



## Extension Education in Cameron County

# Making a Difference

2014

# Making a Difference

## Cameron County

2014

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# Making a Difference

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The Texas A&M AgriLife Extension Service has long been dedicated to educating Texans. Extension education evolved nationwide under the 1914 federal Smith-Lever Act, which sought to extend university knowledge and agricultural research findings directly to the people. Ever since, Extension programs have addressed the emerging issues of the day, reaching diverse rural and urban populations.

In Texas, all 254 counties are served by a well-organized network of professional Extension educators and some 100,000 trained volunteers. Extension expertise and educational outreach pertain to the food and fiber industry, natural resources, family and consumer sciences, nutrition and health, and community economic development.

## EXTENDING KNOWLEDGE *Providing Solutions*

Among those served are hundreds of thousands of young people who benefit annually from Extension's 4-H and youth development programs.

Texans turn to Extension education for solutions. Extension agents and specialists respond not only with answers, but also with resources and services that result in significant returns on the public's investment. Extension programs are custom-designed for each region of the state, with residents providing input and help with program delivery. Here are just a few highlights of Extension impacts on this county and its people.

### Cameron County – Summary of 2014 Educational Contacts

County	# of Sessions	*Goal 1	**Goal 2	***Goal 3	Total
<b>Contacts By Faculty</b>					
<b>Faculty</b>	110	2,793.00	183.50	70.50	3,047.00
<b>Faculty &amp; Volunteer</b>	12	240.00	157.00	36.00	433.00
<b>Total Group Methods</b>	122	3,033.00	340.50	106.50	3,480.00
<b>Individual Methods</b>		97.00	1,687.00	671.00	2,455.00
<b>Material Distributed</b>		9,111.00	1,009.50	9.50	10,130.00
<b>Total Contacts</b>	122	12,241.00	3,037.00	787.00	16,065.00
<b>Contact by Volunteers</b>					
<b>Group Method</b>	2		22.00	317.00	339.00
<b>Individual Methods</b>			122.00	384.00	506.00
<b>Materials Distributed</b>					
<b>Total Contacts</b>	2		144.00	701.00	845.00
<b>Newsletters/Announcements Contacts</b>					
<b>Marketing/Promotion</b>				350.00	350.00
<b>Educational Methods</b>					
<b>Total Contacts</b>				350.00	350.00
<b>Total All Contacts</b>	124	12,241.00	3,181.00	1,838.00	17,260.00

- \* Agriculture
- \*\* Family & Consumer Science
- \*\*\* Youth Development

## 2014 Cameron Crop Production Program

Developed by Dr. Enrique Perez, County Extension Agent- Agriculture

**Relevance:** Over 82,000 acres of grain sorghum are grown annually in Cameron County. It is one of the most important crops grown in the Rio Grande Valley. The Sugarcane Aphid, new insect pest grain sorghum in this production area, was identified in the fall of 2014. The Hidalgo County Crops Committee determined that educational efforts should be initiated to address this emerging need.

**Response:** Independent and prior to local action, a multi-state task force of Extension Specialists and others were formed and research initiated. Locally, ag producers were educated on the sugarcane aphid utilizing a number of different methods. These included field days, meetings and publications: Cotton Pre-Plant Conference, information on the sugarcane aphid posted to a new page on the County Extension Office web site, Sugarcane Aphid Informational Meeting, Sugarcane Aphid Field Day, Crop Options for Spring Meeting and close communications with crops committee members & Extension Specialists. Topics addressed: awareness of a new insect pest in grain sorghum, identification and scouting techniques, insecticide choices including information on Section 18 approval for Transform®, IPM considerations, honeydew threat to harvesting operations, ect. Research demonstrations conducted on producer farms were used to collect an unbiased source of performance data that will be used by growers to help determine the most profitable varieties to select for this area. New efforts to increase producer profits included rating grain sorghum variety trials for differences in tolerance to the sugarcane aphid and it's damage.

**Results:** A total of 23 group methods resulted in a total of 3,362 contact hours of were conducted through education. Independent estimates by the Lower Rio Grande Valley Cotton & Grain Producers Association determined that educational efforts by Texas A&M AgriLife Extension resulted in a net savings to grain sorghum growers in Cameron, Willacy and Hidalgo counties of \$66 million in 2014.

Important collaborators included: Danielle Sekula Ortiz, Dr. Raul Villanueva, Dr. Calvin Trostle, Dr. Luis Ribera, Rio Farms, Inc., Lower Rio Grande Valley Cotton and Grain Producers Association, Texas Grain Sorghum Association and numerous local ag industry company representatives.

**Future Plans:** Continue to funnel new information about the sugarcane aphid and it's management to local producers in a timely manner. Continue important hybrid trials for the major crops in cooperation with local producers, Extension Specialists and private industry. Continue the soil testing campaign, contingent upon funding.





## Agriculture and Natural Resources



### Managing Sugarcane Aphid in the LRGV 2014

**Developed by:** Dr. Enrique Perez, Extension Agent-Agriculture, Dr. Raul Villanueva, Extension Entomologist and Danielle Sekula- Ortiz, Extension Agent- IPM

**Relevance:** The LRGV consists of Cameron, Hidalgo, and Willacy counties and is known for producing 16% of the entire state's crop of sorghum. About 400,000 acres of grain sorghum are planted in the LRGV each year. Sorghum and many other crops are planted earlier in this region than many other areas in the entire USA. Aside from the vast majority of sorghum grown here there is also about 40,000 acres of sugar cane grown each year. The sugarcane aphid, *Melanaphis sacchari*, was first detected in the LRGV in October of 2013 feeding on grain sorghum and related sorghum species such as johnson grass, haygrazer, etc. The sugarcane aphid is an invasive species that is a key pest of sugarcane and sorghum in Africa, Asia, Australia, Far East, Central and South America. We foresee there is potential that the sugarcane aphid will be a problem this year during the spring based on their rapid reproduction, their wide range of hosts and fast spread of dispersal through Texas. Here in the LRGV the sugarcane aphid has been observed in all 3 counties on sorghum. It is within the best interest of our growers to come up with a proactive management plan in order to deal with these aphids if they continue to be a problem.

**Response:** In order to manage the sugarcane aphid in the LRGV the following plan of action was initiated to help educate producers of the potential threat and need for control. The Cameron County Crops Committee met in April 2014 as per request from chairperson Cesar Pacheco to develop a action plan for the Rio Grande Valley for Grain Sorghum Producers. Plans were developed under the Cameron Agriculture Production Committee and IPM agent and Extension Entomologist.

- Upon detection of the sugarcane aphid in Texas in the fall of 2013 AgriLife Extension developed the **Melanaphis Task Force** comprised of several research/industry colleagues throughout the state of Texas and including Kansas, Louisiana, Oklahoma, Florida, and Mississippi. The task force was lead by Dr. Raul Villanueva as information about the pest was shared in order to better study and manage it.
- With the data obtained from our spray trial and other data provided by Dr. Mo Way (Beaumont) we were able to provide information that allowed us to have Transform® (sulfoxafloor) authorized for use in sorghum for the entire state of **Texas under Section 18 of the FIFRA Act by the U.S. EPA till October 31, 2014.**
- Produced first publication, **Sugarcane Aphid: A New Pest of Sorghum ENTO-035 2/14**
- Gave a presentation warning about the potential for sugarcane aphids presence in the spring sorghum crop at the **Pre-Plant Conference** on January 16th 2014.
- **Evaluated the surveying of 11 sorghum fields** for sugarcane aphids in the LRGV
- **Evaluated Seed treatments** on grain sorghum with/ without treatment
- **Evaluated grower spray treatments** (ground vs air treatments) with use of Transform
- **Evaluated Transform at different rates** and other insecticides for sugarcane aphid control
- **Sugarcane Aphid Informative Meeting and Field Day** – was on May 20th 2014 (172 people in attendance) We educated the growers on what sugarcane aphids are, how to look for them, and what to use to control them, 2 TDA CEUs were given.
- **Sugarcane Aphid Workshop** – (May 30th) gave a workshop to extension agents via Lync educating on Sugarcane aphids
- **Sugarcane Aphid Field Day** - (June 19th) 20 growers in attendance, 2 TDA CEUs were given
- **Fall Sugarcane Aphid Field Day** - (October 28th) 93 people attended.

## Agriculture and Natural Resources

**Results:** Economic Impact: In the Lower Rio Grande Valley approximately 400,000 acres of grain sorghum were planted this year. Cotton and Grain Producers of the Lower Rio Grande Valley estimated the economic impact of the research and extension work in the valley alone was \$66 million. LRGV sorghum growers were saved from a devastating yield loss of \$74 Million. Actual control costs and minor yields losses are estimated at \$8 Million, resulting in an estimated net savings to LRGV sorghum growers of \$66 Million.

### Fall Sugarcane Aphid Field Day Survey

A survey was filled out by participants who attended our Fall Sugarcane Aphid field day. The following questions were answered.

**How are you involved in Agriculture? Check all that apply.** Choices given were: Farmer, Independent consultant, Ag Chemical/Seed Company/Fertilizer Fieldman, Research/Extension, and Ag Business (Gin, Elevator, Compress, etc.)

\*71 surveys in total completed

\*33 surveys were completed by farmers giving them the largest in attendance

\*47% in attendance were farmers

**Did you find the Pest Cast Newsletter valuable in your agriculture enterprise?** Circle one. Choices given were: No help, Somewhat helpful, Quite Helpful, and Extremely Helpful

Out of the 33 farmer surveys...In total 26 farmers find the Pest Cast Newsletter helpful in some aspect.

Overall 79% of farmers find the Pest Cast Newsletter helpful while 21% find the newsletter of no help to them.

**Did you grow any grain sorghum this year?** Check one. Yes or No.

Out of the 33 farmers, ALL of them grew grain sorghum this year. 100%

**How did you find out information about the sugarcane aphid (SCA)?** Check all that Apply. The choices were as follows:

Pre-Plant Meeting in January, Grower meeting/Field day on May 20th about the SCA, Grower meeting/Field day on June 19th about the SCA, Pest Cast Newsletter, Local Newspaper, or Local TV News broadcasters

Out of 33 Farmer surveys, 30% of farmers found out by receiving the Pest Cast Newsletter (was their largest source to get info)

**When you attended the field days in May or June regarding the sugarcane aphid, did you find thin information to be...**Check one. The choices were: Very Helpful, Helpful, Unhelpful, and Very Unhelpful.

48.48%  $\approx$  50% of Farmers found the field days educating them about the SCA were either Helpful or Very Helpful.

**How many times did you spray for sugarcane aphid control?**

85% of farmers had to Spray at least 1 to 3 times to Control the Sugarcane Aphid.

**Did you find information about the sugarcane aphid was being timely distributed?** Check Yes or No.

61% of farmers thought information was being timely distributed



## Agriculture and Natural Resources

### Seed Treatment trial

Seed treatments reduced sugarcane aphid infestations earlier during the season in potted plants. In the field trial there were no significance differences between treated vs non treated seed in sugarcane aphid infestations. However in the fall young volunteer sorghum was completely damaged by sugarcane aphid infestations.

### Seasonal Abundance

Population crashes detected in 2014 might be due to the biology of SCA, high temperatures, area wide TRANSFORM application?

### Insecticide Tests 2014

Many insecticide tests were conducted. Transform and Sivanto showed good residual control.

### Spray Application Evaluation

Different Spray Applications were evaluated for control. High Volumes of Water and Spray drops on your booms with hollow cone nozzles proved to be very effective.

**Acknowledgement:** Cameron County Agriculture Production Committee, Hidalgo and Willacy Crops Committees, Extension Agent-IPM, Extension Entomologist, Agriculture Producers for special efforts in addressing emerging issue in the Rio Grande Valley.

In summary, and based on the above points, it is apparent that the IPM Program has had a positive impact on the production system, the profitability of the producers and the economic and environmental viability of the area served.



Growers at our various Sugarcane Aphid Field Days



Sugarcane aphids feeding on  
sorghum



Adult female Sugarcane aphid  
and nymph

### **2014 Rio Grande Valley Beef Development Program**

**Developed by Enrique Perez, County Extension Agent-Agriculture**

**Relevance:** Beef producers can improve their herd or the herds of their customers through more rigid sire selection. Replacement heifers will perform to higher levels when in optimum body condition. Beef producers want to increase the value of bulls by collecting feedlot performance data and carcass characteristics.

**Response:** Texas A&M AgriLife Extension conducted an official 112 day bull gain test and a 126 day heifer development program. Numerous data are collected on all animals including: initial and final weights, average daily gain, body condition score, scrotal circumference, sheath score, reproductive tract score, pelvic area measurements, hip height and ultra-sound measurement of back-fat thickness and ribeye area. All data is provided to consignors.

**Results:** A total of 4 group methods resulted in a total of 99 contact hours of education. A bull gain test and heifer development program has been conducted each year from 1998 through 2014. Participants indicate a positive economic benefit to their beef cattle operations as a result of their participation.

A total of 1133 bulls, 964 heifers and 147 steers have been entered in the 16 years the program has been conducted. Currently, 33 bulls and 65 heifers are entered in the program by cattlemen participating from throughout south and central Texas.

Recognition events are conducted during the Rio Grande Valley Livestock Show in order to recognize the award winners in front of their beef cattle producer peers. The Santa Gertrudis breed awards were presented prior to the breed sale held at the Livestock Show and the Simbrah breed awards were presented during the Open Simbrah judging at the Livestock Show. A feeder pen of steers is in it's third year and adds a new dimension to the program.

Important collaborators are: Dr. Joe Paschal, Extension Livestock Specialist, Rio Beef Feed Yard management and personnel, Rio Grande Valley Livestock Show officials & volunteers and the members of the Rio Grande Valley Beef Improvement Association.

**Future Plans:** In cooperation with the Rio Grande Valley Beef Improvement Association, plans are to continue the program and perhaps consider marketing alternatives for participants. Another future possibility will be to offer an artificial insemination program for heifers.



## Agriculture and Natural Resources

### 2014 Cameron County Pesticide Safety Program

Developed by Enrique Perez, County Extension Agent- Agriculture, Cameron County

**Relevance:** Ag producers have a statutory requirement to obtain and maintain a pesticide license issued by Texas Department of Agriculture in order to use crop protection chemicals, important tools for agricultural producers. Extension is relied upon to provide the education needed in this process. Training is provided for those needing to obtain a license and continuing education is provided to local producers in order to renew their license.

**Response:** Educational training events were conducted to meet statutory requirements for producers to be able to obtain a license. Continuing education units were also provided to all participants at educational events conducted which contained applicable subject matter.

**Results:** A total of 5 sessions resulted in a total of 1,712 contact hours of education. Four Pesticide Safety Trainings were conducted in 2014. Ninety-nine percent of the 97 participants received a passing grade on the exam administered by the Texas Department of Agriculture. The average grade for all students was 87. Total adult contacts 423. Total adult volunteer contacts 225.

Numerous continuing education credits were provided to ag producers during the course of the year at almost every agriculture-related educational meeting conducted.

We also provided Certified Crop Consultants (CCA) continuing education through the CCA certification program. New requirements for continuing education for aerial applicators continued to be a problem for local aerial applicators and educational training was provided to meet their specific needs.

Important collaborators were: Dr. Don Renchie and Dr. Mark Matocha, Agricultural & Environmental Safety Specialists; local personnel with Texas Department of Agriculture and Donnie & Kay Dippel with the Texas Certified Crop Advisor Program.

**Future Plans:** This effort will continue in the future to meet the needs of local agricultural producers and others needing a pesticide license.

## Agriculture and Natural Resources

### 2014 Sustainable Agriculture Program

Developed by Enrique Perez, County Extension Agent-Agriculture

**Relevance:** Sustainable Agriculture in the Rio Grande Valley is a major interest among small acreage agriculture. The dramatic population increase and the continuation of the South Texas drought in the Rio Grande Valley has created an interest on sustainable agriculture. Today, with limited resource small acreage landowners are interested in ways for making land usage optimal. Land owners interested in agriculture continue to lack knowledge of agriculture programs and management for production. The need to implement a variety of educational agriculture programs is important in order to sustain the future of agriculture.

**Response:** Cameron County small agriculture scale acreage agriculture producers under the support of the Texas A&M Agrilife Extension Service, USDA-Natural Resource Conservation, USDA- Farm Service Agency and the Texas-Mexico Border Collision partnered to conduct various educational programs; EQIP, Organic Farming, USDA Program/Loans, Small Acreage Farming/Ranching and TDA registration as Texas Producer.

**Results:** Due to the efforts, the group of 36 individuals organized to meeting once per month at the county Extension meeting room. The results were that the group was interested small acreage production. This year the small acreage land owners were interested in organizing into an agriculture group that represented their interests. They formed the TIP of Texas Agriculture Producers Association, which meets every month at the San Benito Annex Building. There major focus is to produce agriculture commodities and serve local restaurants and participate at local Farmers Market. This past year the Tip of Texas Agriculture Producers had a success in the organization of a Agriculture Cooperative. The Agriculture Cooperative provided the access of Network Marketing for small acreage agriculture producers. Another success of the group provided easier access to federal and state programs through awareness of Networking Marketing. Acreage averages are between 2 ac to 300 acres. The group met 12 times or one time per month organized which resulted completing more than 784 contacts on volunteer hours in education. The Texas AgriLife Extension provides leadership to the group with subject matter expertise and Extension Specialist. Other partners include Texas Mexico Border Coalition, University of Texas-Pan Am, USDA Farm Service Agency, Natural Resource Conservation Service and Cameron County.

**Future Plans:** The Sustainable Agriculture Producers continue to meet once a month at the Extension meeting room. Plans continue to develop as the newly formed association increases knowledge and skill in agriculture production by participation in seminars, workshops and tours.



## Agriculture and Natural Resources

### 2014 Water Quality and Conservation

**Developed by** Enrique Perez, County Extension Agent-Agriculture, Lilian Mezquida, County Extension Agent-Family Consumer Sciences, Jennifer Herrera, County Extension Agent-Horticulture, Marco Ponce, County Extension Agent- 4-H and Youth Development, Tony Reisinger, Jr. County Extension Agent-Coastal & Marine Resources

**Relevance:** Texas is subject to numerous disasters, whether they are natural, accidental or intentional. These hazards are somewhat unpredictable. During 2005, Texas experienced a drought and continues in extreme drought conditions throughout south Texas. Water availability is very limited in Texas.

**Response:** In response to water quality and conservation issues the Cameron County Extension staff developed plan to address water quality and conservation issues in the county in 2014. Consumers, homeowners, agriculture producers, communities, and agriculture irrigation districts understand and adopt best management practices to protect water quality and enhance conservation so water supplies will meet future water needs in Texas including the Rio Grande Basin that are essential for expanding agriculture growth, jobs, and the economy in both rural and urban communities across Cameron County. Plan supports all efforts to water quality and conservation measures. Successful efforts were implemented through programs addressing water quality and conservation issues. Cooperation from different entities, such as Cameron County, agriculture industry, agriculture businesses, municipalities, and communities developed strong partnerships to address water quality and conservation issues.

**Results:** Completion of the Cameron County Water Quality and Conservation Plan this past fall of 2014 provided effective results addressing water quality and conservation issues. The plan served as a model to all program areas in Cameron County. The plan provided outreach education to families, communities, businesses, and agriculture producers to better understand different methods of implementing water quality and conservation measures. This year more than 745 individual direct contacts were documented through education efforts in the county. More than 500 Extension publications were distributed in 2014.

**Future Plans:** Efforts are to continue to provide education to all families, communities, businesses, and agriculture producers through a variety of educational methods. Care must also be taken into consideration to reduce risk of water quality and contamination from production agriculture, as well as urban/suburban settings.

## 2014 Cameron County Emergency Management

**Developed by** Enrique Perez, County Extension Agent-Agriculture, Lilian Mezquida, County Extension Agent-Family Consumer Sciences, Marco Ponce, County Extension Agent-4-H and Youth Development, Tony Reisinger, County Extension Agent-Coastal & Marine Resource, Jennifer Herrera, County Extension Agent-Horticulture, Beatriz Loya, EFNEP Agent- Cameron

**Relevance:** Texas is subject to numerous disasters, whether they are natural, accidental or intentional. These hazards are somewhat unpredictable. During 2005, Texas experienced the effects of two hurricanes, drought, and numerous wildfires. County Emergency Management in Cameron County was organized to analysis, plan, make decisions, and assignment of available resources to prepare for, mitigate, respond to and recover from the effects of all hazards.

**Response:** The Cameron County Emergency Management Plan/County Animal Issues Plan supports all efforts to mitigate, respond to and recover from the effects of all hazards. With cooperation from different entities, such as Cameron County, Texas AgriLIFE Extension, USDA, County Health, Animal Health Commission, etc. the local emergency management plan was developed and provide guidance for the employment of emergency resources under a local incident commander. Local emergency management plans include specific provisions for requesting and employing state resources to aid in managing and resolving situations for which local resources are inadequate.

**Results:** Completion of the Cameron County Emergency Management Plan/Animal Issues Plan this past fall of 2014. The Cameron County Emergency Management Plan/Animal Issues Plan serves as model to both Hidalgo and Willacy County. Due to the Cooperation of a tri-county effort a Regional Emergency Management Committee was initiated and began organizing and developing plans similar to Cameron County efforts but in a regional basis. The Cameron County Emergency Management Committee and the Regional Emergency Management Committee are working closely in finalizing a Regional Emergency Management Plan/Animal Issues Plans to provide outreach education to families, communities, businesses, and producers to better understand respond and recovery from the effects of all hazards. This year 2014 a series of group educational method resulted in a total of 2500 contact hours of education and 2992 contacts. Also this year the Extension staff provided an educational exhibit from May through October in which more than 6000 Extension publications were distributed.

**Future Plans:** The Cameron County Emergency Management/Animal Issues Committee will continue support and participate at the Regional Emergency Management Committee. Membership includes Cameron, Hidalgo and Willacy county and governmental agency personnel and other volunteers. Efforts are to finalize and complete a Regional Emergency Management Plan/Animal Issues Plan. The goal will be to coordinate and be well prepared to respond to emergency situations with the best method of teaching in the communities in emergency situation. Continuation of educational programs will be implemented throughout the county.

### 2014 Horticulture Education in Cameron County

Developed by Jennifer Herrera, County Extension Agent-Horticulture

**Relevance:** Nursery production in the county is a million dollar industry next to agriculture production. Cameron County home gardeners lack the knowledge and skills to effectively landscape using Earth Kind practices. Landscape Water Conservation is critical to our state and to Cameron County. Irrigation of landscapes has been shown to account for 60% of water used, especially during summer months. Improper use of fertilizers and pesticides result in poor water quality and affect the long term health of our community. Reduction of landscape water use is important for the long term sustainability and growth of South Texas and protecting the quality of our water is critical. The Master Gardener Association provide leadership to horticulture programming in Cameron County. Master Gardeners offer a variety of teaching methods; workshops, training's, seminars, and tours. The Master Gardener Arboretum serves as a demonstration learning garden. In Cameron County, the Master Gardener Interns and Master Gardener volunteers contributed more than 2200 service hours equating to \$48708 savings to the county in volunteer service in horticulture programming.

The county horticulture program major programmatic goal is to increase knowledge and skills of homeowners, landscapers, home gardeners a series of educational activities supported through demonstrations and evaluation of research based programs that measure economic and knowledge gain of environmental stewardship. Our goal was to reach over 700 people with horticulture programming. In Cameron County, the Master Gardeners reached over 1000 adults and over 700 youth. The Master Gardener Association is a volunteer service program that is supported by utilizing trained volunteers to provide sustainability, economic viability, and sound horticultural principles to residents of Cameron County.

**Response:** The Horticulture committee this year implemented a series of educational activities. Target audience included local homeowners, landscapers, home gardeners, owners and employees within the landscaping and nursery industry. The Cameron County Master Gardeners program provides leadership and guidance to offer programs to assist homeowners, landscapers, home gardeners, owners and employees within the landscaping and nursery industry in making sound, economical decisions. The Master Gardener program goal is address needs and concerns in horticulture and update on new management tools. The Extension Horticulture Committee meets quarterly to plan, implement and evaluate programs. This year a grant was obtained to develop "Community Gardens" in Cameron County in SNAP eligible communities also labeled as "Food Deserts" by USDA. Through the "Growing and Nourishing Healthy Communities Grant seven community gardens were established in Cameron County in 2014. Over 64 families participated in the six series program and produce over 820lbs. of produce.

- Horticulture Educational Programs
  - Preserving the Harvest (January and February)
  - Strawberry Field Day (March 2014)
  - Earth Day/ Arbor Day (April 2014)
  - Arborist Workshop (April 2014)
  - Starting a Vegetable Gardening (August 2014)
  - Invasive Species Program (September 2014)
  - Aquaponics (November 2014)
  - Growing and Nourishing Healthy Communities Garden: (January- December 64 Families)

## Agriculture and Natural Resources

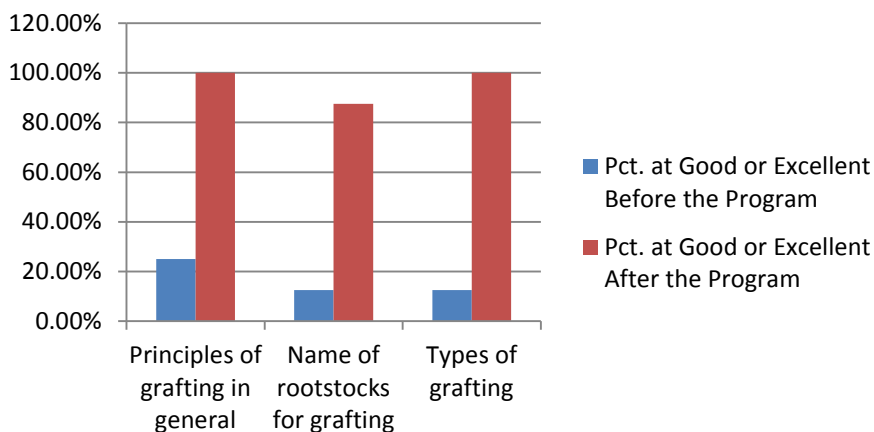
- Series of Small Acreage Production Educational Programs- Cameron County
  - Aquaponics – Principles and Practices (February 2014)
  - Composting for the Small Acreage Producer (April 2014)
  - Grafting Vegetable Crops: Principles and Practices (June 2014)
  - Practical Weed Control (August 2014)
  - Food Safety for the Small Acreage Producer (October 2014)
  - Business Planning (December 2014)
- Emerging Issue
  - Citrus Greening (monthly)
- Master Gardener Course, 75 hours of training and education (January through October 2014, 11 Interns)
- Nutrition in the Garden with Better Living with Texans (June- August 2014, 8 Programs)
- Junior Master Gardener School Gardens (14 total)
- Community Gardens (12 Total)
- Master Gardener Horticulture Weekly News Articles, (Approximately 150,400 residents 18+ read the Valley Morning Star each Sunday)
- Master Gardener Webpage (over 2,000 unique visits)
- Master Gardener Social Media Efforts (168 Followers)
- Horticulture Education Snippet KMBH Radio (weekly)
- Self-Guided Garden Tours (monthly)
- Civic and Garden Club Programs (monthly)
- Arboretum Demonstration Garden (monthly)
- Compost Demonstration Garden (monthly)

**Evaluation Strategy:** A retrospective post survey was administered face to face to all program participants at the end of various horticulture educational programs; Citrus Greening, Aquaponics and Small Acreage Production Series, and Growing and Nourishing Program.

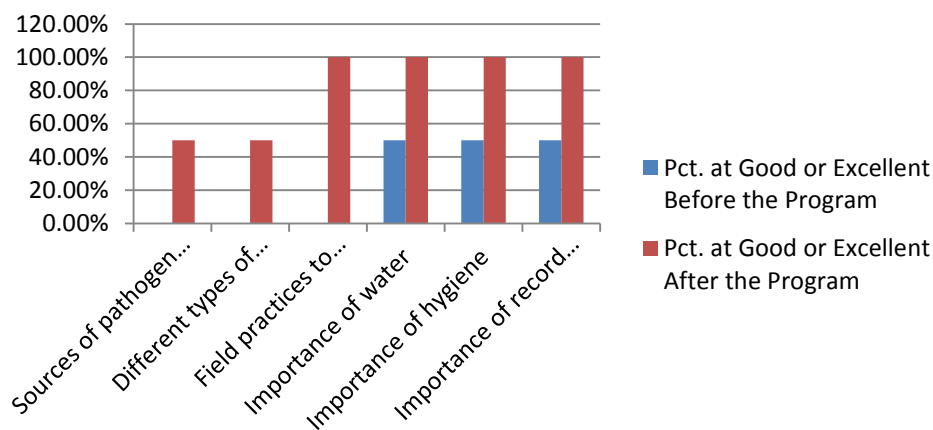
### Results:

- 69% of respondents plan to adopt and/or develop Aquaponics system based on what they learned from the Aquaponics Program.
- 88% of respondents will use the aquaponics system for their home use and 20% plan on expanding commercially based on what they learned from the Aquaponics program.
- 99% of the respondents increased their knowledge on aquaponics, increased their understanding of fish and crop selection, and also increased their understanding on how to create an aquaponics system.

## Agriculture and Natural Resources



**Figure 4:** Illustrates the results of respondent's level of knowledge of Grafting before and after the Small Acreage Production Grafting educational Program



**Figure 5:** Illustrates the results of respondent's level of knowledge of varies Food Safety before and after the Small Acreage Production educational Program

**Future Plans:** In 2015, the Extension Horticulture Committee with support from the Cameron County Master Gardener Association will implement, plan and evaluate a variety of educational programs addressing horticulture environmental stewardship and increase community/ backyard vegetable gardens. Target audience; homeowners, landscapers, home gardeners, owners and employees within the landscaping and nursery industry.





### 2014 Master Gardener Training Program in Cameron County

Developed by Jennifer Herrera, County Extension Agent-Horticulture

**Relevance:** Horticulture education continues to be a major interest among county homeowners. The Cameron County Master Gardener Program began in 2001 as an official Texas Master Gardener Association. The major programmatic goal of the Master Gardener Training is to increase knowledge and skills of homeowners, landscapers, city employees, county employees and home gardeners a series of educational activities supported through demonstrations and evaluation of research based programs that measure economic and knowledge gain of environmental stewardship. Through the Master Gardener program participants increase their gardening knowledge to support and assist Texas A&M AgriLife Extension Service by providing the community with information and guidance on good gardening practices through personal contact, newspaper articles, clinics, presentations at garden clubs, schools and other community groups. Master Gardener Interns are encouraged to find beautification projects throughout their community and establish new gardens.

**Response:** Due to the interest by Cameron County residents in horticulture education Texas A&M AgriLife Extension Service began implementing horticulture education through Master Gardener classes, programs, tours and special events. This year 11 Master Gardener Interns graduated and became certified Texas Master Gardeners. The Master Gardener course consisted of 75 hours of instructional training and education and a minimum on 50 volunteer service hours in Cameron County. In Cameron County, the Master Gardener interns and Master Gardener's volunteers contributed 856 service hours equating to \$18951.84 savings to the county in volunteer service in horticulture programming.

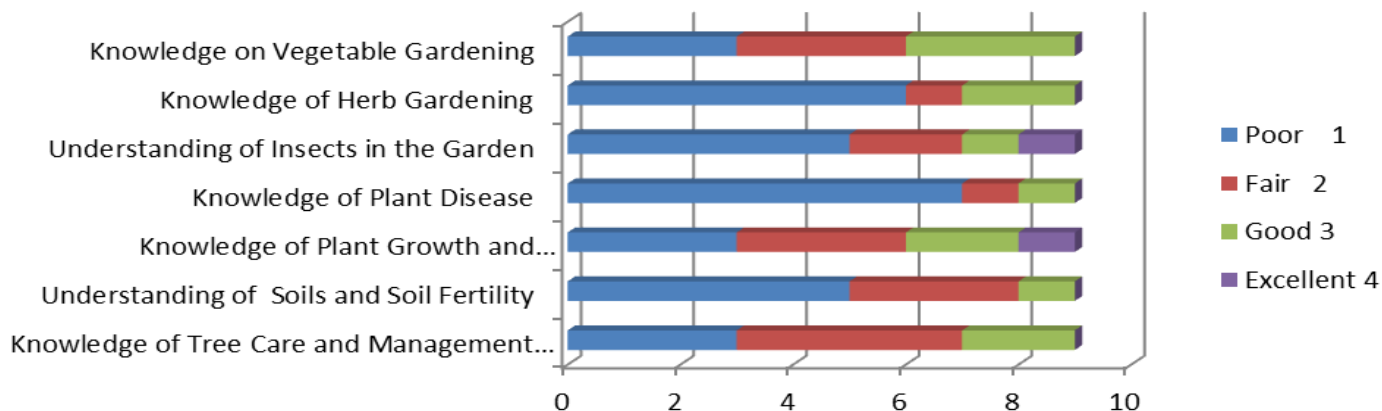
Master Gardener classes are held annually, starting in January and ending in October. Classes are held only once per year in which Master Gardener projects are assigned to participants in which they in turn serve as community service hours and extend horticulture education out in the communities.

**Evaluation Strategy:** A retrospective post survey was administered face to face to all Master Gardener Intern at the end of the Master Gardener Program on Earth-Kind practices, Vegetable Gardening, Herb Garden, Tree Management, and Home Fruit Tree Care.

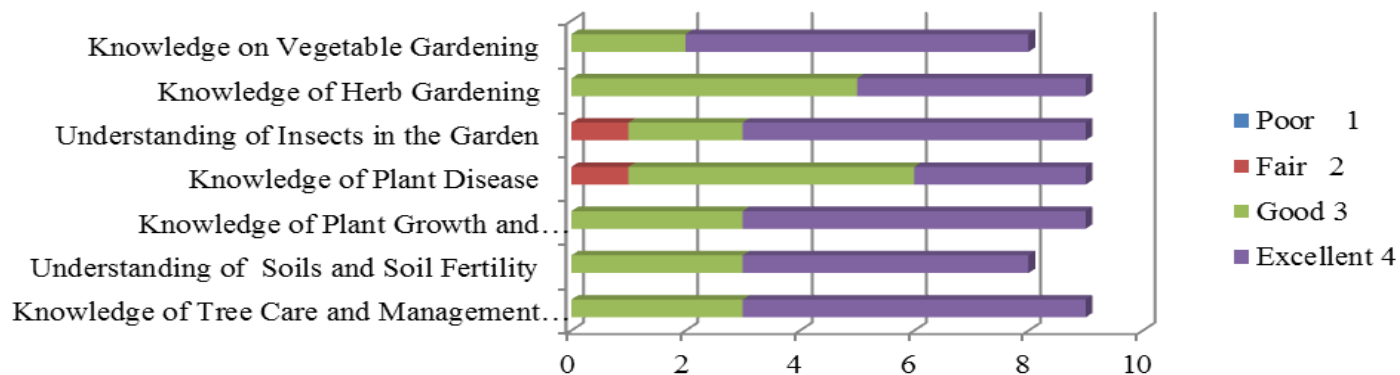
**Results:** The results of the retrospect post survey clearly indicated that respondents' level of knowledge and understanding on horticulture practices and topics increased upon completion of the Master Gardener Training Program.

- 100% of respondents were mostly or completely satisfied with the overall Master Gardener Program
- 88% of respondents indicated that they definitely will or have already adopted Earth-Kind Horticulture practice learned from the Master Gardener Training Program.

## Agriculture and Natural Resources



**Figure 1:** Illustrates the results of respondent's level of knowledge and understanding of varies horticulture topics **before** the Master Gardener Training Program



**Figure 2:** Illustrates the results of respondent's level of knowledge and understanding of varies horticulture topics **after** the Master Gardener Training Program

**Future Plans:** In 2015, the Cameron County Master Gardener Association will implement, plan and evaluate the 2015 Master Gardener Intern Class. The Master Gardener Interns will continue to find projects throughout Cameron County and continue to share horticultural Earth-Kind practices.



## Agriculture and Natural Resources

### **Jr. Master Gardener (JMG) and Youth Programs Cameron County 2014**

**Developed by Jennifer Herrera, Cameron County Extension Agent - Horticulture and Barbara Storz, Hidalgo County Extension Agent – Horticulture**

**Relevance:** Research shows providing children with vegetable gardening opportunities, coupled with the implementation of the Jr. Master Gardener (JMG) curriculum, improves nutritional knowledge and motivation to eat fruits and vegetables. Vegetable gardening improves math and science scores, increases vocabulary, and improves overall student attendance. As our area is consistently high in childhood obesity rates and Type 2 diabetes and schools suffer high drop-out rates, it is important to the health and welfare of our community to support teachers in developing JMG health and nutrition programs.

**Response:** A multi-county, multi-discipline workshop to improve the horticultural skills and nutritional knowledge of school educators is provided annually. Additional support is given to classrooms during the school year by Extension Master Gardener volunteers.

The **Edible School Garden Workshop** attracted 74 (24% increase over 2013) educators from Hidalgo, Starr and Cameron County schools for a day-long workshop with outdoor horticultural demonstrations and classroom activities based on the JMG curriculum, *Health and Nutrition from the Garden*. This workshop was held May 9, 2013 at the South Texas Master Gardener Educational Garden in North San Juan.

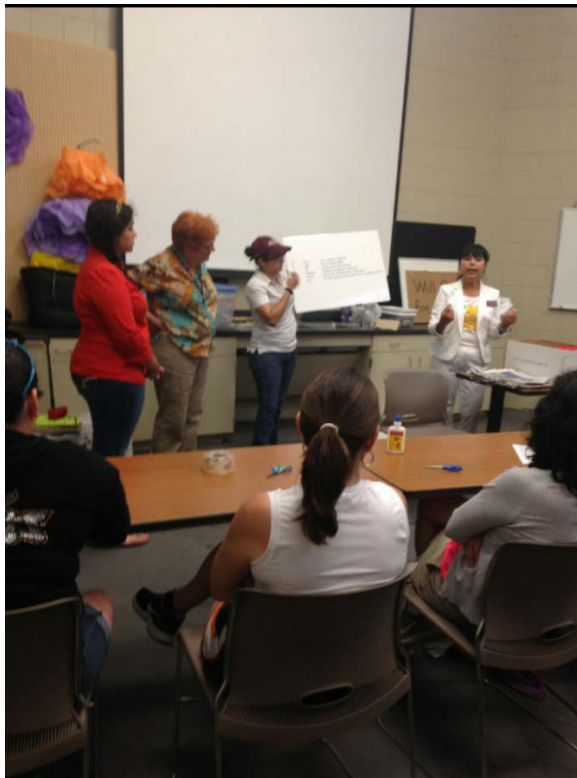
In addition to the train-the-trainer workshop for educators, a two hour JMG workshop was provided for 23 summer program educators for a regional Boys and Girls Clubs of Texas with participants from 9 counties. Summer camps were also conducted by Master Gardener volunteers for 25 youth in N. San Juan and for 45 children at Su Casa Esperanza in Pharr.

**Results:** Of the 74 school educators, 65 completed evaluations. 98% of respondents were mostly or completely satisfied with the workshop; 93% said they will utilize activities from the workshop in their schools and 98% anticipate utilizing the Health and Nutrition curriculum in their classrooms. Additionally, 94% of teachers will build a vegetable garden at their schools in the coming year and 98% would recommend this activity to other educators.

**Collaborations/Partnerships:** The Edible School Garden workshop was a partnership with Hidalgo County horticulturist, Barbara Storz, and was supported by the Hidalgo County Master Gardener volunteers.

**Future Plans:** The Edible School Garden will continue as an annual event and Master Gardener volunteers continue to assist with workshops and teacher support. Plans are in the works to hold the 2015 workshop at a school district elementary school garden.

## Agriculture and Natural Resources





## **2014 Citrus Greening in Cameron County**

**Developed by Jennifer Herrera, County Extension Agent-Horticulture, Cameron County & Heidi C. Arteaga**

**Citrus Greening, Coordinator**

**Relevance:** Citrus Greening Disease was discovered in a commercial grove in San Juan, Texas in January 2012. Additional pockets of the disease have been discovered in residential areas throughout Cameron and Hidalgo Counties. Heidi Arteaga, Citrus Greening Project Coordinator and Master Gardeners conducted outreach education for homeowners and coordinated public participation and application of biological treatments against the Asian Citrus Psyllid, the insect carrier of Citrus Greening Disease.

**Response:** Telephone and email inquiries were processed by Citrus Greening Coordinator, Texas A&M AgriLife Horticulturalists, and Master Gardeners from self-motivated citrus tree owners. The citrus tree owners inquired on CGD and the vector. The citrus tree owners were presented with a brief summary of the citrus greening presentation. These self-motivated individuals were also presented with a residential information survey. Home visits, presentations, biological control methods and media events were held throughout the Lower Rio Grande Valley.

The following outreach on Citrus Greening Disease in the Rio Grande Valley was conducted by Texas A&M AgriLife Employees, Citrus Greening Coordinator, United States Customs and Border Protection, United States Department of Agriculture-Animal and Plant Health Inspection System, County Officials, Texas A&M Kingsville Citrus Center Scientists, Cameron County Master Gardeners, Deep South Texas Master Gardeners of Hidalgo County, Citrus Greening Team, Texasweet, Texas Citrus Mutual, and Rio Grande Valley media outlets.

Cameron and Hidalgo Citrus Greening outreach educational group coordinated a series of educational programs in both counties.

- 20,000 plus commercial growers and county residents were reached: by meetings, workshops, trainings, programs, educational exhibits, media, and newsletters

Direct Impact: One to One on site visits

- 49 RV parks valley wide
- 39 RV parks-Treatment for Asian Citrus Psyllid
- 8 RV parks-Participated in biological control
- 100 county residents-Inside quarantine area were educated
- 40 county residents-Outside quarantine area were educated
- 900 contacts and inquiries by telephone and e-mails

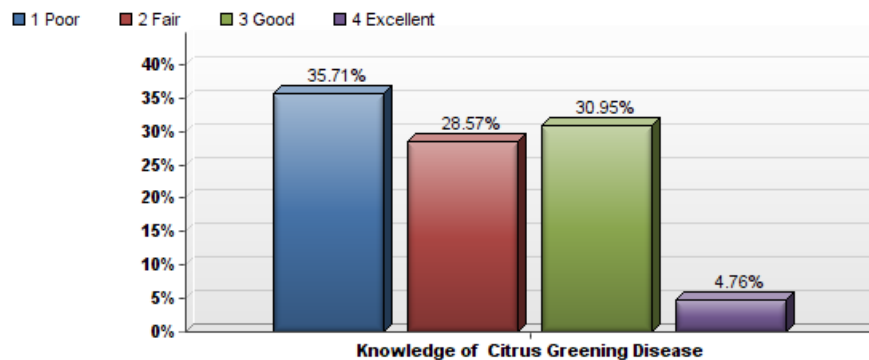
**Evaluation Strategy:** A retrospective post survey was administered face to face to all program participants at the end of Citrus Greening horticulture educational programs.

**Results:** Prior to the training, most of the homeowners (64.3%) had poor to fair understanding of citrus greening, but immediately after training their knowledge of the disease dramatically increased with all participants now having good to excellent understanding of CGD. 83.3% of respondents had a good to excellent understanding of the recommended sample submission process, which is a 50.3% increase from post-training.

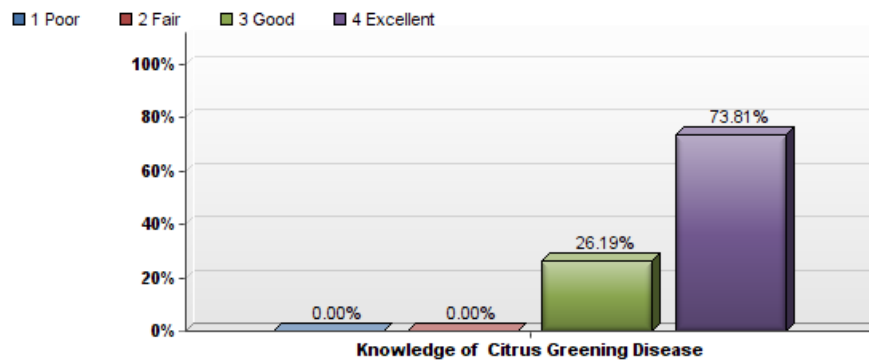


## Agriculture and Natural Resources

After the educational outreach program, most of the homeowners (90%) were willing to treat their citrus trees for Asian citrus psyllid. Of the respondents 45% anticipated benefiting economically while 55% did not anticipate an economical benefit. This data indicates that homeowners have difficulty assessing the importance and threat posed by this pest and disease complex due to Asian Citrus Psyllid and CGD not causing an immediate impact on citrus tree.

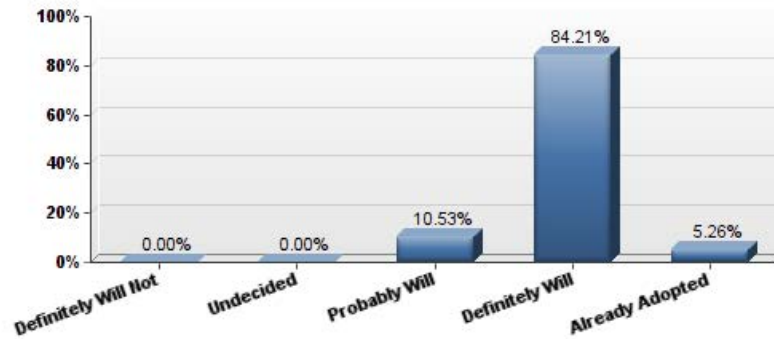


**Figure 1:** Illustrates the results of respondent's level of knowledge of Citrus Greening before the Citrus Greening educational program.



**Figure 2:** Illustrates the results of respondent's level of knowledge of Citrus Greening after the Citrus Greening educational program.

## Agriculture and Natural Resources



**Figure 3:** Illustrates the results of homeowner's plans to take action and treat their trees for the Asian Citrus Psyllid vector.



**Future Plans:** In 2015, the Extension Horticulture Committee with support from the Cameron County Master Gardener Association will implement, plan and evaluate a variety of educational programs addressing emerging issues and continue with educational efforts on Citrus Greening.

## **2014 Growing and Nourishing Healthy Communities**

**Developed by Jennifer Herrera, County Extension Agent-Horticulture**

**Relevance:** According to U.S. Census Bureau 34.9% of Cameron County residents live below poverty level. Nearly 10% of all Texas food deserts identified by USDA are located in Cameron, Hidalgo, and Starr counties. These counties are also characterized by high rates of obesity, diabetes, and other chronic diseases that have a direct link to nutrition. Research suggests that an individual's food choices are often influenced by what is immediately available to them. According to Feeding America's "Map the Meal Gap" Project 89,200 Cameron County residents (23%) are food insecure. On average, these food insecure residents report an annual budget shortfall of \$343 needed to afford "just enough" food \$30,623,250 in total. Many are eligible for federal nutrition programs like SNAP (Supplementary Nutrition Assistance Program), WIC or school meals. For low-income households residing in food deserts, the ability to access and purchase healthy foods are limited. On the other hand, foods that are nutrient poor but calorically dense are often plentiful. Therefore, improving access to vegetables and fruits can be beneficial in improving the diet and health of a community.

**Response:** The Growing & Nourishing Healthy Communities (GNHC) program is funded by the USDA (SNAP) and is being implemented by the Texas A&M AgriLife Extension Service. The program goal is to increase SNAP and SNAP-eligible audience's access to fresh produce by teaching basic gardening skills that allow and promote the development of backyard and community gardens. This project targets SNAP-eligible households and other "communities" such as public housing sites, colonias, schools, and faith based organizations. In spring 2014 four community gardens were installed in Cameron County and reached a total of 64 families with an average household of five. A series of six educational sessions were administered at each garden location to families participating in the GNHC program. Healthy food demonstrations were also presented at each garden site by the Better Living for Texans program assistants. These food demonstrations included healthy recipes that incorporated produce grown straight from the community garden.

**Evaluation Strategy:** A pre and post survey was administered face to face to all program participants at the beginning and at the end of the six session horticulture educational program to determine knowledge gain and vegetable consumption.

**Results:** In 2014, four community gardens were established across Cameron County. These community gardens are located within housing authorities, churches, and community centers. The gardens were embraced with enthusiasm and commitment by a diverse group of local residents. These community gardens are not only a meaningful source of fresh produce, but a great educational resource for citizens to learn best gardening practices along with healthy cooking demonstrations. With the educational program citizens will have the knowledge to break ground on their own home gardens as well.

## Agriculture and Natural Resources

Community Garden Location	Families Participated	Yields
Los Indios City Hall	4	62 lbs.
Santa Rosa Village Housing Authority	8	85 lbs.
San Pedro Catholic Church	28	468 lbs.
Port Isabel Housing Authority	24	207 lbs.
<b>Total</b>	<b>64</b>	<b>822 lbs.</b>

**Future Plans:** Four new community gardens are projected to be installed in Cameron County in 2015.





### **Friend to Friend in Cameron County, 2014**

**Developed by Lilian Mezquida, County Extension Agent- Family & Consumer Sciences**

- This project's goal is to decrease breast and cervical cancer morbidity and mortality for women living in rural Texas counties by improving screening rates and early detection of cancer.
- Funding was applied for and awarded by the Cancer Prevention and Research Institute of Texas (CPRIT) to fund screenings and transportation to uninsured and underserved women in need of screening services.
- The county Extension agent, regional cancer prevention specialist, and patient navigators plan and implement a *Friend to Friend* event. Women attending are given the opportunity to sign a commitment card to obtain a mammogram and/or Pap test within the next year and the option to complete a help request form for assistance in obtaining screening services.

### **Impact of the Program:**

- *Friend to Friend* was implemented in 44 Texas counties in 2014.
- 91 women attended the *Friend to Friend* events on April 11, 2014, and May 30, 2014 at the San Benito CISD Administration Building in the city of San Benito, Texas.
- A Physician, other Health Professional, and Breast Cancer Survivors urged women to obtain a mammogram/Pap screening at the events.
- At the end of the event 94% of women, aged 40 or over, correctly identified the need for a mammogram screening every year.
- 173 Women requested help to navigate screening and diagnostic services.
- 67 Clinical sites are contracted statewide for screenings, diagnostics, radiologists and lab services. Average monthly payments for screenings and diagnostics thru the contracts are \$32,636.00.

### **Success Stories**

- **Sandra:** Me gusto mucho el programa porque aprendi de porque debemos hacernos el mamograma y papanicolao. Tambien porque con programas como este podemos recibir la ayuda para pagar los exámenes, muchas pero muchas gracias por todo lo que hacen por ayudar a las mujeres (I really liked the program because I learned about who important is to have my mammogram and pap smears. Also because programs like this can get help us to pay for the exams, thank you very much for all you do to help women).



## Family and Consumer Sciences



### Parenting Connections Outcome Summary – Cameron County Report, 2014

Developed by Lilian Mezquida, County Extension Agent-Family & Consumer Sciences

**Relevance:** Although children are influenced by many different elements in their environment, parents are the primary influence in the lives of their children. Parents' contributions to their children's development are unparalleled, especially during their early childhood years. Research indicates that children who grow up with actively involved and nurturing parents (as opposed to uninvolved parents) reap numerous benefits, including better school performance, increased self-esteem, healthier relationships with peers, healthier sex-role development, and greater access to financial resources. In addition, children who are raised in environments in which parents are fully involved are less likely to engage in behaviors that put them at risk for a variety of physical and mental health problems.

Research suggests that quality educational programs can assist parents in developing the skills they need to effectively raise their children. The qualities/skills that are common to effective parents (e.g., unwavering love, sensitivity to a child's needs and feelings, clear and consistent limits geared toward a child's stage of development, firm but not harsh discipline, encouragement of child's emerging independence, parental involvement in child's education, being a positive role model) can be taught through a series of parenting education classes that allow parents the opportunity to discuss and practice the desired skills.

**Response:** In 2014, the Texas A&M AgriLife Extension Service conducted multiple parent education workshop series' in Cameron County utilizing the *Parenting Connections* curriculum. Topics covered included guidance/discipline, parent-child communication, promoting a healthy self-esteem in children, and child development. One hundred and twenty-five (125) single session parenting evaluations were completed by participants. Forty-one (41) parents and/or other relatives completed the 4-week program (see Table 1 for outcomes).

### Results:

#### *Participant Characteristics*

The average age of participants was 27 years. Parents who attended the classes had an average of 2.9 children. Fifty-nine percent of attendees who completed the demographic portion of the survey were female and 20% were male. Approximately 51% possessed a high school diploma and 7% some college. Twenty-four percent did not possess a high school diploma. Eighty-eight percent of the participants identified themselves as Hispanic/Latino, and 2% Caucasian. Seventy-three percent reported household incomes under \$20K, 5% between \$20-29K, and 7% over \$30K. Twenty-two percent of participants were married (1<sup>st</sup> time), 10% divorced/separated, 2% remarried, and 54% single. Eighty-three percent identified themselves as the child's custodial parent, and 7% as the non-custodial parent.

#### *Parent/Child Behaviors*

Participants were evaluated after completing the parent education series using a retrospective evaluation tool. Results indicate that the program had a very positive effect on specific parenting practices. Significant behavioral changes from pre to post occurred in the following areas: parent-child communication, parental self-confidence, and parental use of positive disciplinary practices. In addition, parents reported a significant

## Family and Consumer Sciences

improvement in their children's behavior after participating in the program. The following tables demonstrate the positive changes that occurred:

**Table 1. Percent reporting “frequently” or “almost always” from pre to post (N = 41)**

<b>Parenting Behavior</b>	<b>Pre</b>	<b>Post</b>
Compliment child	61.0%	85.4%
Encourage child	68.3%	82.9%
Listen carefully to child	63.4%	87.8%
Communicate clearly & directly	58.6%	83.0%
Confident in parenting skills	46.3%	82.9%
Set limits (rules) for child	53.7%	65.9%
Consistently enforce limits	53.6%	75.6%

**Table 2. Child's behavior pre vs. post (N = 41)**

<b>Child's Behavior</b>	<b>Pre</b>	<b>Post</b>
Excellent or Very Good	39.1%	65.8%
Adequate, Fair, or Poor	43.9%	17.0%

### Better Living for Texans Outcome Summary Cameron County, 2014

- From October 2013 to October 2014 the Better Living for Texans Assistants conducted multiple education workshop series' in Cameron County utilizing: **1. Get the Facts** - Basic food buying skills enable clients to consider more healthful food choices when shopping. **2. Three Easy Bites**, The curriculum promoted diet related best practice behaviors related to breakfast, snacking and dinner, and **3. Back to Basics series**. This program focuses on meal planning, stretching food dollars, and adopting selected behaviors that can reduce the risk of foodborne illness.
- **Get the Facts**. The evaluation of knowledge and intent to change behavior among *Get the Facts* participants was accomplished thru the use of pre/post/follow-up survey instruments. **103** *Get the Facts* pre/post survey sets, of which **102** included the follow-up survey, were received from Cameron County.
- **Results.- Pre-survey 3.1a    Post-survey 5.4b    Follow-up-survey 5.4b**
- There was a statistically significant ( $p<.001$ ) increase in mean knowledge during the time *Get the Facts* was taught.

### Participant Comments:

- Participants stated that they learned the difference between a recommended serving size and a portion which is the amount consumed. Participants stated they now eat smaller portions. Consistently eating smaller portions can help reduce the risk of obesity.
- Participants mentioned that they now use the Nutrition Facts labels to identify saturated fat in food products. Some clients stated that they switched to lower fat milk. Whole milk is a major source of dietary saturated fat, therefore this behavior change can significantly reduce dietary fat intake in these clients.
- Many participants commented that they did not know 70% of dietary sodium comes from processed foods. Selecting food products with lower sodium content while shopping can significantly reduce dietary sodium intake. While a reduction in sodium intake will not cure hypertension, it can help reduce its severity and consequences.
- Most participants (**78%**) rated the Get the Facts lesson series as excellent.
- **Three Easy Bites – Results**
- The curriculum promoted diet related best practice behaviors related to breakfast, snacking and dinner. Participants could opt out of the survey evaluation process if desired. Nonetheless, **79** pre/post/follow-up survey sets were received from Cameron County.
- Self-reported behavior improvements were noted during the time *Three Easy Bites* was taught. Percentage of *Three Easy Bites* participants who answered always or almost always: pre/post/follow-up data sets (n=79). From 18% to 75% **total behavior changed 57%**
- Best practice behaviors with the greatest participant improvement were:
- Using the Nutrition Facts label to determine portion size of snacks
- Planning dinner ahead of time



## Family and Consumer Sciences

- Eating enough fruits/vegetables to cover half of the dinner plate
- Planning breakfast ahead of time
- ***Back to Basics***- During 2014, **135** Cameron County adults completed the BLT *Back to Basics* series. This program focuses on meal planning, stretching food dollars, and adopting selected behaviors that can reduce the risk of foodborne illness. One hundred and twenty-two (**122**) of the **135** participants completed the pre, post, and 30-day follow-up survey. This report reflects the data from those **122** participants. Immediately after the program ended, 105 (86%) of the 122 participants reported that they felt they would be able to spend less money at the grocery store. More than 36% (n=44) of the participants felt they could stretch their food resources to last the entire month “always.” The percentage of participants who reported “never” running out of food before the end of the month rose from 18% (n=22) to 39% (n=47). The number of participants who “always” ran out of food decreased as well from 35 (pre) to 17 (follow-up).
- **Average monthly out-of-pocket food expenses reported by participants\*\*:**
  - Before BLT: **\$ 169.99**
  - After BLT: **\$ 152.44**                      Estimated monthly savings: **\$17.55**
- **89** of the participants rated the BLT program as “excellent” while **20** rated the program as “good.”





### **Junior Master Gardeners Outcome Summary - Cameron County, 2014**

**Developed by Marco Ponce, County Extension Agent – 4-H & Youth Development**

**Relevance:** 4-H youth who are at the elementary and middle school grade level are increasingly unaware of how fruits, vegetables, and ornamentals are produced. Many are unfamiliar with the processes involved in producing fruits and vegetables. They are unaware of basic of gardening techniques such as site selection, planting, watering, and fertilization. It is important that youth be aware of how important the preservation of the environment is in relation to producing these products. Youth must also be made aware that fruits and vegetables grown at home are tastier and healthier as they are free of chemicals and preservatives that can be harmful to one's health. Students need to understand the nutritional requirements needed for them to maintain a healthy lifestyle.

**Response:** Agent planned and implemented a Gardening and Horticulture program for 4-H youth who are members of the Santa Rosa 4-H club. Topics of discussion were planting seeds, basic gardening and management, nutrition, and harvesting. Students also did some hands on activities such as planting seeds in small cups that they were able to take home. 4-H members also expressed interest in creating a vegetable garden for the 4-H club and some members expressed interest in competing in the horticulture division at the Rio Grande Valley Livestock Show.

**Results:** Students learned about the importance being good stewards of the land while also learning about establishing a vegetable garden. Students were administered a pre-program questionnaire in which they had an average of -5.0 or 45% of the questions wrong. Students were then given an identical post program questionnaire at the conclusion of programming. In the post-program questionnaire, students averaged -0.5 or 4% of the questions wrong. In addition, in the pre-program questionnaire, no one student answered all the questions correctly. In the post-program questionnaire, three students answered all the questions correctly and one student only missed two questions.

**Future Plans:** The future plans for this program in to interpret the results to our key stakeholders and county leaders. We also have plans to continue this program with the Santa Rosa 4-H club and with other community centers in the county.

### Youth Higher Education Awareness Outcome Summary, Cameron County - 2014

Developed by Marco Ponce, County Extension Agent – 4-H & Youth Development

**Relevance:** There are many at-risk and underprivileged youth in Cameron County who are unaware of the many higher education opportunities available to them here in South Texas. They are also unaware of the finances needed and the funding that is available to them in order to acquire a higher education degree. These groups of students are often overlooked by school counselors and are not given the individual attention they need by instructors. Thus many fail to graduate high school and in most cases fail to attend an institution of higher education. They are then often relegated to mostly low paying jobs that have little or no opportunity for career advancement.

**Response:** Educational lessons were conducted at the Darrel B. Hester Juvenile Justice Center (Boot Camp) and with members of the Santa Rosa 4-H club. We utilized lessons from the College for Texans curriculum and other higher education resources. Lessons were delivered using power point technology as well as handouts that were given to the audience in order to take notes and follow along. Some individual instruction was also conducted with students who needed special attention in order to fully understand the topic. Educational lessons included local higher education institutions, financial aid 101, and financial impact of college degrees, careers in demand, and possible degree programs and related careers. Students were informed about the expected salaries that they should expect to earn related to their level of education obtained. They were also informed about the many expenses that can be expected to be incurred once they are living on their own and having to pay for all of their own expenses. This made them realize that trying to live comfortably on a salary of a high school drop- out would be extremely challenging if not impossible.

**Results:** Students gained a greater understanding of the many opportunities available to them that would support them in their path to obtaining a higher education degree. Students specifically gained a greater knowledge in financial aid, careers, and salary differences as related to their responses in a pre and post program questionnaire. At the Boot Camp, students missed an average of -4.4 or 37% of the questions on the pre - program questionnaire. On the post – program questionnaire, students missed an average of -0.6 or 5% of the questions. Five students answered every one of the questions correctly and only one student said they were not planning on going to college, as opposed to two in the pre-program questionnaire. The Santa Rosa 4-H Club students missed an average of -5.2 or 43% of the questions on the pre-program questionnaire. On the post program questionnaire, student missed an average of -0.4 or 3% of the questions. All students in the Santa Rosa 4-H club said they planned on going to college. Results for both groups were very similar. The Boot Camp students missed on average about one question less in the pre-test. However, in the post-test, the Santa Rosa 4-H students missed only 3% of the questions whereas the boot camp students missed a slightly higher 5% of the questions.

**Future Plans:** The future plans for this program in to interpret the results to our key stakeholders and county leaders. We also have plans to continue this program at the Darrel B. Hester Juvenile Justice Center and other after school centers in the county.



## 4-H and YOUTH DEVELOPMENT

# TEXAS A&M AGRILIFE EXTENSION



**PRAIRIE VIEW  
A&M UNIVERSITY**  
COLLEGE OF AGRICULTURE  
AND HUMAN SCIENCES

Cooperative Extension Program

## *Making a Difference in Cameron County 2014*

### Annual Cameron County 4-H Program Summary

#### County 4-H Youth Involvement

- 18 Chartered Community Clubs
- 348 Members Enrolled in 4-H Clubs
- 14,708 Youth Reached through Community-based Programs
- 995 Youth Reached through School-Based Enrichment Curriculum

#### Total Youth Reached

# 16,051

#### County 4-H Leadership, Advisory, and Support Organizations

- 14 Youth Board Members attended 2 Meetings
- 170 County 4-H Council Members attended 10 Meetings
- 86 Adult Leaders & Parents Organization Members attended 10 Meetings



#### # of Youth Attending

##### Participation in County 4-H Events

County 4-H Bay Fishing Tournament	145
Cameron 4-H Awards Banquet	115
County 4-H Roundup	34
County 4-H Record Book Judging	42
County 4-H Food Challenge	30

##### County Participation in District Events

D12 4-H Livestock Judging Contest	18
D12 4-H Roundup (All Events)	33
D12 4-H Record Books	25
D12 4-H Food Show/Challenge	28
D12 4-H Leadership Lab	27

##### County Participation in State/National Events

Texas 4-H Round Up	20
Texas 4-H Photo Contest	1
Texas 4-H Record Book Judging	5
Texas 4-H Congress	2
SALE Swine Quiz Bowl	3

##### Most Popular Club Projects in the County

Food & Nutrition	88
Shooting Sports	76
Workforce Preparation and Careers	71
Rabbits	55
Swine/Meat Goats	54

##### Most Popular Curriculum in the County

Food & Nutrition	12,383
Science of Agriculture	874
Eat4-Health	790
Junior Master Gardener	455
Take a Stand	168

#### County 4-H Volunteer Support

- 638 Registered & Screened Volunteers Supporting Clubs
- 65 Club Managers, Co-Managers, and Project Leaders
- 13,177 Hours Contributed by Volunteers in Support of Clubs

#### Livestock Show Premium Sale Proceeds\*

# \$280,150

*Includes all projects (4-H and FFA)*

#### Value of Volunteer Time Supporting 4-H

# \$281,461



### **County 4-H Leadership & Personal Development Programs**

- 26** Attended State-level Leadership & Personal Development educational or competitive events
- 119** Attended District-level Leadership & Personal Development educational or competitive events
- 27** Attended District Leadership Lab
- 8** Received 4-H Scholarships valued at a total of **\$34,500**

### **Local Training Opportunities for Youth and Adults**

- 23** County 4-H Record Book Training
- 19** 4-H Horticulture Project Training
- 17** 4-H Club Management Training
- 13** 4-H Veterinary Science Training

### **Significant Leadership & Personal Development accomplishments from county Events & Activities**

We had state recognition with a 4-H member that received a scholarship for \$18,000 for college for college the Texas 4-H Foundation. We had another 4-H member who also received a scholarship for 1,500 from the Texas 4-H Foundation. Many other 4-H members received scholarships as a result of their involvement in 4-H.

### **County 4-H Agriculture & Natural Resource Programs**

- 334** Livestock Projects (all species)
- 325** Participated in County Livestock Shows
- 28** Attended State-level Livestock Shows
- 27** Attended District-level Agriculture & Natural Resources educational or competitive events
- 40** Youth Trained through "Quality Counts" Program

### **Local Training Opportunities for Youth and Adults**

- 19** 4-H Rabbit Project Training
- 17** 4-H Poultry Project Training
- 19** 4-H Horticulture Project Clinic
- 23** 4-H Record Book Training

### **Significant Agriculture & Natural Resource accomplishments from county Events & Activities**

Many of our participants with livestock projects earned Grand Champion, reserve Champion and Breed Champion honors at the Cameron County Fair, Rio Grande Valley Livestock show, and major shows. the participation in this program area continues to grow as this year we established three new 4-H clubs in which 4-H members will be exhibiting livestock project.

### **County 4-H Family & Consumer Science Programs**

- 63** Attended State-level educational or competitive events
- 28** Attended District-level educational or competitive events
- 57** Attended County-Level educational or competitive events

### **Local Training Opportunities for Youth and Adults**

- 23** County 4-H Food Show Training
- 25** County 4-H Food Challenge Training
- 8** County 4-H Fashion Show Training

### **Significant Family & Consumer Science accomplishments from county Events & Activities**

Cameron County 4-H Food Show and Food Challenge participants had an incredible year. We had four food challenge teams that competed at the District 12 4-H contest. Both senior teams placed in the top 4 and will be representing Cameron County at the State 4-H Food Show. we also had many Top Chef award winners at the D-12 Food Show.





Cameron County 4-H Livestock Judging team members prepare to compete in the San Antonio Livestock Show Judging Contest.



Cameron County 4-H members pose with Toys and Gifts that they donated as part of a community service project by RGV Credit Union



Cameron County 4-H members pose with turkeys and other food items that were donated to families from the Harlingen ISD Parental Center.



Cameron County 4-H members participated in the District 12 4-H Leadership Lab that was held in Uvalde, TX.



Highland Hustlers 4-H members pose with trophies, banners, and belt buckles they received during the RGVLS Judging Contest.



District 12 4-H members pose in front of the Texas State Capitol during their participation in TX 4-H Congress.



# Making a Difference

## Rio Grande Valley Chapter Texas Master Naturalist

Developed by Tony Reisinger, County Extension Agent – Coastal & Marine Resources

**Relevance:** Growth and urbanization will be the preeminent issues facing the Texas coast for the next several decades. Past and present urbanization has led to habitat degradation and loss, which affects water quality, critical habitat, endangered species and contribute to harmful algal blooms.

**Response:** To keep pace with coastal population growth on the Texas coast, the Rio Grande Valley Chapter Texas Master Naturalists (RGVCTMN) volunteer program has become an integral part of Texas AgriLife Extension and Texas Sea Grant's efforts as a base program with the Texas Parks & Wildlife Division. A RGVCTMN is a formally trained volunteer who must complete an initial minimum of 48 hours of instruction, and 40 hours of volunteer service annually, designed to provide them with the knowledge, "how to" skills and tools needed to provide service dedicated to the beneficial management of natural resources and natural areas within their communities. They are also required to attend 8 hours of advanced training every year.

We maintain a RGVCTMN website < <http://rgvctmn.org/> > which attracted 5342 unique visitors in 2014. This site hosts our quarterly chapter newsletter "The Chachalaca" which we have published for 11 years and serves as an excellent outreach tool for marketing. We trained 54 Texas Master Naturalist interns comprising two classes, one with 28 interns in Hidalgo County and one with 26 in Cameron County. The Master Naturalist curriculum for both classes included 32 presentations on different natural history subjects, 12 field trips to various ecosystems of the Rio Grande Valley.

**Results:** Our Rio Grande Valley Chapter Texas Master Naturalist is currently comprised of 183 members. The chapter conducts at least one board and one general meeting monthly and an educational presentation is given during the general meeting. Most meetings are held in the Cameron County Extension Office meeting room. Our planning group is the board of directors composed of 25 members.

In addition to our monthly educational meetings, our chapter members conducted 67 outreach/education events reaching 12,777 people. Chapter land restoration projects impacted 87.5 acres. In 2014 chapter members contributed 22,173 volunteer hours to our community valued at \$518,848. Texas Master Naturalist evaluations were conducted for 32 educational presentations (either 1.5 or 3 hours) and 9 field trips. Each activity was evaluated by the interns on a scale of 1 to 5 and 39 responses were assessed.

Master Naturalist Results: Field Trips Average Score 4.7 out of possible 5  
Classes Average Score 4.85 out of possible 5

All evaluations were conducted by educational committee members, with classes and field trips conducted by volunteers from local universities or experts in their fields of knowledge. Class results from pre and post-tests indicated a 23.25% increase in knowledge for the interns. The post test results indicated 37.5% increase

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in skills and a 52% change in attitude. Forty-three or 79.6% of the 54 interns became certified Master Naturalists in 2014. Presently the upper Valley is in the process of forming a new chapter presently called the South Texas Border Chapter. I was asked to serve as an advisor and agreed to serve until the Hidalgo Extension Office could find a replacement. This group has a board of 13 members and a committed membership of 77 Master Naturalists. It will take at least one year to become a certified chapter so in the meantime the group is still considered part of the RGVCTMN. Meetings are conducted at Bentson Rio Grande Valley State Park

**Recap:** Ten weeks of classes and field trips taught by expert volunteers in two separate locations, Mission and San Benito trained 54 Master Naturalist interns in 2014 with 43 becoming certified Texas Master Naturalists. In 2014, chapter members conducted 67 outreach/education events reaching 12,777 people. Chapter land restoration projects impacted 87.5 acres. RGVCTMN members contributed 22,173 volunteer hours to our community valued at \$518,848 in 2014.



# Making a Difference

## Texas Coastal Naturalist Program

Developed by Tony Reisinger, County Extension Agent – Coastal & Marine Resources

**Relevance:** The Texas Coastal Naturalist (TCN) was founded in 2009 to meet the demand for a volunteer group of first responders educated and trained to: save stranded marine mammals, monitor red tide, respond to sea turtle cold stun events, assist hazmat personnel during oil spills and monitor sea turtle nesting. Other marine related educational opportunities were added to the curriculum and include: the Texas Sea Grant Floating Classroom experience, beach and coastal ecology, fish printing, identification, weighing and measuring techniques, including detection of altered fish during fishing tournaments. The University of Texas Pan American Coastal Studies Lab is a major partner providing a classroom, office and research venue for the Coastal Naturalists.

**Response:** During 2014, this agent and our Coastal Naturalist volunteers trained and certified 35 new Coastal Naturalists bring our total TCN volunteer base to 232. We taught 1046 students in educational events covering a broad spectrum of marine related activities: shark dissection and life histories, fish printing, red tide sampling and identification, fish weighing and measuring techniques, watersheds, sea turtle cold stun event rescues and sea turtle nesting event monitoring, beach ecology, and ecology of the Laguna Madre.

In February 2014, 52 marine ecology classes were taught by Texas A&M Sea Grant specialist Dr. Russell Miget at Port Mansfield, aboard the Texas A&M Sea Grant floating classroom Research Vessel Karma, simultaneously with 52 land based classes at the Port Mansfield Chamber of Commerce. The largest student contingent was comprised of 821, 4<sup>th</sup> through 7<sup>th</sup> grade students. We also conducted 10 floating classroom trips educating 219 students and adults out of South Padre Island aboard chartered vessels from South Padre Island. These trips included 8<sup>th</sup> through 12<sup>th</sup> graders, Master and Coastal Naturalists.

Coastal Naturalists include the exclusive Red Tide Rangers, volunteers trained specifically to respond to red tide blooms. Activities include collecting, counting and reporting red tide cell concentrations and providing location information on the blooms to the Texas Parks & Wildlife Hazardous Algal Bloom Work Group and National Oceanic and Atmospheric Administration (NOAA). The Rangers further assist these groups monitor red tide blooms by ground-truthing the bloom location with cell counts and aerosol intensity measurements, assessing the potential human impacts to help NOAA predict bloom movements and intensity changes. In 2012, NOAA recognized the Red Tide Rangers as essential to red tide monitoring in Texas.

**Results:** During 2014, we trained and certified 35 new Coastal Naturalists bring our total TCN volunteer base to 232. The program held five trainings targeted toward Coastal Naturalists, partnering with the University of Texas Coastal Studies Laboratory on South Padre Island. Our Coastal Naturalists responded to a sea turtle cold stun event in December, helping save 100 green sea turtles from drowning. Surveys of this program rate it 4.8 out of 5 in educational quality and opportunities with no changes in educational programming recommended.

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Test results for 562 4<sup>th</sup> – 7<sup>th</sup> graders who attended the Floating Classroom program in Port Mansfield indicated 65% increase in knowledge. The 219 7<sup>th</sup> – 12<sup>th</sup> and adults took more advanced tests, different from the younger students, indicating a 55.6% increase in knowledge, almost a 17% difference between the two test results.

The Red Tide Rangers were called into action in the fall of 2014 to conduct sentinel monitoring for red tide threatening the upper Texas coast. They never detected red tide locally, but had training for 20 participants from the National Oceanic and Atmospheric Administration Environmental Cooperative Science Center (ECSC) in October, to prepare for a potential red tide bloom. Red Tide Ranger trainings count as one of the three Texas Coastal Naturalist required trainings. The ECSC is a coalition of East and Gulf coast universities which include Texas A&M University Corpus Christi and the University of Texas at Brownsville to promote minority participation in pursuit of advanced degrees in Science. I have the honor of serving on the ECSC advisory board for the last two years and am pleased two of our Texas Coastal Naturalists (trained in red tide response) have been accepted at Florida A&M University for their Ph.D. program in marine science! Our total number of unique visitors to the Texas Coastal Naturalist page in 2014 was 8947 views.

**Recap:** Educated over 1000 students in Cameron and Willacy Counties in the Floating Classroom program. Trained 35 new Texas Coastal Naturalists in 2014 and helped monitor for red tide, monitor sea turtle populations and educate the public on our natural environment. The Texas Coastal Naturalist program has had spin-off from cooperation with the Port Mansfield Chamber of Commerce, Willacy County Navigation District and Commissioner's Court, and UTB. In 2012 we identified and presented ideas for a 40 acre park site on the Laguna Madre which now is complete and includes a 500' fishing pier, kayak launch area, wetlands, picnic areas and nature trails. This park is the Laguna Point Recreation Area, which recently opened in December 2014 on the south side of Port Mansfield.



# Making a Difference

## 2014 Cameron County Shrimp Industry Best Management Practices Outreach

Developed by Tony Reisinger, County Extension Agent – Coastal & Marine Resources & Andrew Ropicki Ph.D., Marine Economics Specialist and Assistant Professor

**Relevance:** Cameron County has a 180 vessel shrimp fleet which costs vessels an average \$3.09/gallon for diesel fuel in 2014. Shrimp nets deployed by the fleet are now mainly comprised of fuel saving super-fibers (initially introduced by Texas Sea Grant Extension) with 90% of the fleet (162 boats) using Sapphire webbing, a high density polyethylene fiber. Each vessel (baseline – no fuel saving technology) uses 66,101 gallons of fuel per year. Sapphire webbing decreases fuel usage 4.8%. This number comes from Sea Grant specialists Mike Haby and Gary Graham, who determined fuel savings from fishing Sapphire combined with cambered doors resulted in a 24% savings in diesel consumption. Twenty percent (20%) of the 24% fuel savings from the combined system (cambered doors and Sapphire) was due to the use of the Sapphire netting, which presents less twine area (drag) and is a lighter hydrophobic material. The median fuel savings from the combined system was 24% ( $24\% \times .2 = 4.8\%$ ), and with a 44% use cambered doors (79 boats) in the Brownsville / Port Isabel fleet. Data was gathered from survey by Reisinger of 94 vessels at Port of Brownsville in December 2014.

Vessels that use cambered doors and Sapphire or another advanced webbing (seemed reasonable since 98% of the fleet uses advanced webbing) showed Cambered-door usage cuts fuel (after accounting for Sapphire) an additional 20.2% (this gets us to 24% reduction by using the combined system – reported as median fuel savings in Haby and Graham) for the 144 vessels employing cambered doors.

**Results:** In 2014 fuel/cost savings for our fleet, due to the use of Sapphire: 514,001 gallons \$1,588,264 Due to Cambered Doors: 1,002,640 gallons \$3,098,096 Total Savings: 1,516,641 gallons \$4,686,360. On 12/18/2014 a census was taken by Reisinger of the 94 vessels in the Port of Brownsville and 51 (54.26%) were found to be using cambered doors. This number was extrapolated to the entire Brownsville fleet of 145 vessels (79 using doors). No one in the Port Isabel fleet (35 vessels) use the doors. This brought the usage rate down to 43.89%.

Use of doors dropped precipitously due to a lack of supply, there is no longer a manufacturer/distributor in the area. The steel cambered-doors require frequent maintenance and the lack of replacements led many fishermen to go back to the traditional wooden doors.

Although use of the cambered doors has fallen the Sea Grant work appears to have led many of the fishermen to evaluate and test other fuel saving technologies on their own. While Sapphire webbing is used extensively, some boats have adopted even more advanced webbing and almost the entire fleet uses some form of advanced webbing.



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In addition, four vessels from the Zimco fleet out of Brownsville are now using smaller more advanced engines (Volvo Penta's D13) which have decreased fuel usage by 5+ gallons per hour or 20%! Volvo claims to reduce NOx and particulate emissions which will meet the upcoming US EPA Tier 3 emission regulations for shrimp vessel engines.

The same fleet is testing a new type of beam trawl, the winged trawl, with great success. Bycatch reduction for croaker is reported at ~90% from Captain interviews. They believe this reduction is due to low trawl height off the bottom. Fuel savings are significant at ~20% due to no door drag and one 50' net pulled of each side of the vessel. This introduction is a direct result of our monthly programming efforts for the Brownsville - Port Isabel Shrimp Producers Association where we hosted the manufacturer for a presentation last year.

The introduction and possible company adoption of this new gear and propulsion system have the potential to save an additional 40% in fuel costs in the future while meeting future EPA regulations on emissions.

In December, Reisinger was contacted by a fuel state controller, FSC, manufacturer and we set up a demonstration aboard a Brownsville vessel. The company installed a FSC aboard a trawler including a fuel flow monitor, gratis. The vessel should have results in early 2015. The company claims an 8% fuel savings increase and a 50% reduction in NOx emissions.

Three hundred and forty vessel owners, captains and crew were from Texas to Florida were trained this year on turtle excluder device, TED, compliance. These trainings helped reduce sea turtle fishing mortality which is estimated at 3%. Over 400 bycatch reduction devices, BRDs, were checked Gulf-wide, crew trainings conducted on proper installation and positioning for over 300, and the majority were fisheye BRDs. Less than 1% vessels use other devices.

Fuel prices have dropped significantly reducing fuel saving gear incentives. This phenomenon has exacerbated the move away from cambered door to the old style wooden doors which now average 7' in length vs. the 9' doors used before the cambered conversion began. This regression to the smaller is indicative the fishermen realized if the cambered doors had less area, a smaller wooden door may work, which seems to be the case. Future work will be to continue: fuel saving investigations including new engines and trawl designs, and TED trainings and BRD checks aboard vessels. The survey of 94 vessels including owners and crews conducted in December revealed and ranked major issues now confronting the industry:

- Crew Issues: acquisition, training, citizen captains, seamanship education, H2B program, USCG waivers, employment of prisoners serving time for petty crimes, and aging, 32%
- Safety compliance and training, 20%
- Communications within the industry, 13%

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- Grants to help industry, 9%
- Bycatch, sea turtles and fish, 8%
- Fuel savings, 7%
- Apathy by vessel owners, 6%
- Silting in of Brownsville Shrimp basin, 3%

**Aquaculture:** Our Cameron County Emergency Management Office asked for our assistance in investigating possible shrimp pond poisonings at the Arroyo Aquaculture Association site this summer. I took numerous samples of shrimp, substrate, and feeding tray algae. The samples were sent to Dr. Paul Zimba, a toxicologist who ran mass spectrophotometry analyses. The Texas Commission on Environmental Quality also took samples. No toxic concentrations were found in any of the samples and the harvested shrimp were allowed to sell on the market and no negative consequences were reported. Cooperation between the different agencies involved helped buyers and marketers bring the shrimp to the market with minimal loss of time and money backed by accurate science.

**Recap:** In 2014 our effort to improve shrimp fishing energy efficiency resulted in fuel/cost savings for our fleet, due to the use of Sapphire: 514,001 gallons valued at \$1,588,264, and due to Cambered Doors: 1,002,640 gallons \$3,098,096, resulting in a total savings of: 1,516,641 gallons worth \$4,686,360. Three hundred and forty vessel owners, captains and crew were from Texas to Florida were trained this year on turtle excluder device, TED, compliance. These trainings helped reduce sea turtle fishing mortality which is estimated at 3%. Over 400 bycatch reduction devices, BRDs, were checked Gulf-wide, crew trainings conducted on proper installation and positioning for over 300, and the majority were fisheye BRDs. Less than 1% vessels use other devices.



## Making a Difference

### **Expanded Food and Nutrition Education Program** **Developed by Beatriz Loya, Extension Agent - EFNEP**

Supporting Texas Families with Greatest Need Since 1969

The Expanded Food and Nutrition Education Program (EFNEP) helps young families and youth with limited resources – those most at risk to suffer from hunger, food insecurity and the inability to connect with available support systems. EFNEP offers practical lessons in basic nutrition, food preparation, food budget management and food safety in settings convenient for the participants. EFNEP also includes a walking program for adult participants. Program graduates reflect significant, lasting improvement in eating behaviors and healthy food habits. Texas has a need for EFNEP – 2011 data show that 20% of Texas families with children under the age of 18 were living below poverty level, compared to 16% of U.S. families.

### ***EFNEP REACHES DIVERSE AUDIENCES IN CAMERON COUNTY***

In Cameron County, ethnically diverse EFNEP nutrition assistants reach youth and adult groups whose principal language may be English or Spanish.

In 2014,

- 2,748 families enrolled in EFNEP.
- 11,955 youth contacts were made through the EFNEP youth program.
- 281 EFNEP participants were pregnant and/or nursing.
- 80% of families were at or below 100% of federal poverty level.
- 17% of families enrolled in one or more food assistance programs at entry.
- 92% of EFNEP adult participants were Hispanic/Latino.



### ***VOLUNTEER STRENGTHEN EFNEP***

In 2014, 247 adult volunteers donated 3,598 hours of work to EFNEP in Cameron County. At the Texas rate of \$23.40/hour, this volunteerism has a minimum dollar value of \$84,203. Volunteers make a difference in their own communities, and contribute to EFNEP's continued success.

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### ***EFNEP MAKES A REAL DIFFERENCE***

#### Adult Program:

Using “hands-on” experiences, EFNEP adult participants complete at least a six-lesson series on stretching food dollars, improving eating habits, and practicing food safety principles. As a result of participation in EFNEP the following food and nutrition behaviors were achieved:

- 96% with positive change in any food group at exit. Specifically, EFNEP participants consumed 1.2 more cups of fruits and vegetables and 0.5 additional cups of dairy at completion, compared to entry.
- 84% improved in one or more food resource management practices such as using a list for grocery shopping.
- 91% improved in one or more nutrition practices such as using the “Nutrition Facts” on food labels to make food choices.
- 72% improved in one or more food safety practices such as thawing foods safely.
- 44% of program participants reported a positive change in physical activity.

#### Youth Program:

The EFNEP – Youth program is directed toward low-income school-age youth. These students participate in a series of fun and educational lessons on good nutrition and food safety as part of summer programs, classroom and after-school activities. The following results show how youth participants’ food behaviors improved after attending EFNEP classes.

- 84% improved ability to choose foods according to the Dietary Guidelines.
- 34% improved their safe food handling practices more often.
- 38% improved physical activity practices.

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### ***COST – BENEFITS OF EFNEP***

Studies have shown that for every \$1 spent of EFNEP, \$10 were estimated to be saved in health care costs and \$2 saved in food costs by participants. For Cameron County, this is \$4.7 million in estimated health care cost savings and almost \$938,666 in food costs.

*"This program has made grand changes in my life. I have learned how to eat moderate and controlled portions and doing exercise has helped me not only to lose weight, but now my feet don't hurt and I sleep better, because before I used to have problems going to sleep. Also, with this program, I have learned to plan my meals, read food labels, and compare prices before purchasing, and now I have better hygiene to not contaminate my food."* L. Peña, Cunningham Manor, Brownsville, TX



# Texas A&M AgriLife Extension Service Cameron County

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