TEXAS A&M AGRILIFE EXTENSION

Rusk County Ag News & Views

FALL 2022

DID YOU KNOW...

.....
According to statista.com, the number of farms in 2021 were as follows:

Texas	247,000
Missouri	95,000
Iowa	84,900
Oklahoma	77,200
Ohio	76,900

According to hay-kings.com, the top hay producing states were as follows:
Texas
Missouri
Nebraska
Montana

INSIDE THIS ISSUE:

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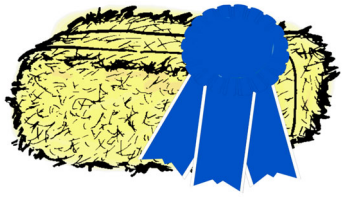
- Agent's Radio Schedule
- Extension Office Address and Phone Numbers
- Our Mailing List / Email List

Save The Date:

RUSK COUNTY HAY SHOW

Tuesday, October 18, 2022
6:00 p.m.



Rusk County Youth Expo Center

PRIVATE PESTICIDE RECERTIFICATION REQUIREMENTS

Licensed private applicators are required to recertify every five years by obtaining 15 continuing education credits, including two credits in Laws and Regulations and two credits in Integrated Pest Management (IPM), prior to expiration of the license.

Find us on Facebook

Rusk County AgriLife Extension Ag

Jamie Sugg
County Extension Agent– Ag
Rusk County
903-657-0376

East Texas Beef & Forage Clinic

Presented by: Cherokee, Panola, Rusk & Smith Counties

5 CEU Credits (2 General, 2 IPM, 1 Laws & Regs)
PENDING TDA APPROVAL

Registration Fee $25

Friday, November 18th
Rusk County Expo | 3303 FM 13 W | Henderson, TX

RSVP By November 14th
903.657.0376

8:00AM
Registration Begins

8:45AM
Welcome, Jamie Sugg, Rusk CEA-AG/NR

9:00AM
Sandbur Identification & Control Using Pre-Emergent Herbicides in Warm Season Forages (1 Gen), Rob Brooks, Area Sales Manager, Bayer Range & Pasture

10:00AM
Weed Control Considerations for Drought Recovery & High Fertilizer Prices (1 Gen), Dr. Vanessa Olson, Associate Professor & Forage Extension Specialist

11:00AM Break

11:15AM
Horn Fly Identification, Insecticide Update & Control Using IPM Strategies (1 IPM), Lee Dudley, Panola CEA-AG/NR

12:15PM Lunch

1:00PM
Aquatic Weed Identification & Control Using IPM Strategies (1 IPM), Ken Hale, CEO Boatcycle

2:00PM
Laws & Regulations Update (1 L&R), Lee Dudley, Panola CEA-Ag/NR

3:00PM
Adjourn

Rain Brings Everything to Life…..Including Armyworms!

It's that time of year to be on the lookout for armyworms. The armyworm has four life stages: egg, larva, pupa and adult. The armyworm has not shown the ability to diapause so its ability to survive winter depends on the severity of the temperature. The armyworm does overwinter in the southern regions of Texas in the pupa stage. The adult is a moth that migrates northward as temperatures increase in the spring. The adult moth has a wingspan of about 1.5 in. The hind wings are white; the front wings are dark gray, mottled with lighter and darker splotches. Each forewing has a noticeable whitish spot near the extreme tip. Eggs are very small and are laid in clusters of 50 or more and are covered with grayish, fuzzy scales from the body of the female moth. The eggs are seldom seen and are laid at the base of appropriate host plants.

Larvae hatch from the eggs and are green, brown, or black and about 1 to 1.5 in. long when full grown. The larva has a dark head capsule usually marked with a pale, but distinct, inverted "Y." The larvae have five stages or instars and usually hide in debris on the soil surface in the middle of the day. When full grown, larvae will enter the soil and form the pupa stage. Adult moths emerge from pupae. Moths mate and lay eggs, thus starting the life cycle over again. Lush plant growth is preferred by the adults for egg laying.

Several generations (a generation is the development from egg to adult stage) occur each year and typically the life cycle from egg to adult takes 28 days. The life cycle can be extended if cooler temperatures occur and can last up to several months. Armyworms in the spring and summer occur in more distinct groups than later in the season. Populations of larvae often blend together several generations and may appear to be continually occurring.

When feeding, larvae strip foliage and then move to the next available food. High populations appear to march side by side to the new food. Thus, the name armyworms have been applied. Armyworms attack many different kinds of plants. When food is scarce, they will move to plants that are not normally attacked. Thus, armyworms can be found on nearly any plant as they migrate in search of edible foliage. Plants attacked by armyworms include: Bermuda grass, grain and forage sorghum, corn, small grains, sweet potato, beans, turnip, clover, spinach, cucumber, potatoes, tomatoes, and many more.

Damage consists of foliage consumption. The small larvae will chew the green layer from the leaves and leave a clearing or "windowpane" effect. The first three instars do very little feeding while the last two instars consume 85% of the total foliage consumed.

Armyworms should be controlled when they occur in large numbers or plant damage is becoming excessive. Preventive treatments normally are not justified because attacks are sporadic and egg mortality is usually high. During favorable seasons, a number of parasitic enemies keep fall armyworm larvae down to moderate numbers. Early detection works best and is achieved by frequent, thorough inspection of plants. Outbreaks seem to occur shortly after a rain or supplemental irrigation. Armyworms feed any time of the day or night but are most active early in the morning or late in the evening. Susceptible fields or lawns should be scouted by counting the number of armyworms in a square foot area in 8 different sites. Divide the total worm count by 8 to find the average number of armyworms per square foot. Be sure to take samples in the interior of the field because this pest is often heaviest near the field margins. Sometimes, only the field margins require treatment.

The threshold level ranges from two to three larvae per square foot for young tender growth. For older plants, three to four larvae and obvious foliage loss justify control measures. Thresholds in improved pastures and lawns vary with conditions but treatment should be considered when counts average three or more small worms per square foot.

**For control options, see the table in this newsletter.

Grasshopper & Fall Armyworm Insecticide Pricing-2022

TEXAS A&M AGRILIFE EXTENSION

Jamie Sugg
County Extension Agent – Ag/NR
Rusk County
903-657-0376

Active Ingredient Sample Trade Name	**Avg. Price as of May 2022**	**Grasshopper Control**	**Armyworm Control**	**Grazing/Haying Restrictions**
S-Cyano *Mustang Maxx**	$203.66/gallon	2.8-4.0 oz/ac **$4.45-$6.36/ac**	2.8-4.0 oz/ac **$4.45-$6.36/ac**	No restrictions
Lambda-cyhalothrin *Karate Z**	$72.72/gallon	2.56-3.84 oz/ac **$1.45-$2.18/ac**	2.56-3.84 oz/ac **$1.45-$2.18/ac**	Do not apply within 5 days of harvest
Diflubenzuron *Dimilin 2L**	$159.52/gallon	1-2 oz/ac **$1.25-$2.50/ac**	2 oz/ac **$2.50/ac**	1 day
Carbaryl *Sevin XLR Plus*	$160.58/2.5gal	1-1 ½ quart/ac **$16.06-$24.09/ac**	1-1 ½ quarts/ac **$16.06-$24.09/ac**	Do not apply within 14 days of harvest or grazing
Cyfluthrin *Tombstone**	$220.50/gallon	2.6-2.8 oz/ac **$4.48-$4.82/ac**	1.6-1.9 oz/ac** **$2.76-$3.27/ac**	No restrictions
Chlorantraniliprole *Vantacor*	$467/qt	.7-1.7 oz/ac*** **$10.21-$24.81/ac**	1.2-2.5 oz/ac **$12.16-$36.48/ac**	No restrictions
Chlorantraniliprole+ Lambda-cyhalothrin *Besiege**	$748.96/2.5gal	6.0-10 oz/ac **$14.04-$23.40/ac**	6.0-10.0 oz/ac **$14.04-$23.40/ac**	No restrictions
Malathion *Malathion 57EC*	$96.70/2.5gal	1.5-2 pints/ac **$9.69-$12.93/ac**	2 pints/ac **$12.93/ac**	No restrictions
Benzoic acid+Hydrazide *Intrepid*	$288.33/gal	Not on label	4-8 oz/ac **$9.01-$18.02/ac**	No restrictions

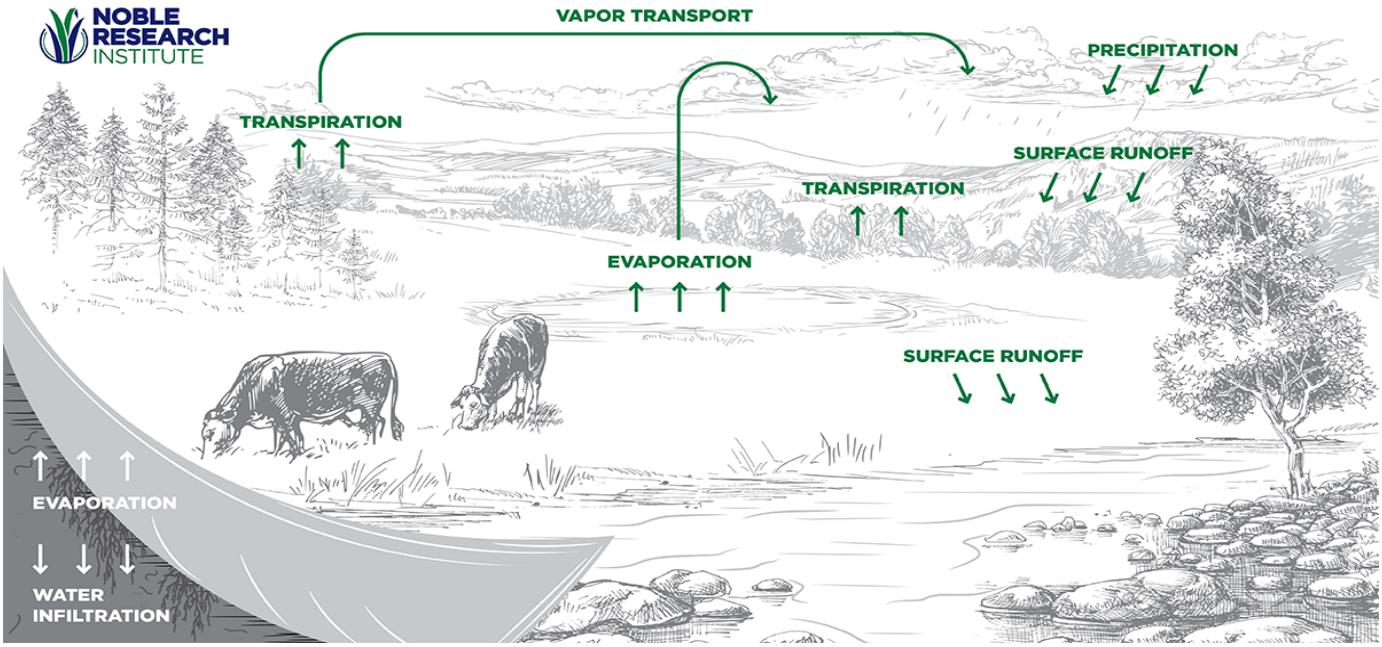
For reference ONLY. Prices listed are "ballpark" retail prices. Read label for complete information.

*= Restricted Use Pesticide (requires Texas Pesticide License to purchase)
**= 1st & 2nd instar (first two stages of the caterpillar's life cycle, usually 2-6 millimeters long)
***= 2(ee) recommendation (This recommendation is made as permitted under FIFRA Section 2(ee) and has not been submitted to or approved by the EPA)

What is the Water Cycle?

Water moves and is recycled from one form or one storage area to another in the process we call the water cycle. This cycle is the mechanism by which water moves around the globe and in our atmosphere. And as a continuous cycle, it has no starting or stopping point.

Ranchers need to capture as much of the water that falls on their ranch and then use it wisely. To inform our management decisions, let's look at how the cycle functions.



Illustrated infographic showing how water cycles into the atmosphere from plants through transpiration and from water ways through evaporation. From there clouds store it as vapor transport. Precipitation occurs and the water moves across the earth in surface runoff until it either evaporates, collects in water ways, or absorbs into the ground via water infiltrations.

WATER CYCLE BASICS

Most of Earth's water is in the oceans, and as such, is saltwater. Only 2.5% of the total water on earth is freshwater, making it a limited resource that should be protected and preserved for the highest and best uses. Of that 2.5%, a majority of freshwater (70%) is trapped in glaciers or ice caps. Most of the remaining freshwater is in underground aquifers. A very small fraction of all water 0.03%, is held as surface water in lakes, rivers and wetlands.

Solar heating is the driving force of the water cycle. As oceans and freshwater are heated by the sun, some of the water evaporates into the air. Air currents transport the water vapor through the atmosphere, along with water that is transpired from plants and evaporated from the soil. Once the water rises into the atmosphere, it cools and forms clouds.

Global air currents move clouds around the earth, eventually leading to precipitation in the form of rain, snow, ice, sleet and hail. Frozen precipitation that falls near the earth's poles can be locked up in polar ice caps and glaciers, making that water unavailable for thousands of years. Snowfall at higher altitudes on the continents may return to a liquid state as temperatures warm and the snow melts, eventually reaching a freshwater system. The majority of precipitation falls in the oceans or back onto land. Gravity moves the precipitation that falls on land across the landscape into streams, lakes, wetlands and other freshwater sources. This is called surface water runoff. Not all the precipitation runs off. Some of it soaks into the soil or flows into underground aquifers.

What is the Water Cycle?

HOW TO HELP THE CYCLE

Where precipitation meets the land is the point in the water cycle where ranchers can influence available water for plants and animals. Through good management, ranchers can capture and retain more water.

- Implementing the six soil health principles can reduce evaporation and increase water infiltration.
- Keeping the soil covered with living plants or plant residues reduces evaporation and surface runoff that can erode the soil.
- Moderating soil surface temperatures with good soil cover keeps soil cooler and reduces evaporative losses from the soil.
- Infiltration and water-holding capacity are best when soils have good structure, meaning there are soil aggregates and pores for water to fill.
- Minimizing disturbance, keeping a living root in the ground for as long as possible and maintaining plant diversity are practices that build soil structure and increase water-holding capacity.
- Increasing organic matter by just 1% increases the soil's ability to hold water by 20,000 gallons per acre per year. Imagine how much forage per acre could be supported with an additional 20,000 gallons of water.

Water is one of the most precious resources on earth. Ranchers can increase the success, profitability and resilience of ranches by understanding the water cycle, minimizing evaporative losses and capturing as much water as possible.

*** ***

BQA: Tip of the Month—Hay Testing

Hay testing is important to determine what if any supplementation is needed. Hay quality can vary tremendously so each load or cutting should be tested. Use a hay probe to collect samples from approximately 10% of the bales from each cutting. At minimum, hay should be tested for content of TDN (total digestible nutrients) and CP (crude protein). The appropriate tests can change depending on hay species, nitrate concerns, or if the hay was baled too wet. So, before sending samples to the lab, visit with a nutritionist for lab recommendations and the appropriate tests for your hay sample.

(From Jason Banta, Ph. D., **jpbanta@ag.tamu.edu**
Texas A&M AgriLife Extension Beef Quality Assurance Coordinator)

What Do Consumers Want These Days?

Every year a national survey is conducted of food consumers to assess their preferences. Some of the more notable findings of the most recent survey were:

> Sales were up about 1% over the previous year.

> Smaller portions are being consumed and fewer people go back for more.

> Plant-based alternatives continued to increase in volume sold but their market penetration (of total meat, poultry, and alternatives) is still small.

> More hybrid vegetable/meat blends have come on the market.

> Time-saving meals are now more important to more consumers. Even fewer meals are cooked at home than before.

> Sales continued to grow for products labeled organic, grass fed and/or no antibiotics ever. But consumers trust such claims only moderately.

> Signs in stores are the top means (surpassing print sources for the first time last year) of finding price specials.

> The vast majority of consumers buy just a few cuts at a time.

> Consumers under 40 years of age are not as confident in their ability to prepare new cuts and in predicting how they will taste after they cook them.

> Supermarkets continue to be the primary source of meat and poultry.

> About 40% of consumers have ordered groceries but only about 20% have ordered meat or poultry, mostly processed and ground products.

> Buyers, particularly younger, are influenced by labeling, especially regarding nutrition, food safety, animal care, and environmental impact. These were important to 40% to 60% of survey respondents.

> About two-thirds of meat and poultry buyers want to know how and where animals were raised. And they want that information on packages, the product's website, and social media. (You may agree or not whether the latter is a good source.)

> Approximately ½ think animal agriculture does not adversely affect the planet, if done properly. Younger people were more likely to disagree.

NOTE: This survey was conducted before the pandemic arrived, so it was not influenced by its effects.

(Power of Meat, Published by the Foundation of Meat & Poultry Research & Education and The Food Industry Association)

*** ***

Columbus Day

Office Closed Monday October 10

Thanksgiving Holiday November 24 & 25

Master Gardener Class To Begin In Early January

The local office of Texas A&M AgriLife Extension will begin a new class for people wanting to become involved in the Master Gardener Program. Our class will begin in early January, 2023 and run through the end of March or first part of April; the class will meet once weekly. Master Gardeners are members of the local community who take an active interest in their lawns, trees, shrubs, flowers, and gardens. They are enthusiastic, willing to learn and to help others, and able to communicate with diverse groups of people. What really sets Master Gardeners apart from other home gardeners is their special training in horticulture. Master Gardener interns will receive training in plant propagation, ornamental plant selection, rose propagation and pruning, shade tree selection, entomology, plant pathology, turfgrass management, vegetable production, fruit and nut production, and grafting.

All class sessions are taught by Professors and Extension Specialists that are part of the Texas A&M University system, as well as County Extension Agents, trained Master Gardeners, and other experts in the horticultural, and agricultural fields. In addition to the formal classroom trainings, several field trips will be made to nurseries, university arboretums, and other horticulture related venues. In exchange for their training, anyone who becomes a Master Gardener contributes time as a volunteer, working through their Extension office to provide horticultural-related information to their communities. The cost of the program is $100 which includes all the course materials and training fees.

For more information or to enroll, contact the Extension office at (903) 657-0376. Enrollment deadline is Friday, December 16, 2022.

The Weather Channel
Henderson TX

Historical Monthly:	Average High / Degrees	Average Low / Degrees	Average Rainfall Inches
September	89	65	3.82
October	80	54	4.22
November	68	44	4.06

TEXAS A&M AGRILIFE

CALIBRATION MADE SIMPLE

Boom Sprayers

1. Measure nozzle spacing.
2. Refer to chart below for length of calibration course.
3. Measure and mark calibration course as indicated in the chart.
4. Set gear and rpm that will be used in the field.
5. Drive course at determined gear and rpm.
6. Record time required to drive course.
7. Park sprayer, maintain same rpm as used to drive course
8. Turn on sprayer, catch water from one nozzle for time required to drive course.
9. OUNCES CAUGHT = GALLONS PER ACRE.

Nozzle Spacing	Length of Calibration Course
18 inches	226 feet
19 inches	214 feet
20 inches	204 feet
24 inches	170 feet
30 inches	136 feet
40 inches	102 feet

Boomless Sprayers (Cluster Nozzle)

1. Measure effective spray swath.
2. Refer to chart below for length of calibration course.
3. Measure and mark calibration course as indicated in the chart.
4. Set gear and rpm that will be used in the field.
5. Drive course at determined gear and rpm.
6. Record time required to drive course.
7. Park sprayer, maintain same rpm as used to drive course.
8. Turn on sprayer and catch water for time required to drive course.
9. PINTS CAUGHT = GALLONS PER ACRE

Effective Swath Width	Length of Calibration Course
15 feet	363 feet
20 feet	272 feet
22 feet	248 feet
24 feet	227 feet
26 feet	209 feet
28 feet	194 feet
30 feet	182 feet
35 feet	156 feet
40 feet	136 feet
45 feet	121 feet
50 feet	109 feet

Quick Reference Guide for Pesticide Solutions

percent solution	ounces per 1 gallon
1%	1.28
2%	2.56
3%	3.84
4%	5.12
5%	6.4
6%	7.68
7%	8.96
8%	10.24
9%	11.58
10%	12.8
11%	14.08
12%	15.36
13%	
14%	17.92
15%	
16%	20.48
17%	
18%	23.64
19%	
20%	25.6
21%	
22%	
23%	
24%	
25%	32

Restricted Use[1] or State-Limited Use[2] Herbicides	Non-Restricted Use Herbicides
2,4-D	Amber
2,4-DB	Chaparral
Banvel (Dicamba)	Cimarron Extra
Cimarron Max	Cimarron Plus
Crossbow	DuraCor
GrazonNext	Milestone
GrazonNext HL	Pastora
Grazon P+D	PastureGard HL
PasturAll HL	Reclaim
Surmount	Redeem R&P
Tordon 22K	Remedy Ultra
Weedar 64	Spike 20P
Weedmaster	Spike 80DF
Weedone LV6	VelPar L
	Vista XLT

[1]Restricted use: for purchase and use only by certified pesticide applicators or persons under their direct supervision. Designation is placed on the product by EPA, and the label will state restricted use.

[2]State-limited use: pesticides containing certain active ingredients, with the potential to cause adverse
Effects to non-targeted vegetation, are classified as SLU when distributed in containers larger than one-quart liquid or 2 pounds dry or solid.

Rusk County Extension Agent's Radio Report

Tune in to 98.5 FM & 1470 AM Monday thru Friday at 8:00 AM and 12 PM to hear the Rusk County Extension Agents Report on KWRD Radio
Henderson, Texas
easttexastoday.com/KWRD

Monday—4-H Tuesday & Thursday—Ag Wednesday & Friday—Family & Community Health

TEXAS A&M AGRILIFE EXTENSION

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We are on the web:
rusk.agrilife.org

Want your news before everyone else??
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If you would prefer to receive the Ag & Natural Resource Newsletter via e-mail, please email me at jdsugg@ag.tamu.edu and I will add you to a mailing list. The benefit of being on the e-mail list (other than saving us money on postage) is that I will be e-mailing weekly Livestock Market reports and trends