



Greetings Ag Family,

Fall is my favorite time of year. The cooler temperatures usher in all the traditions that we have come to love: Friday night lights, harvest season, county fairs, livestock shows, and of course the Mississippi State Fair. Fall is a busy time of our year for our Extension Office as we are sending off soil samples for all of our hunters preparing their food plots, we are kicking off another 4-H livestock show year, we are looking forward to our annual Mississippi Forestry Association meeting, and we are always in full swing helping our clients and landowners lead better lives by providing research based information on a daily basis.

After the retirement of Mrs. JoAnn Price in May, we are excited to welcome Mrs. Shannon Driver, who joined us as our office associate in August. She comes to us with over 20 years of experience as a school secretary and her impact is already being felt, such as taking the lead on producing the extension newsletter. We encourage you to stop by any Monday through Friday from 8:00 to 5:00 and see the changes in our office. Shannon and I look forward to serving you as we strive to extend knowledge and change lives in Clarke County.

In service,  
Christy King  
Extension Agent  
Ag and Natural Resources, 4-H



## Clarke County 4-H First Annual Scarecrow Contest



Located at  
Clarke County Extension Service  
**OPEN TO ALL CLARKE COUNTY RESIDENTS**

Set-up: November 1

Removal date: November 22

DIVISIONS:  
ADULT  
&  
YOUTH

### RULES

- Must be handmade
- No commercial costumes, masks, etc...
- Be able to handle all weather conditions
- All parts should be secure on it
- Living materials are allowed
- Can use additional props: hay bales, corn shuck, etc...
- No loose hay or straw
- No social or political situation or adds
- Nothing bloody or gruesome

Save the Date:  
*Fall Garden Day*

NORTH MS RESEARCH & EXTENSION  
CENTER  
5421 HWY 145, VERONA  
OCTOBER 21  
9AM - 2PM

SCARECROW TRAIL, SPEAKERS, GARDEN TOURS,  
AND MUCH, MUCH MORE!!  
WATCH FOR UPDATES ON LEE CO. MASTER  
GARDENER FACEBOOK/LEE CO EXTENSION FB

**Call the Extension Office by October 25th to sign up and reserve your spot! 601-776-3951**

101 WESTWOOD AVENUE, P.O. BOX 109, QUITMAN, MS 39355~~601-776-3951~~CLARKE@EXT.MSSTATE.EDU

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Extension Service of Mississippi State University, cooperating with U.S. Department of Agriculture. Published in furtherance of Acts of Congress, May 8 and June 30, 1914. GARY B. JACKSON, Director

# Building a Hay Inventory: How Much is Needed and Cost?

**Rocky Lemus; Extension Forage Specialist**



Dry conditions in the summer of 2023 are impacting a large part of Mississippi and the south. With drought stress comes hay shortages and deficiencies. Under these circumstances, now is a good time to assess your hay inventory and allow time to develop options for this upcoming winter. You can determine how much feed you will need to feed the number of animals you have or how much hay you could allocate for

sale. With a depleted hay inventory projected throughout much of the area, hay prices are likely to increase from their current levels. Know your hay –Unless bale weights are already known, weigh representative bales for each type of hay harvested to get an accurate assessment of the total tons of hay available for feeding. Besides the bale weight, it is also important to know the dry matter (DM) content of the bale. The reason for this is that hay allowance per day per animal and livestock nutrient requirements are calculated on a dry matter basis to eliminate the water content in the day, especially if you are developing a mixed ration. There are several ways to determine the DM content of your hay: using a moisture probe, a microwave oven, a food dehydrator, or submitting a sample to a forage analysis laboratory. It is recommended to submit a sample for analysis because it also allows determining the nutritive value (forage quality) of your hay. Knowing the nutritive value of the hay will allow us to strategically feed the lower quality hay in the fall and save the higher quality hay for the winter when nutrient requirements to maintain the animal are higher due to cold stress. No matter what method a producer decides to use, it is always a good idea to get a good representative sample of our hay inventory. If you cannot determine the DM content of your hay, then assume that your hay is only 80 to 85% dry matter. This means that you might over or underestimate your hay inventory for the feeding season. If you are buying hay, it is also important to know the price of the hay to determine the cost per pound of dry matter. For example, let's assume that you plan to buy round bales that are 4 ft x 5 ft weighing 900 pounds, and it has 85% dry matter. The cost of each roll of hay is \$50. That means that your bale of hay has 765 pounds of dry matter ( $900 \text{ lb} \times 0.85 \text{ DM} = 765 \text{ lb DM}$ ). That means that your cost per pound of dry matter is \$0.07. Know Your Livestock Needs—Many factors can influence how much hay an animal will eat every day including the nutritive value of the hay, animal body weight, stage of production, and weather. The next step is to determine the amount of hay that is needed per day per animal. To do so, it is important to determine what is the average

body weight of the herd and what is the target percent dry matter intake. You also will be facing hay waste depending on how the hay is fed. It is recommended to determine what percentage of the day might be wasted and include that in the daily amount of hay needed for the animal. Let's assume that you have a group of mature cows with an average weight of 1,200 pounds and that their dry matter intake will be 2.5% of their body weight. Intake typically will increase by 10% to 20% when offered as a free choice due to waste. Let's assume that you are using a cone hay feeder there will be a 10% waste of the day. This means that a mature cow will need 30 pounds of dry matter per day (1200 lb x 0.025 DM) = 30 lb DM. But wait, we decided that we will have a 10% waste per animal, which means that the actual daily hay requirement is 33 lb of hay per day per animal [(30 + (30 x 0.1) = 33 lb DM/day). Feeding losses (storage method and feeding method) also vary depending on the feeding system. That means that the cost of hay per day per animal will be \$2.16. Know Your Livestock Number –Now that we have determined the daily livestock hay requirements and cost per day, let's determine the amount of hay needed. It is important that you accurately determine how many animals you will be feeding during the season and for how many days. For example, let's assume that you have a herd of 50 mature cows, and you will be feeding for 120 days. We previously determined that a mature cow needs 33 lbs of hay per day. That means that the total hay that is needed for feeding the herd is 99 tons (198,000 pounds) (33 lb/day/cow x 120 days x 50 cows = 198,000 lbs ÷ 2000 = 99 tons).

Since we cannot predict Mother Nature, it is always to add a 20 to 30% emergency hay inventory. That means that I will need 30 tons of extra hay (99 tons x 0.30 = 30 tons) and my total hay inventory will be 129 DM tons (258,000 pounds DM) or 336 round bales as bought (As is) [(258,000 pounds DM ÷ 900 lb/bale)/0.85 DM = 336 bales). That means that you might be feeding 2 bales per day (not considering your emergency hay reserve). What is the projected hay cost to feed my herd this winter?—Now that we have determined you may how many bales of hay are needed and the price per bale, the estimated cost of hay for the feeding season will be \$16,824 (336 bales x \$50/bale = \$16,824)

### ***Winter Hay Purchase Budget***

<b><i>Hay Information</i></b>	
<i>Bale Size</i>	<b>4' x 4'</b>
<i>Bale Weight (lbs)</i>	<b>900</b>
<i>Bale Dry Matter (% DM)</i>	<b>85</b>
<i>Bale Price (\$)</i>	<b>\$50</b>
<i>Cost Per Pound (\$/lb DM)</i>	<b>\$0.07</b>
<b><i>Livestock Hay Requirements</i></b>	
<i>Type of Livestock</i>	<b>Mature Cows</b>
<i>Average Animal Weight (lbs)</i>	<b>1200</b>
<i>Dry Matter (DM) Intake (%)</i>	<b>2.5</b>
<i>Amount of Hay per Animal (lb DM)</i>	<b>30</b>
<i>Estimated Hay Wasted (%)</i>	<b>10</b>
<i>Hay per Head per Day (lb DM)</i>	<b>33</b>
<i>Cost per Head per Day (\$)</i>	<b>2.16</b>
<b><i>Projected Hay Seasonal Cost</i></b>	
<i>Total Heads</i>	<b>50</b>
<i>Number of Feeding Days</i>	<b>120</b>
<i>Amount of Hay Needed for Feeding ( DM tons)</i>	<b>99</b>
<i>Number of Bales Needed (As is)</i>	<b>259</b>
<i>Emergency Hay (DM tons)</i>	<b>30</b>
<i>Number of Emergency Bales Needed (As is)</i>	<b>78</b>
<i>Total Hay Needed for the Season ( DM tons)</i>	<b>129</b>
<i>Total Number of Round Bales Needed (As is)</i>	<b>336</b>
<i>Bales Fed per Day</i>	<b>2</b>
<i>Seasonal Hay Cost (\$)</i>	<b>\$16,824</b>

## GOT STICKERS? NOW IS THE TIME TO TAKE CARE OF THEM.



Lawn burweed is something we all dread having in our yards during warmer months. This weed starts growing in the fall, but doesn't become a nuisance until it's fully matured in the spring. When temperatures rise, these weeds form prickly spines, or "stickers," which they are more commonly known as.

It's easy to ignore these weeds until they're a problem during spring and summer months. However, if you wait until the stickers have formed, it's too late to treat them. By planning ahead and treating them in the fall or winter with a preemergence or postemergence herbicide, you can eliminate them altogether.

The question arises: how do we prevent these weeds from popping up in our lawn? There are two proven ways to treat lawn burweed: preemergence or postemergence herbicide. We recommend marking your calendar every year to remember when to treat your yard.

1. **IN THE FALL:** Use preemergence herbicides on your lawn, including dithiopyr, prodiamine, pendimethalin, indaziflam, atrazine, and isoxaben. It's recommended to apply this in October when temperatures are around 70 degrees.
2. **IN THE WINTER:** If you missed the preemergence timeframe, using postemergence herbicides are your next best bet. Postemergence herbicides such as 2,4-D, simazine, dicamba, metsulfuron, mecoprop, fluroxypyr, or auxin containing formulations will get the job done. These should be applied in January, February, or March.

Don't let these complicated chemical names intimidate you! These herbicides are found in common turf products at your local garden center. Before purchasing, check the ingredient label to confirm it includes the correct active ingredient. Remember to always read and follow label instructions when using herbicides on your lawn

## GET THE MOST FROM YOUR FALL MUMS!

Got your mums out? Always keep your fall mums in full sun! This promotes the very best flower opening and color development.

More tips to keep your mums thriving and not just surviving:

- ◆ Keep your mums consistently watered. This is a greater challenge when growing your mums in containers. If the soil is dry, it's time to water your mums. Do not let them wilt. Once a flowering fall mum is water-stressed, it turns off flowering. This doesn't necessarily kill the plant, but the flowering will not recover.
- ◆ Don't water the foliage, but direct water to the base of the plant and continue until water starts to flow from the bottom of the container. Wet leaves make it easy for fungal growth to set in, making plants look bad.
- ◆ If you need instant impact, then choose a plant in full flower. To extend the display period, select plants that have tight flower buds with just a little bit of color showing. Over time, the buds will open up, making the flowers last longer.



# Mums need full sun!

## MYTH BUSTERS



# MYTH: Goldenrod causes fall allergies.



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Many people consider goldenrod to be the scourge of the fall allergy season! That belief is actually not true. Goldenrod is the victim of cause-and-effect reasoning: If your fall allergies peak when goldenrods are blooming all around, then it must be plant's fault.

However, the real culprit is the ragweed that blooms at the same time. We don't see these tiny, inconspicuous flowers, but they produce loads of small pollen grains that are easily distributed by the wind. Ragweed pollen wreaks havoc with the allergies of thousands of people.

## MYTH BUSTERS



**MYTH: You should store uncooked sweet potatoes in the refrigerator.**



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✗ Do NOT store uncooked sweet potatoes in the fridge! This will cause a hard center and change the flavor.

✔ It is recommended to store fresh sweet potatoes in a cool, dry, dark, and well-ventilated space. Properly stored sweet potatoes can last for several weeks.

Feeling hungry for sweet potatoes??

💧 Wash under cool water and scrub with a vegetable brush just before using.

🍴 When baking whole sweet potatoes, leave the skin on and prick all over with a fork to allow steam to escape. The skin can be eaten and is rich in fiber, vitamins, and minerals.

🥄 For a quick side dish, peel and cube, then roast or cook on the stovetop.

🍠 Cooked sweet potatoes can be frozen for ten to twelve months or refrigerated for four to five days.

# DECORATING WITH PUMPKINS

Here's how to keep your pumpkin decor looking its very best...

One of the most important things you can do is find pumpkins with no surface damage. Don't buy pumpkins with bruises and signs of rotting. Pumpkins without damage generally last longer than those with defects.

Where you place your pumpkin display can also play a role in how long they will last. When setting up your fall decor, avoid wet areas. Find a spot that is well drained to avoid decomposition. Consider wiping down pumpkins with a 1-part bleach, 10-parts water solution to kill bacteria before setting them outside.

The longevity of pumpkins is shortened once carved. After carving pumpkins, use petroleum jelly to help seal the exposed flesh. This seal will keep the pumpkins moist and create a barrier to bacteria. Coat any exposed surfaces, including the inside and the cut-out sections. A great alternative to carving pumpkins is painting them. Choosing to paint your pumpkins instead of puncturing them ensures that they stay fresh longer, since there will not be any cuts on the surfaces.



## Crustless Pumpkin Pie

### Ingredients

- 4 eggs
- 15 ounces canned pumpkin
- 8 ounces evaporated milk
- 1/3 cup sugar
- 1 tablespoon pumpkin pie spice
- 1 teaspoon vanilla extract
- ½ teaspoon salt
- Nonstick cooking spray

### Instructions

1. Heat oven to 400°. Spray a pie pan with nonstick cooking spray.
2. Add the eggs to a mixing bowl and beat together.
3. Next, add the pumpkin, evaporated milk, sugar, pumpkin pie spice, vanilla, and salt. Mix until smooth.
4. Pour into the pie pan and bake for 15 minutes.
5. Turn the oven down to 325° and bake for another 30 minutes or until the pie is set. Pie is done when a knife inserted in the center comes out clean.

Thanks to Virginia Cooperative Extension for this recipe!