Battelle
The Business of Innovation

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 or 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
Senior Director
Battelle Memorial Institute
Technology Partnership Practice
6 Jaycee Drive
Pittsburgh, PA 15243
412-276-1986
Cell: 412-523-6895
tripps@battelle.org

Battelle
The Business of Innovation

Section 1: Institutional Profile

University Name	*Texas A&M University System*
Extension Service Director (name, phone, email)	*Ed Smith* *979-845-7967 EGSmith@ag.tamu.edu*
Experiment Station Director (name, phone, email)	*Craig Nessler* *979-845-8486 CNessler@tamu.edu*

Personnel

Number of Personnel in Extension (FTE)	*1,446.11*
Number of Personnel in Experiment Station (FTE)	*1,328.24*

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

Battelle
The Business of Innovation

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	*$12,567,601*	*__Increasing X_ Stable __Decreasing*	*$7,966,791*	*X_Increasing __ Stable __Decreasing*
State Appropriations	*$61,629,094*	*__Increasing __ Stable X_Decreasing*	*$70,119,221*	*__Increasing __ Stable X_Decreasing*
Local Government Appropriations (Counties, etc.)	*$32,890,893*	*__Increasing __ Stable X_Decreasing*	*$0*	*__Increasing X_ Stable __Decreasing*
Federal Grants and Contracts	*$19,429,659*	*X_Increasing __ Stable __Decreasing*	*$39,549,345*	*__Increasing __ Stable X_Decreasing*
State Grants and Contracts	*$10,532,595*	*X_Increasing __ Stable __Decreasing*	*$13,075,060*	*__Increasing __ Stable X_Decreasing*
Local Grants and Contracts	*$940,084*	*__Increasing X_ Stable __Decreasing*	*$380,575*	*__Increasing __ Stable X_Decreasing*
Industrial Grants and Contracts, including grants and contracts from commodity groups	*$3,049,563*	*X_Increasing __ Stable __Decreasing*	*$14,919,969*	*__Increasing X_ Stable __Decreasing*
Foundation Grants and Contracts	*$608,054*	*X_Increasing __ Stable __Decreasing*	*$11,277,174*	*X_Increasing __ Stable __Decreasing*
All Other Grants and Contracts	*$133,143*	*__Increasing __ Stable X_Decreasing*	*$4,441,462*	*X_Increasing __ Stable __Decreasing*
Sales of Products and Services	*$4,969,357*	*X_Increasing __ Stable __Decreasing*	*$21,424,700*	*X_Increasing __ Stable __Decreasing*
Intellectual Property Revenues	*$0*	*__Increasing x_ Stable __Decreasing*	*$239,730*	*__Increasing __ Stable x_Decreasing*
Gifts	*$1,202,678*	*__Increasing __ Stable X_Decreasing*	*$1,705,993*	*X_Increasing __ Stable __Decreasing*
Other	*$540,834*	*__Increasing __ Stable X_Decreasing*	*$3,601,905*	*__Increasing __ Stable X__Decreasing*
TOTAL	**$148,493,555**	***__Increasing __ Stable X_Decreasing***	**$188,701,926**	***__Increasing __ Stable X_Decreasing***

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

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?

Decline in state and federal earmark revenue sources; pursuing alternative contract & grant revenue sources to offset loss of state revenues. This is also a challenge as it is a competitive process. Balancing mission and stakeholder needs with funding opportunity.

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. Texas Water Resources Institute; Institute of Renewable Natural Resources
2. Norman Borlaug Institute for International Ag
3. V.G. Young Institute of County Government
4. Agriculture and Food Policy Center
5. National Center for Foreign Animal and Zoonotic Disease Defense (FAZD)

Special Research and Extension Infrastructure

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.

1. Genomics and Bioinformatics facility for crop and livestock improvement
2. Laboratories: Soil, Water and Forage Testing; Plant Disease Diagnostic; Texas Veterinary Medical Diagnostic Laboratory
3. Drug screening for cancer and other chronic diseases
4. National Center for Electron Beam Research
5. Center for Food Safety BSL2

Battelle
The Business of Innovation

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. Enhanced breeding programs for wheat, sorghum, dedicated energy crop, cotton, corn
2. Integrated Pest Management programs

Animal Sciences, Animal Health, Livestock

1. Major Research & Extension programs focused on beef and meats, small ruminants, horse and diary
2. Physical facilities for animal-related research, teaching and extension

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

1. Major Research & Extension programs in obesity, diabetes, and other major diseases
2. Targeted education for limited resource families related to Food & Nutrition Education

Food Safety and Biosecurity

1. Major Research & Extension emphasis on Food Safety
2. Research & Extension programs on insect vector pathogens that impact Texas crops, livestock and human health

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

1. Energy Cane and Sorghum
2. Algae Research

Environmental Sciences, Natural Resources, Sustainability

1. Major weather impact on crop, livestock, and human safety
2. Advanced high technological spacial sciences to address environmental issues and natural resources

Agritourism and Recreational Hunting and Fishing

1. Nature Tourism
2. Wildlife and Coastal Resource Management

Family Development

1. Parenting Education and Financial Management
2. Child Care Provider Educational Programs

Youth Development

1. Texas 4-H and Youth Development/Leadership Programs
2. Texas Youth Development Initiative (YDI)

Community and Economic Development

1. Water Conservation and Use Initiatives
2. Texas Events Leadership and Texas Friendly Hospitality Programs

Other, including multi-focus:

1. Rainwater Harvesting
2. Risk Management (Farm Assistance, Master Marketer)

Battelle
The Business of Innovation

Intellectual Property

	2009	2010	2011
# of Invention Disclosures	*72*	*83*	*113*
# of Patents Applied For	*44*	*35*	*18*
# of Patents Awarded	*4*	*10*	*8*
# of Licenses Executed	*30*	*20*	*34*
# of Business Start-Ups	*1*	*0*	*2*
# of Plant Variety Protection Certificates Applied For	*2*	*3*	*0*
# of Plant Variety Protection Certificates Awarded	*3*	*3*	*2*
$ Value of Income received from Plant Variety/Germplasm Development	*$1,736,260*	*$1,852,958*	*$1,789,281*
$ Value of Income received from all other Intellectual Property	*$7,143,181*	*$6,816,432*	*$7,474,759*

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:

SDL Citadel, LLC (Dallas, Texas)
In recent years, the electricity industry has decentralized, due in part to small-scale electrical production and storage methods becoming more cost effective. SDL Citadel is a minority-owned and operated renewable energy company that aims to capture a significant share of this distributed electrical utility market. Established in 2008, SDL Citadel works to integrate green technologies into a seamless process that enhances environmental protection, produces renewable energy and stimulates job growth. SDL Citadel is commercializing a novel biomass gasification system, developed by Dr. Sergio Capareda, that can be used to generate synthesis gas and provide site-specific electricity generation at significantly reduced cost. Moreover, this novel biomass gasification system uses urban municipal solid waste, a renewable waste product, as its feedstock for conversion into electrical power.

Ecolyse, Inc. (College Station, Texas)
Founded in 2009, Ecolyse is developing ecologically safe, non-toxic products for the remediation of microbial-induced pipeline corrosion and reservoir souring as well as a variety of other bacterial, fungal and algae problems in industrial settings. Additionally, Ecolyse offers a variety of tailored services including bacterial consulting, monitoring, testing, and training, in key industries such as oil & gas, water and related industries.

Plantacor, Inc., (College Station, Texas)
Founded in 2003, Plantacor is a specialty biopharmaceutical company developing therapeutic products for the treatment of cancer. Company strategy is to fill the gap between basic research and human clinical trials. The current focus is on one of over 150 patented drug compounds exclusively licensed from the Texas A&M University System.

Battelle
The Business *of* Innovation

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.

1. *The enabling technology called the Baculovirus Expression Vector System (BEVS) for the safe, abundant and rapid production of recombinant proteins in insect cells and insects was pioneered in the laboratory of Dr. Max D. Summers, a distinguished professor in the Department of Entomology at Texas A&M University, and holder of the Chair of Agricultural Biotechnology, with funding support from Texas AgriLife Research. This system was developed from basic studies of insect pathogenic viruses for pest control of medically and agriculturally important insects. BEVS is a discovery with very broad enabling applications and impact spanning the basic life sciences and biotechnology. BEVS represents a core technology that has greatly facilitated the understanding of many proteins from species that span the life sciences. These studies have broad applications and impact in basic research and practical medical applications for both humans and animals. One example of the application and efficiency of BEVS was the rapid development of an experimental vaccine to the deadly Hong Kong "bird-flu" virus. Another was the rapid development of SARS vaccine. The National Institutes of Health (NIH) requested the development of a vaccine and Protein Sciences (a company that specializes in BEVS technology) delivered 1700 doses of an experimental "bird-flu" vaccine within eight weeks. This included the time to identify, sequence and clone the gene responsible for the flu symptoms. The efficiency, low cost and large-scale production of proteins using BEVS represents breakthrough technology. BEVS was licensed non-exclusively to 100 companies in various countries around the world for research and commercial purposes. Licensees included such companies as Eli Lilly, Roche Diagnostics, GlaxoSmithKline, Invitrogen, and Pharmingen. Thousands of laboratories currently use the BEVS technology in their research programs, making it a significant research tool and powerful production platform.*
2. *Texas AgriLife Research wheat breeding programs have developed, released, and commercially licensed 10 new wheat varieties during the past 10 years. These varieties offer improved characteristics such as increased yield, drought resistance, disease resistance, and improved quality. Texas AgriLife Research is a leading provider of Hard Red Winter Wheat germplasm for the Southern Great Plains region of the U.S. In 2011, about 3.9 million acres across five U.S. states were planted in improved wheat varieties developed by Texas AgriLife Research.*
3. *The Texas AgriLife Research Potato Breeding and Variety Development Program has developed and commercially licensed four new strains of Russet Norkotah potatoes. These strains were selected for adaptation to the Texas environment. The strains have superior vine strength, Verticillium tolerance, and yield potential. They have been licensed to over 60 potato growers across 10 states.*
4. *The turfgrass programs at Texas AgriLife Research have developed many varieties and types of both warm- and cool-season grasses. Warm-season grasses include vegetatively propagated zoysiagrasses and St. Augustine varieties used throughout the southern United States in home lawns, commercial properties, golf courses and sports fields. Commercial production for re-sale of A&M System warm season grasses are grown on over 2,500 acres across the southern U.S. and internationally. Cool-season grasses include Texas x Kentucky bluegrass hybrids, creeping bentgrasses and turf-type annual ryegrasses. The scientists of Texas AgriLife Research and*

	Extension have helped solve turfgrass-related problems for years, using reliable research, extensive outreach educational programs, and statewide and county extension activities. Producers like New Life Turf and King Ranch Turfgrass are working to bring these grasses to consumers.
5.	*Ceres, Inc., in conjunction with Texas AgriLife Research, has used sorghum inbreds created by Dr. William Rooney in its development and commercialization of energy sorghum hybrids. These hybrids produce high yields of biomass, are naturally drought tolerant, and can be commercially productive for rain-fed agriculture. The first-generation products can grow to nearly 15 to 20 feet under favorable conditions and could produce more than 1,000 gallons of liquid fuel per acre, more than two times that produced by the current process using grain.*

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

Strong network of Research & Extension state wide infrastructure for disseminating innovative technology to clientele groups. Multi-state collaborations with Research & Extension programs throughout the Southern Region.

Section 4: Extension Service Programs

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

Metric	Number
Number of county/parish offices	*250 County Offices serving all 254 counties*
Number of multi-county/multi-parish regional offices	*15*
Number of major 4H camps	*1*
Number of 4H participants	*600,000*
Number of contacts with clients recorded by extension for the most recently completed year (include professional and volunteer contacts)	*26 million*
Number of volunteers for the most recently completed year and number of hours volunteered	*98,573*

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

Rural Entrepreneurship/Rural Innovation

Community Development Programs/ Impacts

Workforce Training (County officials, day-care provider, food handler, pesticide applicator, irrigation technicians, etc.)

Family and Consumer Science Programs/ Impacts

Chronic disease prevention and management (Walk Across Texas, Do Well Be Well With Diabetes, Better Living for Texans, EFNEP)

4-H and Other Youth Development Programs/ Impacts

Youth Leadership

Other high impact/notable Extension programs

Volunteerism

Additional comments or items of note regarding extension:

Strong network of state wide infrastructure for disseminating innovative technology to clientele groups. Multi-state collaborations with Research & Extension programs throughout the Southern Region.

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

Soil, Water and Forage Testing Lab - $605,000 – 708 clients *Plant Disease Diagnostic Lab – $45,000 – 1,154 clients*

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

Station name	*Texas AgriLife Research & Extension Center at Amarillo*
Location (zip code)	*79106*
Size (acres), including owned and long-term leased land	*1,151*
Key focus area(s) (e.g. poultry, crop demonstration, etc.)	*Beef Cattle Nutrition & Health, Small Grains Improvement, Environmental Quality & Natural Resource, Pest Management & Plant Stress, Cropping Systems and Bioenergy Crops*
Notable or unique characteristics or assets	*Collaborative Partnerships with West Texas A&M*
Number of personnel (FTEs)	*67.1*

Station 2

Station name	*Texas AgriLife Research & Extension Center at Beaumont*
Location (zip code)	*77713*
Size (acres), including owned and long-term leased land	*1,110*
Key focus area(s) (e.g. poultry, crop demonstration, etc.)	*Development of improved rice cultivars and superior rice production and management systems, quantitative analysis of cropping systems interactions, developing bioenergy crops and superior bioenergy crop production and management systems.*
Notable or unique characteristics or assets	
Number of personnel (FTEs)	*36.7*

Station 3

Station name	*Texas AgriLife Research & Extension Center at Corpus*
Location (zip code)	*78406*
Size (acres), including owned and long-term leased land	*1,515*
Key focus area(s) (e.g. poultry, crop demonstration, etc.)	*Animal and Invertebrate Nutrition, Aquaculture, Agronomy and Cropping Systems, Forages and Native Plants, Animal and Plant Physiology, Economics, Entomology, Plant Pathology, Soil Science, Weed Science and Water Quality.*
Notable or unique characteristics or assets	
Number of personnel (FTEs)	*55.5*

Station 4

Station name	*Texas AgriLife Research & Extension Center at Dallas*
Location (zip code)	*75252*
Size (acres), including owned and long-term leased land	*240*
Key focus area(s) (e.g. poultry, crop demonstration, etc.)	*Produces science-based research, technologies and educational programs to help urban clientele manage and conserve natural resources. Research and education programs resolve issues that include the biology, management, utility, adaptability, genetic improvement and pest problems of plants used in Texas landscapes; water conservation and management; energy conservation; and issues related to the diverse green industry. Primary goal is to improve urban and suburban environments through responsible use of natural resources.*
Notable or unique characteristics or assets	
Number of personnel (FTEs)	*47.0*

Station 5

Station name	*Texas AgriLife Research & Extension Center at El Paso*
Location (zip code)	*79927*
Size (acres), including owned and long-term leased land	*234*
Key focus area(s) (e.g. poultry, crop demonstration, etc.)	*Waterborne pathogen detection and control; Water and soil salinity management; Hydrogeology and district delivery efficiency; Water value, pricing and irrigation efficiency; Reclaimed water use and bioremediation; Agricultural economics and water policy; Urban landscape water conservation; Integrated river basin management and analysis*
Notable or unique characteristics or assets	
Number of personnel (FTEs)	*16.6*

Station 6

Station name	*Texas AgriLife Research & Extension Center at Lubbock*
Location (zip code)	*79403*
Size (acres), including owned and long-term leased land	*1,800*
Key focus area(s) (e.g. poultry, crop demonstration, etc.)	*Agricultural Economics, Plant Breeding (Corn, Cotton, Peanut, Sorghum, Potatoes), Plant Pathology, Entomology, Weed Science, Soil Fertility, Agronomy and Crop Physiology, Cropping Systems Modeling, Remote Sensing, Water Conservation and Quality, Viticulture and Irrigation Technology*
Notable or unique characteristics or assets	*Major Partners with Texas Tech University*
Number of personnel (FTEs)	*85.7*

Station 7

Station name	*Texas AgriLife Research & Extension Center at Overton*
Location (zip code)	*75684*
Size (acres), including owned and long-term leased land	*1,200*
Key focus area(s) (e.g. poultry, crop demonstration, etc.)	*Forage-/Based Livestock Systems – Soils, Small Grains and Ryegrass Breeding, Forage Legume Breeding, Pasture Establishment and Management, Forage Production and Utilization, Reproductive Physiology; Horticultural Production Systems - Ornamental Plant Production*
Notable or unique characteristics or assets	
Number of personnel (FTEs)	*38.9*

Station 8

Station name	*Texas AgriLife Research & Extension Center at SanAngelo*
Location (zip code)	*76901*
Size (acres), including owned and long-term leased land	*12,949*
Key focus area(s) (e.g. poultry, crop demonstration, etc.)	*Animal breeding and genetics, Animal fiber measurement, Ruminant nutrition, Brush management, Prescribed fire, Grazing systems, Restoration ecology, Quail management, Nutrition and wildlife/ livestock interaction*
Notable or unique characteristics or assets	
Number of personnel (FTEs)	*39.0*

Station 9

Station name	*Texas AgriLife Research & Extension Center at Stephenville*
Location (zip code)	*76401*
Size (acres), including owned and long-term leased land	*650*
Key focus area(s) (e.g. poultry, crop demonstration, etc.)	*Mitigating the rural and urban carbon footprint; Expanding biofuel feedstock; Peanut breeding to develop genetic resistance or tolerance to diseases and insect; Utilizing native plant germplasm to restore grassland ecosystem; Sustainable management of insect-transmitted plant diseases; Developing cropping systems that result in healthier watersheds*
Notable or unique characteristics or assets	*Partnerships with Tarleton State University*
Number of personnel (FTEs)	*31.3*

Station 10

Station name	*Blackland Texas AgriLife Research & Extension Center*
Location (zip code)	*76502*
Size (acres), including owned and long-term leased land	*92*
Key focus area(s) (e.g. poultry, crop demonstration, etc.)	*Agro-ecosystems Research and Modeling, Agronomy and Crop Physiology, Agricultural Systems Modeling, Hydrologic Modeling, GIS-Integrated Information Management, Water Quality*
Notable or unique characteristics or assets	
Number of personnel (FTEs)	*44.5*

Station 11

Station name	*Texas AgriLife Research & Extension Center at Uvalde*
Location (zip code)	*78801*
Size (acres), including owned	*192*

and long-term leased land	
Key focus area(s) (e.g. poultry, crop demonstration, etc.)	*Conservation of regional aquifers/rivers through sustainable and ecologically-sound systems of row and vegetable crops, and forage management, and the parallel development of new cultivars with economically important traits, such as drought tolerance, increased yield, disease resistance, improved quality and high concentrations of beneficial phytochemicals.*
Notable or unique characteristics or assets	*Rechargeable water resources, irrigated agriculture and wildlife-based enterprises.*
Number of personnel (FTEs)	*29.5*

Station 12

Station name	*Texas AgriLife Research & Extension Center at Vernon*
Location (zip code)	*76385*
Size (acres), including owned and long-term leased land	*2565*
Key focus area(s) (e.g. poultry, crop demonstration, etc.)	*Cropping/Tillage Systems; Introduced Forage Systems; Rangeland Ecology and Management; Wheat Breeding and Management Stocker Cattle Nutrition; Wildlife Ecology and Management Watershed Management*
Notable or unique characteristics or assets	
Number of personnel (FTEs)	*34*

Station 13

Station name	*Texas AgriLife Research & Extension Center at Weslaco*
Location (zip code)	*78596*
Size (acres), including owned and long-term leased land	*700*
Key focus area(s) (e.g. poultry, crop demonstration, etc.)	*Plant Molecular Biology; Genetic Transformation; Variety Development & Breeding; Sustainable Production Systems*
Notable or unique characteristics or assets	*Partnership with Texas A&M University-Kingsville Citrus Center*
Number of personnel (FTEs)	*13.9*

Station 14

Station name	*O.D. Butler, Jr. Animal Science Complex*
Location (zip code)	*77845*
Size (acres), including owned and long-term leased land	*580*
Key focus area(s) (e.g. poultry, crop demonstration, etc.)	*Complex devoted to teaching, research, and Extension in animal science.*

Notable or unique characteristics or assets	
Number of personnel (FTEs)	*1.0*

Station 15

Station name	*McGregor Research Center*
Location (zip code)	*76657*
Size (acres), including owned and long-term leased land	*6,372*
Key focus area(s) (e.g. poultry, crop demonstration, etc.)	*Beef cattle research*
Notable or unique characteristics or assets	
Number of personnel (FTEs)	*9.0*

Station 16

Station name	*Fort Stockton Extension Center*
Location (zip code)	*79735*
Size (acres), including owned and long-term leased land	*2.5*
Key focus area(s) (e.g. poultry, crop demonstration, etc.)	*Serving far West Texas through research and education in environmental systems management, including air and water quality, food, feed and fiber production, animal nutrition and health, and natural resource conservation and protection.*
Notable or unique characteristics or assets	
Number of personnel (FTEs)	*10.0*

Station 17

Station name	*La Copita Demonstration Ranch and Research Area*
Location (zip code)	
Size (acres), including owned and long-term leased land	*3,239*
Key focus area(s) (e.g. poultry, crop demonstration, etc.)	*Conducting outreach and research that contributes to the understanding of the form and function of range ecosystems while developing information applicable to improved range ecosystems and improved range management systems*
Notable or unique characteristics or assets	
Number of personnel (FTEs)	*1*

Station 18

Station name	*Texas State 4-H Office*
Location (zip code)	*77845*
Size (acres), including owned and long-term leased land	*1.2*
Key focus area(s) (e.g. poultry, crop demonstration, etc.)	*Prepare youth to meet the challenges of childhood, adolescence and adulthood, through a coordinated, long-term, progressive series of educational experiences that enhance life skills and develop social, emotional, physical and cognitive competencies.*
Notable or unique characteristics or assets	
Number of personnel (FTEs)	*12.0*

Station 19

Station name	*Texas 4-H Conference Center*
Location (zip code)	*76801*
Size (acres), including owned and long-term leased land	*78*
Key focus area(s) (e.g. poultry, crop demonstration, etc.)	*Group Retreats & Youth Programs*
Notable or unique characteristics or assets	
Number of personnel (FTEs)	*13.0*

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

80% of Extension Professions are located across the state, outside the agency headquarters. 50% of Research appropriated budget distributed to research conducted across the state outside the agency headquarters.

Battelle
The Business of Innovation

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 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.

1. *Collaborative Research & Extension partnerships with every major agricultural commodity group in the state of Texas*
2. *Research & Extension collaboration with every major public sector industry*
3. *Major private partnerships with firms in animal health, energy, and crop production*
4. *Research & Extension programs impacting every major ecosystem in Texas*
5. *Collaboration with every major university and community college in the state of Texas*

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

Water Quality and Utilization, Food Safety, Biofuels, Advanced genomic technology and approaches to improvements in crop, livestock, and human health

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?

Food, Fiber, and Fuel Ag Production; Biotourism; Land Use for Recreation; Water Marketing

Additional comments or items of note regarding industry partnerships:

AgriLife Research & Extension work closely with all major industries, groups and associations (e.g., state health services, Department of Agriculture, major commodity groups)

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 safely, biosecurity, rural economic development, etc.

1. *Gulf of Mexico Alliance*
2. *Citrus Greening collaboration with Florida*
3. *Southern Region Water Quantity and Quality Initiative (in process)*
4. *Research & Extension Southern Region Forestry collaborations*
5. *Research & Extension programs in cotton*

Battelle
The Business *of* Innovation

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

Department of Defense (Military Readiness); United States Department of Agriculture (Food Security, Farm Bill related activities, Natural Resource and conservation, basic science); Homeland Security (Foreign Animal and Zoonotic Disease Defense to address both accidental and intentional threats for animal, plant, and human safety)

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.

Texas Department of Agriculture (Zebra Chip, Good Ag Practices/Food Safety, Feral Hog Damage Abatement); Texas Department of State Health Services (child and adult care program, Better Living for Texans); Texas Commission on Environmental Quality (Air and Water Quality)

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?

The southern region provides a good lab to analyze research and deliver programs due to the many diverse ecosystems that exist in the southern region, including the coastal region.

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

Strong Research & Extension network that works together to address critical needs that provide for Research & Extension programs that impact the southern region, nation, and world.

Battelle
The Business of Innovation

Section 8: Education and Human Capital Development

In Texas, Research & Extension are separate agencies that collaborate with Texas A&M University College of Agriculture & Life Sciences. Section 8 includes information on the College of Agriculture.

Student Population

Number of students graduated in most recent year with Bachelor's degrees in related field of study	*1,677*
Number of students graduated in most recent year with Master's degrees in related field of study	*249*
Number of students graduated in most recent year with Doctorate degrees in related field of study	*110*
Number of students graduated in most recent year with Associates or other less than baccalaureate qualifications in related field of study	*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.)

Foods for health undergraduate curriculum, Vegetables & Fruit Improvement Center, Biotechnology Masters degree program

Continuing education programs or training for producers or industry

Certified financial planning, professional event planning, Horticultural Business Management, Floral Design

Professional Certification Programs

Agriculture eLearning Development, Community Development, Dairy Management; Dietetic Internship, Equine Science, Food Safety, Geographic Information Systems, International Agriculture and Resource Management; International Trade and Agriculture, Leadership Education Theory & Practice, Meat Science, Military Land Sustainability, Professional Certificate in Event Management, Regulatory Science in Food Systems, Remote Sensing, Space Life Sciences, Tree Improvement, Watershed Certificate

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

Agricultural and Natural Resources Policy Internship Program; Freshman Leadership Experience; Louis Stoke Alliance for Minority Participation; Hispanic Leaders in Agriculture and the Environment

Entrepreneur training and other special training or education initiatives

Rural Entrepreneurship Capstone Course

National defense, including National Guard, training or educational initiatives

Military Land Sustainability Certificate

K-12 specific educational programs and initiatives

Summer Training in Agriculture and Related Sciences; World Food Prize Youth Institute; Big City Big Country Roadshow; DISCOVER RPTS; Abriendo Puertas; Youth Development Initiative; Poultry Institute; Animal Science Camps

Additional comments or items of note regarding education and training:

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

1. *Base resource federal & state funding – Critical mass at Research & Extension Centers*
2. *Research remains relevant to the needs of the public*
3. *Training students/research in forages*
4. *Equipment – scientific & agricultural costs*
5. *Border issues*

Top 5 key challenges for the Extension Service in your state

1. *Providing more technology assisted programs*
2. *Conducting more distance education*
3. *Reaching nontraditional audiences/adapting to changing demographics*
4. *Optimizing funding / pay and benefits / retention*
5. *Vying with more competition in knowledge marketplace*
6. *Responding to demands related to organic and locally grown production*

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

Top 5 emerging opportunities and trends for the Experiment Station

1. *Water*
2. *Bioenergy*
3. *Health – Nutrition*
4. *International Opportunities*
5. *Partnerships with 2 year colleges*

Battelle
The Business of Innovation

Top 5 emerging opportunities and trends for the Extension Service

1. *Expansion of urban educational outreach*
2. *Online course delivery*
3. *Integrated Water Conservation and Use Education*
4. *Increased collaboration and funding for total systems approaches*
5. *Urbanization of Texas*

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

1. *Temperature/drought impact on Agriculture*
2. *Urbanization – Land Fragmentation*
3. *Interpret public value of Research & Extension programs*
4. *Collective support for Federal Formula Funding*
5. *Food Safety*

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.

1. *Demographic changes associated with ethnicity and rural/urban populations*
2. *Unique in coastal resources and educational opportunities*
3. *Energy diversification both inland and off shore*
4. *Diverse bio-based ecosystems*
5. *Maintain strong Research & Extension network throughout states in the southern region*

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*
Jerry Harris	***CEO***	***King-Mesa Gin***	***806-462-7351***	***kingmesa@poka.com***
Loy Sneary	***President/CEO***	***Gulf Coast Green Energy***	***979-245-7219***	***Loy.gcge@gmail.com***
Milo Shult	***Retired***		***803-669-2724***	***Mshult43@gmail.com***

Battelle
The Business of Innovation

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:

Extension Economic Impact Studies
http://agrilifeextension.tamu.edu/about/strategic-plan-and-impacts/economic-impact-studies/
Research Economic Impact Studies
http://agriliferesearch.tamu.edu/about-agrilife-research/research_impacts/