hope it will be of assistance to you, your staff, and your constituents. Enclosed, also, is one set of brochures which describe the Corporation programs. Please call if you need additional brochures or more information.

BUSINESS INNOVATION CENTERS APPROVED

Business Innovation Centers (BICs) have been approved by the GMC in southwestern Minnesota, northeastern Minnesota, and the metro area. Proposals from four more regions will be acted on next month.

The BICs will provide access to information on the latest technology and applied research, and hands-on assistance in using appropriate new technology to help local businesses compete in the world economy. The BICs will network with private businesses, colleges, universities, and technical institutes, as well as federal laboratories. They will be managed by local boards of directors.

The Business Innovation Centers are not traditional economic development or business assistance programs. Their focus will be on improving existing businesses with technology applications, and assessing new products and processes to create new businesses. The BICs will refer to and work with such general business assistance programs as the Small Business Development Centers, local economic development organizations, and chambers of commerce.

A summary of the BICs is attached (Appendix 1).

TECHNOLOGY RESEARCH GRANTS APPROVED

The Technology Research Grants (TRG) program is designed to support applied research and development leading to new commercial products, processes, and services. The program emphasizes projects which advance the technology of an industry, have direct and marketable commercial applications, and have a high probability of enhancing the growth of the Minnesota economy.

The program has drawn remarkable interest and response throughout the state. In the first round of funding applications, requests totaled $6.4 million, more than double the program budget for the entire year.

A total of $980,000 was awarded to fund seven applied research projects during the first round of project funding. The grant awards were selected from 56 first-round proposals following evaluations by Greater Minnesota Corporation staff, by merit reviewers with technical and business knowledge matched to the projects, and by the Greater Minnesota Corporation's Research Advisory Board. Three more rounds of TRG funding will occur later this year.

A description of the projects is attached (Appendix 2).

AGRICULTURAL UTILIZATION RESEARCH INSTITUTE

The Agricultural Utilization Research Institute (AURI) was established to strengthen the future of Minnesota's agricultural and agricultural-related economy. It will foster long-term economic growth by utilizing applied research and technology to find new uses and markets for Minnesota agricultural commodities.

The AURI will build partnerships with post-secondary educational institutions, agricultural organizations, public and private research facilities, agri-businesses, rural development organizations, financial institutions, and rural communities to meet future needs and improve the worldwide competitiveness of Minnesota agriculture.

The AURI will reach throughout the state's agricultural regions from its four regional research centers in Waseca, Marshall, Morris, and Crookston. Administrative offices for the AURI are located in Crookston.

Executive Director Named

Dr. Virgil Smail, Vice President for Corporate Development of BioTechnica Agriculture, Inc., of Kansas City, assumed the duties of AURI Executive Director at the AURI's administrative headquarters in Crookston.

Energy Savings Grants Awarded

Eight agricultural projects have been selected to receive grants totaling more than $505,000 under Round One of the Agricultural Energy Savings Program to foster research and demonstration of energy-saving techniques which can be transferred to Minnesota farms.

Agri-Product Research Grants

The AURI is now accepting proposals for projects which will involve industrial or other non-food products and processes utilizing agricultural commodities. The AURI will make available up to $1 million for grants of up to $100,000.

A summary of AURI initiatives is attached (Appendix 3).

NATURAL RESOURCES RESEARCH INSTITUTE

The Natural Resources Research Institute (NRRI) at the University of Minnesota, Duluth, is a designated Applied Research Institute of the Greater Minnesota Corporation. The NRRI was established by the Minnesota Legislature in 1983 to bolster the state's economy through the commercial development of natural resources in an environmentally sound manner.

The Greater Minnesota Corporation allocated $750,000 to NRRI for the current year to support applied research projects and the development of new natural resources technologies.

A summary of the projects is attached (Appendix 4).

MINNESOTA ADVANCED MANUFACTURING TECHNOLOGY CENTERS

The Minnesota Advanced Manufacturing Technology Centers (MAMTC), a program of the Greater Minnesota Corporation, is a nonprofit corporation to help businesses and industries through a market-driven program of advanced technology adoption, adaptation, and consulting services. MAMTC will assess the manufacturing needs of small and medium-size manufacturers and make advanced manufacturing technologies available to these manufacturers as a means of helping them sustain a globally competitive position.

Executive Director Named

Walter Bruce Hardman was named Executive Director of MAMTC by the program's board of directors. Hardman is director of the computer-integrated manufacturing office at the Honeywell Residential and Building Controls Division in Golden Valley.

Regional Proposals Accepted

MAMTC issued "Requests for Proposals" on June 30 with regional proposals due by September 22, 1989. A decision to fund at least one Regional Manufacturing Center will be announced by October 31, 1989.

A description of MAMTC activities is attached (Appendix 5).

Appendix 1

Business Innovation Centers

The Greater Minnesota Corporation approved:

* An 18-county plan in southwestern Minnesota to locate a BIC in Granite Falls, with up to four Technology Field Offices to be located within the region.

* A seven-county plan in northeastern Minnesota to locate a BIC in Virgina, with a Technology Field Office in Duluth.

* A joint plan from the Minnesota Cooperation Office (MCO) and Women's Economic Development Corporation (WEDCO) to locate a BIC in the metro area, and to provide specialized services throughout the state.

All BIC proposals must represent a region-wide consensus of applied research and technology transfer needs. Local matching contributions in cash and in-kind services are required.

Appendix 2

Technology Research Grant Awards

The first round of Technology Research Grant awards totaled more than $980,000. Projects receiving grant awards were:

* TUBEMASTERS, Inc., Plymouth, MN - for developing an automatic condenser tube insertion process which replaces manual operation and will be used for new construction or retubing of existing steam surface condensers.

* Golden Pond Fisheries, Erskine, MN - for propagating red-tail bait fish native to Minnesota in a controlled environment which is more cost-effective and reliable than existing trapping methods.

* TAFCO Equipment Company, Blue Earth, MN - to continue research and development work on the Curbside Recycling Body. The project will process glass, plastic, aluminum and tin cans and reduce the volume of these materials by up to 80 percent.

* Phoenix Industries, Crookston, MN - to commercialize new airfoil and other blade improvements for wind turbine rotor blades.

* Farm & Forest Software, White Bear Lake, MN - to commercialize a new prototype hardware and software laptop computer system which records and stores the location of weed patches in a crop production field to facilitate herbicide application.

* APA Optics, Blaine, MN - to continue development of a solid state laser scanner program and to provide support of new optoelectronic concepts.

* MAR Engineering, Inc., Eden Prairie, MN - to develop a super-precision cylindrical grinder and super-precision slicer grinder, for applications in the computer, semiconductor, and aerospace industries.

Second round Technology Research Grant applications are currently being reviewed. Application deadlines for the final two rounds are August 11 and October 6, 1989.

Appendix 3

Agricultural Utilization Research Institute

Energy Savings Grants

Eight agricultural projects have been selected to receive grants totaling more than $505,000 under Round One of the Agricultural Energy Savings Program to foster research and demonstration of energy-saving techniques which can be transferred to Minnesota farms. They are:

* The Tri-County Conservation Project, for researching and demonstrating fertilizer and waste management and several conservation tillage systems.

* The North Central Soil Conservation Research Laboratory, for testing the elimination of late season irrigation.

* The Minnesota Fruit and Vegetable Growers Association, for developing techniques to reduce insecticide applications on strawberries.

* The West Central Experiment Station, for researching the best winter hardy crop cover for corn and soybeans.

* The Southwestern Minnesota Farm Business Management Association, for whole-farm sustainability and profitability analysis.

* The Minnesota Apple Growers Association, for researching monitoring methods of major pests in orchards to reduce pesticide applications.

* The Minnesota Extension Service Integrated Pest Management Program, for demonstrating the effectiveness of comprehensive crop management in reducing energy inputs, improving profitability, and protecting the environment.

Forty-four proposals were submitted to the Agricultural Energy Savings Program. All proposals underwent a technical merit review by independent reviewers before being submitted to the AURI Steering Committee for recommendation.

Guidelines for Round Two of the Agricultural Energy Savings Program were announced in early May. $1.5 million is available for grants of up to $100,000 each. Forty-two "letters of intent" to submit proposals, totaling almost $3 million in funding requests, have been received by the AURI. Final awards will be made at the end of 1989.

Agri-Product Research Grants

The Agricultural Utilization Research Institute is now accepting proposals for its Agri-Product Research Grants program.

The program will fund projects which will involve industrial or other non-food products and processes utilizing agricultural commodities. It will also offer grants to projects involving food, feed, and fiber products and uses which are innovative and improve the value of agricultural commodities. The AURI will make available up to $1 million for grants of up to $100,000.

Organizations and institutions which are eligible to apply include: Minnesota-based businesses -- sole proprietorships, partnerships, corporations, associations, joint ventures or cooperatives -- and all Minnesota-based public and private accredited post-secondary educational institutions.

Grants are expected to be awarded by late fall, 1989.

Agricultural Utilization Grant Pilot Program

Nine projects designed to find new uses and products utilizing Minnesota agricultural commodities were selected to receive grants under the Agricultural Utilization Grant Pilot Program. Research is now underway. The nine projects funded are:

* Agricultural Experiment Station, University of Minnesota, to determine the costs and benefits of pelletizing soybean meal for export.

* CENEX-Land O'Lakes, to research the use of soybean oil as an herbicide additive and grain dust suppressant.

* Moorhead State University and American Crystal Sugar, to discover methods to make sugar beet molasses suitable for human consumption.

* Department of Food Science and Nutrition, University of Minnesota, and American Cystal Sugar, to research the effect of sugar beet fiber in human diets.

* Minnesota Wheat Research Promotion Council, to research wheat flour and gluten for water stability-enhanced fish feed.

* Institute for Advanced Studies in Biological Processing Technology and Cray Freshwater Biological Institute, University of Minnesota, to develop road salt substitute (CMA) from agricultural residues.

* Science and Technology Resource Center, Southwest State University, to research Nisin in controlling bacterial contamination in alcohol fermentation.

* Soil Science Department, University of Minnesota, to research the biodegradability of cornstarch-incorporated plastic films.

Appendix 4

Natural Resources Research Institute

Natural resource applied research projects supported by the Greater Minnesota Corporation are:

* Development of wood fiber products which can substitute for structural lumber.

* Creation of a process to harden Minnesota aspen for use in furniture manufacturing.

* Development of Minnesota's most plentiful form of peat for horticultural applications.

* Research aimed at reducing crushing and grinding costs in taconite mining through improved blasting and drilling techniques.

* Development of papermaking and bricks (as well as other fired products) using clay from three geographical areas of Minnesota.

* Research on the economic and ecological feasibility for the development of a soft-shell crayfish industry in rural Minnesota.

Appendix 5

Minnesota Advanced Manufacturing Technology Centers

Walter Bruce Hardman will begin work August 1 as Executive Director of MAMTC. Hardman spent 12 years with General Electric's aerospace and commercial division, accumulating a wide range of experience in engineering, production, and program management. In his 19 years at Honeywell, Hardman served for several years as director of various Honeywell corporate organizations supporting the development of computer-aided engineering and manufacturing systems. He founded and then served as director of the Honeywell Corporate Production Laboratory.

MAMTC staff completed its program of statewide community needs assessment meetings, which included visits to Hibbing, Staples, Fergus Falls, Fosston, Austin, and Marshall. The Centers' staff is now working closely with regional groups in the development of Regional Manufacturing Center proposals.