

Horticulture Highlights 2018

Allison Watkins, County Extension Agent – Horticulture, Tom Green County

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Horticulture programming in 2018 included events such as the Earth-Kind Landscape School, Every Drop Counts water conservation seminar, Fall Landscaping Symposium, Master Gardener training, the Learn, Grow, Eat & GO! series for 3rd graders at Veribest and Glenmore elementary schools, and more. Educational efforts were centered around Earth-Kind principals to encourage water conservation and pesticide safety. Programs were added as needed based on current events and community needs, such as the Landscaping in Drought series in August and the Trash to Treasure: Recycling and Composting class in October in response to local recycle service concerns.

184 horticulture educational sessions were held with 4,304 total attendees

Total number of master gardener volunteer hours for 2018: 3,701;

Value to the community of \$91,377

Program Highlights–

Earth-Kind Landscape School

Every Drop Counts seminar for homeowners

Texas Water Star Conference for professionals

Landscaping in Drought seminar series

Spring Water Conservation Program

Learn, Grow, Eat and GO! series – Veribest ISD and Glenmore Elementary

Fall Landscaping Symposium

Trash to Treasure – Recycling and Composting

Monthly Lunch N Learn

Horticulture Therapy at correctional facilities, weekly

Master Gardener Training Class – 15 weeks

Concho Valley Pecan Show and West Regional Pecan Show

All About Trees seminar

Presentations for various local civic groups – rotary clubs, garden clubs, etc

Media – newspaper, radio and television

Monthly newsletter

What is Extension?

AgriLife Extension delivers research-based educational programs and solutions for all Texans.

Vision: Help Texans better their lives

Mission: Through the application of science-based knowledge, we create high-quality, relevant continuing education that encourages lasting and effective change

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Results: Fall Landscaping Symposium (2017 follow-up)

A 6-month follow up survey showed the following actual results (20% responded):

- 83% of respondents have selected plants based on water conservation
- 78% of respondents have used less pesticides
- 78% of respondents have used mulches more effectively
- 78% of respondents have used less fertilizer
- 65% of respondents have increased composting of yard wastes
- 48% of respondents have used less water in the landscape

Results: Master Gardener Training Class

A 6-month follow up survey showed the following actual results (36% responded):

- 100% of respondents have started using mulch more effectively
- 100% of respondents have improved management of their home irrigation system
- 100% of respondents have decreased the use of pesticides
- 100% of respondents have used less water in the landscape
- 75% of respondents have decreased the use of fertilizer
- 75% of respondents have selected plants based on water conservation

Results: Earth-Kind Landscape School

A 6-month follow up survey showed the following actual results (21% responded):

- 100% of respondents have used less pesticides
- 66% of respondents have redesigned the landscape
- 66% of respondents have used mulches more appropriately
- 66% of respondents have selected plants based on water conservation

Results: Every Drop Counts

A post-event survey showed the following results (54% responded):

- 90% intend to use 2-4 inches of mulch in planted beds
- 86% intend to harvest rainwater for use in landscape
- 77% intend to use 'cycle and soak method' to prevent water loss and runoff
- 75% intend to design or redesign landscapes to utilize lower water use plants
- 100% of attendees indicated they will have a decrease in water use
 - 58% estimate a decrease of 10% to 24%, 16% estimate a decrease of 25% to 49%
- 95% of attendees indicated they will receive an economic benefit of at least \$50 from attending the program (16% estimate an economic benefit of \$250 to \$499)

Results: Landscaping in Drought

A post-event survey showed the following results (93% responded):

- 100% intend to utilize irrigation evaluations/audits to improve efficiency
- 100% intend to use mulch more appropriately
- 100% intend to select plants based on water conservation
- 100% intend to modify soil for water conservation
- 100% intend to install a rain barrel or tank to capture rainwater for landscape, wildlife or in-home use
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- 85% intend to increase composting of yard wastes

Making a Difference

2018 Tom Green County Learn, Grow, Eat & GO!

Developed by Allison Watkins, CEA: Horticulture
& Courtney Redman, CEA: Family & Community Health

Relevance

The high prevalence of childhood obesity in Texas is cause for concern because it is linked to negative health consequences for children and their families. Schools are uniquely positioned to have a positive impact on children's knowledge and behaviors associated with obesity. For example, vegetable exposure plus school gardening has been shown to improve consumption of fruits and vegetables. Adding more frequent and more vigorous physical activities during school has been shown to improve student fitness and weight. The home environment is also an important influence on a child's eating and activity behaviors. The greater the frequency of vegetable consumption by parents, the greater the consumption of these foods and exercise by their kids. With child obesity rates among low-income children in Texas ranging from 10% to over 20%, engaging schools and families in prevention efforts is critical.

Response

The Learn, Grow, Eat & GO! curriculum was developed by Texas A&M AgriLife Extension to address these issues and is specifically targeted to the third grade. It is research and evidence based curriculum that teaches the importance of nutrition and exercise through gardening. The program was initiated in Tom Green County at Veribest ISD in 2017, and then expanded to include Glenmore Elementary with San Angelo ISD in 2018. This expanded the program from one classroom in one school to four classrooms in two schools in 2018.

The program is a 10 week curriculum that includes a school vegetable garden that the students plant and harvest, classroom learning activities, vegetable tastings, recipe demonstrations and tastings, and physical activity games. The learning activities teach the importance of nutrition and exercise, as well as science, math, and more, in fun ways the students can understand. Parents and family members are included through weekly letters and recipes that the students take home.

Partnerships within the community have made the program successful; Master Gardener volunteers took on much responsibility to facilitate the weekly activities, All-Tex Irrigation and Texas Farm Bureau provided funding to create the Veribest ISD garden, San Angelo ISD built the Glenmore Garden. The teachers at both schools devoted their time and efforts to do part of the curriculum on their own. We greatly appreciate all who have helped make this program possible in Tom Green County.

Results

Many students shared personal stories of things they gained from the program, such as:

- They now eat more vegetables
- Discovered they liked a vegetable they thought they didn't like
- Have made the recipes demonstrated in class at home with their family
- Learned how to make better food choices
- Planted vegetables at home with their family

A pre and post-program survey showed the following results:

Yesterday, did you do any hard physical play for 30 minutes or longer AFTER SCHOOL?

Pre - 24% of respondents said yes

Post - 75% of respondents said yes

Yesterday, how many hours of screen time did you have AWAY FROM SCHOOL?

Pre - 47% of respondents said two hours or more, 12% none

Post - 14% of respondents said two hours or more, 29% none

Yesterday, did you drink any sweetened beverages such as soda?

Pre - 66% of respondents said yes

Post - 44% of respondents said yes

Yesterday, did you eat a salad made with lettuce, or any green vegetables?

Pre - 24% of respondents said yes

Post - 44% of respondents said yes

Yesterday, did you eat fruit?

Pre - 77% of respondents said yes

Post - 88% of respondents said yes

Have you made any vegetable recipes with your family?

Pre - 41% of respondents said yes

Post - 63% of respondents said yes



Testimonial from one of the teachers:

"Thank you for all that y'all did the kiddos LOVED IT!!!! Our garden looks amazing and we love going to look at it – some of my kiddos even convinced their parents to start their own garden at home with the seeds they got!"

Looking Ahead

The program continues to grow in Tom Green County and we anticipate expanding and adding two additional schools in 2019.

EXTENDING KNOWLEDGE
Providing Solutions

Making a Difference

2018 Tom Green County Horticulture Therapy

Developed by Allison Watkins, CEA: Horticulture, Tom Green Co.

Relevance

Alcohol and drug addiction are issues that not only affect the individuals struggling with the addiction but also the entire community. Drug and alcohol related crimes can jeopardize the safety of the community, and it also requires public financial resources to impose punishment and/or treatment for substance abuse problems. Gardening can be therapeutic to individuals struggling with addiction and therefore reduce occurrences of repeat offenses by reducing stress, teaching responsibility and other life skills, improving problem solving skills, and reducing anger. Horticulture therapy is a treatment system designed to improve life skills and provide vocational training to residents of correctional facilities through classroom education and hands-on experience.

The Roy K. Robb and Concho Valley Female Community Corrections facilities are local men's and women's correctional programs that offer rehabilitation services to substance abusers, as an alternative to jail or prison. Among other subjects, the facilities provide instruction in the areas of anger management, life skills, job placement, community service and physical training. Horticulture therapy can help achieve these goals and increase the instances of recovery, and reduce cases of the individuals committing offenses again.

Response

This issue was addressed by offering weekly horticulture therapy classes at both the men's and women's facilities. The agent worked with a local non-profit organization, the People/Plant Connection to organize and implement the program. Classroom instruction was provided on a horticulture science subject each week, and the participants also worked outside building and maintaining gardens and greenhouses. A total of 74 educational sessions were held, and 1,040 educational contacts were made. This program is in the middle of its 10th year and continues to be an important part of the treatment offered at the facilities.

Students were educated in the following subjects:

- Botany
- Plant pathology
- Entomology
- Soils
- Propagation
- Fruits and vegetables
- Water conservation
- Composting
- Turfgrass
- Arboriculture
- Greenhouse management

Students participated in the following activities:

- Maintenance of rainwater harvesting and drip irrigation system installation
- Soil improvement & mulch application
- Planting of trees, shrubs, perennials and annuals
- Plant propagation by seeds and cuttings
- Installation and maintenance of vegetable gardens
- General landscape and garden maintenance including weeding, pruning and irrigation

Educational programs of the Texas A&M AgriLife Extension Service are open to all people without regard to race, color, sex, religion, national origin, age, disability, genetic information, or veteran status. The Texas A&M University System, U.S. Department of Agriculture, and the County Commissioners Courts of Texas Cooperating

Results:

Using a post-event survey, the attendees indicated their intentions to adopt the following practices:

- 95% of respondents indicated they intend to plant a garden after finishing the recovery program
- 95% of respondents indicated the gardening skills they learned will help them grow a successful garden
- 97% of respondents indicated the life skills they learned will help them stay sober

Respondents indicated the following knowledge levels before and after the program, using a scale of 1 to 4:

<i>Understanding of...</i>	Avg. knowledge level before program	Avg. knowledge level after program	% increase in knowledge
Soil management and improvement	1.58	3.39	60%
Proper tree care	1.56	2.91	45%
Benefits of gardening to promote a healthy life	2.33	3.67	45%
Basic horticulture skills to increase success in gardening and landscaping	1.72	3.41	56%
Vegetable gardening techniques	1.88	3.45	52%
Proper lawn care	2.00	3.44	48%

In addition to the data from the surveys, participants were also evaluated based on observation of behavior. The majority of students improved throughout the course of the program in the areas of team work, positive attitude, treatment of others, anger, responsibility for actions, and dependability.

Looking to the Future:

This program has evolved and been adapted as needed over the last nine years, and will continue to be adjusted as needed based on the responses of the participants and the needs of the correctional facility. The women's program was changed from a 16-week curriculum to an 8-week curriculum because of the facility's class schedule. The men's program had an added Saturday work day off-site at a local children's garden to provide more opportunities to learn hands-on skills and provide community service. Although we are not allowed to do follow-up surveys after the participants leave the facilities, in order to protect their privacy, they give very positive feedback and are greatly appreciative of the opportunity to learn life skills and vocational skills to help with their sobriety and recovery goals.

Making a Difference

2018 Tom Green County Water Star Conference Developed by Allison Watkins, CEA: Horticulture, Tom Green Co.

Relevance

It is estimated that Texans maintain over two million acres of turf. It is also estimated that over 1.37 trillion gallons of water are used annually in the municipal environment. Additionally, Texans apply an estimated 2 million tons of fertilizers and another 71 to 78 million pounds of pesticides in the home landscape. Couple this use of water, fertilizers, and pesticides with the expected rise of the state population to over 46 million by 2060 as Texas water supplies are projected to decrease by 10%, educational programs to conserve water in the urban environment and to reduce the risk of surface and ground water contamination are critically needed.

The Texas Community Futures Forum identified water conservation as an important issue for Texas A&M Agrilife Extension to address, and the Tom Green Horticulture Committee chose to implement the Texas Water Star program to address this issue for professionals, to supplement the efforts of the Earth-Kind program for homeowners. The goal of the Texas Water Star program is for grounds maintenance professionals to adopt new technology and recommended management practices to improve water conservation in landscapes. Landscape professionals will also improve water quality by using recommended fertilizer and pesticides application practices.

Response

A Program Area Committee was formed to implement a Texas Water Star Conference in San Angelo, TX. The committee planned the event by scheduling speakers and vendors, and compiled a mailing list of all landscape professionals, groundskeepers etc. in the area. CEU's were arranged and offered for licensed irrigators from the TCEQ, and for certified professional nurserymen from the TNLA. The conference had 25 professionals in attendance.

A special thank you goes to the Paulina Levy and City of San Angelo Water Conservation department and Roger Havlak and the Parks Department for their support, help and sponsorship of this program.

Looking to the future

This is the third year the Texas Water Star Conference has been offered in Tom Green County and it will continue to be held every two years. The planning committee utilized evaluation data from previous events as well as input from specialists to improve the program and adapt to local needs. Beginning with the second conference, licensed irrigator CEU's were offered and the timing of the conference was set based on input from attendees.

Results

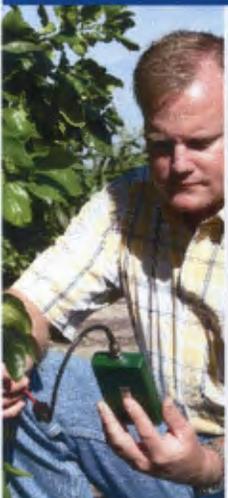
Using a post-event survey, the attendees indicated their intentions to adopt the following practices:

- 91% intend to utilize irrigation evaluations/audits to improve efficiency
- 77% intend to design or redesign landscapes to utilize lower water use plant
- 92% intend to use 2-4 inches of mulch in planted beds
- 83% intend to use 'cycle and soak method' to prevent water loss and runoff
- 58% intend to install rain and freeze sensor to an existing irrigation system
- 54% intend to install or retrofit with smart irrigation controllers

<i>Understanding of...</i>	Avg. knowledge level before program	Avg. knowledge level after program	% increase in knowledge
Use of irrigation evaluations/audits to identify problems	2.067	3.200	55%
Efficiency of drip irrigation	2.214	3.214	45%
How landscape design can affect water usage	2.600	3.600	38%
Plant selection for water conservation	2.467	3.400	38%
Irrigation controller management to improve application	2.600	3.533	36%
Benefits of mulch in the landscape	2.733	3.533	29%

VALUE

Water Conservation Education



Texas A&M AgriLife Extension programs that teach farmers, homeowners, and business administrators to conserve water are helping reduce demand on the state's limited water resources. Texans benefit from a safer, more reliable water supply at no additional cost.

Making a Difference

2018 Tom Green County Earth-Kind Landscaping Developed by Allison Watkins, CEA: Horticulture, Tom Green Co.

Relevance

There is ever-increasing concern for the environment and the natural resources that we need to live – water being the most precious resource that requires conservation. It is estimated that about 30% of total water use in urban communities is used for irrigating landscapes, so water conservation is a critically important horticultural issue - and landscape water conservation can make a major impact on preserving local water sources. In addition to water conservation, the proper handling and application of fertilizers and pesticides is also an important issue; homeowners and landscapers often misuse fertilizers and pesticides, which leads to a waste of resources and creates pollution problems for the community.

The Tom Green County Texas Community Futures Forum (TCFF) identified water quality and conservation, and pesticide safety as critical county issues. The Tom Green County Horticulture Committee (PAC) selected the Earth-Kind Environmental Stewardship Program to help address these issues.

Response

Programs were planned and implemented to a significant degree by PAC members. Paulina Levy with the City of San Angelo water department secured sponsorships for water related programs, provided items for attendees and assisted with organizing and setting up programs. Ron Knight secured the speakers and managed all the planning and implementation of the Fall Landscape Symposium. Susan Stanfield with the People/Plant Connection planned and promoted the Lunch N Learn series. All PAC members helped provide direction, planning and implementation assistance for all programs. The programs were adapted to current needs based on evaluation data from previous programs, such as the Fall Landscaping Symposium – PAC members reviewed the surveys to improve the event each year. The location was changed based on input, and the speakers and topics are chosen based on evaluation results.

The issues were addressed through the following programming efforts:

- 12 Monthly Lunch N Learn seminar series covering various topics; 114 attendees total
- Master Gardener Training Class, February through May – series of 15 classes all emphasized Earth-Kind principles; 11 class members
- Earth-Kind Landscape School, March; 4 sessions, 19 attendees each
- “Every Drop Counts” Water Conservation Seminar, June; 35 attendees
- “Landscaping in Drought” seminar series, August; 27 attendees
- Fall Landscaping Symposium, September 8; 112 attendees
- “Trash to Treasure: Recycling and Composting” seminar, October; 16 attendees
- Weekly newspaper columns, circulation ~15,000 each
- Daily radio segments, ~3,000 listeners each – January to May

The members of Texas A&M AgriLife will provide equal opportunities in programs and activities, education, and employment to all persons regardless of race, color, sex, religion, national origin, age, disability, genetic information, veteran status, sexual orientation or gender identity and will strive to achieve full and equal employment opportunity throughout Texas A&M AgriLife.

Results: Fall Landscaping Symposium (2017 follow-up)

A 6-month follow up survey showed the following actual results (20% responded):

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VALUE	
Earth-Kind® Landscaping	
	The Earth-Kind® program teaches participants how to care for gardens and landscapes with environmentally friendly, research-proven techniques. Instructional topics include water conservation, responsible fertilizer application, and non-chemical options for controlling pests. Use of Earth-Kind® practices benefits Texas by saving water and protecting surface and groundwater resources from potential contaminants.

EXTENDING KNOWLEDGE
Providing Solutions