



USDA



National Institute of Food and Agriculture

Project Directors Conference/Workshop

Hispanic-Serving Institutions (HSI's) Grant Program 1890 Capacity Building Grant Program

2010

**Nov. 29
12:30-5:30pm
Waterfront Center
800 9th St, SW 3252
Washington DC
20024**

**Nov. 30-Dec. 1
8:30-5:00pm
Crystal Gateway
Marriott Hotel
1700 Jefferson Davis
Highway,
Arlington, VA 22202**

**Dec. 2
8:30-11:30pm
USDA Headquarters
Jefferson Auditorium
1400 Independence
Ave., SW Washing-
ton, DC 20250**

**Dec. 2
2:00-4:00pm
National Science
Foundation
4201 Wilson Blvd,
Arlington, VA 22230**

***Building Institutional Capacity and Partnerships
in the 21st Century***



November 29, 2010

Dear 2010 Conference Participants:

Welcome to Washington, DC! On behalf of the National Institute for Food and Agriculture (NIFA), we extend greetings to all in attendance at the 2010 Joint Project Directors Conference/Workshop between Hispanic-Serving Institutions (HSI's) and the 1890 Institutions. This collaborative venue brings together various educators and researchers and extension educators from different food and agricultural sciences disciplines from across the nation to increase their knowledge in this area, as well as share their unique and enriching scholarly experiences within their respective learning environments.

This year's theme "Promoting Student-Centered Learning and Engagement" represents the focus of the in-depth presentation sessions provided regarding the changing instructional environment. There is no question that new demands in the workforce require our students to think critically and be more analytical. We must find innovative ways through the learning experience to empower students and adult learners, particularly at minority-serving institutions, through learner-centered teaching approaches. Clearly, this conference will go a long way toward enhancing the quality of teaching and learning in our schools, community colleges and universities as related to food and agriculture.

The National Institute for Food and Agriculture (NIFA) is proud to be a collaborative partner and sponsor of this conference. Best wishes for a very successful and highly productive conference.

Sincerely,

Ali I. Mohamed, Ph.D.

Irma Alemar Lawrence, Ed. D.

USDA Waterfront Center Room 1410 A & B

Day 1

12:30 – 1:00 pm

Check In

1:00 – 1:15 pm

Roger Beachy, PhD, Director, NIFA
Welcome

1:15 – 1:30 pm

Jennifer Martin
Communications

1:30 – 1:45 pm

Adriene Woodin
Award Management Branch

1:45 – 2:15 pm

Henry Doan, PhD
Planning and Accountability

2:15 – 3:00 pm

Networking

Oral Presentations

3:00 – 3:15 pm

Hemanth Vasanthaiah, PhD
Florida A&M University

3:15 – 3:30 pm

Harbans Bhardwaj, PhD
Virginia State University

3:30 – 3:45 pm

Janis K. Bush, PhD
University of Texas, San Antonio

3:45 – 4:00 pm

Jeff Pendergraft, PhD
Sul Ross State University

4:00 – 4:15 pm

Fawzy Hashem, PhD
University of Maryland Eastern Shores

4:15 – 4:30 pm

Ming Gao, PhD
Alcorn State University

4:30 – 4:45 pm

Jose Espiritu, PhD
University of Texas, El Paso

4:45 – 5:00 pm

Sarah Alvanipour, PhD
Houston Community College

5:00 – 5:30 pm

Closing and Adjourn

Crystal Gateway Marriott Hotel, Arlington, VA

Day 2

7:30 - 8:15 am

Continental Breakfast

8:15 - 9:45 am

Plenary Session I

9:45 - 10:15 am

Morning Break

10:15 - 11:00 am

Plenary Session II

11:00 am- 12:15 pm

Breakout Session I

- Childhood Obesity
- Plant Science Programs
- Agriculture Economics and Rural Communities
- Successful Education Projects
 - Sharon Walker, PhD University of California, Riverside
 - Roger Hanigriff, PhD Texas A&M University, Kingsville
 - Koffi Konan, PhD Alabama A&M University
 - Nina Bennett, PhD University of Maryland Eastern Shores
- High Impact Extension Projects

12:15 - 1:30 pm

Networking Buffet Lunch

1:30 - 2:45 pm

Breakout Session II

- Climate Change
- Higher Education Programs
- Coordinated Agricultural Projects
- Agriculture and Food Research Initiative Food and Agricultural Science Enhancement (FASE) Grants
- Logic Model Planning Process

2: 45 - 3:15 pm

Afternoon Break

3:15 - 4:30 pm

Breakout Session III

- Food Safety
- Natural Resources and Environment
- Small Business Innovation Research
- Successful Education Projects
 - Joel Gray, PhD Oter Junior College
 - Krish Jayachandran, PhD Florida International University
 - Mohammad Jalaluddin, PhD University of Arkansas Pine Bluff
 - Moses Kairo, PhD Florida A&M University

High Impact Extension Projects
(Repeat of breakout session I)

4:30 - 5:30 pm

Networking Reception

Crystal Gateway Marriott Hotel, Arlington, VA

Day 3

7:30 - 8:15 am

Continental Breakfast

8:15 - 9:45 am

Plenary Session III

9:45 - 10:15 am

Morning Break

10:15 - 11:30 am

Breakout Session IV

- Global Food Security and Hunger
- Agriculture Systems and Technology
- Multi-cultural Alliances
- Coordinated Agricultural Projects
- Logic Model Planning Process (repeat of Breakout Session II)

11:30 am - 1:00 pm

Networking Buffet Lunch

1:00 - 2:15 pm

Breakout Session V

- Sustainable Bioenergy
- Animal Science Programs
- International Programs
- Agriculture and Food Research Initiative Food and Agricultural Science Enhancement (FASE) Grants (Repeat of Session II)

2:15 - 2:30 pm

Afternoon Break

2:30 - 3:00 pm

Plenary Session IV

USDA– South Building Jefferson Auditorium

Day 4

8:30 – 9:00 am	Set up Posters
9:00 – 9:30 am	Alma Hobbs, PhD Deputy Assistant Secretary for Administration USDA
9:30 – 11:00 am	Poster Session
11:00 am – 11:30 am	Poster Breakdown/
11:30 – 12:00 noon	Travel to National Science Foundation (NSF)

National Science Foundation 4201 Wilson Boulevard, Arlington, VA

12:00 – 1:00 pm	Lunch (on your own)
1:00 – 1:05 pm	Victor Santiago , Education Directorate Introductions
1:05 – 1:10 pm	Fae Korsmo , Office of the Director Welcome and Remarks
1:10 – 1:25 pm	How NSF Works, preparing proposals for NSF, and being a peer reviewer
1:25 – 1:45 pm	James Hicks , Education Directorate Louis Stokes Alliances for Minority Participation (LSAMP)
1:45 – 2:05 pm	David Matty , Education Directorate STEM Talent Expansion Program (STEP)
2:05 – 2:25 pm	Russell Pimmel , Education Directorate Transforming Undergraduate Education in Science (TUES)
2:25 – 2:45 pm	Bert Holmes , Education Directorate Scholarships in Science, Technology, Engineering, and Mathematics (S-STEM)
2:45 – 3:00 pm	BREAK
3:00 – 3:20 pm	Celeste Carter , Education Directorate Advanced Technological Education (ATE)
3:20 – 3:40 pm	Omnia El-Hakim , Engineering Directorate Broadening Participation Research Initiation Grants in Engineering (BRIGE)
3:40 – 4:00 pm	Deborah Allen , Education Directorate Robert Noyce Teacher Scholarship Program
4:00 – 4:30 pm	Victor Santiago - Wrap-up

HSI Participants

Gour S. Choudhury	Director/Professor	California State Univ., Fresno
Steven J. Rocca	Assistant Professor	California State Univ., Fresno
Laura Calderon	Professor, Nutritional Science	California State Univ., Los Angeles
Joyce Ann Gilbert	Associate Professor	California State Univ., Northridge
George Vourlitis	Professor	California State Univ., San Marcos
Peggy Hauselt	Assistant Professor	California State Univ., Stanislaus
Darron L. Smith	Associate Professor	Eastern New Mexico University
Krish Jayachandran	Associate Professor	Florida International University
Sarah Alvanipour	Professor	Houston Community College
Jan Robinson	Project Director	Houston Community College
Roxanne I. Vedia	Dean	Laredo Community College
Edward Martinez	Professor	New Mexico Highlands Univ.
Barbara Chamberlin	Associate Professor	New Mexico State University
Jeanne Gleason	Director	New Mexico State Univ., Coop. Ext.
Kenneth M Volglesonger	Assistant Professor	Northeastern Illinois University
Laura Sanders	Professor	Northeastern Illinois University
Joel Gray	Chairman/Math & Science	Otero Junior College
Erinque LaMadrid	Professor	Regents of the Univ. of New Mexico
Cecilia Arriaza	Counselor/Coordinator	Santa Ana College University
Martha Vargas	Counselor/Coordinator	Santa Ana College University
William Quinn	Professor	St. Edwards's University
Jeff Pendergraft	Associate Professor	Sul Ross State University
Riccardo Mozzachiodi	Assistant Professor	Texas A&M Univ., Corpus Christi
Stacey D. Lyle	Associate Professor	Texas A&M Univ., Corpus Christi
Roger Hanagriff	Associate Professor	Texas A&M University, Kingsville
Kim McCuistion	Associate Professor	Texas A&M University, Kingsville
Jose F. Espiritu	Assistant Professor	The University of Texas at El Paso
Sharon L. Walker	Associate Professor	University of California, Riverside
Lisa Morano	Associate Professor	University of Houston, Downtown
Edna Negrón	Coordinator of the Food Science and Technology Program	University of Puerto Rico, Mayaguez
Janis K. Bush	Associate Professor	University of Texas at San Antonio
Zenong Yin	Professor	University of Texas, San Antonio
Joy Cowden	Coordinator of Special Grants	West Hills Community College District

1890 Participants

Koffi N Konan	Associate Professor	Alabama A&M University
Ming Gao	Associate Professor	Alcorn State University
Jinshan Tang	Assistant Professor	Alcorn State University
Dahlia Jackson-O'Brien	Assistant Professor	Delaware State University
Mingxin Guo	Associate Professor	Delaware State University
Guinihal Ozbay	Assistant Professor	Delaware State University
Moses T.K. Kairo	Professor	Florida A&M University
Muhammad Haseeb	Research Entomologist	Florida A&M University
John Yang	Associate Professor	Lincoln University
Majed Dweik	Assistant Professor	Lincoln University
Kun Lian	Associate Professor	Louisiana State University
Antoine J. Alston	Professor	NC A&T State University
Kenrett Y. Jefferson-Moore	Associate Professor	NC A&T State University
Lijun Wang	Associate Professor	NC A&T State University
Gary R. Newton	Research Scientist Leader	Prairie View A&M University
Yuanchang Xie	Assistant Professor	South Carolina State University
Jae-Dong Hong	Professor	South Carolina State University
Louis D. Whitesides	Research Administrator	South Carolina State University
Yadong Qi	Professor	Southern University and A&M College
Daniel Collins	Professor of Plant Pathology	Southern University and A&M College
Glenda Stein Johnson	Nutrition Scientist	Southern University and A&M College
Agnes Kilonzo-Nthenge	Research Assistant Professor	Tennessee State University
Suping Zhou	Research Associate Professor	Tennessee State University
Fur-Chi Chen	Research Associate Professor	Tennessee State University
Fisseha Tegegne	Research Professor	Tennessee State University
Mohammad Jalaluddin	Professor of Agronomy	University of Arkansas Pine Bluff
Stephan Tubene	Associate Professor	University of Maryland Eastern Shore
Arthur L. Allen	Associate Professor	University of Maryland Eastern Shore
Nina Lyon Bennett	Associate Professor	University of Maryland Eastern Shore
Bessie M. Green	Research Associate	University of Maryland Eastern Shore
Fawzy M. Hashem	Research Associate Professor	University of Maryland Eastern Shore
John Parry	Assistant Professor	Virginia State University
Shobha Sriharan	Professor	Virginia State University
Harbans L. Bhardwaj	Professor	Virginia State University
Mark Kraemer	Assistant Professor	Virginia State University
Asmare Atalay	Professor	Virginia State University

HSI ABSTRACTS

Gour S. Choudhury

California State University, Fresno

Intellectual Capacity Development in Food and Agricultural Sciences

Abstract: California is the leading agricultural and food processing state in the US. A wide gap exists between California's R & D needs and the available scientists/technologists. The goal is strengthen our research capability to deliver high quality graduate education in food and agricultural sciences and increase the number of graduates. The Graduate Laboratory with state-of-the-art equipment will be a central facility to deliver advanced research training in four graduate programs. Successful implementation of this project will enable the faculty to train the next generation of scientists and technologists who will shape the future of our food and agricultural industry.

Laura Calderon

California State University, Los Angeles

Strengthening and Expanding a Public Health/Community Nutrition Focus in the CSULA Nutritional Science Curriculum.

Abstract: In the midst of our nation's obesity epidemic, food insecurity has reached its highest prevalence since 1995. It is paramount that Nutritional Science faculty and students are knowledgeable about public health nutrition issues including food insecurity, obesity, the link between obesity and poverty, advocacy and working/grant writing for non-profits. The purpose of this grant is to create a university community nutrition education model whereby graduates of our program will be proficient in working with diverse populations and will possess the necessary skills (grant writing, advocacy) to implement programs and empower target populations. Scholarships will be available for underprivileged, bilingual students.

George Vourlitis

California State University, San Marcos

Development of a New Generation of Environmental Scientists through an Undergraduate Program of Inquiry-based Instruction, Independent Research, and Professional Development

Abstract: The overall goal of this project is to attract, retain, train, and support underrepresented undergraduate students in environmental and natural resource science. This goal will be fulfilled through a comprehensive program that provides (1) freshmen-sophomore biology students with intensive summer instruction where environmental science theory and research methods are illustrated using a long-term field experiment as the focus, (2) opportunities for conducting independent research, internships with USDA agencies (U.S. Forest Service), and professional development through student research symposia and professional conferences, and (3) instructional support and mentoring as students work toward achieving their Bachelor of Science (BS) degree

Steven J. Rocca

California State University, Fresno

Opening Doors in Agricultural Education: Recruitment, Preparation, and Careers

Abstract: Overall goal of this project is to increase the underrepresented students pursuing and completing the Agricultural Education program at California State University, Fresno. As a result of this project at least 60 students will consider a career in agricultural education and at least 60 students from College of the Sequoias will have clearly established academic and transfer plans allowing for a smooth transition to the university. Additionally, one underrepresented student who completes the program and majors in Agricultural Education at CSU, Fresno, will receive full financial assistance for two years allowing them to focus on their education and career success.

Joyce Ann Gilbert

California State University, Northridge

Recruiting and Retaining Hispanic Nutrition Students & Advancing their Professional Competencies in the Area of Breastfeeding Education through Experimental Learning

Abstract: California State University Northridge in collaboration with Women, Infants, and Child Program are recruiting and retaining Hispanic nutrition students and advancing their professional competencies by developing a new course in breastfeeding education and an experiential learning internship in breastfeeding promotion. Our project aims to address the underrepresentation of Hispanic students in the dietetics profession. We address the low retention rate of undergraduate Hispanic students in our nutrition program and the need for dietetic professionals to become more knowledgeable and skilled in the area of breastfeeding promotion and education.

Peggy Hauselt

California State University, Stanislaus

Expanding Opportunities for Underrepresented Students for Agriculture Careers through Recruitment, Experiential Learning, and Agricultural Literacy

Abstract: California State University, Stanislaus is building a thriving Agricultural Studies Department that reflects the Northern San Joaquin Valley. The goal of this project is to increase the educational opportunities for underrepresented students in agriculture by: continuing recruitment, developing a sustainable agriculture garden available for instructional and service learning projects, delivering 40 USDA and industry internships (e.g. with local NRCS offices), eliminating financial barriers through annual student scholarships designed to recruit and retain underrepresented students, hosting an Agricultural Awareness Day for 3rd grade students and teachers, and holding K-6 teachers workshops on creating sustainable school gardens, agriculture literacy, and nutrition education.

Darron L. Smith

Eastern New Mexico University

Enhancing Career Awareness and Development Through Experiential Learning.

Abstract: The purpose of this project is to provide an underrepresented student population (who are primarily first-generation college students) the opportunity to improve their competitiveness when applying for graduate school or entering the industry. This project provides research experiences to agricultural students by hiring 1 graduate and 10 undergraduate students per year. The undergraduate students will gain laboratory experience using the latest methodologies in the areas of animal science, feed and nutrition, and reproductive physiology. Student researchers will also gain professional experience through scientific presentation of their research at scientific meetings.

Sarah Alvanipour

Houston Community College

Innovative Means of Promoting Agriscience Career Tracks

Abstract: Between 2010-12, 1696 students will benefit from experiential learning, research-grade instrumentation, and faculty preparation and enhancement of teaching through IMPACT (Innovative Means of Promoting Agriscience Career Tracks). IMPACT will strengthen the educational capacity of Houston Community College, and, in collaboration with USDA-ARS, will enhance educational equity for underrepresented students by exposing them to new research tools and techniques, providing internship opportunities and placement, and preparing them for potential careers in agriscience. Instructors, in turn, will learn the benefits of "hands-on" teaching techniques, which, in turn, will foster and facilitate an environment conducive to student learning.

Roxanne I. Vedia

Laredo Community College

SABOR

Abstract: SABOR is an acronym for Spanish, Selección de Alimentos para el Bienestar y Obras de trabajo Reales, which means in English, the Selection of Foods for Well-being and Real Jobs, and means Taste in Spanish. SABOR has six objectives; 1. Create and implement a new Culinary Arts program at LCC, 2. Increase the number of completers from the program, 3. Increase the number of students transferring to the university to complete degrees in human nutrition, 4. Improve teaching through student experiential learning; internships demonstrations, 5. Create learning bridges from the high school to the community college and to the university, and 6. Increase awareness of food safety, human nutrition and health through changes in eating habits and food preparation techniques demonstrations. LCC will work with the two local ISD's to recruit students who are in their current culinary program, it will be done by dual enrollment and/or articulation agreements. Data collection will be acquired through Institutional Effectiveness office on student enrollment and completers. An external evaluator will also be hired to provide technical assistance for continuous improvement.

Krish Jayachandran

Florida International University

Biofuel Science Education for Under-Represented Students at Florida International University

Abstract: The proposed project will expand the successful agroecology program at Florida International University to include bioenergy, and thus, increase the educational opportunity in a high national priority area like sustainable energy production (NIFA's priority areas). A new curricular product - biofuels course will be developed and taught students about biomass availability, sustainability, and conversion to biofuels and energy fulfilling Educational Need Area (a). Students through this project will compete for technically challenging careers and higher education degree programs in bioenergy, agriculture and environment, and will succeed in landing jobs with USDA.

Jan Robinson

Houston Community College

Café con Leche

Abstract: Café con Leche, an invitation to sit down and talk, is an innovative tool to reach out to students and their parents to encourage college admission. The pathway will be developed to demystify the admission process while encouraging the students that college success awaits. Five institutions, Houston Community College, Del Mar College, El Centro College, St. Edwards University, and Texas A&M University-Corpus Christi, having strong community ties, will organize meetings at community centers and churches to reach out to those that are slipping through the cracks. Those students, whose parents may not be familiar with the college admission process, will have the opportunity to sit with their parents and discuss the need for higher education and the pathway to achieve college success.

Edward Martinez

New Mexico Highlands University

Supporting Agriculture in Science and Education-

Abstract: New Mexico Highlands will implement the Supporting Agriculture in Science and Education (SASE) project based on the institution's long-term Strategic Plan and stated mission to advance student knowledge by integrating education, research, public service, technology, sustainability and economic development for northern New Mexico (NM), the State and nation. The project will partner with local natural resource management agency personnel to educate, inform high, and recruit high school students to participate in a summer institute exposing them to agricultural related scientific activities and to career options.

Barbara Chamberlin

New Mexico State University

Retaining Students and Supporting Instruction in Science-Intensive Undergraduate Programs through Innovative Media

Abstract: Like most students, New Mexico's under-represented agriculture students struggle with key scientific and math concepts used in science-intensive agriculture, due largely to a lack of conceptual understanding in pre-requisite STEM skills. This deficiency in STEM-related skills deters under-represented students from completing coursework in STEM-intensive agricultural majors, decreasing potential graduates in these fields. This proposal will assist students in understanding STEM concepts that frequently deter many from continuing these majors. The team will create educational animations and games to supplement instruction, refine educational objectives based on needs of core ag science courses and develop innovative media to enhance STEM conceptual understanding.

Bruce Milne

Regents of the University of New Mexico

Collaborative for Sustainable Foodshed Development

Abstract: The University of New Mexico will work with USDA Rural Development to improve food and agricultural sciences education programs and increase retention and graduation of 30 Hispanic students. The program will assist in the developing of the New Mexico food shed. To accomplish this, the faculty will conduct three new online courses, two seminars, and two summer field school courses visiting four bioregions and twenty-one farms, ranches, markets, processing facilities, and community food projects in traditional Hispanic, Native American, and other communities.

William Quinn

St. Edwards's University

Education, Experience and Employment for Underrepresented Students in Natural Resources

Abstract: Educational institutions are challenged with recruiting and retaining underrepresented students into agricultural fields, and insight into barriers will provide a diverse work force in agricultural agencies. For example, many underrepresented students are first generation students, and support to continue with education may not be as strong as in other cultures. Also, these students often have strong local connections. Thus, they are unfamiliar with opportunities within agricultural outside of their region. In this project, St. Edward's University and Texas A&M University improve recruitment and retention of underrepresented students and develop experiential programs that will link them to careers in agricultural agencies.

Joel Gray

Otero Junior College

Soil and Crop Transfer Program

Abstract: Opportunities in soil and crop science for young scientists are extensive and rewarding in terms of earning capabilities and personal enrichment. The program described below would allow a student to begin his/her soil and crop science degree program at Otero Junior College and transfer to Colorado State University with transcript junior status. Otero Junior College, OJC, meets the statutory definition of a Hispanic Serving Institution, with just over 30% of our students being of Hispanic descent. Because the region is rural, farming and ranching plays a vital role in its economic viability. The Soil and Crop Science Program has four primary educational goals: (1) enhance the scientific curriculum at OJC, (2) improve scientific equipment within the laboratories, (3) provide an atmosphere for experiential learning for students enrolled in the program and (4) improve student recruitment and retention for underrepresented students. In order to provide experiential learning opportunities OJC plans to partner with the Arkansas Valley Research Center, located just 10 miles away from the campus. To promote recruitment and retention OJC will offer substantial scholarship awards to qualified students.

Martha Vargas

Santa Ana College University

Partnership for Transfer Success in USDA majors (PTSP II)

Abstract: By the end of the grant period (2013), this project will increase awareness of FANRRS among 2000-3000 talented underrepresented high school and community college students through career awareness activities and curricula. A cohort of forty students will receive enhanced academic support, transfer services, internships and mentoring opportunities that will ensure a successful transition from high school to the university, and increase transfer rates in USDA related majors. PTSP II Builds upon the successful outcomes of our PTSP I grant which achieved a transfer rate of 84% and introduced over 900 students to USDA related opportunities and careers.

Jeff Pendergraft

Sul Ross State University

Mentoring Underrepresented Students through Sustainable Agricultural and Biological Research

Abstract: Sul Ross State University will partner with the University of Puerto Rico at Mayaguez and the Natural Resources Conservation Services (USDA-NRCS), and Chihuahuan Desert Resource Conservation and Development Area (CDRCD) to develop a science based mentoring program that utilizes sustainable agricultural and biological research projects to increase the number of underrepresented students graduating with a baccalaureate or higher degree in agriculture related science.

Roger Hanagriff

Texas A&M University, Kingsville

Improving Recruitment and Retention of Minority Students Through Experiential Learning Opportunities

Abstract: Engaging minority students to attend a major university and focus in agriculture, natural resources and human sciences is the focus of this presentation. The focus was to bring students into an academic environment for a four day workshop that engages them in experiential learning activities that allow them experiences that have the potential to increase their interest in pursuing careers focused to this area. The workshops for students will involve interactive labs, such as hands on animal labs or soils evaluations in the field. An additional focus is to create an agri-business lab experience such as a interactive business game to get students involved. In addition to educational experiences, students will have experiences with financial aid, admissions and advisement. Another focus of the program is to provide financial scholarships to current minority students to complete undergraduate research projects.

Jose F. Espiritu

University of Texas, El Paso

Building Expertise on Energy Sustainability (BEES) – An Integrative Model to Increase Research and Education in Renewable Energy Systems

Abstract: This poster presents the model “Building Expertise on Energy Sustainability (BEES)” to increase research and education in Renewable Energy Systems and Natural Resources. The BEES model is a comprehensive approach composed of four key components, which are: 1) Education, 2) Research, 3) Outreach, and 4) Connection. Each component consists of a set of structured activities such as, development of curricula, outreach to high school students by training and providing full lessons to High School Teachers in energy sustainability, mentoring undergraduate students and building strategic partnerships with other academic institutions to help increase education and research in renewable energy systems.

Sharon L. Walker

University of California, Riverside

Building Bridges Across Riverside through Nano-Water Research

Abstract: The Building Bridges Across Riverside through Nano-Water Research programs builds upon collaboration between Riverside Community College (RCC) and the University of California, Riverside (UCR), both Hispanic Serving Institutions, to (1) provide RCC students experiential learning opportunities in applied nanotechnology research occurring at UCR; and (2) to motivate and facilitate RCC student transfer to a four-year institution in USDA-related fields. The activities introduce students to research in USDA priority areas and are designed to foster an environment conducive for them to continue their studies and become the future skilled USDA workforce. Lessons learned from this model and new approaches will be discussed.

Stacey D. Lyle

Texas A&M University, Corpus Christi

USEARCH: Innovative Education

Abstract: The objectives of U-SEARCH are to fund undergraduate research students to work on existing research projects and to apply Geospatial Sciences to Agriculture Science. The research students will; (i) conduct research with scientists at the Conrad Blucher Institute for Surveying and Science (CBI) at TAMU-CC, (ii) publish results with scientists in peer-reviewed journals and/or conference proceedings, and (iii) share the research through contact back to their home high schools. Five students will benefit directly with additional benefits back to their home high school’s students.

Kim McCuiston

Texas A&M University, Kingsville

Improving Student Success Through Professional Development Opportunities

Abstract: This project will focus on recruitment and retention of an underrepresented student population to produce well-rounded leaders prepared to enter the work force and provide the human capital necessary to enhance the nation’s food supply. The outcomes will be increased graduation rates supported by the multi-faceted approach of recruitment, enculturation, and retention through experiential learning.

Lisa Morano

University of Houston, Downtown

Rocks to Wine: Connecting Urban Education and Research with the Texas Wine Industry

Abstract: The Rocks to Wine program through the University of Houston-Downtown focuses on experiential learning via undergraduate research in geology, plant biology and wine-making. Six students per year will be enrolled in a new course Rocks to Wine (open to all students) which will cover geology and plant/food science, review methodologies used in the field and include lectures from agricultural extension and the wine industry professionals. In addition to a year-long research project on geochemistry and wine quality, students will build a marketing plan for Texas wineries and serve as a 3-week summer intern with a winery or extension agent.

Edna Negrón

University of Puerto Rico, Mayaguez

Strengthening the pipeline of undergraduate students into the Masters' Program in Food Science and Technology at UPRM

Abstract: This project is aimed at strengthening the pipeline of undergraduate students from the feeder programs at UPRM, into the Masters' Program in Food Science and Technology. Activities proposed are: a curricular sequence in food science, workshops, a COOP Practice, undergraduate research, sponsorship for students to present their research work and, opportunity to apply for financial assistance to pursue the Masters' in FST. Students will be exposed to courses in food science that will allow them to explore this discipline as a possibility for graduate studies and/or a career in food science. Students able to participate in this project are 238.

Janis K. Bush

University of Texas, San Antonio

Educating through Field-Based Research and Career Development to Increase Retention of Students Pursuing College Degrees in Agriculture.

Abstract: The Teaching and Research in Environmental Ecology (TREE) Program is designed to increase the number of under represented students enrolling in natural resource and conservation courses and completing baccalaureate or graduate degrees in conservation and natural resources. The goals of the program are 1) to develop students' interests in natural resource and conservation at the K-12, community college and higher education, and 2) develop higher education students' resumes through various workshops. Workshops include scientific writing, grant writing, media training, and role-model seminars given by local, State, and national natural resource and conservation scientist.

Zenong Yin

University of Texas, San Antonio

Dietitians Today and Tomorrow/Dietistas Hoy y Mañana

Abstract: Dietitians Today and Tomorrow/Dietistas Hoy y Mañana is designed to prepare undergraduate students who attend a public Hispanic Serving Institution in South Texas for scientific and professional careers in dietetics and nutrition. The objectives of project are 1) to build a pipeline of 20-30 qualified Hispanic students per year in the Health and Kinesiology Program at UTSA to apply for the graduate programs in dietetics and nutrition, and 2) to plan a joint MSc Program in Nutrition between UTSA and UTHSC providing a much needed post-secondary education opportunity for Hispanic students by 2013.

Joy Cowden

West Hills Community College District

Water Science and Natural Resource Management for California's Central Valley

Abstract: The purpose of this project is to expand upon West Hills College's Agricultural Engineering Technology program by creating certificate options in Water Science and Natural Resource Management. With the decrease in natural resources throughout California's Westside, area industry needs to conserve every drop of water, every kilowatt of energy and every acre of grazing land. There currently is a shortage of students entering careers in irrigation and natural resources, thus creating a need for employees trained in these disciplines. This program aims to create programs which will allow students to enter the workforce or to transfer on to four-year universities.

1890's ABSTRACTS

Koffi N Konan

Alabama A&M University

Enhancement of Student Participation and Career Development in Nanobiotechnology

Abstract: The emerging field of Nanobiotechnology is furthering the goals of biotechnology with many important implications in medicine, the life sciences and society as a whole. It is estimated that more than two million workers will be employed in the nanotechnology industries by the year 2015. Yet, Americans from the minority groups continue to be underrepresented in the US workforce in science technology engineering and mathematics (STEM). This project was designed to expose high school students and to trigger their interest to STEM fields. High school seniors and teachers were trained two summers in a row in hands-on NanoBiotech laboratories. The success of the program was so great that students had to be turned down the second year for lack of available space. For 100% of participants, overall understanding and interest in STEM careers was increased. Amongst those attending college in the Fall 2009 /Spring 2010, 30 % will choose a STEM field leading to biotechnology and nanotechnology

Dahlia Jackson-O'Brien

Delaware State University

Characterization Of Anthelmintic Resistance In Small Ruminant Gastrointestinal Nematodes (Gin) In The Mid-Atlantic States

Abstract: The emergence of parasites that are resistant to all commonly used anthelmintics creates a threat to this industry. In order to effectively control parasites, current levels of resistance need to be determined and adequate means of diagnosing resistance must be available. This project utilized currently available in vitro (LDA), in vivo (FECRT), and molecular biology techniques to characterize anthelmintic resistance in nematodes of small ruminants in the Mid-Atlantic U.S. Results showed that anthelmintic resistance in GIN is a serious problem in this region. Results were used to assist producers in developing management strategies that are effective on their farms.

Guinihal Ozbay

Delaware State University

Enhancing Geographic Information System Education and Delivery Through Collaboration Curricula Design, Faculty, Staff and Student Training

Abstract: Primary purpose of the proposed teaching and extension proposal is to prepare faculty members and extension agents to produce well trained students for careers in agricultural sciences with good competency using advanced technology such as GIS and Remote Sensing in order to solve real world problems in agriculture and natural resources. This project focuses on the advancement of both Baccalaureate and Master degree programs and improves extension efforts via advancement in agricultural practices and provides opportunity for leadership development. Specifically, the following are the objectives of this proposed program: (1). Curriculum Development and/or Enhancement, (2) Faculty and Staff Advancement, (3) Student Training and Case Studies, (4) Community Outreach and Extension Activities, and (5) Information Exchange, Hands-on Training, Networking, and Professional Development. It will effectively improve the capacity of DSU in educating future agricultural workforces.

Ming Gao

Alcorn State University

Toward Value-enhanced Sweetpotato for Limited-resource Farmers

Abstract: This project is aimed at developing value-enhanced specialty sweetpotatoes for limited resource farmers. First, we identified that the structural texture of sweetpotatoes is the main factor determining its utility for snack food. We then developed a processing procedure that can drastically enhance the quality of chips made from some existing cultivars, and a simple and effective test for selecting desirable texture of sweetpotatoes. Progress has been made in selecting sweetpotato lines best suited for making snack food in a breeding program. We have also obtained two transgenic sweetpotato lines having reduced amylose content, which will be used for breeding specialty cultivars for industrial uses.

Mingxin Guo

Delaware State University

Outreach-Incorporated Studies Of Reforestation And Soil Conservation On Delaware Marginal Land

Abstract: Reforestation of marginal land in Delaware for creating wildlife habitats and preserving natural areas from urban development often encounters failure due to lack of scientific, locality-specified reforestation approaches for establishing functional forest ecosystems. This project aims to develop effective, practical reforestation and soil conservation techniques and to transfer the techniques to the local agricultural communities for preserving natural resources. It will also help Delaware State University achieve its long-term institutional goal in research, outreach, and education excellence and enhance its collaborations with state agencies and private land owners.

Moses T.K. Kairo

Florida A&M University

Implementation Of A Regulatory Plant Science Curriculum At Florida A&M University

Abstract: Globalization has emphasized the need for graduates in agriculture to have a broader knowledge including proficiency in regulatory plant science in order to deal with bio-security and other issues related to trade. Using modern technology, two key courses are now delivered by long distance delivery through collaboration with USDA-APHIS-PPQ, Center for Plant Health Science and Technology (CPHST). In addition, a program whereby FAMU students intern at CPHST, has been established. This has been successfully run over two summers with six students participating. FAMU faculty have also participated in experiential training at CPHST, in order to further enhance curricula in this area.

Muhammad Haseeb

Florida A&M University

Identification Resources for Weevils of Cultivated Palms in the United States and Caribbean Countries

Abstract: A vital step in the development of effective strategies for the prevention, eradication or management of invasive pests, is the provision of immediate and accurate identification. To this end, a digital identification tool focusing on coleopteran pests of palms is being developed. This tool is part of a broad based commodity identification resource which comprises several taxa/issue based components. A list of key Coleoptera found on palms, has been developed, and specimens obtained for imaging. Efforts have also been initiated to develop data sheets on individual species. Other activities have included training of graduate students and other professionals

Majed Dweik

Lincoln University

The Transformation of Educational Grant to Successful Applied Research Grant in Nanotechnology

Abstract: In 2008, USDA Capacity Building Grant has funded my educational grant titled Nano-Biotechnology. The objective from this grant is to develop hand-on-experimentations for undergraduate students to understand the fundamentals of Nanotechnology and its application. This grant has impacted my activities on a multiple levels. The participated students were able to use the skills learned in physics, math, biology, and chemistry since Nano Science is the combination of all the above sciences. The other impact is in research area, several applied research proposals were developed and funded. Currently I have two laboratories and a third one under construction funded by NSF.

Kenrett Y. Jefferson-Moore

NC A&T State University

Recruitment and Retention Strategies for Educating Students for Successful Careers in Agribusiness

Abstract: We assess the overall impact of recruitment and retention strategies for educating students for successful careers in agribusiness. In this presentation, we assess the attitudes of high school students participating in a residential summer program, evaluate career-oriented training strategies for undergraduates, evaluate the effectiveness of graduate advisors and mentors, and provide potential marketing strategies for recruitment and retention of agribusiness students. Our capacity to recruit Millennials is vague at this point. Although the summer program participants' understanding of agribusiness increased, their attitude towards applying to the university and selecting agribusiness as a major only increased 'a little bit, maybe'.

John Yang

Lincoln University

Reducing Arsenic Accumulation in grains by Domestic Rice Cultivars

Abstract: Human exposure to arsenic (As) causes many severe health problems including cancers. Rice grains produced from South Central U.S. were reported to contain elevated As content. This joint research aims to investigate the interactions between As and soil key constituents and develop management strategy to effectively reduce As content in rice grains through integrated laboratory, greenhouse and field studies. Outcomes of this research would help rice growers produce high quality, marketable rice grains and safeguard consumers from the potential health risk of As-elevated rice products, which supports NIFA Strategic Goal 4: Enhance Protection and Safety of the Nation's Food Supply.

Antoine J. Alston

NC A&T State University

Hydroponics For The Advancement Of Experimental Learning In Environmental Horticulture, Soil Science, and Agricultural Education

Abstract: The objectives of this project were to: (i) To provide experiential learning opportunities in hydroponics for undergraduate and graduate students (ii) To train high school agriculture teachers (AGED Graduate Students) how to build hydroponic demonstrations for their classrooms (iii) To increase enrollment in specific agricultural science courses and strengthen the curriculums. The outcomes of the project were the increased knowledge base of students in Environmental Horticulture, Soil Science, and Agriscience Education regarding hydroponic science. The impact of the project can be measured by the number of students who incorporate hydroponics into their professional activities.

Lijun Wang

NC A&T State University

An Integrated Process for Production of Ethanol and Bio-based Products from Lignocellulosic Biomass

Abstract: This multi-institutional and multi-disciplinary project is to investigate an integrated bioprocess for the economical conversion of lignocellulosic biomass including agricultural residues, forest residues and energy crops into fuel ethanol, acetic acid, xylo-oligosaccharides and activated carbon. Biomass is fractionated into the glucan-rich solid stream and xylan-rich liquid stream. The glucan-rich solid stream is further hydrolyzed with cellulase and fermented into fuel ethanol with yeast of *Saccharomyces cerevisiae*. The xylan-rich liquid stream is further fermented into acetic acid with *Clostridium thermoaceticum* or biologically converted into xylo-oligosaccharides. The fermentation residues are converted into activated carbon.

Gary R. Newton

Prairie View A&M University

Gene Expression Changes in Goat Testis During Development and in Sperm During the Breeding and Non-Breeding Seasons: A Novel Male Fertility Test?

Abstract: Male sub-fertility is a serious problem in many farm species. Current clinical tests to screen for fertility include analyses of sperm number, morphology, motility, chromatin quality, and acrosomal integrity in semen. These endpoints fluctuate due to many factors unrelated to overall fertility. Development of a simple accurate method that predicts fertility of fresh or frozen-thawed semen is a long-standing goal of the animal production industry. Objectives were to identify key seminal plasma proteins and sperm mRNAs that may lead to tests that will allow farmers to predict the utility of goat sires used in animal production systems.

Daniel Collins

Southern University and A&M College

Plant Biosecurity Short Courses to Enhance Urban Forestry Education and Training at Southern University and A & M College.

Abstract: There is a need to provide more training in plant health management at Land Grant Universities on high consequence plant pathogens. The objective of the Plant Biosecurity short courses are to enhance urban forestry education by providing students with experiential learning activities with various universities, state and federal agencies involved in plant biosecurity. Students participated in hands on training in plant biosecurity at the USDA APHIS PPQ Plant Inspection Stations in New Orleans, LA and Huston, TX. Students visited Penn State University, and the USDA ARS Lab Ft. Detrick, MD to discuss research projects on plant pathogens of national concern. The impacts of the Plant Biosecurity Short course are over 36 graduate students, 200 undergraduate, and 50 K-12 students have received training in identification, and response to high consequence plant pathogens.

Agnes Kilonzo-Nthenge

Tennessee State University

Occurrence of Antibiotic-Resistant Salmonella, Escherichia coli, and other Enterobacteriaceae isolated from Retail Meats and Domestic Kitchens

Abstract: Emergence of antibiotic resistance among food-borne and commensal bacteria has become a major area of concern. A study was undertaken to identify antibiotic-resistant Enterobacteriaceae from retail meats and domestic kitchens. Research findings indicated that retail meats and domestic kitchens were tainted with antibiotic-resistant Klebsiella, Escherichia coli, Salmonella, Morganella morganii, Yersinia enterocolitica, and Enterobacter sakazakii. Retail meats and domestic kitchen environment are sources of antibiotic-resistant bacteria and therefore, consumers need to adhere to hygienic food handling practices. Database on patterns of antibiotic-resistant bacteria will provide useful information in mitigation efforts to control emerging antibiotic-resistant foodborne pathogens.

Yadong Qi

Southern University and A&M College

Application of Nanotechnology in Forest Health Management

Abstract: Scientists at Southern University Agricultural Research and Extension Center in Baton Rouge, LA, in collaboration with Louisiana State University and USDA Forest Service, are conducting a USDA-NIFA-CBGP funded joint research project that is to apply nanotechnology in forest health management. The nanotechnology is derived from a new generation composite nano-material called Copper-Carbon Core-Shell Nanoparticles (CCCSNs), which have received increasing attention because of their low cost, unique stabilities, and demonstrated performance against Formosan termite and fungal diseases. This joint effort will have potential to advance research on control of Southern pine beetle associated fungi and other important crop and tree diseases, to develop new technologies to protect forest products against woody decay and termites, and to help secure our natural resources and economy.

Glenda Stein Johnson

Southern University and A&M College

Enhancement of K-12 Pipeline in Family and Consumer Sciences Using an Innovative Recruitment and Retention Model

Abstract: Recruiting and graduating academically qualified students from diverse backgrounds are needed to help sustain the Nation's scientific and professional workforce. A K-12 pipeline into FCS's undergraduate degree programs for students in underserved Louisiana communities was developed. It included organizing partnerships between Southern University and selected K-12 schools, developing and disseminating a recruitment DVD, parents' newsletter, and other materials related to careers in FCS. The Project also sponsored career exploration conferences for high school students, a campus workshop for local high school FCS teachers and a mentoring and awards program to improve retention of FCS students. Important impact includes increased awareness of careers in FCS, motivated Southern University FCS students, and enhanced partnerships with local K-12 schools.

Fur-Chi Chen

Tennessee State University

Surface Plasmon Resonance Sensor for Direct Detection of Campylobacter jejuni in Chicken Rinse Water

Abstract: Research efforts were devoted to develop a Surface Plasmon Resonance biosensor for the detection of Campylobacter jejuni. Three monoclonal antibodies specific to flagellar antigens were produced and applied to the sensor. Antigenic specificity and affinity of the monoclonal antibodies were characterized and the sensitivity and specificity of the sensor were evaluated. The sensor could be regenerated for more than 50 times and the responses in the middle log-linear range remained above 92% of the initial level. The developed sensor analysis, which requires minimal instrument investment and less labor intensity than other molecular methods, has potential applications in poultry processing plants.

Fisseha Tegegne

Tennessee State University

Enhancing Income of Small Farmers through on-Farm Pigeonpea Research and Outreach

Abstract: Pigeonpea (*Cajanus cajan* L. Millsp) is a warm season, high protein legume produced for human consumption and forage. Field trials involving four varieties are being conducted on research stations at Tennessee State, Virginia State, and Alabama A&M Universities. A randomized split plot design with four replications is used. The crop is also being planted on selected farmers' plots which are used as demonstration sites. In response to request by researchers and extension agents at North Carolina A and T and Delaware State Universities, sample seeds were provided for planting. The project is providing experiential learning opportunity for students in production agriculture and farm management.

Stephan Tubene

University of Maryland Eastern Shore

Strengthening the International Capacity of University of Maryland Eastern Shore Students and Faculty: A Belize Field Experience

Abstract: Nine students from the University of Maryland Eastern Shore (UMES) were placed in Belizean institutions in July 2009 and January 2010 for three weeks. Through this International Service Learning (ISL) program, all nine students were educated about the multidisciplinary aspect of agriculture. They acquired critical thinking, analytical, and problem-solving skills by analyzing and solving real field problems and issues encountered in Belizean agencies including Belize Animal Health Authority (BAHA), Belize Trade and Investment Development (BELTRAIDE), and Forest Department. An International Agricultural Development course was developed and offered at UMES in fall 2009 and spring 2010 by three UMES faculty who participated in this program. While eight students are working on their B.S. degree, one student is pursuing a graduate degree in international agricultural development.

Nina Lyon Bennett

University of Maryland Eastern Shore

Building Capacity in Family Consumer Sciences Education & Dietetics Programs: A Model for Recruitment, Retention & Increased Graduation Rates at an 1890 HBCU

Abstract: This proposal is designed to enhance recruitment, retention, and graduation rates at the University of Maryland Eastern Shore by addressing the need to attract more students from underrepresented groups into the generalized discipline of the Human Sciences. This project supports the achievement of specifically identified goals by directly concentrating on recruitment and retention needs in two important specific disciplines: FCS Teacher Education and Dietetics. The proposal expects to reform mainstream instructional practices and addresses future needs within the food and agricultural sciences system by pipelining potential college students into two low enrollment disciplines at an HBCU.

Mohammad Jalaluddin

University of Arkansas Pine Bluff

Recruitment Strategies for Enrolling Talented Students in Agricultural Sciences at the University of Arkansas at Pine Bluff

Abstract: UAPB has a remarkable history of producing minority graduates in agricultural sciences. However, in the past few decades enrollment in Agronomy has dwindled. The fear of science and negative image of agriculture seemed to be a major part of the problems. To offset this situation, we planned strategies to motivate high school students to explore careers in modern agricultural sciences. Summer internships were conducted from 2007 through 2010. About 40 high school juniors/seniors participated. Twenty-five percent interns have enrolled in agriculture at UAPB. Students' involvement in on-campus research activities can motivate students to enroll in agricultural sciences.

Arthur L. Allen

University of Maryland Eastern Shore

Balancing water quality and agricultural production priorities to save the Chesapeake Bay

Abstract: Urea Project: Harmful algal blooms have over the past decade become an increasing problem for offshore waters worldwide with impacts on fisheries, shellfish and human health. This project characterizes the spatial and temporal distribution and co-occurrence of *Pseudo-nitzschia* sp., domoic acid, urea, and other water quality parameters relative to land use to identify probable terrestrial sources of urea in the Manokin River watershed in Maryland. This study will also elucidate how urea moves from land to water bodies, and if it is tied to the development of neurotoxin domoic acid in red tides. **Litter Project:** On poultry farms, no-till leaves poultry litter used as a source of cheap fertilizer vulnerable to environmental processes that transfer nutrients to water and air. While subsurface injection has been available with liquid manures, no analog has existed for dry poultry litter incorporation beneath the soil surface until the "Subsurfer" was recently invented by ARS scientists. Working with farmers in the area, we will test the performance and agronomic effects of this technology. Feedback will be used to improve the "Subsurfer" as well as to support adoption for local farmers to help them meet their mandatory nutrient management quotas.

Bessie M. Green

University of Maryland Eastern Shore

Identification and Characterization of Biological Control Agents for Lepidopterous Pest in Delmarva Ecosystem

Abstract: Corn and soybean crops growing in Delmarva are damaged by Lepidopteran pests, corn earworm (*Helicoverpa zea*, Boddie) and silver spotted skipper (*Eparagyreus clarus*). These pests have become resistant to conventional chemical and biological insecticides. Public pressures have decreased chemical usage for environmental safety. Therefore, biocontrol agents similar to *Bacillus thuringiensis* must be expanded. Bacilli isolated from *E. clarus* larvae were tested from 2004 through 2009. Fifty percent of isolates tested caused 60-80% mortality of larva in 5 to 7 days. Bacilli identification was based on 16SrRNA gene alignment. These new bacilli could have the potential of decreasing corn ear and soybean foliar damage.

Fawzy M. Hashem

University of Maryland Eastern Shore

Pathogen Testing Metrics for GAPS in Delmarva Leafy Greens/Fresh Produce and Poultry Litter Compost

Abstract: Poultry litter, runoff water, and aerosolized bacteria can serve as three pathways responsible for microbial contamination of field-grown fresh produce. This study investigated these three pathways by assessing their potential to contaminate crops and methods to prevent contamination. Non-pathogenic strains of *E. coli* O157:H7 and *Salmonella* were inoculated into piles of chicken litter and subjected to a composting process for three months. Initial *Salmonella* and *E. coli* O157:H7 populations were 4.28 and 6.61 log₁₀/g, respectively, which declined rapidly to nearly undetectable concentrations during the first six days of composting. Generic *E. coli* and fecal coliforms persisted for up to 55 days. To assess pathogen transport by runoff, soil was amended with four manure types and subjected to two rainfall simulations. Manure types with the highest initial levels of bacteria, 5-6 log₁₀/g, also served as sources for the highest levels of bacteria detected in runoff water. Pathogen levels were higher in runoff water immediately after manure was applied to soils than at later dates. This study provides growers and consumers with information on potential fresh produce field level contamination sources and suggests approaches that can make fresh produce grown for human consumption a safer commodity.

Shobha Sriharan

Virginia State University

Collaborative Efforts for Student Training in Interactive Communications on Current Global Issues through Innovative Instruction: Faculty Writing Case Studies and Student Preparing Reflections of Case Studies and Exchanging with their Peers via Discussion

Abstract: Virginia State University (VSU) in collaboration with Florida A & M University (FAMU), Elizabeth City State University (ECSU), and Global Seminar Program at Virginia Tech developed an innovative teaching module, "Global Seminar". The activities included: (i) faculty development for writing case studies on Climate Change, Antibiotics in Farming, Genetically Modified Organisms, and Florida Orange Juice: Food Safety Issues, (ii) Integrating these case studies by offering the course, "Global Seminar" at VSU, ECSU, and FAMU, (iii) Guiding undergraduates in writing their reflections on the case studies and exchanging their views with peers at partner institutions via discussion board, videoconferencing, and Webcast.

Mark Kraemer

Virginia State University

Integration of Native Bees with Honey Bees for Sustainable Pollination of Fruit Crops

Abstract: A native solitary bee, *Osmia lignaria* Say, commonly known as the Blue Orchard Bee, was established in 4 orchards in Virginia and North Carolina over a period of 3 years to evaluate the use of this bee for tree fruit pollination. Populations increased up to several fold per year. Information on nest design, pollen choice, and natural enemies showed that this bee is a good candidate for alternative or supplemental orchard pollination if properly managed and if competing alternative forage is not overly abundant. Large scale nesting shelters are being designed for the 2011 season.

Asmare Atalay

Virginia State University

Establishing 1890s Land Grant universities Water Center

Abstract: An effective virtual Water Center is critically needed to transmit research, education, and extension activities of the 1890 Land Grant Universities. These institutions need to have a comprehensive water management planning and database that can be accessed both at regional and local levels. Currently such information may only be available in scattered and scant format in very few institutions that have developed water programs. Such a virtual Center will house databases that are archiveable and useful for various applications. Research, extension and academic programs can benefit a great deal from such a resource. The purpose of establishing a centralized 1890 Land Grant Water Center is to bridge the gap among institutions by sharing education and outreach methods, tools and technologies, and other needed information on water and related environmental issues, thus enabling research, academic, and extension programs to become more visible, accessible, and effective in serving the underserved clientele. The objectives are to: (1) enhance and/or initiate integrated water programs at each 1890 LGU through collaborative research, teaching, and outreach efforts; (2) investigate and document water and related issues within rural and underserved communities; (3) develop geo-spatial database on water related issues that can be used as decision-making tools; and (4) provide seed money for collaborating 1890s LGUs to initiate water programs.

Shobha Sriharan

Virginia State University

Instruction of Geographic Information System (GIS): Curriculum, Faculty, and High School Teacher Development, and Student Experiential Learning

Abstract: This presentation summarizes the outcomes of the 1890 Teaching Project led by Virginia State University in collaboration with Delaware State University and Elizabeth City State University. The project's accomplishments are: (i) instruction of Geographic Information System-GIS (AGRI 280, GEOL 360), Advanced GIS (GEOL 461), and Remote Sensing (AGRI 290, GEOL 365), (ii) faculty development in teaching GIS (iii) increased student enrollment in these courses, (iv) students availing themselves internships, (v) publications and presentations by the faculty members and students; (vi) awareness of GIS and career planning among precollege students, and (vii) high school teacher preparation for integrating GIS in curriculum.

John Parry

Virginia State University

Anti-diabetic Properties of Pomace

Abstract: This project will examine the effect of fruit pomaces that may assist in the prevention of type 2 diabetes. Alpha-glucosidases hydrolyze short chain sugars which are then absorbed into the body as individual sugar molecules. The inhibition of the activity of these enzymes can reduce spikes in blood sugar, therefore, reducing stress on the pancreas. Recently, some extracts have been shown to reduce the activity of α -glucosidases in vitro, and in a human study, the extracts showed a substantial reduction in the blood glucose absorption rate. Results of this project may promote human health and provide extra profits for producers

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Project Directors Conference/Workshop Participating Institutions

Hispanic-Serving Institutions

California State University, Fresno
California State University, Los Angeles
California State University, Northridge
California State University, San Marcos
California State University, Stanislaus
Eastern New Mexico University
Florida International University
Houston Community College
Laredo Community College
New Mexico Highlands University
New Mexico State University
Northeastern Illinois University
Otero Junior College
Regents of the University of New Mexico

Santa Ana College University
St. Edwards's University
Sul Ross State University
Texas A&M University, Corpus Christi
Texas A&M University, Kingsville
The University of Texas at El Paso
University of California, Riverside
University of Houston, Downtown
University of Puerto Rico, Mayaguez
University of Texas, San Antonio
West Hills Community College District

1890 Institutions

Alabama A&M University
Alcorn State University
Delaware State University
Florida A&M University
Lincoln University
North Carolina A&T State University
Prairie View A&M University

South Carolina State University
Southern University and A & M College
Tennessee State University
University of Arkansas at Pine Bluff
University of Maryland Eastern Shore
Virginia State University

