



Introduction

This issue could unofficially be called “The Tomato Issue”. Not only are there updates on the homeowner and field tomato trial, but there is a picture page of common tomato foliar diseases too.

Also included in this summer issue are program updates, including one about the status of growing hemp in Texas. Please check the end of the newsletter for the “Name that Plant”. Last quarter’s plant was a little hard, so this month is an old fashioned flower that everyone’s probably seen at least once.

If you have any questions, please do not hesitate to contact the office at 830-997-3452, or email me at elizabeth.mcmahon@agnet.tamu.edu

Preview

TCFF Forum Update	Pg. 2
Grow It Cook It Program Announcement	Pg. 2
Strange Tales of Horticulture	Pg. 3
Field Tomato Trial Update	Pg. 4
Home Tomato Trial Update	Pg. 5
Picture Guide to Tomato Foliar Diseases	Pg. 6
Hemp Update	Pg. 7
Upcoming Programs	Pg. 8

Office Closures

We will be closed on 8/23 and 9/2/2019.



Results of the Gillespie County AgriLife Extension Office Texas Community Futures Forum

On April 4th, 2019 the Gillespie County AgriLife Extension Office held their Texas Community Futures Forum. The goal of this special program was to find out what issues your local county extension office could focus on.

Potential agricultural and horticulture issues for the county that were suggested included: noxious weeds, brush control and invasive plants, problems with urbanization, new owner/resident and small landowner education, proper pesticide use/protecting pollinators, water, and predators of animals and plants. The winning issue was the noxious weeds, brush control and invasive plants. Other issues were suggested than those written above but these were either combined or dropped.

In the Family and Community Health category, issues suggested included healthy meal planning and preparation, senior care, addictions, online resource guides for community needs and child care. The winner from this category was addictions. In the youth category, skills (life, financial, study, work ethic, career, etc), social interactions versus screen time, public speaking and trade school education were brought up as potential issues. Of these issues, "skills" was voted on as being the most crucial to youth.

So what happens now? We try to base future programs around these topics and in five years, we review them again. If you have any questions about the Community Futures Forum, please feel free to call the AgriLife Extension Office at 830-997-3452.

"The Trendy & Versatile Cauliflower" Program on September 6th

What can you not do with cauliflower? You can use the tiny bits as rice, use it as crust for pizza, or make it into "cauliflower steak". But if this seems unfamiliar to you, or if you would like to learn how to grow it, we will be having a program on September 6th that will talk about not just how to grow it, but how to cook it as well. You can again all the cauliflower knowledge you will need in just an hour long session that will have recipes for you to taste. Contingent upon their survival cauliflower transplants will be given away as part of the program. This is part of the "Grow it Cook it" program series, so if you've already signed up for the series, you get in free! If you haven't signed up for any of the programs, the cost is \$15. Payment can be made ahead of time or at the door. If you signed up for a previous program but missed it, please contact me and I can email you the hand-outs.

This program will be taught by Family and Community Health Agent Shea Nebgen and Horticulture Agent Beth McMahon.

Please contact the Gillespie County AgriLife Extension Office at 830-997-3452 to sign-up or with questions.



In addition to white, cauliflower can be purple, orange, white and green.

Strange Tales of Horticulture

\$ Luxury Produce \$

How much would you pay for a melon? Three bucks for one of those honey kiss melons? Ten bucks for a watermelon? Maybe \$45,600 for two muskmelons?

In May this year, one bidder at the Sapporo Central Wholesale Market in Japan bid the monetary equivalent of \$45,600 for two muskmelons. Though this was acknowledged to be unusually high, fruit at this auction has previously gone for 3.2 million yen (\$29,665) before, though this too was a record breaking number. The purchaser of the fruit, according to “The Asahi Shimbun”, a Japanese newspaper, is Pokka Sapporo Food & Beverage Ltd who sells a melon flavored beverage, and wants to analyze the flavor profile for their drinks.

But does that explain the price in past years? Fruit in general is more expensive in Japan. A common example is that of an apple. One apple can cost around two dollars in Japan, while that same two dollars can get you at least two apples in the United States. This is for normal produce. However Japan has a luxury fruit market. In some of the luxury fruit shops, high quality crown melons can cost approximately two hundred dollars.

One potential reason for the higher cost of fruit is the labor that is put into growing it. Take crown muskmelons for example. These melons are grown using very intensive methods. Special varieties are used and plants are grafted and planted in climate controlled greenhouses. Because they are grown in greenhouses, they need to be hand pollinated. Plants are limited to only one fruit. Water and nutrients are strictly monitored. On some crown melons, they even receive cute “hats” to shade them from the sun. Some growers even give their melons a massage, rubbing them daily. According to an article by Slate, which is not a horticultural magazine, this is thought to increase the fineness of the netting on the melon, which is thought to signify a sweeter melon.



Muskmelon. Photo by Texas AgriLife Extension.

This is a lot of labor, but is it enough to raise the price up that high? Add in the local fruit factor and the fact that many of these fruits are given as a gift, and that might be enough to justify the price. Of course, the fruit is also thought to taste outstanding which helps increase the price too.

Getting the wholesale price for a two hundred dollar melon would be enough to cause a melon planting fad, though I doubt that this will ever occur in the United States. In the meantime, if you desire a high quality fruit, look for it in season or purchase it locally at a farm stand or farmers market. You could try growing it yourself, though I don't know if giving it a melon massage would be worth it.



Field Tomato Trial Update



Last year the Gillespie County Extension office did a tomato variety trial at one of the local farms. This year we are doing two experiments regarding tomatoes. While you can graft fruit trees, tomato plants can be grafted onto different rootstocks too. It is questionable if this is helpful, especially since grafted plants are much more expensive. The first tomato experiment will compare five grafted tomato varieties versus five ungrafted tomato varieties to see if the grafting gives these varieties an advantage in this particular area. The tomatoes were planted on April 14th, 2019 at Engel Farms.



Picture on left is Grafted "Tasti-Lee" tomato plant. Picture on right is ungrafted.

Data collection is still ongoing, so no firm conclusions can be made yet. One thing noted is that the tomato variety "Prudens Purple" has been the slowest to set on both the grafted and ungrafted plants. Otherwise the plants look generally healthy.

The second experiment is a variety trial consisting of forty-one tomato varieties. The goal of this variety trial is to determine which variety can produce reliably in our local area. Plants were planted on April 25th, 2019. As with the grafting experiment, it's still early to make any



"Estiva" tomatoes hanging out.

firm recommendations based upon the heat stress trial. It has been noted that tomato varieties "Manalucie", "Homestead", "Carbon" and "Pruden's purple" have lagged behind on set when compared to other varieties. The first varieties to set fruit included "Fall 2018-253", "Rally", "BHN589", "Valley Girl", "Estiva", "New Girl", "RS1", "LAF 44", "HM1823", and "Heatmaster". Production weights are forthcoming,



"Heatmaster" tomato a few weeks after planting in field experiment.

but it was observed that "Pruden's Purple", "Black Krim", "Manalucie" didn't have a lot of tomatoes on them as of the last week of June. Other varieties were much more productive. Production ratings and continual monitoring of set will continue in the heat of the summer to see if these plants can handle our weather. Thanks to Engel farms for taking care of the tomato plants.

Homeowner Tomato Trial Update

Variety	# Survey Responses	# Survived	Percent Set
TAM-FLW3	10	10	100.00
TAM-FLW1	10	10	100.00
RS 1	10	10	100.00
LaF 77	10	10	100.00
LaF 66	10	10	100.00
LaF 44	10	10	100.00
Estiva	10	10	100.00
Better Bush	10	10	100.00
HT 2	8	8	100.00
HM1823	8	8	100.00
'Rally'	8	8	100.00
Tasti-Lee	8	6	75.00
Bella Rosa	6	6	66.67
Amelia	8	8	62.50
Carbon	8	8	50.00
Fall 2018-253	7	6	50.00
Porter	8	7	42.86
BHN 589	10	10	30.00
HeatMaster	8	8	25.00
Black Prince	8	8	25.00
Picus	8	8	25.00
Arkansas Traveler	7	7	14.29
HT 1	10	10	0.00
Bolseno F1	9	9	0.00
Black Krim	8	8	0.00
RS 8	7	3	0.00
Homestead	7	7	0.00
Wisconsin 55	6	6	0.00
Pruden's Purple	4	4	50.00
Phoenix	4	3	0.00
Manalucie FSt	4	4	0.00
Dixie Red	4	4	25.00
'Tribeca'	4	4	25.00
Skyway	3	3	66.67
BHN-1021	3	3	67.00
Shourouq	2	0	0.00
New Girl	2	2	0.00
FL 91	2	2	0.00
Valley Girl	1	1	100.00
Summerpick	0	NA	NA
Big Beef	0	NA	NA

Figure 1. Survey responses by variety as of late June/early July. Percent set means the percentage of tomatoes that have grown little tomatoes.

er” and “Wisconsin 55”.

This survey experiment is not over yet. It will be interesting to see if some of the tomatoes that haven't set yet do, and if they can set in July. Stay tuned for the final results in the fall newsletter. Participants in the trial, expect to be asked about flowering, survival, fruit set and a rough estimate of how much tomatoes you got in July. You don't have to count the tomatoes, but when queried, let me know if it was low, normal or high. This email will be sent in late July. Your response is appreciated!

Field results are one thing, but would these varieties really perform that well after you take them home? To determine the same conditions but on a more spread out and casual scale, plants from the heat stress variety trial plants were given away to homeowners to compare their results with the ones growing in the field. These results will be gathered more as a survey, due to the different growing conditions that everyone has. However, If a variety polls very well across a wide range of conditions, that could indicate it's a good variety for the area. If you look at figure 1, the varieties shaded in red did not have enough survey responses to be considered, but were calculated for curiosity sake. Varieties shaded in yellow are experimental varieties bred by Texas A&M, and not commercially available. Most varieties seemed to have at least 50% of the responses flowering, with the exception of “Black Prince”, “Heatmaster”, “Picus”, “Homestead” and “Bolseno”. Variety “Estiva” had 100% set, but all ten plants of this variety was given to one person, who could just be a super awesome tomato grower. Not counting the research varieties, the varieties “Better Bush”, “Rally”, “HM1823” and “Tasti-Lee”, had at least 75% of the survey respondents reporting that their plants had set tomatoes. Other varieties reported set,



The tomatoes were free, but there was a catch.



“Black Prince” tomato. Photo by Terri Willingham.

but those that reported lower than 25% included “Picus”, “Black Krim”, “Bolseno”, “Homestead”, “Arkansas Travel-

Common Tomato Foliar Issues



Septoria Leaf Spot

Fungal disease. Doesn't have rings, usually appears on the bottom leaves first. Prefers persistent wet and humid weather. Treat by removing foliage, mulching plants and applying a fungicide.



Early Blight

Fungal disease. Leaves yellow with dark areas that have rings like a bulls-eye. Usually starts on bottom foliage first. Likes moist warm conditions. Foliage infection most common, but can infect fruit. Remove yellowed foliage, apply fungicide to uninfected leaves.



Late Blight

Fungal disease. Prefers high moisture but mild (60-80 F) temperatures. Gray water soaked leaves, usually no yellowing. Can kill plants quickly. Apply fungicide only after signs of disease.



Viral Diseases

Viral diseases that can infect tomatoes include cucumber mosaic, tobacco mosaic, and tomato yellow leaf curl virus (pictured). Viral damage can cause shoestringing, leaf stretching, and odd color patterns. Remove plants when you are certain it is viral damage.



Spider Mites

Tiny mites that suck the juices out of your plant. Their damage can cause speckling /sandblasted look on foliage. Worse in hot dry weather. Use a miticide or neem/horticultural oil if the weather permits. Picture courtesy of easttex-asgardening.com



Dicamba or 2-4D damage

Caused by herbicide drift or herbicide residue in straw or manure. Shoestring and stretched foliage appearance. Plants will outgrow mild cases, in severe cases plants should be removed.

Should I be worried about curling tomato leaves?

Maybe. Wind, hot dry temperatures, herbicide, mites and viruses can cause leaf roll. If the weather has not been excessively windy or hot and dry, take a closer look at the plant to see if you see any other symptoms.



Prevent Disease By:

- Removing diseased foliage
- Rotating where you plant tomatoes
- Good air circulation
- Prune off bottom foliage
- Use disease resistant varieties

CAN WE GROW HEMP IN TEXAS?

House Bill 1325 which legalizes production of hemp has been signed into law by Governor Abbot. But before growing hemp is legal, two things need to happen.

1. USDA finishes writing their regulations and guidelines
2. Texas Department of Agriculture finalizes writing of its regulations and guidelines, and has them approved by the USDA.

Additionally, you will need some sort of license to grow hemp, though this has not yet been finalized.

The anticipated completion time for the regulations is the end of 2019, just in time for the 2020 growing season. We don't have any extension publications regarding hemp yet, but some of our specialists are currently working on the topic and we hope to have more information soon.

Junior Master Gardeners Starts in September

Do you have a kid or know a kid that is interested in gardening? Are they in 3rd-5th grade (or near that age)? Sign them up for the Gillespie County Junior Master Gardening program. Program is tentatively scheduled to be on Mondays starting at 4:30 pm. It will tentatively start September 9th and run until November 18th, 2019. Further details forthcoming.



What is Eating My Sunflowers?



Unless it has four legs, tan skin and a white tail, it could be the caterpillars of the bordered patch (*Chlosyne lacinia*) butterfly. Their eggs are laid in masses. These caterpillars are very voracious. They can strip an entire sunflower plant of foliage. Bordered patch larvae eat not only sunflowers, but cowpen daisy and straggler daisy, cocklebur and other plants. The adult butterfly is small with variable coloration.

Upcoming Programs In Gillespie County

“Let’s Have a Ball!” Making Seed Balls

July 23rd, 2019. Memorial Presbyterian Church, 607 N Milam St, , Fredericksburg. Refreshments are served at 6:30. Meeting starts at 7:00 pm. Join the Fredericksburg Native Plant Society for an seed ball activity with Znobias Wooten of Native American Seed. Free.

Fredericksburg Beekeepers Meeting

August 15th, 2019. 6:30 pm -7:30 pm. Gillespie County Extension Office, Fredericksburg. If interested in learning how to keep bees, please attend.

Gillespie County Fair

August 22nd-25, 2019. Gillespie County Fairgrounds, 530 Fair Drive, Fredericksburg, TX County fair with agricultural and home products show, livestock shows, carnival, agricultural and local organization exhibits and horse racing! See the fair magazine or <http://www.gillespiefair.net/> for more information.

How to Use I-Naturalist to Become a Citizen Scientist

August 27th, 2019. Memorial Presbyterian Church, 607 N Milam St, , Fredericksburg. Refreshments are served at 6:30. Meeting starts at 7:00 pm. Join the Fredericksburg Native Plant Society for a presentation by Kelly Simon with Texas Parks and Wildlife about using the I-Naturalist website. Free.

Grow It Cook It: Trendy & Versatile Cauliflower

September 6th, 2019. 12:00-1:00 pm. Gillespie County Extension Office, 95 Frederick Road, Fredericksburg.

Learn not just how to grow cauliflower, but how to cook them too. Recipe tastings included. Program cost is \$15 for this program Contact the Gillespie County Extension Office at 830-997-3452 to register.

Upcoming Programs In Gillespie County

Kolaches and Conservation Fall Edition

September 17th, 2019. 8:30 am -10:30 am, Gillespie County Extension Office, Fredericksburg. Come in, drink some coffee, eat a kolache and ask us questions. Representatives from Natural Resources Conservation Service, Hill Country Alliance, Texas Parks and Wildlife and the Ag Agent & Horticulture Extension Agents will be there. Free (including the kolaches).

Statewide Programs

State Pecan Show & Pecan Grower Conference

July 14-17th, 2019. Hilton Dallas Frisco Hotel Convention Center & Spa, Frisco, TX. Mini pecan short course, updates from pecan industry groups, orchard tour and more. Spouse and children's outing also. For more information and to register, see <https://tpga.org/tpga-events/>

Southern Region Water Conference

July 23th-July 25th, 2019. Texas A&M Hotel & Conference Center, College Station. Register here: <https://agriferegister.tamu.edu/productListingDetails/2800>. Special rates for farmers. Topics on farm irrigation, urban water conservation, crops & water management, drinking water, watershed management, and a lot more. See detailed schedule here: https://agriflife.org/southern-region-water-conference/files/2019/05/Preliminary_Agenda-7.pdf

Produce Safety Alliance Grower Training

July 24th, 2019. Hondo Public Library, 2003 Avenue K. Hondo, TX
8:30-5:00 pm. Lunch included. Food safety training required to satisfy FSMA Produce Safety rule. Cost is \$40. Call 979-862-7678 to register.

Listen to Hill Country Gardening Podcasts on the Radio or Internet

Every morning, either Brad (the Ag Agent) or I have a short radio program that plays on KNAF 910 at around 7:10 am, during the farm and ranch news. These radio shorts feature upcoming program information or cover specific horticulture topics that are going on in the county. Each are around 3 minutes long.

If you miss it at 7:10 am, the horticulture radio shorts can be downloaded off the internet at <https://hillcountrygardening.podbean.com/>. More are available at <https://soundcloud.com/txhillgarden>, but you have to have an account to download them. If you have any questions about this, please contact me at elizabeth.mcmahon@agnet.tamu.edu.

Name that Plant!



What is the name of this plant? First person to respond with the correct answer will get their name featured in next quarter's newsletter.

Last Newsletter's Plant



Answer from last quarter's newsletter was Gloriosa Lily. No one got the correct answer.

This newsletter is a publication comes out quarterly, with issues out on February/March (spring), June/July (summer), September/October (fall), November/December (winter). If you would like to stop receiving this newsletter, please contact us me at elizabeth.mcmahon@agnet.tamu.edu.

For other questions, comments, and concerns, please contact us at:

*Gillespie County Extension office
95 Frederick Road
Fredericksburg, TX 78624
830-997-3452*

Educational programs of the Texas A&M AgriLife Extension Service are open to all people without regard to race, color, religion, sex, national origin, age, disability, genetic information, sexual orientation or veteran status. The Texas A&M University System, U.S. Department of Agriculture, and the County Commissioners Courts of Texas Cooperating. Information compiled by Elizabeth McMahon, Gillespie County Horticulture Agent, except where indicated.