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## Grimm Brothers slashes defects and pegs delivery with Six Sigma

By Jim Black, CIRAS

Bill Barrett of Grimm Brothers, a plastic thermoform manufacturer in Wapello, Iowa, had just met with an important customer who wanted the company to become one of two producers from whom they could buy all their thermoformed parts. This customer also noted that all its suppliers were pursuing Lean Enterprise through either Kaizen or Six Sigma.

CIRAS had been receiving inquiries from clients and its advisory council about Six Sigma methods. It was determined that CIRAS should offer Six Sigma as a service to client companies. CIRAS Senior Project Manager Jim Black called Barrett, who is the general manager of Grimm Brothers, to see if the company had a good quality project that Black could conduct as a class project for his Six Sigma Black Belt classes. The timing was perfect!

### What is Six Sigma?

Six Sigma is the measure of reduced (improved) variability that equates to only 3.4 defects for every one million parts. For example, a company operating at the Six Sigma level that produces 10,000 parts per year for 100 years for the same customer (total of one million parts produced) would only produce one defect about every 29 years.

CIRAS has been developing Six Sigma capabilities to respond to growing requests from client companies. Jim Black recently passed the American Society for Quality exam to become a Certified Six Sigma Black Belt (CSSBB). The exam covered sections on

- Enterprise-wide deployment
- Business process management
- Project management
- The DMAIC process (see page 8)
- Lean enterprise
- Design for Six Sigma



*The Grimm Brothers Plastics Six Sigma team applies concepts and retains "Top Plus" designation with customer.*

### Bringing a team together

Barrett and Black had previously teamed on a quality systems project that had saved Grimm Brothers over \$200,000 in quality costs. In the latest project, Barrett wanted the Six Sigma team to address quality problems that were causing short shipments and late shipments to one of Grimm Brothers' largest customers. Barrett asked Black to facilitate a Six Sigma team with the following key objective:

*Reduce defects from the initial level of 11.2% defective (2.7  $\sigma$ ) to 3.0% defective (3.4  $\sigma$ ). ( $\sigma$  or sigma is the standard deviation, which is a measure of the variability of a process.) Achieving this goal would reduce short and late shipments and would permit Grimm Brothers to retain the coveted "Top Plus" designation from its customer. Grimm Brothers has valued this rating at \$75,000 to \$100,000 as a result of cost reductions achieved in quoting new jobs and an expectation that sales would expand with this key customer.*

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# Chantland ISO implementation—A model for success

By Verl Anders, CIRAS

In January 2004, Chantland PVS Co. in Humboldt, Iowa, was certified to ISO 9001:2000 by Orion Registrar for the 'manufacture and sale of conveyor pulleys and industrial rollers, exclusive of design.' The implementation process was a case study in getting results.

## What did ISO certification achieve?

For starters, agreeing to ISO implementation lent Chantland employees a common purpose that centered on meeting collective goals in product quality, customer requirements, and customer satisfaction. It clarified organizational roles, responsibilities, and expectations, according to Jim Shimon, quality manager and ISO management representative. ISO implementation helped increase employee awareness. Employees would periodically bring quality-related issues that needed correction or clarification to the attention of internal auditors.

Shimon and the audit team also sensed a significant shift in thinking. Prior to ISO, employees focused their expectations for improvements on the production side of operations. Now, employees and management realize that quality is the responsibility of all employees, which has led Orion Registrar to state in its audit report that the company has gained "a consistently high level of both job and quality responsibility knowledge at all organizational levels."

Finally, compliance to ISO 9002:1994 yielded substantial monetary savings for Chantland in accomplishing key objectives, such as on-time delivery, rework, and returned material authorizations (RMAs), which stimulate continual improvement processes.

## What did the process involve?

A print room was established with employee Gene Westry as print room supervisor. The room was used to store all prints on a computer, check for accuracy, make changes, and perform general maintenance on all prints. Westry and Shimon both agree that this measure has led to improved print quality control measures—a key factor in continual improvements.

Management established quality objectives to achieve cost savings in rework, on-time delivery, and RMAs. Shimon used Microsoft Excel spreadsheets to analyze the data for trends and used that data as an educational tool for continued improvement. To measure customer satisfaction, Shimon mailed surveys with all customer invoices.



*Chantland ISO implementation team members, from left, Deb Stalzer, Gene Westry, Deb Lanus, Andy Richardson, and Jim Shimon.*

With over a 50% response rate, the company averaged a response of 1.23, with 1.00 being very good, and 4.00 being unacceptable. All feedback was posted in a summary report for employees to review. Finally, Shimon instituted weekly mini-management reviews at weekly production meetings to discuss data and actions for continual improvement.

## How did CIRAS help?

When Chantland decided to get certified for ISO 9001:2000 at the request of a major customer, Shimon contacted Brenda Martin, a former Iowa Manufacturing Extension Partnership agent with Iowa Central Community College. Martin introduced CIRAS Industrial Specialist Verl Anders to Shimon who requested Anders to serve as consultant, facilitator, educator, and implementation guide. Anders provided employees with ISO internal auditing and documentation training, documentation review skills, advice on selecting an ISO registrar, and general counseling on ISO issues. In addition, Anders and CIRAS' Don Brown conducted a pre-certification audit.

## How did internal auditing contribute to improvements?

With the support of Chantland General Manager Larry Askelson, Shimon chose four company employees to be internal auditors. Trained by CIRAS, team members began weekly internal audits, documenting non-conformances as they went along. The auditing exercise increased ISO awareness and brought improvements in processes and practices, which, in turn, led to more employee involvement.

Auditors said their initial task was to gain the trust and confidence of the employees. Team members expressed benefits from the audit process that encouraged employee

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## New distance education course investigates composites

By Sunanda Vittal, Engineering Communications & Marketing

“Over the years I have come across many Iowa manufacturers who want to use composites but don’t have the necessary technical knowledge to do so,” stresses Vinay Dayal, whose new engineering course, “Design and Analysis of Fiber Reinforced Composites,” is expected to fill a critical need in understanding the nature of composites and their use in designing new structures.

Dayal, an associate professor in Iowa State University’s aerospace engineering department, will offer this course in fall 2004. Students will learn how to design both the structure and material for composites, how they can be used in assemblies, and how to create manufacturable composites using existing technology.

Composites touch every aspect of our lives, explains Dayal, from commercial and military aircraft that are increasingly made of composite structures to everyday objects such as tennis racquets, helmets, golf clubs, and even bridges and pavements, which often carry composite patches or material that increases flex to reduce wear and tear.

“Composite materials have excellent stiffness and tensile properties that can be tailored to the requirement of the structure,” says Dayal. Comprised of a basic mixture



Vinay Dayal conducts nondestructive testing of an aircraft’s composite panel.

of very tough fibers or particles combined with weak polymers called matrix, the end product essentially relies on the best property of each of these materials to give it extreme strength and durability.

“A lot of designers assume that composites can replace conventional materials one on one, a misconception that can often result in failed structures and accidents,” explains Dayal. “There are some composite properties that depend on fibers and some that depend on matrix,” he elaborates. An expert designer will know how to make maximum use of these different properties to develop the desired composite material.

The course will be multifaceted, from understanding the fiber, matrix, micro-mechanics, and testing of composites to determining their strength, failure, and design considerations. Composite manufacturing techniques, machining operations, and composite joints and repairs will also be examined.

Course content will cater to academic as well as non-academic students, stresses Dayal, who plans to use special equipment in the aerospace engineering department’s composite lab to demonstrate fabrication techniques as part of the course’s lab component.

The course will be of value to engineers at many levels. “As the technology of composite structures advances, engineers are increasingly facing tough structural problems that need solutions,” says Dayal. Proper training in the understanding of composite materials is critical to their appropriate use under a variety of circumstances.

Dayal has also taught distance education courses in the past on finite elements, at which time the idea for this new course surfaced. “An informal survey of engineers and managers I came into contact with led me to understand that a proper training in the understanding of composite materials would be very welcome.”

Dayal is a faculty associate at ISU’s Center for Nondestructive Evaluation and an expert in composites. He has over 15 years of experience at ISU, researching composites and teaching graduate- and undergraduate-level courses. He has guided numerous senior design projects in the area and is currently teaching a graduate-level course at ISU titled “Mechanics of Composites.” The new course on composites will be offered online this fall via streaming video on the Web.

To enroll for this course or for more information on other Engineering Distance Education courses, visit the Web site at [www.ede.iastate.edu](http://www.ede.iastate.edu).

## Selling commercial products to the federal government is as easy as GSA

By Bruce Coney, IPOC (Reprinted from CIRAS News, Vol. 36, No. 4, Summer 2002)

The General Services Agency (GSA) is a federal agency where many potential contractors get their first exposure to government contracting. GSA buys commonly used commercial items from pencils and pens to cars and trucks for use by all federal agencies. GSA also deals with construction and leasing of facilities including all items in that facility from desks and chairs to coffee pots and computers. In short, if a typical government office or industrial setting requires a set of services or products, GSA has the capacity to provide it.

Another service that GSA also provides to federal agencies is bulk purchase and storage of common-use items for distribution to federal agency customers. GSA will act as a vendor in some cases for specific items obtained through the businesses.

### **How do I get my GSA number for a no-bid contract?**

There are established regional GSA offices around the country that provide specific products such as furniture, automotive products, hardware, and appliances, as well as management services. These business opportunities are accessed through the multiple award schedule (MAS) process.

The MAS is a pre-negotiated set of prices, terms, and conditions between a business and the government for specific products (such as hardware and appliances) that are managed through the regional office in Kansas City, Missouri.

The offeror or business will approach the appropriate GSA regional office to obtain necessary documents to submit an offer. The government will accept the offer after some negotiation and issue a GSA schedule contract to the business along with a unique contract number that enables the business to market its product or service to federal agencies. If a particular federal office is interested in purchasing an item from the offeror, it may do so without going through the bidding process as long as it uses the pricing, terms, and conditions set forth in the GSA schedule and subsequently places the purchase order referencing the GSA number.

### **Marketing**

Many contractors who have developed and marketed a product can find potential opportunities with the federal government through GSA MAS procedures. It is very important that businesses interested in this opportunity be aware that this method is only successful for those firms who actively market their service to the federal government.

The operative word in MAS is "multiple," implying that there are scores of other businesses that are eligible to

offer their products or services on the MAS. Although each firm receives its own unique GSA number, it is the firm's responsibility to identify the superiority of its product from that of a competitor offering a similar item. It is this process that determines the success of a business in this form of federal contracting.

### **IPOC assistance**

IPOC will be glad to help you understand potential opportunities for your business using GSA MAS and assist you with submitting your offer, negotiating your terms and conditions, and marketing your schedule contract to appropriate federal customers.

*If you would like to learn more about federal contracting in general and about GSA MAS specifically, contact Bruce Coney, IPOC program manager, at (515) 294-4461; [bconey@ciras.iastate.edu](mailto:bconey@ciras.iastate.edu), or Kathy Bryan at (800) 458-4465; [kbryan@ciras.iastate.edu](mailto:kbryan@ciras.iastate.edu).*

## Fourth Annual Mini-Expo and Breakfast

Come speak with large business and state and federal agency purchasing agents, who will come prepared to make bidding opportunities available. Last year, over 150 participants were present. This year, participation is expected to be even greater.

**Date:** July 15, 2004

**Place:** Top of the Tower at Holiday Inn, Downtown Des Moines, 1050 6th Avenue

**Time:** Breakfast 7:30—Mini-Expo 8:30

If you are a purchasing agent and need suppliers, we would be happy to reserve a table for you. (See contact info below.)

### **Government Contracting**

Find out how to tap into government contracting at an all-day seminar/workshop, featuring speakers from the General Services Administration (GSA), Kansas City, Missouri. The event will be held on July 14, 2004, at the Des Moines Botanical Center. Business Specialist Lois Phillips from GSA, Kansas City, as well as four other GSA purchasing agents, will conduct the seminar.

*For more information on all these events or to make reservations, call Kathy Bryan at (800) 458-4465; [kbryan@ciras.iastate.edu](mailto:kbryan@ciras.iastate.edu).*



Stan Johnson



Merlin Bartz



Kevin Kephart



Diane Neuzil



Blake Hollis



Lou Honary



*The 2004 Biobased Industry Outlook Conference attracted a broad spectrum of participants from Iowa's economic and industry sectors.*

## Biobased conference signals exciting bioindustry future

*By Jean McGuire, Continuing Education and Communication Services*

“We are at the dawn of the bioeconomy,” stated Stanley Johnson, Iowa State University (ISU) Extension vice provost, as he inaugurated the 2004 Biobased Industry Outlook Conference, held March 7–8 in Ames. Hosted by ISU, the conference catered to individuals and organizations interested in developing different aspects of the bioeconomy and understanding more about the future of biobased products.

“The conference demonstrated again that Iowa is a leading force at the dawn of the bioeconomy,” said CIRAS Industrial Specialist Jill Euken. “Researchers, growers, and manufacturers shared their current successes and expanded their networks for future needs. The continued involvement of the U.S. Department of Agriculture and the U.S. Department of Energy in Iowa is also stimulating new partnerships that will produce significant results,” added Euken.

The conference opened with an evening reception on March 7 that featured research projects funded by the Iowa Biotechnology Bioproducts Consortium and the Ames Laboratory Biorenewables Consortium. ISU and the University of Iowa researchers showcased their accomplishments and discussed the impact of their research on Iowa and the Midwest.

George Anderl, BIOWA board of directors’ president and CEO, Genencor, Intl., welcomed guests and presented an overview of Iowa’s bioindustry. This was followed by presentations and future bioindustry projections made by USDA representative Merlin Bartz and James Fischer from the DOE. Iowa Energy Center Director Floyd Barwig talked about the State Technologies Advancement Collaborative (STAC) program and its impact on Iowa and the Midwest. STAC is the product of a formal intergovernmental agreement between the DOE, the National Association of State Energy Officials, and the Association of State Energy Research and Technology Transfer Institutions.

A success story panel illustrated the scope of what can be achieved in the current environment. Speakers included Kevin Kephart from South Dakota State University; Diane Neuzil, Blake Hollis, and Lou Honary from the University of Northern Iowa’s

Ag-Based Industrial Lubricants Research Program; and Jeff Stroburg from West Central Cooperative. Iowa Department of Economic Development Director Mike Blouin addressed areas where Iowa can excel to bring more economic development to the state, stressing that Iowa has the potential to be a world leader in producing biomass, and now is the time to start growing the bioeconomy.

Part of the first day's focus was directed toward breaking down biobased value chain links. ISU experts described the challenges and opportunities represented by each link and highlighted current and future research directions. The final session was devoted to the USDA's new Federal Biobased Products Preferred Procurement Program (FB4P). USDA representative Marvin Duncan explained the section of the 2002 Farm Bill that outlines the FB4P and how it will affect the bioindustry.

Sponsors for the 2004 conference were the Office for Biorenewables Programs, BOWA Development Association, Iowa Biotechnology Byproducts Consortium, Biorenewable Resources Consortium, Iowa State University Extension, the Iowa Energy Center, and the Center for Crops Utilization Research.



George Anderl



Marvin Duncan



Floyd Barwig



James Fischer

*For more information about the Biobased Industry Outlook Conference or to view conference presentations, visit the Web site at [www.ciras.iastate.edu/bioindustry/bioconference](http://www.ciras.iastate.edu/bioindustry/bioconference).* ■

## Iowa's bioeconomy is becoming a reality

By Jill Euken, CIRAS

According to a recently released report prepared by the Batelle Memorial Institute, Iowa's bioeconomy is not a long-term dream anymore; rather, it is becoming a reality, and it's a reality that Iowa State University is leading. The BatelleReport was commissioned by the Iowa Department of Economic Development to help gain an understanding of Iowa's core competencies and opportunities in the biosciences.

The Batelle Memorial Institute selected technology development platforms that the state of Iowa should develop, focus, and invest in to strengthen Iowa's economy. The bioeconomy was selected as one of these platforms based upon criteria set by the researchers. These criteria included existing research focus strengths, existing or emerging commercial opportunities, and product market potential, among others.

In the report, the bioeconomy is defined as "focused on the commercial application of bioresources to the production of energy, industrial commodities, and specialty products." Examples include ethanol, biodiesel, biobased lubricants, and fibers.

In terms of stated criteria, researchers found a \$5.1-billion market potential for lubricant sales. Additionally, existing research strength at Iowa State University was recognized as "central to the state's initiatives in the bioeconomy." ISU leadership in the bioeconomy is prevalent in programs and organizations such as the Iowa Industries of the Future and the BOWA Development Association—two organizations recognized for and attributed with nurturing the growth of the bioeconomy in Iowa.

Driving the bioeconomy forward in Iowa are new departments and centers at Iowa State, including the Center for Sustainable Environmental Technologies, the Center for Catalysis, the Center for Crops Utilization Research, and the Plant Sciences Institute. The Batelle Institute reported that ISU has a structure in place that efficiently moves research from the laboratory to the marketplace.

The Batelle Report has made recommendations that will contribute toward further growth in the economy. To strengthen Iowa's economy, the report states that increased funding and continued support of bioeconomy organizations and centers throughout the state will create a lasting impact on the economy. The outcome will surface in not only increased production, but also new jobs creation and investment opportunities for Iowans.

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## “The Six Sigma Define, Measure, Analyze, Improve, Control (DMAIC) Process”<sup>1</sup>

- **Six Sigma—DEFINE process includes:**
  - Define the project—purpose, scope, and resources in the charter.
  - Develop the SIPOC (Suppliers-Inputs-Process-Outputs-Customers) map to understand the process.
  - Determine project goals that fit customer needs (Voice of the Customer).
- **Six Sigma—MEASURE process includes:**
  - Collect baseline data on suspected problem.
  - Plot the data in time order.
  - Use Pareto charts to pinpoint occurrence.
  - Calculate process sigma.
  - Create detailed process maps—analyze waste and bottlenecks.
- **Six Sigma—ANALYZE process includes:**
  - Focus on the problems identified in Measure.
  - Brainstorm as many potential causes as possible.
  - Select a few of the most likely causes and collect data on them.
  - Use statistical methods to quantify the effects.
- **Six Sigma—IMPROVE process includes:**
  - Brainstorm a lot of ideas for improvement.
  - Select solutions—select criteria to assess alternative solutions; then evaluate alternatives through testing.
  - Develop plans—include tasks, timelines, budget, resources, and stakeholders.
  - Pilot the selected solutions—use PDCA cycles.
  - Implement plans—include how you will check results.
  - Interpret the charts to quantify effects of solutions.
  - Evaluate overall results/methods used to achieve them.
- **Six Sigma—CONTROL process includes:**
  - Document the new methods—develop standard work.
  - Provide training to those who will use new methods.
  - Monitor implementation—make course corrections.
  - Create a process to update and improve the method.
  - Summarize and communicate key learnings to others.
  - Recommend next project to further increase sigma level.

<sup>1</sup> Condensed from Six Sigma Black Belt Training developed by Oriel Inc.

## Grimm Brothers slashes defects

Continued from page 1

A team was formed, and the first meeting was devoted to

- developing a charter that stated project purpose, importance, scope, deliverables, measures, and resources
- conducting a suppliers-inputs-process-outputs-customers (SIPOC) analysis
- identifying a Voice of the Customer (VOC) data collection plan
- generating Critical to Quality (CTQ) requirements
- gathering and reviewing initial attribute data
- preparing a Pareto chart showing defects by scrap code
- creating a focused problem statement
- writing a plan for cause verification
- developing Ishikawa diagrams for the top three scrap codes
- selecting actions to address the top three scrap codes

### Six Sigma project

Six Sigma classes comprised four one-week sessions, each followed by three weeks of applying learned concepts to the class project. Team meetings were scheduled during the three-week periods between classes. During this time, the team implemented the Plan-Do-Check-Act (PDCA) Shewhart cycles. Additionally, weekly meetings were instituted to implement and track improvements.

Subsequent meetings were devoted to a continued analysis of potential causes of defects and PDCA cycles to test. Actions implemented by the team ranged from the simple to the complex, as illustrated by two examples:

**Simple:** Operators and handlers were made aware that scratches *can* cause defects. An increased awareness helped the team to significantly reduce the number of “scratch” defects.

**Complex:** The team suspected that high moisture levels in the plastic sheets caused bubbles to appear during a heated bend operation. Team members obtained humidity and temperature gages while measuring both variables and oven-drying time, and then created a matrix of drying times based on temperature and humidity. When the sheets had dried adequately, it was discovered that they no longer developed bubble inclusions during the heated bend.

The Six Sigma team has continued to meet on a weekly basis to review production quality results, discuss ideas for improvement, and document process changes.





*Grimm Brothers employee works on screen printing task.*

### **Assessing the outcome**

Although the Six Sigma team continues to meet, they have achieved or surpassed all their initial objectives in the following key metrics:

1. Reduction in defective rate from 11.2% to 1.8%, which translates into an 84% reduction in defect rate
2. Increased process sigma level from 2.7 to 3.6 in just six months
3. Retention of the customer's "Top Plus" designation valued at \$75,000 to \$100,000

After just three months of Six Sigma project effort, the team proudly shared the customer's supplier evaluation form, which revealed that Grimm Brothers had achieved a 100% rating for the very first time—an improvement from a previous rating of 97% that reflected the late and short shipments.

Asked about the impact of Six Sigma at Grimm Brothers, Barrett replied, "The impact on our shipments was immediate. After only three months, late and short shipments were eliminated and our supplier rating hit 100%." In addition, the customer rewarded the company with 38 new part numbers to manufacture, adds Barrett. "Results achieved have given us a quick payback. We are now applying the Six Sigma process to a new quality problem."

*For more information about Lean: Six Sigma concepts and applications, visit the Web link at [www.ciras.iastate.edu/productivity/](http://www.ciras.iastate.edu/productivity/) and check the Lean: Six Sigma option. Jim Black may be contacted at (515) 294-1507; [jimblack@ciras.iastate.edu](mailto:jimblack@ciras.iastate.edu). ■*

### **Chantland ISO implementation**

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consensus on the issue of quality. This led to improved customer satisfaction, reduced rework, increased employee awareness of the ISO process, and continuous communication and focus on improving items found to be not satisfactory during the audit.

### **What contributed to success?**

Enlisting the services of an ISO consultant was the first step in the right direction. Shimon sought advice and assistance from CIRAS and used the information to customize the ISO implementation to the company's special needs.

Commitment and support from top management was also critical to success. Askelson attended each special training session for employees and the implementation team, as well as sessions dealing with documentation development and internal auditing. His awareness and participation in the ISO process sent a message to all employees that ISO was critical to Chantland.

Finally, Askelson gave Shimon the freedom to implement and maintain a data collection and reporting system, as well as establish a strong internal audit program. Shimon put in long hours and extra effort and maintained constant communication with employees and management on the status of ISO implementation.

### **Where does ISO stand today at Chantland?**

The continued success of ISO in any company occurs when management and employees communicate on audit results, quality objectives, customer satisfaction measures, and corrective actions. Like many ISO-certified companies, Chantland holds yearly management review meetings.

Shimon and Askelson, however, have taken the process two steps further. Shimon conducts quarterly management style review meetings with the company's CEO, who is located out of state. More importantly, he has instituted weekly reviews of production-related quality systems and objectives. Additionally, charts, graphs, and other information posted regularly for all employees to view detail the company's success in reaching the objectives.

Results? ISO implementation has translated into a six-digit dollar figure in benefits.

*To determine how CIRAS can help your company with ISO 9001:2000 implementation, contact Verl Anders at (515) 294-1316; [vanders@iastate.edu](mailto:vanders@iastate.edu). Shimon may be contacted at Chantland's south plant in Humboldt at (515) 332-4040. ■*

## New Advisory Council Members



Gordon Rehn, P.E., is a senior staff engineer at Deere & Company in Davenport, Iowa. Rehn heads the simulation group, supervising projects in discrete event simulation analysis in manufacturing operations. Rehn graduated from Iowa State's mechanical engineering department and has been with Deere for 31 years. As a member of the CIRAS Advisory Council, he hopes his awareness of planning techniques at Deere can be useful to smaller companies that supply close to 70% of Deere's products and services.



Don Schmidgall is vice president for sales and marketing at Hawkeye Group in Mediapolis, Iowa. Hawkeye Group is a worldwide supplier of concrete pipe machinery used in manholes and as reinforcements and spacers. Schmidgall joined the family business over 30

years ago, soon after he graduated from Iowa State University with an undergraduate degree in engineering operations. Being a part of the Advisory Council means contributing his extensive experience in business operations and management, says Schmidgall.

The CIRAS Advisory Council is a voluntary organization of Iowa business people that serves as a liaison between manufacturers, CIRAS, and Engineering Distance Education. The council meets with CIRAS staff four times a year to discuss ideas and plans that can help better meet the needs of Iowa manufacturers.

### CVMA invites area companies

Showcase your products and services and network with existing and potential customers at the Cedar Valley Manufacturers Association (CVMA) 2004 Manufacturers' Expo to be held Wednesday, October 13, at the Five Sullivan Brothers Convention Center in downtown Waterloo.

The last expo, held in 2002, featured over 70 exhibitors. This year, to better accommodate both exhibitors and attendees, a few changes are being made. The career showcase, for instance, is being moved to earlier in the day and will be held prior to the trade show. Additionally, several northeast Iowa high schools will be invited to bring their industrial tech students to the event. As students consider a career in manufacturing, they will have a chance to visit with exhibitors about employment opportunities in the Cedar Valley area.

*For more information on participating in the 2004 Manufacturers' Expo, contact the CVMA office at (319) 266-3390. Discounts are available for early registration.*

## Don Brown leaves CIRAS



Don Brown joined CIRAS in 1988 as a "field man" for the Cedar Rapids area, a position that required him to offer technical assistance and Iowa State University (ISU) resources to 13 counties, home to approximately 700 manufacturing companies.

This spring, after 16 years of service that includes making key contributions in the field of quality systems and productivity and providing invaluable assistance to Iowa companies, Brown retired from CIRAS.

Brown will be missed for his range of services, from general management guidance to his expertise in statistical process control, problem solving tools, failure mode and effects analysis, and root cause analysis. His CIRAS career is filled with initiatives in setting up leadership teams, finance teams, and quality system teams. Career highlights include representing ISU from 1989 to 1992 at the National Network of Quality and Productivity Centers and helping to set up the Graphic Arts Technology Center of Iowa in 1992.

Through the years, Brown helped create an awareness of quality systems and encouraged their implementation in Iowa companies. He co-founded the Woods Quality Center—a community network providing quality-related knowledge to the Cedar Rapids/Iowa City region. He was instrumental in expanding this group, which eventually became a statewide organization called the Iowa Quality Center with about 180 affiliates representing thousands of Iowans.

Brown is the recipient of numerous awards, including the ISU Regents Staff Excellence Award for professional service in 1999 and the Meritorious Service Award in 2002 for achievement and educational contribution to clients.

Don is leaving CIRAS to spend time in the Iowa Great Lakes area, where he and his wife, Paula, will live. His diplomacy and knowledge will be greatly missed by CIRAS and the many Iowa manufacturers he has touched in his years of service through ISU Extension.

# Manufacturers boost sales to federal government through FB4P

By Krysta Nibe, CIRAS

**B**<sup>4</sup> Ventures, LLC, located in Mount Vernon, Iowa, was recently awarded GSA Advantage by the federal government. This award allows B4 Ventures, LLC, to sell its biobased hand sanitizer, Avant, to the federal government. Additionally, with the help of CIRAS and the implementation of the new Federal Biobased Products Preferred Procurement Program (FB4P), B4 Ventures' biobased product may soon get preferential treatment in the federal purchasing process.

The FB4P was written into the Farm Security and Rural Investment Act of 2002 and requires federal agencies to purchase biobased products when those products meet certain standards set by the U.S. Secretary of Agriculture. The term 'biobased product,' as defined by the act, means a product determined by the U.S. Secretary of Agriculture to be a commercial or industrial product that is composed in whole or in significant part of biological products, renewable domestic agricultural materials, or forestry materials.

In order to get the FB4P started, the USDA is gathering information about biobased products and companies. To collect this data, ISU is developing an on-line information system, encouraging manufacturers to participate, establishing a carbon-14 testing lab, and documenting the process in order to become ISO 9000 certified.

B4 Ventures, LLC, is one of several Iowa manufacturers that CIRAS is working with to get the program started. The company is working to complete the steps necessary to designate the biobased hand sanitizer for the program. According to B4 Ventures Chief Operating Officer Chad Stamper, the sanitizer, which contains an active ingredient of corn-based ethanol, has been carbon tested and is awaiting other tests. "We have been working closely with Steve [Devlin] at CIRAS to get this product designated. We have also been working with Steve and Glenn Norton from the Center for Sustainable Environmental Technologies

to submit two new products—a hand soap and a hand lotion—to the FB4P," Stamper says.

B4 Ventures, LLC, is helping to lead the way for Iowa manufacturers in the FB4P. "Manufacturers' participation and support will have a great effect on the implementation of this program," says CIRAS Industrial Specialist and Program Manager Steven Devlin. "It is a simple process for other Iowa manufacturers to submit products to the designation process of the FB4P. They need only to visit the Web site, download the product information sheet, and return it to us [CIRAS] as soon as possible," he adds. This information can be obtained at <http://www.biobased.oce.usda.gov>.

The information gathering and product testing process will result in a list of biobased item designations that will help manufacturers, such as B4 Ventures, LLC, market their biobased products to the federal government. Once an item has been designated as biobased, a manufacturer can take their biobased product to the government for preferential treatment. While this is the ultimate goal, the final guidelines for establishing the FB4P are still in process. ISU expects the program will be ready to begin once the details of the federal bill have been determined.

Iowa State University and CIRAS were selected to jumpstart the FB4P for the USDA in part because of the university's growing commitment to the bioindustry. "ISU is already supporting the emerging bioindustry with the Office of Biorenewables Programs, the BLOWA Development Association, and the Iowa Industries of the Future effort already in place. The USDA saw these efforts as a good opportunity to help start this program," says Devlin.

*More information about the FB4P initiative at ISU can be found on the CIRAS Web site at [www.ciras.iastate.edu](http://www.ciras.iastate.edu). For more information about B4 Ventures, LCC, visit the Web site at [www.b4brands.com](http://www.b4brands.com).*

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## Iowa's bioeconomy

Continued from page 7

ISU Extension/CIRAS is identified as integral to building Iowa's bioeconomy. CIRAS is helping the USDA implement section 9002 of the 2002 Farm Security and Rural Investment Act. This initiative, known as the Federal Biobased Products Preferred Procurement Program (FB4P), was written to require federal agencies to purchase biobased products when those products meet certain standards set by the U.S. Secretary of Agriculture (see article in this issue). CIRAS Director Ronald Cox and Industrial Specialists Steve Winter and Steven Devlin are leading the effort to jumpstart the FB4P.

The Batelle Report challenges Iowa Regent institutions to work out new relationships with biobased businesses that will benefit both. How well and quickly we build new public/private relationships and partnerships, it points out, may well determine whether Iowa does indeed dominate in the commercialization of the bioeconomy platform.

*A copy of the full report and edited sections of the report that relate specifically to the bioeconomy can be accessed at [www.ciras.iastate.edu/bioindustry](http://www.ciras.iastate.edu/bioindustry). For more information about bioeconomy issues, contact Jill Euken at (712) 769-2600; [jeuken@ciras.iastate.edu](mailto:jeuken@ciras.iastate.edu).*

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[www.ciras.iastate.edu](http://www.ciras.iastate.edu)

## WebWatch: CIRAS is just a click away

The CIRAS Web site is a quick and easy way for Iowa manufacturers and companies to access technical services and keep informed about the latest in manufacturing practices and trends.

The site features industry statistics, in-depth information on topics important to manufacturers, case studies, and workshop descriptions that can help Iowa companies increase productivity and enhance customer and employee satisfaction.

Visit the Web site at [www.ciras.iastate.edu](http://www.ciras.iastate.edu) to see what CIRAS can do for you!



## Focus: CIRAS Web site

*CIRAS News* is published quarterly by the Center for Industrial Research and Service and edited by the CIRAS publications team. Design and production is by Engineering Communications and Marketing, Iowa State University. Contact John Van Engelenhoven at (515) 294-4475 or [jve@ciras.iastate.edu](mailto:jve@ciras.iastate.edu) with questions and comments regarding the newsletter.

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