

Institutional Information Request Form

Southern Region: Value of Extension Services and Experiment Stations

The Battelle Memorial Institute is working with the leadership of the *Association of Southern Region Extension Directors* and the *Southern Association of Agricultural Experiment Station Directors* in producing analysis and a high-profile report on the special value of extension and experiment stations in the development of the 21st Century agbioscience economy. Each of the land grant universities in the 13 state and 2 U.S. territory southern region is collaborating in performance of this important project.

For each of the land-grant institutions participating in this project, Battelle is requesting information, data, project examples, etc. that will help illustrate the value of experiment stations and extension services. Completion of this information request is an important step in the information gathering required for this project. We are requesting that at each institution, the Experiment Station Director and the Extension Director **jointly** complete each section to the best of your collective ability. Note that within this form, Agbiosciences includes all aspects of agricultural, environmental, and biological sciences; as well as forestry, fisheries, wildlife, agro-tourism, and recreation; which are within the purview of the experiment station and/or extension service. Also, if you have additional supporting documents, reports, statistical summaries, etc. that you believe would be helpful to this project please forward them to the consulting team at Battelle together with your completed form. The form is set-up using MS-Word tables so you can type directly into the table boxes.

Please return the completed form to Simon Tripp at Battelle via email to tripps@battelle.org If you have questions please direct them to Simon at:

Simon J. Tripp
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Battelle Memorial Institute
Technology Partnership Practice
6 Jaycee Drive
Pittsburgh, PA 15243
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Section 1: Institutional Profile

University Name	Auburn University
Extension Service Director (name, phone, email)	
Experiment Station Director (name, phone, email)	Dr. William D. Batchelor Aqdean@auburn.edu 334.844.3209

Personnel

Number of Personnel in Extension (FTE)	
Number of Personnel in Experiment Station (FTE)	351

* Please do not include student employees, graduate assistants or temporary personnel

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Section 2: Income/Revenue Sources

Income Source	2011 \$ Income Received by Extension	Funding Trend for Past 3 Years	2011 \$ Income Received by Experiment Stations	Funding Trend for Past 3 Years
Federal Formula Funds	\$	<input type="checkbox"/> Increasing <input type="checkbox"/> Stable <input type="checkbox"/> Decreasing	\$4,938,000	<input type="checkbox"/> Increasing <input checked="" type="checkbox"/> Stable <input type="checkbox"/> Decreasing
State Appropriations	\$	<input type="checkbox"/> Increasing <input type="checkbox"/> Stable <input type="checkbox"/> Decreasing	\$30,968,000	<input type="checkbox"/> Increasing <input type="checkbox"/> Stable <input checked="" type="checkbox"/> Decreasing
Local Government Appropriations (Counties, etc.)	\$	<input type="checkbox"/> Increasing <input type="checkbox"/> Stable <input type="checkbox"/> Decreasing	\$0	<input type="checkbox"/> Increasing <input type="checkbox"/> Stable <input type="checkbox"/> Decreasing
Federal Grants and Contracts	\$	<input type="checkbox"/> Increasing <input type="checkbox"/> Stable <input type="checkbox"/> Decreasing	\$7,618,000	<input checked="" type="checkbox"/> Increasing <input type="checkbox"/> Stable <input type="checkbox"/> Decreasing
State Grants and Contracts	\$	<input type="checkbox"/> Increasing <input type="checkbox"/> Stable <input type="checkbox"/> Decreasing	\$2,120,000	<input type="checkbox"/> Increasing <input type="checkbox"/> Stable <input checked="" type="checkbox"/> Decreasing
Local Grants and Contracts	\$	<input type="checkbox"/> Increasing <input type="checkbox"/> Stable <input type="checkbox"/> Decreasing	\$33,000	<input type="checkbox"/> Increasing <input checked="" type="checkbox"/> Stable <input type="checkbox"/> Decreasing
Industrial Grants and Contracts, including grants and contracts from commodity groups	\$	<input type="checkbox"/> Increasing <input type="checkbox"/> Stable <input type="checkbox"/> Decreasing	\$8,309,000	<input checked="" type="checkbox"/> Increasing <input type="checkbox"/> Stable <input type="checkbox"/> Decreasing
Foundation Grants and Contracts	\$	<input type="checkbox"/> Increasing <input type="checkbox"/> Stable <input type="checkbox"/> Decreasing	\$0	<input type="checkbox"/> Increasing <input type="checkbox"/> Stable <input type="checkbox"/> Decreasing
All Other Grants and Contracts	\$	<input type="checkbox"/> Increasing <input type="checkbox"/> Stable <input type="checkbox"/> Decreasing	\$0	<input type="checkbox"/> Increasing <input type="checkbox"/> Stable <input type="checkbox"/> Decreasing
Sales of Products and Services	\$	<input type="checkbox"/> Increasing <input type="checkbox"/> Stable <input type="checkbox"/> Decreasing	\$3,956,000	<input type="checkbox"/> Increasing <input checked="" type="checkbox"/> Stable <input type="checkbox"/> Decreasing
Intellectual Property Revenues	\$	<input type="checkbox"/> Increasing <input type="checkbox"/> Stable <input type="checkbox"/> Decreasing	\$0	<input type="checkbox"/> Increasing <input type="checkbox"/> Stable <input type="checkbox"/> Decreasing
Gifts	\$	<input type="checkbox"/> Increasing <input type="checkbox"/> Stable <input type="checkbox"/> Decreasing	\$27,000	<input type="checkbox"/> Increasing <input checked="" type="checkbox"/> Stable <input type="checkbox"/> Decreasing
Other	\$	<input type="checkbox"/> Increasing <input type="checkbox"/> Stable <input type="checkbox"/> Decreasing	\$3,033,000	<input checked="" type="checkbox"/> Increasing <input type="checkbox"/> Stable <input type="checkbox"/> Decreasing
TOTAL	\$	<input type="checkbox"/> Increasing <input type="checkbox"/> Stable <input type="checkbox"/> Decreasing	\$60,002,000	<input type="checkbox"/> Increasing <input type="checkbox"/> Stable <input type="checkbox"/> Decreasing

Are these income/revenue numbers based on a cash or accrual accounting basis? Accrual

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Income Trends:

During the past five years, what trends have been observed in the funding for extension and experiment station activities? What are key funding challenges? Where have the most notable funding declines or increases occurred?

Over the past five years, we have seen our research programs grow through extramural support. During this same period of time, our state appropriations have declined sharply. From a budget perspective, we have to be incredibly strategic and deliberate with how we invest our funding to ensure our continued success.

Section 3: Research and Extension Activities

Key Initiatives, Institutes and Programs:

Please provide a description of FIVE key centers, institutes, programs or initiatives that are true signatures of experiment station and extension work at your institution. Here we are looking for descriptions of initiatives, centers, programs, etc. for which your university is internationally or nationally well-recognized as a leader.

1. *Center for Bioenergy and Bioproducts.* This interdisciplinary center focuses on developing technology solutions for biofuels, biopower, and biobased products from biomass resources. The Center's signature efforts include biomass logistics systems, biomass fractionation, and thermochemical conversion of biomass to liquid fuels, high-value chemicals, and renewable electrical power.

2. *National Poultry Technology Center.* This center focuses on technology solutions for the poultry production sector. Signature efforts for the poultry producer include energy efficiency and renewable energy improvements in poultry housing, new strategies for heating and cooling poultry housing, lighting advancements in poultry housing, water harvesting and water use efficiency for poultry production, and poultry waste management.

3. *Aquaculture and Fisheries Business Institute.* The Institute is charged with finding efficient solutions to the production, economic, quality, logistical and marketing problems standing between the region's aquatic enterprises—including freshwater, saltwater and recreational fisheries—and growth.

4. *Auburn University Food Systems initiative.* The AUFSI is taking a leadership role in reducing foodborne hazards in every part of the food chain, from food origin to consumer, and is at the forefront of food systems technology and food defense.

5. *International Hunger Institute.* The institute is another tool to use in the fight against domestic and global hunger. Since its inception in 2004, Auburn's War on Hunger has had a role in every school, college and major student organization on campus. Multidisciplinary cross-college efforts have been occurring in such areas as fisheries, geography, management, industrial design, pharmacy, engineering and nutrition.

Special Research and Extension Infrastructure

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Please provide a description of FIVE special assets or infrastructure investments that support agbioscience and related development at your institution. Examples might include pilot plant facilities, unique scientific research infrastructure, biosecurity facilities, camps, etc.

Poultry Research and Education Unit. This facility has 21 buildings encompassing ~100,000 sf of total space. Facilities include animal care and use facilities, food safety and quality facilities and support facilities. An educational/training room that can accommodate 100 attendees is located at this unit.

Feed Mill: This facility will open in November 2012 and will be a state-of-the-art research and educational feed mill.

Bioenergy and Bioproducts Laboratories: Auburn operates several bioenergy and bioproducts laboratories that include biomass processing lab, biomass characterization lab, a biomass fractionation reactor, a mobile biomass gasification and power generation laboratory, a bench scale bubbling bed fluidized bed gasification reactor; and a pilot-scale bubbling bed fluidized bed gasification reactor and liquid fuels laboratory.

Center for Advanced Science, Innovation and Commerce Building: The new center will feature 20 laboratories as well as shared support spaces and specialized equipment areas for scientific research in bioenergy, water quality, food safety, genomics, information science and ecosystem health. Construction will be completed in August 2013.

Aquatic Resource Center and pond complex: Approximately 650 hectares of the tract have been set aside primarily for research and teaching in aquaculture, aquatic ecology, and fisheries management. Constructed on the Fisheries Center are 235 earthen ponds comprising approximately 90 hectares of water. The ponds range in size from 0.02 hectare to 8.90 hectares. The recently completed Center for Aquatic Resources Management consists of an administration building with more than 20,000 square feet and a 17,000-plus-square-foot laboratory building. The administrative building includes office space as well as a teaching lab, a hatchery, a meeting room, a 6,354-square-foot holding area for sorting, weighing and counting and a new market for sales to the public. It also features classrooms and a visitor-friendly reception area. The adjacent laboratory building houses fish tanks and state-of-the-art labs, including several wet labs that have complete climate control and will allow year-round research.

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Most Notable Assets, Centers, Programs or Initiatives by Category

For each of the areas of focus listed below, please provide what you consider to be the top TWO most notable strengths (programs, assets and infrastructure, centers, etc.) of your institution :

Plant Sciences, Crop Science, Plant Genetics and Agronomy

1. *PGPR products*

2. *Turfgrass management*

Animal Sciences, Animal Health, Livestock

1. *Feedmill program*

2. *Fisheries and Aquaculture including Fish Genetics and Genomics Center*

Food Science, Food Product Development, Advanced Nutrition and Health Products

1. *Sensory laboratory and research kitchen in Poultry Science Building*

2.

Food Safety and Biosecurity

1. *Food Systems Initiative*

2. *Farm-to-Fork / Pond-to-Plate approaches and emphases.*

Industrial Bioeconomy, Biofuels, Biobased Chemicals, Biobased Materials and Fibers

1. *Center for Bioenergy and Bioproducts and associated bioenergy laboratories*

2.

Environmental Sciences, Natural Resources, Sustainability

1. *Southeast Climate Consortium*

2. *Nutrient Management Research program*

Agritourism and Recreational Hunting and Fishing

1. *Recreational Fisheries Management Program*

2. *Agricultural Tourism on Coastal Alabama*

Family Development

1.

2.

Youth Development

1. *4-H Livestock Programs*

2.

Community and Economic Development

1.

2.

Other, including multi-focus:

1. *Urban pest management*

2. *Precision Agriculture and Precision Forestry program*

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Intellectual Property

	2009	2010	2011
# of Invention Disclosures	11	21	12
# of Patents Applied For	6	16	12
# of Patents Awarded	1	8	2
# of Licenses Executed	2	7	8
# of Business Start-Ups	0	0	2
# of Plant Variety Protection Certificates Applied For	0	0	2
# of Plant Variety Protection Certificates Awarded	0	0	0
\$ Value of Income received from Plant Variety/Germplasm Development	\$50,000	\$70,000	Less than \$20,000
\$ Value of Income received from all other Intellectual Property	Less than \$20,000	Less than \$20,000	Less than \$20,000

Company Spin-Offs and Commercialization

Please provide examples of any start-up companies located in your state or the southern region that resulted from research discoveries, innovations or technologies developed at your institution in the past 10 years:

Technology to produce hybrid catfish and 6 germplasm releases has led to at least 4 new companies and expansion of many more in the aquaculture industry in the south.

The develop of a flash dehydrator to produce fish meal from processing plant waste has already led to the development of one new company and several new plants within the first couple years.

High Impact Innovations and Technology Development

Please provide FIVE examples of innovations or technology developments that have had a substantial impact on the field of agbioscience and/or associated agbio industries in the past 10 years. Examples might include crop varieties with enhanced yield characteristics, new processes or technologies introduced that significantly enhance productivity in industry, etc.

*PGPR products developed from departmental research
Development of commercial techniques to produce hybrid catfish has had a major impact on our catfish aquaculture industry. Estimates are that 30 – 40% of the industry is now benefiting from this technology*

Additional comments or items of note regarding experiment station and extension impacts:

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Section 4: Extension Service Programs

Statistics: please provide basic metrics and statistical information for extension:

Metric	Number
<i>Number of county/parish offices</i>	
<i>Number of multi-county/multi-parish regional offices</i>	
<i>Number of major 4H camps</i>	
<i>Number of 4H participants</i>	
<i>Number of contacts with clients recorded by extension for the most recently completed year (include professional and volunteer contacts)</i>	
<i>Number of volunteers for the most recently completed year and number of hours volunteered</i>	

Please provide selected examples of notable/high impact projects or programs of extension that you would like considered for inclusion within the Battelle report. Please give consideration to including both rural and urban programs.

Business Development Programs/ Impacts

Community Development Programs/ Impacts

Family and Consumer Science Programs/ Impacts

4-H and Other Youth Development Programs/ Impacts

Other high impact/notable Extension programs

Additional comments or items of note regarding extension:

What diagnostic or other service facilities are operated by extension? What is the annual volume of business in number of clients and dollars?

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Section 5: Off-Campus Experiment and Extension Stations, Research and Extension Farms, and Outlying Research and Extension Centers

Please provide a listing of your off-campus agricultural experiment and extension station locations, including those near the main campus but not on campus, and other key research and extension locations across the state where faculty conduct research and/or extension activities, together with key characteristics or focus areas of each. *Note: please cut and paste table as needed to create enough entry places for all of your experiment station sites.*

Station 1

<i>Station name</i>	<i>Tennessee Valley Research and Extension Center</i>
<i>Location (zip code)</i>	<i>35756</i>
<i>Size (acres), including owned and long-term leased land</i>	<i>755</i>
<i>Key focus area(s) (e.g. poultry, crop demonstration, etc.)</i>	<i>Cotton, variety evaluations, precision technology</i>
<i>Notable or unique characteristics or assets</i>	
<i>Number of personnel (FTEs)</i>	<i>7</i>

Station 2

<i>Station name</i>	<i>Sand Mountain Research and Extension Center</i>
<i>Location (zip code)</i>	<i>35962</i>
<i>Size (acres), including owned and long-term leased land</i>	<i>536</i>
<i>Key focus area(s) (e.g. poultry, crop demonstration, etc.)</i>	<i>Manure and nutrient management, vegetables, fruits, and berries, pecans, and variety evaluations</i>
<i>Notable or unique characteristics or assets</i>	
<i>Number of personnel (FTEs)</i>	<i>6</i>

Station 3

<i>Station name</i>	<i>North Alabama Horticulture Research Center</i>
<i>Location (zip code)</i>	<i>35056</i>
<i>Size (acres), including owned and long-term leased land</i>	<i>159</i>
<i>Key focus area(s) (e.g. poultry, crop demonstration, etc.)</i>	<i>Organic agriculture, and vegetables, fruits, and berries</i>
<i>Notable or unique characteristics or assets</i>	
<i>Number of personnel (FTEs)</i>	<i>5</i>

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Station 4

<i>Station name</i>	<i>Upper Coastal Plain Agricultural Research Center</i>
<i>Location (zip code)</i>	<i>35594</i>
<i>Size (acres), including owned and long-term leased land</i>	<i>735</i>
<i>Key focus area(s) (e.g. poultry, crop demonstration, etc.)</i>	<i>Beef cattle, forage production</i>
<i>Notable or unique characteristics or assets</i>	
<i>Number of personnel (FTEs)</i>	<i>5</i>

Station 5

<i>Station name</i>	<i>Chilton Research and Extension Center</i>
<i>Location (zip code)</i>	<i>35045</i>
<i>Size (acres), including owned and long-term leased land</i>	<i>161</i>
<i>Key focus area(s) (e.g. poultry, crop demonstration, etc.)</i>	<i>Peaches, pest management, vegetables, fruits, and berries</i>
<i>Notable or unique characteristics or assets</i>	
<i>Number of personnel (FTEs)</i>	<i>5</i>

Station 6

<i>Station name</i>	<i>Piedmont Research Unit</i>
<i>Location (zip code)</i>	<i>36850</i>
<i>Size (acres), including owned and long-term leased land</i>	<i>1,409</i>
<i>Key focus area(s) (e.g. poultry, crop demonstration, etc.)</i>	<i>Wildlife</i>
<i>Notable or unique characteristics or assets</i>	
<i>Number of personnel (FTEs)</i>	

Station 7

<i>Station name</i>	<i>Prattville Agricultural Research Unit</i>
<i>Location (zip code)</i>	<i>36067</i>
<i>Size (acres), including owned and long-term leased land</i>	<i>80</i>

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<i>Key focus area(s) (e.g. poultry, crop demonstration, etc.)</i>	<i>Cotton, variety evaluations, soils</i>
<i>Notable or unique characteristics or assets</i>	
<i>Number of personnel (FTEs)</i>	<i>2</i>

Station 8

<i>Station name</i>	<i>Black Belt Research and Extension Center</i>
<i>Location (zip code)</i>	<i>36759</i>
<i>Size (acres), including owned and long-term leased land</i>	<i>1,116</i>
<i>Key focus area(s) (e.g. poultry, crop demonstration, etc.)</i>	<i>Beef cattle, forage production</i>
<i>Notable or unique characteristics or assets</i>	
<i>Number of personnel (FTEs)</i>	<i>5</i>

Station 9

<i>Station name</i>	<i>AU Natural Resources Education Center</i>
<i>Location (zip code)</i>	<i>36726</i>
<i>Size (acres), including owned and long-term leased land</i>	<i>1790</i>
<i>Key focus area(s) (e.g. poultry, crop demonstration, etc.)</i>	<i>Environmental and natural resources</i>
<i>Notable or unique characteristics or assets</i>	
<i>Number of personnel (FTEs)</i>	

Section 10

<i>Station name</i>	<i>Monroeville Agriculture Research Unit</i>
<i>Location (zip code)</i>	<i>36427</i>
<i>Size (acres), including owned and long-term leased land</i>	<i>79</i>
<i>Key focus area(s) (e.g. poultry, crop demonstration, etc.)</i>	<i>Longleaf pine establishment and management</i>
<i>Notable or unique characteristics or assets</i>	
<i>Number of personnel (FTEs)</i>	

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Section 11

Station name	<i>Wiregrass Research and Extension Center</i>
Location (zip code)	36345
Size (acres), including owned and long-term leased land	600
Key focus area(s) (e.g. poultry, crop demonstration, etc.)	<i>Peanuts, cattle, variety evaluations</i>
Notable or unique characteristics or assets	
Number of personnel (FTEs)	12

Section 12

Station name	<i>Brewton Agricultural Research Unit</i>
Location (zip code)	36426
Size (acres), including owned and long-term leased land	80
Key focus area(s) (e.g. poultry, crop demonstration, etc.)	<i>Biobased products and processing, ornamental horticulture/nursery crops, variety evaluations, vegetables, fruits and berries</i>
Notable or unique characteristics or assets	
Number of personnel (FTEs)	3

Section 13

Station name	<i>Ornamental Horticulture Research Center</i>
Location (zip code)	36689
Size (acres), including owned and long-term leased land	18
Key focus area(s) (e.g. poultry, crop demonstration, etc.)	<i>Nursery Production, disease and insect pest management,</i>
Notable or unique characteristics or assets	
Number of personnel (FTEs)	4

Section 14

Station name	<i>Gulf Coast Research and Extension Center</i>
Location (zip code)	36532
Size (acres), including owned	800

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<i>and long-term leased land</i>	
<i>Key focus area(s) (e.g. poultry, crop demonstration, etc.)</i>	<i>Beef cattle, cotton, citrus, peanuts, pecans, soybeans, variety evaluations</i>
<i>Notable or unique characteristics or assets</i>	
<i>Number of personnel (FTEs)</i>	<i>9</i>

Section 15

<i>Station name</i>	<i>Plant Science Research Center</i>
<i>Location (zip code)</i>	<i>36849</i>
<i>Size (acres), including owned and long-term leased land</i>	<i>12,000 sq.ft.</i>
<i>Key focus area(s) (e.g. poultry, crop demonstration, etc.)</i>	<i>Biobased products and processing, cotton, microbial biotechnology, organic agriculture, ornamental horticulture, pest management, vegetables, fruits and berries</i>
<i>Notable or unique characteristics or assets</i>	
<i>Number of personnel (FTEs)</i>	<i>2</i>

Section 16

<i>Station name</i>	<i>E.V. Smith Research Center</i>
<i>Location (zip code)</i>	<i>36075</i>
<i>Size (acres), including owned and long-term leased land</i>	<i>3,816</i>
<i>Key focus area(s) (e.g. poultry, crop demonstration, etc.)</i>	<i>Animal health, nutrition and reproduction, organic agriculture, plant breeding, sustainable agriculture, variety evaluations</i>
<i>Notable or unique characteristics or assets</i>	
<i>Number of personnel (FTEs)</i>	<i>26</i>

Additional comments or items of note regarding off-campus experiment and extension stations, county offices, etc.:

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Section 6: Industry Partnerships

Please provide a description of FIVE notable partnerships that your experiment station and/or extension service has with industry. Examples might include a joint engineering center with an agricultural equipment manufacturer, plant breeding or transgenics programs with seed companies, bioprocess

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development with chemical or biofuels companies, food product development with food manufacturing companies, etc.

Provide details on companies, groups of companies, commodity groups etc. worked with, key results achieved and thoughts on benefits provided.

<i>Becker Underwood to develop plant growth promoting bacteria</i>
<i>BASF to develop new pest control formulations</i>
<i>Alabama Nursery and Landscape Association- Green Industry Training Center</i>
<i>Alabama Poultry and Egg Association, partnered with National Poultry Technology Center to focus</i>
<i>Forest biomass logistics consortium – industry partners include Tigercat (leading forest equipment manufacturer) and Corley Land Services (forestry service provider).</i>
<i>Southeast Partnership for Integrated Biomass Supply Systems – industry partners include Arborgen (forest genetics), Ceres (switchgrass and sorghum genetics), and Rentech (liquid fuel producer).</i>
<i>New initiative with industry, AU, Alabama Peanut Producers and USDA for peanut variety development.</i>
<i>State Commodity groups – Wheat and Feed Grain, Cotton, Soybeans, Alabama Peanut producers, to meet local, current issues</i>
<i>Beef Cattle Improvement Association</i>
<i>Alabama Coalition of Farm Animal Care and Well-Being</i>
<i>Eagle Aquaculture to produce hybrid catfish. Now benefiting 30 – 40% of industry.</i>
<i>Falcon Protein to produce fish meal products from processing plant waste.</i>

What areas of R&D at your institution do you believe hold the most promise for increasing industry engagement in the next five years?

<i>IPM systems</i>
<i>Precision agriculture</i>
<i>Production and marketing of Specialty Crops including Satsuma Mandarins, Kiwifruit, and Blueberries</i>
<i>Key issues related to commercial poultry (broiler) production and processing</i>
<i>Bioenergy and bioproducts</i>
<i>Variety development and winter cash crops that help producers avoid summer drought losses</i>
<i>Food safety and production systems</i>
<i>New catfish lines, hybrids and production systems</i>
<i>New genetic lines and vaccines for fish</i>

What agriculture, forestry, fisheries or wildlife and natural resource-related industries do you expect to see grow in the southern region during the next five years?

<i>Additional acres of cash crops such as cotton and vegetables</i>
<i>Increased production of specialty crops including Satsumas, Kiwifruit, and Blueberries</i>
<i>Development of export market for Commercial Poultry</i>
<i>Local Poultry Production:</i>
<i>Development Local poultry market including game bird (tourism) production</i>
<i>Production of Biofuels</i>
<i>Increased market demands for fisheries products</i>

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Additional comments or items of note regarding industry partnerships:

We hope to encourage a more formalized and rigorous training and certification of landscape practitioners. We are working with the catfish industry through tough economic times helping them to increase efficiencies and product quality

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Section 7: Regional Cross-Institutional & Governmental Partnerships

Please provide a description of FIVE projects, initiatives, centers or programs, etc. that your experiment station and/or extension service is engaged in together with other institutions in the southern region. Examples might include joint initiatives in biofuels development, food safety, biosecurity, rural economic development, etc.

<i>1. Food Safety Initiative</i>
<i>2. Southern region IPM center</i>
<i>3. Southeast Partnership for Integrated Biomass Supply Systems. A consortium composed of University of Tennessee, North Carolina State University, Auburn University, Arborgen, Ceres, Rentech, and USDA. The consortium is focused on providing solutions for producing a sustainable supply of biomass to support and deploy a biofuel industry in the southeast U.S.</i>
<i>4. Tristate peanut project-joint research program with AL, FL and GA</i>
<i>5. The Auburn Fisheries Business Institute works with other institutions and businesses in the region to put together the right expertise to solve problems and increase economic viability of our aquaculture and fisheries businesses, both freshwater and coastal enterprises.</i>

What federal agencies do you partner with on major joint projects and programs? Please list the top 3 federal initiatives you are engaged with.

<i>USDA including NIFA, FSIS, APHIS, ARS, NRCS Department of Energy Department of Commerce including NOAA and Sea Grant Department of Health and Human Services US Forest Service Environmental Protection Agency</i>
<i>TOP 3 Federal Initiatives: 1) Food Safety 2) Biofuels and Bioenergy 3) Food Security</i>

What state agencies do you partner with on major joint projects and programs? Please list the top 3 state agency initiatives you are engaged with.

<i>Alabama Department of Agriculture and Industries Alabama Department of Economic and Community Affairs Alabama Department of Environmental Management Alabama Department of Conservation and Natural Resources Alabama Department of Human Resources</i>
<i>TOP 3 STATE Initiatives: 1) Natural resource conservation 2) Fisheries management 3) Poultry technology</i>

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What do you believe are some of the unique assets of the southern region that make it particularly well-suited to leadership in the 21st Century agbioscience economy?

Concentration of poultry industry
Biomass production capacity and existing infrastructure
Short mild winters which allow almost year round grazing
Potential for irrigation
Potential for winter cash crops
Abundant aquatic resources

Additional comments or items of note regarding potential or existing partnerships with other institutions across the southern region:

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Section 8: Education and Human Capital Development

Student Population

<i>Number of students graduated in most recent year with Bachelor's degrees in related field of study</i>	504
<i>Number of students graduated in most recent year with Master's degrees in related field of study</i>	72
<i>Number of students graduated in most recent year with Doctorate degrees in related field of study</i>	32
<i>Number of students graduated in most recent year with Associates or other less than baccalaureate qualifications in related field of study</i>	0

Education and Training Programs

In a science and knowledge-driven economy, skilled human capital is a critically important asset for our states. Please provide details pertaining to education and skills development in the sections below:

New or innovative education programs or degree programs developed (for example: bioprocessing or biorefinery operator training, biosecurity training, education programs in new fields such as functional foods, nutraceuticals, etc.)

Ecological Engineering option within Biosystems Engineering

Continuing education programs or training for producers or industry

Many extension programs presented each year; this includes local and state wide extension meetings, commercial sponsored meetings and field days.

Distance education courses are offered for academic credit and as certificate courses in numerous areas: Agronomy and Soils, Entomology, Plant Pathology, Poultry Science.

Organization of national and international research area specific conferences

Animal AG 101 in cooperation with Alabama Coalition of Farm Animal Care and Well-Being

Professional Certification Programs

Certification for Aquaculture Professionals (CAP) - An on-line course

Alabama Certified Crop Advisors program

Pesticide applicator training programs including PCO, right-of-way, and turf

Organic agriculture including certification criteria

Developing program for Biomass Procurement Professionals

Leadership training, including civic, commodity, government, youth, etc.

Entrepreneur training and other special training or education initiatives

National defense, including National Guard, training or educational initiatives

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K-12 specific educational programs and initiatives

<i>4-H Livestock programs</i>
<i>Teacher Workshops conducted by Fisheries</i>

Additional comments or items of note regarding education and training:

<i>ALERN web site (Alabama Education in Aquatic Sciences, Aquaculture, Recreational Fisheries and Natural Resource Conservation). Website contains all kinds of educational materials and receives about 750,000 visits each year.</i>
<i>Development of the largest Internet database of questions and answers on drinking water issues</i>
<i>(www.aces.edu/waterquality/faq/faq_03.htm)</i>

Section 9: Into the Future

What key challenges does your institution face in the future:

Top 5 key challenges for the Experiment Station in your state

<i>1.Funding uncertainties</i>
<i>2.Refilling vacant faculty positions</i>
<i>3.Maintenance and replacement of research infrastructure</i>
<i>4.Rapidly changing research environment</i>
<i>5.Addressing our capacity to meet state, national and global needs</i>

Top 5 key challenges for the Extension Service in your state

<i>1.</i>
<i>2.</i>
<i>3.</i>
<i>4.</i>
<i>5.</i>

What emerging opportunities or trends do you see impacting your institution:

Top 5 emerging opportunities and trends for the Experiment Station

<i>1.Biofuels</i>
<i>2.Poultry Production and Processing</i>
<i>3.Fisheries and Aquaculture</i>
<i>4.Food production to meet global population growth</i>
<i>5.Food Safety</i>

Top 5 emerging opportunities and trends for the Extension Service

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1.
2.
3.
4.
5.

For the southern region overall, what do you see as the top five challenges/issues moving forward

<i>1.Funding shortfalls for personnel and infrastructure due to diminishing appropriations</i>
<i>2.Addressing concerns with Food Safety and Production systems</i>
<i>3.Developing cooperative research between states</i>
<i>4.Availability of federal research funding for agricultural research</i>
<i>5.Urbanization of southern region</i>

What are the top five differentiating factors of the southern region in agriculture, agbiosciences, community/family/youth development, etc. What makes the region unique or provides key comparative advantages.

<i>1.Potential to produce half of the nation's biofuels</i>
<i>2.Climate and long growing season</i>
<i>3.Abundant aquatic resources</i>
<i>4.Relatively affordable land and favorable business environment</i>
<i>5.Diversity of agricultural systems</i>

Section 10: Interview Suggestions

Battelle would like to interview some key stakeholders (outside of the land-grant institutions) across the southern region to discuss their perspective on the importance of extension and agricultural research. Please provide the names and contact information for three individuals who you would suggest for interviewing in your state:

Name	Title	Organization	Telephone	Email
James Harwell	Executive Director	Alabama Nursery and Landscape Association	334-821-5148	info@alnla.org
Johnny Adams	Executive Director	Alabama Poultry and Egg Association	334-265-2732	johnny@alabamapoultry.org
Butch Wilson	President	Wilson Farms and Catfish Farmers of America	334-628-8145 (h) 334-412-6598 (c)	wilsoncatfish@gmail.com

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Section 11: Additional Comments

Please provide any additional comments, information, data, case-studies, impact assessment results, etc. that you feel may be useful or relevant for inclusion in this project and resulting report:

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