



## AGRICULTURE

### Estimating Winter Hay Needs

Mark Z. Johnson, Oklahoma State University Extension Beef Cattle Breeding Specialist

Some basic rules of thumb to follow when determining the hay supplies you will need to sustain your cow herd over the winter and into next spring.

Determine your average mature cow size. This can be done by weighing your 4 – 7 year old cows and calculating the average weight. From mature cow size, we can approximate the amount of forage dry matter cows will need to consume per year or per day. For example: a 1,000 pound cow will consume about 26 pounds of forage dry matter per day. A 1,400 pound cow will consume about 36.4 pounds of forage dry matter per day.

Determine your cow inventory

Estimate the amount of time you expect to be feeding cows.

From this information you can calculate the total amount of hay needed. For example: 100 cows weighing 1,400 pounds will consume about 3640 pounds of hay per day. We should take into account that a certain amount of the hay fed will be wasted and there will be a certain amount of spoilage of each bale fed that won't be consumed. With this in mind we will add another 10% to the daily total to bump it up to about 4000 pounds (2 tons) per day.

Remember the amount of hay wasted or spoiled could be higher. If we are feeding hay carried over from last year, expect a higher percentage spoiled in each bale.

If we are expecting to feed hay from mid-October to mid-May, that is approximately 200 days of hay feeding. 4000 pounds of hay needed per day x 200 days equals a total of 800,000 pounds (400 ton) of forage dry matter that cows will consume over this time. If we are feeding or buying large rounds with an average weight of 1,250 pounds that equates to 640 (800,000 divided by 1,250) big bales needed to sustain the 100 cows.

If possible, purchase hay by the ton. It leads to less error in securing the amount of hay you will need to purchase or have on inventory. If buying hay by the bale is your only option, make sure to weigh enough of the bales to have an accurate representation of bale weight. Also, take into account the amount of spoilage of each bale. One of the upsides of hay baled this summer is less spoilage.

Other factors such as weather, stage of gestation or lactating versus dry cows will obviously impact nutritional requirements of cows from day to day. Many Oklahoma producers are fortunate to have more standing forage than normal as we evaluate pastures right now. This may reduce hay needs and move back the starting date of hay feeding this year.

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Beaver County OSU Extension

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# Questions and Answers About FALL ARMY WORMS

- Are there any specific reasons why fall armyworm (FAW) activity seems to be especially high this year?
- FAW populations are typically higher in years with cooler and wetter weather patterns. This has been the case for 2025. We see more FAW in years like this because the cooler weather means that the more vulnerable life stages like the egg and the early instars are not drying out or desiccating like they would in a hotter year. The rainfall we have had in Oklahoma has also allowed for a lot of lush, green vegetation which is excellent and attractive habitats for the female moths to lay their eggs on and for the FAW larvae that hatch to readily feed on. Summer crops like sorghum, corn, and soybean, as well as our alfalfa, pasture, and rangeland have stayed healthy, so they are a nice green bridge for the FAW to move out of and into winter wheat.
- What dangers do fall armyworms pose to wheat and field crops?
- FAW get their name from their ability to march from one area of a field and into another while eating any green, leafy tissue in their path. For summer crops that are wrapping up, they can cause reductions in yield due to the FAW eating leaves which results in a reduction of the plant's photosynthetic abilities, so the plant is unable to generate energy for higher yields. They can also cause reduction in yield for sorghum when FAW feed on the grain sorghum heads.
- For wheat, the timing of planting coupled with the FAW occurrence being at its peak brings about a perfect storm. FAW early instars will be very small, and they feed on leaves by scraping off the top layer which leaves a transparent area on the leaf that is called windowpaning. As the larvae get larger and progress into the later instars, they will chew holes in the leaves and even consume whole leaves. Because wheat planting coincides with FAW, these insects can cause stand loss especially in the seedling stages. In severe cases if FAW are not detected and treated in a timely manner producers may need to replant their crop. Wheat growers in OK plant wheat for grain or grazing cattle or both (dual-purpose wheat). For those that are dual-purpose operations, they aim to plant about 2-4 weeks before grain-only operations so they can increase wheat fall forage yield potential. However, this earlier planting lines up with peak FAW activity.
- What are some early warning signs producers should watch for?
- Knowing the timing at which FAW adult moths arrive in OK is a good way to have a heads up of when to expect FAW larvae. FAW do not overwinter in OK, they must make a migratory flight from Mexico or Texas every year. Typically, they arrive in OK in June, with us seeing the first signs of FAW in early July. Female moths will lay their eggs in clusters on leaves, the larvae will hatch, feed for about 2-3 weeks, then crawl into the soil to pupate. After about two weeks the adult moths will emerge, and the next generation begins. FAW can have several overlapping generations in OK that last anywhere between October to November.
- Once the wheat has emerged, growers should actively scout their fields for FAW larvae, windowpaning, and FAW frass (yellow to brown in color, looks like mush) on leaves. Growers should check grassy and weedy borders/edges of fields to look for FAW eggs and larvae. Usually, FAW will move into wheat fields from these areas first. Scout for FAW early in the morning or late in the evening as this is when FAW will be feeding on the crop. If scouting during the day, they should be looking at the base of the plant and top of the soil for FAW.
- If producers are dealing with a full-blown outbreak, what steps can they take, if any?
- The key for successfully managing FAW is to catch infestations early when they are not numerous and when the FAW are less than 1" in length. The smaller the FAW are, the easier they are to manage. Larger FAW are less susceptible to insecticides and can cause damage rapidly. The current economic threshold for FAW in wheat is 3-4 larvae per foot of row. There are foliar insecticides labeled for FAW and producers should reach out to their OSU County Educator for guidance on selecting an insecticide that is labelled specifically for FAW. Insecticide applications should be based on label rates and growers should place close attention to the re-entry interval (REI).
- How serious are the consequences for crops if a producer is dealing with this?
- In severe infestations when wheat stand is a complete loss and replanting is required it can be economically devastating. Replanting is a time and money investment, as well as a race against the clock to plant while moisture and temperature conditions are still conducive for wheat emergence. If on a grazing or dual-purpose operation then the wheat grower will also need to invest in an alternate food source for their cattle, further compounding economic losses.

## Using Patch Burning to Adjust Grazing Distribution

Dana Zook, Oklahoma State University Cooperative Extension Service NW Area Livestock Specialist

Grazing distribution has long been a challenge for cattle producers. Even with a correct stocking rate, cattle can “over-use” or “over-graze” some areas of pasture or rangeland. To combat unbalanced grazing, producers have historically employed different management methods to encourage cattle to graze more evenly (think fencing and water infrastructure or mineral and salt).

Researchers at the Oklahoma State Natural Resource Ecology and Management Department are looking at Patch Burning as a tool in the toolbox to adjust grazing distribution. Patch burning is a technique that burns a portion of a grazing area and allows cattle and other livestock to select what forage they prefer from the burned or unburned areas. In a study conducted by Kathrine Haile, Dr. Laura Goodman and others at the Klemme Research Station south of Clinton, patch burning was used to target under grazed areas of a pasture and adjust grazing distribution.

In this study, GPS collars were put on cattle and grazing distribution was analyzed in three pastures (100-200 acres each) for the first year without fire. This GPS data was then utilized to identify portions of the pasture that cattle were avoiding. Four 4 areas were then selected from these under-grazed areas for patch burning in March (2) and June (2). Forage samples were collected and analyzed every two months comparing quality of burned and unburned areas. The results of this study didn't find a difference in the season of burn (March vs. June), but overall forage consistently remained high quality (8-15% Crude Protein) for about 5 months. By using fire, grazing distribution was totally changed in these pastures and the burned patches enhanced forage quality during times of the year when quality is typically low. Using GPS tracking, they identified that the previously avoided areas were now targeted by the cattle, allowing previously over-grazed areas to recover.

Due to many natural disasters over the years, fire isn't always thought about in the best light.

However, good research shows the benefits of a well-planned prescribed burn for plant quality, species diversification, wildlife, and livestock production. If you would like more information about patch burn grazing, check out resources at OSU Natural Resources Extension or find them on Facebook @OklahomaLands.

## Plants for Poorly Drained Soils

When dealing with poorly drained soils, additions of organic matter address many of the problems faced with garden soils. But sometimes, we run into problem areas in the garden where our efforts have little impact on drainage. Areas where water often drains that are low, have poor soil, or sit at the end of a slope can be such problem spots.

In many urban sites the upper eight inches or so of the soil are in very good condition from years of compost and organic matter inputs, but when we dig deeper, we find compacted clay subsoil. This subsoil has very poor drainage. Plants often struggle to survive in these locations.

Our options for managing these sites can be limited. We could excavate the soil to 18 to 24 inches and add improved topsoil, but that can come at a great expense and can sometimes create more problems, and if we have established trees and shrubs growing in the area that is out of the question. Sub-surface drainage pipe can be installed to help pull excess water away from problem areas. And in some cases, we can just build up by installing raised beds. We can also reduce some of the water problems through careful irrigation management, but that is only part of the solution.

Another option, which is generally easier, is to plant plants that don't mind wet feet. The following plants tolerate flooding for short periods of time (normally only a few days). Very few of these plants will tolerate long-term submersion.

Contact Beaver Extension Office for an email list of plants at [beaverext@okstate.edu](mailto:beaverext@okstate.edu)



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### **CALENDAR**

ESP Conference..... Oct 6-9  
5 State Beef Conf, Beaver .....Oct 14  
5 State Beef Conf, Guymon.....Oct 15

### **5 STATE BEEF CONFERENCE**

**OCT. 14, 2025**

**2:30-7:30PM**

**BEAVER CO. FAIRGROUNDS**

**REGISTRATION BEGINS AT 2PM**

Please contact the Beaver  
Extension Office for pre-  
registration 580-625-3464

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