



Exemplifying Cooperation: *Southern Agbiotech Consortium for Underserved Communities*

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and

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An Eleven University Consortium

- Alabama A&M University (AAMU)
- Alcorn State University (ASU)
- Florida A&M University (FAMU)
- Fort Valley State University (FVSU)
- Langston University (LU)
- North Carolina A&T and State Univ. (NCAT)
- Prairie View A&M University (PVAMU)
- Southern University (SU)
- Tennessee State University (TSU)
- Tuskegee University (TU)
- University of Arkansas at Pine Bluff (UAPB)

How Problem Area was Identified?

- Two pre-proposal meetings were held in 2000 among 1890 faculty
 - At Tuskegee University 3/4/00
 - Atlanta Airport 3/22/00
- 8-10 institutional representatives attended each meeting
- Basic components of the project were commonly agreed upon

Refinement of Problem area

- Holding of these meetings was the best investment the institutions had made.
- It developed camaraderie and exchange of ideas.
- The main project components: education, training, crop demonstrations, and socioeconomic studies were agreed upon.

Project Development

- One of the best thing CSREES did was the advance notice.
- The key thrust areas for RFP were well-known for over a 4-month period Jan.-May 2000.
- Each participating campus in the consortium provided written and budgetary input.
- Heated philosophical and pragmatic discussions helped.

Evolution of Project: Management/Team Building/ Pre-agreed Principles

- We will have a close working relationship ARD/ 1890 administrators
- We will have a decentralized structure
- one lead institution but....
- Four co-lead institutions; one for each of the four objectives and additional funds will be provided
- Each institution will have common minimum work and therefore, base funding

Evolution of Project: Management/Team Building/ Pre-agreed Principles...

- Each Objective will have a coordinating committee
- We will have an yearly meeting and an annual report
- We will have a small but a hands-on advisory board and an external evaluator
- We will identify and work with key “industry” and other “not-for-profit” cooperators

How SACUC Functions?

● SACUC Advisory Committee

- Dr. David Gilchrist, UC Davis, CEPRAP/PI Pathologist
- Dr. Fred Buttle, Rural Sociology, Univ. of Wisconsin
- Mr. Ralph Page, Federation of Southern Cooperatives

■ Administrative Support Team (AST)

- Deans and Directors, 1890 Institutions, ARD, AEA,

How SACUC Functions?

• Coordinating Committees

- ✓ Education Outreach Committee
- ✓ Commodity Outreach Committee
- ✓ Community Outreach Committee
- ✓ Socio-economic Studies Committee

■ Leadership Team

- ✓ 11 Campus Coordinators

• Program Evaluation

- ✓ Internal Evaluation
- ✓ External Evaluation

How SACUC Functions?

Committee Chairs

Education Outreach:

Dr. George Accquaah

Langston University

Commodity Outreach

Dr. Allan Zipf

Alabama A&M University

Community Outreach

Dr. Samuel Besong

Alcorn State University

Socioeconomic Studies

Dr. Ellene Kebede

Tuskegee University

•SACUC Campus Coordinators

Dr. Duncan Chembezi, Alabama A&M University

Dr. Samuel Besong, Alcorn State University

Dr. Mehboob Sheikh, Florida A&M University

Dr. Anand Yadav, Fort Valley State University

Dr. George Acquaaah, Langston University

Dr. Yemane Ghebreiyessus, Southern University

Dr. Fisseha Tegegne, Tennessee State University

Dr. Marceline Egnin, Tuskegee University

Dr. Millie Worku, N. C. A&T and State University

Dr. Mohammed Jalaluddin, Univ. of Arkansas Pine Bluff

Dr. Michael Osuji, Prairie View A&M University

■ **Education Outreach Coordinating Committee:**

Dr. George Acquah, Chair, Langston University

Dr. Mohamed Jalaluddin, Univ. of Arkansas Pine Bluff

Dr. John Hubble, Southern University

Dr. Anand Yadav, Fort Valley State University

■ **Socioeconomic Studies Coordinating Committee:**

Dr. Ellene Kebede, Chair, Tuskegee University

Dr. Duncan Chembezi, Alabama A&M University

Dr. Curtis Borne, Fort Valley State University

Dr. Alton Thompson, North Carolina A&T University

Dr. Fisseha Tegegne, Tennessee State University

Dr. Gerald Wheelock, Alabama A&M University

Commodity Outreach Coordinating Committee Members

Dr. G. Acquah

Dr. N. Alvarez

Dr. N. Aziz

Dr. C. Bonsi

Dr. C. Borne

Dr. M. Egnin

Dr. S. Gebrelul

Dr. Y. Ghebreyessus

Dr. L. Jackai

Dr. M. Kamp-Glass

Dr. H. Mazhar

Ms. M.L. McGraw

Dr. R. Mentreddy

Dr. G. Osuji

Mr. E. Rand

Dr. R. Sauve

Dr. G. Sharma

Dr. M. Sheikh

Dr. F. Tegegne

Mr. J. Willis

Dr. A. Yadav

Dr. G. Yang

Dr. A. Zipf (Chair)

•SACUC Web Page Committee

www.sacuc.subr.edu

Dr. John Hubble, Southern University

Dr. Allan Zipf, Alabama A&M University

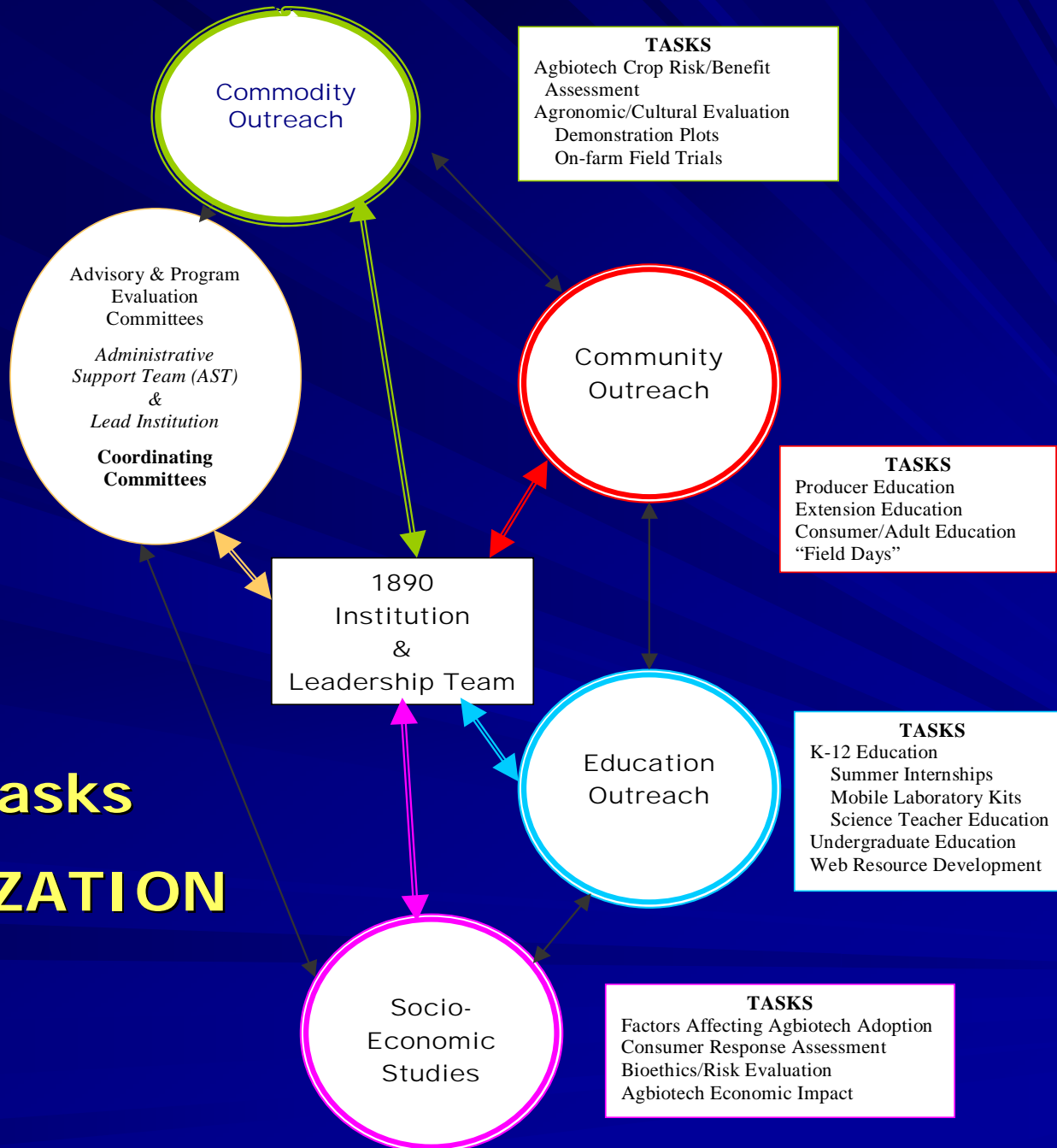
Dr. George Acquaaah, Langston University

Mr. Curtis Borne, Fort Valley State University

Dr. Millie Worku, N. C. A&T State University

Ms. Catharine Strother, Alabama A&M Univ.

SACUC Tasks ORGANIZATION

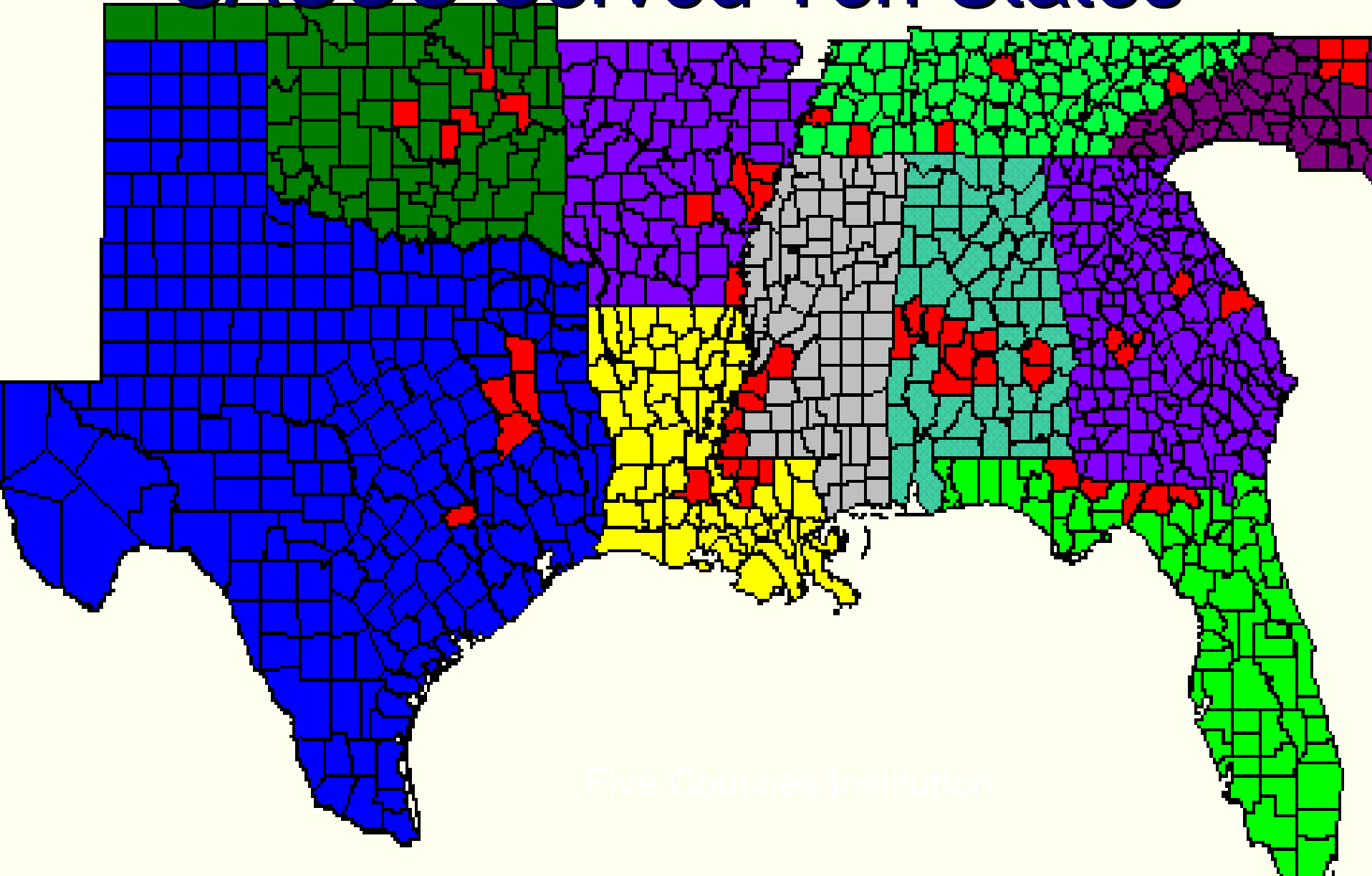


Funding of the Consortium

● Alabama A&M University (AAMU)	796,754
● Alcorn State University (ASU)	374,034
● Florida A&M University (FAMU)	224,999
● Fort Valley State University (FVSU)	226,424
● Langston University (LU)	525,000
● North Carolina A&T & State Univ. (NCAT)	223,997
● Prairie View A&M Univ. (PVAMU)	225,000
● Southern University (SU)	223,155
● Tennessee State University (TSU)	224,872
● Tuskegee University (TU)	377,957
● University of Ark at Pine Bluff (UAPB)	222,023

Selected SACUC States and Counties

SACUC Served Ten States



Five Counties/Institution

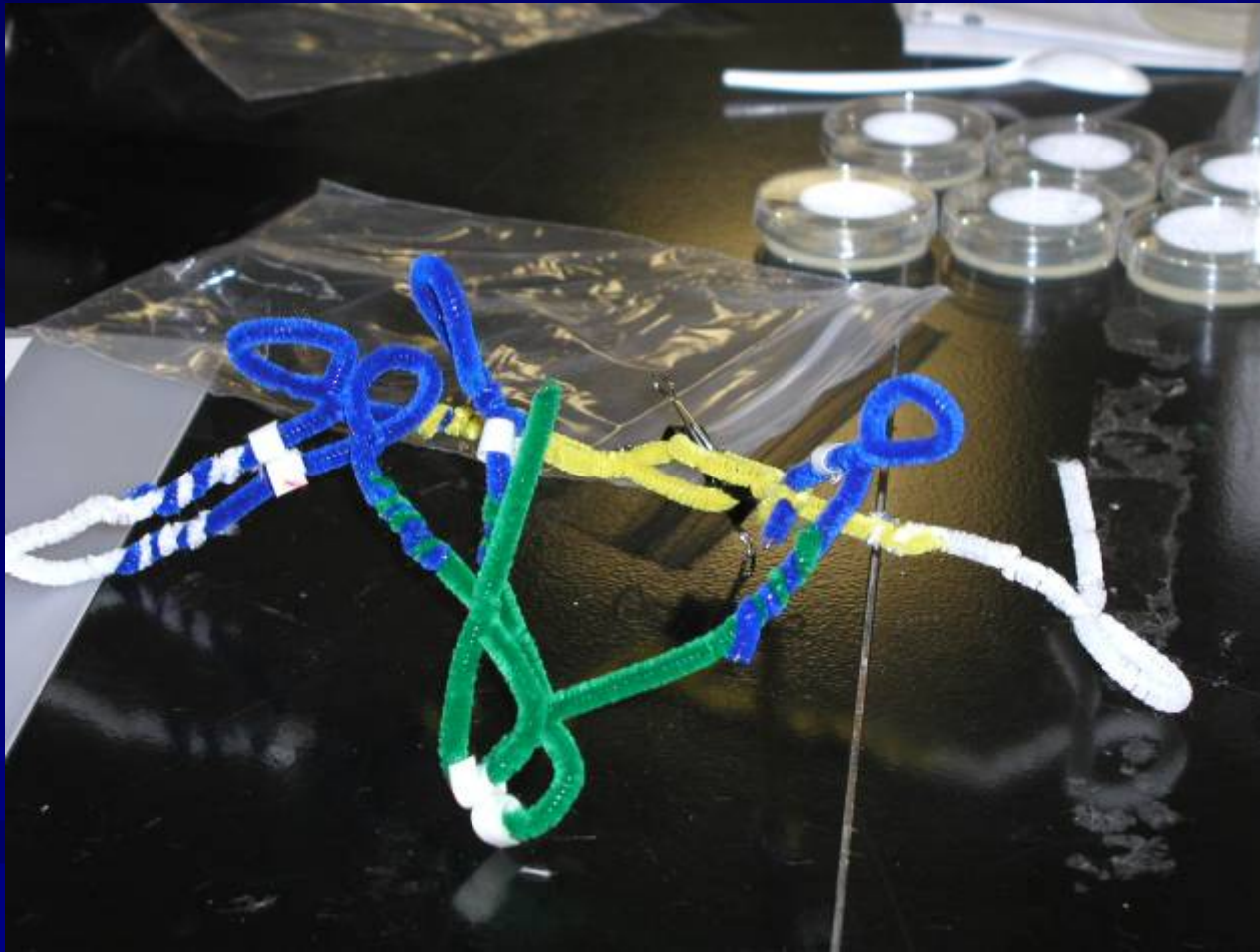
SACUC Collaborators

- Eden Biosciences
- Monsanto Life Sciences
- Syngenta Seeds
- Seminis
- National 4-H Council
- USDA/ARS Technology Transfer
- University of California, Davis /CEPRAP

Educational Outreach

- Primary focus is 9-12 grade (high school) students.
- Teachers trained and equipped with Biotechnology Kits for classroom use.
- Science and Ag Science Teachers were included

Teacher Training at Tuskegee University



Macon County Middle School Students at Tuskegee University



Teacher Training at Tuskegee University



SACUC Biotech Intern at Tuskegee University



SACUC Participation by Teaching Faculty

SACUC PRESENTATION BY FVSU TEAM AT DOOLY COUNTY HIGH SCHOOL, VIENNA, GA, ON 16 MAY 2002



Teacher Training at Alabama A&M University 2002



Teacher Training at Fort Valley State University



UC DAVIS SACUC Teacher Workshop July 2004



Commodity Outreach

- Goals include identification of agbiotech crops and pest management demonstrations using:
 - ✓ Replicated on-campus trials
 - ✓ On-farm demonstrations.



SACUC Agbiotech Crops



On-Station Trial at Southern University



Corn Ear Worm on non-Bt Sweet Corn



'Prime Plus' supersweet corn (Syngenta)

Comparison of Bt (left) vs. Non-Bt (right) sweet corn
at Alabama A&M University



A comparison of genetically modified and conventional squashes at Tuskegee University



Roundup Ready Soybean Plots at Fort Valley State University



Comparison of virus resistant and non-virus resistant zucchini squash at Tennessee State University



High Protein Sweet Potato Slip Propagation at Tuskegee University



Community Outreach

- ✓ Field days
- ✓ Small farmer workshops
- ✓ Professional worker training

SACUC Participation by Extension Agents



County Extension Agents participate in "hands-on" Biotechnology Demonstration at a SACUC Workshop



Sweet corn demonstration Southern University.



Twenty five such demonstrations/field days and Small Farmer Workshops were held for the consortium in 2001 introducing agbiotechnology Crops

On Farm Demonstration Tuskegee University



Field Day at Alabama A&M University



Farmers Market in the Alabama's Black Belt selling of crops grown in the project



Community Outreach at UAPB



Outreach Workshop at Prairie View A&M Univ. June 2004

Registration Form

Name
Employment Title
Company/Organization/Academic Institution
Department/Division
Mailing Address
City/State/Zip
Telephone/Fax Numbers
E-mail

Advanced Registration (June 4, 2004)

\$65.00 — One Day
\$95.00 — Two Days

Late Registration

\$95.00 — One Day
\$140.00 — Two Days

(Meals & Snacks Included)

Registration Fees payable to CARC
(Checks only)

Mail to:
Dr. Velva McWhinney
P.O. Box 4079

Conference Audience

Farmers
Teachers
Students
University Faculty
Extension Staff and Professionals
Research Staff and Professionals
Corporate Personnel

For More Information Contact

Velva McWhinney, Ph.D.
936.857.4061
velva_mcwhinney@pvamu.edu

Godson Osuji, Ph.D.
936.857.2030
godson_osuji@pvamu.edu

Nathaniel Keys, Ph.D.
936.857.2317
nathaniel_keys@pvamu.edu

Conference Location

Prairie View A&M University
Prairie View, Texas 77446

For exact location call:

936.857.3311
or
936.857.4823

Lodging

Lodging located at FM 1960 and Hwy 290 (30 minutes from the campus of Prairie View A&M University — traveling west on Hwy 290)

Holiday Inn Express — 800-HOLIDAY
Hampton Inn — 800-HAMPTON
La Quinta Inn — 281.469.4018
Best Western Windsow Suites — 800.528.1234



CROPPING WITH BIOTECHNOLOGY

June 13 - 15, 2004

Southern AgBiotechnology
Consortium for Underserved
Communities
(SACUC)

Socioeconomic Studies

- ✓ Evaluation of adoption of biotech crops by producers.
- ✓ Analyzing consumer perception of biotechnology.
- ✓ Assessing understanding of biotechnology among college students
- ✓ Thesis completed; papers presented; manuscripts developed

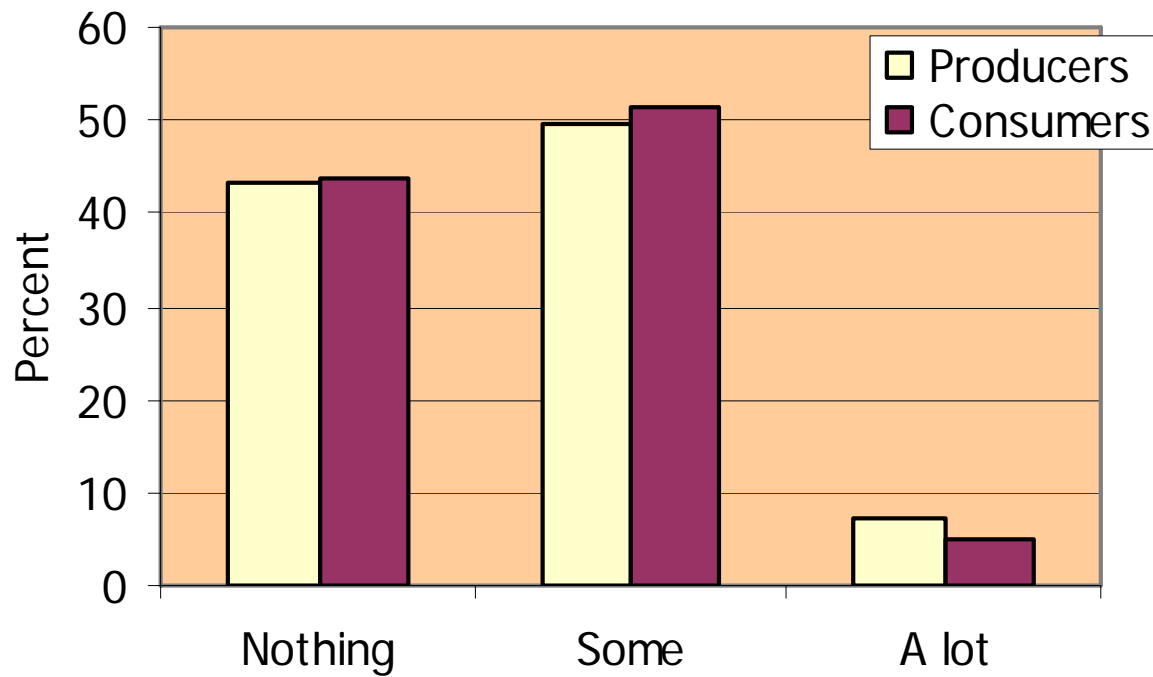
Producer Survey

- Completed in 55 selected counties in ten states
- Respondents' socio-economic characteristics were obtained.
- Agbiotech knowledge, perception & concerns assessed
- Alabama Agricultural Statistical Service aided in the survey;
- 3,436 complete reports are being used in analysis.

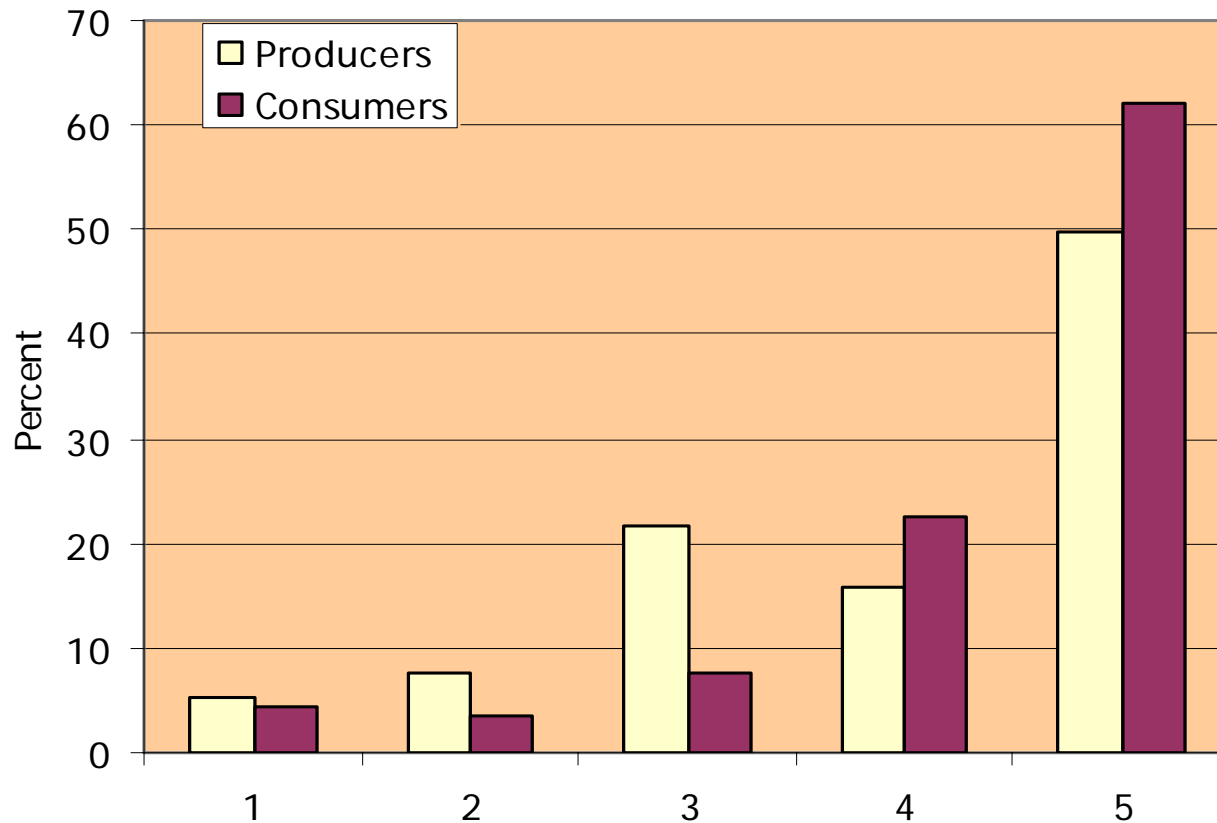
Consumer Survey

- Conducted in the urban centers of the ten states
- There were 3,000 complete reports.
- The average age of producers was 62 years while for consumers 48 years.
- The average education level for the producers was some college and consumer were college graduates.

Producers' and Consumer's Perceived knowledge About Agbiotechnology



Producers' and Consumers' Attitude Toward Mandatory Labeling



1= strongly disagree 2= somewhat disagree 3= neutral 4= somewhat agree 5= totally agree

Survey Results...

- The majority of producers and consumers have limited knowledge of agbiotechnology.
- The majority in both surveys were for mandatory labeling.
- **Agbiotechnology Knowledge** and **education** had positive and significant correlation.
- **Mandatory labeling** and **education** had positive and significant correlation in the producers survey but in the case of consumers, it was positive but not significant.

•SACUC Synopsis

■ Educational Outreach

- 89 Teachers trained in 1 week or longer sessions
- 207 Teachers trained in 1-2 day training sessions
- 29 U.C. Davis workshops 1 week sessions
- 688 Student participated and/or held Apprenticeships
- 58 High Schools received Instruments/kits
- 125 Schools received information, training or material support

■ Commodity Outreach

- 52 On-station: studies in replicated experiments
- 70 Number of on-farm trials/demonstrations

SACUC Synopsis

■ **Community Outreach**

- **1,268 Farmers, extension agents attended workshops and field days**
- **1,068 Educational magazines and CDs/DVDs distributed**

■ **Socioeconomic Studies**

- **3,300 Producer Surveys completed and analyzed**
- **3,000 Consumer surveys completed and analyzed**
- **380 College surveys completed and analyzed**

■ **SACUC website**

- *<http://www.subr.edu/sacuc>*

•College Student Survey

Introductory Biology students at 8 SACUC Institutions:

Florida A&M University,
Alabama A&M University,
Fort Valley University,
University of Arkansas-Pine Bluff,
Tennessee State University,
Prairie View A&M University,
North Carolina A&T University, and
Tuskegee University.

•College Student Survey

METHODOLOGY

The questionnaire consisted of 15 questions sets;

Covering college student's demographics and their opinions and know ledge of genetic modification.

The questionnaire was developed by the SACUC Social Science committee and a very able editor, Fred Buttel.

The instructors teaching Biology 101 and 102 administered the survey in their respective classes during 2004.

•College Student Survey...

1. How familiar would you say you are with genetic engineering and biotechnology?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I have heard and read A LOT about genetic engineering.	82	9.8	11.0	11.0
	I have SOME familiarity with genetic engineering.	366	43.7	49.0	60.0
	I have NOT HEARD MUCH about genetic engineering techniques.	299	35.7	40.0	100.0
	Total	747	89.2	100.0	
Missing	System	90	10.8		
Total		837	100.0		

•College Student Survey...

4. Which of the following statements most agrees with your view about the safety of food in the U.S.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I trust our regulatory process and assume that all foods on	322	38.5	41.5	41.5
	I am concerned that the regulatory process is not thorough e	387	46.2	49.9	91.5
	I do not have an opinion about food safety regulations in th	66	7.9	8.5	100.0
	Total	775	92.6	100.0	
Missing	System	62	7.4		
Total		837	100.0		

M.S. Theses

- *Perceptions of Alabama Producers on Labeling Genetically Modified Food Products.* Alabama A&M University (Elicia L. Chaverest), 2003.
- *Profitability of Genetically Engineered Crops Among Farmers in North Alabama.* Alabama A&M University (Erica R. Johnson), 2003.
- *Small Farmers Perceptions of genetically Modified Crops.* Alabama A&M University (Kamika Lucas), 2003
- *An Assessment of Producers Attitudes and Perception Toward Agricultural Biotechnology in South West Alabama.* Tuskegee Univ.
- *Consumers Perceived Knowledge of Genetically Modified Organisms and Labeling in the Black Belt Counties of Alabama.* Tuskegee Univ.

•Paper and Poster Presentations

Awareness and Perceptions of Biotechnology Among Science Students in Predominantly Black Land-Grant Universities.

Rural Sociological Society annual conference, Tampa, Florida, August 9-12, 2005.

Producers' Opinions and Mandatory Labeling of Genetically Modified Food Products.

Hawaii International Conference on Business in Honolulu, Hawaii, May 21, 2005.

Consumers' Awareness and Willingness to Pay for Genetically Modified Food Products: Lessons from the Southern Agricultural Biotech Consortium for Underserved Communities.

American Agricultural Economics Association (AAEA) Denver, Colorado, August 1-4, 2004.

An Analysis of Producers' Opinions on Mandatory Labeling of Genetically Modified Products. *Southern Agricultural Economics Association Tulsa, Oklahoma, February 14-18, 2004.*

Correlates of Producers' Perceptions on a Mandatory Labeling Program for Genetically Modified Products.

Missouri Valley Economics Association St. Louis, Missouri, February 27-March 1, 2003.

Producers' Perceptions On Labeling Genetically Modified Products.

Southern Rural Sociological Association Annual Meeting, Mobile, Alabama, February 1-5, 2003.

Communicating Agricultural Biotechnology to Underserved Communities.

Southern Agricultural Economics Association Annual Meeting in Orlando, Florida, February 2-6, 2002.

Tegegne, F., S. Muhammad, E. Ekanem and S. Singh. 2004. "Attitude of Tennessee Consumers towards Labeling," paper presented at the Annual meeting of the American Agricultural Economics Association, Denver.

Tegegne, F. and A. Aziz. 2003. "Trend in Production and Trade of Transgenic Crops and Field Trials at Tennessee State University," presentation made to farmers and extension agents, Franklin County, Winchester, Tennessee.

Tegegne, F., S. Muhammad and E. Ekanem. 2003. "Tennessee Farmers' Perceptions of and Attitudes towards Agricultural Biotechnology," paper presented at the Southern Agricultural Economics Association, Mobile.

Tegegne, F., S. Muhammad and E. Ekanem. "Factors Affecting Farmers' Knowledge of Agricultural Biotechnology: Survey Findings." 2003. Paper presented at the Annual meeting of Food Distribution Research Society and subsequently published in the Journal of Food Distribution Research, Volume XXXIV, Number 1, March, 2003.

An outreach brochure summarizing the activities of the SACUC project in Tennessee was distributed at the 2004 Tennessee Small farmers' expo and at the last SACUC project impact assessment meeting in Nashville.

Lessons Learned

- Size of the consortium?
- Inter-University consortium culture.
- “GM crops: European reaction” & other factors causing slowing new crop entry.

Other Lessons Learned...

- Stronger links with the State, City and County-level Boards of Education
- Science Education: AgScience Education (turf wars?)
- Was extension sufficiently integrated in SACUC planning & implementation?
- Federation's decision on the SACUC Advisory Committee



SACUC: Positive Lessons Learned

- Pre-proposal planning meetings (2) integrated ideas from cross-section of teaching, research and extension.
- Proposal submitted to IFAFS under Social Science Component.



Positives at Programmatic Level...

- Underserved focus allowed us to work in counties with most need.
- Knowledge and resource transfer to high schools.
- Scientists/extension personnel conducted on-station and on-farm demonstrations.



Positives at Programmatic Level...

- Expanded teaching, research and public outreach efforts in agbiotechnology.

Each of 11 SACUC institutions have received funded proposals in biotech education, research or outreach

- Improved communications between:
 - ✓ Faculty at different campuses.
 - ✓ Life scientists and social scientists.
 - ✓ Researchers, extension faculty & agents.
 - ✓ University and high school faculty.



Positives at Programmatic Level...

- Provided resources to undertake regional socioeconomic studies.
- Stimulated interest in graduate level research on our campuses.
- Partnered with public, private and governmental entities.



■ Thank you!