



Extension Education in Wharton County

Making a Difference

2018

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.

Wharton County – Summary of 2018 Educational Contacts

4-H Members	287
4-H Volunteers	44
4-H Clubs	16
Curriculum Enrichment Participants	654

Contacts at Educational Events

Total Contacts 67,326

Educational Events 9,108

Other Contacts 58,218

Other Contacts

All Contacts 58,218

Individual Contacts – Direct 1,494

Individual Contacts – Indirect 8,776

Newsletters 44,615

Editions 25

Educational Resources 1,524

Individual Contacts – Volunteer 1,784

23 news releases with a distribution reaching 56,000 contacts

Social Media Posts: 82 with Followers: 2,507

Volunteer Involvement

Total Involved: 234

Hours Contributed: 217

Agriculture and Natural Resources

2018 Pesticide Applicator Programming in Wharton County

Developed by:

Corrie Bowen
County Extension Agent – Ag/NR
Wharton County

Relevance

For year 2018 Wharton County, Texas has 592 pesticide applicators licensed with the Texas Department of Agriculture (TDA). Private Pesticide Applicators are required to obtain fifteen (15) CEUs (continued education credits) every five years in order to renew their license. Commercial and Non-Commercial Applicators are required to obtain 5 CEUs every year in order to renew their license. There is a substantial audience and a need for Extension to provide the educational opportunities for these applicators to obtain their CEU credits. In addition, new applicators seek opportunities throughout the year to take the certification course at the Wharton County Extension Office to obtain their license.

Pesticide applicators generate and accumulate a significant amount pesticide waste in the form of empty containers and unused pesticides. Pesticides become unused when either pesticides become unregistered for use by the EPA, or become unidentifiable when product labels deteriorate or separate from containers. Regionally sponsored pesticide collection events are necessary to give applicators a responsible, and economically feasible source to properly dispose of pesticide waste.

Response

The Wharton County Row Crops Committee provided for one (1) individual course in 2018 that offered five (5) CEUs. The committee planned and conducted this event based on client need and evaluation results from the 2017 Conference. This 5-CEU Pesticide Recertification Conference is scheduled each year at the Wharton County Youth Fairgrounds in Crescent. CEUs were also awarded at the following seminars and workshops scheduled throughout the year: January 11, 2018 Upper Gulf Coast Feed Grain and Cotton Conference ;January 24, 2018 Western Rice Belt Conference; January 25, 2018 Grain Handlers Conference; February 1, 2018 5-CEU Conference; February/March 2018 Auxin Specific Applicator Training; April 17, 2018 Ag Symposium; July 17, 2018 Wharton County Cotton Turn Row Meeting; and at seed meetings and/or field days for: DowAgroSciences®, Pioneer Seed®/Kresta Farms, and Krenek Seed Company. CEU credits are also made available to pesticide applicators by viewing a series of Last Chance CEU videos at the Wharton County Extension Office.

The mandatory Certification Training for potential pesticide applicators to obtain their pesticide applicator license was provided by the Wharton County Extension Office throughout the year on an as-needed basis or when requested.

Ag Science Teachers located throughout Texas is another audience of Pesticide License holders that County Extension Agent, Corrie Bowen educates at the annual Vocational Ag Teachers Association of Texas (VATAT) Annual Conference. Since 2005 Agent Bowen has facilitated a Pesticide Applicator Certification Workshop and a Pesticide Applicator Recertification Workshop at the VATAT annual conference. Ag Science teachers must also acquire their required recertification credits, but they often have difficulty attending the recertification course while they are teaching in the classroom. Offering CEUs at their annual conference helps teachers acquire their needed recertification credits. 2018 marked Agent Bowen's 14th consecutive year cooperating with the VATAT, providing and facilitating their annual pesticide workshops.

Results

Agriculture and Natural Resources

Eight (8) new applicators attended the Private Pesticide Applicator training and testing sessions offered at the Wharton County Extension Office in the year 2018.

For year 2018 Wharton County awarded a total of **31.0 CEUs** at group meetings to a total of **806** individuals. In addition to CEUs obtained at group meetings, a total of eight (**8**) licensed Pesticide Applicators obtained at total of **21** hours of CEU credits by viewing our Last Chance CEU videos at the Wharton County Extension Office.

February 1, 2018 5-CEU Pesticide Recertification Conference

A retrospective-post evaluation instrument was conducted on the day of the 5-CEU Pesticide Recertification Conference. **37 of 111 (33.3%)** completed the evaluation instrument. Participants reported 65,066 acres managed, and a total anticipated economic benefit to their operations of **\$215,957** or **\$3.32** per acre.

Client Change Level of Understanding: February 1, 2018 5-CEU Pesticide Recertification Conference

TOPICS	Mean Value BEFORE	Mean Value AFTER	Percent Increase
Changes to WPS laws that went into effect in 2018	1.94	3.17	41.0%
Annual auxin training is required prior to applying Engenia, Xtendirnax or Fexapan	1.41	3.44	67.7%
Auxin training is not required to purchase seed or chemistry	1.53	3.41	62.7%

November 28, 2018 Waste Pesticide Collection Event at Wharton County

On November 28, 2018 I cooperated with the Wharton County Leadership Advisory Board, Texas Department of Agriculture, Texas A&M AgriLife Extension Agricultural and Environmental Safety, Stericycle Company, and US Ag Recycling to coordinate and conduct the first state-coordinated, free pesticide waste collection event held in the past 9 years. This pesticide collection event was advertised to pesticide applicators in Wharton and surrounding counties, and was held from 8:00 am. to 12:00 p.m. at the Wharton County Fairgrounds on November 28, 2018. One Hundred Seventeen (**117**) applicators properly disposed of a total of **121,836 pounds** of pesticide waste. **117 of 117** completed surveys as applicators waiting in line for two hours, each, while a total of **114** vehicles waited to drop of their pesticide waste. Pesticide applicators came from 19 counties to dispose of their pesticide waste; 42.7% came from Wharton County; 18.8% from Colorado and Fort Bend Counties; 5.9% from Matagorda County; 5.9% from Brazoria County; 5.1 % from Austin County; and the remaining 21.6 came from counties as far away as Trinity, Polk, Walker, Grimes, Burluson and Victoria counties. The average cost for each of the 114 vehicles that dropped off product would have cost **\$1,582.12** for disposal. In all, total savings was estimated at **\$180,361.68**. This does not include any transportation or labor charges, so the total average per vehicle would be close to \$2,000, making the estimated savings for producers in the Wharton-county area a total of **\$228,000**.

Agriculture and Natural Resources

2018 Row Crop Production Education Programming in Wharton County

Developed by:

Corrie Bowen, County Extension Agent – Agriculture & Natural Resources, Wharton County
Kate Harrell, County Extension Agent – Integrated Pest Management; Matagorda, Wharton, Jackson County

Relevance

Wharton County ranks 17th in the State in total agricultural receipts and 2nd in the State in total value of crops, including nursery and greenhouse production. The 2012 Census of Agriculture for Wharton County reports \$373,637,000 in total agricultural receipts. Cotton, corn, grain sorghum, and soybeans are among the chief agricultural products in Wharton County, totaling 188,686.11 acres planted for the 2016 crop production year. As costs of production continue to increase, applied research is needed to evaluate new emerging technologies to determine their feasibility in local farming systems.

In 2018, cotton producers faced an EPA mandated Auxin Specific Applicator training for cotton and soybean producers planting Xtendflex cotton varieties and using dicamba technology herbicides such as Xtendimax, FeXapan, and Engenia. In addition to education on emerging pests, producers also sought education on a newly released Seed Cotton program by USDA, and education on drift minimization and temperature inversions following increased adoption of Enlist and Xtendimax herbicides.

Response

The Wharton County Row Crops Committee planned, conducted, and evaluated educational programs and applied research projects for the 2018 crop production year. An annual Upper Gulf Coast Feed Grain and Cotton Conference was held on January 11, 2018 as a multi-county program in El Campo, Texas (Wharton County) – Wharton, Matagorda, and Colorado County cooperating. The 2018 EPA mandated Auxin Specific Applicator Training was conducted by the Wharton County Extension Office as part of the Feed Grain and Cotton Conference, and at multiple meetings in the months to follow.

On February 19, 2019 a webinar was hosted in El Campo to educate cotton producers about the Seed Cotton Program, passed by Congress in February 2018 as an effort to get cotton back in Title 1 of the farm bill. This is an issue that the cotton industry, led by the National Cotton Council with support from South Texas Cotton & Grain Association, has worked on for the past three years.

On July 17, 2018, The Wharton County Row Crops Committee hosted a Cotton Turn Row Meeting in Crescent, Texas. Topics addressed cotton varieties and late season issues, minimizing off-target herbicide movement, and newly implemented Worker Protection Standard (WPS) requirements by the EPA for pesticide workers and handlers.

Three committee members also served as Result Demonstration Cooperators. The following result demonstrations were conducted in 2018:

- 2018 Wharton County Grain Sorghum Uniform Hybrid Trial with cooperating grower and committee member Duane Lutringer – El Campo, Texas.

Agriculture and Natural Resources

- 2018 Wharton County Corn Uniform Hybrid Trial with cooperating grower and committee member Terry Marek – Pierce, Texas.
- 2018 Replicated Agronomic Cotton Evaluation (RACE) Trial with cooperating grower and committee member Michael Beard – El Campo, Texas.

Results

Upper Gulf Coast Feed Grain and Cotton Conference

To determine the programmatic results of the Upper Gulf Coast Feed Grain and Cotton Conference, a retrospective post evaluation instrument completed the day of the event. **44 of 100** completed evaluations. **73.3%** of respondents indicated that they intend to adopt practices that prevent the off target movement of dicamba herbicides; **65.2%** intend to adopt bollworm management strategies. Participants reported 49,968 acres managed, and a total anticipated economic benefit to their operations of \$355,657 or \$7.12 per acre.

Client Change Level of Understanding: Upper Gulf Coast Feed Grain and Cotton Conference

TOPICS	Mean Value BEFORE	Mean Value AFTER	Percent Increase
Understanding of the 2017 high plains fumonisin event and how it relates to local corn	1.68	3.41	57.7%
Anyone applying Engenia, Xtendimax or FeXapan must attend the auxin training..	1.9	3.71	60.3%

February 19, 2018 Seed Cotton Farm Program Training

Twenty-five (25) cotton producers attended a training program for the 2018 Seed Cotton Program. Cotton producers increased their knowledge of how the Seed Cotton Program will provide risk management to their 2018 cotton crop, as a result of the inclusion of Cotton as a Title 1 farm program in the 2014 Farm Bill. Producers were informed of how to convert Generic Base Acres in to Seed Cotton acres, along with pertinent sign up dates for PLC/ARC in 2018.

July 17, 2018 Cotton Turn Row Meeting

Fifteen (15) cotton producers attended the July 17, 2018 Cotton Turn Row Meeting in Crescent, Texas. Participants increased their knowledge of cotton varieties and late season issues, how to minimize off-target herbicide movement, and how to comply with Worker Protection Standard requirements for pesticide workers and handlers.

Auxin Specific Applicator Trainings

Two Hundred Thirty-two (232) pesticide license holders completed the special training required by the EPA for the new dicamba formulations applied on tolerant cotton and soybean crops. Cotton and soybean producers received this required training at one of six scheduled Auxin Specific Trainings held from January through April.

Result Demonstrations and Applied Research

Results for all applied research projects conducted in Wharton County are posted, and can be downloaded at <http://varietytesting.tamu.edu>

2018 Upper Gulf Coast Rice Production Education Summary

Developed by:

Corrie Bowen, County Extension Agent – Agriculture & Natural Resources, Wharton County
Aaron Sumrall, County Extension Agent – Agriculture & Natural Resources, Colorado County

Relevance

Rice has been a mainstay of the Colorado, Matagorda, Jackson, and Wharton County's economies since the early 1900's. Rice income accounts for \$135 million in the four-county area, comprised of 53%, or 100,738 acres of Texas' 191,133 total rice acres. However, lack of profitability is placing financial stress on both the infrastructure and the farming community. Acreage has declined in recent years creating negative impacts on the local economy in general. In response to challenging economic conditions, this results in changes in land ownership patterns and changes in water availability. Rice farmers are diversifying their operations through entrepreneurial pursuits - new enterprises, value added, niche marketing, seeking new water sources, etc. Most recently in 2018, market influences and consumer demand created rice storage challenges for the 2018 rice crop. With enough drying capacity for 12 million hundredweights (cwts), by October 2018 Texas had only enough drying and storage capacity for only 20% of the remaining ratoon crop yet to be harvested. 53% of the 7,476,000 cwts of rice in storage had not been sold by October due to quality concerns by buyers. To achieve and maintain the economic viability of rice producers, we must provide business profitability and risk management-based programs in response to the educational needs of those in the region. The Western Rice Belt program area committee for Matagorda, Wharton, Jackson and Colorado Counties reflects this educational need.

Response

County Extension Agents with Texas A&M AgriLife Extension in Wharton, Matagorda, Jackson, and Colorado come together each year to provide the Western Rice Belt Conference. This has been an ongoing multiyear, multi-county educational effort since 2005. The conference is comprised of a Producers Seminar, along with a Consumers Seminar, held each year on the third Wednesday of January. All stages of the event from planning to evaluation are directed by two, multi-county Western Rice Belt Conference planning committees – one for the producers section and one for the consumer section. Committees are made up of County Extension Agents, equipment dealers, rice warehouse managers, rice producers, rice producers, U.S. Rice Producers Association, USA Rice, Inc., wives of rice farmers, and Extension Education Association (EEA) members. The committee builds the agenda each year to address current production and consumer issues in the rice industry with guest speakers from Texas Department of Agriculture, Texas A&M AgriLife Research and Extension, and more.

In September 2018 the Western Rice Belt committee sought to gather a better understanding as to why the Texas rice industry has faced sudden challenges in 2018 finding storage space to store the 2018 rice crop. Any findings would be shared with rice producers at the 2019 Western Rice Belt Conference. On October 30, 2018 the Western Rice Belt Committee hosted a Rice Sustainability Forum in El Campo for professionals from the Texas rice industry.

Results

[2018 Western Rice Belt Conference](#)

Agriculture and Natural Resources

The 14th Annual Western Rice Belt Conference was held on January 24, 2018 at the El Campo Civic Center, after being cancelled on January 17, 2018 due to an ice storm that prevented safe travelling. 220 rice producers and 81 rice consumers attended the conference. To determine the programmatic results of the Western Rice Belt Producers Seminar a retrospective post evaluation instrument was administered the day of the conference. **131 of 220 (59.5%)** completed evaluations. **53.8%** of the participants plan to voice their input and concerns regarding the 2018 Farm Bill through the proper channels. Rice producers report a total anticipated economic benefit for their farm operations of \$876,550, or an economic benefit of \$4.83 per acre.

Client Change Level of Understanding: 2018 Western Rice Belt Conference

TOPICS	Mean Value BEFORE	Mean Value AFTER	Percent Increase
EPS worker protection standards laws that take into effect in 2018	2.24	3.16	30.7%
The various rice boards in Texas: their purpose, what empowers each one, who to contact	2.39	3.22	27.7%
Management of insects in Texas rice	2.61	3.29	22.7%
Research on new chemistry available in weed control for rice	2.38	3.06	22.7%
Disease management in rice	2.59	3.14	18.3%

2018 Rice Sustainability Forum

A total of thirty-nine (39) rice industry professionals attended the October 30, 2018 Western Rice Belt Committee sponsored, Rice Sustainability Forum in El Campo, Texas. These professionals represented rice producers, rice research, Texas Department of Agriculture, AgriLife Extension, grain marketers, grower associations, rice mills, and rice dryers. With limited time to discuss the market, and with a lot to discuss, the group focused on answering five questions pertaining to the rice industry:

Question 1	What are the challenges that you are facing in the rice industry?
<i>Response</i>	<i>Providing a quality product to a quality driven market; concern that not all rice producing regions in the U.S. preserve the identity of rice varieties; rice millers have a difficult time selling varieties with lower cooking qualities; pricing of rice in foreign markets; competing with rice of higher quality in foreign markets.</i>
Question 2	Do you see a path forward to handle and market 15-20 million cwts out of Texas?
<i>Response</i>	<i>Texas, we would have to expand our storage space; more consistent, annual production volume would be needed to justify the enormous investment in drying and storage infrastructure, as well as rice export facilities.</i>
Question 3	What are your customer's needs?
<i>Response</i>	<i>The farmer desires a profitable and consistent price for his/her rice. Rice dryer operators need volume of rice from their customers, the growers. The rice mills need consistent quality rice coming out of the mill (variety related).</i>
Question 4	Which seed varieties are viable for your customers?
<i>Response</i>	<i>Desirable varieties currently identified include 745,723,111,153, Presidio, Cheniere, and Provisia.</i>
Question 5	Do you see something that, as an industry we can improve?
<i>Response</i>	<i>communication shall improve between the mills, dryers, and growers; Opening the international market and supporting the export of rough rice through improvements in infrastructure</i>

Making a Difference

Lori Schindler, County Extension Agent
Family and Community Health, Wharton County

Food Protection Manager's/Food Handler's Safety Program 2018

The Food Protection Manager's and Food Handler's Safety Program continues to be one of my top programs in the County. The Centers for Disease Control and Prevention estimate that 1 in 6 individuals will become sick from a foodborne illness each year. More than half of all foodborne diseases is attributed to improper food handling in restaurants. Because nearly half of all food dollars are spent on food prepared outside the home, food safety is a top concern among consumers. Therefore, food safety education is a critical prevention component for reducing the risk of foodborne diseases. Under the Texas Department of State and Health Services (DSHS) jurisdiction each food establishment is required to have one certified food manager employed by that establishment. The Department of State and Health Services also requires that all food service employees shall successfully complete an accredited food handler training course within 60 days of employment, however, DSHS does not provide the training, therefore, the food service industry is left looking for other options to provide training.

During the 2018 year I have provided 205 Food Handler's Safety Training Certificates and 5 Food Protection Manager's Certifications. I have been working closely with both the El Campo High School and Wharton High School Culinary Arts Classes and have provided their students enrolled in these classes Food Safety training and they have received their certificates that are valid for when they seek a job in the food industry. The Food Handler's Safety Training is valid for 2 years and the Food Protection Manager's Certification is good for 5 years. With constant turn over in the food industry and new students enrolling in Culinary Arts classes, there is a constant need for Food Handler's Safety and Food Protection Manager's Training. Just this week I had a couple come in asking about both trainings as they are preparing to buy a business and intend to open a restaurant. They are trying to get the certifications done in time to take over the business without having to shut down operations temporarily to wait until training can be done. Without my service in this county, there would be a much greater delay in training and they would most likely have to delay opening until trainings were complete. Wharton High School has also requested that I come in and teach the Food Protection Manager's classes to 5 High School Culinary Arts Senior students early in 2019. This will allow these students to go into the food service industry as a Food Safety Manager with a 5 year Certification. The culinary arts teacher would like to certify more students, however, the cost of the program makes it difficult and so it has been limited to students who show a great interest in the program for now.

Making a Difference

2018 Wharton County 4-H Program

Developed by Laura Reyna County Extension Agent 4-H Youth Development, Wharton County

Relevance

4-H empowers youth to reach their full potential by promoting positive youth development through participation in animal projects, community service projects, family and consumer science projects and leadership projects just to name a few. In Wharton County we have individuals that are involved in every different aspect of the 4-H program. By involving these youth in the many different projects and activities they are able to experience positive youth development that helps to prepare them for their futures.

Target Audience

4-H Youth participants, ages 8-18, in Wharton County who strive to help the community and prepare for the future.

Response

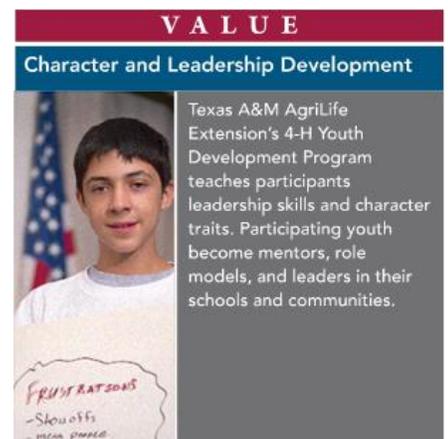
As a former Wharton County 4-H member improving the program in all aspects has become a top priority since starting here in March. The first task at hand has been to build relationships with 4-H members and their families so that we can increase the trust in the program. By doing this we can proceed in increasing enrollment in not only our 4-H program but the many opportunities that we have to offer. It is also important to provide quality contest and programs that our members enjoy participating in so that they continue to do so. By providing adequate training for our adult volunteers allows us to empower them to help us lead our youth. A training was held for club managers and volunteers, they were able to learn the different aspects of the 4-H program and given the tools needed to run a successful 4-H club. We also hosted a scholarship training and recordbook training for members and parents to have the tools to be successful in both avenues. Setting our 4-H members up for success is another way that we can continue to retain members.

A big part of 4-H is working with and helping the community. One Day 4-H has given our 4-H clubs an outlet to do this during National 4-H week. We had a variety of community service projects done across the county ranging from carrying out groceries for individuals to donating water and gatorade to local first responders. We also host a community service project each month during the County Council Meetings, our youth truly see the impact that they can have by helping others in numerous ways. Youth participants have learned that through their community service efforts they are directly helping our community, in turn this helps promote their positive youth development.

Participation in all projects has been very successful and individuals have learned responsibility, record keeping, leadership, consumer life skills, and interview skills preparing them for the future.

Results

- 303 members enrolled in Wharton County 4-H
- 53 Adult volunteers enrolled on 4-H Connect
- 17 Community Clubs, 1 project club, 1 county club and 1 Parent Adult Leaders Association



Making a Difference

- 71 youth exhibitors participated in Ft. Worth, San Antonio, Houston, and Austin Major Livestock Shows
- 206 youth participated in the Wharton County Youth Fair Livestock Exposition
- 36 youth participated in Wharton County Fair Creative Arts Show
- 39 youth participated in the County Photography Contest, submitting 213 pictures
- 10 youth participated in the County Fashion Show
- 6 youth participated in the County Fashion Story Board Contest
- 14 youth/4 teams participated in the Duds to Dazzle Contest
- 49 youth participated in the County Round-up
- 35 youth participated in District 11 Spring Spectacular (Roundup, Fashion Show, and Story Board)
- 11 youth participated in District Photography Contest
- 7 youth participated in State Photography Contest
- 27 youth participated in the County Recordbook Contest
- 20 youth and 7 Adults participated in State 4-H Roundup
- 30 youth participated in Kids in the Kitchen Camp
- 1 Texas 4-H Council Member
- 1 Texas 4-H Junior Master Photographer
- 1 Texas 4-H Fashion & Interior Design Ambassador
- 1 District 11 4-H Council Officer
- 2 senior 4-H members received Texas 4-H opportunity scholarships, for a total amount of \$32,000.
- 3 youth and 1 adult attended District 11 Leadership Lab
- 23 youth participated in the District Recordbook Contest
- 200 youth and adults in attendance at the annual awards banquet
- 3 youth participated in the State Recordbook Contest
- 1 State Recordbook Winner!
- 150 youth and 32 Adults participated in One Day 4-H efforts across the county
- 24 youth participated in the County Food Show
- 50 youth/13 teams participated in County Food Challenge
- 3 youth and 1 adult participated in District 11 4-H Crossroads
- 1 youth attended the Texas 4-H Leadership Conference in Washington, D.C.

Summary

Results indicate that the 4-H program is greatly appreciated and very important to the Youth and Community of Wharton County. Plans are to continue working with volunteers, youth and the community to make the Best Better!



Making a Difference

2018 Wharton County Fostering Strong Families/ Financial Management Kashara Bell- Family and Consumer Science Agent- Cooperative Extension Program

Relevance

What happens in your life can set the foundation of a lifetime. It's key that families have the tools and resources that they need to provide a stable and nurturing environment for their families. In order to reach that goal Prairie View A&M Cooperative Extension Program must partner with communities in Wharton County to strengthen families and empower families to upgrade their life skills! We all have a shared responsibility for making our communities strong. According to the Wharton County Family plan the solution to prevent poverty and low resources is to offer educational programming.

Wharton County Criminal Justice Community Plan Solutions 2016-2017

- Secure basic resources and emergency services for families
- Reinforce and expand after school programming
- Provide educational, vocational, and economic services to families to encourage emotional maturity and financial independence.

Response

Knowing how to solve family issues and conflict management is important for family resilience. Being educated on how to be resourceful and creative will expose possibilities when overcoming adversity. To strengthen families we must: 1) engage youth and their families in an educational pilot program that promotes learning and behavior change in the areas of prevention, nutrition, and physical activity, 2) implement healthy living programs, 3) develop and begin implementing curriculums.

- Reaching **71** adults
- **31** Presentations

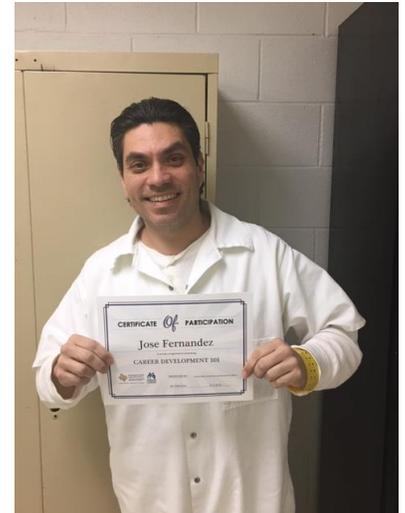
Education Efforts:

Parenting 101- 5 session course of classes that provides parents with helpful tips and strategies on dealing with common parenting challenges. This course covers a range of parenting topics including: parenting styles, child development, communication, positive discipline and stress management.

- Parenting class were held at the **Wharton County Extension Office**
- Child Protective Services** highly recommend this program for their cases
- 26** participants and **18** graduates (January 2018-December 2018)

Making a Difference

Career Development Series- Are you ready to jump back into the work force after your released? Don't know where to start? Need resume help? Work force wardrobe assistance? Interview skills? If so, this series will be perfect for you! The work force world is challenging and constantly innovating. Join this program to gain skills that set you apart from all other applicants. These were the questions that we asked the inmates in the Wharton County Jail. So, of course their answer was YES! Prairie View A&M University Cooperative Extension taught 8 sessions of Career Development 101 at the Wharton County Jail. This class was offered to males and females inmates. During the series we had mock interviews, created a vision board and presented it, learned how to compete in the work force world, and how to dress for success. The work force world is challenging and constantly innovating. Gearing these participates up with top notch professional skills will set them apart from all other applicants. Our class deceased over the course because of transfers, release dates, and disciple restrictions, but everything ended up working at in the end.



- Program implemented at the Wharton County Jail
- Partnered with Sabrina Simon (Cooperative Extension Program Life Skills Specialist)
- 34 participants enrolled. 21 graduated and finished the series
- Collaborated with the Wharton Work Force Center
- As a reward for completing the series, each inmate received a professional resume and a certificate. They were so excited!

Results

- Parenting 101-** 10 out of 37 participants were able to be reunited with their child/children.
- Career Development-** 2 participants were able to get jobs once released. The guards at the jail saw a behavior improvement from the inmates. 21 graduated and finished the series

Making a Difference

2018 Wharton County Health and Wellness Kashara Bell- Family and Community Health Agent- Cooperative Extension Program

Relevance

Prairie View A&M University Cooperative Extension Program strives to address the health and wellness needs of Wharton County by offering programs that help prevent chronic illnesses (diabetes, cancer, Alzheimer, and heart disease), eliminate health disparities, poor dieting, and unhealthy lifestyle habits. Wharton County profile states that 19% of the population is impacted by diabetes or cancer. Chronic health conditions have serious consequences for disease, premature death, and health care costs.

Response

The goal of our programming is to positively impact participant's health and wellbeing through improvements in self-efficacy, self-care behaviors, nutrition and physical activity. Wharton County Cooperative Extension Program strive to improve the health and quality of life for individuals, families, and communities by moving the nation from a focus on sickness and disease to one based on prevention and wellness.

- 187 participants
- 11 education presentations

Education efforts:

Cooking for a Lifetime Cancer Prevention Cooking School- is an interactive class where participants learn how to choose and prepare food to reduce cancer risk along with discussing the screenings recommended for breast, cervical, and colorectal cancer.

- 37 participants
- Grant funded (**\$350.00** each class) by **University of Georgia Cooperative Extension**
- Partner with El Campo Wharton County Library Branch

Blender Bike Program- Encourages MyPlate, physical activity, and the importance of eating fruits and vegetables. Wharton County Cooperative Extension program partnered with El Campo Memorial Hospital, Wharton County Library, and Faith Christian Academy.

- 150 program total attendance
- \$205.00** for program supplies from the El Campo Memorial Hospital and the Faith Christian Academy
- Ages **7-75** attended education presentations
- June 2018- November 2018

Making a Difference

Results

Cooking For a Lifetime Cancer Prevention School follow up program utilized 27 post paper evaluations

<i>Please mark how likely you are to do each of the behaviors below</i>	<i>Not at all likely</i>	<i>A little likely</i>	<i>Moderately likely</i>	<i>Very likely</i>	<i>Extremely Likely</i>
Be physically fit for at least 30 minutes 5 days or more a week	0.00%	0.00%	18.18%	27.27%	54.55%
Fill half of your plate with fruits and vegetables	0.00%	0.00%	9.09%	27.27%	63.64%
Achieve a healthy weight	0.00%	0.00%	18.18%	27.27%	54.55%
Eat 18 ounces of red meat per week	0.00%	0.00%	0.00%	45.45%	54.55%

tool to show behavior change and knowledge gained.

Blender Bike Program



Making a Difference

2018 Wharton Childhood Obesity 4-H Heroes 4 Health Grant Kashara Bell- Family and Consumer Science Agent- Cooperative Extension Program

Relevance

Obesity is a condition that is associated with having an excess of body fat. The adult obesity rate of Wharton County, TX was 31.30% in 2015 (<https://www.opendatanetwork.com>). Obesity is classified as having a BMI (body mass index) of 30 or greater. Obesity related conditions include heart disease, stroke, and certain types of cancers. These are some of the leading causes of preventable death. The estimated annual health care cost of obesity related illness is \$190.2 billion in the United States. The United States is the eighth fattest country in the world. 31.8% percent of the population being overweight. Even though childhood obesity is our main focus area, we must still educate and inform their parents as well. The commonness of obesity in Texas was notably higher among African Americans and Hispanics compared to Caucasians and other races.

Response

The Prairie View A&M University (PVAMU) Cooperative Extension Program will implement the Heroes 4-Health program in ten counties in Texas targeting 5,000 undeserved youth and their families. The Wharton County Heroes '4 Health program is a youth service-learning program dedicated to developing youth advocacy and contribution in their communities around nutrition and physical health. The Wharton County Family and Consumer Sciences Agent, will engage community partners, 4-H youth and adult volunteers in evidences -based healthy living programs. Prairie View A&M Cooperative Extension plan to inspire schools, families, and communities to engage in a healthier lifestyle. Our goal is to improve diets, increase physical activity, and maintain body weight to avoid excess weight gain. Making healthier decision will help prevent chronic illness and other health risk factors. Incorporating MyPlate and the Expanded Food and Nutrition Education Program (EFNEP) modules will provide a hands-on educational approach. The plan for 2019 will be to conduct programs that are geared towards childhood obesity prevention which will help reach the National Institution of Food and Agriculture goals.

- Reaching **382** youth and adults
- **21** Presentations

Education Efforts:

Hero's 4 Health Grant – The program provides technical and educational information to limited resources individuals and families to raise nutritional and dietary knowledge. The program amplifies awareness and the relationship between high-calorie food consumption and lack of exercise to health issues.



Making a Difference

- 137 participants
- Offered at 4 locations- El Campo Library, Louise Library, Boys and Girls Club, and Just Do It Now
- May 2018-July 2018
- Just Do It Now** was impacted from **Hurricane Harvey** which caused their building to flood. As an effort to continue after school programming, Just Do It Now transported the children to the Wharton County Extension office after school to attend the nutrition classes!
- Funded through the Hero's 4 Health Grant through Walmart**
- 10 Volunteers

CHFFF- Choose Health: Food, Fun, and Fitness (CHFFF) is an award-winning, comprehensive nutrition and fitness curriculum composed of six hands-on lessons for 8-12-year-olds (3rd-6th graders). Developed by Cornell University's Division of Nutritional Sciences in collaboration with Cornell Cooperative Extension's 4-H Youth Development Program, CHFFF uses experiential learning to teach healthy eating and active play, targeting behaviors research shows to be most important for preventing childhood obesity and chronic disease. Topics include replacing sweetened drinks with low-fat milk and water, eating more vegetables, fruits, and whole grains, eating fewer high-fat and high-sugar foods, and playing actively 60 minutes a day.

- Implemented at Faith Christian Academy and Just Do It Now
- 245** students
- 11** presentations
- \$330.00** in food donations for program supplies
- 2** volunteer and **22** total hours

Results

Following are the percentages of participants who answered "yes/usually" vs. "no/not really" to the following questions. Do you pay attention to...?

- * How much fruit you eat each day? yes/usually (71%) vs. no/not really (29%).
- * How many vegetables you eat each day? yes/usually (76%) vs. no/not really (24%)
- * How much water you drink each day? yes/usually (74%) vs. no/not really (26%)
- * How many sugary drinks you drink each day? yes/usually (79%) vs. no/not really (21%)
- * The food label for the food you eat? yes/usually (70%) vs. no/not really (30%)

When asked, "Have you given your family ideas for healthy meals or snacks?" The responses were:

yes (74%), no (16%), and sort of (10%).

When asked, "At 4-H, did you learn about healthy food choices?"

The responses were: yes (69%), no (5%), and sort of (26%).

Making a Difference

2018 Food Safety (outreach)

Kashara Bell- Family and Community Health Agent- Cooperative Extension Program

Relevance

The goal of our Food Safety outreach programming is to positively impact limited resource families' health and wellbeing by providing relevant information to develop basic sanitation practices. This program provides research based educational information to limited resource families and individuals to help them understand the importance of food safety. Additionally, it heightens awareness of the relationship between basic sanitation practices when handling food, reduces waste, conserve nutrients and prevent food-borne illness. Food quality and safety involves purchasing, preparing, and storing food using procedures that prevent the spread of bacteria and reduce the risk of foodborne illness. Every year more than 76 million people get sick from food poisoning. 56,000 people are hospitalized and 1,351 people die. Billions of dollars are lost due to medical expenses and loss of productivity. Providing clients with necessary skills to handle food properly teaching the importance of good personal hygiene, preparing and storing foods properly will allow clients to prevent food contamination resulting in food borne illness.

Response

Prairie View A&M University took an interactive approach to show the importance of disease, spreading germs, and food safety. Allowing the parenting and children see the germs and food demonstrations opened the door for better understanding. We used Glo Germ and other techniques for those kinetics learners. Which let them experience these projects hands on. The goal of our Food Safety plan helped provide relevant information to develop basic sanitation practices, improve personal hygiene, and prepare and store foods properly.

- Reaching **392** youth and adults
- **8** Presentations



Pictured: April 23rd, 2018 Wharton County Youth Fair Educational Center

Making a Difference

Education Efforts

Glo Germ Handwashing Station- This interactive experiment was a great way to show the community how easy and fast it can be to attract germs! The adults were just as shocked as the children! Glo Germ is a product which safely and graphically demonstrates to students and adults alike how germs are spread. This was used at the **Wharton County Youth Fair Education Center**. Animal handlers and children were eager to see how many germs were on their hands while participating in fair livestock events.

Let's Tackle Hygiene -The ages in this class ranged from 14-22. Witnessing the special needs students striving to understand and participate touches the hearts of many. We covered different topics about personal hygiene, food safety, and handwashing. Working with the **El Campo High School Transition/Life Skills** class was an honor. The students were so respectful and always had a lot of energy

Fall Safety Event- For this event we partnered with the Wharton County Library System and HEB. It's a family event that is held in the heart of Wharton. There is plenty of fun and entertainment every year. This year we had: physical activity games, trick or treat safety talk, bug petting zoo, fashion show, and arts/crafts. HEB donated goody bags for every child and adult. Trick or treating is traditional family outing. While it's fun and yummy, food safety is still a big issue. During this event we educated parents on how to inspect their children candy before allowing them to eat it. We also had a pumpkin decorating contest and the community and stakeholders voted all week long! **Kate Harrell (AgriLife Wharton County IPM agent)** brought the bug petting zoo and **Clara Walker (Prairie View A&M Cooperative Extension Program Waller County Agent)** helped with registration. Thank you for your support!

-**\$200.00** donation from HEB

-Partnered with Wharton County Library System and HEB

-**20** community volunteer. **3** total hours

Making a Difference

IPM Programming: Jackson, Matagorda and Wharton Counties 2018

Developed by Kate Harrell, EA- IPM, Jackson, Matagorda and Wharton Counties

Relevance:

Agricultural operating costs continue to rise nationwide while commodity prices remain low. For area producers to continue farming, they must find ways to cut inputs at the same time increasing production. Integrated Pest Management (IPM) is a tool that can aid producers in the reduction of input costs. IPM considers multiple tactics for the control of pests, maintaining pest populations below a damaging level and conservation of the environment. Agriculture is one of the primary occupations in Wharton, Jackson, and Matagorda counties, and cotton covered a large number of those acres.

The past two years, we have observed rising issues with *Helicoverpa zea*, the cotton bollworm, in cotton containing Bt traits meant to reduce their population. This insect also has a record of being difficult to control with pyrethroids, so newer chemistries containing the active ingredient rynaxypyr or chlorantraniliprole are deployed for their control. *H. zea* does not only feed on cotton, but is a pest insect on many different crops, including: corn, sorghum, soybeans, peanuts, sunflowers, tomatoes, rye, timothy, artichoke, asparagus, cabbage, cantaloupe, collard, cowpea, cucumber, eggplant, lettuce, lima bean, melon, okra, pea, pepper, potato, pumpkin, snap bean, spinach, squash, sweet potato, watermelon, as well as many ornamentals.

Response:

- Summer Field Scouting Program
- *Helicoverpa zea* Collections
- *Bt* Test Plot
- Rynaxypyr concern meeting
- Feed Grain and Cotton Conference
- Field meetings
- Upper Coast IPM Blog - 23 issues

Making a Difference

The control problems with *H. zea* are not restricted to Wharton county, but are evident across the southern United States. Dr. David Kerns lab at Texas A&M University set up to test for resistance in *H. zea* to the *Bt* toxins found in commercial cotton varieties, as well as setting up pyrethroid resistance monitoring. My intern and I set up 9 large mesh pheromone traps, 3 in each county. These traps were monitored from the first week of bloom to open bolls, and the moth numbers were recorded weekly. If there were 9 or more healthy specimens in a trap, a pyrethroid vial bioassay was run on the adult moths. There were a few field locations in the county with high larval populations in crops with *Bt* traits. We collected caterpillars from two field locations and sent them to the lab for *Bt* toxin bioassays. In total, two pyrethroid bioassays, one Rynaxypyr bioassay, and two larval *Bt* toxin bioassays were run during the summer.

Results:

Fig. 1: LC₅₀ and 95% confidence limits (CL) based on larval mortality of *Helicoverpa zea* to three *Bt* proteins in 2018. CBW-BZ-SS is the known susceptible lab maintained strain of *H. zea*.

Bt protein	Insect strain	N ^a	LC ₅₀ (95% CL) ($\mu\text{g}/\text{cm}^2$) ^b	Slope \pm SE	X ²	df	Resistance ratio ^c
Cry1Ac	CBW-BZ-SS	958	0.10 (0.08, 0.11)	1.55 \pm 0.09	28.4	26	1.0
	CBW-EC-TX-BG2	576	1.25 (0.76, 2.09)	1.33 \pm 0.17	62.6	30	12.5 *
	CBW-WH-TX-BG2	576	> 31.60	/	/	/	> 316.0 *
Cry2Ab2	CBW-BZ-SS	960	0.20 (0.17, 0.24)	1.61 \pm 0.09	30.7	26	1.0
	CBW-EC-TX-BG2	448	4.94 (2.69, 10.68)	1.12 \pm 0.19	53.4	22	24.7 *
	CBW-WH-TX-BG2	448	5.63 (2.66, 21.46)	1.06 \pm 0.22	40.3	22	28.2 *
Vip3A	CBW-BZ-SS	448	0.20 (0.16, 0.26)	1.48 \pm 0.12	21.8	22	1.0
	CBW-EC-TX-BG2	448	0.05 (0.04, 0.06)	2.76 \pm 0.28	15.5	22	-4.0
	CBW-WH-TX-BG2	448	0.02 (0.01, 0.03)	2.88 \pm 0.57	26.9	22	-10.0

^aTotal number of neonates assayed.

^bThe LC₅₀ value of an insect strain was considered to be greater than the highest *Bt* protein concentration used in the bioassay if its larval mortality was <50% at the highest concentration. Larval mortality was calculated based on the number of dead larvae plus survivors that were still in the first instar (mortality = dead+L1) divided by the total number of insects assayed.

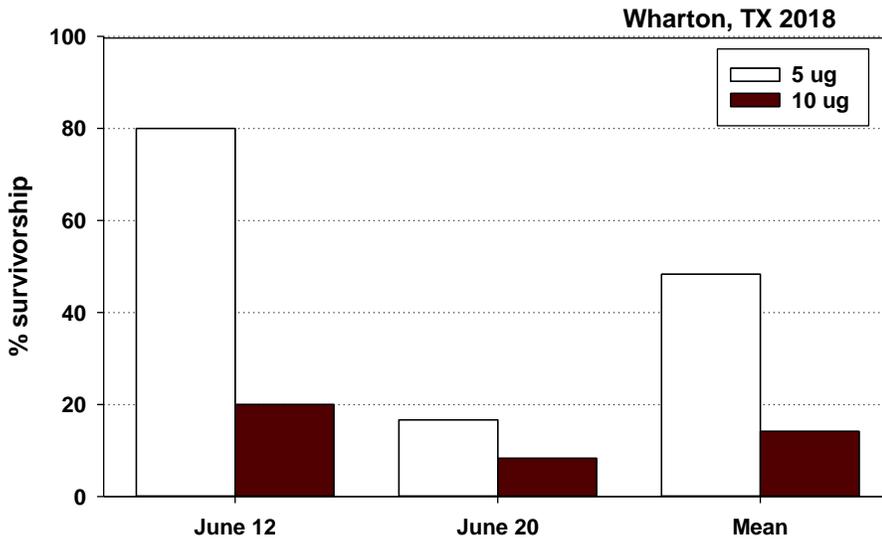
^cResistance ratio for *Bt* protein were calculated by dividing the LC₅₀ value of an insect population by that of the susceptible strain (BZ-SS). If the LC₅₀ an insect population was smaller than that of the BZ-SS, a negative sign was assigned to the resistance ratio.

* indicates significant resistance ratios that were \geq 10-fold.

The larval bioassays in fig. 1 indicate the *H. zea* specimens collected near Wharton and El Campo exhibited a high level of resistance to Cry1Ac and Cry2Ab2, but high levels of susceptibility to the Vip3A protein. The Benzene strain caterpillars (lab maintained susceptible strain) have a baseline resistance ratio of 1, indicating a susceptibility to the *Bt* proteins. Any ratio over 10 is considered highly resistant, and our El Campo and Wharton field collected lines had resistance ratios of 12.5 and 316 to Cry1Ac; and 24.7 and 28.2, respectively. Our field collected strains are still highly susceptible to the new Vip3A protein, as indicated by our El Campo and Wharton resistance ratios of -4 and -10, respectively.

Fig. 2:

Making a Difference



The cypermethrin bioassays indicate levels of resistance to pyrethroids in our local populations. Each pyrethroid bioassay was done with *H. zea* moths collected from Wharton, Jackson and Matagorda counties. Fig. 2 shows the percent of survivorship average of 50% in the low level treatment (5 ug), and 15% in the high level treatment (10ug).

(trapped near fields with recorded spray breakthrough), even at the lowest dose. This would indicate that other factors could have been the cause of the high remaining field populations, but not resistance to the chemistry.

Future Plans:

2019 will see continuation of the Wharton, Jackson, and Matagorda field scouting program, not only to monitor the overall pest complex of the upper gulf coast, but to maintain a working relationship with growers, crop consultants, and industry personnel. I plan to plant another cotton variety *Bt* test plot next year, continuing the *H. zea* moth trapping, and responding to calls on fields with high levels of caterpillar populations with collections for larval bioassays.

The Rynaxypyr bioassay resulted in 100% mortality of all the moths

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