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Robert Donley, Executive Director

January 13, 2016

Glen Dickinson  
Legislative Services Agency  
State Capitol

Re: IPRT FY 2015 Annual Report

Dear Mr. Dickinson:

Pursuant to 2013 Iowa Acts, Chapter 141 §54(3), the attached summary highlights activities for the Center for Industrial Research and Service (CIRAS) on the status of the Technology Assistance Program ((TAP) which is to include information the Industrial Incentive Program (IIP) at Iowa State University for FY 2015. The attached spreadsheets include FY 2015 Matching Funds, Expenditures, and Industry Awards. This report is being sent to you for distribution to the Joint Appropriations Subcommittee on Economic Development. This report has been expanded from past reports to include financials and impact data for all three elements of the CIRAS/TAP effort. Previously, while managed under the old IPRT program, the primary focus was on the Industrial Incentive Program (IIP). This new report format now covers IIP, nondirected applied research, and directed technical assistance.

If there are any questions concerning this report, please do not hesitate to contact us.

Sincerely,

Robert Donley

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cc: Robin Madison  
Legislative Liaisons  
Legislative Log

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January 12, 2016

FY15 Progress Report on the CIRAS Technology Assistance Program

Per the code of Iowa, Iowa State University's Center for Industrial Research and Service (CIRAS) is to provide an annual report to the legislature on the status of the Technology Assistance Program (TAP), which is to include information on the Industrial Incentive Program (IIP). Specifically, ISU must "report annually to the joint appropriations subcommittee on economic development and to the legislative services agency the total amount of private contributions, the proportion of contributions from small businesses and other businesses, and the proportion for directed contract research and nondirected research of benefit to Iowa businesses and industrial sectors." This report highlights the FY15 CIRAS/TAP efforts, including a summary of IIP activities.

There are three components to the CIRAS/TAP program: directed applied research with individual Iowa companies (IIP), nondirected applied research for the good of industry clusters in Iowa, and directed technology assistance to individual Iowa companies. FY15 highlights are provided below.

## **CIRAS/TAP: Industrial Incentive Program**

The goal of the TAP-IIP effort is to help small companies incorporate technology improvements into their company through applied research projects with ISU faculty and staff. FY15 highlights are delineated below.

- Seven new directed research projects were initiated.
  - One project (14% of the total projects) was with a small company (20 or fewer employees).
  - Six projects (86%) were with larger companies.
- There were eight projects completed, including projects carried forward from previous years.
- Ten research projects remain active.
- New company funding was \$146,455, with \$142,109 of new TAP-IIP funding.
- Company reported impacts are:
  - \$6.9 million from new investments, new or retained sales, and savings or avoided costs; and
  - 52 jobs created or retained.

## **CIRAS/TAP: Nondirected Applied Research**

The goal of the TAP-Nondirected Applied Research effort is to support ISU centers and ISU-led conferences that are a) aligned with the Iowa Battelle economic development roadmap and b) partially funded by industry, including Iowa companies, to investigate near-term technology issues of importance to industry. CIRAS/TAP funding was used to help support four ISU centers:

- Center for Biorenewable Chemicals (CBiRC)
- Center for Bioplastics and Biocomposites (CB<sup>2</sup>)
- Biobased Industry Center (BIC)
- Center for e-Design

These centers have 20 distinct Iowa company members and have 39 active research projects underway.

CIRAS/TAP also sponsored the Conference on Autonomous and Robotic Construction of Infrastructure, which was held at Iowa State University. The conference brought together industry, academia, and government officials interested in improving construction productivity, quality, reliability, and safety.

## **CIRAS/TAP: Directed Technical Assistance**

The goal of the TAP-Directed Technical Assistance effort is to provide Iowa companies with access to a number of technologies, including materials, quality systems, and nondestructive evaluation. FY15 highlights are delineated below.

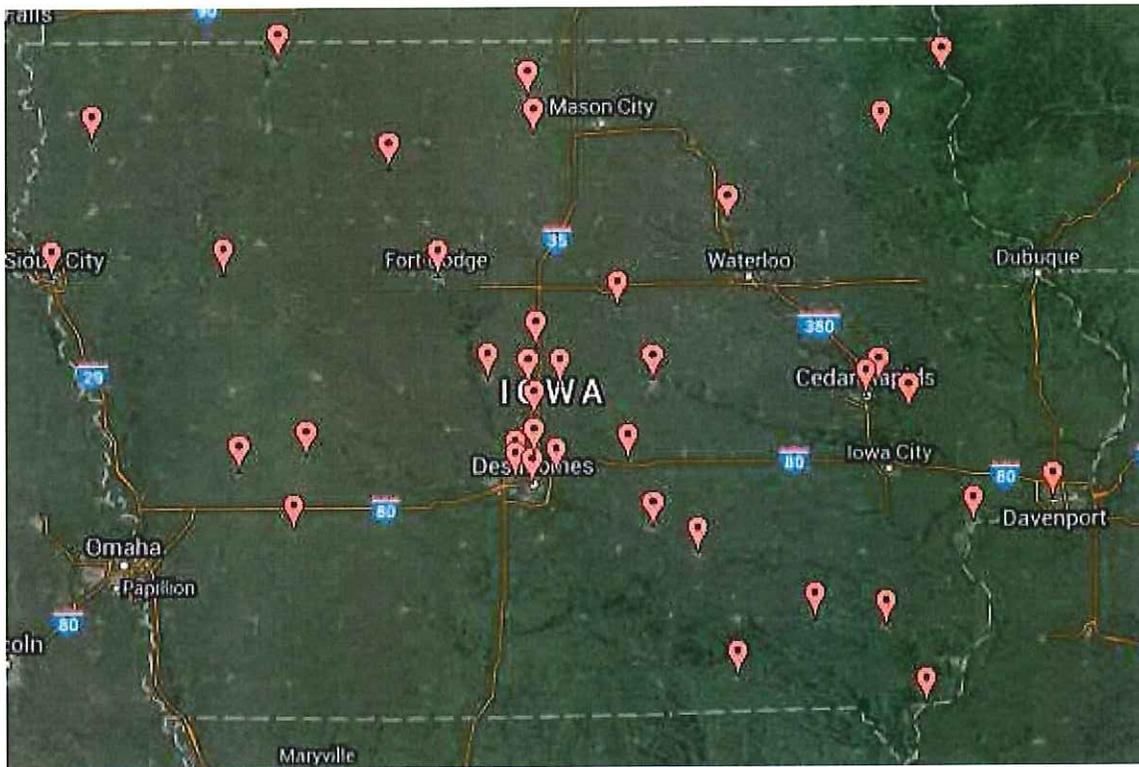
- There were 46 projects completed with 35 distinct clients.
- Company reported impacts are:
  - \$20.5 million from new investments, new or retained sales, and savings or avoided costs; and
  - 86 jobs created or retained.

## **Summary**

The Center for Industrial Research and Service (CIRAS), a joint program of the Office of Economic Development and Industry Relations and the College of Engineering, took over management of the TAP program in July 2014. The goals were to increase the impact of the TAP technology diffusion efforts and to improve the efficiency of TAP administration.

The aggregated impact from all three CIRAS/TAP efforts are delineated below.

- There were 64 distinct clients served.
- These companies resided in 38 different cities (28 different counties). See Figure 1 below.
- Company reported impacts are:
  - \$27.4 million from new investments, new or retained sales, and savings or avoided costs; and
  - 138 jobs created or retained.
- FY15 impacts were nearly three times greater than FY13 impacts.



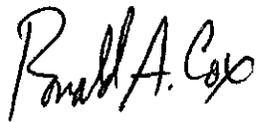
**Figure 1: City locations of companies that received CIRAS/TAP assistance in FY15.**

This past year, CIRAS/TAP staff also focused on improving the efficiency of the program so more funds could be directed to assisting Iowa companies. This included using existing CIRAS administrative staff to support TAP work, developing a standard agreement to streamline the contract process, and implementing a new process to quantify return on investment early in the project timeline to better focus efforts.

The FY15 CIRAS/TAP financials are included as Appendix A. A log of directed contract research projects that were active during FY15 are included as Appendix B. CIRAS has taken a conservative approach to financial management of the program while we gather additional information on the impact of the various TAP initiatives. As our processes become more robust, our services to Iowa industry are expanded, and additional impact data is gathered, we will redirect efforts (and expenditures) to further increase program impact and the diversity of clients served by the program.

In FY16 we are continuing our work to improve the efficiency of the CIRAS/TAP effort, while expanding our technology support to Iowa industry. We will be investing in the purchase and operation of new equipment to expand the portfolio of technology resources available to Iowa companies. This year our focus is on metal Additive Manufacturing (AM), commonly called 3-D printing. An AM machine is being brought

online, educational materials are being developed, and we are completing technical assistance projects with Iowa companies to help keep them globally competitive.



Ronald A. Cox  
Director, CIRAS



Chris Hill  
Manager, CIRAS Technology Assistance Program

Appendix A: CIRAS/TAP FY15 Revenue and Expenses

		FY15
<b>Carryforward*</b>		
	Previous FY Carryforward IIP 109s	\$ 232,304
	Previous FY Carryforward Co 400s	\$ 209,856
	<b>TOTAL CFW</b>	<b>\$ 442,160</b>
<b>Revenue</b>		
	State Appropriation	\$ 1,365,602
	Company Fees (Directed Contract Research)	\$ 146,455
	<b>TOTAL REVENUE</b>	<b>\$ 1,512,057</b>
<b>TOTAL FUNDS AVAILABLE FOR FY</b>		<b>\$ 1,954,217</b>
<b>Expenses</b>		
	Nondirected Research - Administration	\$ 38,233
	Nondirected Research - Centers	\$ 130,000
	Nondirected Research - Faculty Grants	\$ 33,781
	<i>Sub-total</i>	<i>\$ 202,014</i>
	Directed Contract Research (IIP)	\$ 198,613
	Directed Contract Research (Company)	\$ 252,867
	<i>Sub-total</i>	<i>\$ 451,480</i>
	Technical Assistance - CNDE	\$ 202,533
	Technical Assistance - Materials	\$ 247,986
	Technical Assistance - CIRAS Engineering	\$ 105,944
	Technical Assistance - ISU Faculty/staff	\$ 32,455
	Technical Assistance - Other	\$ 15,806
	<i>Sub-total</i>	<i>\$ 604,724</i>
	Equipment	\$ 38,699
	Administration	\$ 205,482
	<i>Sub-total</i>	<i>\$ 244,182</i>
	<b>TOTAL EXPENSES</b>	<b>\$ 1,502,401</b>
<b>Carryforward*</b>		<b>\$ 451,816</b>

\* Predominantly carryforward funding for ongoing Directed Contract Research projects.

Appendix B: CIRAS/TAP FY15 Active Project Log: Directed Contract Research

<b>FY12 IPRT Company Assistance ^</b>			
<i>Company</i>	<i>Status</i>	<i>Industry Funding</i>	<i>IPRT-IIP Funding</i>
Endometric*	Closed FY15	\$ 25,606.00	\$ 24,974.91
<b>FY13 IPRT Company Assistance</b>			
<i>Company</i>		<i>Industry Funding</i>	<i>IPRT-IIP Funding</i>
Wootworks*		\$ 7,789.00	\$ 18,547.00
Pella	Closed FY15	\$ 17,056.00	\$ 16,935.00
Diamond V	Closed FY15	\$ 83,491.00	\$ 25,000.00
Scott's Company, LLC	Closed FY15	\$ 17,952.00	\$ 17,792.44
<b>FY14 IPRT Company Assistance</b>			
<i>Company</i>		<i>Industry Funding</i>	<i>IPRT-IIP Funding</i>
Quad County Ethanol*		\$ 29,848.00	\$ 24,491.00
inVinci Safety Systems*		\$ 55,286.00	\$ 24,999.00
Iowa Cagefree*		\$ 25,449.00	\$ 25,000.00
Summit Technology Group*		\$ 7,257.00	\$ 21,776.00
Seabee Cylinders	Closed FY15	\$ 26,207.00	\$ 25,000.00
Vi-Cor	Closed FY15	\$ 72,059.00	\$ 25,001.00
<b>FY15 CIRAS Technology Assistance Program</b>			
<i>Company</i>		<i>Industry Funding</i>	<i>CIRAS/TAP-IIP Funding</i>
Navita Premium Feed Ingredients*		\$ 8,631.00	\$ 24,977.00
Hy-Line		\$ 40,000.00	\$ 25,000.00
Nutra-Flo (Nutraferma)	Closed FY15	\$ 8,935.00	\$ 8,828.00
Grain Processing Corporation (GPC)	Closed FY15	\$ 23,454.00	\$ 18,040.00
SeaBee		\$ 25,000.00	\$ 25,000.00
Metalcraft		\$ 21,514.00	\$ 21,506.00
C and S Products		\$ 18,921.00	\$ 18,758.00
<b>FY15 CIRAS/TAP Directed Research New Funding Total</b>		<b>\$ 146,455.00</b>	<b>\$ 142,109.00</b>
^ The program had been referred to as IPRT Company Assistance prior to July 1, 2014.			
*Small company (20 or fewer employees)			