

Nueces Agriculture

“IMPROVING FOOD & FIBER PRODUCTION”

VOLUME 13, ISSUE 6

NOVEMBER 2020



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Dry weather appears to be setting in and growers should make 2021 crop planning decisions accordingly. NOAA continues to forecast persistent below normal precipitation through at least May. As such, shifting crop mix to more drought hardy crops and selection of more drought-tolerant hybrids should be considered. Our soil testing campaign concluded on November 20th; as always soil fertility varied widely from field to field and from grower to grower. This highlights a significant opportunity to improve profitability from either improving productivity by correcting nutrient deficiencies or by reducing input cost by not over applying fertilizer. On January 7th, our annual Field Crop Symposium is being planned. Much like our Fall CEU Conference last month we plan to offer participants the option of attending in-person or virtually. We currently have presentation on Understanding Bt Resistance in Bollworms and Viral Control Options, Weed Management with New Sorghum Herbicide Technology, and a 10 Year Review of “What’s NEW” in Pesticide Laws planned. We intend to request 5 hours of CEU credit for those who attend the program. We are going to have some Auxin herbicides labeled for over-the-top application in cotton again this year and the annual training requirements will remain in place as well. With this in mind we will offer an opportunity of this training and an additional CEU prior to the start of the Symposium.

TEXAS A&M
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PRIVATE APPLICATOR TRAINING

When:..... Tuesday, 12/1
Pre-Registration Required.....(361)767-5223
Time8:00 am—11:30 am
Where.....A&M AgriLife Ext. Office,
710 E. Main, Robstown, TX

Fee: \$50.00 (Includes study manuals)

A Private Applicator is defined by law as a person who uses or supervises the use of a restricted-use or state-limited use pesticide for the purpose of producing an agricultural commodity.

FARM WORKER PROTECTION SAFETY TRAINING

When.....Friday, 2/5/21
Time9:00 –11:00 am
WhereTexas A&M AgriLife Extension Office

Pesticide handlers and workers must be trained every year unless they are certified applicators. All participants in this training will be issued cards verifying they have successfully completed the required training and given a copy of the sign-in roster for their employer’s files.

Controlling Herbicide Weed Resistance

By: Jason P. Ott, CEA – Ag/NR
Texas A&M AgriLife Extension Service
Nueces County

“Be not the first to leave the tried and true, or the last to leave the old behind” could be a strong piece of advice for growers considering the adoption of new practices or technology. However, a key component of successful crop production is effective weed management; and when it comes to weed control and managing herbicide resistance there is no room for this type of philosophy.



In fact it has been said that, "If you like your herbicide program, you better change your herbicide program." This statement emphasizes the importance of rotating modes of action within your herbicide program in order to preserve that mode of action's ability to keep working for you in the future.

There are currently 246 species of herbicide resistant weeds globally. For the Coastal Bend Region the most concerning herbicide resistant weeds are glyphosate resistant pigweed and common waterhemp. These weeds are capable of producing around 100,000 – 500,000 seed per female plant and can spread rapidly throughout a region once established. In a controlled greenhouse experiment, researchers were able to observe herbicide resistance in pigweed to dicamba after only three generations of plants being exposed to sub-lethal doses of dicamba. This experiment emphasized the importance of several weed resistance prevention principles such as:

- Always use the recommended rate, timing of application, and spray volume
- Avoid using a single mechanism of action in your herbicide program
- Scout for herbicide failures following spraying and control any escapes before they go to seed

While the greenhouse experiment was purposely designed to show how quickly poor herbicide stewardship practices could develop herbicide resistance in a weed population, in a field setting following the three principles above will prevent the rapid development of herbicide resistance. The use of cultivation and crop rotation will further strengthen the producer's arsenal against herbicide resistance.

As we move closer to the 2021 growing season growers will have several new tools available to combat grassy weeds in sorghum. An over-the-top herbicide to control grassy weeds in sorghum is an exciting new assets for growers who need help with problem fields. Justifiably so, preliminary work by industry, academia, and in

local on-farm grower tests show how effective this tool can be. However, resistance to these herbicides is very likely and could be extremely rapid without diligent and proper stewardship of this new technology. The core principle of that being rotation, rotation. Rotate crop and rotate mode of action.

Dr. Josh McGinty, Extension Agronomist in Corpus Christi, has developed an excellent guide that can be found at <http://bit.ly/1MN6E59> to help growers with identifying products with the same mode of action. This “Quick Guide to Herbicide Modes of Action” can be used to keep track of the modes of action that you use and help ensure that you are using multiple modes of action in your herbicide program.

While growers can do several things to help mitigate the development of herbicide resistant weeds, the most effective step is to include a pre-emergent residual herbicide into their weed control arsenal. A complete list of herbicide suggestions for cotton producers can be found at <http://bit.ly/2ki7kWE>, that includes preemergence herbicide options.

Reliance on a single mode of action herbicide may very well be a low cost flexible weed management option today, but continued reliance on this type of system will guarantee that your neighbor’s problem

Interested in Reminders About Extension Events?

Our office has recently started using Remind as a means for sending notifications regarding upcoming programs or events. You may already be familiar with Remind, or Remind 101, as a communication platform commonly used in school settings. With Remind, you can receive text messages on any phone, including flip phones. To start receiving text messages from us regarding reminders about emerging issues, upcoming events and CEU opportunities, sign up today. Simply send or text @agnatural to 81010. You can also contact Lisa at 361.767.5223 for assistance in completing this process.

. Nueces County RACE Trial, 2020

Cooperator: Darrell Lawhon

Jason Ott - Nueces County Extension Agent, Agriculture and Natural Resources
 Dr. Josh McGinty, Clinton Livingston, and Rudy Alaniz - Texas A&M AgriLife Extension, Corpus Christi

Variety	Yield (lbs/acre)	Turnout %	Micronaire	Length (inches)	Strength (g/tex)	Uniformity	Loan Value (¢/lbs)	Lint Value (\$/Ac)							
FM 2398	1374	a	4.9	1.14	de	29.3	d	83.1	53.62	de	737	a			
NG 4936	1326	ab	4.2.8	bc	4.4	de	1.16	cd	31.4	b	82.8	54.08	abc	717	a
DP 1646	1324	ab	4.3.1	bc	4.5	c	1.19	ab	29.8	d	83.1	53.98	a-d	715	a
B2XF PHY 400	1305	abc	40.9	e	4.2	f	1.16	cd	29.7	d	83.0	53.87	bcd	703	ab
W3FE PHY 480	1314	abc	42.3	cd	4.5	cd	1.12	e	30.1	cd	83.6	53.45	e	702	ab
W3FE DG 3555	1284	bcd	42.0	cde	4.1	g	1.17	bc	30.1	cd	83.4	53.92	a-d	692	abc
B3XF ST 4990	1234	cde	39.4	f	4.3	ef	1.15	d	29.9	d	83.3	53.70	cde	663	bcd
B3XF DP 1845	1203	de	43.2	bc	4.3	ef	1.20	a	31.2	bc	83.2	54.10	ab	651	cde
NG 4098	1180	e	41.2	de	4.4	de	1.20	a	33.8	a	83.3	54.30	a	641	de
ST 4550 GLTP	1151	e	45.1	a	4.7	b	1.09	f	29.3	d	82.6	52.93	f	610	e
Mean	1269		42.4		4.4		1.16		30.5		83.1	53.80		683	
P>F	0.0044		<0.0001		<0.0001		<0.0001		<0.0001		0.6676	0.0006		0.0038	
LSD (P=.10)	87.13		1.229		0.121		0.026		1.159		NS	0.393		47.143	
STD DEV	91.58		1.71		0.23		0.04		1.49		0.62	0.44		49.75	
CV%	7.21		4.04		5.25		3.19		4.89		0.74	0.82		7.28	

Nueces County RACE Trial, 2020

Cooperator: Jim Massey

Jason Ott - Nueces County Extension Agent, Agriculture and Natural Resources

Dr. Josh McGinty, Clinton Livingston, and Rudy Alaniz - Texas A&M Agrilife Extension, Corpus Christi

Variety	Yield (lbs/acre)	Turnout %	Micronaire	Length (inches)	Strength (g/tex)	Uniformity	Loan Value (¢/lbs)	Lint Value (\$/Ac)						
FMI 2398	1393	a	41.8	b	5.0	a	1.13	e	31.2	cd	83.5	ab	53.03	738
GLTP														
DG														
3555	1308	b	38.9	c	4.0	e	1.18	bc	32.2	bc	83.5	ab	54.25	710
NG														
4936														
B3XF	1288	bc	38.3	c	4.3	cd	1.18	c	31.0	cd	84.0	a	54.05	696
DP 1646														
B2XF	1285	bc	41.0	b	4.3	d	1.20	ab	31.0	cd	82.8	bc	54.05	695
DP 1845														
B3XF	1278	bc	41.5	b	4.3	cd	1.20	a	33.0	b	83.5	ab	54.30	694
ST 4550														
GLTP	1287	bc	42.7	a	4.6	bc	1.11	f	31.6	bc	83.0	bc	53.67	690
NG														
4098														
B3XF	1239	bc	38.1	c	4.4	bc	1.20	a	35.6	a	82.3	c	54.22	672
ST 4990														
B3XF	1220	c	38.1	c	4.4	cd	1.15	d	29.9	d	83.5	ab	53.87	657
Mean	1287		40.1		4.4		1.17		31.9		83.3		53.9	694
P>F	0.0605		<0.0001		<0.0001		<0.0001		0.0007		0.0634		0.242	0.1034
LSD (P=.10)	79.515		0.902		0.141		0.016		1.585		0.821		NS	NS
STD DEV	69.07		1.90		0.29		0.03		1.88		0.72		0.61	33.65
CV%	5.37		4.75		6.56		2.93		5.90		0.87		1.13	4.85

Eight Considerations to Get More Value for Your Soil Test Dollars

Dr. Calvin Trostle, *AgriLife Today*

Farmers across Texas are familiar with standard soil testing procedures and many make use of soil tests to determine fertilizer applications for a wide range of crops and soil types. You have likely been encouraged to soil test annually and “Don’t Guess—Soil Test” to better pinpoint your soil fertility program. Overall soil testing information from Texas A&M is found at <http://soiltesting.tamu.edu/>.

Here are eight additional considerations to help you capture more value from soil test results.

1) **There are different philosophies of soil testing.** Producers regularly comment to me that they sent the same sample to two different labs and received different recommendations. Why? There are several reasons why this could be. First, there are two components to soil testing and recommendations. On one hand there is the specific test method that is used. This includes how the nutrients are extracted from the soil and what method is used to analyze the nutrient. These may not be the same between two labs (see more in #5 below). On the other hand, an individual lab may have a different basis for what they recommend based on both the measured nutrient value and your goals. The two primary philosophies of soil testing are generally “provide the nutrients needed for the current crop” vs. “build and maintain,” or let’s increase the background residual fertility. Each has its merits. The former is more likely the approach taken by public (university) soil test labs, which are expected to base soil test recommendations on years of field validation trials for different crops across a range of soil types. Private labs likely use a similar basis for gauging crop nutrient requirements (and very well may use the university data) but may be more inclined to recommend a higher level of fertilization for some nutrients to increase the background level of fertility. (This is most commonly associated with P and K; we do not “build” soil nitrogen, or N, which is relatively mobile in the soil when applied or converted to the nitrate form; any build-and-maintain approach for nitrogen generally involves the application of compost, manure, etc. where N release occurs over a couple of years). In general, both philosophies should include a yield goal and consider existing residual soil fertility that is available to your next crop. You know that build-and-maintain may cost a little more, but if it reflects your goals, then this is acceptable additional expense. If you are not sure of your preferred soil test lab’s approach to their recommendations, ask. You have a right to know. The same applies if you have a crop consultant or fertilizer dealer making recommendations for your farm.

2) **Who soil samples your field and makes your recommendations?** Particularly for large farms, producers may rely on a crop consultant or the fertilizer dealer themselves to conduct soil sampling on your different fields. Ensure they are taking representative samples for each sampling unit or field (at least one probe point per 4 acres, preferably 1 per 2 acres especially for smaller sampling areas). Also, if the individual who conducts soil sampling may not be familiar with different soil types or other production zones in your field (good areas, poor areas) that you observe, let them know so they can sample accordingly and not commingle soil samples from potentially different management zones.

Ask what soil test lab the consultant or fertilizer dealer uses. Even if you are not charged for the soil tests (part of the consultant’s fee or you are expected to purchase your fertilizer from that dealer), you should inquire who is conducting the test and understand what the recommendations might be (see #1). Also, since you did not submit the soil test reports, were they returned to you with recommendations based on your yield goals? What are your yield goals? If you have been working with a consultant for many years, they may already know your target yield goals for individual fields based on experience. But you should ask. If you have made other changes in your production practices that may influence yield goals hence recommendations you need to share that information.

3) **Be alert for possible conflicts of interest.** You know this, and it should go without saying. But if someone is doing your soil sampling for you, handles soil testing and recommendations, and you buy your fertilizer from them, this is a potential conflict of interest. Just so you know, regardless of the level of trust you may have. I have colleagues that strictly recommend you control the soil sampling process and sourcing of fertilizer recommendations that fully reflects your best interests. Then you shop for fertilizer based on cost, type, availability, and possible fertilizer application services.

4) **There is a trend to increase the depth of soil sampling.** Initially, this was driven by recognition that there may be substantial amounts of the readily available form of soil nitrogen, or nitrate, below 6”—and sometimes lots of nitrate-N, even up to 100 lbs. of N per acre in rare cases—that is utilized by all crops. Some highly agricultural states now

recommend standard soil samples to 24" deep for the basic, routine analysis. This includes Kansas and North Dakota. But you know that soil sampling to 24" is more difficult and will take more time. But what is the value of better fine-tuning your nutrient needs? Texas A&M AgriLife does not currently recommend deeper soil sampling for general soil nutrient analysis, though we acknowledge it would provide more information to better pinpoint fertilizer recommendations. We do recommend, however, greater attention to soil nitrate-N below 6". Thus, the Texas A&M Soil Test Lab now provides a "Profile N" soil test form (see <http://soiltesting.tamu.edu/files/profilesoil.pdf>). To use this approach, you collect your standard soil sample (likely a 6" depth) which is analyzed for basic nutrients and any additional tests. A companion soil sample is collected at the same point beginning at 6" then deeper into the soil. On the form you mark the depth of the subsoil sample as 6-12", 6-18", or 6-24". This sample is analyzed inexpensively for nitrate-N only, and it is credited to your crop requirement. It represents a potential cost savings on fertilizer N, especially in wetter regions of Texas where nitrate could be lost out the bottom of the root zone from excessive rains.

5) **Do you use a soil test lab that is out of state?** If so, how do we know their soil fertility recommendations are appropriate for your farm? Nebraska soil test and fertility recommendations may be appropriate for corn there, but what about for a Texas field? What if you send soil test samples for cotton to Nebraska where cotton is not grown? So how do they make recommendations for cotton? You have a right to know. States outside of Texas may even use a different soil test method for some nutrients that is not appropriate for some Texas soil types. This is an even bigger question than what soil test philosophy an out-of-state lab uses. You need assurance that their recommendations are appropriate for Texas. So ask.

6) **Is it possible in some cases to compare soil test recommendations from other labs to what Texas A&M recommends?** The essential key is the other lab must use the same standard soil extraction and analysis method that is the basis for Texas A&M AgriLife testing and recommendations. Texas A&M posts online numerous charts for N, P, and K that also reflect a yield goal. This is done for the major crops of cotton, corn, grain sorghum, wheat, winter canola, and a few forage crops. For these crops you will find the recommended fertilizer application for a target yield goal based on a soil test value of the nutrient. Unfortunately, there is less information for other crops, so Texas A&M recommendations become uncoupled from yield goal (no range of yields are provided). So, for crops like sunflower, peanut, sesame and several forages this comparison cannot be done. If you make this comparison, you can rightly assume the Texas A&M AgriLife recommendation is based on providing what your crop needs for the coming crop year. In addition to ensuring the two labs are using the same extraction and analysis method, you will need to know what soil test philosophy is used by the other lab.

7) **Using soil test information when buying and selling farmland.** If you are considering purchasing farmland, have you thought about asking for recent soil test reports? Or better, can you get permission from the seller to soil test the property? This is rarely if ever done, but why not? Information from soil testing could potentially demonstrate a swing of \$50 per acre or more on the value of the land. If residual soil fertility is high and you find there is 60 lbs. of soil nitrate-N below 6" (that is probably worth at least \$25 per acre), you can better justify your price. If you find that soil test P is 'low' (10-20 ppm P₂O₅ equivalent) and you have a build and maintain approach to your cropping, then you can calculate how much P fertilizer—a significant cost—it will take to reach your goals. This of course detracts from the value of the land to you. If you are denied the opportunity to soil test a unit of land for sale, what does that say? It should decrease your interest in paying as much for the land. On the other hand, if you are selling land that you know has good soil nutrient status, invite prospective buyers to soil sample. You could do this yourself and provide the information though this is not independent.

8) **How long should you keep soil test reports for each field?** I recommend you treat them like previous years' tax returns. Keep them a long time, even more than 25 years. A historical record of soil tests can show you what changes have occurred in your soil over time. Have you improved overall soil fertility. Or has it degraded over time? Perhaps at some point you change how you tilled the soil or applied your P, then you can see if that is reflected in your soil tests.

And like #7 above, if you are considering purchasing a unit of land, ask if they have soil sample reports over past years. If you were buying a vehicle or tractor, you would like evidence the oil has been changed regularly. That reflects better care. Soil tests reports can do the same for buyers—and sellers.

Nueces County
710 E. Main St., Ste. 1
Robstown, TX 78380

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Individuals with disabilities who require an auxiliary aid, service, or accommodation in order to participate in any Extension event are encouraged to contact their County Extension Office at 361-767-5223 at least one week in advance of the program in order for proper arrangements to be made.

In the event of a name, address or phone number change please contact the office at:

Texas A&M AgriLife Extension Service
710 E. Main, Suite 1 Attn: Ag/NR
Robstown, Texas 78380
(361) 767-5223



A handwritten signature in black ink that reads 'Jason Ott'.

Jason P. Ott, CEA
Ag/Natural Resources
710 E. Main St., Suite 1
Robstown, TX 78380
Ph: 361.767.5223
Fax: 361.767.5248
Email: j-ott@tamu.edu