

CIRAS 2001 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

This past year has been one of change and opportunity for CIRAS. Changes in staffing, programming, and the manufacturing economy have created opportunities for CIRAS to expand services and to create new partnerships to provide the latest programming requested by Iowa industry.

Grants have allowed us to expand our services, both with targeted one-on-one assistance and with cluster activities. This includes expanding technical services to rural Iowa through EDA's University Center grant, government procurement assistance to businesses through the Department of Defense and the Iowa Department of Economic Development (IDED) grants, and energy efficiency assistance through Department of Energy, Iowa Department of Natural Resources, and Iowa Energy Center funding of the Industries of the Future program.

Student assistance with client activities continued to grow. The 33 students who worked at CIRAS and Engineering Distance Education (EDE) this past year provided economical solutions to manufacturers' problems and also gained invaluable experience.

Partnering and leveraging resources has become a prerequisite for success in all CIRAS undertakings. In the past year, CIRAS staff have partnered with nearly 40 different community colleges, universities, state and federal agencies, and ISU departments and centers to continue to provide a broad range of programs, depth of knowledge, and efficiency of operation that our clients demand. CIRAS partnered with the Iowa Manufacturing Extension Partnership (Iowa MEP) to bring lean manufacturing to Iowa manufacturers. We also teamed with a number of community colleges and IDIED on numerous training projects. The Center for Advanced Technology Development (CATD) and the Iowa Company Assistance Program (ICAP) at ISU are key partners in our product design projects. Work with the Value-Added Agriculture group at ISU on quality systems is a developing program that holds great promise for improving the quality of food systems.

We continued to explore innovative ways to bring the latest manufacturing best practices to Iowa industry. The Cedar Falls Industry Outreach Center increased programming by 350% over FY00 levels, our partnership with EDE continued to grow as we developed non-credit engineering short courses, and we explored new opportunities with the Iowa MEP. Examples of our many successes are highlighted on the back.

For nearly four decades, CIRAS has brought research-based knowledge to bear on the critical needs of Iowa's manufacturers. In the future, we will continue to focus our efforts on these core needs and will also assist Iowa industry in transforming into the new economy industries that will be critical to the economic vitality of our state. As the new director of CIRAS, I am honored to be a part of this rich tradition of providing solutions to Iowa manufacturers.

Ronald A. Cox
Ronald A. Cox

CIRAS Staff*

- Verl Anders
- Jim Black
- Donald Brown
- Reg Clause
- Ronald Cox
- Clay Crandall
- Steve Devlin
- Paul Gormley
- Joanne Hansson
- Jeffrey Mohr
- Sharmon Norris
- Carey Novak
- Merle Pochop
- Rudy Pruszek
- John Roberts
- Carol Smith
- Denzil Stacy
- Timothy Sullivan
- Sarah Terrones
- Chris Thach
- Steven Vanderlinden
- John Van Engelenhoven
- Michael Willett

Iowa Procurement Outreach Center

- Kathleen Bryan
- Bruce Coney

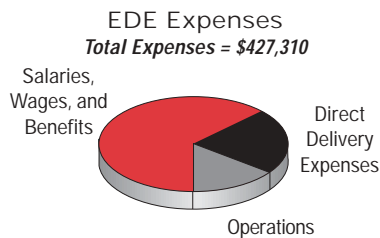
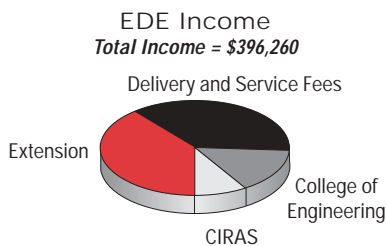
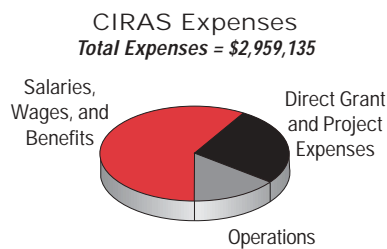
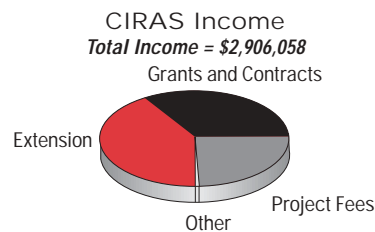
Engineering Distance Education

- Kristy Goodale
- Hiro Iino
- Paul Jewell
- Rebecca Sidler Kellogg
- Joe Monahan
- Pam Shill

*As of June 30, 2001

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Iowa Manufacturing Profile

Iowa is home to 6,495 manufacturing facilities. The three areas below reflect how the manufacturing sector plays out as a portion of the state's total economic activity:

Labor Force	17%
Work Earnings	20%
Gross State Product	22%

2000-2001 Highlights

Business Planning and Management

- CIRAS assisted Carousel Farms Meats to develop a “virtual marketing” strategy in adopting information technology tools to boost sales and ensure future growth and productivity.
- Over 250 individuals attended the first annual E-business conference. “This conference has been a great overview tool for me—a great resource,” said Stewart Fluent, a partner in RADEC Engineering Services.
- A CIRAS team of industry experts, accountants, and business planners collaborated to compile the first comprehensive business start-up manual to aid Iowa livestock producers. *Adding Value to Pork Production*, a how-to manual for value-added pork production, is now available through CIRAS and ISU Extension offices.
- CIRAS’ national reputation for doing feasibility studies in recent years led to its prominence as a third-party consultant to the USDA Rural Development Agency.

Energy

- CIRAS moved forward with the Iowa Industries of the Future (IOF), an initiative that focuses on energy efficiency, waste reduction, and productivity improvements in the most energy intensive industry sectors. Metal casters participated in vision and roadmap sessions; representatives from ag producer groups, processors, and researchers began planning for the Agriculture IOF, which focuses on bio-based products.

Engineering Distance Education

- Over 350 Iowans working in a variety of industries enrolled in engineering distance education courses, up 19% from the previous year.
- The number of distance master’s degrees awarded increased by 30% over FY 2000.
- EDE helped deliver distance education engineering courses to 20 secondary school teachers across Iowa.

Government Procurement

- “They open doors for us,” said Tommy Young, Owner, Braunn-Young’s Sales and Marketing. CIRAS and IPOC have been instrumental in helping Braunn-Young’s obtain federal contracts and meet key players in industry.
- “IPOC is there for all small businesses and remains an invaluable resource for the everyday operations of Carver Pump Company,” said Jeanette Billingsley, after-market sales manager. Carver is a leading manufacturer and supplier of centrifugal pumps for industrial and marine markets.

Product Design and Testing

- Working with the Structural Engineering Lab at ISU, CIRAS assisted Sukup Manufacturing conduct on-site structural testing of its stacked grain dryers.
- In a project with Schaeff, Inc., CIRAS partnered with ISU’s mechanical engineering faculty and the Center for Non-Destructive Evaluation to evaluate and offer design alternatives for components used in Schaeff’s stand-up fork lifts.

- CIRAS and ISU’s aerospace engineering faculty assisted LPR Inc., a new company in Grinnell, Iowa, with product design and documentation for its exterior post-mounted sign. With CIRAS assistance, LPR has firmly established itself as an expanding company with first-year expected sales of \$500,000.
- CIRAS assisted CombiSep, Inc., in designing and developing a prototype based on an innovative technology developed by the ISU chemistry department and licensed to CombiSep through the ISU Research Foundation. The project exemplified CIRAS’ ability to partner with ISU resources, such as IMEP, CATD, Ames Lab, ICAP, and the AEEM department. “Because of our partnership with CIRAS, we were able to bring the concept through a prototype stage and then to market quickly and efficiently,” said President and CEO Dr. Shelley Coldiron.

Productivity

- CIRAS specialists worked on a lean strategic plan with Paragon International, transforming it from a traditional ‘push’ to a lean ‘pull’ manufacturer. Sales per employee increased 27% and WIP decreased by 33%.
- Tim Sullivan received an Outstanding Project Award from the National Association of Management and Technical Assistance Centers for his work with Iowa manufacturers on Theory of Constraints.
- Iowa Fittings, an industrial welded steel fittings manufacturing company, experienced significant cost-savings in a project with CIRAS and Iowa Western Community College. Using an advanced computer simulation program, CIRAS helped the company assess the economics of expanding as well as ways to improve existing facilities. “The material handling process began to lend itself to a better flow, bringing in a savings of \$45,000,” reported Iowa Fittings.

Quality

- CIRAS initiated ISO 9001 implementation projects with two feed mills, a large grain farmer, and the ISU-NICC Dairy Center. Additionally, CIRAS trained a group of 35 farmers in basic ISO 9000 techniques.
- CIRAS worked with the Iowa Quality Center to develop a concept and implementation process for the Iowa Recognition for Performance Excellence Award, Iowa’s equivalent of the Malcolm Baldrige Award.

Project Activity

