

# CIRAS 2003 ANNUAL REPORT

University Extension

IOWA STATE UNIVERSITY

College of Engineering

**CIRAS Mission Statement:** *The mission of CIRAS is to enhance the performance of Iowa industry, and associated entities, through education and technology-based services.*

## From the Director

2003 marks CIRAS's fourth decade of service to Iowa manufacturers, but our 40-year anniversary is somewhat bittersweet. Despite substantial growth in the manufacturing sector in the nineties, the downturn of the past few years continues to linger. In Iowa, manufacturing jobs decreased by 6,000 this past year, more than any other economic sector.

Despite the slowdown in the economy, there continues to be a degree of optimism among manufacturers. Many we have worked with have voiced cautious optimism because of increases in orders for the next few quarters. We have also received many positive responses regarding our work with companies that use biomass as feedstocks, the bioindustry sector.

This past year USDA awarded Iowa State and CIRAS a contract to assist in the development of the national USDA biobased product certification program. While benefiting the entire country, there is likely to be amplified local payback due to the proximity of the nation's biomass to Iowa.

The bioeconomy vision and roadmap that Iowa industry developed through their partnership with ISU and the Department of Energy has received national acclaim and has brought international exposure to ISU and CIRAS. As a result of this process, the industry leaders have established a non-profit organization, BLOWA, to pursue the development of biorefineries in the state.

CIRAS involvement with economic development efforts, like BLOWA, will likely continue to expand as state agencies work to coordinate services. The relocation of Mastercraft to Iowa is an example of a coordinated economic development effort. Council Bluffs Chamber of Commerce, Iowa Western Community College, IMEP, and CIRAS staff worked together to deliver a broad range of services, which included CIRAS involvement in the layout of their new Iowa plant. Examples of additional projects that we completed this past year are highlighted on the reverse side. The map conveys the extent to which we have been able to reach out to industry across the state.

We received two national awards recognizing the quality of our programming. The engineering team received an award from the National Association of Management and Technical Assistance Centers for their product design work with Ames-based CombiSep, Inc. Paul Jewell led a team that developed multicast videoconferencing capability via satellite and received the Bill Murphy Barrier Buster award by the American Distance Education Consortium.

Recently, a former CIRAS advisory council member eloquently penned in a letter to the Governor, "CIRAS is one organization that not only pays its way, it 'paves the way.'" CIRAS is committed to helping Iowa manufacturers pave the way to economic recovery. We look forward to another 40 years of being that unbiased colleague that you can turn to for guidance, education, and assistance as you help grow Iowa's economy.

*Ronald A. Cox*

## CIRAS Staff

- Verl Anders
- Andrew Bice
- Jim Black
- Donald Brown
- Ronald Cox
- Clay Crandall
- Steve Devlin
- Jill Euken
- Paul Gormley
- Dawn Hines
- Jeffrey Mohr
- Sharmon Norris
- Merle Pochop
- Rudy Pruszko
- John Roberts
- Carol Smith
- Timothy Sullivan
- Chris Thach
- Steven Vanderlinden
- John Van Engelenhoven
- Michael Willett

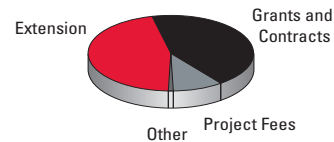
## Iowa Procurement Outreach Center

- Kathleen Bryan
- Bruce Coney

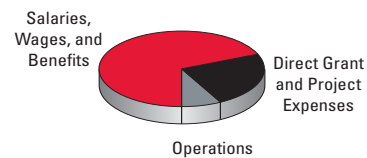
## Engineering Distance Education

- Hiro Iino
- Paul Jewell
- Joe Monahan
- Pam Shill

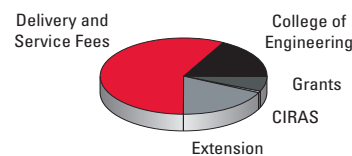
### CIRAS Income Total Income = \$2,684,152



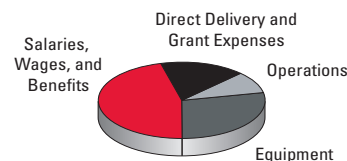
### CIRAS Expenses Total Expenses = \$2,501,374



### EDE Income Total Income = \$646,947



### EDE Expenses Total Expenses = \$614,701



## Iowa Manufacturing Profile

Iowa is home to 5,772 manufacturing establishments. The three areas below reflect how the manufacturing sector plays out as a portion of the state's total economic activity:

Labor Force .....	16%
Work Earnings .....	19%
Gross State Product .....	21%

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# 2002–2003 Highlights

## Engineering

- Iowa Companies Assistance Program, ISU aerospace engineering faculty, and CIRAS helped Hugg Manufacturing in Westside develop a portable winch. The company received assistance in load testing, materials selection, and welding and design issues. Annual sales of \$200,000 are anticipated.
- WAYNE Engineering in Cedar Falls worked with CIRAS in modifying refuse compaction assemblies. “With CIRAS help and guidance, the company was able to foresee how the structure would react,” – WAYNE Product Engineering Manager.
- The Iowa EDA University Center, located at CIRAS, provided product design assistance to rural Iowa companies, such as the Maytag facility in Amana, Kangaroo Recreation in Ely, E-Ject Systems in Elkader, and Al-Jon Inc. in Ottumwa in product design areas.

## Management Practices

- CIRAS, ISU Extension Value Added Agriculture, and the Center for Advanced Technology Development conducted a feasibility study for PEC, Inc. in Waukon to help the company apply for a U.S. Department of Agriculture rural development loan guarantee.

## Government Procurement

- The Procurement Technical Assistance Center (PTAC) reported that 546 jobs were created as a result of contracts awarded to companies that received assistance from IPOC and CIRAS staff. IPOC is funded through the Defense Logistics Agency, the Iowa Department of Economic Development, and ISU Extension.
- The third annual business showcase had over 100 attendees from state, federal, and local agencies. The event provided small businesses from across Iowa an opportunity to meet government and commercial purchasing agents and obtain solicitations for bids.

## Productivity

- CIRAS worked with state economic development agencies assisting Mastercraft Furniture relocate from Omaha to Council Bluffs. The move generated 50 new Iowa jobs and over \$2 million in investments in plant operations and equipment.
- A Kaizen team at Britz-Heidbrink, Inc. in Monona implemented over 100 ideas with CIRAS assistance. “The impact on our business was immediate. By analyzing the full value stream, our team reduced our product leadtime by 50%, which greatly reduced costs.”— Britz-Heidbrink.
- CIRAS assisted Centerville Machining Inc., Centerville, with its management techniques, improving cash flow and reducing lead-time. CIRAS assistance resulted in annual cost savings of \$290,000 and increased sales of \$440,000. “Without the help of CIRAS, we would not be in business now” – Centerville Machining Inc.

## Quality

- Diversified Fastening System, Inc. in Charles City worked with CIRAS on implementing ISO 9000. The company reported hiring 10 more employees, adding a new building, buying additional equipment, and gaining new customers as a direct result of the implementation.
- CIRAS continued to work with university staff, Iowa companies, ISO registrars, and the American Society of Agricultural Engineers to develop an ISO 9001:2000 standard for agriculture.

## National Initiatives

- CIRAS partnered with the Iowa Manufacturing Extension Partnership, Iowa Energy Center, and MidAmerican Energy in a U.S. Department of Energy plant-wide assessment of North Star Steel Iowa in Wilton. The team identified potential savings of over \$1,000,000. The project will serve as a case study for all steel producing mini-mills.
- The USDA and CIRAS are collaborating on developing a national certification program to identify, qualify, and label biobased products for federal procurement.
- CIRAS participated in a National Renewable Energy Laboratory (NREL)- sponsored grant to develop educational material and pilot teach a biodiesel technology workshop. Over 175 people from 33 states and 11 foreign countries attended the seminars.
- The Iowa Industries of the Future program began working with the food processing industry, the largest industry in Iowa. The program is a joint venture with the Department of Energy, the Iowa Department of Natural Resources, and the Iowa Energy Center.
- Maytag in Newton has partnered with the Department of Health and Human Services and CIRAS to develop a prototype of a universal design kitchen system that will meet the needs of older people.

## Continuing Education

- EDE delivered distance education courses to 752 students, which included 447 Iowa students.
- Extension staff from ISU’s Department of Civil, Construction, and Environmental Engineering offered courses and workshops attended by over 1,800 engineers from across the state.

## Project Activity

