

From: "McCutchen, Bill" <bmccutchen@tamu.edu>
To: JSWEETEN@ag.tamu.edu
CC: RDLacewell.EXTERNAL.Internet; DKLunt.EXTERNAL.Internet; RVAvant.EXTERNAL...
Date: 3/1/2009 12:36 PM
Subject: Re: Research?

John,

Thanks. Perhaps a telecon with this group to discuss next steps for strategy for distiller's grains in beef, poultry, goats, mariculture.

Would like to discuss unique opportunities for binding and degrading aflatoxin/mycotoxins (and other toxins) in wet DG's process.

Thanks again, and I will work with Dave Lunt to arrange a call.

Bill

From: John Sweeten
To: McCutchen, Bill
Cc: Baltensperger, David; Avant, Bob; Lunt, David; Lacewell, Ron
Sent: Thu Feb 26 10:33:53 2009
Subject: Re: Research?

Bill-- I will be very happy to visit with both David's (Baltensperger and Lunt) on these two topics, along with Bob Avant. I do not plan to be anywhere near College Station until perhaps May 12, so we will have to set up conference calls.

I think we had a conference call last Friday to discuss starting the development of a statewide strategic plan for Distillers grains and I am excited about that. The assignments from that call were not clear, so if there is to be followup, perhaps that can be set out by one or all.

Second, for a long time now the Amarillo group has engaged with industry and with TEES and BAEN on conversion of feedlot and dairy biomass as biofuels, both thermochemical and bioconversion routes and in fact have a concluding DOE grant project on that currently. This project has included the NPK values and the use of combustion ash, assisted by engineers and soil scientists at WTAMU. There are data and reports/papers on the table for all to see. So, perhaps a seminar to inform others where these projects are, what we have found out, and what are the next logical steps, i.e. research opportunities, is in order. Kind of in a have slides/will travel mode. So let me know what the best way to communicate and lead on this avenue. jms

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Fax (806) 677-5644

>>> "McCutchen, Bill" <bmccutchen@tamu.edu> 2/14/2009 10:52 AM >>>
John,

We had a great visit with some of the Soils faculty yesterday.

May I ask that you visit with David's, Bob and/or me in the following areas of soils, fertilizer and livestock the and the potential for RD across units/disciplines in:

- * DG's and aflatoxin RD to potentially include animal studies
- * Feedlot biomass RD to produce co-products (e.g. char from Panda) as a potential source of NPK (e.g. RD to increase availability) for high value markets

Thanks,

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Thanks,

Bill

From: David Baltensperger
To: ALL FAC '10
Date: 9/25/2009 3:19 PM
Subject: Fwd: Re: Followup on IRWP Meeting 9/8/09
Attachments: Re: Followup on IRWP Meeting 9/8/09; CPRIT and ETF Briefing Reminder & TTVN
/LiveStreaming Information; RE: CPRIT Visit - Monday

FYI

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Texas A&M University
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College Station, Texas 77843-2474

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RFA	Program Area	Max Annual Project Funding (\$)	Max Total Project Funding (\$)*	Requested Project Type	# of Awards	Project Idea	Faculty Lead	Institutional Partners Required? (Y/N)	Proposed Partner(s)	Who Leads?	Letter of Intent Deadline	Application Deadline	Notes
Foundational Program	Plant Sciences (\$7.5M)	n/a	500,000	Research	n/a			N			4/20/2010	7/7/2010	
Foundational Program	Pest and Beneficial Insects in Plant Systems (\$6M)	n/a	500,000	Research	n/a			N			4/22/2010	6/10/2010	See RFA for
Foundational Program	Animal Health and Production: Animal Bioinformatics and Development of Tools for Livestock, Poultry, and Aquaculture (\$5M)	n/a	750,000	Research	n/a			N			4/21/2010	7/14/2010	
Foundational Program	Animal Health and Production: Animal Reproduction (\$4M)	n/a	500,000	Research	n/a			N			n/a	5/4/2010	
Foundational Program	Animal Health and Production: Animal Health (\$5M)	n/a	500,000	Research	n/a			N			n/a	5/5/2010	See RFA for
Foundational Program	Food-borne Pathogen-Plant Interactions (\$3.5M)	n/a	500,000	Research	n/a			N			4/14/2010	5/26/2010	
Foundational Program	Practical Approaches to Food Safety (\$2M)	n/a	500,000	Research	n/a			N			5/12/2010	8/4/2010	Research aim not be consi
Foundational Program	Reducing Food Allergies by Improving Food Quality (\$4.5M)	n/a	500,000	Research	n/a			N			4/14/2010	6/14/2010	1) This prop only (2) M
Foundational Program	Microbial Communities in Soil (\$4.5M)	n/a	500,000	Research	n/a			N			5/3/2010	8/23/2010	All soil envi terms of agr
Foundational Program	Agricultural Water Science (\$4.5M)	n/a	500,000	Research	n/a			N			n/a	5/19/2010	
Foundational Program	Engineering Approaches for Improved or Alternative Management Systems to Safeguard Animal Welfare (\$4M)	n/a	700,000	Research	n/a			N			4/14/2010	7/8/2010	Applications combination agricultural animal science efficiency, a
Foundational Program	Nanoscale Science and Nanotechnology to Ensure Safe Food (\$3.5M)	n/a	500,000	Research	n/a			N			n/a	5/14/2010	1) Multi-disc information developed in biopersistence distribution, should be co
Foundational Program	Prosperity of Small and Medium-sized Farms and Rural Communities (\$7M)	n/a	500,000	Research	n/a			N			n/a	7/14/2010	
Foundational Program	Economics of Markets and Development (\$3M)	n/a	500,000	Research	n/a			N			n/a	7/7/2010	
Childhood Obesity Prevention	Integrated Research, Education, and Extension to Prevent Childhood Obesity	1,000,000	5,000,000	Integrated	≤ 15			N (but "strongly encouraged")			n/a	6/29/2010	See RFA for
Childhood Obesity Prevention	Extension Interventions to Prevent Childhood Obesity	200,000	1,000,000	Extension	≤ 5			N			n/a	6/29/2010	See RFA for
Childhood Obesity Prevention	Transdisciplinary Graduate Education and Training in Nutrition and Family Sciences or Child Development or Related Fields to Prevent Childhood Obesity	1,000,000	5,000,000	Education	≤ 2			N (but "strongly encouraged")			n/a	8/3/2010	See RFA for
Childhood Obesity Prevention	Methodological Research to Assess the Effectiveness of Obesity Prevention Strategies	500,000	2,500,000	Research	≤ 4			N (but "strongly encouraged")			n/a	6/29/2010	See RFA for
Childhood Obesity Prevention	Community-based Childhood Obesity Prevention	5,000,000	25,000,000	Integrated	≤ 1			Y			5/3/2010	8/3/2010	Should form to integrate multifaceted
Climate Change	Regional Approaches to Climate Change	4,000,000	20,000,000	Integrated	5-8			Y			5/7/2010	7/16/2010	1) "Region" geographic c Program Area notes to list
Climate Change	Regional Approaches to Climate Change: Planning**	50,000	50,000	Integrated	≤ 10			Y			n/a	5/14/2010	1) Planning focus on dev designated f feasibility fo requirement systems scie an integral p agroecosyste mitigating th

								N (but US & international partners "strongly encouraged")					
Climate Change	National Cereal Germplasm Phenotyping	5,000,000	25,000,000	Integrated	≤ 2						5/7/2010	7/16/2010	See RFA un- additional re-
Climate Change	Impacts of Climate Change on Animal Health and Production	500,000	2,500,000	Research	≤ 5			N			4/30/2010	7/2/2010	1) applies to proposal for NOT suitable objective; (2 e.g., on mu- ntake); and diseases
Climate Change	Climate Change Mitigation and Adaptation in Agriculture	1,000,000	5,000,000	Research, Education, and Extension	≤ 13			N			4/30/2010	7/2/2010	f a project i appropriate
Food Safety	Prevention, Detection, and Control of Shiga toxin-producing Escherichia coli (STEC) from Pre-Harvest through Consumption in Beef Products	5,000,000	25,000,000	Integrated	1-2			Y			5/5/2010	9/22/2010	1) Multiple U S must be and food inc recommendat
Food Safety	Microbial Ecology and Shiga toxin-producing Escherichia coli (STEC) Shedding in Cattle	500,000	2,500,000	Research	≤ 7			N			4/21/2010	6/29/2010	
Food Safety	Prevention, Detection, and Control of Food-borne Viruses in Food: A Focus on Noroviruses	5,000,000	25,000,000	Integrated	1-2			N			4/26/2010	9/1/2010	1) The rese assessment, Noroviruses education an government component i
Food Safety	Food Processing Technologies to Destroy Food-borne Pathogens with an Emphasis on Viruses and Shiga toxin-producing Escherichia coli (STEC)	1,000,000	5,000,000	Integrated	≤ 4			N			4/21/2010	6/29/2010	
Food Safety	Addressing Critical and Emerging Food Safety Issues	300,000	1,500,000	Research	≤ 5			N			4/28/2010	6/29/2010	
Food Safety	National Education Programs for Food Safety	500,000	2,500,000	Education	≤ 2			N			4/28/2010	6/29/2010	
Global Food Security	Improving Sustainability by Improving Feed Efficiency of Animals	1,000,000	5,000,000	Integrated	≤ 3			Y-international partners encouraged			4/14/2010	7/14/2010	See RFA un- requirement
Global Food Security	Minimizing Losses from Dairy Diseases with Major Impact on Production, Marketing, and/or Trade***	2,000,000	10,000,000	Integrated	1			Y-international partnerships expected			4/23/2010	7/13/2010	1) Multidis- Program Ar
Global Food Security	Oomycete Pathosystems in Crop Plants to Minimize Disease	1,900,000	9,500,000	Integrated	≤ 2			Y-international partnerships expected			4/26/2010	8/2/2010	1) Multidis- of project re same or sim Area Requir
Global Food Security	Program Delivery and Implementation of Wide-area Pest Monitoring	1,200,000	6,000,000	Extension	1			Y-international partnerships expected			5/19/2010	8/11/2010	1) Multidis- of project re same or sim Area Requir
Global Food Security	Improved Sustainable Food Systems to Reduce Hunger and Food Insecurity Domestically and Globally	1,000,000	5,000,000	Integrated	≤ 5			Y			4/30/2010	6/29/2010	See RFA un- requirement
Sustainable Bioenergy	Regional Approaches to Sustainable Bioenergy	9,000,000	45,000,000	Integrated	3-5			Y			7/9/2010	9/15/2010	See RFA--tc
Sustainable Bioenergy	Regional Approaches to Sustainable Bioenergy: Planning**	50,000	50,000	Integrated	≤ 4			N			n/a	5/14/2010	
Sustainable Bioenergy	Sustainable Bioenergy Research	200,000	1,000,000	Research	≤ 40			N			4/30/2010	6/14/2010	Projects mus
Sustainable Bioenergy	Investing in America's Scientific Corps: Stimulating a New Era of Students and Faculty in Bioenergy	1,000,000	5,000,000	Education	≤ 2			N			4/30/2010	6/14/2010	Applications implementat
Sustainable Bioenergy	National Loblolly Pine Genome Sequencing	3,000,000	15,000,000	Research	≤ 1			N (but US & international partners encouraged)			5/7/2010	7/16/2010	

* max project duration is five years, unless otherwise noted

Global Food Security Challenge Area

Food Availability Program Goals:

In FY 2010:

Improving feed efficiency of agriculturally relevant animals

Minimizing losses from one livestock disease with major impact on food production, marketing, and/or trade

Minimizing crop plant losses from oomycete pathosystems

Program delivery and implementation of wide-area pest monitoring

In FY 2011:

Translating genomics into practical applications for selection of animals with genetic resistance to diseases

Minimizing losses from a second livestock disease with major impact on food production, marketing, and/or trade

Management of fungal diseases in plants

Management of vector associated pathogens in plants

In FY 2012:

Increasing reproductive fertility in food animals

Minimizing losses from a third livestock disease with major impact on food production, marketing, and/or trade

Management of plant insect pests

Management of plant bacterial diseases

Food Accessibility Program Goals:

In FY 2010:

Improving sustainable food systems to reduce hunger and food insecurity domestically and globally

In FY 2011:

Enhancing animal welfare in sustainable food systems – a systems approach that evaluates biological, environmental, and societal

Evaluating Life Cycle Analysis of sustainable food systems

Determining the impact of use of sustainable food system best practices in communities

In FY 2012:

Enhancing the viability of small and mid-sized farms in the context of global food security through:

Evaluating trade and sustainable food systems – labor, environment, animal welfare and related issues in major food exporting countries

Determining U.S. consumer willingness to pay for standards that enhance food security

Improving public policies and business strategies that enhance sustainable food systems and global food security

Climate Change Challenge Area - Mitigation, Adaptation, and Education/Extension Program Goals

In FY 2010:

Cropping systems: cereal production systems (e.g., corn, barley, wheat, rice, oats)

Animal systems: swine or poultry production systems

Forest systems: southern conifers

In FY 2011:

Cropping systems: legume production systems, forage production systems

Animal systems: ruminant livestock production systems, dairy production systems

Forest systems: western conifers

Grassland, pastureland, and rangeland systems

In FY 2012:

Cropping systems: food and non-food horticultural production systems, fiber production systems

Animal systems: farmed aquaculture and specialty livestock

Forest systems: deciduous hardwoods and mixed forests

Agroecosystems that provide ecosystem services (e.g., provisioning, regulating, supporting, and cultural services identified under the National Science Foundation's Ecosystem Services Program)

Sustainable Bioenergy Challenge Area - Goals for Standard Research Grants

In FY 2010:

Crop protection for sustainable feedstock production systems

Enhanced-value co-product development

Carbon sequestration and sustainable bioenergy production

In FY 2011:

Impacts of policy on feedstock production systems

Scalable conversion of feedstock to “drop-in” biofuels

Impacts of feedstock production systems on pollinators and wildlife

In FY 2012:

Land-use changes resulting from feedstock production and conversion

Socioeconomic impacts of biofuels in rural communities

Logistics of handling feedstocks for biofuels

tion systems

stem Assessment)

From: "McCutchen, Bill" <bmcCutchen@tamu.edu>
To: RVAvant.EXTERNAL.Internet; TMiller@ag.tamu.edu; DBaltensperger@ag.tamu.e...
Date: 8/24/2010 4:12 PM
Subject: Aflatoxin: AgNMore News: Texas crop, weather

I am sure you have heard of the problems, and here is a news article. Concerns over sampling procedures.

From: AGNMORE (Agriculture and More) News from Texas AgriLife Extension Service and AgriLife Research <AGNMORE@LISTSERV.TAMU.EDU>
To: AGNMORE@LISTSERV.TAMU.EDU <AGNMORE@LISTSERV.TAMU.EDU>
Sent: Tue Aug 24 14:30:01 2010
Subject: AgNMore News: Texas crop, weather

Texas crop, weather

Aflatoxin testing methods an ongoing issue in Central Texas
August 24, 2010
Writer(s):

Robert Burns, 903-834-6191,rd-burns@tamu.edu
COLLEGE STATION - Corn growers in Central Texas were having to dump corn in the fields or plow their crop under because of excessively high aflatoxin levels, according to Texas AgriLife Extension Service <<http://agrilifeextension.tamu.edu/>> reports.

Bell County <<http://bell-tx.tamu.edu/>> , which is east of Killeen, had a lot of rain in late June and early July, then high humidity, followed by extreme dry hot conditions, said Dirk Aaron, AgriLife Extension agent.

"We're in our 24th day of over 100 degrees and many of those days have been over 104," Aaron said. "So conditions were ripe for aflatoxin levels to be excessively high, and it's hurting growers in the pocketbook in a big way."

Testing methods by elevators are also causing a lot of "farmer angst," Aaron said, with many crying foul.

No one is arguing that aflatoxin levels are high, he said. In many cases above 300 parts per billion, and in some cases they are above 500 parts per billion. Above 20 parts per billion, the usage regulations for corn become complicated, he said.

"A facility right now can take anything up to 20 parts per billion can be put directly into commercial channels," Aaron said. "But when you get above 20, there new levels that come into play. For example, 50 is the limit on wildlife; 100 is the limit on breeding cattle, lactating goats, poultry and sheep. But then finishing swine can go up to 200 parts per billion. And of course, for the feedlot industry, when grain is used for finishing cattle in confinement, they can go up to 300 parts per billion."

Technically, at aflatoxin levels more than 500 parts per billion, the crop is supposed to be destroyed, according to Aaron.

All this puts a lot of management strain on elevators, particularly small ones that can't separate corn with corn with different aflatoxin levels, he said.

But in some cases, the testing method can seem highly arbitrary, Aaron said. A load from one part of the

field may test at acceptable levels, while another load can be rejected. Worse, farmers may take the same load of corn that's been rejected at one elevator and go to another and perhaps get an acceptable report.

According to Aaron, what's needed is a standardized system for testing. Some elevators are taking a single or limited number of samples off one truck and perhaps hitting a hot spot, while other elevators are taking random samples to get a more accurate idea of how the load would test once it's mixed.

"We need mandated criteria that insure it's done the same at every buying point," he said. "It all needs to be tested in the exact same way."

AgriLife Extension district reporters compiled the following summaries:

CENTRAL: <<http://stephenville.tamu.edu/~TAEX> /> Corn yields were 60 bushels to 80 bushels per acre, but most of the crop showed high levels of aflatoxin. High temperatures were hard on pastures. Pecans were rapidly progressing, and yield expectations are moderate.

COASTAL BEND: <<http://agfacts.tamu.edu> /> Extremely hot temperatures caused cotton bolls to open. Some counties had isolated showers that halted cotton harvest and defoliation. However, in most areas, defoliation was going well. The small-grain crop and corn harvests were mostly completed. The harvesting of sunflowers and soybeans was ongoing. Producers continued harvesting hay, enjoying record yields from multiple cuttings. Overall, livestock were in good condition, despite being stressed from the heat.

EAST: <<http://overton.tamu.edu> /> Extremely high temperatures and lack of moisture stalled hay production and caused pond and stream levels to drop. Some counties received as much as 4 inches of rain, while others saw none. Producers in some counties were looking for hay to buy. Warm-season vegetable production came to a halt. Livestock were in fair to good condition. Grasshoppers and armyworms continued to be a problem. Feral hog activity increased.

FAR WEST: <<http://ftstockton.tamu.edu> /> Counties reported from 0.25 inch to 0.75 inch of rain. Growers mowed and baled their fifth cutting of alfalfa. Irrigated cotton was setting bolls. There was low pest pressure from lygus, bollworm and white fly. Dryland cotton was showing signs of stress and in need of rain. Pecan nut loads were considered exceptional for an off-year. Chiles were blooming and setting fruit. Area ranchers hoped for another rain to reduce the chances of wildfire.

NORTH: <<http://dallas.tamu.edu> /> Two weeks of 100 degree and hotter days took a toll on crops and pastures. Soil moisture ranged from short to very short. Homeowners and landowners reported trees dropping leaves due to moisture stress. Prior to the heat wave, corn and other crops were doing very well. These last two weeks of hot weather reversed the favorable conditions. The corn harvest was nearly complete with much lower yields than average. Most yield reports on good fields were less than 50 bushels per acre. Many corn farmers decided they would try to harvest for what fields they could for grain, then cut and bale the rest of the crop. Early reports on grain sorghum harvest were good to average on some fields and below average on marginal fields. Soybeans began to drop leaves, and harvesting was expected to begin in a couple of weeks. The high heat negatively affected the maturity of soybeans. Cotton was in fair condition, while peanuts were in poor shape. Pastures and hay meadows were stressed by the heat and no rain. There is little or no grass left in many areas. Where there was grass, some producers were still dealing with grasshoppers and armyworms. Some cattle producers downsized their herds due to lack of forage.

PANHANDLE: <<http://amarillo.tamu.edu> /> Most of the region received some rain, with accumulations ranging from a trace to 4 inches. Randall County received from 2-4 inches of rain with most falling within about an hour. Soil moisture was mostly adequate. Corn was mostly in fair to good condition and was still being irrigated. Cotton was fair to good condition, but needed more hot days to mature. Peanuts were in good condition. Sorghum was 70 percent to 100 percent headed with some coloring. Soybeans were in fair to good condition. There was some wheat planted for early grazing. Cattle were in good condition.

Horn flies were a problem.

ROLLING PLAINS: <<http://vernon.tamu.edu/>> Though temperatures surpassed the 100-degree mark every day for the past couple of weeks, conditions remained favorable. Rain came at a good time, as pastures were beginning to brown and stock tanks levels were dropping. Cotton was in excellent condition, blooming and setting bolls, though some plants dropped fruit because of the heat. Peanuts also looked good without many insect or fungus problems. Sudan hay yields were good. Unless they sell excess hay, most producers will have a two-year supply. Pasture and rangeland grass quality declined due to heat stress and maturity. Grasshopper numbers dropped somewhat. Armyworms were still present, but were not a large problem. Producers were preparing fields for the planting of winter wheat and oats. Wheat producers will need a good rain in the next two weeks prior to planting. Many ranchers were receiving cattle and putting them on grass. Cattle on pasture were doing well. The peach harvest wound down.

SOUTH: <<http://www.taes-weslaco.net/>> Soil moisture levels in the eastern, western and southern parts of the region were 30 percent to 100 percent adequate. Soil moisture was short in some northern counties. With high temperatures above 100 degrees, rangeland and pastures were browning but the quality of the forage remained adequate. Producers were providing some supplemental feed to livestock, and stock-tank water levels dropped quite a bit; however, cattle were still in good condition. The corn harvest was in full swing, while the sorghum harvest was done. Cotton was still in the open-boll stage and with harvesting expected to begin sometime in the next two weeks. In the northern part of the region, peanuts progressed well. In the eastern parts of the region, producers were harvesting row crops, had completed the small-grain harvest, and were going full tilt with the cotton harvesting and seeing good yields. In the western part of the region, cotton was doing well under heavy irrigation. Pecan producers were also heavily irrigating their orchards in that area, and the sorghum and corn harvests were expected to be finished within a week. In the southern part of the region, cotton, hay and corn harvests were ongoing.

SOUTH PLAINS: <<http://lubbock.tamu.edu/>> Hot conditions continued this week with temperatures in the mid-to-upper 90s. Accumulations from scattered rains ranged from a trace to 1 inch. Soil moisture was short to adequate. Cotton was in good condition, ranging from peak bloom to cut-out in growth stage. Corn was in good condition and in the dough stage. Grain sorghum was in good condition, ranging from flowering to being mature. Sorghum midges were found in late-planted fields. Peanuts and sunflowers were in good condition with minimal pest reports. Pastures and rangelands were in fair to good condition. There was a lot of forage growth due to heavy rains a few weeks ago, but pastures were beginning to dry out. Livestock were in good condition.

SOUTHEAST: <<http://bryan.tamu.edu/>> Some areas got isolated showers, but pastures and trees were showing stress from the heat and dry conditions. Many producers were buying hay from out of county. Feral-hog activity was high. Grasshoppers remained a problem. Producers were cutting rice in Chambers County and thankful for the dry weather. In Galveston County, the corn harvest wrapped up with yields from 80 to 160 bushels per acre. Many producers reported yields around 120 bushels per acre. Cotton growers began defoliating their crops. Producers with soybeans are wrapping up their harvest. Lots of hay was being baled.

SOUTHWEST: <<http://uvalde.tamu.edu/>> The region has been almost completely dry during the last 50 days. Dry afternoon winds aggravated the moisture situation as mid-afternoon temperatures were 100 degrees and higher. Cotton neared the end of its growing season, and corn and sorghum harvests were about complete. The harvesting of sesame, cotton and peanuts gained momentum. Pecans set a good crop this spring, but had a large premature nut drop due to drought stress. Forage availability remained above average for this time of the year.

WEST CENTRAL: <<http://sanangelo.tamu.edu/>> Extremely hot, dry conditions continued throughout the week. Burn bans were put in place as the wildfire hazards were at critical levels. A few areas reported widely scattered showers, but all counties needed rain. Producers continued cutting and baling hay in a few areas, but most hay harvesting was at a standstill due to hot, dry conditions. Cotton looked very

good, but needed rain soon to mature. Rangeland and pastures showed heat and moisture stress. Stock-tank and pond-water levels were dropping rapidly. Livestock were in good condition. Livestock producers were concerned about prussic acid and nitrate poisoning issues from summer annual forages due to heat stress. Pecan growers were heavily irrigating orchards.

-30-

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From: "McCutchen, Bill" <bmccutchen@tamu.edu>
To: TPHILLIPS@cvm.tamu.edu
CC: AHelms.EXTERNAL.Internet; DBaltensperger@ag.tamu.edu
Date: 9/3/2009 7:13 PM
Subject: Aflotoxin and Cancer

Tim,

First of all, thanks for providing insight and strategy per our call yesterday.

Second, do you have a short document/summary that our other faculty on call might coalesce around? We would appreciate.

Third and by all means please submit to NIH. CPRIT would just be a bonus for funding additional RD activities.

Bill

From: "McCutchen, Bill" <bmccutchen@tamu.edu>
To: JDixon@ag.tamu.edu; SMurray@ag.tamu.edu; Kolomiets@ag.tamu.edu; awika@ta...
CC: WDugas.EXTERNAL.Internet; ahelms@dsmail.tamu.edu; RVAvant.EXTERNAL.Inter...
Date: 9/7/2009 10:17 AM
Subject: Aflotoxin and Cancer
Attachments: PROJECT SUMMARY.pdf; NEW TITLE.pdf; PROJECT NARRATIVE.pdf

All,

Here is the information that Tim Phillips kindly provided as a potential catalyst to develop a CPIRT Cancer Proposal per aflotoxin. Per our discussion this information might be used a central point to "build" up-stream and/or downstream activities for the cancer initiative RFP. A match from industry may be tough on such short notice, but I believe that internal matching funds can be used as appropriate (salary, etc.). Time is short and I believe the proposal(s) would be due OCT 8th. Please refer to the CPRIT RFP for details.

Let David, Adam, Tim and/or me know if you want to proceed and how we might be able to help and coalesce a proposal. David please add.

Thanks,

Bill

--

Bill F. McCutchen, Ph.D.

Associate Director

Texas AgriLife Research

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From: "McCutchen, Bill" <bmcCutchen@tamu.edu>
To: therrman@tamu.edu; nwilkins@ag.tamu.edu; PSMurano.EXTERNAL.Internet; MDi...
CC: BMcCutchen.EXTERNAL.Internet; DGILLILA@ag.tamu.edu; sfspurlin@tamu.edu; ...
Date: 3/30/2010 9:45 AM
Subject: AFRI RFAs - PROPOSED Strategy and Team Leads
Attachments: 2010_AFRI RFAs.xlsx; AFRI Sustainable Bioenergy RFA_condensed.docx

Dear Unit Heads and Team Leads,

AFRI RFAs - General

As you know, USDA-NIFA has released the RFA for AFRI proposals. This approach is a significant departure from the previous CSREES/NRI process as it focuses on larger systems-oriented research rather than smaller topical research areas. The RFA imbeds a number of sub-proposal areas ranging from large regional systems proposals to targeted (but still significant) topical proposals. The larger proposals will require integrated efforts from Research & Extension components, on and off campus inter-agency collaboration, external out-of-state partners, minority partners, and possibly international cooperation. This offers numerous opportunities for our units and individual faculty members both on the larger and targeted proposals. Attached is a spreadsheet (2010_AFRI RFAs) on all of the program areas. USDA has divided the RFAs into general programs as follow: Foundational Programs (14 areas), Childhood Obesity (5 areas) Climate Change (5 areas), Global Food Security (5 areas), Food Safety (6 areas), Sustainable Bioenergy (5 areas).

Texas A&M AgriLife (Research and Extension) is well poised to compete for awards at several levels and these areas represent a large opportunity for our units and faculty. There will be numerous opportunities to participate, but we need to exercise care that we approach our response(s) so they are coordinated and not self-defeating. It is important that we identify who should take the lead in the numerous areas. In some areas, we will want to take the lead and in others we will want to be strategic partners. We would like suggestions/volunteers on how to best organize our efforts and leadership from our units and faculty. I have already received expressions of interest from several units in the bioenergy, climate, food, obesity, and foundational areas and this leadership is appreciated and will be essential for success. To be successful, we will need independent but parallel efforts in all of these areas.

AgriLife Research and Extension to Lead a Response for South Central Approaches to Sustainable Bioenergy

As an example, Texas AgriLife Research and Extension have been conducting advanced intelligence in the bioenergy arena, and some of you

will recall that a draft strategy was distributed for feedback and team leaders in early March. For this particular RFA, designated Regional Approaches to Sustainable Bioenergy, the USDA has specifically identified six regional areas and topical feedstocks of priority as follows: Central, Northeast, Northwest, South Central; Southeast, and Southwest. Texas is well positioned to be the lead for the South Central, and we have asked Bob Avant and the Corporate Relations/Bioenergy Team to assist in the development of a Bioenergy South Central Regional Coordinated Agricultural Project (CAP) with the involvement of numerous units.

Please see the attached document entitled AFRI Sustainable Bioenergy RFA for a "condensed" 11-page review of the overall request, strategy and approach to this RFA. Below please find below highlights of the AFRI Sustainable Bioenergy RFA. This RFA will fund grants supporting the start up and growth of a network of regional systems for the sustainable production of bioenergy and bio-based products. Key to implementation of these grants is integrated research, education, and extension activities. "USDA has identified regions of the country with high net primary productivity for these dedicated energy feedstock groups where these feedstocks may be grown with relatively low inputs (e.g., non-irrigated) and where land is available that will not displace existing productive agricultural sectors or harm existing rural economies and environmentally sensitive lands. These regions are: Central (perennial grasses); Northeast (woody biomass); Northwest (Pacific Northwest and North Central; oilseeds, woody biomass); South Central (sorghum, energy cane); Southeast (woody biomass, energy cane, perennial grasses, sorghum); and Southwest (algae). Applications are strongly encouraged from these regions. Applications from other regions may be considered." In addition to the focus on a systems-oriented approach for sorghum and energy cane (as outlined by the RFA) we will also plan to work with colleagues and experts on other grasses (e.g. switchgrass), wide-hybrids, woody biomass, etc.

Specifically and per the RFA, long-term outcomes of Regional Bioenergy CAPs:

- * Contribute significantly to reducing dependence on foreign

Projects are expected to employ a systems approach to address one of the stated Program Area Priorities which collectively contribute to the achievement of the following goals:

Based upon the details highlighted by the RFA per the previous communication in early March, the team leads across Research and Extension have been designated in the table below. As team leads, they will help coordinate our overall response to the AFRI Sustainable Bioenergy RFA with a focus on and other dedicated crops. They will coordinate their efforts with and through Bob Avant, Director of Corporate Relations and Bioenergy.

Team Leads

Topic Areas

Research

Extension

On-Campus

Off-Campus

with >

and related crops

Bill Rooney

Mike Gould

Juerg Blumenthal, Travis Miller

Burl Carraway (TFS)

Jim Ansley

Eric Taylor

John Mullet

Erik Mirkov

N/A

Tom Cothren

Juan Landivar

Brent Bean, Juerg Blumenthal

Frank Hons

Ted Wilson

B.L. Harris

James Richardson

Luis Ribera, Joe Outlaw

Steve Searcy

Brent Auvermann

Ed Rister

Dean McCorkle

Please feel free to call upon Drs. Nessler, Ed Smith, Dave Lunt, Pete Gibbs , Bob Avant and/or me if you have any questions.

With best regards,

Bill

--

Bill F. McCutchen, Ph.D.

Associate Director

Texas AgriLife Research

Texas A&M University System

113 Jack K. Williams Administration Building

2142 TAMU College Station, TX 77843-2142

979-845-8488 Tel

979-458-4765 Fax

bmccutchen@tamu.edu

ANDREW H. PATERSON

Professional Preparation:

Univ. Delaware Plant Science BS (Summa Cum Laude) 1982;
Cornell Plant Breeding / Genetics MS, 1985/ PhD. 1988
Cornell Plant Molecular Genetics Postdoctoral, 1988-9

Appointments 1 July 2002: Distinguished Research Professor, Univ. GA.
1 Jan 1999: Professor, Univ. GA (Depts Crop & Soil Sci; Botany; Genetics).
1991-8. Asst., Assoc., & Full Professor, Dept Soil & Crop Sci., Texas A&M.
1989: Adjunct Assistant Prof. of Plant Molecular Biology, Univ. Delaware.
1989-1991: Principal investigator, Agric. Biotechnology, E.I. DuPont

Five publications most relevant to this proposal (from 233 total):

Tang, H., Bowers, J. E., Wang, X., Ming, R., Alam, M., Paterson, A. H. 2008. Synteny and colinearity in plant genomes. *Science* 320:486-488.
B. Yüksel, A. H. Paterson. 2005. Construction and Characterization of a Peanut BAC Library. *TAG* 111:630-639.
B. Yüksel, J. E. Bowers, J. Estill, L. Goff, C. Lemke, A. H. Paterson. 2005. Exploratory Integration of Peanut Genetic and Physical Maps, and Possible Contributions from *Arabidopsis*. *TAG* 111:87-94.
B. Yüksel, J. C. Estill, S. R. Schulze, A. H. Paterson. 2005. Organization and Evolution of Resistance Gene Analogs in Peanut. *MGG* 274:248-263.
Burow, M.D., C. E. Simpson, J. L. Starr, A. H. Paterson. 2001. Transmission genetics of chromatin from a synthetic amphiploid in cultivated peanut (*Arachis hypogaea* L.): Broadening the gene pool of a monophyletic polyploid species. *Genetics* 159: 823-837.

Five other relevant publications:

Burow, M.D., C. E. Simpson, M. W. Faries, J. L. Starr, A. H. Paterson. 2009. Molecular biogeographic study of new B- and A-genome *Arachis* species, also providing new insights into the origins of cultivated peanut. *Genome* 52:107-119.
Paterson, Andrew H., et al. 2009. The *Sorghum bicolor* genome and the diversification of grasses. *Nature* 457:551-556.
Paterson, Andrew H. 2006. Leafing through the genomes of our major crop plants: strategies for capturing unique information. *Nature Reviews Genetics* 7:174-184.
M. Ferguson, M. Burow, S. Schulze, P. Bramel, S. Kresovich, A. Paterson. Sequence-tagged microsatellites reveal polymorphism in peanut (*Arachis hypogaea* L.): I. Microsatellite identification and characterization. *TAG*, 108:1064-1070.
Burow, M.D., C. E. Simpson, A. H. Paterson, J. L. Starr. 1996. Tagging of a gene for resistance to Meloidogyne arenaria in peanut. *Molecular Breeding* 2:369-379.

Synergistic Activities. Integration of research and education: Most of my career has been spent at public universities, and my research is closely tied to education of students and the public. To date I have been thesis advisor for 18 and committee member for 29 graduate students, and trained 51 postdoctoral scientists, 86 undergraduates, 6 HS students, and 3 HS teachers.

Innovations in teaching and training: Over a 5 year history of "Analysis of Complex Genomes", a 3-hour lecture and 3-hour lab I created jointly with R. Wing at TAMU, 97 students achieved an average GPA of 3.47. Student evaluation of my teaching averaged 4.52 (5.0 = max.). A textbook entitled "Genome Mapping in Plants", which I wrote (9 chapters) or edited (13 chapters) was created. "Genome Evolution across the Tree of Life", created with R. Kuzoff and C. Deom at UGA with J. Leebens-Mack later replacing Kuzoff, included 33 students over 4 years (pass/fail, all passed). Student evaluation of my teaching averaged 1.51 (1-5 scale, 1 = best). I was PI on a training grant at Texas A&M, and co-PI on an NSF GK-12 award to UGA.

Development of research tools, computation methods, and algorithms for problem-solving:

Methods for QTL mapping that I contributed to (Paterson et al 1987; 1990; 1991) are widely used. My lab developed leading reference maps for cotton, sorghum, peanut, sugarcane, Bermuda grass, buffelgrass and others, providing many thousands of DNA probes worldwide. We have also developed public BAC libraries for sorghum, papaya, cotton (5), peanut, and Brassica (3). Our CBCS approach (Peterson et al 2002) has been widely used. We have described new approaches and software for analysis of chromosomal duplication (Bowers et al 2003), management of BAC hybridization data (publ. in prep.), and other needs.

Development of databases: Public online databases were developed under projects that I led under NSF funding for sorghum and USDA funding for cotton. I contributed to two dbs as a co-PI for maize and cotton, and to many additional dbs in lesser roles. My 'Plant Genome Mapping Lab' site offers research resources and links. URLs are not included to protect reviewer confidentiality, per NSF guidelines.

Broadening participation of under-represented groups: The graduate, postdoctoral, and other scientists that I have trained include 61 members of under-represented groups, descended from African (2, 3, 6), Asian (16, 17, 7), Indian (6, 4, 2), Native American (0, 1, 0), Hispanic (3, 2, 3) and Turkish (2, 0, 0) cultures). A total of 12, 9, and 37 were women.

In addition, I have served as an Associate Editor for 6 journals (currently 3), ad hoc reviewer for >20 journals, and ad hoc reviewer and/or panelist for 15 funding agencies. I have been a scientific advisor on two major international programs, and have high levels of interaction and collaboration with CG centers and national research programs in several countries.

A few key collaborators are Jonathan Wendel, Rod Wing, and Steven Kresovich. My full COI list is in Fastlane as a 'single-copy' document.

Graduate and Postdoctoral Advisors: Mark Sorrells, Ralph Obendorf. Steven Tanksley.

Thesis advisor and Postgraduate-Scholar Sponsor: Graduate Students (48). Current: L. Lin, P. Kumar, L. Liu, J. Li, G. Hui, C. Zhou, D. Zhang (all Ph.D.); J. Patel (M.S.); Prior: H. Tang, C. Kim, J. Ross-Ibarra, C. Bethel, R. Jessup, M. Mackiewicz, N. Skinner, A. Desai, R. Mroczek, B. Yuksel, B. Chapman, A. Missaoui, T. Fukao, T. Byrum, L. Decanini, X. Qian, N. Vinh, S. Anderson, T. Lan, Y. Lin, R. Wright, C. Katsar, T. Hsieh, C. Lehn, X. Wu, L. Luo, D. Wang, Z. Li, Y. Wang, J. Rocha, A. Herring, M. Ouedraogo, O. Rodriguez, D. Marchala (Ph.D.); M. Yang, D. Stilwell, S. Mendonsa, M. Jung, W. Smith (M.S.). **Postdoctoral Scientists (50).**

Current: X. Wang, U. Sezen, H. Cuevas, M. Ratnaparkhe, C. Kim. Prior: Z. Zhang, R. Perez, P. Khadke, M. Rana, R. Bandopadhyay, M. ur-Rahman, J. Bowers, J. Rong, M. Torres, A. Feltus, T. Kamps, C. Jang, T. Wicker, H. Singh, T. Silva, H. Lohithaswa, J. Leitao, V. Waghmare, C. Corbin, A. Karnauh, H. Ma, D. Peterson, M. Wise, M. Osterlund, R. Noyes, M. Ferguson, C. Park, G. Burow, M. Burow, H. Okuizumi, P. Morrell, P. Chee, Z. Li, Y. Si, R. Ming, C. Jiang, D. Rana, X. Draye, A. Reinisch, S. Kowalski, G. Wang, X. Zhao, S. Liu, J. Yang, D. Qiang.

From: "McCutchen, Bill" <bmccutchen@tamu.edu>
To: DBaltensperger@ag.tamu.edu; PGibbs@ag.tamu.edu; CNessler.EXTERNAL.Intern...
CC: NBPenn.EXTERNAL.Internet; JSlovacek.EXTERNAL.Internet
Date: 6/23/2010 2:51 PM
Subject: Austin

Craig, Pete and Dave,

I am in meetings with Dave Baltensperger, and he would like to join us for trip to Austin to Corn Meetings. Since the meeting is at the airport in Austin, we can meet at the JKW office at 7:15am and have no problem making it to the 9:30am meeting - I had previously thought the meeting was a 9:00 am.

Thanks,

Bill

From: "McCutchen, Bill" <bmccutchen@tamu.edu>
To: AChandra.EXTERNAL.Internet; RSBrown@ag.tamu.edu
CC: MCEngelke.EXTERNAL.Internet; RVAvant.EXTERNAL.Internet; DBaltensperger@a...
Date: 4/26/2010 3:26 PM
Subject: Award! 2010 SCRI - recommended for funding

Ambika,

Congratulations to you and your team!! Steve just passed this along, and it is indeed great news. Second time around works - thanks for being persistent and innovative!

Please let us know how we might help.

Best regards,

Bill

----- Original Message -----

From: Steve Brown <rsbrown@ag.tamu.edu>
To: McCutchen, Bill
Sent: Mon Apr 26 13:32:47 2010
Subject: Fwd: 2010 SCRI - recommended for funding

Hi Bill,

I hope that the duty last week wasn't too tough. I received this email from Ambika a few minutes ago. If you didn't already know, I thought that you might find this interesting.

Thanks,

Steve Brown
Program Director
Texas Foundation Seed Service
Email: rsbrown@ag.tamu.edu
PH: 940-552-6226
website <http://tfss.tamu.edu>
FAX:940-552-5524

>>> "Ambika Chandra" <a-chandra@tamu.edu> 4/26/2010 12:21 PM >>>
Hello Steve,

I wanted to inform you that I have received the phone call from Dr. Tom Bewick, USDA-NIFA-Specialty Crops Research Initiative this morning. He congratulated me and said that the panel met 2-3 weeks ago and have 'Recommended our proposal for funding' in its entirety (all objectives and requested budget (close to 3.9 million dollars) for five years, as proposed). I can't believe that this is really happening! Now, I guess the real work begins. I will contact the Texas research Foundation and get the paperwork and the process started. I also need to start developing a CRIS project for this proposal and will submit AD 146 and AD147 forms to USDA.

I just wanted to share this news with you.

Ambika

Ambika Chandra, Ph.D.

Assistant Professor, Turfgrass Breeding & Molecular Genetics

Texas AgriLife Research and Extension Center, Dallas

Department of Soil and Crop Sciences

Texas A&M System

17360 Coit Road

Dallas, TX 75252

Phone: 972-231-5362

Fax: 972-952-9216

Email: a-chandra@tamu.edu <blocked::mailto:a-chandra@tamu.edu>

<http://dallas.tamu.edu>

**

EDUCATION

Louisiana State University	Plant Breeding	Ph.D.	December 1994
Louisiana State University	Agronomy	M.S.	May 1991
Auburn University	Agronomy & Soils	B.S.	June 1989

EMPLOYMENT HISTORY- POST DOCTORATE

Institution/Company	Title	Dates of Employment
University of Florida, Marianna, FL	Assistant Professor, Peanut Breeder (tenure accruing- 75% Research, 20% Extension, 5% Teaching)	2004 – present
RiceTec, Inc., Alvin, TX	Breeding Program Leader, Hybrid Rice Breeder	1997 - 2004
Texas A&M University, Beaumont, TX	Assistant Research Scientist, Rice Breeder (non-tenure accruing)	1995 – 1997

RESEARCH ACTIVITIES and ACCOMPLISHMENTS**University of Florida****Responsibilities and Activities :**

- 1) Research
Manage a large peanut breeding program with 9 full time employees housed in two locations with about 45 acres of nursery plots annually. The primary goal of the program is to develop peanut cultivars for the Southeastern US with improved pod yield, grade, seed chemistry and disease resistance.
- 2) Extension
Maintain an extension program entitled "Improving Adoption and Industry Acceptance of New Peanut Cultivars". The goal of the program is to encourage peanut farmers to utilize at least two cultivars on their farm with the ultimate goal of reducing genetic risk with cultivar diversity.
- 3) Teaching
Chair of the committee for 2 M.S students and member of 4 Ph.D. committees, and one M.S. committee. Research programs of graduate students complement the breeding effort by answering fundamental questions that limit breeding progress.

Accomplishments :

- 1) Co-developer of 5 peanut varieties, 2004 - 2007.
- 2) Trained two Ph.D. students and one non-thesis M.S student.
- 3) Author or co-author of twelve referred journal articles, ten peer-reviewed extension documents, and one book chapter, 2005-2009.
- 4) Presented 53 extension lectures to peanut growers and county agents, 2005-2009.
- 5) Secured \$1.36 million in grants, 2004-2009.
- 6) Program earned \$2.2 million in cultivar royalties, 2004-2009.

RiceTec, Inc.Responsibilities and Activities :

- 1) Hybrid Rice Breeder- developed rice hybrids for North and South America using temperature mediated male sterility.
- 2) Breeding Team Leader- lead a team of 5 breeders, 2 molecular breeders, and a plant pathologist in the development of hybrid rice cultivars.
- 3) Station Manager- managed the Alvin Research Station, including a 400 acre farm, 27,000 square feet of greenhouses and a staff of four, the Newport, Arkansas breeding and testing station, and the Hawaii winter nursery.

Accomplishments :

- 1) Developed a series of rice hybrids from germplasm previously untapped by RiceTec, which evolved into three commercial products, XL7, XL8 and Clearfield* XL8 during 2001-03 and to XP721, XP730 and others in 2004-2006.
- 2) Improved and simplified breeding methodology to produce hybrids and select parent lines in early generation breeding material.
- 3) Released new parent lines into the yield testing program which produced hybrids with significant improvements over XL7 and XL8 for yield, milling, and seed production.
- 4) Developed the first CLEARFIELD* rice hybrids at RiceTec.
- 5) Organized 400 acre farm into a three-year rotation used by 8 groups within RiceTec.
- 6) Organized the collection, analysis and reporting of yield trial data and wrote procedures for the yield testing program from trial randomization through data reporting.

Texas A&M University Research and Extension Center, Beaumont, TexasResponsibilities and Activities :

- 1) Managed the day-to-day operations of the USDA/TAMU Rice Breeding Program including supervision of 4 full-time and 3 part-time employees.
- 2) Managed a 30 acre breeding nursery including crop inputs of fertilizer and pesticides.
- 3) Organized germplasm storage, collection and analysis of data, selection of breeding material, and maintenance of computerized records.

Accomplishments :

- 1) Devised and implemented a plan to utilize new planting and harvesting equipment that significantly improved efficiency and accuracy.
- 2) Introduced, applied and trained staff to use new plant breeding software.
- 3) Organized newly occupied laboratory and shop facilities.
- 4) Introduced electronic data collection devices that reduced errors compared to hand written records.
- 5) Introduced and utilized ground-based application of pesticides and fertilizers that reduced reliance on aerial application.

PROFESSIONAL SOCIETY ACTIVITIES

Member of the American Peanut Research and Education Society

- 1) Technical Program Chair – 2010 Annual Meeting
- 2) Site Selection Committee Chair - 2010
- 3) Associate Editor- 2006-present
2008: 1 paper communicated
2007: 3 papers communicated
- 4) Member of the Peanut Crop Germplasm Committee

Member of the Crop Science Society of America

- 1) Reviewer: Crop Science/Journal of Plant Registrations for Peanut, 2004-present
2008: 2 manuscripts reviewed
2007: 8 manuscripts reviewed
2006: 8 manuscripts reviewed
- 2) NCCPB Genetics & Plant Breeding Award for Industry Committee, 2009-2010
- 3) Crop Registration Committee- Peanut Member, 2006-2008
- 4) Crop Registration Committee- Rice Member, 2000
2008: 2 manuscripts reviewed
2007: 8 manuscripts reviewed
2006: 8 manuscripts reviewed

Manuscript Reviewer

Journal of the American Oil Chemists' Society

2008: 1 manuscript reviewed
2009: 1 manuscript reviewed

Transactions of American Society of Agricultural and Biological Engineers

2009: 1 manuscript reviewed

HONORS

IFAS Award for development of the peanut cultivar Florida-07- 2009

Recipient of RiceTec's Beachell Award for scientific achievement in developing XL8-2002

Gerald O. Mott Meritorious Graduate Student award for LSU Agronomy (Crop Science Society of America) 1992, 1993

INTELLECTUAL PROPERTY

Cultivar Releases

Release of peanut cultivar- "Florida-07" (2006), Co-developer. (PVP issued)
 Release of peanut cultivar- "McCloud" (2006), Co-developer. (PVP pending)
 Release of peanut cultivar- "York" (2006), Co-developer. (PVP pending)
 Release of peanut cultivar- "AP-4" (2007), Co-developer. (PVP pending)
 Release of peanut cultivar- "Florida Fancy" (2007), Co-developer. (PVP pending)

Patents

Sarreal, Eugenio S. and Tillman, Barry L. February 3, 2009. Rice hybrid XP316M. United States Patent 7485784.
 Gorbet, D.W. and Tillman, B.L. 2008. Florida-07. PVP Certificate #200800069 issued June 5, 2008.
 Sarreal, Eugenio S. and Tillman, Barry L. April 1, 2008. Inbred rice line 053002. United States Patent 7351891.
 Sarreal, Eugenio S. and Tillman, Barry L. April 1, 2008. Inbred rice line 054001. United States Patent Application 7351892.
 Sarreal, Eugenio S. and Tillman, Barry L. April 1, 2008. Inbred rice line 053001. United States Patent Application 7351893.
 Sarreal, Eugenio S. and Tillman, Barry L. December 4, 2007. Rice hybrid XL723. United States Patent 7304223.
 Sarreal, Eugenio S. and Tillman, Barry L. November 27, 2007. Rice hybrid XL730. United States Patent 7301083.
 Tillman, Barry L. and Sarreal, Eugenio S. April 26, 2005. Rice hybrid RH101. United States Patent 6884931.
 Tillman, Barry L. and Sarreal, Eugenio S. June 3, 2004. Rice hybrid RH102. United States Patent 7005567.
 Tillman, Barry L. September 30, 2003. Rice hybrid RH103. United States Patent 6953881.

Philosophy for the Potential of Intellectual Property in the University Setting

Universities are in a special position to invest in long-term research efforts which can lead to commercial application decades later. In the case of plant breeding, unique traits with the potential for commercial application can become sources of much needed revenue (with appropriate intellectual property protection) and create partially self-funded research programs. Far from competing with private companies, this approach enables private business to access valuable technology at a reasonable cost. Government sponsored research then fulfills the vital role of conducting long-term, high risk/high reward research that may not be undertaken in the private sector. As the process of research, licensing and commercialization matures, costs to fund new research are shared by royalty proceeds and taxpayers. In this way, taxpayers don't have the full financial burden for long-term research and the goals of research are more clearly focused on creating technology that solves societal problems and in so doing creates marketplace value. I believe that Research Universities who embrace intellectual property protection create significant value for themselves, their state and the nation.

BOOK CHAPTER

Tillman, B.L. and H.T. Stalker. 2009. Peanut. In: Oil Crop Breeding. Johann Vollmann and Istvan Rajcan (Eds.). Springer Verlag, New York.

REFEREED JOURNAL ARTICLES (18 total)

Gorbet, D.W. and B.L. Tillman. 2009. Registration of 'Florida-07' Peanut. Journal of Plant Registrations. 3:14-18. doi: 10.3198/jpr2008.05.0276crc.

Tillman, B.L. and D.W. Gorbet. 2009. Registration of 'AP-4' peanut cultivar. Journal of Plant Registrations. 3:138-142. doi: 10.3198/jpr2008.11.0669crc.

Gorbet, D.W. and B.L. Tillman. 2008. Registration of 'DP-1' Peanut. Journal of Plant Registrations. 2:200-204. doi: 10.3198/jpr2007.11.0629crc.

Culbreath, A.K., B.L. Tillman, D.W. Gorbet, C.C. Ho brook, and C. Nischwitz. 2008. Response of new field-resistant peanut cultivars to twin-row pattern or in-furrow applications of phorate for management of spotted wilt. Plant Disease. 92:1307-1312.

Isleib, T.G., B.L. Tillman, H.E. Pattee, T.H. Sanders, K.W. Hendrix and L.O. Dean. 2008. Genotype-by-environment interactions for flavor attributes of breeding lines in the uniform peanut performance test. Online. Peanut Science. 35: 55-60. DOI: 10.3146/PS07-108.1. www.peanutscience.com.

Isleib, T.G., B.L. Tillman, H.E. Pattee, T.H. Sanders, K.W. Hendrix and L.O. Dean. 2008. Genotype-by-environment interactions for seed composition traits of breeding lines in the uniform peanut performance test. Online. Peanut Science. 35: 130-138. DOI: 10.3146/PS08-001.1. www.peanutscience.com.

Morton, B.R., B.L. Tillman, D.W. Gorbet, and K.J. Boote. 2008. Impact of seed storage environment on field emergence of peanut (*Arachis hypogaea* L.) cultivars. Online. Peanut Science. 35: 108-115. DOI: 10.3146/PS07-111.1. www.peanutscience.com.

Kang I., M. Gallo, and B.L. Tillman. 2007. Distribution of allergen composition in peanut (*Arachis hypogaea* L.) and wild progenitor (*Arachis*) species. Crop Science. 47:997-1003.

Tillman, B.L., D.W. Gorbet, and P.C. Andersen. 2007. Influence of planting date on yield and spotted wilt of runner market type peanut (*Arachis hypogaea* L.). Online. Peanut Science 34:79-84. DOI: 10.3146/0095-3679(2007)34[79:LOPDOY]2.0.CO;2. www.peanutscience.com.

Tillman, B.L., D.W. Gorbet, A.K. Culbreath, and J.W. Todd. 2006. Response of peanut cultivars to seeding density and row patterns. Online. Crop Management doi:10.1094/CM-2006-0711-01-RS. www.plantmanagementnetwork.org/sub/cm/research/2006/newpeanut/.

Tillman, B.L., D.W. Gorbet, and G. Person. 2006. Predicting oleic and linoleic acid content of single peanut seed using near-infrared reflectance spectroscopy. *Crop Science*. 46:2121-2126.

Cubrecht, A.K., D.W. Gorbet, N. Martinez-Ochoa, C.C. Hobbrook, J.W. Todd, T.G. Isleb, and B.L. Tillman. 2005. High levels of field resistance to tomato spotted wilt virus in peanut breeding lines derived from hypogaea and hirsuta botanical varieties. Online. *Peanut Science*. 32:20-24. doi: 10.3146/0095-3679(2005)32[20:HLOFRT]2.0.CO;2. www.peanutscience.com.

Tillman, B.L., W.S. Kursell, S.A. Harrison, and J.S. Russin. 1999. Yield loss caused by bacterial streak in winter wheat. *Plant Disease*. 83:609-614.

Tubajika, K.M., B.L. Tillman, J.S. Russin, C.A. Clark, and S.A. Harrison. 1998. Relationship between flag leaf symptoms caused by *Xanthomonas translucens* pv. *translucens* and subsequent seed transmission in wheat. *Plant Disease*. 82:1341-1344.

Tillman, B.L. and S.A. Harrison. 1996. Heritability of resistance to bacterial streak in winter wheat. *Crop Science*. 36:412-418.

Tillman, B.L., S.A. Harrison, C.A. Clark, E.A. Milus, and J.S. Russin. 1996. Evaluation of bread wheat germplasm for resistance to bacterial streak. *Crop Science*. 36:1063-1068.

Tillman, B.L., S.A. Harrison, J.S. Russin, and C.A. Clark. 1996. Relationship between bacterial streak and black chaff symptoms in winter wheat. *Crop Science*. 36:74-78.

Tillman, B.L., S.S. Croughan, and B.G. Harville. 1993. Potassium effects on soybean stem canker in differentially susceptible cultivars. *Plant Pathol.* (Trends in Agril. Sci) 1:55-61.

PEER REVIEWED EXTENSION PUBLICATIONS (8 total)

Rich, J. and B.L. Tillman. 2008. Root-knot nematode resistance in peanut. ENY-057 (NG046). <http://edis.ifas.ufl.edu/NG046>.

Tillman, B.L. and D.W. Gorbet. 2008. Florida-07, a medium maturity, large seeded high oleic peanut variety with resistance to tomato spotted wilt. SS-AGR-313. http://edis.ifas.ufl.edu/document_ag319.

Tillman, B.L., D.W. Gorbet, M.W. Gomillion, J. McKinney, G. Person, and W.D. Thomas. 2008. Peanut variety performance in Florida, 2004-2007. SS-AGR-311. http://edis.ifas.ufl.edu/document_ag317.

Tillman, B.L., D.W. Gorbet, M.W. Gomillion, J. McKinney, and W.D. Thomas. 2007. Peanut variety performance in Florida, 2003-2006. SS-AGR-109. <http://edis.ifas.ufl.edu/AG269>.

Tillman, B.L., D.W. Gorbet, and E.B. Whitty. 2006. Farmer saved peanut seed: factors to consider. SS-AGR-186. <http://edis.ifas.ufl.edu/AG189>.

Tillman, B.L., D.W. Gorbet, H. Wood, M.W. Gomillion, and J. McKinney. 2006. Peanut variety performance in Florida, 2002-2005. SS-AGR-13. <http://edis.ifas.ufl.edu/AG247>.

Whitty, E.B., B.L. Tillman, and D.L. Wright. 2006. Producing quality peanut seed. SS-AGR-187. <http://edis.ifas.ufl.edu/AG190>.

Wright, D.L., B.L. Tillman, E. Jowers, J.J. Marois, J.A. Ferrell, T.W. Katsvairo, and E.B. Whitty. 2006. Management and cultural practices for peanuts. SS-AGR-74. <http://edis.ifas.ufl.edu/AA258>.

Wright, D.L., B.L. Tillman, J.J. Marois, J.R. Rich, R.K. Sprengel, and J.A. Ferrell. 2006. Conservation tillage peanut production. SS-AGR-185. <http://edis.ifas.ufl.edu/AG187>.

Wright, D.L., B.L. Tillman, and E.B. Whitty. 2006. Producing peanuts for the fresh (green/boiling) market. SS-AGR-190. <http://edis.ifas.ufl.edu/AG194>.

From: "McCutchen, Bill" <bmccutchen@tamu.edu>
To: DOPeterson.EXTERNAL.Internet; plpm-head@ppserver.tamu.edu; KSalzman@ag.t...
CC: NBPenn.EXTERNAL.Internet; JASlovacek.EXTERNAL.Internet; KSMITH@ag.tamu.e...
Date: 2/23/2009 4:07 PM
Subject: BASF Follow-up

To faculty and unit heads,

Several of you have contacted us regarding the status of our discussions with BASF. As you may remember, we had two meetings with them in April and October of 2008 to discuss possible areas of collaboration. Since those meetings, we have continued discussions with them, and Tom Holt [Manager of Biology for BASF has requested a follow up meeting to discuss bioenergy in more detail. That meeting will be on campus on March 9-10. We are now organizing this meeting.

Paul Bernasconi of BASF reported to me that "Collaborations with faculty remain of interest to BASF. But, the general economic situation has degraded from the time of our first visit to TAMU and we should be realistic in what we can achieve. Therefore, a student assistantship program is the only venue we should actively pursue at the moment, and that we should focus on finding a way to put in place such program; the magnitude of which needs to be further discussed. Hopefully - as things improve, we can revisit intensification of our relationship with TAMU."

I believe a significant opportunity exists to engage BASF now for student assistantships and in the future potentially for areas of collaborative R&D and sponsored research. This is another example of the impacts of the world-wide economic situation. We look forward to working with you to pursue opportunities for sponsored research with BASF and other companies.

Thanks,

Bill

--

Bill F. McCutchen, Ph.D.

Associate Director

Texas AgriLife Research

Texas A&M University System

113 Jack K. Williams Administration Building

2142 TAMU College Station, TX 77843-2142

979-845-8488 Tel

979-458-4765 Fax

bmccutchen@tamu.edu

From: "McCutchen, Bill" <bmccutchen@tamu.edu>
To: therrman@tamu.edu; NCLARKE@ag.tamu.edu; nwilkins@ag.tamu.edu; PSMurano.E...
CC: NBPenn.EXTERNAL.Internet; DKLunt.EXTERNAL.Internet; WDugas.EXTERNAL.Inte...
Date: 6/12/2009 7:40 AM
Subject: Basic Research to Enable Agricultural Development (BREAD)

Dear Unit Heads,

Please send to your faculty as appropriate. The Program's focus is on novel, transformative research at the proof-of-concept stage rather than its application or development. Especially encouraged are original proposals that address major constraints to the productivity of crops important to smallholder farmers, or on the development of novel and efficient production practices. Although the Program places an initial emphasis on crop improvement, it will also consider innovative research proposals from scientists in all fields of research and engineering as long as the proposed research is consistent with the Program objectives.

Proposals are also expected to address project outcomes in the context of broader societal impacts, and as appropriate to the research proposed, engage international partners in scientific collaborations.

Thanks,

Bill

--

Bill F. McCutchen, Ph.D.

Associate Director

Texas AgriLife Research

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113 Jack K. Williams Administration Building

2142 TAMU College Station, TX 77843-2142

979-845-8488 Tel

979-458-4765 Fax

bmccutchen@tamu.edu

From: Mike Cronan [mailto:mikecronan@tamu.edu]
Sent: Thursday, June 11, 2009 8:23 PM
To: Maldonado, Theresa A.; Summers, Max D.; Dugas, William; McCutchen, Bill; Giroir, Brett
Cc: Cronan, Michael; Lucy Deckard; sbirdwell@vprmail.tamu.edu

Subject: Basic Research to Enable Agricultural Development (BREAD)

RSS:AG

Basic Research to Enable Agricultural Development (BREAD)

http://www.nsf.gov/pubs/2009/nsf09566/nsf09566.htm?govDel=USNSF_25
<http://www.nsf.gov/pubs/2009/nsf09566/nsf09566.htm?govDel=USNSF_25>

LOI August 5; full Sept. 9

The Program's focus is on novel, transformative research at the proof-of-concept stage rather than its application or development. Especially encouraged are original proposals that address major constraints to the productivity of crops important to smallholder farmers, or on the development of novel and efficient production practices. Although the Program places an initial emphasis on crop improvement, it will also consider innovative research proposals from scientists in all fields of research and engineering as long as the proposed research is consistent with the Program objectives.

Proposals are also expected to address project outcomes in the context of broader societal impacts, and as appropriate to the research proposed, engage international partners in scientific collaborations.

Mike

Mike Cronan
Office of Proposal Development
Division of Research & Graduate Studies
Texas A&M University
OPDTeam: <http://opd.tamu.edu/people>
OPD WEB: <http://opd.tamu.edu/>
Funding: <http://opd.tamu.edu/funding-opportunities>

I. INTRODUCTION

Agriculture is benefiting from advances in genomics made over the past decade and the outcomes of this research have allowed academic and industrial researchers to expand the breeders' toolkit, for example, to exploit the diversity of agronomically useful traits in wild and domesticated crop plants and to accelerate the development of new plant varieties through marker-assisted breeding. While support is available to promote the downstream applications derived from advances in science and technology to address constraints to developing country agriculture, there have been fewer funding opportunities to support development of cutting-edge and creative new approaches.

Clearly, new collaborations among a broad range of scientists and

engineers are needed that lead to a different way of thinking about the major problems facing developing country agriculture. The NSF and the BMGF are partnering to offer a new research program to foster these collaborations and the transformative research that will emerge. The goal of the new BREAD Program is to build on the accomplishments of the National Plant Genome Initiative (NPGI), extending the opportunities to include international partners in efforts to generate innovative, science-based solutions to problems of smallholder agriculture in developing countries. Through these new partnerships and projects, it is anticipated that the Program will change the research culture to one that is more broadly inclusive of these needs.

The BREAD Program is a component of the Plant Genome Research Program (PGRP) that began in Fiscal Year 1998 as part of the NPGI. A new five-year plan for the NPGI was released in January 2009 (<http://www.ostp.gov/galleries/NSTC/NPGI%20Five-Year%20Plan%202009-2013.pdf> <<http://www.ostp.gov/galleries/NSTC/NPGI%20Five-Year%20Plan%202009-2013.pdf>>). The overall goals of the NPGI are to support basic research in plant genomics and to accelerate the acquisition and utilization of new knowledge and innovative approaches to elucidating fundamental biological processes in plants. The focus of the NPGI is on plants of agricultural importance and plant processes of potential agronomic value.

Since 2004, the PGRP has offered the Developing Country Collaborations in Plant Genome Research (DCC-PGR) funding opportunity (http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=12789&org=BIO <http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=12789&org=BIO>) to support research collaborations between US scientists and scientists from developing countries as part of ongoing or new PGRP awards. The intent of the DCC-PGR program is to support collaborative research linking US researchers with partners from developing countries to solve problems of mutual interest in agriculture, energy and the environment, while placing US and international researchers at the center of a global network of scientific excellence.

The BREAD Program represents a new opportunity within the PGRP that allows for a broader engagement of researchers across disciplines and across international boundaries to form a new community of scientists who may not have worked together before. However, you do not have to have been part of a PGRP or DCC-PGR project to participate in BREAD.

II. PROGRAM DESCRIPTION

The advances made over the past decade of the Plant Genome Research Program (PGRP) have led to the development of resources with potential benefit far beyond US agriculture. Indeed, the Dear Colleague Letter for Developing Country Collaborations in Plant Genome Research (NSF 04-563: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=12789&org=BIO <http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=12789&org=BIO>) encourages proposers to consider inclusion of collaborative activities focused on research problems of importance to developing countries, including scientist-to-scientist interactions with the potential to lead

to long-term partnerships among participating laboratories. Supported activities have included joint research projects and reciprocal exchange visits of up to one year in length. PGRP funding is provided to US institutions only.

The new BREAD Program will take the activities of the PGRP and DCC-PGR to the next level by supporting a broader range of scientific research and by enabling funding to be provided to eligible, US or non-US institutions through subawards. A major distinction between the BREAD Program and other programs at NSF is that proposals to the BREAD Program must make a clear and well-defined connection between the outcomes of the proposed research and its direct relevance and potential application to smallholder farming in the developing world. The Program focus is on novel, transformative research at the proof-of-concept stage rather than application or redevelopment of existing research outcomes. The Program is also receptive to high risk projects provided that they employ sound scientific principles and offer a high return if successful. High risk projects that do not provide a sound scientific basis for the proposed approach will be less competitive than projects that do provide this justification.

Proposals to the BREAD Program should employ state-of-the-art scientific approaches that address key constraints to agriculture as practiced by smallholder farmers in the developing world. For the purposes of this program, developing world countries are those defined by the World Bank as low- and middle-income economies (see World Bank Country Classification page, <http://www.worldbank.org/data/countryclass/classgroups.htm> <<http://www.nsf.gov/cgi-bin/good-bye?http://www.worldbank.org/data/countryclass/classgroups.htm>>). While projects may target constraints in specific regions of the developing world, those with the potential to impact broadly large areas and/or numbers of farmers would receive the highest priority for funding. However, the Program is not intended to target any specific country or region preferentially, and institutions eligible for sub-awards may exist in any country of the world, excluding those that are currently embargoed by the US government.

Successful applications will be ones that generate new knowledge and/or test new hypotheses to enable discoveries that can be moved rapidly to the field where needed and translated into future agricultural advances in developing countries. If proposals include one or more international developed or developing country partners, their specific role(s) and contributions to the project should be justified. While inclusion of a developing world partner is not a strict requirement, it is strongly encouraged.

Proposed projects may include a broad range of activities, from basic research to technology development and while genomics approaches can be involved, they are not required. However, proposals that are of a purely applied nature and focus on delivery of current technologies are beyond the scope of the BREAD Program.

Especially encouraged are original proposals that address key constraints to the productivity of crops important to smallholder farmers, or impact development of novel and efficient production practices. Although the major focus of the BREAD Program will be on

approaches and technologies most relevant for smallholder agriculture in the developing world, it is recognized that some projects may be relevant to all crops (e.g., novel approaches to enhancing yield or tolerance to plant stresses such as drought or salinity), and so the program would also consider proposals for such projects. Recognizing that innovative ideas relevant to agriculture may come from many scientific disciplines, the Program will also consider innovative research proposals from scientists in all fields of science and engineering (excluding economics or the social sciences) as long as the proposed research is consistent with the BREAD Program objectives. However, proposals of any kind that focus on development of existing tools or resources or that would result in only small advances are outside the scope of this program.

Interdisciplinary proposals are encouraged, especially those that bring together researchers from disciplines that would not normally work together to focus on novel questions or challenges. Proposers are encouraged to consider carefully the roles of each co-PI or collaborator to ensure that each brings a unique, appropriate and necessary expertise to the project.

Simultaneous submission of proposals to this program and another source of funding is permissible with prior written approval of the funding agencies involved. A proposal from the submitter that is a duplicate of, or substantially similar to, a proposal already under consideration by NSF will be returned without review.

The BREAD Program should NOT be viewed as a mechanism to support the type of fundamental research that is or has already been supported through other programs at NSF or other similar agencies. Proposers are strongly encouraged to review carefully additional information provided on the Program web site (http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503403 <http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503403>) and to contact the Program Director for further guidance.

Examples of eligible research areas would include, but are by no means limited to, the following:

- * Basic research that seek to exploit new discoveries in the plant sciences to develop novel ways to enhance the yield or the nutritional content of crops important to small-scale farmers.
- * New strategies for creating resistance to major diseases and pests that affect plants, animals or insects of agricultural importance, and that have major impact in broad regions of the developing world.
- * Novel approaches to basic research on the enhancement of water-, nitrogen- or phosphate-use efficiency in crops or to gain a better understanding and control of agronomically important processes such as tolerance to drought and salinity.
- * Novel approaches to using the genetic diversity of plants, microbes, or animals to enhance the ability of small-scale farmers to adapt to emerging threats of global climate change, emerging diseases, and the rising costs of energy.
- * Development of new products or novel ways to enhance the ability of plant and animal products to delay ripening and/or withstand storage under less-than-ideal conditions prevalent in many parts of the

developing world.

- * Application of new advances in fields such as nanotechnology to the development of novel and more efficient ways to deliver fertilizers and thus address poor soil fertility without negatively affecting the environment.

- * Creation of novel low-cost, high-throughput tools for use in breeding or disease diagnostics, especially suited to developing world agriculture.

- * Basic research towards the development of new technologies or devices for local or remote monitoring of crops.

- * Basic research aimed at development of low-cost, efficient devices for energy production and storage appropriate to small-scale agriculture in remote settings.

Additional considerations:

International Collaboration: International collaborative plant genome research is actively pursued all over the world. International research collaboration is strongly encouraged in the BREAD Program, particularly with investigators from developing countries, and especially where there is a common research focus or system. However, the PI must hold an appointment at an eligible US institution. Proposals will not be accepted from a non-US institution serving as the lead institution. Subawardee(s) may be eligible US or non-US institutions. Subaward activities should be clearly connected to the overall goals of the proposed research and the human and institutional capacities available for the project described for each institution. Before proposal submission, all proposed US or non-US subawardee institutions must be registered with Central Contractor Registration (<http://www.ccr.gov> <<http://www.ccr.gov>>). This registration takes approximately 2-3 weeks, and there are no financial requirements for registration.

Industrial Collaboration: Private industry has already made a significant investment in plant genomic research. Innovative collaborations with industry are encouraged when they advance the goals of the program. Participation of a company as a provider of a service should be managed according to the submitting institution's procurement policy. When private industry is involved, the proposer is responsible for ensuring that any intellectual property issues are handled according to the program policy (see section A-1 under Special Information and Supplementary Documentation below).

Integration of Research and Education and Broadening Participation: Proposers are encouraged to take advantage of opportunities to train young scientists in the course of proposed projects and to promote increased participation by members of under-represented groups. Innovative approaches to training are encouraged where they fit with the goals of the proposal and may include training of young scientists in research programs of institutions in the developing world that are building programs that aim to apply the advanced sciences to agriculture. However, proposals focused primarily on supporting existing or new training programs are not eligible and may be returned without review. A mentoring plan must be included for all supported postdoctoral researchers and students as specified under Special Information and Supplementary Documentation sections A-5 and A-6 below.

Data sharing: Proposals that would generate large amounts of data or new software and the like should present a plan for how these resources will be made widely available and accessible, notably to developing countries. Where appropriate, project outcomes are expected to meet current community standards for genomic data and be deposited into existing long-lived community databases. For more details, see section A-1 under Special Information and Supplementary Documentation below.

Societal Impacts: The societal benefits and potential long-term impacts on developing country agriculture of the proposed research should be integrated into the Project Description.

III. AWARD INFORMATION

Most projects are anticipated to be supported for 3 years, with funding for each succeeding year dependent upon meeting annual financial and technical reporting requirements. Awards may range in size from \$150,000 per year to a total of \$600,000 per year for projects involving no more than 3 subawardee institutions. Proposers of projects with budgets outside these general guidelines should consult with the Program Director prior to proposal submission.

IV. ELIGIBILITY INFORMATION

Organization Limit:

Proposals may only be submitted by the following:

* Universities and colleges [universities and two- and four-year colleges (including community colleges) accredited in, and having a campus located in the US, acting on behalf of their faculty members. Such organizations also are referred to as academic institutions.]; US non-profit research organizations, including museums, research laboratories, professional societies; or similar organizations in the US that are directly associated with educational or research activities; or consortia led by the eligible organizations listed here.

A proposal from a consortium of organizations must be submitted as a single proposal with one US organization serving as the lead and all other organizations as subawardees. Separately submitted collaborative proposals will not be accepted and will be returned without review.

Subawards may be made to US or non-US academic institutions, research organizations, research laboratories, professional societies and similar organizations that are directly associated with educational or research activities.

From: "McCutchen, Bill" <bmccutchen@tamu.edu>
To: tmaldonado@tamu.edu; JMGould@ag.tamu.edu; DBaltensperger@ag.tamu.edu; du...
CC: PLSchuerman.EXTERNAL.Internet; Cornwell@tamu.edu; NBPenn.EXTERNAL.Intern...
Date: 2/9/2010 11:49 AM
Subject: Bioenergy ETF hire: Info on Newell
Attachments: Newell's Algae Poster.ppt; Viral Genetics support letter.pdf

Attached and below, please find more information per the new ETF hire into HSC. Dr. Newell and HSC will be receiving approximately \$750K of the ETF funds that AgriLife secured for bioenergy-related R&D. As Brett mentions below this could also result in spinning out a company focused on biofuels. We look forward to meeting with Dr. Newell and Dr. Carlson to discuss how we can work together in algal and/or oilseeds projects.

Congratulations Dr. Carlson.

Also, and just so that everyone is up to speed, we already have a signed letter of commitment from one of our two candidates - the Weslaco position has been filled but not officially announced yet. Things look promising for the final hire, and he and his family plan to visit campus (again) February 20-22nd.

Finally, I would like to say thanks to Brett Cornwell, Peter Schuerman and others from the OTC that have helped make this happen.

Thanks,

Bill

--

Bill F. McCutchen, Ph.D.

Associate Director

Texas AgriLife Research

Texas A&M University System

113 Jack K. Williams Administration Building

2142 TAMU College Station, TX 77843-2142

979-845-8488 Tel

See the attached poster. She told me that the treatment that she has patented resulted in 300% increases in oil production by the algae (across different species). She also said that her patent covers all plants (not just algae) and the treatments could be used to significantly increase oil production in other oil producing plants.
http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO2&Sect2=HITOFF&p=1&u=%2Fnetahtml%2FPTO%2Fsearch-bool.html&r=1&f=G&l=50&co1=AND&d=PTXT&s1=7105718.PN.&OS=PN/7105718&RS=PN/7105718

She has one biofuel related patent that has been licensed to a company, Viral Genetics. Viral Genetics plans on spinning out a company focused on biofuels and relocating to Texas. See the attached letter from Viral.

Brett Cornwell
Commercialization Services Director
Office of the Vice Chancellor of Technology Commercialization
Texas A&M University System
800 Raymond Stotzer, Suite 2034A

College Station, TX 77843

979-845-9699

Biographical Information

Curt Munson
Chevron Energy Technology Company
Richmond California 94802

Education

Ph.D. Chemical Engineering, University of California, Berkeley, 1985
Dissertation Title "Separation of Polar Organic Compounds from Dilute Aqueous Solutions", C. Judson King Thesis Advisor

M. ChE. University of Delaware, Newark, DE, 1980
Thesis Title "Thermodynamic Analysis of the Vapor Compression Vacuum-Freezing Water Desalination Process". Advisor R. L. Pigford.

B. S Chemical Engineering, University of California, Berkeley, 1976

Registered Professional Engineer, Chemical Engineering, California

Chevron Energy Technology Company (1995-present)

Currently the Unit Manager, Fuels and Advanced Bio-Fuels– Four teams (Combustion, Bio-Fuels Conversion, Process Engineering, and Thermo-Chemical) conduct R&D for next-generation, fuels, and fuel performance in advanced engines and combustion cycles. Also Focus Area Manager for Differentiated Products – with the goal of optimization of hydrocarbon supply chain value for hydrocarbons from the wellhead to wheels (or wingtips).

Prior position was Manager, Process Technology R&D – Managed Reactor Science, Separations, Advanced Energy, and Laboratory Support teams. R&D & Tech. support in development of new reactor designs & internals, membranes, crystallization, adsorption, reactive and physical separations processes, and hydrogen storage.

Environomics Inc., Puris Inc. (1992-1995) Chief Engineer for Environmental start up companies. Designed, managed construction, and deployed UV oxidation equipment for treatment of organic compounds in nuclear reactor wastewater streams. Also developed thermal swing adsorption systems for removal of VOCs from industrial gas streams.

Bio-Rad Laboratories (1985-1992) Research engineer and Team Leader for Process Development – Scale-up & deployment manufacturing processes for dozens of new polymeric resins and specialty chemicals.

Ampex (1976-1978) Process Engineering for magnetic tape manufacturing.

Professional Affiliations – AIChE Director of the Separations Division (2001-2007), Program Area Chair for General Separations 1999 – 2001 ; Award Recipient Northern California AIChE Professional Excellence Award, 2003.

US Patents, 15 issues, 15 published.

From: "McCutchen, Bill" <bmccutchen@tamu.edu>
To: DBaltensperger@ag.tamu.edu
CC: RVAvant.EXTERNAL.Internet; MAHussey.EXTERNAL.Internet
Date: 7/17/2009 6:43 PM
Subject: Bransby

David,

Please speak with Mark over the weekend per Bransby. We need to move very quickly if we decide to engage David.

Good meeting today.

Bill

From: "McCutchen, Bill" <bmccutchen@tamu.edu>
To: TMILLER@ag.tamu.edu
CC: SSimpson.EXTERNAL.Internet; RVAvant.EXTERNAL.Internet; DBaltensperger@ag...
Date: 5/11/2009 6:20 PM
Subject: BRDI

Travis,

Heard anything per BRDI? Just found out that one other (ligno / Gould) got selected for full proposal.

Bill

June 18,2009

Dr. David Brune
Department of Agricultural and Biological Engineering
Clemson University
Clemson.. SC 29634-0312

Dear Dr. Brune:

We are pleased to offer you an appointment as a member of the faculty of Texas A&M University. Your qualifications certainly fit our needs, and we hope you will give it serious consideration. The position offers a unique challenge and significant opportunities to develop highly recognized teaching and research programs in aquaculture systems engineering.

We anticipate that you will develop a nationally and internationally recognized integrated research and teaching program in aquaculture systems engineering, specifically in algae production. Our goal is for you to work with existing faculty to develop and foster interdisciplinary, leading-edge research programs, so we have a world-class program. We hope that you provide the leadership to create a scholarly foundation to develop a strong aquaculture systems engineering program. We expect that you will develop modules for and teach undergraduate classes within our department. We also expect that you will develop a strong graduate program to produce the leaders of tomorrow in this important area. We also encourage you to help educate the public by organizing conference, forums and workshops.

The appointment will carry the title of full professor with tenure, subject to final approval by University Administrators and the Board of Regents. This will be a nine-month appointment and carry a salary of \$--,000 per month. The sources of funding for your appointment will be the College of Agriculture and Life Sciences and Texas AgriLife Research. If you assume an endowed chair as anticipated, one month of your nine-month appointment will be paid by the endowment earnings. We anticipate that you will be available to begin your appointment on September 1, 2009.

Upon your appointment and upon receipt of Emerging Technology Funds from the State of Texas, Texas AgriLife Research will provide funds to establish an endowed chair within the Biological and Agricultural Engineering Department. Once the endowed chair is established, I will submit your name as the sole candidate to be reviewed for the inaugural holder of the chair as per Texas A&M University System Policy 120 199.M20 I "Appointment, Evaluation, and reappointment of Faculty to Endowed Positions" It is anticipated that the chair will be endowed at the level of \$2 million and the title will be the Distinguished Chair in Sustainable Resources

Dr David Brune

Engineering. Funds from this source start accruing after the Texas A&M Foundation retrieves fees for establishing the chair.

You will be eligible for any authorized salary increases effective September 1, 2010 and thereafter. Your appointment will be subject to all applicable employment laws, the Texas A&M University Systems Policies and Regulations, and Texas A&M University, and Texas AgriLife Research rules.

Further details of the offer include:

A discretionary fund with \$--,000 will be provided for funding summer salary supplement. These funds will be available to use when needed for summer salary.

Funding of approximately \$21,000 for two years for a graduate assistant.

Total funding of \$600,000 for facilities and equipment to support your research program. Please note this funding level is contingent upon Dr Greg Schwartz also accepting his offer of employment. [f Dr. Schwartz does not accept, then this funding level will need to be modified.

One-time allocation of \$50,000 to assist in relocating.

Teaching responsibilities generally include three courses each year but may be reduced for new faculty, those with leadership and program development responsibilities, and those with strong graduate student programs. Teaching will include both undergraduate and graduate courses.

Please let me know if you have any questions about the terms and conditions relating to this appointment. If they are acceptable to you, please sign and date one copy of this letter and return it. The other copy is for your records. We are anxious to have you as a member of our faculty and we hope that you will be able to provide us with your response within the next few weeks.

Sincerely,

Gerald L Riskowski, P.E.
Professor and Head

I understand and accept the employment conditions as described in this letter.

-----Signature

From: "McCutchen, Bill" <bmccutchen@tamu.edu>
To:
CC: DBaltensperger@ag.tamu.edu; RVAvant.EXTERNAL.Internet
Date: 8/30/2009 10:48 AM
Subject: Cancer Initiative

Jeff,

We had a conference all this past Friday with key faculty and administrators, and we all agree that we will pursue this endeavor by submitting a proposal based on black/yellow sorghum.

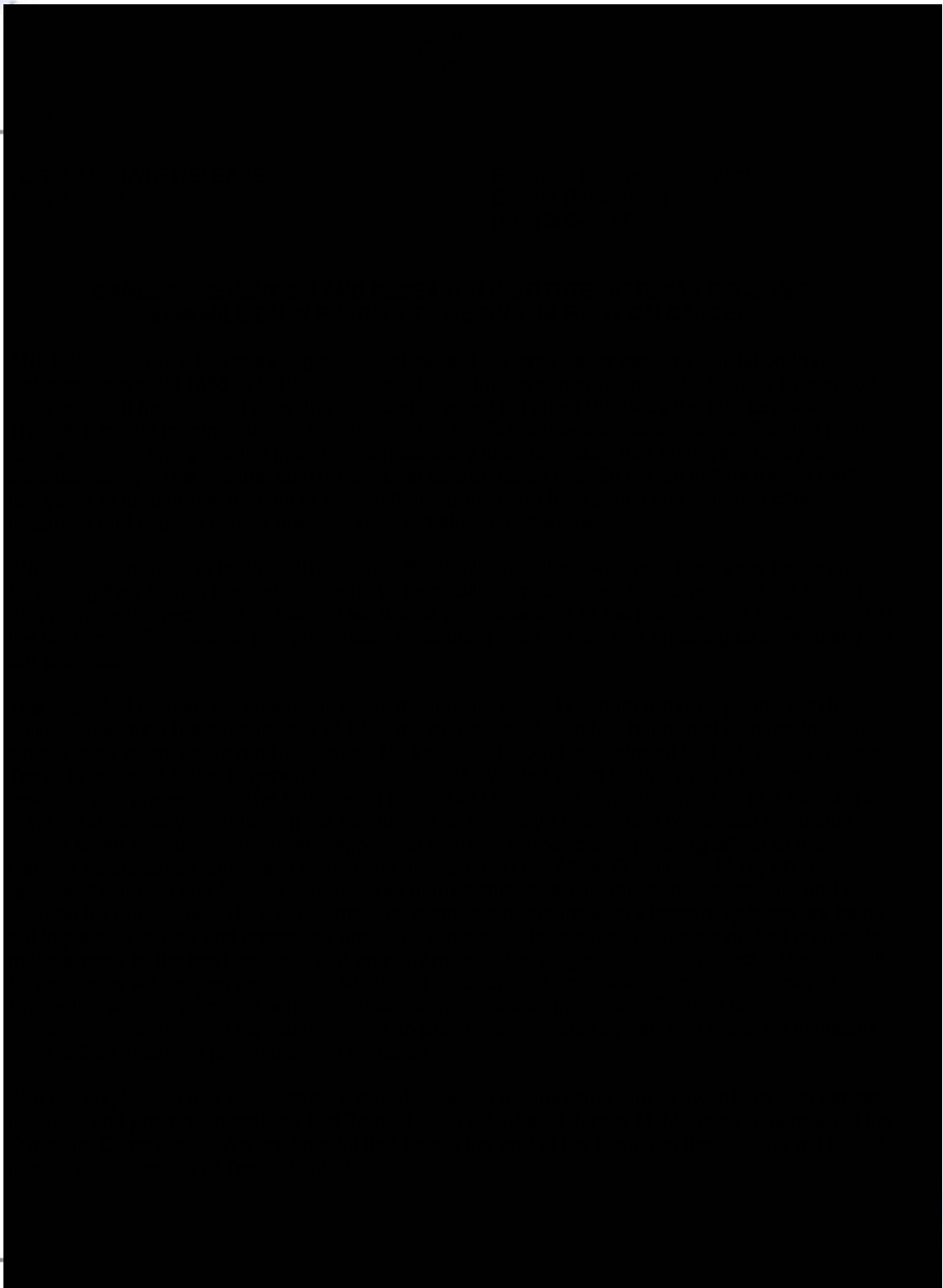
This will not only include RD by Lloyd and Bill Rooney but with one or more of our nutritionist/cancer scientist(s). We plan comprehensive RD across sorghum extracts, cell culture and in vivo animal studies to show the potential benefits of these specialized sorghums.

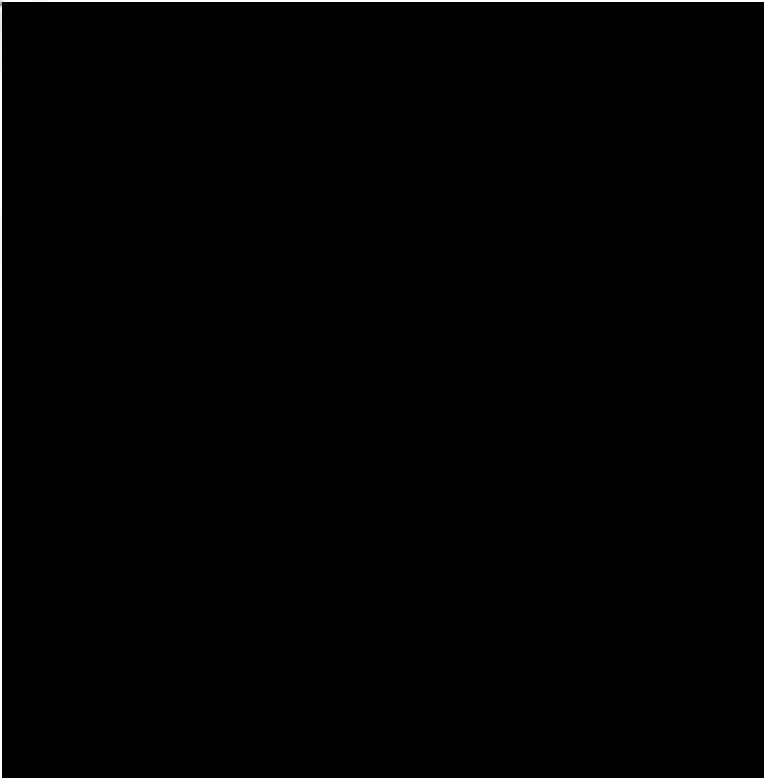
To that point, we are producing a one-pager that provides an overview of our RD mission and potential for IP and commercialization that we will provide you in short order.

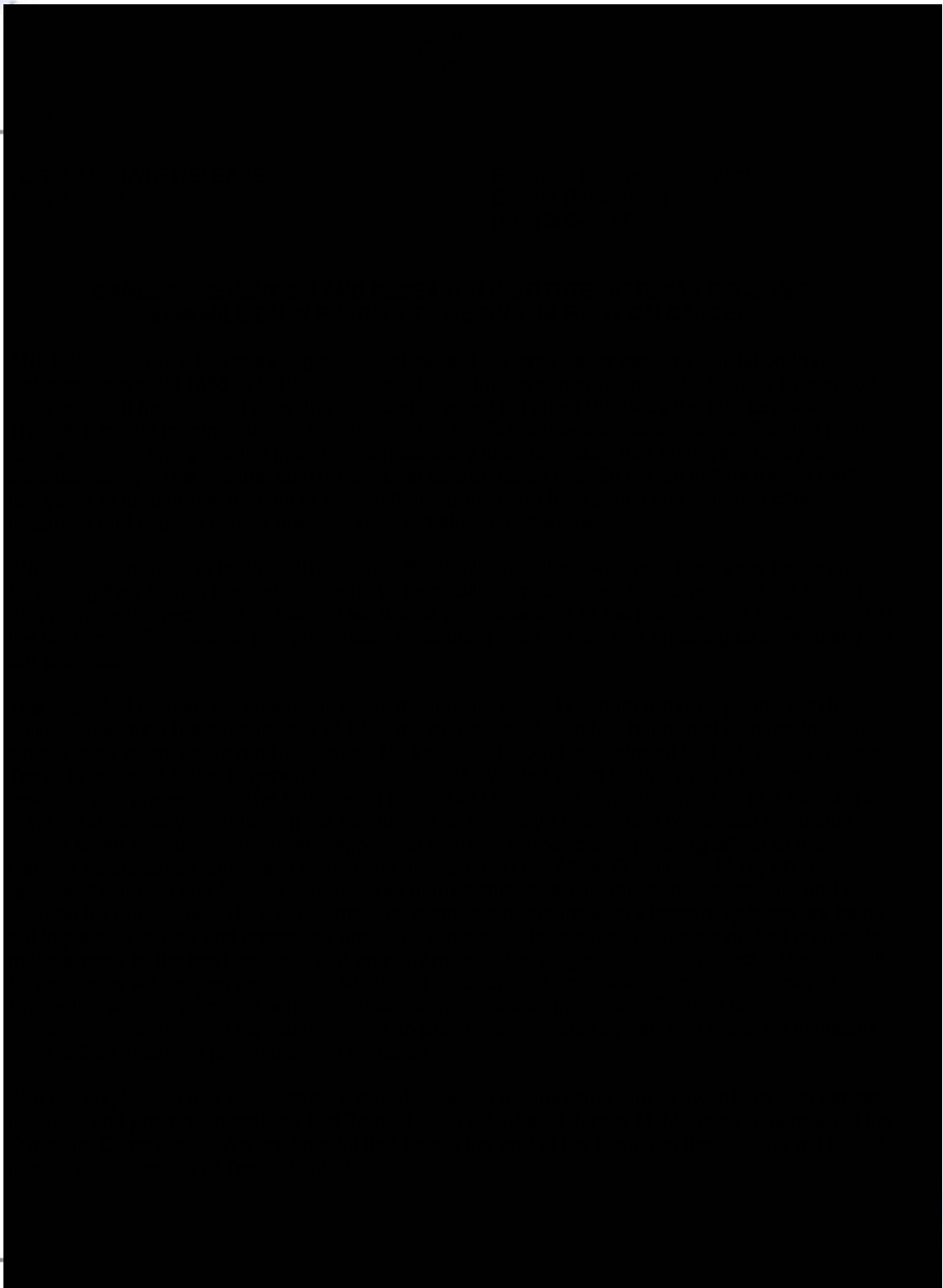
Can you facilitate contacts with high-level corporate contacts? Also, how does NSP and/or TX SP want to participate? Directly or indirectly? Of course time is limited; so we need to proceed quickly if you concur.

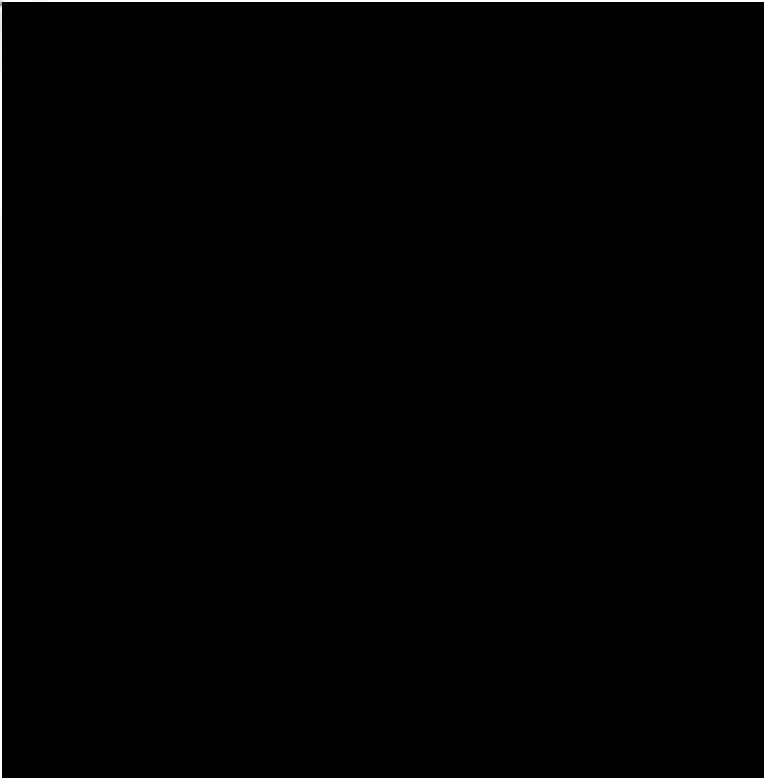
Thanks again for your support, and I thought the meetings were very productive.

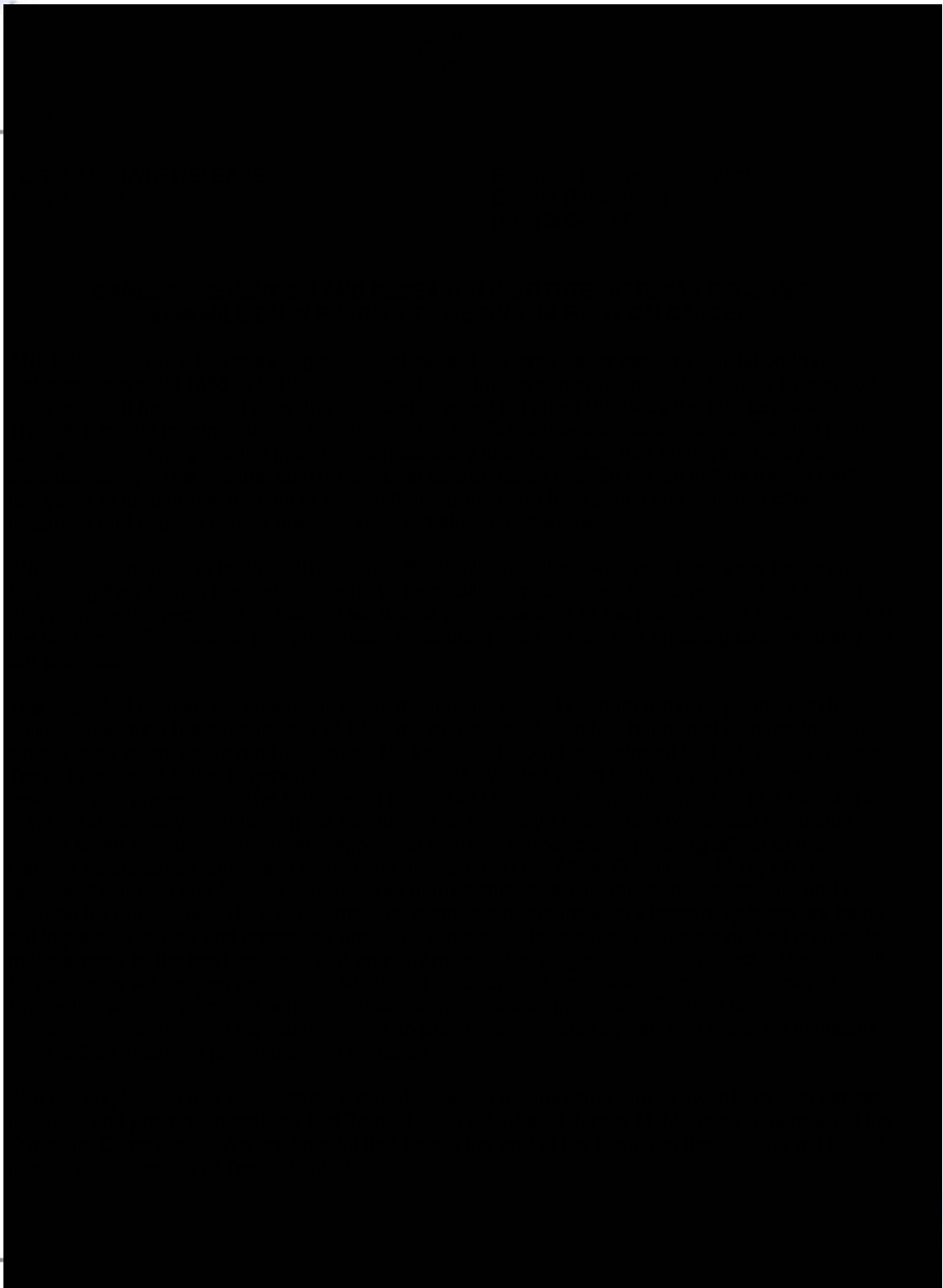
Bill

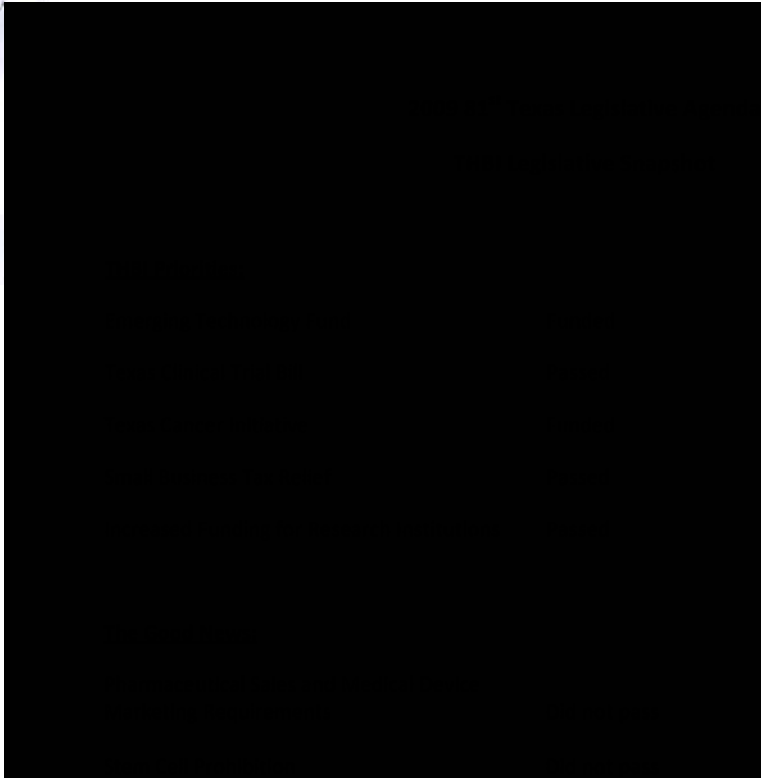












From: "McCutchen, Bill" <bmcCutchen@tamu.edu>
To: mmcclellan@dsmail.tamu.edu; DKLunt.EXTERNAL.Internet; DBaltensperger@ag....
Date: 7/15/2010
Time: 9:00 AM - 10:00 AM
Subject: Castor to Renewable Bio-Jet Fuel BRDI Meeting (McCutchen, Helms, Avant, McClellan, Lunt, Baltensperger, Miller)
Place: 113 Jack K Williams Conference Room
Attachments: meeting.ics

When: Thursday, July 15, 2010 9:00 AM-10:00 AM (GMT-06:00) Central Time (US & Canada).
Where: 113 Jack K Williams Conference Room

~~*~*~*~*~*~*~*

Bill,
Per your request, please find attached the one-page condensed version of the Castor to Biojet Fuel BRDI we are submitting with Evogene, REG Fuels, UOP Honeywell, Pratt & Whitney and NASA.
I believe you stated you would like for Dr. Nessler, Dr. Lunt, yourself, Bob, Travis and I to meet about this project and the potential it provides. I would also like to include Matt McClellan as well. Did I miss anybody?
Jackie, could you help me arrange this meeting - please? J It looks like July 15th is fairly open.
Please let me know if you have any further questions or comments.
Best,
Adam

From: "McCutchen, Bill" <bmccutchen@tamu.edu>
To: JMGould@ag.tamu.edu; DBaltensperger@ag.tamu.edu; PGibbs@ag.tamu.edu; LBo...
CC: SSimpson.EXTERNAL.Internet; PLSchuerman.EXTERNAL.Internet; RVAvant.EXTER...
Date: 4/16/2009 5:04 PM
Subject: Chevron and Ceres Fw: April 24

Just wanted you to know that both Ceres and Chevron will be in town end of next week. Both will attend a meeting and presentations on the . A seeded looks like a real possibility to include etc. Could be

Last week we met with faculty to discuss a number of IP opportunities to build our portfolio and "fence". We have and will file many patents.

A number of companies to include Chevron and Ceres are very interested and discussions of a JV bw these two companies are now taking place.

Shay can send you meeting agenda if you would like to join.

Thanks,

Bill

----- Original Message -----

From: Simpson, Shay
To: 'MYLong@chevron.com' <MYLong@chevron.com>; 'Doug.Jones@chevron.com' <Doug.Jones@chevron.com>; Zak, Kendra
Cc: Avant, Bob; McCutchen, Bill; Nelson, Michelle; Slovacek, Jackie; 'td-miller@tamu.edu' <td-miller@tamu.edu>
Sent: Thu Apr 16 16:45:42 2009
Subject: Re: April 24

Thanks, Michelle. We will see you next week.
Shay

----- Original Message -----

From: Long, Michelle Y. (YLON) (MYLong) <MYLong@chevron.com>
To: Simpson, Shay; Jones, Doug M <Doug.Jones@chevron.com>; Zak, Kendra
Cc: Avant, Bob; McCutchen, Bill; Nelson, Michelle; Slovacek, Jackie; td-miller@tamu.edu <td-miller@tamu.edu>
Sent: Thu Apr 16 16:41:24 2009
Subject: RE: April 24

Shay,
Thanks for the clarification. The agenda outlined below sound good to me. We look forward to our meeting next Friday!

Michelle Y. Long
Manager, Feedstock and Logistics
mylong@chevron.com
Chevron Technology Ventures
Biofuels and Hydrogen
3901 Briarpark, BRP 608
Houston, TX 77042
Tel/Fax: 713 954 6053/6016
Cell: 925-548-7845

-----Original Message-----

From: Simpson, Shay [mailto:shay-simpson@tamu.edu]

Sent: Thursday, April 16, 2009 4:16 PM

To: Jones, Doug M; Zak, Kendra

Cc: Long, Michelle Y. (YLON) (MYLong); Avant, Bob; McCutchen, Bill; Nelson, Michelle; Slovacek, Jackie; td-miller@tamu.edu

Subject: RE: April 24

Doug:

I believe your directions are close, but 1 and 2 are a little strange sounding and might get you turned around. Use these directions:

1. From Highway 290 / Highway 6 (in Hempstead) take the Hwy 6 exit toward Bryan/College Station
2. Remain on Hwy 6 heading North through Navasota and on to College Station
3. Take Hwy 60 (University Drive) exit
4. Turn left onto Hwy 60 (University Drive) and follow for about 3.8 miles
5. Turn left onto Discover Drive at stop light (this is much safer at that time of day than turning at Research Parkway with no light)
6. Turn right onto Enterprise Avenue
7. Go straight through 2 stop signs into parking lot for the Centeq Building
8. Visitor parking is along the first row of the lot next to the building. If visitor spaces are all taken you can park anywhere in the lot without being ticketed. (This lot is not limited to A&M tags, except for the handicapped parking.)
9. Enter the building on the North main entrance
10. Our meeting room will be suite 100 (Texas AgriLife Research - Corporate Relations) in the conference room 101A

Below is our agenda for Friday morning's joint meeting with Ceres:

8 am

(5 min) Welcome and Introductions

(5 min) Goals of Visit - Bill McCutchen

(15 min) Breakthrough Advances in - Mike Gould

(20 min) - David Stelly

(15 min) - John Mullet

(15 min) General Discussion & Path Forward

Wrap up by 9:15 am

At 9:30 am we will begin the
a different conference room.

quarterly review in the same conference room, while Ceres goes to

Bill McCutchen and Bob Avant are kicking around an idea to take you and Michelle to lunch to discuss the
a little further without Ceres, while Travis Miller takes the other Chevron attendees to
lunch with the group. Does this sound reasonable?

Travis Miller and I are putting the finishing touches on the written quarterly report and will send to you all
by tomorrow.

Thanks,

Shay

From: Jones, Doug M [mailto:Doug.Jones@chevron.com]
Sent: Thu 4/16/2009 7:53 AM
To: Simpson, Shay; Zak, Kendra
Cc: Long, Michelle Y. (YLON) (MYLong)
Subject: RE: April 24

Hello:

I hope all is well with you today.

Let me know if the below directions sound about right:

1. From Highway 6 Take the S St Hwy 6 exit toward Bryan
2. Merge onto E Bypass/Earl Rudder Fwy S/TX-6 N
3. Turn left at Farm-To-Market Rd 60/University Dr E
4. Continue to follow University Dr E
5. Turn left at Research Pkwy
6. Centex is at 1500 Research Parkway with a cross street Enterprise Ave

If this is correct we should be in pretty good shape for directions. Information regarding where to park and where to meet would be greatly appreciated.

We look forward to the meeting.

Have a good day!

Doug

Doug Jones
Business Analyst

Chevron Technology Ventures
Biofuels and Hydrogen

3901 Briarpark Drive, BP605
Houston, TX 77042
phone 713-954-6857
fax 713-954-6016

From: Simpson, Shay [mailto:shay-simpson@tamu.edu]
Sent: Wednesday, April 15, 2009 6:10 PM
To: Jones, Doug M
Cc: Zak, Kendra
Subject: RE: April 24

Doug:

Sorry, we've had a lot of possible changes just yesterday with the room and finally gotten things straightened out this afternoon. Our meeting location will be Centeq Building.

I will have Kendra Zak send you directions to the building and meeting room tomorrow.

Thanks,

Shay

Shay L. Simpson

Associate Director, Corporate Relations

Texas AgriLife Research

979-845-6315 Tel

shay-simpson@tamu.edu

From: Jones, Doug M [mailto:Doug.Jones@chevron.com]

Sent: Wednesday, April 15, 2009 11:07 AM

To: Simpson, Shay

Subject: RE: April 24

Hello Shay:

I hope all is well with you today.

Please let us know which building we will be in for the 8:00 meeting. The A&M campus is huge and we don't want to head to the wrong spot thus becoming late.

Look forward to seeing you again.

Thank you.

Doug

From: Simpson, Shay [mailto:shay-simpson@tamu.edu]

Sent: Thursday, April 09, 2009 5:46 PM
To: Long, Michelle Y. (YLON) (MYLong)
Cc: Jones, Doug M
Subject: April 24

Michelle:

Our AgriLife Research team is having a brainstorming session on Monday to develop an agenda for the Joint Meeting with Chevron and Ceres. But, I wanted to give you a loose agenda for April 24 and give you a heads up now. John Mullet suggested that Doug Jones sit in on this discussion since he has a technical background related to processes like We are proposing an 8 am start time for the Joint Meeting, and ending about 9:15 am so we can set up for the quarterly review conference call.

I will provide you a more detailed agenda next week.

Thanks,

Shay

Shay L. Simpson

Associate Director, Corporate Relations

Texas AgriLife Research

979-845-6315 Tel

shay-simpson@tamu.edu

From: "McCutchen, Bill" <bmcCutchen@tamu.edu>
To: DBaltensperger@ag.tamu.edu; lt-wilson@aesrg.tamu.edu; JMoore@ag.tamu.edu...
CC: AHelms.EXTERNAL.Internet; DKLunt.EXTERNAL.Internet; CNessler.EXTERNAL.In...
Date: 11/9/2009 7:18 PM
Subject: Chevron Meeting

Gentlemen,

Confidential please. Bob and I need your help. We have an upcoming ("low key, under the radar" and confidential) meeting with Chevron mid-management in Houston to discuss several topics.

One of the topical areas revolves around IP. Chevron would like our input/suggestions on areas of potential IP that we might want to protect. Several areas come to mind, and no intention of trying to be comprehensive, but might include:

Can you assist Bob and me in assembling a draft set of potential discoveries/technologies and PVP's that AgriLife and Chevron might want to consider? To include discoveries to consider protecting now or in the not too distant future.

We will also be discussing the attributes and merits of a BioEnergy Center.

Thanks,

Bill

From: "McCutchen, Bill" <bmccutchen@tamu.edu>
To: "Nessler, Craig" <cnessler@tamu.edu>, "Lunt, David" <d-lunt@tamu.edu>, "...
CC: "Avant, Bob" <bavant@tamu.edu>, <dbaltensperger@ag.tamu.edu>, <td-miller...
Date: 10/15/2010 3:52 PM
Subject: Chevron Renewal!!!!

Craig, Mark and all,

We just received official notice today that Chevron has renewed (signed off on) on our MRA for another 6 years, still focused on and programs at this time. We will be submitting new executive summaries for funding in January of 2011!

Great way to end the week and start the weekend.

Bill

--

Bill F. McCutchen, Ph.D.

Associate Director

Texas AgriLife Research

Texas A&M University System

113 Jack K. Williams Administration Building

2142 TAMU College Station, TX 77843-2142

979-845-8488 Tel

979-458-4765 Fax

bmccutchen@tamu.edu

From: "McCutchen, Bill" <bmcCutchen@tamu.edu>
To: lt-wilson@aesrg.tamu.edu; JMGould@ag.tamu.edu; TMILLER@ag.tamu.edu
CC: AHelms.EXTERNAL.Internet; DKLunt.EXTERNAL.Internet; WDugas.EXTERNAL.Inte...
Date: 3/3/2009 4:05 PM
Subject: Chevron

Travis, Mike and Ted,

Bob and I had a good conversation with Michelle Long today. Several topics that need to be addressed. Appears that meeting in Weslaco on March 12 is a go.

Mike - Anyway that a few producers can meet Michelle and group for breakfast to discuss production, agronomics of dedicated crops? Any chance that Steve Bearden could join them for a short time?

Of course they want to tour cane RD initiatives and plots. Also would like a tour of and any other in Weslaco area. Travis, Michelle asked if you would be joining this trip.

Finally, Chevron owns over 8,000K acres in Brazoria county, which is now being leased as cattle pasture. She also indicated that it bordered with AgriLife property. Do we know where this might be?

They are having initial, preliminary discussions about its future use and production is of strong interest - to include it's proximity to Baytown, etc. I believe they would like to make a visit with us to this area soon and get an initial assessment of potential for growing bioenergy crops in this area.

Thanks and as always, they are very impressed with our efforts and pleased with our collaboration.

Bill

From: "McCutchen, Bill" <bmcCutchen@tamu.edu>
To: PLSchuerman.EXTERNAL.Internet; brummettr@tamu.edu; AHelms.EXTERNAL.Inter...
CC: JSlovacek.EXTERNAL.Internet; DBaltensperger@ag.tamu.edu
Date: 9/1/2009 10:39 PM
Subject: CIPRIT

Bob, Adam, Robert and/or Peter,

Any chance that you could join this conference call tomorrow?

Tim Phillips called me today and we may have some major opportunities to include support from BASF.

Conference call to discuss aflatoxin amelioration cancer proposal (Youjun Deng, David Baltensperger, Joseph Awika, Mikhailo Kolomiets, Seth Murray, Avant, MAC, Joe Dixon.

Thanks,

Bill

From: "McCutchen, Bill" <bmcCutchen@tamu.edu>
To: ahelms@dsmail.tamu.edu; DGILLILA@ag.tamu.edu; JKeeton@ag.tamu.edu; dbalt...
Date: 10/9/2009
Time: 2:00 PM - 3:00 PM
Subject: Clearvision Discussion
Place: CR Conference Room
Attachments: meeting.ics

When: Friday, October 09, 2009 2:00 PM-3:00 PM (GMT-06:00) Central Time (US & Canada).
Where: CR Conference Room

~~*~*~*~*~*~*~*

Meeting to discuss "Plan B" email (to be forwarded separately) received from Chris Carruth related to the CerealChip product request following yesterday's phone call with Drs. Rooney and Awika.

Meeting will be held in Corporate Relations Office.

From: "McCutchen, Bill" <bmccutchen@tamu.edu>
To: WDugas.EXTERNAL.Internet
CC: MAHussey.EXTERNAL.Internet; DBaltensperger@ag.tamu.edu
Date: 1/11/2009 11:08 AM
Subject: Confidential Fw: Field Tests

Bill,

Anyway that we can Keerti officially "moved" into SCS? I think Keerti would benefit from strong leadership and guidance. He has strong scientific skills and would likely flourish under David's leadership.

Thanks,

Bill

----- Original Message -----

From: McCutchen, Bill
To: 'rathore@tamu.edu' <rathore@tamu.edu>
Sent: Sun Jan 11 10:45:11 2009
Subject: Re: Field Tests

Keerti,

We are moving it towards a product but it is not so simple - the biggest being funding for regulatory approval. RNA was just one of many topic areas we covered with both groups.

We are making steady progress.

Bill

----- Original Message -----

From: Keerti Rathore <rathore@tamu.edu>
To: McCutchen, Bill
Sent: Sun Jan 11 08:30:07 2009
Subject: Re: Field Tests

Bill,

If I knew you all were going to meet with Monsanto and CI, I would have liked to participate in the meetings. I know that this project has moved beyond science, but I am also eager to see this technology turned into a product some day.

Best wishes.

Keerti

McCutchen, Bill wrote:

> Much thanks Keerti. Sorry I missed you at meetings.
>

> Bill
>
> -----Original Message-----
> From: Keerti Rathore [mailto:rathore@tamu.edu]
> Sent: Friday, January 09, 2009 8:51 AM
> To: McCutchen, Bill
> Cc: Baltensperger, David; ahelms@tamu.edu; Schuerman, Peter L.; Tom
> Wedegaertner; Reed, Janet N; Kater Hake
> Subject: Re: Field Tests
>
> Bill,
>
> Yes, we will have enough seeds from one line to do a limited field study
>
> this year. I had a dinner meeting with Tom Wedegaertner and Janet Reed
> on the 7th in San Antonio. We also discussed field trial. Janet has
> some contact who can advice on how easy or difficult the process is to
> get a permit to conduct field trials. She will be in Germany next week,
>
> but after her return, she can get some information on this. I feel that
>
> if it turns out to be a complex process, then we should certainly get
> some help from an outside consultant.
>
> Keerti
>
>
> McCutchen, Bill wrote:
>
>> Keerti,
>>
>> Are u still looking to conduct field trials this year with
>>
> gossypol cotton? If so have we made any headway of regulatory approval
> process? We might need to hire consultant to help out.
>
>> Bill
>>
>>
>
>
>
>
>

From: "McCutchen, Bill" <bmcCutchen@tamu.edu>
To: MBdickman@tamu.edu; PGibbs@ag.tamu.edu; LBoleman.EXTERNAL.Internet; PLSc...
CC: KZak.EXTERNAL.Internet; NBPenn.EXTERNAL.Internet; sfsPurlin@tamu.edu; M_...
Date: 8/10/2009 10:54 AM
Subject: Confidential: NAABB (Algal) Industrial Workshop Meeting - Update
Attachments: Tower of Babel.pptx; NAABB_IPWorkshop_080709.pptx; IndustrialBrief-080709.pptx

All,

As an update, I wanted to provide you some current information on NAABB (The National Alliance for Advanced Biofuels and Bioproducts), whereby Texas AgriLife is a founding member, and NAABB is seeking the \$50M DOE award for algal RD and Outreach. I ask that you, please, NOT distribute the attached documents or messages; since we have several major and formidable competitors (university-national lab-industry alliances) that are also seeking the RD award from DOE. Since your units and faculty are conducting RD (or have expressed interest) in the algal arena, we believe it is important for you to have this latest information per NAABB. The email and attachments below will provide update and context. I apologize if I mistakenly overlooked a unit/unit head involved with algal RD.

The take home message from the meeting I attended in Denver was that algal co-products might be nearly as significant as the biofuels RD. Co-products will certainly be a "major component" of our current DOE proposal (which is due in less than 45 days). Short term, co-products such as feed-stocks for livestock and mariculture, to include economics, will be the major emphasis; longer term, perhaps co-products for food, biopolymers, pharmaceuticals, etc.

In addition to Bob and Shay providing excellent leadership, we are fortunate to have 2 AgriLife faculty leading RD proposal areas (7 key areas). Tryon Wickersham is leading co-products and Ron Lacey is leading Harvesting and Extraction. Please know such an award (if we/NAABB are lucky enough to secure/win) would be split multiple ways with our partners. That said and if NAABB were to be successful, this would greatly enhance our chances for additional RD support from industry and other government agencies.

Please call Bob, Shay or me with any questions.

Thanks,

Bill

--

Bill F. McCutchen, Ph.D.

Associate Director

Texas AgriLife Research

Texas A&M University System

113 Jack K. Williams Administration Building

2142 TAMU College Station, TX 77843-2142

979-845-8488 Tel

979-458-4765 Fax

bmccutchen@tamu.edu

From: "McCutchen, Bill" <bmcCutchen@tamu.edu>
To: astrong@tamus.edu; BMCCONNE@ag.tamu.edu; RBM@tamu.edu
CC: Cornwell@tamu.edu; PLSchuerman.EXTERNAL.Internet; DKLunt.EXTERNAL.Intern...
Date: 5/22/2010 5:54 AM
Subject: Confidential: Requests and Impacts

Andrew, Brooks and Bill,

Per our previous discussions on Texas PIA, these requests for information are taking a very significant toll on our RD activities. As one example, Dr. Rooney and his staff have spent precious time with recent requests - and now we have a new one from the same individual. At a minimum (and documented), ONE of Dr. Rooney's staff has spent apx. \$15K in time alone focused on these efforts and in lieu of other priorities. The total impact for all PIs and staff is more likely 10X, not too mention your time and others in administrative and supporting roles. In other words, these actions are having a huge direct (and lasting) impact on our RD activities, and I would ask that we consider charging for/reimbursement from said enquirer(s) as a policy by AgriLife and TAMUS. Based on my homework, this (reimbursement costs) is apparently SOP for other agencies and institutions. At a minimum, it covers some/fraction of our costs and makes said enquirer "think diligently" about such requests in the future.

To quote another faculty member "such repeated requests will literally shut-down our research". Thanks for considering, and I would be happy to discuss.

Bill

From: "McCutchen, Bill" <bmccutchen@tamu.edu>
To:
Date: 7/23/2009 2:24 PM
Subject: Contact Info

John,

Good talking with you. Here is David Baltensperger's contact information, Head of Soil and Crop Sciences. Let me know if and how I can help.

dbaltensperger@ag.tamu.edu

(979) 845-3041

--

Bill F. McCutchen, Ph.D.

Associate Director

Texas AgriLife Research

Texas A&M University System

113 Jack K. Williams Administration Building

2142 TAMU College Station, TX 77843-2142

979-845-8488 Tel

979-458-4765 Fax

bmccutchen@tamu.edu

From: "McCutchen, Bill" <bmccutchen@tamu.edu>
To: DBaltensperger@ag.tamu.edu; JMoore@ag.tamu.edu
CC: RVAvant.EXTERNAL.Internet; MAHussey.EXTERNAL.Internet; WDugas.EXTERNAL.I...
Date: 2/2/2009 11:12 AM
Subject: Corn

Jaroy and David,

Spoke with David Gibson concerning the potential/possibility of developing long term and major RD collaborations with large (or smaller) corporate partners at TSTA. Specifically that our agreements will define limited space and on only with certain types (small percentage) of our germplasm.

He seemed to appreciate and understand the process and seems comfortable and similar to what we have done in sorghum with Ceres and DuPont. Less than 2 percent of our germplasm

He may have me give a talk to his board first week of April.

Wenwei was in on discussions as well.

Just wanted to give you a heads up.

Bill

From: "McCutchen, Bill" <bmccutchen@tamu.edu>
To: JDever@ag.tamu.edu; WSMITH@ag.tamu.edu
CC: MAHussey.EXTERNAL.Internet; RVAvant.EXTERNAL.Internet; DBaltensperger@ag...
Date: 1/16/2009 6:55 PM
Subject: Cotton

Wayne and Jane,

I received a call from a Sr. V.P. of DuPont/Pioneer today requesting information regarding our cotton breeding and germplasm RD capabilities, collection, etc. Is there anyway you two (and others) can provide me with a quick, rough synopsis?

On an unrelated note based on a request from Monsanto, we AgriLife Research "Cotton" would ask you two to lead the development of an Executive Summary for Molecular Breeding of Cotton - no more than 2-3 pgs.

Would you lead a group of scientists in developing such a document based on the team's interests and priorities? Let me know and I plan to provide more information on ES process and strategy to include 2 additional Summaries in RD areas that will overlap with your efforts.

Thanks much,

Bill

Save the Date

Subject: Cancer Prevention and Research Institute of Texas (CPRIT) and Emerging Technology Fund (ETF) Briefing

Date: September 28, 2009

Time: 1:00 – 4:00 pm
CPRIT: 1:00 – 2:30 pm
ETF: 2:30 – 4:00 pm

Location: Amphitheater, Texas A&M Institute for Preclinical Studies
800 Stotzer Parkway, Bldg. 1904, 979 847 8477

Parking : Behind the building (map included)

Leadership from the Cancer Prevention and Research Institute of Texas (CPRIT) and the Emerging Technology Fund (ETF) will be on campus Monday, September 28, to provide information updates about these programs. Attending will be:

ETF: <http://www.emergingtechfund.com>

Alan Kirchhoff -Director of the Emerging Technology Fund
David Nance -Executive Director, Innovate Texas Foundation
Ryan Confer -Director of Operations, Innovate Texas Foundation
Bob Pearson -Chairman of ETF Advisory Committee

CPRIT: <http://www.cprit.state.tx.us>

Dr. William (Bill) Gimson, Executive Director, CPRIT
Dr. Alfred (Al) Gilman, Chief Scientific Officer of CPRIT
Dr. Jo Ann Eckert, Director of Scientific Review, CPRIT
Dr. Rebecca (Becky) Garcia, Chief Prevention Officer, CPRIT
Ms. Heidi McConnell, Office of the Governor

You are invited to attend the briefing and meet key CPRIT/ETF staff members and learn how to apply for CPRIT and ETF funding. Breakout rooms will be available for you to meet one-on-one with both CPRIT and ETF staff regarding your specific research interests.

Teleconferencing capabilities will be available at all campuses for those who are unable to attend the briefing. You will receive information listing the remote TTVN locations shortly.

The Division of Research and Graduate Studies of the Vice President for Research office has created an online portal for information about the Cancer Prevention and Research Institute of Texas (CPRIT): <http://rgs.tamu.edu/cprit/>

Please contact Lisa Groce in my office at llgroce@tamu.edu or 845 8031 with any questions.

Jeffrey R. Seemann
Vice President for Research
Texas A&M University

Save the Date

Subject: Cancer Prevention and Research Institute of Texas (CPRIT) and Emerging Technology Fund (ETF) Briefing

Date: September 28, 2009

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CPRIT: <http://www.cprit.state.tx.us>
Dr. William (Bill) Gimson, Executive Director, CPRIT
Dr. Alfred (Al) Gilman, Chief Scientific Officer of CPRIT
Dr. Jo Ann Eckert, Director of Scientific Review, CPRIT
Dr. Rebecca (Becky) Garcia, Chief Prevention Officer, CPRIT
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The Division of Research and Graduate Studies of the Vice President for Research office has created an online portal for information about the Cancer Prevention and Research Institute of Texas (CPRIT): <http://rgs.tamu.edu/cprit/>

Please contact Lisa Groce in my office at llgroce@tamu.edu or 845 8031 with any questions.

Jeffrey R. Seemann
Vice President for Research
Texas A&M University

From: "McCutchen, Bill" <bmccutchen@tamu.edu>
To: KHeinz@ag.tamu.edu; jpn@tamu.edu; TDavis@ag.tamu.edu; JKeeton@ag.tamu.ed...
CC: Mark.Ellison@tamu.edu; llgroce@tamu.edu; tmaldonado@tamu.edu; DGILLILA@a...
Date: 9/24/2009 12:01 PM
Subject: CPRIT Visit - Monday
Attachments: CPRIT.xls

All,

Per Jackie's email below...

First, thank all of you for your input to date. I will be having a closed session with CPRIT Monday morning of next week (Sept 28th) to review our interest and capabilities in AgriLife/COALS. I will provide this spreadsheet to the CPRIT visitors along with a spreadsheet of current proposed proposals that will be submitted for the current RFP.

Thus, any additional information that you would like to provide for (within) the table - per category, capabilities, etc. - need to be provided by tomorrow COB.

Thanks,

Bill

--

Bill F. McCutchen, Ph.D.

Associate Director

Texas AgriLife Research

Texas A&M University System

113 Jack K. Williams Administration Building

2142 TAMU College Station, TX 77843-2142

979-845-8488 Tel

979-458-4765 Fax

bmccutchen@tamu.edu

From: Slovacek, Jackie
Sent: Thursday, September 24, 2009 11:26 AM
To: Baltensperger, David; Reinhart, Gregory; Acuff, Gary R.; 'Tom Gerik'; Keeton, Jimmy; Davis, Tim; Nichols, John P; Heinz, Kevin
Cc: Judy Young; 'Betty Cotton- Biochemistry & Biophysics'; Glenn, Grace; 'Dorothy See'; Dugas, William; Hussey, Mark; McCutchen, Bill; Hyden, Gail; 'Carla Smith- Entomology'
Subject:
Importance: High

Dear All:

Thanks to all of you for submitting your capabilities in cancer research. Dr. McCutchen has asked me to send the following attachment for your review.

Please look over this attachment and provide any additions or changes to our office by tomorrow, Friday September 25th noon. Your comments are greatly appreciated.

Thanks

Jackie

Jackie Slovacek

Assistant to the Associate Director

Texas AgriLife Research

113 Jack K Williams Administration Bldg

College Station, Texas 77843-2142

979.845.7980

979.458.4765 Fax

From: "McCutchen, Bill" <bmccutchen@tamu.edu>
To: TPHILLIPS@cvm.tamu.edu; DBaltensperger@ag.tamu.edu
Date: 9/14/2009 1:44 PM
Subject: CPRIT

David,

Please get in touch with Tim Phillips per CIPRIT proposal and your faculty.

Bill

College of Agriculture and Life Sciences - Possible CIPRT and ETF involvement

Department	PIs	Area of Study	Yearly Funding	Facilities
Animal Science	Nancy Ing			
	Penny Riggs			UT MD Anderson Cancer Center
Agricultural Economics	several, if Health Economics is a component			
Biochemistry	Sumana Datta		approx. \$2M pending	BL2 tissue culture lab, standard Drosophila genetics
	James Sacchetti			
	Dorothy Shippen			
Entomology	Patricia Pietrantonio			Cell culture labs, histochemistry, fluorescence microscopy, flow cytometry, GFP or luciferase markers, site specific integration technologies.
	Spencer Johnson			

	Craig Coates			
Horticulture	Bhimu Patil, +16 Pis statewide		\$300,000 (USDA)	VFIC Research Labs (6,500 SF)
Temple R&E Center	Rajani Srinivasan			
Nutrition and Food Science	Robert S. Chapkin		\$200,000/y	KLCT Research Lab (2,500 SF)
			\$225,000/y	
			\$225,000/y	
			\$499,918/y	
			\$1,000,000/y	
			\$100,000/y	
	Susanne U. Talcott		\$100,000/y	Centeq A Research Labs (2,000 SF)
			\$1,000,000/y	
	Nancy Turner		\$92800 Direct Costs	We use animal facilities at CMP and the Kleberg Vivarium to conduct the animal work. Two microscopes that are used for characterize pathological changes and to perform histological analyses. Image analysis. Hoods to perform RNA isolations in preparation for PCR and microarray analyses. Immunoblotting equipment, a microplate reader and gas chromatography system that allow us to determine protein expression, enzymatic kinetics and fatty acid analysis.

Nutrition and
Food Science

		\$24,000 Direct Costs	
Nancy Turner		\$34,000 Direct Costs	We use animal facilities at CMP and the Kleberg Vivarium to conduct the animal work. Two microscopes that are used for characterize pathological changes and to perform histological analyses. Image analysis. Hoods to perform RNA isolations in preparation for PCR and microarray analyses. Immunoblotting equipment, a microplate reader and gas chromatography system that allow us to determine protein expression, enzymatic kinetics and fatty acid analysis.
		\$15,000 Direct Costs	
Alice Villalobos		None presently	Cater-Mattil Lab ~\$2,000 sq ft.
Clinton Allred		\$75,000/y	Cater-Mattil Lab ~\$2,000 sq ft.
		\$499,918/y	
		\$1,000,000/y	
Joanne Lupton		200,000 (various)	2800 SF of lab space, Gas chromatograph, plate reader, microscopes, image analysis software, RNA isolation h

From: "McCutchen, Bill" <bmccutchen@tamu.edu>
To: RDLacewell.EXTERNAL.Internet; RVAvant.EXTERNAL.Internet; JEMullet.EXTERN...
CC: DBaltensperger@ag.tamu.edu; MAHussey.EXTERNAL.Internet; DKLunt.EXTERNAL....
Date: 8/14/2009 7:47 AM
Subject: DARPA confidential

Please see short note from Brett below. Things are moving and we are could be looking at another visit perhaps in mid-September. Might want to start thinking about more comprehensive R&D proposal, budget, teams, etc. I informed Gould and told him that the proposal is sorghum-centric based on DARPA's request, but that we would be engaging Weslaco as major partner if this come to fruition.

Thanks,

Bill

--

Bill F. McCutchen, Ph.D.

Associate Director

Texas AgriLife Research

Texas A&M University System

113 Jack K. Williams Administration Building

2142 TAMU College Station, TX 77843-2142

979-845-8488 Tel

979-458-4765 Fax

bmccutchen@tamu.edu

From: Giroir, Brett
Sent: Thursday, August 13, 2009 4:46 PM
To: McCutchen, Bill
Subject: Re: Any

I am out for a few days
Doug is working it and likely wants another visit. May have the big boss (Director) here in mid september. Will be great and on the path.

B

-----Original Message-----

From: McCutchen, Bill

Sent: Wednesday, August 12, 2009 6:44 PM

To: Giroir, Brett

Subject: Any

Any word from Doug / DARPA? Not trying to be a pest, just anxious.

Bill

From: "McCutchen, Bill" <bmccutchen@tamu.edu>
To: stelly@tamu.edu; ssearcy@tamu.edu; jwrichardson@tamu.edu; jmullet@neo.ta...
CC: cnessler@tamu.edu; CPollard@tamu.edu; npenn@tamu.edu; j-slovacek@tamu.ed...
Date: 11/6/2009 10:29 AM
Subject: DARPA Energy Crops Draft Proposal

All,

I received inquiries from a number of you concerning DARPA. Just wanted to provide an update that yes DARPA has received the proposal, and there has been some delay due to illness - but proposal is being reviewed. Official word is to "sit-tight" for now.

Thanks,

Bill

--

Bill F. McCutchen, Ph.D.

Associate Director

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From: "McCutchen, Bill" <bmccutchen@tamu.edu>
To: DMStelly.EXTERNAL.Internet; ssearcy@tamu.edu; JRICHARD.EXTERNAL.Internet...
CC: CPollard@tamu.edu; NBPenn.EXTERNAL.Internet; JSlovacek.EXTERNAL.Internet...
Date: 9/14/2009 12:42 PM
Subject: DARPA FW: ull Proposal from TAMUS
Attachments: DARPA RD

All,

Please see the note below as it pertains to our official submission to DARPA per their request. I apologize that this full-proposal had to be crafted so quickly, but it was important to meet DARPA's timelines as well as provide this document prior to the upcoming visit by Dr. Regina Dugan on Thursday and Friday of this week. The faculty will have 30 mins with Dr. Dugan this Friday afternoon at the Norman E. Borlaug Center for Southern Crop Improvement to showcase the materials in the greenhouse facilities.

Please call Jackie, Bob Avant or me with any questions.

Thanks,

Bill

--

Bill F. McCutchen, Ph.D.

Associate Director

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979-845-8488 Tel

979-458-4765 Fax

bmccutchen@tamu.edu

From: McCutchen, Bill
Sent: Monday, September 14, 2009 12:25 PM
To: Douglas.Kirkpatrick@darpa.mil
Cc: Giroir, Brett; Pollard, Claudia; Slovacek, Jackie
Subject: Energy Crops Full Proposal from TAMUS

Doug,

Please find attached a full proposal entitled "High-Biomass Energy Crops for U.S. Energy Security" as a follow-up from our 2-page executive summary. Per our previous discussions, our proposal covers the following:

VISION: Texas AgriLife Research and Texas A&M University System (TAMUS) will create and deliver advanced high yielding energy sorghums and new energy crops through a novel, non-GMO, technology platform. These unique energy crops will be sustainable, high yielding, widely adapted, drought tolerant, optimized for biofuels and biopower generation, thereby significantly improving U.S. biofuels and biopower production capability and long-term energy security.

PROJECT DELIVERABLES:

If you agree, may I ask you to provide this proposal to Dr. Regina Dugan, your new Director, prior to her visit to the A&M campus later this week? We have a tour planned for Dr. Dugan and DARPA that will take place at Norman E. Borlaug Center for Southern Crop Improvement. We will utilize this proposal as a framework/outline for general and casual "walk and talk" discussion around the greenhouse complex displaying some incredible materials.

Thanks in advance, and we are looking forward to talking with you soon.

Very best regards,

Bill

--

Bill F. McCutchen, Ph.D.

Associate Director

Texas AgriLife Research

Texas A&M University System

113 Jack K. Williams Administration Building

2142 TAMU College Station, TX 77843-2142

979-845-8488 Tel

979-458-4765 Fax

bmccutchen@tamu.edu

From: McCutchen, Bill
Sent: Friday, July 24, 2009 2:24 PM
To: Douglas.Kirkpatrick@darpa.mil
Cc: Giroir, Brett
Subject: Energy Crops Proposal from TAMUS

Doug,

It was great visiting with you and your colleagues last week. Please find attached a two-page proposal (and 3 Figures) entitled "High-Biomass Energy Crops for U.S. Energy Security".

We hope this meets yours and DARPA's expectations. The proposed R&D and corresponding technology platforms will address many energy-security issues for the DOD and the United States.

Please give me a call if you have any questions, and we look forward to

your feedback.

Very best regards,

Bill

--

Bill F. McCutchen, Ph.D.

Associate Director

Texas AgriLife Research

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2142 TAMU College Station, TX 77843-2142

979-845-8488 Tel

979-458-4765 Fax

bmccutchen@tamu.edu

From: "McCutchen, Bill" <bmccutchen@tamu.edu>
To: pklein@tamu.edu; ssearcy@tamu.edu; JMGould@ag.tamu.edu;
JRICARD.EXTERNA...
CC: Bridges.EXTERNAL.Internet; M_Nelson.EXTERNAL.Internet; sfspurlin@tamu.ed...
Date: 9/25/2009 1:52 PM
Subject: DARPA UPDATE

All,

I just wanted to provide an update on progress with DARPA per Dedicated Bioenergy Crops proposal.

DARPA is now asking for a detailed technical brief (detailed task, work plan, schedule, and budget) inclusive of the recent proposal that we submitted. We will be receiving an example for you to work from in the near future. We will ask all of you to coordinate with Bob Avant's Corporate Relations and Diane Gilliland's Contracts and Grants groups to make this happen as soon as feasible.

Thanks again for all of your hard work and dedication, and no doubt that this request from DARPA is very positive news - no guarantees yet, but good news.

Thanks,

Bill

--

Bill F. McCutchen, Ph.D.

Associate Director

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To: DBaltensperger@ag.tamu.edu; JMGould@ag.tamu.edu
CC: NBPenn.EXTERNAL.Internet; JASlovacek.EXTERNAL.Internet; RVAvant.EXTERNAL...
Date: 4/9/2009 8:13 PM
Subject: DaSilva

Can I ask Jackie to set a telecon to discuss a replacement strategy for Jorge and how we might expedite process?

Thanks,

Bill

From: "McCutchen, Bill" <bmccutchen@tamu.edu>
To: DBaltensperger@ag.tamu.edu
Date: 2/23/2009 12:07 PM
Subject: David,

David,

Between us and per guidance from Dugas - You need to initiate directly conversation with Riskowski per Brune and algae. He is in town this week.

Bill

--

Bill F. McCutchen, Ph.D.

Associate Director

Texas AgriLife Research

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2142 TAMU College Station, TX 77843-2142

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bmccutchen@tamu.edu

From: "McCutchen, Bill" <bmc cutchen@tamu.edu>
To: GDR einhart.EXTERNAL.Internet; JEMullet.EXTERNAL.Internet
CC: NBPenn.EXTERNAL.Internet; JSlovacek.EXTERNAL.Internet; WLRooney.EXTERNAL...
Date: 6/30/2009 3:31 PM
Subject: DGA-tech
Attachments: Technician funding request_Mullet.docx

John and Greg,

I have spoken with Dr. Dugas, and AgriLife Research will agree to cover ½ of the cost for the technician if the BioBio Department also makes the same commitment - to help you and AgriLife Research carry out Digital Genotyping Analysis. This technology is truly at the cutting-edge and you and your team are to be commended for developing DGA. In addition to sorghum germplasm and as you state in your request, we would appreciate that this support also be used to enhance cane, corn, cotton and other crop species. We would also ask that you engage other faculty to facilitate the use of the DGA technology platform. As you know it could be an incredibly powerful tool for a number of our breeders and plant geneticists (as well as animals, microbes, etc.)

Thanks again, and let us know if this arrangement is suitable. We would propose a 2yr duration for this agreement.

Bill

--

Bill F. McCutchen, Ph.D.

Associate Director

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bmc cutchen@tamu.edu

A Platform for Yield Gene Discovery and Genetic Gain:

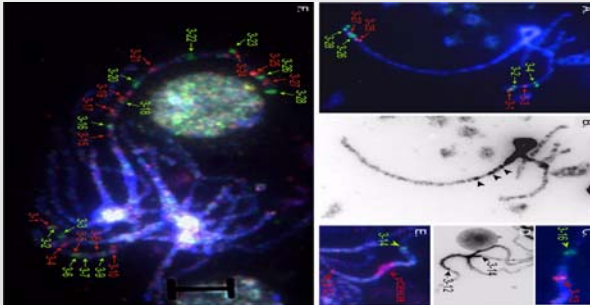


Wheat and Sorghum R&D Initiatives within AgriLife Research



Bill F. McCutchen
Associate Director
Texas AgriLife Research
February 4, 2008
Texas Seed Trade Association

What is a “Yield” Gene?





A multi-state, multi-institution project, funded by USDA/CSREES dedicated to the genetic improvement of US wheat through research, education and extension

The CAP Grant seeks to:

- Facilitate U.S. wheat breeder's efforts to increase **YIELD** and **QUALITY**
 - Funded by U.S. Department of Agriculture's Cooperative State Research, Education and Extension Service (CREES)
- Increase efficiency of wheat breeding programs by:
 - Utilizing DNA technology called marker assisted selection (MAS)
 - Reducing timelines in the development of varieties through the deployment of MAS in both laboratory and field research
- Maintain the international competitiveness of U.S. wheat.



Texas Wheat Producers
Board & Association



Objectives of Texas AgriLife Research Community Assistance Program

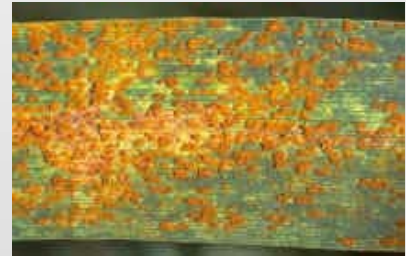
Organization & Structure

- Lead: Dr. Jackie Rudd with oversight from Dr. John Sweeten, Amarillo
 - AgriLife Institute for Plant Genome Biotechnology
 - Research Centers in Amarillo, Vernon and others in Texas and U.S.



Research

- Traits of interest
 - Greenbug resistance
 - Leaf rust resistance *“Rust problems alone reduced the grain yield of the Texas wheat crop by about 20 percent in 2006.” Dr. Jackie Rudd*
- Goals
 - Combine traditional and molecular breeding capabilities
 - Utilize Marker-Assisted Selection to identify **molecular markers** for leaf rust and greenbug resistance.
Molecular markers are a piece of DNA, near a gene or within a gene, that signal the presence of a useful trait such as disease resistance



Combining Traditional & Molecular Wheat Breeding

Traditional Breeding Requires

- Evaluation of wheat lines over several years in many locations and demonstrating these varieties have the desired traits
- Planting thousands of lines most will be discarded

Molecular Breeding Provides

- New tools such as MAS to improve efficiency of our breeding capabilities
- The ability to ID molecular markers for leaf rust and greenbug resistance



"If we can look at the DNA before planting those rows and determine they have the effective resistance genes, we can be more selective in our planting."

Typical Breeding Scheme for ONE Product

Year #1

200 different crosses

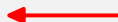


F2

F3



genetics used,
very efficient



Yield Screen

no genetics used,
very inefficient

Year # 2

20,000 lines x 1 rep

Year # 3

2,000 lines x 5 reps

Year # 4

200 lines x 10 reps

Year # 5

20 lines x 20 reps

Year # 6

2 lines x 100 reps

Key point:
genetics will improve
yield screen process



1 product (marginally better than parents)



What is a “Yield” Gene?

Theoretical Definition:

Disease resistance? Maybe

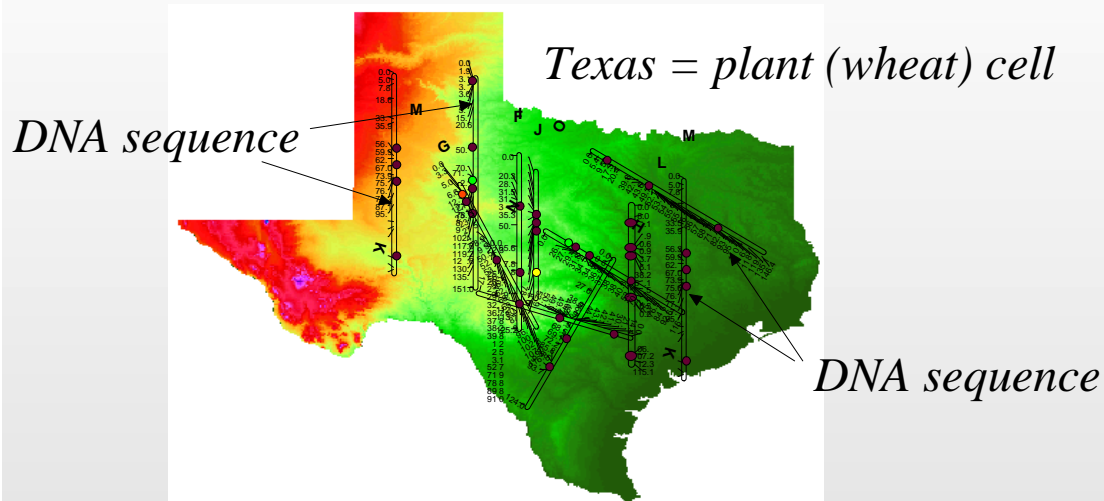
Insect resistance? Maybe

Cold tolerance? Maybe

Drought tolerance? Maybe

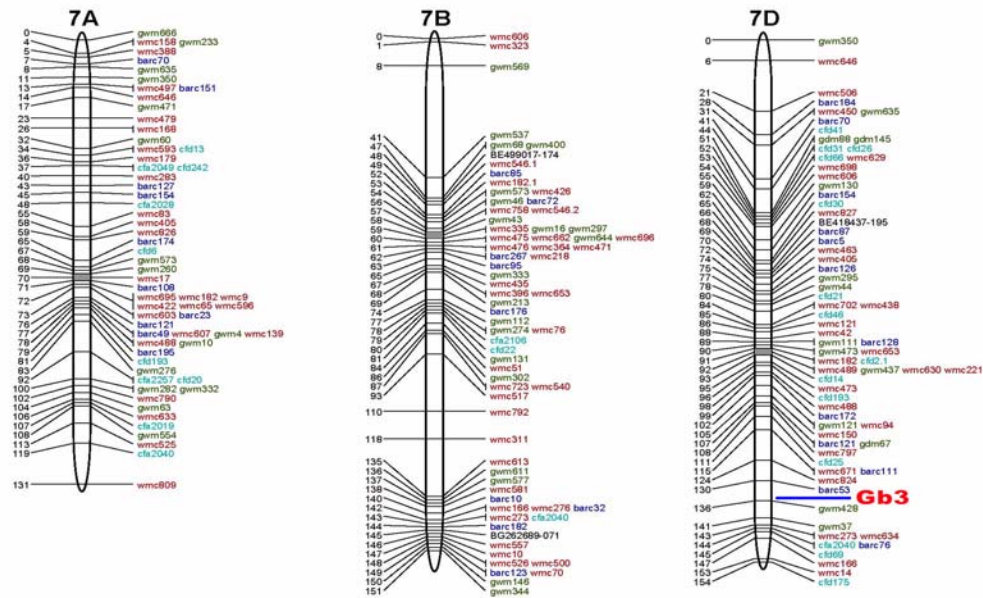
Historically many questions, few answers.

Creating a MAP to Find “Yield Traits” Marker Assisted Selection (MAS)



Traits important to growers are controlled by the genetic make-up of each wheat cultivar...and the characterization of a genetic MAP leads to the identification of Yield Traits!!!

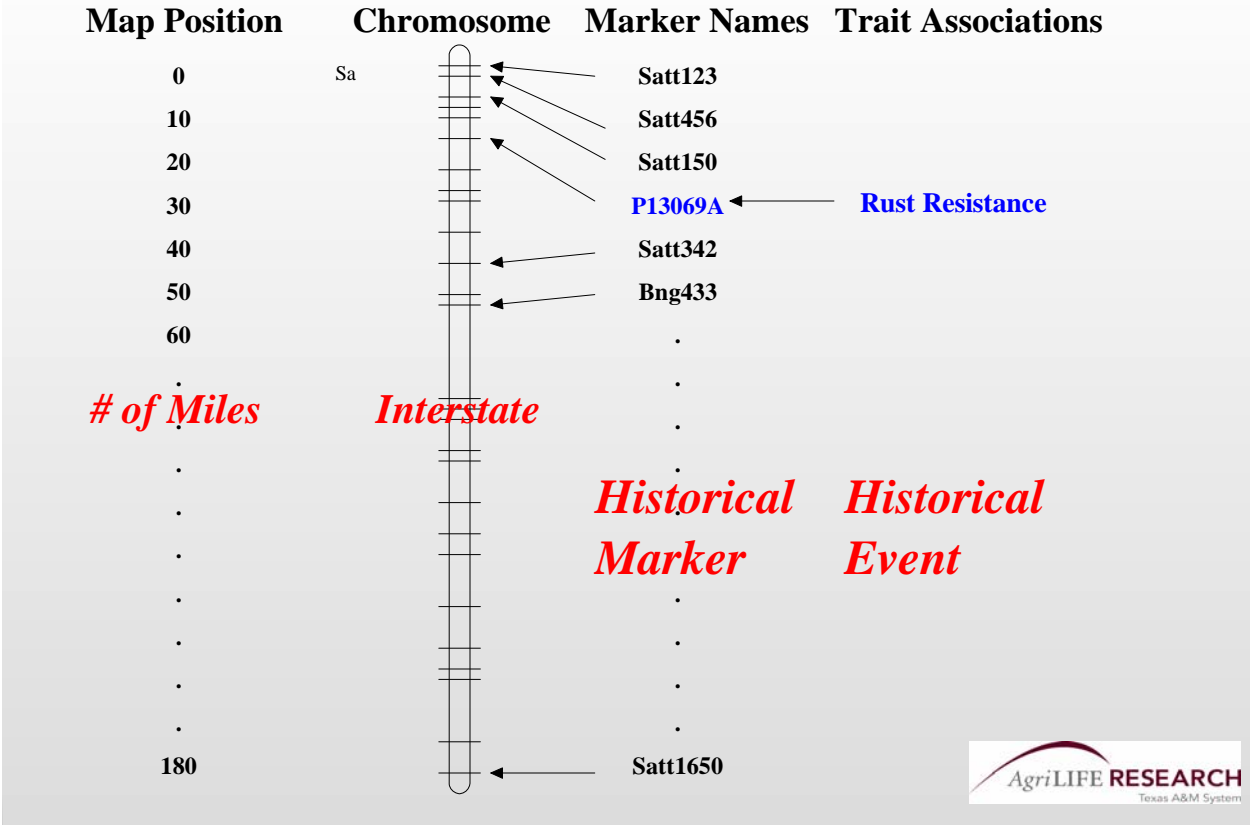
Genetic Maps of Wheat



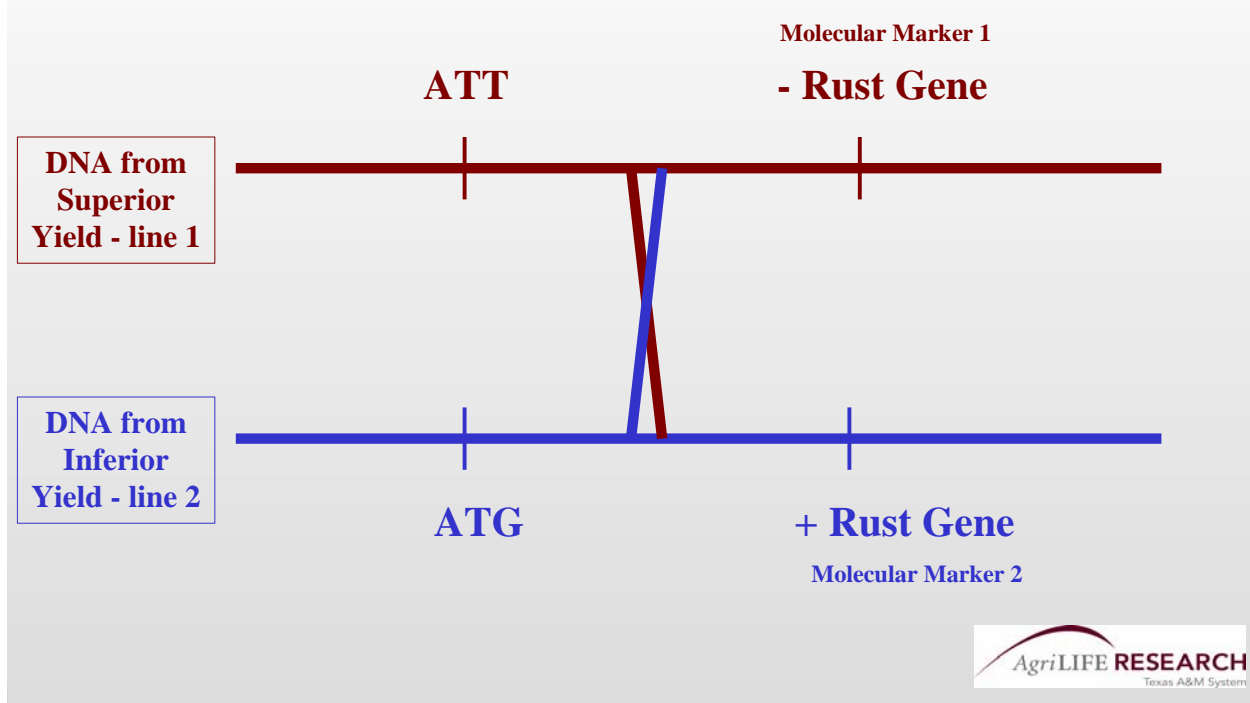
Genetic maps of wheat chromosomes 7A, 7B and 7D showing the location of the greenbug resistance gene Gb3 in 7DL distal region

Chromosomes and Molecular Markers

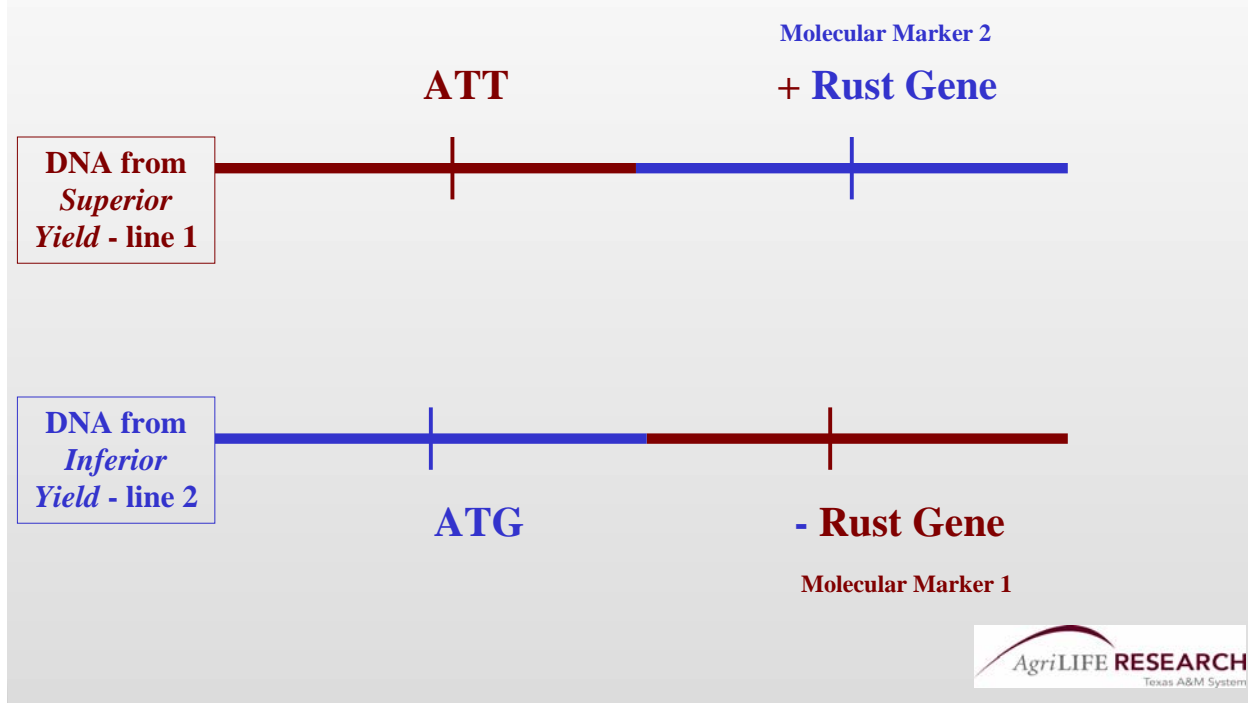
Molecular Markers on a Wheat Chromosome



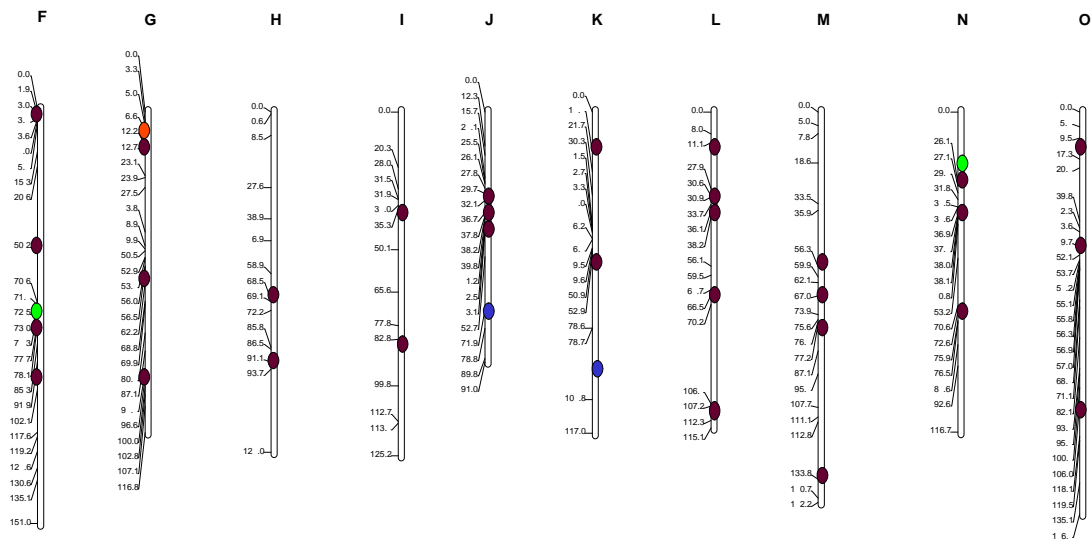
Wheat Breeding Results in Crossovers of DNA



Producing an Elite Variety: Superior Yield + Leaf Rust Resistance



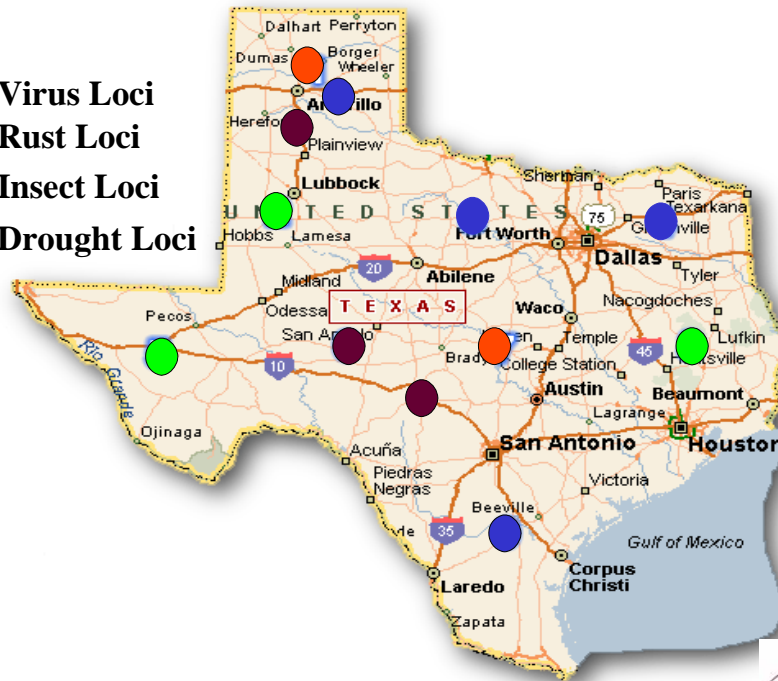
Wheat “Yield Genes” Mapped by MAS



- = Virus Loci
- = Rust Loci
- = Insect Loci
- = Drought Loci

Texas Wheat & Major Interstates for “Yield Traits”

- = Virus Loci
- = Rust Loci
- = Insect Loci
- = Drought Loci



What is a “Yield” Gene?

Data-driven definition:

Any gene with a **net positive effect** on yield.

In other words:

Let the genome, MAS & the field tell you.

For obvious reasons, major advances have and will occur in corn and soybeans first!



Sorghums – Different Market Profiles & Yield Potential

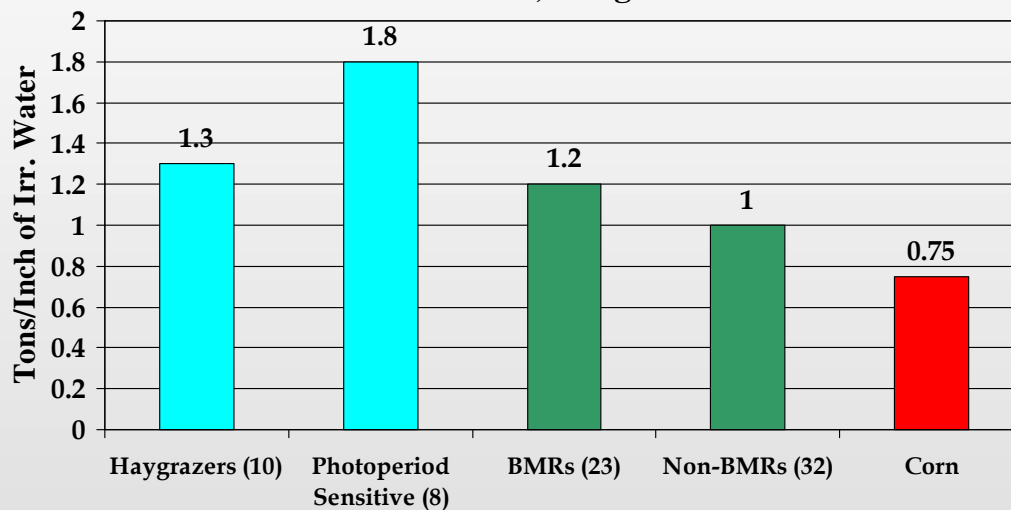
- Grain Sorghum
 - grain: starch
 - stover: lignin, cellulose
- Sweet Sorghum
 - stalk: soluble sugars
 - bagasse: lignin, cellulose, starch (grain)
- High Tonnage Sorghum
 - whole plant: lignin, cellulose



Sorghum is an Excellent Model to Identify Traits for “Yield”

Drought tolerance and water-use efficiency

- Produces more biomass than corn, using 33% LESS water.



“Drought” will be one of the next major “traits” in plant biotechnology

BioEnergy Sorghum

- AgriLife endeavor for > 5 years
- Emphasis on biomass production
- Benefits
 - Long Canopy Duration
 - Drought Tolerance
 - High Biomass Accumulation (expect >15-20 tons/acre)
- Considerations
 - Uses existing equipment
 - BUT, requires Cellulosic Conversion Technology



2006 Field Trial, College Station, Texas

The Sorghum Gene Discovery Platform

- An excellent genetic system for gene/trait/IP discovery in many similar crops like corn, cane and switchgrass.
- The sorghum, rice and other plant genomes have been sequenced with others coming on-line.
- AgriLife Research has R&D initiatives to discover key genes, traits, and biochemical pathways (i.e., pests, drought, nitrogen, etc).

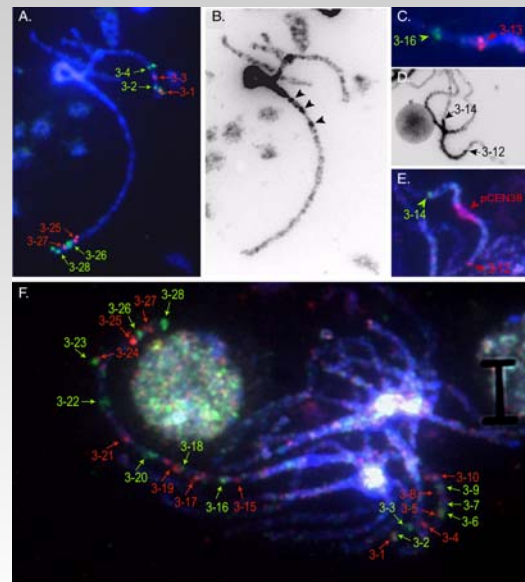
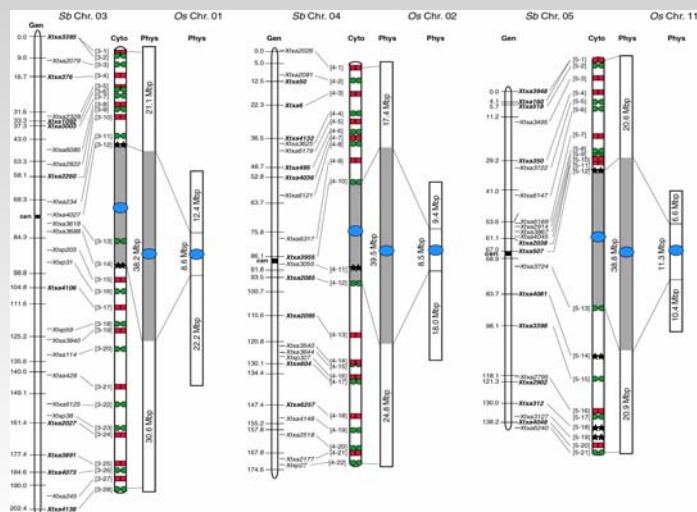


Figure showing the physical layout of sorghum chromosomes identifying regions that are good for gene discovery.

AgriLife Research's Sorghum Gene Mapping Platform

Genomics Maps:

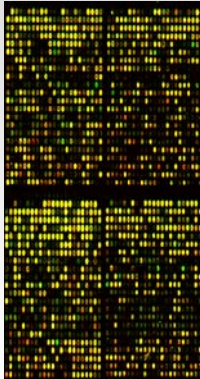
- genetic,
- physical,
- sequence,
- comparative



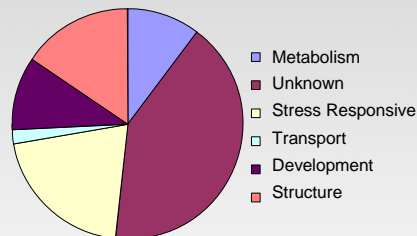
AgriLife Research has technology platforms for and expertise in gene/trait discovery.

Gene Expression Profiling Platform

Microarrays



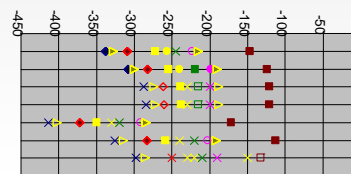
Biochemical pathways



Comparison of sorghum maize, rice, etc.



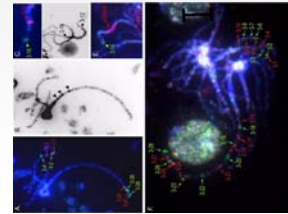
Regulatory elements



Trait X Gene Discovery Targets

Yield traits

- Biomass
- Drought tolerance
- Nutrient utilization (nitrogen, etc.)
- Duration of growth (flowering time)
- Lack of lodging, height, stem traits
- Disease/Pest resistance
- Composition



The Ceres Collaboration: Dedicated Bioenergy Sorghums

Ceres and Texas AgriLife Research Snapshot

- Ceres is a leading energy crop developer with cutting-edge, genomics-based technologies.
- World's leading plant genomics platform - more plant genes/traits identified than any other entity.
- An exclusive, multi year R&D initiative to develop and commercialize high-biomass sorghums for biofuels.
- Significant synergies across high-throughput trait development and breeding programs that will accelerate crop innovation and capture of intellectual property.



“Growing” A Research Partnership

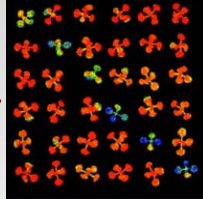
*Select
Phenotype*



*Discover
Sequence*



*Identify
Traits*



*Transform or
Breed Crop*



*Conduct
Field Trials*



AgriLife and Ceres are combining scientific expertise across germplasm, breeding and genomic technology platforms to:

- Identify traits and corresponding molecular markers
- Optimize biomass production and composition
- Build and protect intellectual property portfolio
- Expedite development of designer sorghum for energy conversion



Oilseed and Lignocellulosic Feedstocks

Chevron and Texas AgriLife Research Snapshot

- Chevron met with key faculty and units in July 2007 and requested executive summaries in seven areas.
- For 2008, Chevron selected two research areas: oilseed development and lignocellulosic feedstocks ~\$10 million over 4 years.
- Significant emphasis placed on mission-oriented R&D and potential development of IP.
- Chevron has key collaborations with UC Davis, Georgia Tech, National Renewable Energy Laboratory (NREL) and others.



2007 Bioenergy Accomplishments

- 30 bioenergy research projects funded
- Current funding for faculty and units > \$27M with additional proposals under evaluation
- Several on-going relationships/contacts with corporate entities
- Prepared a draft strategic plan
- Development of intellectual property portfolios within the Office of Technology Commercialization (OTC)



Innovation is Game Changing...

“Changes that will have effects comparable to those of the Industrial Revolution and the computer-based revolution are now beginning. The next great era, a genomics revolution, is in an early phase.

*Thus far, the pharmacological potentials of genomics have been emphasized, **but the greatest ultimate global impact of genomics will result from the manipulation of the DNA of plants.***

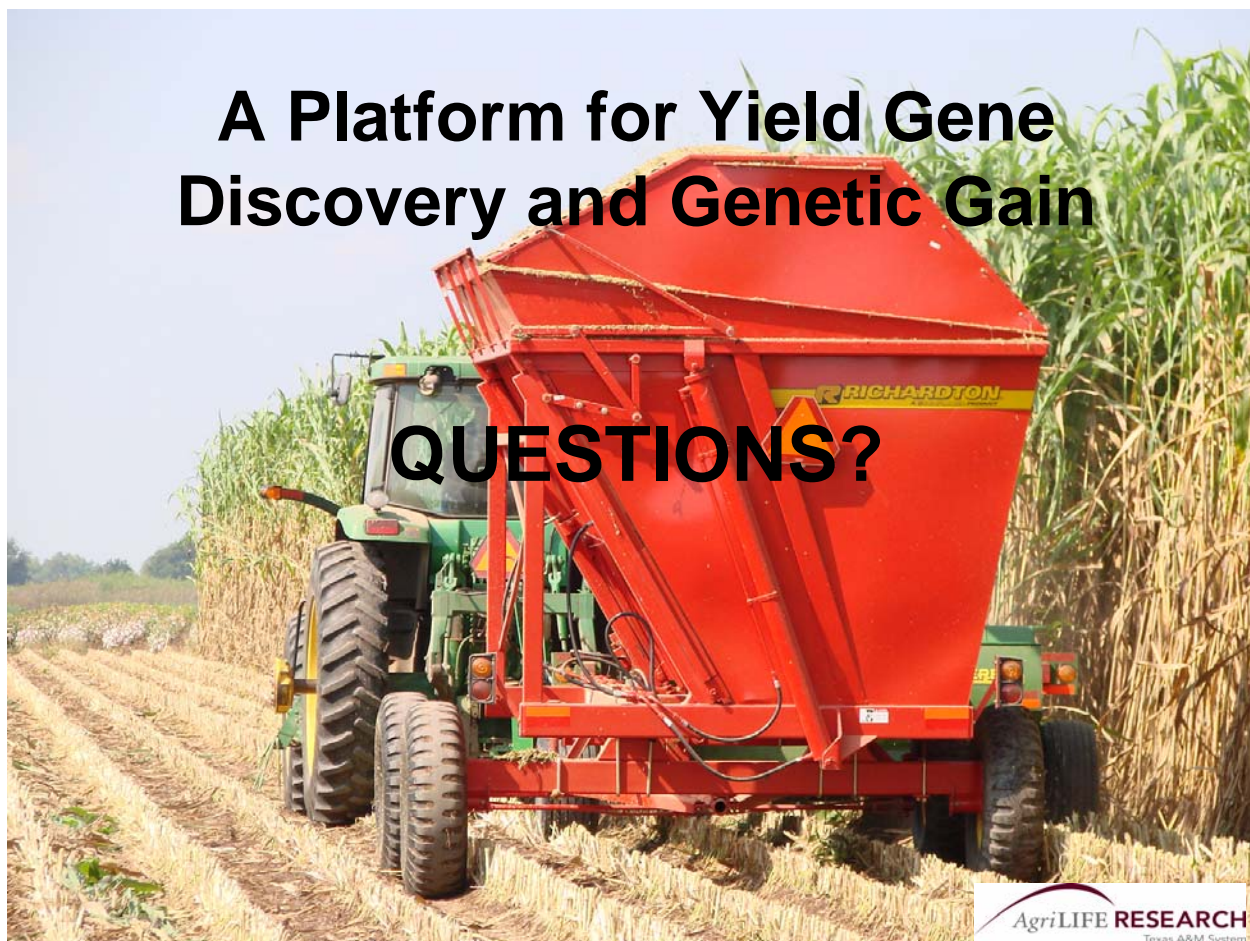
Ultimately, the world will obtain most of its food, fuel, fiber, chemical feedstocks, and some of its pharmaceuticals from genetically altered vegetation and trees.”

Philip H. Abelson, Editor
Science, March 1998



A Platform for Yield Gene Discovery and Genetic Gain

QUESTIONS?



From: "McCutchen, Bill" <bmccutchen@tamu.edu>
To: JMGould@ag.tamu.edu; JEMullet.EXTERNAL.Internet; DMStelly.EXTERNAL.Inter...
CC: PLSchuerman.EXTERNAL.Internet; GDR Reinhart.EXTERNAL.Internet; DBaltensper...
Date: 7/1/2009 6:25 PM
Subject: DuPont

Bill, David, Mike and John,

Just an update.

Bob and I had a good conversation today with DuPont's VP, John Pierce, who oversees Corporate Biosciences. He and team are interested in learning more about the technology platform - especially .

We are in the midst of renewing and updating our NDA with DuPont. Please be prepared to provide a couple of one-pagers and/or a telecon with DuPont Corporate personnel.

I know this maybe confusing, but this discussions/transactions would likely be separate of Pioneer and DuPont Dannisco. DuPont Corporate has their own agenda for biofuels/bioproducts and quite frankly much "deeper pockets".

Thanks and just wanted to provide a heads up.

Bill

From: "McCutchen, Bill" <bmccutchen@tamu.edu>
To: Mark.Ellison@tamu.edu; Cornwell@tamu.edu
CC: DBaltensperger@ag.tamu.edu; RVAvant.EXTERNAL.Internet
Date: 11/2/2009 8:41 AM
Subject: ETF FW: CV
Attachments: CV

Brett and Mark,

I believe we may have another viable candidate for Bioenergy ETF - cv attached. Tillman has good background IP and commercialization experience in plant breeding. Please let us know your initial reaction as Baltensperger needs to set up visit and meetings.

Thanks,

Bill

--

Bill F. McCutchen, Ph.D.
Associate Director
Texas AgriLife Research
Texas A&M University System
113 Jack K. Williams Administration Building
2142 TAMU College Station, TX 77843-2142
979-845-8488 Tel
979-458-4765 Fax
bmccutchen@tamu.edu

-----Original Message-----

From: David Baltensperger [mailto:DBaltensperger@ag.tamu.edu]
Sent: Wednesday, October 28, 2009 4:59 PM
To: McCutchen, Bill
Subject: Fw: CV

Please call!!!!

David Baltensperger
Professor and Head
Soil and Crop Sciences
Texas A&M University
2472 TAMU
College Station
Texas 77843-2474

979-845-3041

From: "McCutchen, Bill" <bmccutchen@tamu.edu>
To: PGibbs@ag.tamu.edu; RVAvant.EXTERNAL.Internet; MAHussey.EXTERNAL.Interne...
CC: Cornwell@tamu.edu
Date: 2/5/2010 8:08 AM
Subject: ETF Green Light

We got the green light on the proposed ETF hires yesterday from the committee. Thanks Brett for briefing the committee and answering there questions.

Bill

--

Bill F. McCutchen, Ph.D.

Associate Director

Texas AgriLife Research

Texas A&M University System

113 Jack K. Williams Administration Building

2142 TAMU College Station, TX 77843-2142

979-845-8488 Tel

979-458-4765 Fax

bmccutchen@tamu.edu

From: "McCutchen, Bill" <bmccutchen@tamu.edu>
To: DBaltensperger@ag.tamu.edu
Date: 10/1/2009 4:24 PM
Subject: ETF

David,

Any progress on potential ETF hire?

Bill

From: "McCutchen, Bill" <bmccutchen@tamu.edu>
To: GRiskowski.EXTERNAL.Internet; SSCHULZE@ag.tamu.edu
CC: RVAvant.EXTERNAL.Internet; Cornwell@tamu.edu; DKLunt.EXTERNAL.Internet; ...
Date: 1/11/2010 7:41 PM
Subject: ETF

Steve,

Any chance that you or Gary have a copy of the offer letter provided to Brune per ETF award? We would like to utilize as a template for new potential hires.

Thanks,

Bill

From: "McCutchen, Bill" <bmccutchen@tamu.edu>
To: DBaltensperger@ag.tamu.edu
CC: NBPenn.EXTERNAL.Internet; JSlovacek.EXTERNAL.Internet; DKLunt.EXTERNAL.I...
Date: 1/14/2010 3:04 PM
Subject: Example Offer Letter for Tillman
Attachments: Brune Draft Letter 18.doc

David and all,

Here is an example of an offer letter that we made to David Brune, that I thought you could use as a reference as it relates to Tillman and prior to our meeting in the morning.

Bill

--

Bill F. McCutchen, Ph.D.

Associate Director

Texas AgriLife Research

Texas A&M University System

113 Jack K. Williams Administration Building

2142 TAMU College Station, TX 77843-2142

979-845-8488 Tel

979-458-4765 Fax

bmccutchen@tamu.edu

From: "McCutchen, Bill" <bmccutchen@tamu.edu>
To: KRathore.EXTERNAL.Internet
CC: PLSchuerman.EXTERNAL.Internet; AHelms.EXTERNAL.Internet; DBaltensperger@...
Date: 1/7/2009 8:37 AM
Subject: Field Tests

Keerti,

Are u still looking to conduct field trials this year with gossypol cotton? If so have we made any headway of regulatory approval process? We might need to hire consultant to help out.

Bill

Request for Pre-Proposals

Texas AgriLife Research Zebra Chip Disease Program FY'10-FY'11

Background

The Texas AgriLife Research Zebra Chip Disease Program was funded initially by the Texas Legislature through the Texas Department of Agriculture in FY'08 and FY'09 at \$0.8M/year to develop solutions to this critical problem. Essentially all funding was passed from TDA to AgriLife Research to support research in pathology, entomology, and plant breeding. Due to the significant support from the potato industry and growers, we were able to secure the state funding once again. Funding in FY'10 and FY'11 from this program will focus on research, development and outreach that enhance our understanding of this disease, causal agent(s), and best management practices with the ultimate goal of minimizing the impact of the disease on the potato industry while emphasizing environmental stewardship.

Also and as many of you know Dr. Charlie Rush and team, have recently secured funding through the Specialty Crops Research Initiative. With the new SCRI funds and the renewal of State funding, we now have an opportunity to make major R&D and Outreach advances to help Texas and the Nation curtail and control Zebra Chip disease. To this point and through this RFP, we will seek to fill gaps by leveraging the SCRI (and other) funding to build an even more robust ZC R&D program. Major emphasis will be placed on multi-unit and -disciplinary teams. As a major consideration we strongly advise you to read the 3 attachments, entitled “*Industry and Growers INPUT*”, “*SCRI Project Management Plan*” and “*SCRI Approach Text*” as you develop your proposed R&D and/or Outreach one-pager. Again, we are seeking synergy and a more comprehensive ZC program from our State resources. We also want to eliminate any redundant funding for projects; so it is incumbent for the scientific community to demonstrate that the funding from each source supports different albeit complimentary research objectives.

Process

The Texas AgriLife Research Zebra Chip Disease Program will accept two-year proposals from individuals and more preferably from teams of researchers. Requested funding should not exceed \$150,000 per year. *Smaller requests that leverage other external funding (e.g. SCRI) and/or expand existing research and extension efforts will be given special consideration.* Each pre-proposal should have one clearly identified principal investigator (PI) or two Co-PI's (see below). Principal investigators of funded projects will be expected to submit progress reports. Preference will be given to pre-proposals based upon the following research and development criteria:

- Further refinement and improvement of rapid, precise and accurate diagnostic

- procedures;
- Increased knowledge of causal agent(s), vector(s) and plant phenotype to include field and/or molecular based approaches;
 - Improved conventional and/or marker-assisted breeding for adapted potatoes with disease and/or vector resistance;
 - Enhanced pesticide testing and integrated pest management initiatives to lessen impact of the pathogen and/or vectors;
 - Further development and elucidation of cultural, environmental, modeling and/or related technologies enhancing prediction of impact and management of disease;
 - Other novel methodologies, technologies or related R&D initiatives that might be combined with any of the areas outlined above.

Criteria for the Evaluation of Pre-Proposals and Selected Proposals:

- Scientific merit;
- Capability of PI and/or research team;
- Special emphasis should be placed on multi-disciplinary and multi-unit initiatives;
- Leveraging these potential funds with other funding sources;
- Potential for development of intellectual property, as appropriate;
- Reasonableness of budget.

Who is Eligible to Submit a Pre-Proposal:

Principal Investigators: Each PI or Co-PI may be the lead submitter for one proposal and at least one Co-PI must be an employee of AgriLife Research or AgriLife Extension.

Collaborators: Principal Investigators may involve and provide funding to collaborators from another agency, university and/or industry, which will enhance the competitiveness of a proposal.

Deadline for Submission: **One-page** pre-proposals are due **COB on Thursday, September 3rd, 2009**. Please submit an electronic copy of each pre-proposal to Dave Lunt, Assistant Director (d-lunt@tamu.edu), with a copy to Nancye Penn (npenn@tamu.edu).

Review Process: Pre-proposals will be reviewed by an *ad hoc* advisory review panel. Pre-proposals will be selected for full proposals. Full proposals will likely be due by **COB Thursday, October 6th, 2009**. Input will be sought from our Growers Advisory Board, and the Director of Texas AgriLife Research will make final recommendations for funding to TDA.

Funding: Funding is contingent upon budget availability, but should be **distributed to**

PI's by December 8th, 2009. It is anticipated that several larger and smaller 2-year proposals will be funded for FY'10 and FY'11.

Format for Pre-Proposals
Texas AgriLife Research Zebra Chip Disease Program
FY'10-FY'11
(1 page maximum, e.g. no smaller font than Times New Roman 11)

Title:

Principal Investigator or Co-PI's:

Collaborator(s):

Amount Requested: \$_____FY'10 \$_____FY'11

Briefly address the following in a one-page pre-proposal:

- 1. Problem this project is attempting to solve**
- 2. Experimental approach**
- 3. Deliverables and time horizon for research**
- 4. Value proposition and/or intellectual property as warranted**
- 5. Potential for leveraging resources**

Request for Pre-Proposals

Texas AgriLife Research Zebra Chip Disease Program FY'10-FY'11

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Texas AgriLife Research Zebra Chip Disease Program
FY'10-FY'11
(1 page maximum, e.g. no smaller font than Times New Roman 11)

Title:

Principal Investigator or Co-PI's:

Collaborator(s):

Amount Requested: \$_____FY'10 \$_____FY'11

Briefly address the following in a one-page pre-proposal:

- 1. Problem this project is attempting to solve**
- 2. Experimental approach**
- 3. Deliverables and time horizon for research**
- 4. Value proposition and/or intellectual property as warranted**
- 5. Potential for leveraging resources**

**FINANCIAL ASSISTANCE
FUNDING OPPORTUNITY ANNOUNCEMENT**



**U.S. Department of Energy
Office of Science
Office of Biological and Environmental Research**



**U. S. Department of Agriculture
National Institute of Food and Agriculture**

**Plant Feedstock Genomics for Bioenergy:
A Joint Research Funding Opportunity
Announcement USDA, DOE**

**Funding Opportunity Number: DE-FOA -0000223
Announcement Type: Initial
CFDA Number: 81.049 & 10.310**

ISSUE DATE: 12/11/2009

**Preapplication Due Date: 01/04/2010, 4:30 PM Eastern Time
(Preapplications are Required)**

Application Due Date: 02/18/2010, 8:00 PM Eastern Time

Where to Submit:

NOTE: REQUIREMENTS FOR GRANTS.GOV

Where to Submit: Applications must be submitted through Grants.gov to be considered for award. You cannot submit an application through Grants.gov unless you are registered. Please read the registration requirements carefully and start the process immediately. Remember you have to update your CCR registration annually. If you have any questions about your registration, you should contact the Grants.gov Helpdesk at 1-800-518-4726 to verify that you are still registered in Grants.gov.

Registration Requirements : There are several one-time actions you must complete in order to submit an application through Grants.gov (e.g., obtain a Dun and Bradstreet Data Universal Numbering System (DUNS) number, register with the Central Contract Registry (CCR), register with the credential provider, and register with Grants.gov). See <http://www.grants.gov>

in the CCR registration process. Applicants, who are not registered with CCR and Grants.gov, should allow at least 21 days to complete these requirements. It is suggested that the process be started as soon as possible.

IMPORTANT NOTICE TO POTENTIAL APPLICANTS: When you have completed the process, you should call the Grants.gov Helpdesk at 1-800-518-4726 to verify that you have completed the final step (i.e. Grants.gov registration).

Questions: Questions relating to the registration process, system requirements, how an application form works, or the submittal process must be directed to Grants.gov at 1-800-518-4726 or support@grants.gov. Part VII of this announcement explains how to submit other questions to the Department of Energy (DOE).

All applications should be in a single PDF file.

TABLE OF CONTENTS

PART I – FUNDING OPPORTUNITY DESCRIPTION

PART II – AWARD INFORMATION

- A. Type of Award Instrument**
- B. Estimated Funding**
- C. Maximum and Minimum Award Size**
- D. Expected Number of Awards**
- E. Anticipated Award Size**
- F. Period of Performance**
- G. Type of Application**

PART III – ELIGIBILITY INFORMATION

- A. Eligible Applicants**
- B. Cost Sharing or Matching**
- C. Other Eligibility Requirements**

PART IV – APPLICATION AND SUBMISSION INFORMATION

- A. Address to Request Application Package**
- B. Letter of Intent and Pre-Application**
- C. Content and Form of Application**
- D. Submissions from Successful Applicants**
- E. Submission Dates and Times**
- F. Intergovernmental Review**
- G. Funding Restrictions**
- H. Other Submission and Registration Requirements**

PART V – APPLICATION REVIEW INFORMATION

- A. Criteria**
- B. Review and Selection Process**
- C. Anticipated Notice of Selection and Award Dates**

PART VI – AWARD ADMINISTRATION INFORMATION

- A. Award Notices**
- B. Administrative and National Policy Requirements**
- C. Reporting**

PART VII – QUESTIONS/AGENCY CONTACTS

- A. Questions**
- B. Agency Contacts**

PART VIII – OTHER INFORMATION

- A. Modifications**
- B. Government Right to Reject or Negotiate**
- C. Commitment of Public Funds**
- D. Proprietary Application Information**
- E. Evaluation and Administration by Non-Federal Personnel**

- F. Intellectual Property Developed under this Program**
- G. Notice of Right to Request Patent Waiver**
- H. Notice Regarding Eligible/Ineligible Activities**

PART I – FUNDING OPPORTUNITY DESCRIPTION

GENERAL INQUIRIES ABOUT THIS FOA SHOULD BE DIRECTED TO:

Technical/Scientific Program Contact:

SCbiomass.genomics@science.doe.gov

Program Manager: Dr. Catherine M. Ronning
U. S. Department of Energy
Office of Biological and Environmental Research
Phone: 301-903-9549
E-Mail: Catherine.Ronning@science.doe.gov

Program Manager: Dr. Ed Kaleika
United States Department of Agriculture
National Institute of Food and Agriculture
E-Mail: ekaleikau@nifa.usda.gov

STATUTORY AUTHORITY

Public Law 95-91, US Department of Energy Organization Act
Public Law 109-58, Energy Policy Act of 2005
Public Law 110-246, Food, Conservation, and Energy Act of 2008
Competitive, Special, and Facilities Research Grant Act (7 U.S.C. 450i(b))

APPLICABLE REGULATIONS

U.S. Department of Energy Financial Assistance Rules, codified at 10 CFR Part 600
U.S. Department of Energy, Office of Science Financial Assistance Program Rule, codified at 10 CFR Part 605
7 CFR Part 3430 – NIFA procedures to implement Competitive and Noncompetitive Nonformula Grant Programs—General Grant Administrative Provisions and Program-Specific Administrative Provisions for the Specialty Crop Research Initiative

SUMMARY :

The U.S. Department of Energy's Office of Science, Office of Biological and Environmental Research (OBER), and the U.S. Department of Agriculture (USDA), National Institute of Food and Agriculture (NIFA), hereby announce their interest in receiving applications for genomics-based research that will lead to the improved use of biomass and plant feedstocks for the production of fuels such as ethanol or renewable chemical feedstocks. Specifically, applications are sought for fundamental research on plants that will improve biomass characteristics, biomass yield, or sustainability. Systems biology approaches to identify genetic indicators enabling plants to be efficiently bred or manipulated, or research that yields fundamental knowledge of the

structure, function and organization of plant genomes leading to improved feedstock characterization and sustainability are also encouraged.

SUPPLEMENTARY INFORMATION:

Renewable energy from biomass has the potential to reduce or remove dependency on fossil fuels as well as reduce negative environmental impacts from emissions of greenhouse gases and toxic pollutants. Realizing this potential will require the simultaneous development of high yielding biomass production systems and bioconversion technologies that efficiently convert biomass energy into the forms of energy usable by industry. Most agricultural research to date has focused on enhancing the production of seeds, roots and tubers that are used for food and feed production. However, these improvements in food crops have frequently been directed towards increases in starch content with a corresponding reduction of lignocellulose accumulation. Research applications are solicited in the area of improved fundamental understanding of lignocellulosic accumulation and regulation that will lead to improved utilization of plant biomass for the production of fuels such as ethanol or renewable chemical feedstocks. This FOA continues a commitment, initiated in 2006, to conduct a fundamental research program in biomass genomics, to provide the scientific foundation to facilitate the use of lignocellulosic materials, either primary material or agricultural residues, for bioenergy and biofuels. The rationale for developing lignocellulosic crops for energy is that less intensive production techniques and poorer quality land can be used for these crops, thereby avoiding competition with food production on better quality land.

Significant advances in breeding, molecular genetics, and genomic technologies provide an opportunity to build upon the existing knowledgebase of plant biology to be able to confidently predict and manipulate their biological function for bioenergy resources. Specific areas of interest include:

- Elucidation of the regulation of gene networks, proteins and metabolites for manipulation of plant feedstocks for improved productivity and sustainability, and improved water use efficiency and nutrient utilization.
- Elucidation of the regulation of gene networks, proteins and metabolites for advanced understanding of carbon partitioning and nutrient cycling in plant feedstocks.
- Comparative approaches to enhance fundamental knowledge of the structure, function, and organization of plant genomes leading to innovative strategies for feedstock characterization, breeding or manipulation.

The use or development of model biological systems is acceptable; however, a specific statement must be provided on the linkage of the model to current or future biomass energy crops. The use or augmentation of existing genomic information and resources is strongly encouraged; relevant plants for which preliminary genome information has been obtained at the DOE Joint Genome Institute include maize, poplar, sorghum, soybean, switchgrass, and Brachypodium.

Research that seeks to increase starch content for improved nutrient qualities or to facilitate the digestion and fermentation of starch to produce sugars and other bio-based products or biofuels

is not the focus of this FOA. Also, research that seeks to increase grain yield or seed-oil production is not the focus of this FOA.

Projects that would primarily involve field demonstrations or testing or empirical screening for biomass quality characteristics **will not be** considered for funding. Projects **should not** request support for whole genome-scale sequencing; such requests should be submitted separately to the DOE Joint Genome Institute's Community Sequencing Program for an independent merit review (see information at <http://www.jgi.doe.gov/CSP/index.html>).

This FOA strongly encourages individual investigators as well as interdisciplinary teams that assemble a range of expertise into a coordinated approach; for the latter situation, applicants must include a clear plan describing the individual contributions of each participant, as well as the overall management scheme.

Information about the DOE Genomic Science (Genomics:GTL) data release policy, with which awardees will be expected to comply, is available at <http://genomicscience.energy.gov/datasharing/index.shtml>

For USDA:

- All sequence and expression data must be released to public repositories (e.g., Genbank under the Bermuda standards; GEO under MIAME compliance; etc.). All phenotype and map data must be deposited into an appropriate public database (e.g., major databases of the research community, etc.) in a rapid timeframe after quality control tests.
- Researchers are encouraged to confer with the Crop Curators and Crop Germplasm Committees (CGCs) in the USDA National Plant Germplasm System (NPGS) (www.ars-grin.gov/npgs/index.html) regarding the desirability of depositing genetic stocks and experimental plant populations generated into the NPGS genebanks. Crop curators and the researchers need to define mutual responsibilities for quality assurance, replenishing depleting stock, and the projected duration for the NPGS's commitment to curate these materials.
- Beginning in 2007, CGIAR International Agricultural Research Centers (e.g., CIMMYT, IRRI, CIAT, CIP, ICRISAT, ICARDA) and some national genebanks began distributing germplasm of certain crops accompanied by the FAO International Treaty's Standard Material Transfer Agreement (SMTA). Researchers are encouraged to confer with their host institution regarding how such materials should be handled. For further information, see the International Treaty's web site at http://www.planttreaty.org/smta_en.htm
- For issues about intellectual property policy, applicants should consult the Agency's intellectual property web page at <http://www.nifa.usda.gov/business/awards/intelproperty.html>

Information about the program, including prior year award abstracts, is available at <http://genomicscience.energy.gov/research/DOEUSDA/>.

Indirect Costs:

For DOE: Explain the basis for each overhead and indirect cost. Include the current rate.

For USDA: Section 7132 of the Food, Conservation, and Energy Act of 2008, amended the National Agriculture Research, Extension, and Teaching Policy Act of 1977 (7 U.S.C. 3310(a)), limiting indirect costs to 22 percent of the total Federal funds provided under each award. To accommodate USDA limit on indirect costs, applicants may be required at the time of award to submit a revised budget.

Proposals selected for funding by USDA will be required to limit their requests for recovery of indirect costs to the lesser of their institution's official negotiated indirect cost rate or the equivalent of 22 percent of total Federal funds awarded.

Annual Meeting:

If a project is funded, beginning in the first year of funding, at least one member of the project team will be required to attend annual investigator meetings; these meetings may be held in conjunction with internationally attended genomics meetings (e.g. Plant and Animal Genome) or jointly with other DOE or USDA program meetings (e.g. the Genomics: GTL program meeting) as specified by the USDA and DOE program managers. Reasonable travel expenses may be submitted as part of the project budget.

PART II – AWARD INFORMATION

A. TYPE OF AWARD INSTRUMENT.

DOE and USDA anticipates awarding grants under this program announcement.

B. ESTIMATED FUNDING.

It is anticipated that up to \$6 million total will be available for multiple awards to be made in FY 2010 for the Plant Feedstock Genomics for Bioenergy: A Joint Research Funding Opportunity Announcement USDA, DOE. The number of awards will be contingent on satisfactory peer review, the availability of appropriated funds, and the size of the awards. Multiple year funding is expected. Applications may request project support for up to three years, with out-year support contingent on the availability of funds, progress of the research, and programmatic needs; it is anticipated that this will reflect a long term commitment to improved use of primary feedstocks or residues for energy resources. Annual budgets are expected to range from \$200,000 to \$500,000 total costs. Neither DOE nor USDA is under any obligation to pay for any costs associated with the preparation or submission of an application. DOE and USDA reserve the right to fund, in whole or in part, any, all, or none of the applications submitted in response to this Funding Opportunity Announcement.

In FY 2010 USDA support for this Plant Feedstock Genomics for Bioenergy solicitation is available through the Agriculture and Food Research Initiative (AFRI) Competitive Grants Program.

C. MAXIMUM AND MINIMUM AWARD SIZE.

See B. Estimated Funding section above.

D. EXPECTED NUMBER OF AWARDS.

See B. Estimated Funding section above.

E. ANTICIPATED AWARD SIZE.

See B. Estimated Funding section above.

F. PERIOD OF PERFORMANCE.

See B. Estimated Funding section above.

G. TYPE OF APPLICATION.

DOE will accept new and renewal applications under this Announcement.

USDA will only accept new applications.

Renewal applications are requests for additional funding for a period subsequent to that provided by a current award. Renewal applications compete with all other applications and must be submitted by any established due date/deadline or at least six months before additional funding is required if there is no specified due date/deadline. In preparing a renewal application, applicants should assume that reviewers will not have access to previous applications. The application should be developed as fully as though the applicant were applying for the first time.

RENEWAL APPLICATION INSTRUCTIONS

Renewal applications must include the same forms and information as a new application, in addition to the following:

1. Include under the project description/narrative section, information on any research changes (size or scope) that affect the original research endeavor.
2. Include an estimate of anticipated unexpended funds that will remain at the end of the current project period.
3. Include a progress report as an appendix to the narrative section (**this will not count against the page limit**) that describes the results of work accomplished through the date of the renewal application and how such results relate to the activities proposed to be undertaken in the renewal period.

PART III - ELIGIBILITY INFORMATION

A. ELIGIBLE APPLICANTS.

DOE Eligibility Criteria:

Applicants from U.S. Colleges and universities, non-profit organizations, for-profit commercial organizations, state and local governments, and unaffiliated individuals are eligible to apply, except Federally Funded Research and Development Center (FFRDC) Contractors, and nonprofit organizations described in section 501(c)(4) of the internal Revenue Code of 1986 that engaged in lobbying activities after December 31, 1995. Researchers from other Federal agencies are encouraged to submit a preapplication referencing this FOA **DE-FOA -0000223**; if a formal proposal is encouraged, additional submission information will be provided.

USDA Eligibility Criteria :

The Secretary may award grants to State agricultural experiment stations; colleges and universities; university research foundations; other research institutions and organizations; Federal agencies; national laboratories; private organizations or corporations; individuals; or any group consisting of two or more of the aforementioned entities. Applications from scientists at non-U.S. organizations will not be accepted. Award recipients may subcontract to organizations not eligible to apply, provided such organizations are necessary for the conduct of the project.

B. COST SHARING .

Cost sharing is not required.

C. OTHER ELIGIBILITY REQUIREMENTS .

N/A

PART IV – APPLICATION AND SUBMISSION INFORMATION

A. ADDRESS TO REQUEST APPLICATION PACKAGE.

Application forms and instructions are available at Grants.gov. To access these materials, go to <http://www.grants.gov>, select "Apply for Grants", and then select "Download Application Package". Enter the CFDA (81.049) and/or the funding opportunity number located on the cover of this announcement and then follow the prompts to download the application package.

B. LETTER OF INTENT AND PREAPPLICATION.

1. Letter of Intent.

A Letter of Intent is not required.

2. Preapplication.

Potential applicants are **required** to submit a brief preapplication, referencing Funding Opportunity Announcement (FOA) **DE-FOA -0000223** for receipt by DOE by 4:30 p.m., Eastern Time, January 4, 2010. Preapplications will be reviewed for conformance with the guidelines presented in the FOA and suitability in the technical areas specified. A response to the preapplications encouraging or discouraging formal applications will be communicated to the applicants by January 20, 2010. Applicants who have not received a response regarding the status of their preapplication by this date are responsible for contacting the program to confirm this status.

Only those preapplicants that receive notification from DOE encouraging a formal application may submit full applications. **No other formal applications will be considered.** Preapplications referencing Funding Opportunity Announcement **DE-FOA -0000223** should be sent as PDF file attachments via e-mail to: **SCbiomass.genomics@science.doe.gov** with "Preapplication **DE-FOA -0000223**" as the subject. **No FAX or mail submission of preapplications will be accepted.**

Potential applicants must submit a brief preapplication that consists of a cover page **plus** two to three pages of narrative describing the research objectives, the technical approach(s), and the proposed team members and their roles. The intent in requesting a preapplication is to save the time and effort of applicants in preparing and submitting a formal project application that may be inappropriate for the program. Preapplications will be reviewed relative to the scope and research needs as outlined in the summary paragraph and in the SUPPLEMENTARY INFORMATION. The preapplication **must** identify, on the cover sheet, the title of the project, the institution or organization, principal investigator name, telephone number, fax number, and e-mail address. No budget information or biographical data need be included, nor is an institutional endorsement necessary.