Keys to
Agronomy
APR '24

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PRODUCER SPOTLIGHT

Jeff Edwards
Lamb County

Jeff Edwards is a 5th generation farmer who has been farming for 28 years in the Lamb, Bailey, and Hockley County area. Growing mainly cotton, Jeff is looking forward to testing a few new varieties of cotton and is the Lamb County irrigated producer for the RACE (Replicated Agronomic Cotton Evaluation) trial for 2024. He also grows milo, wheat, and blackeye peas in his operation.

Jeff's biggest hurdle to growing crops is the lack of rainfall the area receives, however, he is committed to ensuring the land is well taken care of and that consumers have a safe food source. During these trying times, Jeff is reminded to not worry about the things you can't control and focus on those things you can and put your trust in God, that he will provide for you. He even claims he loves a good sandstorm!

Outside of farming, you can catch Jeff with his three children and his wife, running across the state showing sheep. He is dedicated, even during the hard times in farming, to leave a legacy for his children.

Contact Me!
Got an idea, question, or comment?

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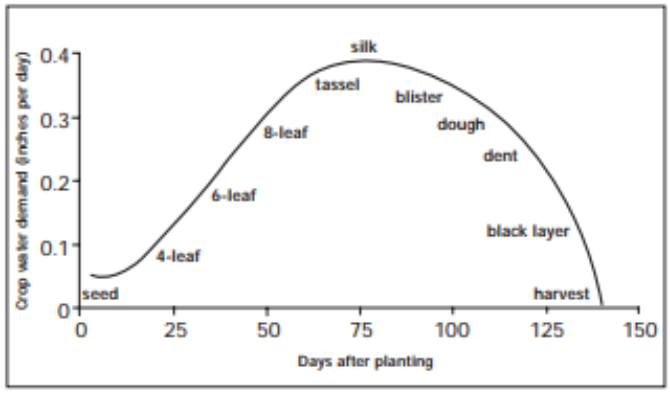
TIMING OF IRRIGATION: CORN/SORGHUM

Irrigating corn with declining water availability can pose challenges, especially considering corn's high water demand during critical growth stages like tasseling and grain fill and its sensitivity to drought. When water is limited, producers are likely to irrigate to maintain profitability. Planting corn varieties that are more tolerant to drought stress can help mitigate the impact of declining water availability. These varieties are bred to maintain productivity under limited water conditions.

Corn plant roots can grow as deep as 5-6 feet. Corn extracts all the water from the top 3 feet of soil first before finding deeper water. This is why it is important to establish a good root system early in the season. Corn uses 28-32 inches of water per season and approximately 0.35 inches per day at tasseling. Timing is crucial when irrigating corn, as different growth stages have varying water requirements.

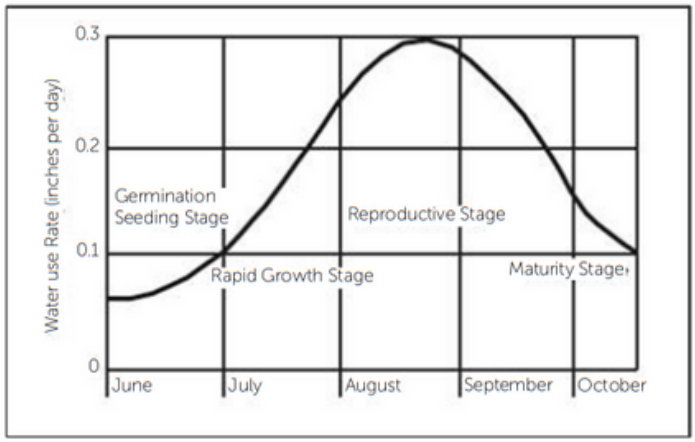
- Peak water demand occurs a few days before tasseling and begins to decline halfway through the grain-fill period.
- Reduce water stress 2 weeks before and after sinking, which would have the greatest effect on yield.
- Low-pressure, low-elevation applicators allow water to be placed more efficiently near soil surface reducing evaporation.

Figure 1. Approximate corn water demand (inches per day) in the Texas High Plains.



Sorghum is well-suited to the semi-arid climate of the Texas High Plains, as it is relatively drought-tolerant compared to other crops. However, sorghum growth can be affected by temperature extremes, especially during key growth stages. Selecting sorghum varieties adapted to the region's climate and planting them at the appropriate time can help mitigate these risks. Sorghum has been shown to yield in a variety of conditions including dryland to reach high yields under limited to full irrigation. Although very depending on the climate, sorghum typically requires 10-18 inches of irrigation per season to fully meet the crops needs. Sorghum roots can extract water from 6 feet in the soil.

FIGURE 4. CHARACTERISTIC WATER USE PATTERN OF GRAIN SORGHUM



- Grain sorghum is generally later planted therefore the reproductive stage begins after the hottest weather.
- Average peak water use are about 1/3 inch per day.
- Key water periods are: 35 days after emergence during seed head formation, flag leaf-boot stage, and grain fill.

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COVER CROP ECONOMICS WITH DR. WRIGHT

Cover Crops: Economic Considerations

While the primary reason for adopting conservation practices like no-till and/or cover crops is probably ecological, rather economical, there is still an economic decision to be made. Adopting these practices can significantly change the profitability of a farm operation, and some producers may not consider the potential economic costs worth the ecological benefit. Here, I summarize the potential economic costs and benefits of adopting cover crops using the results from trials conducted at the Agricultural Complex for Advanced Research and Extension Systems (AG-CARES) in Lamesa, TX.

The primary economic benefit from utilizing a no-till system with a cover crop is potential savings on variable costs relative to a conventional cropping system. For cotton, converting to a no-till/cover crop system allows you to avoid certain costs like sand fighting and cultivation; however, some of these savings are offset by costs associated with the cover crop (seed, drilling, termination, and herbicides).

Data from studies at AG-CARES showed potential cost savings from adopting no-till/cover crop systems as large as $40/acre and as small at $3/acre. The main drivers behind these cost differences were the cover crop seed cost and the herbicide costs associated with the no-till/cover crop system.

The primary economic cost to switching to a no-till/cover crop system is a reduction in yields, relative to a conventional system, which results in less revenue and smaller gross margins. Using data from the same AG-CARES studies, potential revenue losses from adopting no-till/cover crop systems may range from $40-$80/acre. On average, in these studies the loss in revenue is greater than the cost savings.

This is not to say that there are no benefits to adopting a no-till/cover crop system. The ecosystem benefits that arise from these systems, such as reduced soil erosion and improvements in soil health, are well-documented but difficult to quantify in a crop budget. Furthermore, it's possible that these ecosystem benefits, combined with new developments in cotton seed technology, may result in long-term increases in yields, revenue, and gross margin. Finally, there are numerous programs, such as the NRCS EQIP program, that provide financial incentives to producers that adopt conservation practices on their operations. These programs can help offset the costs associated with switching to a new cropping system and can replace the lost revenue that results from the switch.

- Article by Dr. Andrew Wright, Extension Economist-Management, Lubbock, Tx

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RAINWATER HARVESTING

Rainwater harvesting involves collecting and storing rainwater for later use. This can be achieved through various methods, including rooftop catchment systems. By capturing rainwater that would otherwise run off into storm drains, this practice not only conserves water but also reduces erosion and pollution into waterways particularly in areas prone to drought or water scarcity.

The benefits of rainwater harvesting extend beyond water conservation. For homeowners and businesses, it can lead to significant cost savings on water bills over time. While rainwater harvesting holds immense promise, it is not without its challenges; proper maintenance and water quality considerations are essential to ensure the safety and efficacy of harvested rainwater.

One of the most compelling aspects of rainwater harvesting is its sustainability. Unlike traditional water sources, such as groundwater or surface water, rainwater is a renewable resource that replenishes naturally with each rainfall supporting the creation of green spaces and urban gardens. By relying on rainwater for non-potable uses like irrigation, toilet flushing, and laundry, communities can reduce their dependence on finite water supplies and alleviate pressure on strained water systems. By decentralizing water supply and promoting self-sufficiency, rainwater harvesting enhances community resilience to water shortages, extreme weather events, and disruptions to traditional water infrastructure.

In the quest for sustainability, rainwater harvesting stands as a testament to humanity's ability to work in harmony with nature, harnessing the power of the elements to meet our needs while preserving the planet for future generations.

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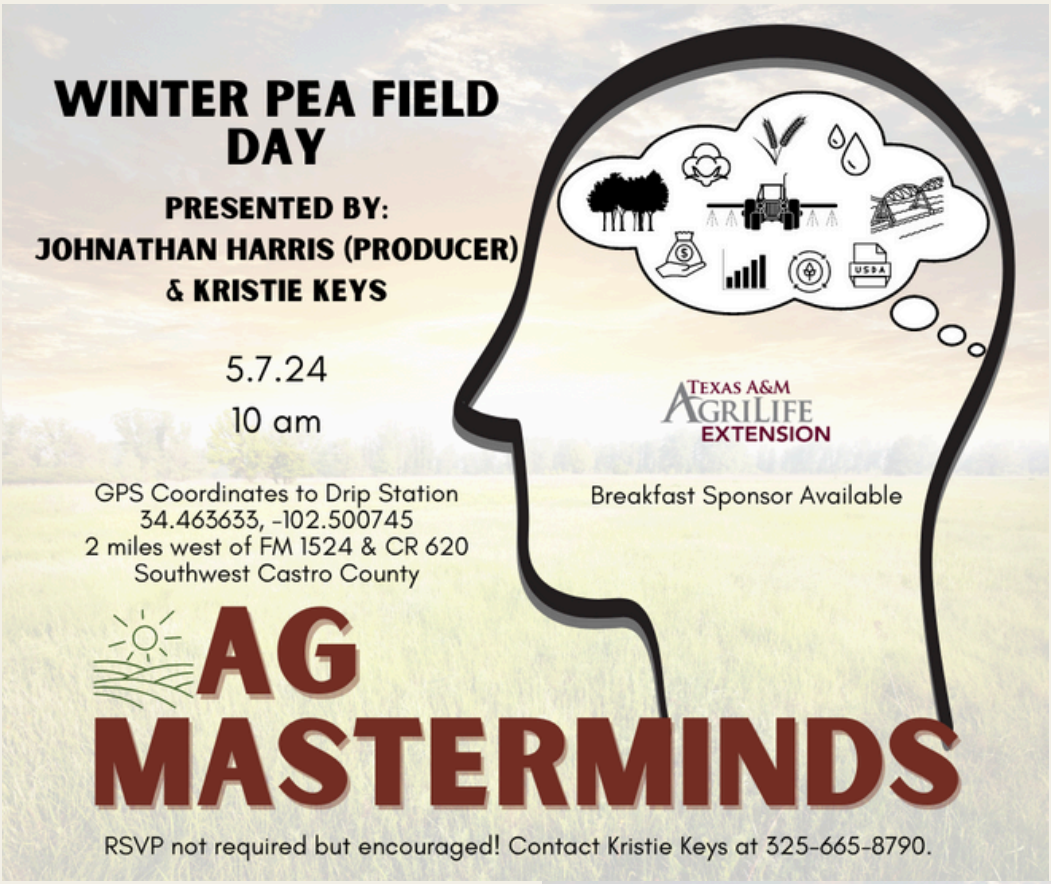
UPCOMING FIELD DAYS



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OTHER PROGRAMS

2024 VECTOR MANAGEMENT CEU PROGRAM

$50 Registration Fee Required

TEXAS A&M AGRILIFE EXTENSION

Lubbock, TX

May 6, 2024

8am - 3pm

Texas A&M AgriLife Research and Extension Center

1102 E FM 1294
Lubbock, TX 79403

azelis

GULF SOUTH VECTOR
Vector Educational Center for Training, Outreach & Resources

Pesticide CEU's Offered:

- 5 Agricultural
- 5 Structural
- 5 Animal Control CE's
- 5 Registered Sanitation
- 5 Code Enforcement

INFORMATION:

This is a recertification program that will educate personnel in cities and municipalities in the field of vector abatement on mosquitoes, ticks, flies, fleas & bugs, control tactics, trap usage, surveillance, virus testing, and mosquito control.

REGISTRATION REQUIRED

LUNCH PROVIDED

Registration is OPEN!
Aim your phone's camera at the QR code above for more information.

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LAMB COUNTY!!!!

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Save the Date

May 2- Lamb County TCFF (see graphic above)

May 7- Winter Pea Field Day (Castro Co) flyer above

May 10- Plains Cotton Growers Advisory Group Meeting (Lubbock)

May 17- Wheat Field Day (Hale Co) flyer above

May 24- Plains Cotton Growers Advisory Group Meeting (Lubbock)

May 28- Rainwater Harvest Program (Castro Co) flyer above

May 31- Scout School (Lubbock)

June 18- Ag Mastermind-USDA Programs (Castro Co)

Stay tuned to social media and newsletters for more events

Are you interested in Beekeeping?

Take this survey to help me plan a fun, hands-on program

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