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The University of Georgia
College of Agricultural and Environmental Sciences
Cooperative Extension

Lee County Ag Newsletter

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Corn Production Guide (Rome Ethredge)

UGA's newly revised **2022 Corn Production in Georgia ,** with lots of good updated info, is now on the web at the following link:

https://grains.caes.uga.edu/content/dam/caes-subsite/grains/docs/corn/2022-Corn-Production-Guide.pdf

Using Manures as Fertilizer (Rome Ethredge)

We've been getting more questions concerning fertilizing with poultry litter due to the price of commercial fertilizers. Here's an excerpt from the Corn Guide mentioned above concerning this, from Glenn Harris and Henry Sintim:

"Animal manures such as poultry litter and lagoon water can be an excellent source of nutrients for corn. It is important though to know the amounts of nutrients contained in the manure prior to deciding to use it as your main source of phosphorus and potassium. The majority of the nutrients contained in the manure are readily available in the season. If you are using poultry litter, in general, you should be able to use about 65% of the nitrogen and 80% of the phosphorus and potassium contained in the litter the **first year**. For example, if the analysis is 50-50-50 per ton, and you apply two tons per acre, then credit your fertility program 65 lbs of nitrogen, and then 80 lbs of phosphorus and potassium the first year. At least 25% of the nitrogen should be available within the first two to three weeks after application and the remainder throughout the season."

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It's possible to lose 10% of the Nitrogen if not tilled into the soil pretty quickly and the neighbors will **like you more** as well. Lol.

We are also getting questions about banding fertilizer to reduce total fertilizer use, but Dr. Harris says we will still need the same total amount for the season.

Crop Economics (Rome Ethredge)

In case you missed it, the UGA Ag Economics Department's January revision of the Crop Comparison sheet, and crop budgets are on the web now here at this link. https://agecon.uga.edu/extension/budgets.html

Amanda and Yangxuan really do a great job on this. Very useful and can be easily modified with the grower's or your county's projected numbers, in Excel. For example if grower says "I usually make 230 bushels of corn" (200 is on the sheet) put that in and everything is adjusted even the increase in fertilizer to reach that yield goal. Also, he may have a different projected price he will get, so change that, too. I'm hearing some 500$ peanut contracts so that's easily changed as well.

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Estimate of 2022 Relative Row Crop Costs and Net Returns

By A.R. Smith and Yangxuan Liu, UGA Extension Economists, Department of Agricultural & Applied Economics

[[Due to extreme volatility in input markets, prices may change rapidly. You are encouraged to enter your own prices to best estimate your 2022 cost of

Jan 2022

Conventional Tillage	IRRIGATED					NON-IRRIGATED						
	Cotton	Peanuts	Corn	Soybeans	Grain Sorghum	Cotton	Peanuts	Corn	Soybeans	Grain Sorghum	Int Mgmt Wheat	Wheat
EXPECTED YIELD per ACRE	1,200 lbs	4,700 lbs	200 bu	60 bu	100 bu	750 lbs	3,400 lbs	85 bu	30 bu	65 bu	75 bu	55 bu
EXPECTED SEASON AVG PRICE	$0.90 /lb	$440 /ton	$6.00 /bu	$11.50 /bu	$5.80 /bu	$0.90 /lb	$440 /ton	$6.00 /bu	$11.50 /bu	$5.80 /bu	$7.00 /bu	$7.00 /bu
GROSS RETURN per ACRE	$1,080	$1,034	$1,200	$690	$580	$675	$748	$510	$345	$377	$525	$385
VARIABLE COSTS per ACRE												
Seed	95	123	122	62	25	95	130	76	62	15	65	43
BWEP	2					1						
Fertilizer & Lime*	222	70	503	112	269	160	70	194	112	172	223	157
Chicken Litter												
Chemicals	125	181	38	60	29	136	153	38	41	29	57	46
Custom Application											8	8
Hand Weeding	18	18				18	18					
Scouting	13	13				13	13					
Fuel and Lube**	33	53	22	20	23	33	53	22	20	23	33	20
Repairs and Maintenance	44	57	24	20	21	44	57	24	20	21	23	15
Irrigation***	76	57	76	47	38							
Labor	14	35	14	12	14	14	35	15	12	14	17	10
Insurance	19	31	21	12	27	35	43	35	20	24	13	17
Land Rent												
Other												
Interest on Operating Capital	18	18	23	10	12	15	16	11	8	8	12	9
Gin & Warehouse (net after cottonseed)	47					30						
Drying and Cleaning		63	61		31		45	26		20	7	5
Marketing and Fees		15					11					
TOTAL VARIABLE COSTS per ACRE	$725	$733	$904	$356	$489	$594	$644	$441	$296	$325	$458	$331
RETURN ABOVE VARIABLE COST per ACRE	$355	$301	$296	$334	$91	$81	$104	$69	$49	$52	$67	$54
BREAKEVEN PRICE (Variable Cost)	$0.60 /lb	$312 /ton	$4.52 /bu	$5.93 /bu	$4.89 /bu	$0.79 /lb	$379 /ton	$5.19 /bu	$9.87 /bu	$5.01 /bu	$6.10 /bu	$6.01 /bu
BREAKEVEN YIELD per ACRE (Variable Cos	806 lbs	3,332 lbs	151 bu	31 bu	84 bu	660 lbs	2,927 lbs	74 bu	26 bu	56 bu	65 bu	47 bu
FIXED COSTS per ACRE												
Machinery and Equipment	186	170	87	68	66	186	170	87	68	66	77	54
Irrigation	135	135	135	135	135							
Buildings												
Miscellaneous Overhead	36	37	45	18	24	30	32	22	15	16	23	17
TOTAL SPECIFIED FIXED COSTS per ACRE	$357	$342	$267	$221	$226	$215	$202	$109	$83	$83	$100	$71
TOTAL COST EXCL. LAND & MGT per ACRE	$1,082	$1,075	$1,171	$577	$714	$809	$846	$550	$379	$408	$557	$401
RETURN TO LAND AND MGT per ACRE	-$2	-$41	$29	$113	-$134	-$134	-$98	-$40	-$34	-$31	-$32	-$16
BREAKEVEN PRICE (Total Costs)	$0.90 /lb	$457 /ton	$5.86 /bu	$9.62 /bu	$7.14 /bu	$1.08 /lb	$498 /ton	$6.47 /bu	$12.64 /bu	$6.28 /bu	$7.43 /bu	$7.29 /bu
BREAKEVEN YIELD per ACRE	1,202 lbs	4,884 lbs	195 bu	50 bu	123 bu	899 lbs	3,846 lbs	92 bu	33 bu	70 bu	80 bu	57 bu

* Expected fertilizer $/lb. of nutrient: N= $1.10 P= $0.70 K= $0.72

** Season Average Diesel fuel price: $3.00 per Gallon

*** Weighted average of diesel and electric irrigation application costs. Electric is estimated at $7/appl and diesel is estimated at $13/appl when diesel cost $3/gal.

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Growth regulator (Rome Ethredge)

Here's some information concerning **Palisade** growth regulator that can be used on some small grains to limit growth. It's not widely used here, but can be useful, mainly in high fertility situations where grain would have the potential to fall (lodge) before harvest. Use it when fully tillered or beginning to joint to reduce the overall height the grain will get up to. There's a new formulation called Palisade Max but no real use differences, just mainly has a better smell, I'm told. One use is to go around the field

ends with one swath where fertilizer applications often overlap and we often see it falling. I have a company info sheet I can email if anyone needs more information on it.

Corn Planting (Rome Ethredge)

Folks are getting planters ready and making sure everything is in working order. Here's some good planting info, mostly from the UGA Corn production guide.

Do not underestimate the importance of good plant stands. Improper establishment will have a negative impact on yield as corn can be sensitive to planting depth, thick or thin populations, highly variable spacing, and delayed emergence. Inspect and service your planter and replace worn parts. Utilize the expertise that planter companies have to gain insights on properly adjusting all parts to changing soil and weather conditions as to optimize the operation.

Ensure that coulters and disc openers are aligned accurately and the planter is level when you begin planting. Calibrate the planter for a proper seed drop. Make sure seed is between 1.5 and 2 inches deep. **Avoid too much down pressure especially when wet** but make sure the furrow is closed properly. Check your speed to ensure that seed spacing is correct so as to avoid differences in plant emergence. Speed can increase your stand spacing so optimize your planting speed according to your seed density and the ability to reduce the spacing differences at seed drop.

Avoid planting when soil temperatures drop below 55 F. Variable plant emergence can reduce yields as much as 10 to 20% depending on the establishment delay of neighboring plants. Delayed plants cannot compete with older, better established plants. A field where all plants emerge within 12 to 24 hours of the first emerging plant is considered a successful stand that may provide a high yield potential for you to manage.

Plant corn as soon as temperature and moisture become favorable for seed germination and seedling growth. Soil temperature in the seed zone should be 55°F

or greater before planting. Corn seed will sprout slowly at 55°F while germination is prompt at 60°F. One should delay planting if cold weather drops soil temperatures below 55°F at the two-inch soil level. It is generally safe to plant if soil temperatures are 55°F and higher, and warm temperatures are in the forecast.

Extremely early planting introduces a risk to frost or freeze damage and subsequent loss of stands. Usually, as long as the growing point is below ground level, corn can withstand a severe frost or freezing damage without yield reduction. It is best therefore to monitor soil conditions and weather if your desire is to plant as early as possible. Generally, it takes corn seed 7 to 12 days to emerge when planted in soils at 55°F.

Early-planted corn typically out-yields late-planted corn. Depending on your location, planting dates may range from early March in south-Georgia to mid-May in north Georgia. Early planting helps avoid periods of low rainfall and excessive heat during pollination, both of which lead to internal water stress during critical periods of corn development.

Right now (9 am on Monday, Feb 21) we have 2 inch soil temperature of 53.6 but its best to look at the daily averages, going back in order last 4 days were 55, 54.6, 65.2, 63.5 for the average 2 inch soil temperature in Seminole County, Ga . So soil temp is marginal for planting and we always need to watch the forecast. Avoid planting when big rains or hard cold are in the 3 day forecast. We don't want to plant when too wet as we'll get side wall compaction and other problems that aren't good.

Here's below what I got from Univ. Of Georgia Weather Network today. It gives you a soil temperature average over the days you choose. Notice how soil was cooler this time last year but warmer the 2 previous years. Remember that we use the 2 inch temp for corn but the 4 inch for peanuts.

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Average Soil Temperature Calculator

Choose a station : Donalsonville

From: February 17 2022

To: February 20 2022

US Metric

Calculate

From February-17	To February-20	Average Daily 2 in. Temperature °F	Average Daily 4 in. Temperature °F	Average Daily 8 in. Temperature °F
2022	2022	59.48	59.54	59.38
2021	2021	53.45	54.27	54.64
2020	2020	63.43	63.27	62.7
2019	2019	63.26	63.23	62.74

Reference Publications (Doug Collins)

Here's an online reference book that I find very useful for answering questions about small grains to include the ones other than our standards.
https://secure.caes.uga.edu/extension/publications/files/pdf/B%201190_3.PDF

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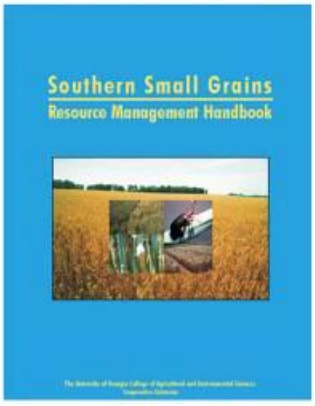
Southern Small Grains Resource Management Handbook



- Wheat, Oats, Barley, Rye, etc

Here's another very useful guide for quickly looking up general planting rates and dates and days to maturity, etc.

https://secure.caes.uga.edu/extension/publications/files/pdf/C%20813_2.PDF

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Planting Guide for Row Crops in Georgia

Revised by R. Dewey Lee
Original manuscript by R. Dewey Lee and J. Troy Johnson
Former agronomists for the University of Georgia Crop and Soil Sciences Department

This planting guide will help producers establish grasses and legumes commonly grown in Georgia. Information given for particular species should not be taken as a recommendation to grow that species. Not all of the plant species grown in Georgia are recommended by the University of Georgia. Current production guides may be found at www.caes.uga.edu/commodities/fieldcrops/index.html.

Start with high quality seed. Certified seed is available for most recommended crops. Test your soil to determine nutrient needs. Contact your local county Extension office for information on soil sampling. Fertilize and lime according to soil test results. Plant seed at the proper depth in a good seed bed when soil temperatures and moisture are best for that species. Use the correct seed per acre as indicated. Manage for high yields by maintaining soil fertility and controlling weeds, insects and diseases. Harvest at the appropriate time with properly adjusted equipment. Protect seed quality through proper handling and storage.

Crop	Lbs. Seed/ Bu.	Approx. Seeds/ Oz.	Seeding Rate	Planting Date[1]	Days to Maturity[2]	Cert. Seed Quality			Remarks
						Min. Germ %	Min. Purity %	Max. Weed Seed	
WARM SEASON									
Corn, field	56	80-140	*See table	LV-Apr. 1 - May10 P-Mar. 15 - Apr. 20 C-Mar. 1 - Apr. 15	100-125	90	99	None	Use higher plant populations for ir fields. See the cu UGA production g
Cotton	46	225-350	For 36"* row width: 3-4 seed/row ft	S-Apr. 1 - May 25	140-160	80	98	.02%	Irrigated fields sh be planted after

Reviton For Burndown Weed Control (Prostko)

Last week, I received quite a few questions about a relatively new herbicide sold under the trade name of Reviton. Marketed by Helm AG (https://www.helmag.com), Reviton is being promoted for use in the pre-plant burndown market. At this point in time, neither Culpepper nor I have enough data/experience to make a science based "official" UGA recommendation. Basically, Reviton is being tested in tank-mixes with Roundup (glyphosate). I have no problems if a grower wants to try some out on a few acres (***but not on 100% of their acres)***. Here are a few facts about Reviton that you might find helpful:

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Trade Name: Reviton 2.83SC

Common Name: tiafenacil

Herbicide Family: N-Phenyl-imides (same as Valor or Sharpen)

WSSA MOA: Group 14 (PPO inhibitor)

Labeled Use Rates: 1-3 oz/A

Crop Rotation Restrictions: Corn/wheat = 0 days; soybean/cotton = 14 days; peanut = 120-180 days depending upon rate (*we are working on this one*).

Current Label: https://s3-us-west-1.amazonaws.com/agrian-cg-fs1-production/pdfs/Reviton_Label1.pdf

2021 Data (Prostko):

Peanut Tolerance: http://www.gaweed.com/slides/prostko-swss-2022.pdf

Efficacy: http://www.gaweed.com/trials/prostko2021/PDFFiles/BD-01B-21.pdf

Enlist Soybean Variety Update for Georgia - 2022 (Prostko)

At the recent Laurens County Weed Meeting, I was asked if UGA has any information about the performance of Enlist soybean varieties. The following is a quick summary of the yield performance of Enlist soybean varieties tested in the official UGA-OVT Tests in 2020 and 2021 (DM = Don Mario; AGS = AGSouth; MS = MorSoy; SH =Southern Harvest):

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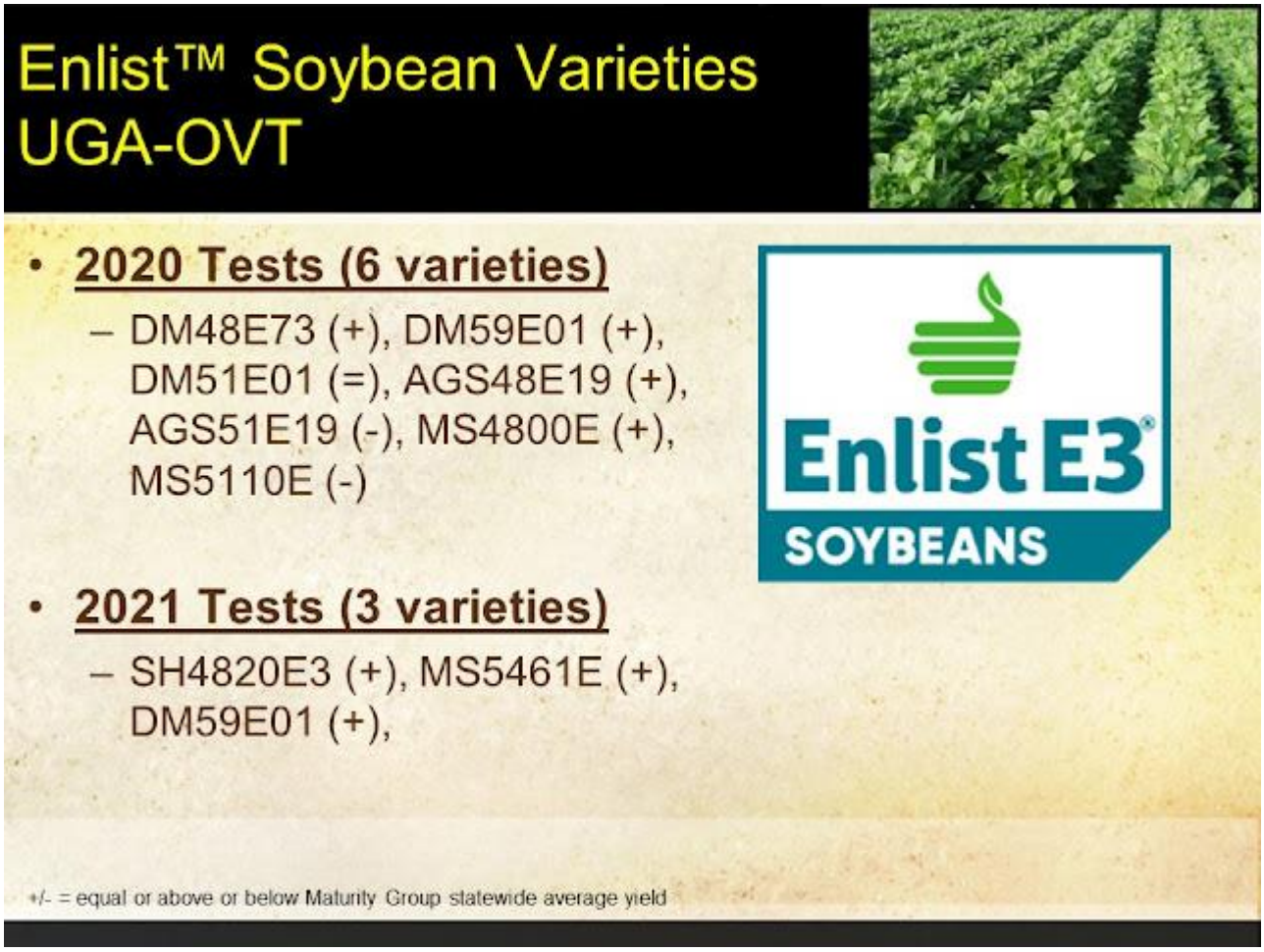

Results of the UGA-OVT soybean tests can be obtained at the following locations:

2020: https://swvt.uga.edu/content/dam/caes-subsite/statewide-variety-testing/docs/performance-trials/2020/soybean-prelim-2020-tables.pdf

2021: https://swvt.uga.edu/content/dam/caes-subsite/statewide-variety-testing/docs/performance-trials/2021/2021-soybean-prelim.pdf

Using Pesticides Wisely Training (Doug Collins)

Information on the Using Pesticides Wisely Training will be coming out shortly. This is the training that is required for using dicamba and 2,4-D on auxin tolerant transgenic crops. Remember, sprayer operators must be trained. If you attended the weed meeting and stayed until the end and signed the sheet and put down your pesticide license number, you are considered trained.

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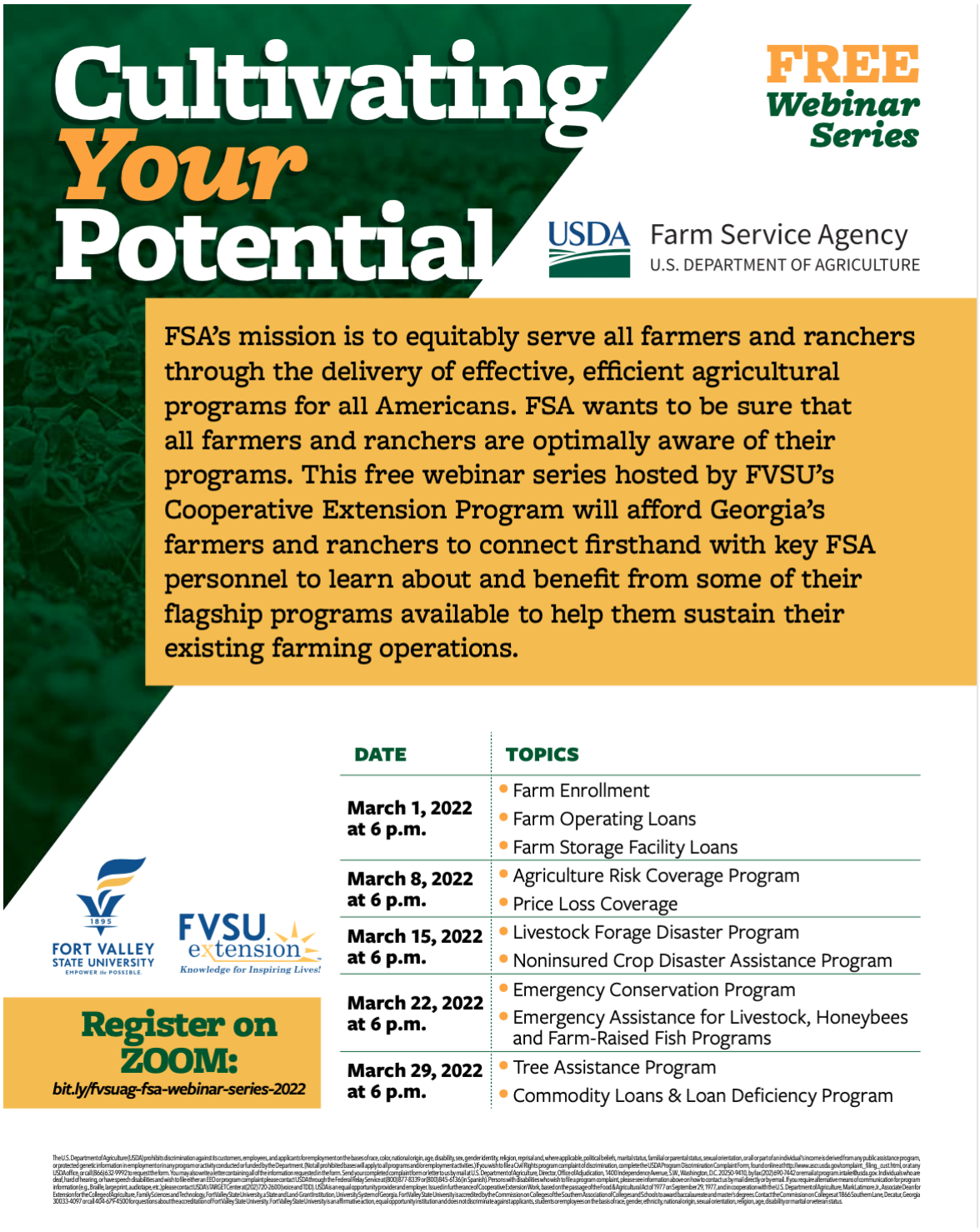
Webinar on Farm Service Program



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