



Learn, Grow, Eat & GO! Healthy Texas FY 2018 Program Impact Report

Relevance

Texas A&M AgriLife Extension Service's, Learn, Grow, Eat & GO! (LGEG) – Junior Master Gardener curricula, is a 10 week academically rich, elementary-focused, curricula that incorporates the best practices identified by research and combines interdisciplinary elements of garden science, nutrition, food preparation, vegetable tastings, and physical activity to improve the health and wellness of children, families and the school community.

Response

Pre-test surveys were administered to children prior to starting the LGEG curricula and post-test surveys were administered at the conclusion of the curricula. 25 counties out of 36 HT counties completed the pre and post LGEG surveys. Pre and post response rates and participant demographics are detailed below:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Angelina	314	9.0	9.0	9.0
	Aransas	1	.0	.0	9.0
	Bee	18	.5	.5	9.6
	Brazoria	457	13.1	13.1	22.7
	Brooks	100	2.9	2.9	25.5
	Calhoun	35	1.0	1.0	26.5
	Cameron	19	.5	.5	27.1
	Dallas	753	21.6	21.6	48.7
	Duval	28	.8	.8	49.5
	Houston	21	.6	.6	50.1
	Jackson	163	4.7	4.7	54.8
	Jim Hogg	65	1.9	1.9	56.6
	Jim Wells	60	1.7	1.7	58.4
	Kenedy	1	.0	.0	58.4
	Kleberg	59	1.7	1.7	60.1
	Live Oak	46	1.3	1.3	61.4
	Nacogdoches	315	9.0	9.0	70.4
	Nueces	254	7.3	7.3	77.7
	San Augustine	86	2.5	2.5	80.2
	Shelby	438	12.6	12.6	92.8
	Tarrant	8	.2	.2	93.0
	Victoria	137	3.9	3.9	96.9
	Webb	39	1.1	1.1	98.0
	Willacy	43	1.2	1.2	99.3
	Zapata	25	.7	.7	100.0
	Total	3485	100.0	100.0	

Gender

Boy	52.3%
Female	47.7%

Age

7 years	12.8%
8 years	29.4%
9 years	25.1%
10 years	17.7%
11 years	11.9%
12 years	3.2%

Ethnicity

Hispanic	37.9%
White	27.5%
African American	12.1%
Native American or Alaskan Native	5.0%
Multi-racial or Other	17.5%

Results

Summary by Question:

Q: We want to know what you think about the following vegetables. Do you like to eat ____ ?

What do you think about these vegetables?	Mean Before	Mean After	Percent Change Increase
Do you like Cauliflower?	23.5%	28.4%	4.9%
Do you like Lettuce?	75.0%	74.9%	----
Do you like Carrots?	69.4%	76.9%	7.5%
Do you like Spinach?	35.8%	46.3%	10.5%
Do you like Potatoes?	67.1%	69.5%	2.4%
Do you like Swiss chard?	12.2%	19.2%	7.0%
Do you like Tomatoes?	63.7%	63.4%	----
Do you like Broccoli?	57.3%	61.9%	4.6%
Do you like Bell Peppers?	45.3%	48.4%	3.1%
Do you like Squash?	28.1%	36.1%	8.0%
Do you like Sugar Snap Peas?	29.4%	34.0%	4.6%
Do you like Bok Choy?	14.7%	16.8%	2.1%

Conclusion comment: Student answers reflected an increase in vegetable preference for 10 of the 12 vegetables featured in the LGEG 10 week curriculum. Lettuce and Tomatoes were already high at both the pre and post-tests and remained consistent. The greatest increase was seen for Spinach, Squash, and Carrots. Additionally, students were asked if they had tried each of the vegetables on the pre-test and post-test. There was an increase in willingness to try for all 12 vegetables.

Q: Students were asked what beverage that than drank yesterday and the frequency

Yesterday how many times did you consume	Frequency	Mean Before	Mean After	Percent Change
Sweetened beverages such as soda, sweet tea or sports drinks	More than once	31.4%	27.4%	4.0 %
Fruit juice	More than once	29.0%	19.2%	9.8%
Water	More than once	49.5%	54.2%	4.7%
Milk	More than once	27.5%	27.9%	.2%

Yesterday how many times did you consume	Frequency	Mean Before	Mean After	Percent Change
Sweetened beverages such as soda, sweet tea or sports drinks	Did not consume	24.0%	27.6%	3.6%
Fruit juice	Did not consume	31.8%	35.2%	3.4%
Water	Did not consume	9.6%	10.1%	.5%
Milk	Did not consume	28.4%	30.5%	2.1%

Conclusion Comment: Student answers on yesterday consumption when comparing mean differences showed a reduction in consumption of both daily sugar sweetened beverages and fruit juice, with the greatest change being an almost 10% reduction pre to post in the frequency of fruit juice beverage consumption. Water consumption increased by 4.7% pre to post on this question. When students were asked which beverages in the table above they did NOT consume yesterday, there were more students choosing not to consume any sweetened beverages (3.6%) or fruit juice (3.4%) when comparing pre and post-test results.

Q: Students were asked to reflect on physical activity and screen time

Yesterday, did you do any hard physical play for 30 minutes or longer (after school)	Mean Before	Mean After	Percent Change
Response – No	24.0%	20.9%	3.1%
Response – Yes	76.0%	79.1%	3.1%

Yesterday, how many hours of screen time did you have (away from school)	Mean Before	Mean After	Percent Change
Response – 2 hours or more	34.7%	33.2%	1.5%
Response – Less than 2 hours	46.6%	49.4%	2.8%
None	18.7%	17.4%	1.3%

Conclusion Comment: When students were asked to reflect on yesterday activities related to hard physical activity and play for 30 minutes or longer, there was a 3.1% decrease in students reporting doing no physical activity. There was a 3.1% increase in students reporting they had done hard physical activity when comparing pre and post mean scores. In general, there were less students reporting they did not do any physical activity yesterday and more students reporting they did more hard physical activity yesterday when comparing pre to post results. When students were asked about yesterday screen time activities, there was a decrease in screen time use away from school for all frequency categories.

Q: Students were asked which vegetables/fruits that they ate yesterday and frequency of consumption

Vegetable/Fruit Consumed	Frequency of consumption	Pre test	Post test	Percent change
Yesterday, how many times did you eat orange vegetables (EX; carrots, squash or sweet potatoes)	More than once	13.4%	15.4%	2.0%
	Once	27.6%	28.8%	1.2%
	Did not consume any	59.0%	55.8%	3.2%
Yesterday, how many times did you eat a salad made with lettuce, or any green vegetables like spinach, collard greens, Swiss chard, green beans, sugar snap peas, broccoli, or other greens	More than once	11.0%	11.2%	----
	Once	31.8%	29.4%	----
	Did not consume any	57.3%	59.5%	----
Yesterday, how many times did you eat any beans like pinto, garbanzo or kidney beans	More than once	6.8%	7.5%	.7%
	Once	21.9%	22.3%	.4%
	Did not consume any	71.2%	70.3%	.9%
Yesterday, how many times did you eat any other vegetables like tomatoes, asparagus, red cabbage, cauliflower, cucumbers, mushrooms, bell peppers, eggplant or celery	More than once	12.4%	14.0%	1.6%
	Once	29.1%	30.8%	1.7%
	Did not consume any	58.5%	55.2%	3.3%
Yesterday, how many times did you eat fruit? Fruits are all fresh, frozen, canned or dried fruits. Do not count fruit juice,	More than once	34.9%	35.8%	.9%
	Once	40.0%	37.4%	----
	Did not consume any	25.1%	26.8%	----

Conclusion Comment: When reviewing orange vegetables, the percent increase from pre to post for both *more than once* daily and *once daily* increased. Student responses for *did not consume any* orange vegetables decreased by 3.2% from pre to post; Students ate more orange vegetables at the post test. Student responses for *did not consume any other vegetables* decreased by 3.3% from pre to post; Students ate more other vegetables (detailed in table) at the post-test. There were no significant improvements from pre-test to post-test for salads or beans. Fruit consumption was already extremely high as 74.9% of children indicated they were already eating fruit once or more daily.

Q: Tell us which of the following activities you have done in the last year with your family.

Conclusion Comment:

The following items showed statistically significant change from pre to post results. Students responded they:

- Planted more seeds or plants at home in a vegetable garden with their family
- Picked vegetables from a garden to cook or eat with their family
- Prepared the LGEG recipes with their family
- Gardened with family and others in a community or school garden

Q: Students were asked about academic confidence, school attendance, sharing their knowledge, and gardening enjoyment at the conclusion of the program

68.8% of students reported they felt that gardening had made them a better math and science student

71.1% of students reported the garden program made them want to come to school

60.5% of students reported they had taught someone else how to make better food choices

67.0% of students reported they have gardened with their family and enjoyed it

Overall Summary

There were increases in vegetable preferences for 10 of the 12 vegetables featured in the LGEG curricula. Lettuce and Tomatoes were consistently high when comparing pre and post test results. Survey data indicated an almost 10% reduction in fruit juice consumption and an increase for water consumption, with more students choosing not to consume any sweetened beverages from pre to post tests. When students were asked to reflect on yesterday activities there was a decrease in students reporting no physical activity and an increase in hard physical activities from pre to post test. Additionally, there was a decrease in screen time use away from school. Yesterday consumption of vegetables showed pre to post increases for orange and other vegetables. Student responses were significant in 4 areas of family engagement including: planting more seeds or plants at home in a vegetable garden with their family, picking vegetables from a garden to cook or eat with their family, preparing LGEG recipes with their family, and students and family gardening with others in community or school garden. Finally, 68.8% reported they felt gardening had made them a better math and science student; 71.1% of students reported the garden program made them want to come to school; 60.5 % of students reported they had taught someone else how to make better food choices; and 67.0% of students reported they enjoyed gardening with their family.