



# **August Ag/NR Newsletter Harrison County**

TEXAS A&M  
**AGRI**LIFE  
EXTENSION



# GARDENING TIPS FOR AUGUST

## MARSHALL, TEXAS

- Check out local plant sales for great deals!
- Start your fall vegetable garden by planting broccoli, Brussels sprouts, Chinese cabbage, carrots, collards, lettuce, and other cool-season vegetables that will winter over.
- Remove old vegetable plants that have stopped producing; this will help eliminate pests and diseases from your garden.
- Beware of caterpillars, aphids, spider mites, and other insects in the garden. Treat them as needed.
- Stay on top of weeds; don't let them go to seed.
- Deadhead spent flowers; this may encourage new blooms in September.
- During these warmer months, raise the mowing height to 2.5 to 3 inches.
- For Bermuda lawns, water 1 inch per week.
- Check the mulch around your plants; if there is little or no mulch, make sure to put in a 3- to 4-inch layer to conserve moisture.
- Divide and transplant iris, peonies, and other spring blooms as they go dormant.
- Plant new perennials, shrubs, and trees; they have a better chance to establish themselves during the milder fall months than those planted in the spring.
- Order your spring-blooming bulbs.
- Be sure to regularly water your houseplants and potted plants. Use a water-soluble fertilizer so that the plants do not lose vital nutrients. Do not let houseplants dry out.
- Pick your annuals and perennials frequently to encourage more flower production.





## Supplemental Feeding

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When forage quality and/or quantity is affected by drought, livestock producers are usually faced with decisions about supplemental feeding. First, they must determine whether they can afford to supplement, and if so, then decide what to supplement and how to manage feeding.

If the drought continues or worsens, they will also need to decide when to stop supplementing and start selling livestock.

### Whether to supplement

When deciding whether or not to feed during a drought, the first question a producer should ask is, "Can I afford to meet the animal's nutrient requirements?" rather than, "How much can I afford to spend on feed?" (and hope that whatever is in it does the job).

A good place to start is with a monitoring program for animal body condition. As always, this should be a routine part of management. To further define what specific dietary nutrients may be lacking and in turn, what kind and how much of the supplement might remedy the problem, livestock managers can use additional tools such as forage testing and fecal analysis. Results of these tests can indicate the diet quality of free-ranging animals.

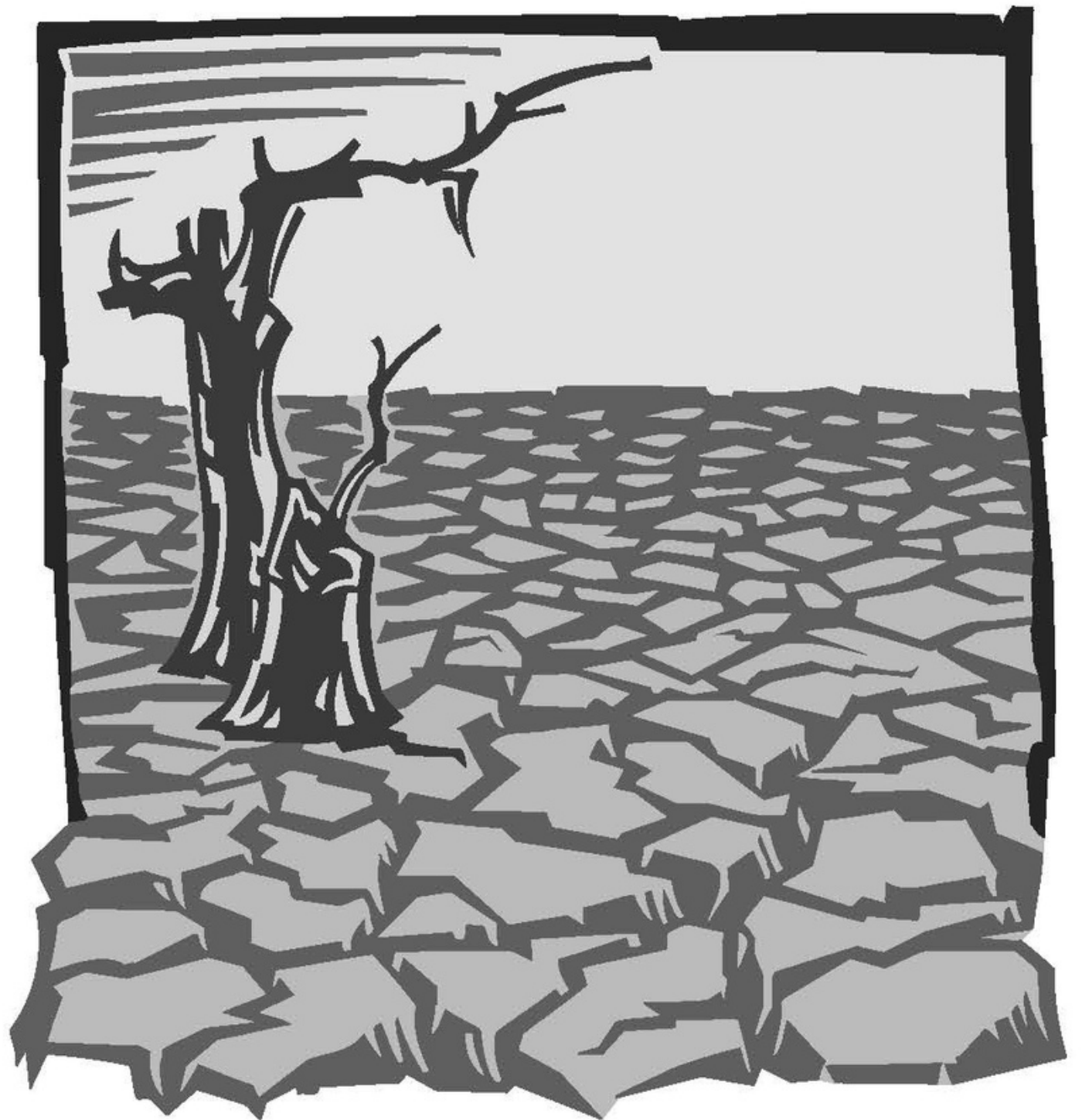
For more information on these technologies see:

<http://cnrit.tamu.edu/ganlab/> and

<http://soilcrop.tamu.edu/soiltest/index.html>

### Supplementation in relation to forage quality and quantity

The goal of a supplemental feeding program is to augment a forage-based diet. Therefore, having a proper stocking rate is critical, because even in drought situa-



tions, the majority of dry matter consumed by livestock should come from pasture forage.

This typically means adjusting stocking rate to a level appropriate for forage supply, and then supplementing protein to improve diet quality and forage consumption. In planning, remember that an average 1,000-pound cow will consume 20 to 30 pounds of dry forage per day or 2 to 3 percent of her body weight.

Either hay or high energy supplements may be used to extend or partially replace existing forage supplies. Note, however, that this comes at higher cost, and when more than 3 pounds of high energy supplements are used, it results in lower efficiency of feed conversion.



Therefore, this technique is probably best reserved for specific, short-term situations. Supplementing large amounts of energy in any form for long periods is usually uneconomical.

Remember also that if high-energy grain supplements are chosen to compensate for short grass (probably being fed at more than 2 to 3 pounds per day), feeding frequency may affect animal performance. Feed grain supplements daily (as opposed to skipping days and increasing amounts). This will help keep acidosis problems in check and minimize the inhibitory effects of grain on digestibility of pasture forage.

As an alternative, supplements that are high in digestible fiber, such as wheat midds, soybean hulls, peanut skins, etc., can also be used to extend forage supplies. These supplements provide energy, but because they are lower in starch, they lessen undesirable effects on the digestibility of pasture forage.

For more information, see Extension publication B-6067, *Supplementation Strategies for Beef Cattle*.

## What to supplement

When evaluating supplements, remember that there are no “magic bullets.” Animals will perform as long as the supplement compensates for the nutrients that are lacking in the diet.

A dry cow or ewe requires a minimum of 7 percent crude protein in her diet just to keep the digestive system microbes healthy and working on forage digestion. Therefore, the first limiting nutrient in dormant or drought-stressed forage is usually protein.

When evaluating supplements, the most important factors to consider are nutrient content and price per pound of nutrient(s) in the supplement. To choose the right one for your herd, you need to not only calculate the cost per pound of supplement, but also consider the supply and quality of available forage.

For example: You are comparing two types of cubes to add crude protein to the livestock diet. One cube contains 38 percent crude protein, the other 20 percent. Which is the better buy?

First, calculate the cost per pound of crude protein. The 38-percent cube provides 760 pounds of crude protein per ton of bulk feed; at \$280 per ton, it costs \$0.37 to provide a pound of protein. The 20 percent cube provides 400 pounds of actual protein per ton of bulk feed; at \$210 per ton, it costs \$0.53 to provide a pound of crude protein.

If protein were the only concern, then the 38 percent cube would be the better buy. However, if grass is not only dormant but also in short supply, then the 20 percent cube, fed at twice the rate, would probably be a more complete feed because it would provide some extra energy as well. Note however, that this would add 30 percent to the overall cost of the supplemental feeding program.

The form of supplement—be it block, tub, cube, meal, etc.—is unimportant as long as the animal consumes enough of it to compensate for nutrients lacking in the pasture diet. If animal supplemental requirements are particularly high, some types of self-fed supplements may limit intake to a level below what is needed.

Molasses is another energy supplement that is often used to stretch forage supplies. It is convenient because it can be self-fed, and in most cases it also contains some type of protein additive.

Be cautious: Some pre-formulated molasses supplements may use high levels of nonprotein nitrogen (NPN), such as urea, as their primary “protein” source. High NPN supplements are not drought supplements. If and when they are used, it should be in situations such as this: forage is abundant, but dormant; dietary protein requirements are low (dry mature females); and protein deficiency is only minor.

## Feed management tips

Sort and feed livestock by age, body condition and production status (growing vs. mature, lactating vs. nonlactating, etc.).

If reductions in stocking rates are needed, begin by culling the open cows, or dry spring and summer ewes. If numbers need to be reduced further, follow by culling lactating females in poor body condition (they probably won’t re-breed anyway).

Other feed management tips include:

- Buy and store feed in bulk. You can sometimes trim a few dollars by forward contracting.
- Feed protein supplements less often. Supplements high in natural protein may be fed as infrequently as twice or even once per week. Conversely, feed high-energy supplements daily to avoid chances of acidosis.
- Use a good 1:1 calcium-to-phosphorus mineral.
- Inject vitamin A or provide it in frequently fed supplements if it has been more than 3 to 4 months since the diet has included any green forage.



In many situations, supplementation strategies are just a best guess, unless something is known about diet quality in relation to animal requirements. A lot of that guesswork can be removed by using some of the previously discussed technologies that predict pasture diet quality.

Knowing diet quality can help you evaluate supplements for their biological benefits to the animal. Livestock and feed prices will tell you if that answer is economically feasible.

Other drought-management publications include:

E-61, *Rangeland Drought Management for Texans: Planning: The Key to Surviving Drought*

E-62, *Rangeland Drought Management for Texans: Livestock Management*

E-64, *Rangeland Drought Management for Texans: Stocking Rate and Grazing Management*

E-65, *Rangeland Drought Management for Texans: Toxic Range Plants*

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More Extension publications can be found at [AgriLifeBookstore.org](http://AgriLifeBookstore.org)

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# Cattle Price Trends

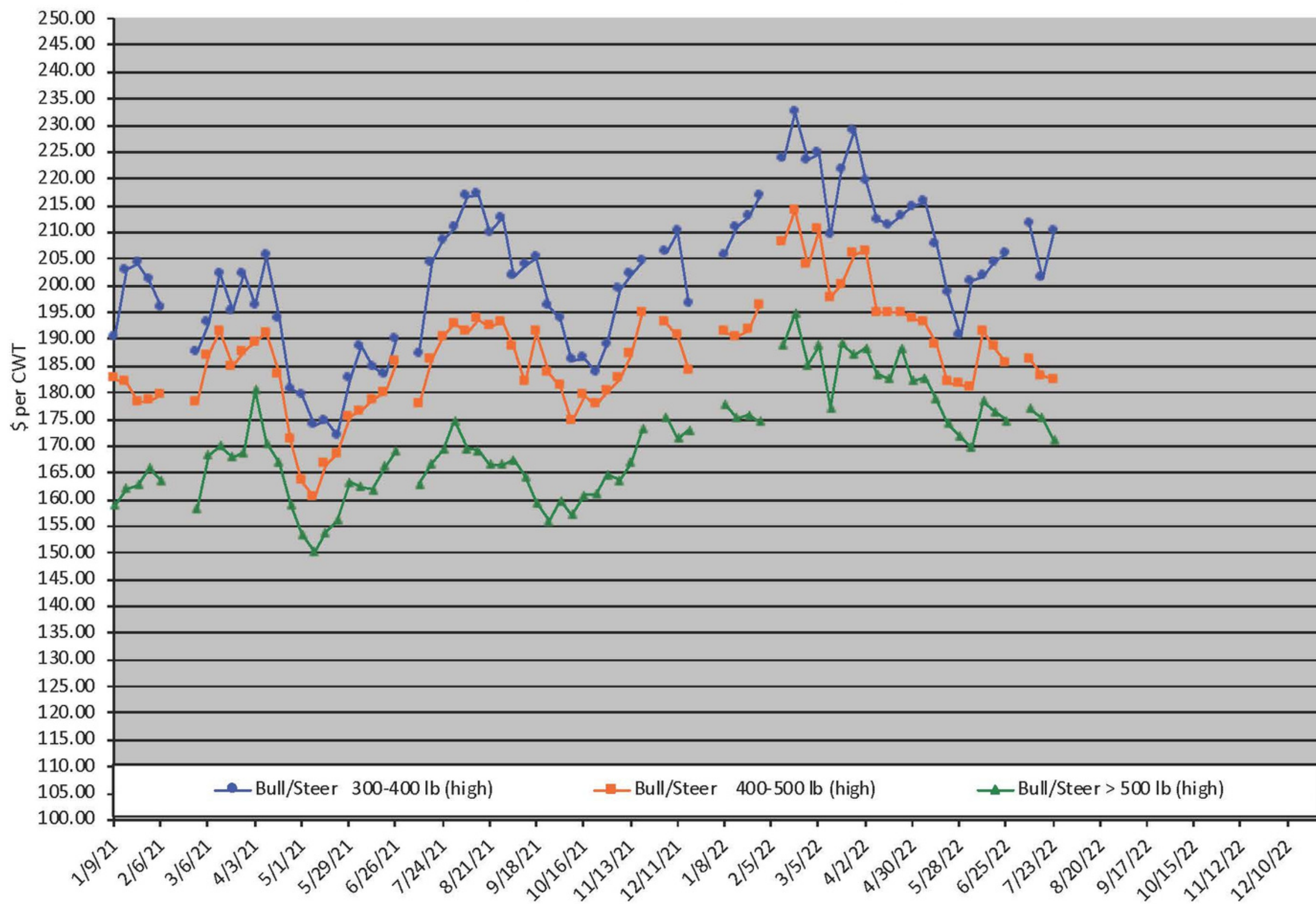
Cattle price trends for the week ending 7/23/22. The graphs show the average of the highest prices reported for 6 livestock auction markets located in East and Central Texas.

## Calf Price Trends

Trend of the Highest Price Reported for Various Weight Calves, Average of 6 East & Central Texas Livestock Auctions

For a weekly email copy of this chart please subscribe at <http://beeffax.tamu.edu> or contact a Texas A&M AgriLife County Extension Agent

Chart created by Dr. Jason Banta, Extension Beef Cattle Specialist

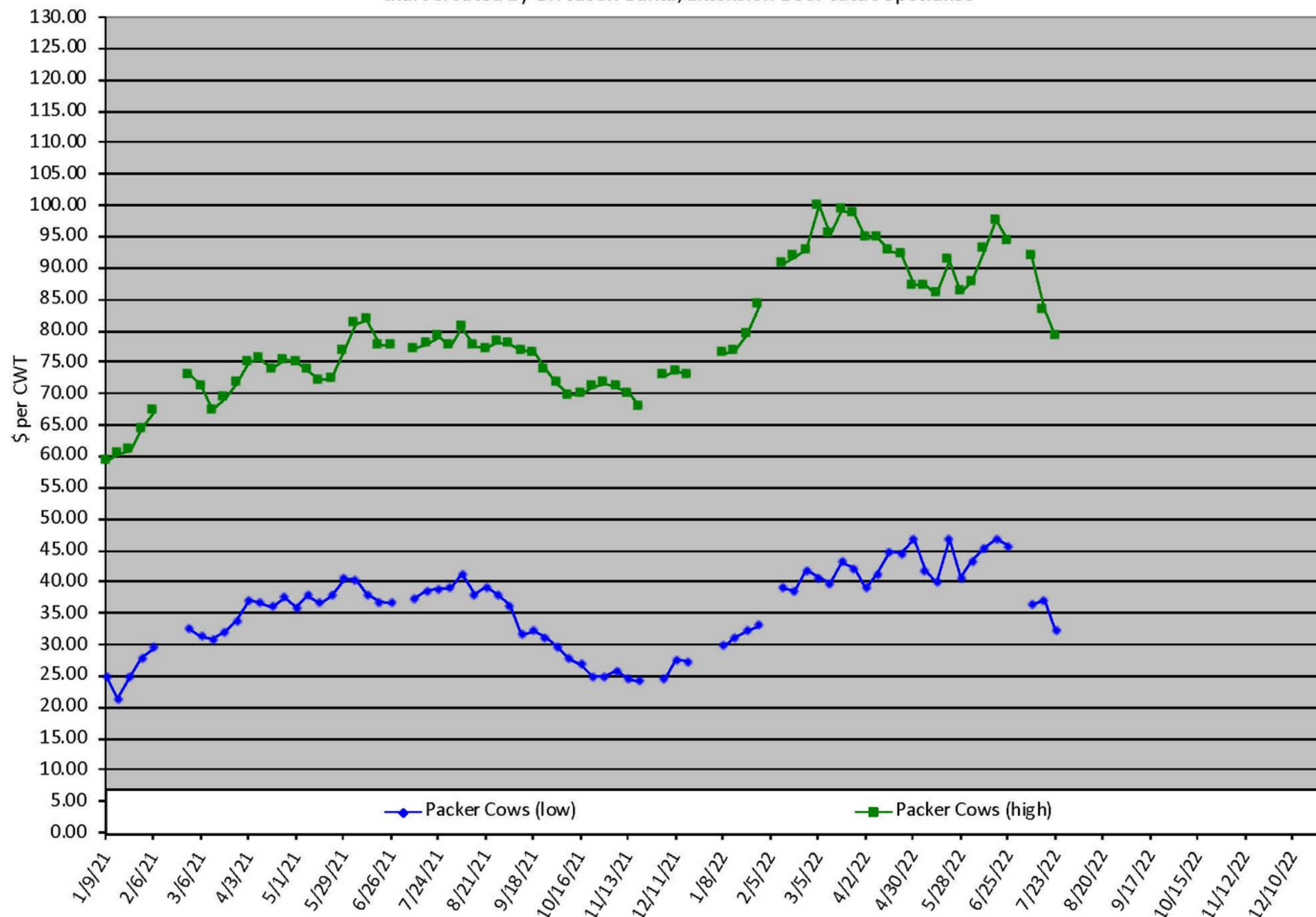


## Packer Cow Price Trends

Trend of High and Low Prices Reported for Packer Cows, Average of 6 East & Central Texas Livestock Auctions

For a weekly email copy of this chart please subscribe at <http://beeffax.tamu.edu> or contact a Texas A&M AgriLife County Extension Agent

Chart created by Dr. Jason Banta, Extension Beef Cattle Specialist





# The Fall Armyworm – A Pest of Pasture and Hay.

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2019 revision

The fall armyworm, *Spodoptera frugiperda*, is a common pest of bermudagrass, sorghum, corn, wheat and rye grass and many other crops in north and central Texas. Larvae of fall armyworms are green, brown or black with white to yellowish lines running from head to tail. A distinct white line between the eyes forms an inverted “Y” pattern on the face. Four black spots aligned in a square on the top of the segment near the back end of the caterpillar are also characteristic. Armyworms are very small (less than 1/8 inch) at first, cause little plant damage and as a result often go unnoticed. Larvae feed for 2-3 weeks and full grown larvae are about 1 to 1 1/2 inches long. Given their immense appetite, great numbers, and marching ability, fall armyworms can damage entire fields or pastures in a few days.

Once the armyworm larva completes feeding, it tunnels into the soil to a depth of about an inch and enters the pupal stage. The armyworm moth emerges from the pupa in about ten days and repeats the life cycle. The fall armyworm moth has a wingspan of about 1 1/2 inches. The front pair of wings is dark gray with an irregular pattern of light and dark areas. Moths are active at night when they feed on nectar and deposit egg masses. A single female can deposit up to 2000 eggs and there are four to five generations per year. The fall armyworm apparently does not overwinter in north Texas, but survives the winter in south Texas. Populations increase in south Texas in early spring and successive generations move northward as the season progresses.

Parasitic wasps and flies, ground beetles, and insect viruses help suppress armyworm numbers. However, these natural enemies can be overwhelmed when large numbers of migrating moths move into an area and weather conditions favor high survival of eggs and larvae.

**Management.** Fall armyworm outbreaks in pastures and hay fields often occur following a rain which apparently creates favorable conditions for eggs and small larvae to survive in large numbers. Hay fields with a dense canopy and vigorous plant growth are often more susceptible to armyworm infestations than less intensely fertilized and managed fields. Irrigated fields are also susceptible to fall armyworm infestations, especially during drought conditions. Infestations that develop in volunteer wheat and weedy grasses in ditches and around fields can be a source of armyworms that can move into adjacent crops.

Look for fall armyworm larvae feeding in the crop canopy during the late evening and early morning and during cool, cloudy weather. During hot days, look for armyworms low in the canopy and on the soil surface where they hide under loose soil and fallen leaves. Kneeling on the ground and parting the grass can reveal armyworms. A sweep net is very effective for sampling hay fields for fall armyworms. When fields are wet with dew or rain, armyworms can



be detected by walking through the field with rubber boots as the worms will stick to the boots. Small larvae chew the green layer from the leaves, creating a “windowpane” effect and later notch the edges of leaves. Look for this feeding damage and if detected, look more closely to assess the infestation.

The key to managing fall armyworms is frequent inspection of fields to detect infestations before they have caused economic damage. Once larvae are more than  $\frac{3}{4}$  inch long, the quantity of foliage they eat increases dramatically. During their final 2-3 days of feeding, armyworms eat 80% of the total foliage consumed during their entire development.

The density of armyworms sufficient to justify insecticide treatment depends on the stage of crop growth and value of the crop. Seedling plants can tolerate fewer armyworms than established plants. Infestations of more than 2-3 armyworms ( $\frac{1}{2}$  inch or longer) per square foot may justify an insecticide application. If practical, apply insecticides early in the morning or late in the evening when armyworm larvae are most active and therefore most likely to come into contact with the insecticide spray.

If the field is near harvest, an early harvest, rather than an insecticide treatment, is an option. Once the field is cut, most of the armyworm will die due to lack of food and exposure to high temperatures. In some cases, armyworms can move into an adjacent field and continue to feed.

### Insecticide Characteristics and Options.

The active ingredients beta-cyfluthrin, cyfluthrin, gamma-cyhalothrin, lambda-cyhalothrin and zeta-cypermethrin are all classified as pyrethroid insecticides and therefore have similar characteristics. Pyrethroids are nerve toxins. Due to their effectiveness and relatively low cost, they are widely used to control fall armyworm in pasture and hay. In many situations, a single treatment is sufficient to control an infestation. However, when fall armyworm populations are high, frequent retreatment with pyrethroids may be necessary due to their short residual control (2-3 days) and re-infestation of the field. Pyrethroid insecticides are effective against grasshoppers and suppress Bermudagrass stem maggot.

Dimilin and Intrepid are insect growth regulators and kill by disrupting the normal development of immature insects. To be effective, they must be applied when the armyworms are less than  $\frac{1}{2}$  inch long. This can be a limitation since infestations may not be found before larvae are larger. However, both products can continue to kill small caterpillars for 1-3 weeks. Thus, the addition of Dimilin or Intrepid to a pyrethroid insecticide application can extend the control period for fall armyworms. This combination can be especially useful when fall armyworm populations are high and fields are frequently re-infested. Dimilin and Intrepid can be used alone if applied as a preventive application and when caterpillars are less than  $\frac{1}{2}$  inch. Dimilin is also effective against small grasshoppers while Intrepid is active only against armyworms and other caterpillars.

Chlorantraniliprole, the active ingredient in Prevathon, is effective against all sizes of fall armyworms and grasshoppers. It provides several weeks of residual control, depending upon rate applied and is a general use pesticide. Besiege is a combination of the active ingredient in Prevathon and a pyrethroid insecticide.



Malathion and carbaryl have a long history of use for armyworm and grasshopper control and are general use insecticides. Carbaryl has a 2-week waiting period after application before the crop can be grazed or harvested.

Spinosad is most effective on small larvae. One formulation of spinosad, Entrust, is approved for organic production by the Organic Materials Review Institute.

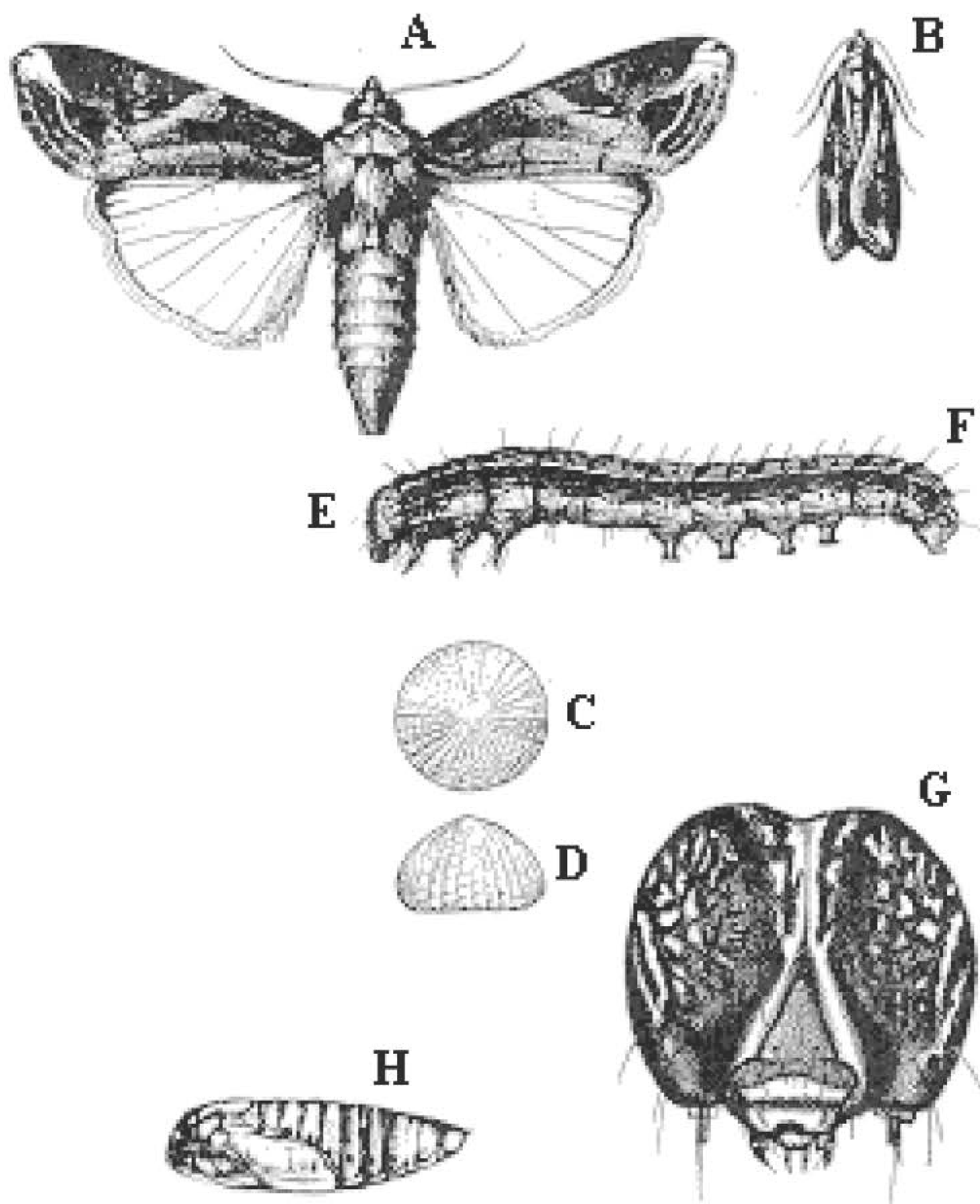
A nuclear polyhedrosis virus found in nature that kills fall armyworm has been cultured and formulated into an insecticide and is commercially available under the name Fawlgien (AgBiTech LLC, Ft. Worth, TX). It is toxic only to larvae of the fall armyworm and beet armyworm. It is labeled for hay production and pasture, but studies are needed to determine best use practices and efficacy under field conditions in the US.

Always read and follow all label instructions on pesticide use and restrictions. Information below is provided for educational purposes only.

**Some Insecticides labeled for fall armyworm in pasture, grasses, and hay. 2019.**

Active ingredient	Insecticide	Pre-grazing interval (days)	Pre-harvest interval for hay (days)	Remarks
beta-cyfluthrin	Baythroid	0	0	Restricted use
carbaryl	Sevin 4F, Sevin 80S, Carbaryl 4L, Sevin XLR Plus	14	14	General use
chlorantraniliprole	Prevathon, Coragen	0	0	General use
chlorantraniliprole + lambda-cyhalothrin	Besiege	0	7	Restricted use
cyfluthrin	Tombstone	0	0	Restricted use
diflubenzuron	Dimilin 2L	None listed	1	Restricted use; apply at egg hatch and when larvae are less than ½ inch
gamma-cyhalothrin	Declare	0	7	Restricted use
lambda-cyhalothrin	Warrior II, Karate, Lambda-Cy	0	7 for hay, 0 for forage	Restricted use
malathion	Malathion 57EC	0	0	General use
methoxyfenozide	Intrepid 2F	0	7	General use. Apply when first signs of feeding occur
spinosad	Tracer, Blackhawk, Entrust	Allow spray to dry	3 days, 0 days for forage	General use; target small larvae or egg hatch
zeta-cypermethrin	Mustang Maxx	Allow spray to dry	0	Restricted use





**Fall armyworm. A & B, Adults. C- E, Eggs (enlarged) and egg mass. F & G, Larva with front view of head. H, Pupa.**



# HELP OUR CHILDREN BE THEIR BEST



**Clover Kids**  
**K-2nd grade**

**4-H**  
**3rd-12th Grade**

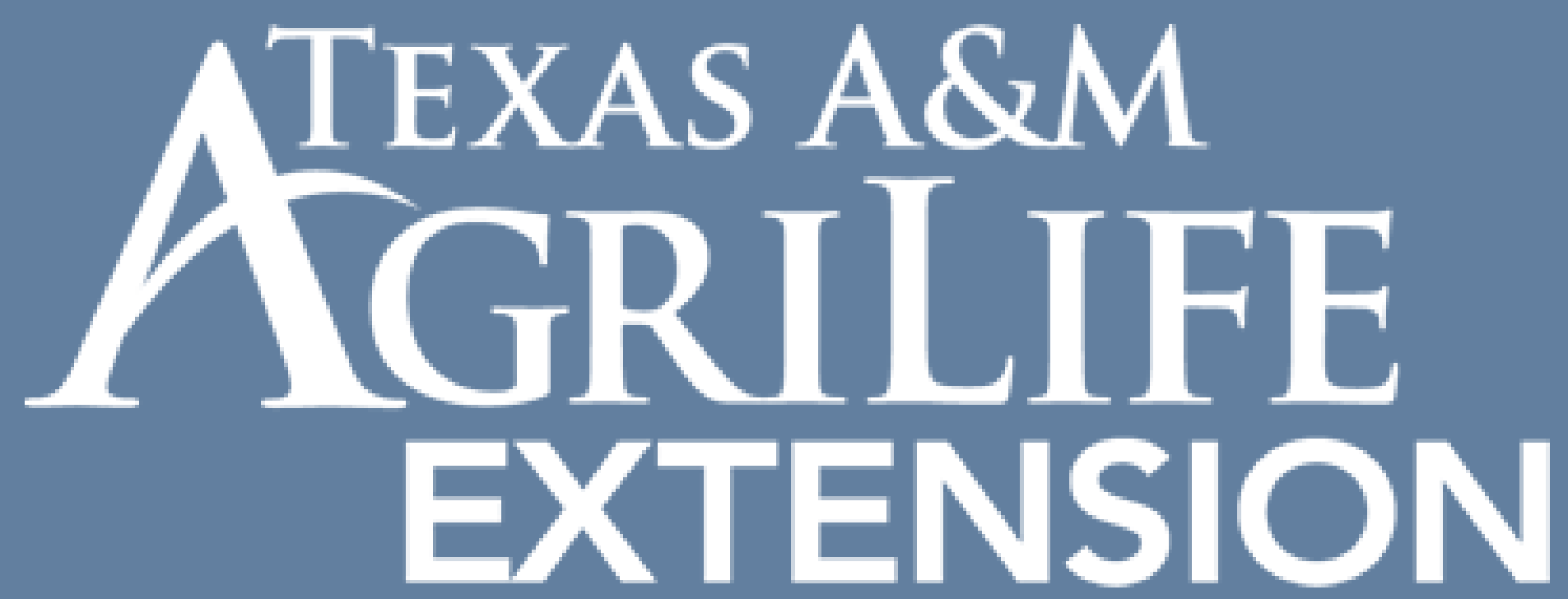
Cooking, fashion, sewing, shooting sports, archery, livestock, photography and countless life lessons.

You are the vessel to provide awesome learning opportunities for today's youth in our community. From you taking your child to 4-H meetings or choosing to be an Adult Volunteer.

4-H has been proven to strengthen children's leadership skill, public speaking, ability to work as a team, problem solving, overall health and well being.

There are multiple 4-H Clubs in Harrison County BUT there is always a need for more youth involvement. By volunteering you are investing in OUR future. These children will be our leaders one day. With the values of Texas 4-H instilled in these children it makes the future that much more bright.





**Keep in Touch!!**

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