UTRGV

CENTER FOR SUSTAINABLE AGRICULTURE & RURAL ADVANCEMENT





2017 ANNUAL REPORT

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LETTER FROM THE CO-DIRECTORS

Welcome to the 2017 Annual Report for UTRGV's Center for Sustainable Agriculture and Rural Advancement (SARA). Through this report, we provide an overview of SARA's activities, operations, and accomplishments during 2017, the Center's first year of operation. In our first annual-report letter, we wanted to share with you the events and activities that led to the establishment of this new, integrated, research center, and also review the contents of this report.

SARA was created in the spring of 2017. Previously, SARA's legacy center, the Center for Rural Advancement, had been the rural-development arm of UTRGV's Department of Economic Development. However, rural development and sustainable agriculture are inexorably intertwined, and rural-development activities at UTRGV had become more involved in sustainable agriculture in recent years. SARA's legacy center had been created and directed by George Bennack, who had a background in both rural development and in agriculture.

In the fall of 2013, Dr. Alex Racelis started a research and teaching program in Agroecology at UTRGV's legacy institution, UT Pan American. This Agroecology program involved the ecological processes that operate in agricultural production systems. This program combined student-centered research, education, and community engagement to address issues that affect agroecosystems in South Texas. Also in 2013, George Bennack headed a task force that included Alex Racelis, which led to the development of organic-certified research and community gardens at the Edinburg campus in 2014. Alex Racelis and George Bennack began working together frequently on projects related to sustainable agriculture.

In late 2016, the visionary dean of the College of Sciences, Dr. Parwinder Grewal, suggested that Dr. Alex Racelis and George Bennack combine their research and outreach efforts under one unified center, the Center for Sustainable Agriculture and Rural Advancement. Racelis and Bennack developed a proposal for this new research center, and in the spring of 2017, the legacy Center for Rural Advancement became SARA—the Center for Sustainable Agriculture and Rural Advancement. Also in spring 2017, UTRGV's College of Sciences established its Master of Science (MS) in Agricultural, Environmental, and Sustainability Sciences, making the spring of 2017 a pivotal period in the development of agricultural programs at UTRGV.

SARA was established as a multi-disciplinary, integrated, research center, integrating research, education, and outreach in sustainable agriculture and rural development. SARA helps develop opportunities for engaged scholarship and experiential learning, preparing UTRGV students for future jobs that address the environmental, economic, and social challenges associated with meeting the need of food, fiber, and fuel for a growing world population. SARA facilitates experiential-learning and internship opportunities for students, serving as a coordinating platform for UTRGV's interdisciplinary degree plans related to sustainable agriculture.

This 2017 Annual Report for SARA contains a linked Table of Contents on the second page. The report follows with SARA by the Numbers then provides the purpose, mission, and organizational structure for SARA. The 2017 activities for SARA are summarized and an innovative approach to providing financial information and performance metrics for SARA is provided. The report concludes with information on the 2017 economic and social impacts of SARA, and with recognition of SARA's sponsors and partners.

In summary, 2017 was a challenging year of startup for SARA. This 2017 Annual Report for SARA shows a strong carryover of USDA-funded agricultural outreach program from SARA's legacy center, with focus on beginning and Hispanic farmers, cooperative development, and rural-energy assistance. The report shows strong engagement with UTRGV students and substantial research activity, considering the recent start-up of agricultural programs at UTRGV. This report demonstrates an aggressively leveraged program with substantial leveraging of minimal institutional funding with federal USDA and state line-item funding. Institutional funding comprised 15% of SARA's total 2017 budget of nearly $1.4 million and was leveraged against soft money by a factor of nearly 7 to 1.

In conclusion, we hope you find this 2017 Annual Report for SARA informational and interesting. We've included a number of captioned photographs that visually capture SARA activities. Please don't hesitate to visit the SARA website at www.utrgv.edu/sara for more information. Lastly, we would like to recognize the three graduate students that played a strong role in the development of this report: Allison Kaika, Joy Youwakim, and Matthew Kutugata.

SARA BY THE NUMBERS

2,290
PROGRAM PARTICIPANTS

196
ONE-ON-ONE TECHNICAL ASSISTANCE VISITS

$2.5M
IN ECONOMIC IMPACT

41
WORKSHOPS

30
ENGAGED STUDENTS

PURPOSE AND MISSION

SARA's mission is to improve agricultural sustainability and advance rural communities through research, education, and outreach activities that engage students, faculty, and staff.

SARA does this by connecting researchers with farmers thus creating engaged scholarship and providing experiential learning opportunities.

Research results are disseminated throughout South Texas and beyond. Our work connects local knowledge and participatory research that addresses questions farmers have about increasing yields while reducing environmental degradation to their farm and their community.

SARA bolsters UTRGV as the premier university in Texas for undergraduate and graduate education in sustainable agriculture and food systems. SARA activities connect capstone, experiential- learning, and internship opportunities for students. SARA serves as a coordinating platform for UTRGV's interdisciplinary degree plans related to sustainable agriculture.

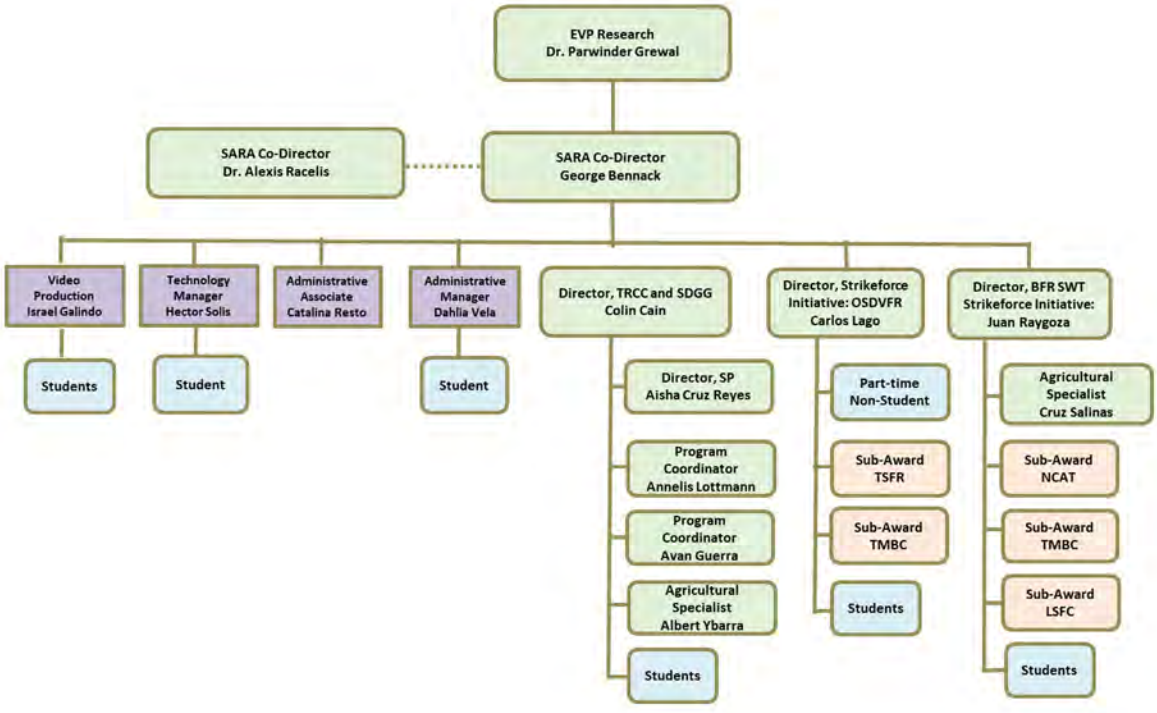
STRENGTHENING UTRGV MISSION AND GOALS

SARA supports UTRGV mission and goals by:

- Providing accessible community-based research opportunities to students
- Providing jobs and internships to students, preparing them for careers in agricultural and rural sustainability
- Committing to the improvement of agricultural and rural sustainability in the Rio Grande Valley through education and research
- Focusing on providing resources to existing communities to ensure sustainable economic and environmental development in the Rio Grande Valley

From left to right: George Bennack, Albert Ybarra, Dahlia Vela, Catalina Resto, Israel Galindo, Juan Raygoza, and Cruz Salinas. Not shown: Colin Cain, Aisha Cruz-Reyes, Avan Guerra, Carlos Lago, Annelies Lottman, and Hector Solis.

ORGANIZATIONAL STRUCTURE



Acronyms are as follows: TRCC (Texas Rural Cooperative Center); SDGG (Socially Disadvantaged Groups Grants); SP (Sponsored Projects); OASDVFR (Outreach and Assistance for Socially-Disadvantaged and Veteran Farmers and Ranchers; TSFR (Texas Small Farmers and Ranchers, CBO); TMBC (Texas Mexico Border Coalition, CBO); BFRDP (Beginning Farmer and Rancher Development Program); NCAT (National Center for Appropriate Technology); LSFC (La Semilla Food Center).

Graduate students measure soil respiration during an on-farm cover-crop trial

RESEARCH ACTIVITIES

Soil Health

The Subtropical Soil Health Initiative involves research conducted by the Agricultural Environmental and Sustainability Sciences Masters Program students and faculty, along with Environmental Science undergraduates to determine the feasibility and value of incorporating cover crops and reduced tillage on certified-organic, non-irrigated cropland in the Rio Grande Valley.

Asparagus

Researchers looked at the long-term impact of the South Texas summer heat on asparagus production. Studies compared five different cultivars of asparagus and assessed their viability as a cash crop.

Drones in Agriculture

Unmanned aerial systems (UAS), or drone technology, is being used to increase participation of South Texas students in the field of agricultural extension. This project targets students transitioning from a two-year to four-year college and includes coursework in UAS operation, application, and ethics.

Agricultural Education

CENA, Curricula Development, Experiential Learning, Networking, and Agroecology for a Diverse Student Clientèle in South Texas, includes advanced curriculum development in agroecological and food-related sciences to create a high-school, college, career pipeline for Hispanic students.

Graduate Research

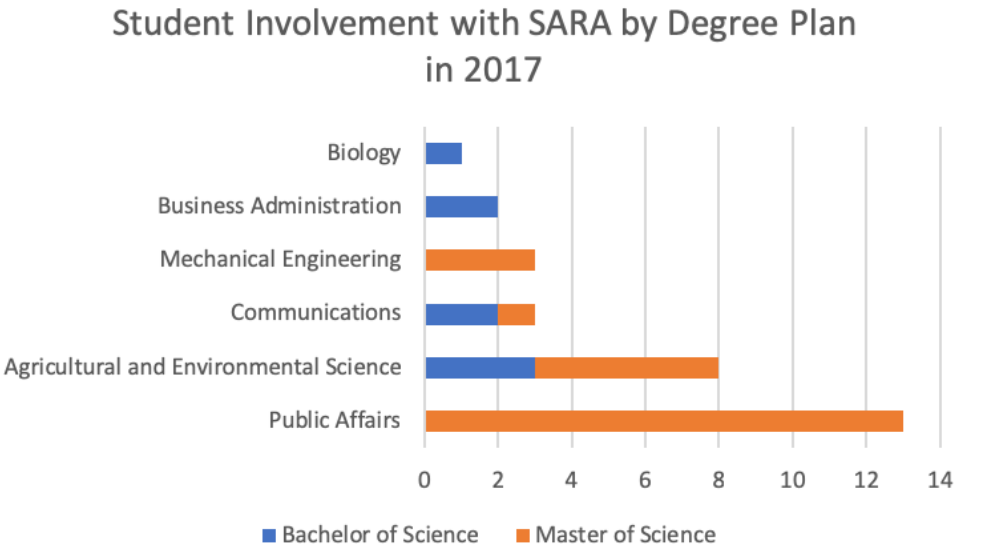
A comprehensive fellowship plan-Integrated Approach to Graduate Research, Education, and Engagement, or IAGREE - includes recruiting eight students into UTRGV's newly developed Agricultural, Environmental, and Sustainability Sciences Master's program.

Wine in South Texas

Viticulture and enological research has been completed and continues to advance, thanks to SARA. Current research is underway that compares two different rootstocks for Blanc du Bois and Lenoir grapevines to determine their viability in the burgeoning wine industry of South Texas. Research is also being done to compare trellis-system design for grape cultivars and on the marketability of South Texas Wines. This innovative research aims to make wine growing a viable option for small-scale farmers in the lower Rio Grande Valley.

EDUCATION ACTIVITIES

SARA assists faculty, staff, and students with hands-on research activities in sustainable agriculture, while providing students with research experience through internships at the Center. During 2017, SARA engaged over 30 students through internships and research opportunities, while being affiliated with 18 faculty members. In 2017, SARA paid students a total of $45,009 for their research and outreach activities.



SARA has supported the launch and development of the Agricultural, Environmental, and Sustainability Sciences Master's program at UTRGV. Upon its inception in Spring 2017, the program had 21 students enrolled. Additionally, the Center supported the development of a complementary Bachelor's degree program in Sustainable Agriculture and Food Systems.

From top left clockwise: Suzanne El-Haj (BS) writes field notes; Allison Kaika (MS) takes a soil sample; Stephanie Kasper (MS) measures solutions in the lab; Dr. Alex Racelis teaches in the field

OUTREACH ACTIVITIES

As a research center, one of the main objectives of SARA is to ensure the dissemination of the applied knowledge gained from research projects accomplished through student and faculty partnerships at UTRGV. Rather than holding information in a silo at the University, SARA plays a key role in making academic information available to the community. Through relationships with Community Based Organizations and funding from USDA programs, SARA has successfully reached thousands of community members with relevant information and vital resources to increase agricultural sustainability and economically advance rural communities.

Outreach Highlights

- Provided small-business development assistance to 17 cooperatives, 20 businesses, and 13 groups
- Developed a production plot at the Veterans Outreach Center in San Benito, allowing participants to apply lessons in the field
- Provided group and individual trainings on high-tunnel production and construction in the RGV with information on NRCS EQIP program opportunities. Four local farmers constructed high tunnels
- Supported the education of faculty and students in the engineering department to develop and perform energy audits
- Provided weekly technical assistance and hands-on workshops to a group of low-income Hispanic women on small-scale farming techniques and marketing at Proyecto Desarrolo Humano in Peñitas, Texas

Farmers from all over the region join SARA at the Subtropical Soil Health Initiative Field Day at Hilltop Gardens

CENTRAL TEXAS FARMERS CO-OP

Texas Rural Cooperative Center provided hands-on technical assistance and training during the start-up phase of the Co-op, and continues to participate in monthly meetings and strategic planning to build good business-planning and cooperative-governance skills among the co-op's producer owners. Central Texas Farmers Co-op expands access to local food in Caldwell, Hays, and Blanco Counties while supporting small farmers through a multi-farm CSA. The co-op was founded in January of 2017 and offers weekly meat and vegetable shares to over 50 families in the San Marcos area. Farmers meet their customers every Tuesday evening for farm-stand style pickup, where customers select their veggies.

Workshop given by the Texas Rural Co-op Center for future co-op members

PROYECTO DESAROLLO HUMANO

A group of Hispanic women in Penitas, Texas increased production by expanding their production area and by receiving weekly training by SARA on different topics in order to produce more efficiently. They entered a new market by selling their produce to a 'Farm to Work' program and continued selling directly to consumers in their community. During the last year of this project, and with the collaboration of the Food Bank of the Rio Grande Valley, the group established two farmers' markets during the growing season thus allowing participants to increase their revenue.

Proyecto Desarollo Humano gardens in Penitas, Texas.

FINANCIAL INFORMATION

The following five tables detail SARA expenditures, performance indicators, and funding sources. SARA employs individuals with a variety of skills to conduct work focused on advancing rural agriculture. In 2017, SARA had eight student employees and 13 full-time staff members. SARA operates in partnership with UTRGV and through various external funding sources.

EXPENDITURES

Staff	$731,556	52.8%
Direct Wage	$45,009	3.3%
Fringe Benefits	$256,434	18.5%
Sub-Awards	$150,898	10.9%
Mileage	$34,011	2.5%
Participant Cost	$11,469	0.8%
Other	$32,392	2.4%
Indirect Costs (IDC)	$122,319	8.8%
TOTAL	**$1,384,088**	**100.0%**

FUNDING SOURCES

Federal Grants	$842,188	60.9%
State Line-Items	$300,692	21.7%
Institutional	$208, 731	15.0%
Activities	$32,478	2.4%
TOTAL	**$1,384,089**	**100.0%**

PERSONNEL EXPENDITURES

Staff Salaries	$731,556	70.8%
Staff Fringe Benefits	$251,933	24.4%
Student Wages	$45,009	4.4%
Student Fringe Benefits	$4,501	0.4%
Other Compensation	$0	0%
TOTAL	**$1,032,099**	**100.0%**

PERSONNEL ACTIVITIES

Program Operations	$736,938	71.3%
Program Technical Support	$108,871	10.5%
Program Administration	$187,190	18.2%
TOTAL	**$1,032,099**	**100.0%**

PERFORMANCE INDICATORS

Total Annual Funding	$1,384,089
Institutional Leveraging Ratio	6.6
Institutional Funding Percentage	15.1%
Federal- to -State Funding Ratio	1.7
Administrative Funding Percentage	19.6%

SARA'S ECONOMIC IMPACT

Through its programs, funding for SARA supports the creation of 24 jobs, generates $1.3 million in labor income, adds $1.9 million to the Texas Gross Domestic Product, creates $69,716 in state and local taxes and $291,515 in federal taxes, for a total economic impact of $2.5 million on the economy.

SARA's Economic Impact

Impact Type	Employment	Labor Income	Value Added	Output
Direct Impacts	16	$965,716	$1,288,066	$1,384,088
Indirect Impacts	1	$53,574	$72,613	$143,623
Induced Impacts	7	$316,941	$557,312	$964,941
Total Impacts	24	$1,336,231	$1,917,990	$2,492,652
Local & State Tax				$69,716
Federal Taxes				$291,515

Methodology

The Impact Analysis for Planning (IMPLAN) input-output economic modeling system was used to estimate the economic impact. IMPLAN is a widely used, nationally-renowned, economic modeling system, which consists of regional economic data and software. IMPLAN is an accounting system of economic transactions that take place among industries, businesses, and consumers in an economy. When the company spends money in the form of purchases, salaries, capital investment, construction, etc., it is creating an economic impact; some of this money is re-spent one or more times in the local economy, creating additional economic impact, also called the multiplier effect.

Definitions

Employment–Employment supported in the study area related to the spending generated as a result of the activities occurring with the new event. Employment impact is stated in job years.

Labor Income–All forms of employment income, including employee compensation (wages and benefits) and proprietor income.

Value Added–Is the sum of total income and indirect business taxes

Output–Output represents the value of industry production. In IMPLAN these are annual production estimates for the year of the dataset and are in producer prices.

SARA'S SOCIAL IMPACT

EDUCATIONAL OPPORTUNITIES

In 2017, SARA reached thousands of farmers and community members with workshops, one-on-one consulting visits, and presentations. SARA covered topics from high-tunnel construction to small-business planning and marketing. The intended social impact of these activities will be the economic activity generated by the small businesses assisted and created through SARA's programs, and the sustainable businesses and agriculture practices learned and implemented by participants in SARA's programs.

RESEARCH AND JOB EXPERIENCE

SARA engaged 30 students in 2017 and employed eight students with part-time job opportunities. Additionally, the Center partnered with faculty across five different departments at UTRGV and has facilitated community partnerships for participatory research. SARA's intended impact through these activities is to increase the number of community-oriented research papers published and the number of students receiving jobs from experience with SARA.

IMPROVING AGRICULTURAL SUSTAINABILITY

Through the myriad of training opportunities offered by SARA staff, along with consultations and technical assistance available to clients, SARA has helped young, beginning, socially-disadvantaged, veteran, and other farmers increase their sustainability.

The social impact of these endeavors can be observed in the money saved by farmers through decreased inputs, healthier soils, and improved water management.

SPONSORS

University of Texas Rio Grande Valley (UTRGV)

USDA-Animal and Plant Health Inspection Sercice (APHIS)

USDA-Farm Service Agency (FSA)

USDA-National Institute of Food and Agriculture (NIFA)

USDA Natural Resources Conservation Service (NRCS)

National Science Foundation (NSF)

USDA Rural Business-Cooperative Service (RBS)

PARTNERS

Farm and Ranch Freedom Alliance (FARFA)

Food Bank of the Rio Grande Valley (Food Bank RGV)

Hilltop Gardens

Holistic Management International (HMI)

HOPE for Small Farm Sustainability (HOPE)

Le Semilla Food Center (LSFC)

National Center for Appropriate Technology (NCAT)

National Immigrant Farming Initiative (NIFI)

PPC Farms

Proyecto Desarrollo Humano (PDH)

Rio Farms, Inc. (RFI)

Service Corp of Retired Executives (SCORE)

Small Business Development Centers (SBDC)

Texas International Produce Association (TIPA)

Texas/Mexico Border Coalition, CBO (TMBC)

Texas Rural Cooperative Center (TRCC)

Texas Small Farmers and Ranchers, CBO (TSFR)

Veterans Business Outreach Center (VBOC)

Juan Raygoza, director of special programs, leads an irrigation workshop for beginning farmers and ranchers

Aerial view of the Subtropical Soil Health Initiative cover-crop trial at Hilltop Gardens

SARA

E-CESS Building
Room 1.200
1407 E. Freddy Gonzalez Drive
Edinburg, TX 78542
sara@utrgv.edu
https://www.utrgv.edu/sara/
(956) 665-7555