



## Renting Pasture Land in Mississippi

Volume 8, Issue 1

Rocky Lemus  
Extension Forage Specialist

January 2015

Visit us at: <http://mississippiforages.com>

Leasing pastureland has been a hot topic in Mississippi in the last six months due to good cattle prices. Since there is not a commercial or real estate price for pasture land, the question becomes what constitutes a fair pasture rental price? Prices can also be influenced by the demand for other agronomic crops such as corn and soybeans. Depending on the county or region of the state, pasture rent prices can range from \$10.00 to \$35.00/ac (Fig. 1). Prices should only be used as guidelines and estimates to give parties involved a similar starting point in calculating the cost of renting the land. This will allow the renter to determine if the land might be suitable depending on the landowner's projected budget and returns.

Pasture rental rates can be affected by the quality of the pasture, grass species, fence condition and configuration (perimeter vs. cross fencing), availability of water, and previous fertility management practices. Depending on the renter and the landowner, there are several methods that could be used for computing pasture rental rates.

⇒ **Pasture Rent by the Acre** – Determining the value of pasture land in the real estate market is very difficult because pastures are very seldom sold as a separate entity from the farm enterprise. In Mississippi, pastures can range from 0.55 to 1.5% of the farm land value (personal observation). It is recommended to look at average pasture rental rates of the county or the region of the state where the property is located. The average pasture land price in Mississippi for 2014 was \$2,110/acre (Fig. 2), that means that pasture could rent from \$11.60 to \$31.65/acre.

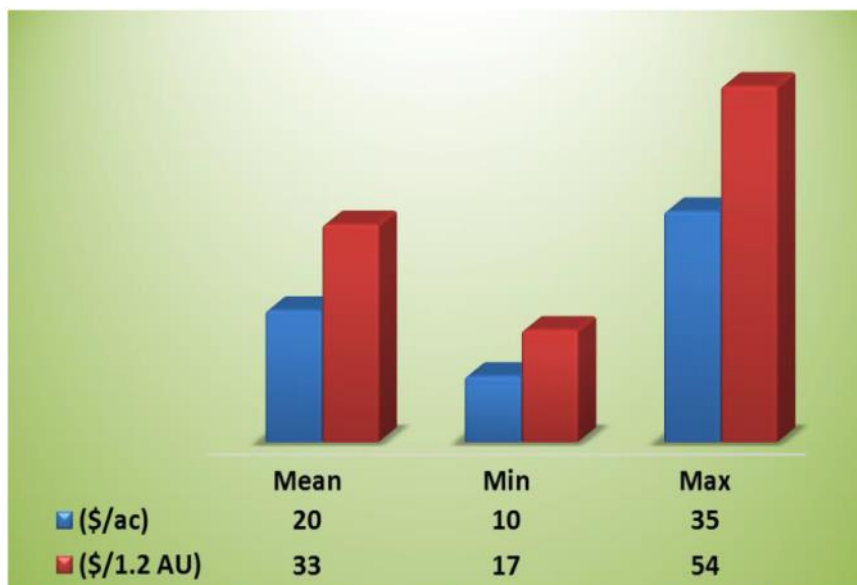


Figure 1. Average pasture cash rentals in Mississippi for 2013 reported in a per acre value and a dollar per 1.2 AU (dollars per cow/calf pair). Source: Parman, 2014.

⇒ **Rent per head per month** – This approach allows some flexibility because the renter only pays a price depending on the how many animals are grazing and how long the pasture will be used. This approach takes into account three major components: number or animal units, the price of hay per ton and quality of the pasture. An animal unit (AU) is defined as a mature (1,000-pound) cow or the equivalent, based on an average consumption rate of 2.5% their body weight of 25 pounds of forage dry matter per day. That makes an animal unit month (AUM) equal to 31 days x 25 pounds per day or about 775 pounds of dry matter forage. The quality of the pasture is estimated by categorizing the pasture and giving it a factor. These are the common factors used when assessing pasture types and conditions:

- Corn stalks (0.10). Low quality forage that is mainly roughage.
- Unimproved, poor or weedy (0.12). Pastures are overgrazed or heavily infested with weeds or have very low fertility.
- Fair to good (0.15). Usually native pastures with adequate grasses, but less abundant. Pastures are either weedy or of lower quality because of lack of moisture or advanced maturity.
- Good to Very good (0.18). Permanent pasture with abundant growth of seeded or native grasses or legumes, but less palatable grasses than the "excellent" category, or with a high proportion of plants in the early

to late bloom or seed stage.

- e. Excellent (0.20). Lush, green pasture and high-protein. Seeded grass or grass-legume pastures, abundant growth, tender with no blooms or seed heads showing.



**Example:** Let's consider a 1,000 lb cow with a 500-lb calf grazing a very good permanent pasture from May to October (5 months) when the hay price is \$70.00/ton of bermudagrass. This pasture could have the potential to produce 4 tons (8,000 lbs) of hay per acre when fertilized properly.

- ◆ **The cost based on the AU will be:**

**Pasture charge per head per month (\$ head/month) = AU x Hay price per ton x Quality Factor**

**1.5 AU x \$70/ton hay x 0.18 quality factor = \$18.90 per month or \$94.50 for the season (5 months).**

⇒ **Rent based on forage value** – To estimate the rental rate based on the forage value, estimate the expected pasture or hay production and multiply by either 25% of the price of grass during the grazing season for pasture or 35% of the price of hay a well-established and productive hay stand. It is recommended to use hay prices corresponding to the type and quality of the stand to assess the forage value. For example, if a well fertilized bermudagrass hay field produces 8,000 lbs of forage per acre, a pasture with a good fertilization might produce 2,000 lbs/acre. That's 25% of the total hay production.

**Pasture Charge per forage value (\$/acre) = (Hay price per ton x hay factor x forage production)**

- ◆ **The Cost based on the forage value will be:**

**\$70.00/ton of hay x 0.25 x 1.5 ton per acre = \$26.25 per acre**

⇒ **Carrying Capacity** – The carrying capacity of a pasture is the maximum number of animals that can be grazed in pasture throughout the grazing season without causing overgrazing. The carrying capacity ensures adequate forage for grazing animals and leaves enough residual forage for regrowth the following year. There are two ways to compute rental prices per AUMs with the method: (1) the hay price during the grazing season is multiplied by the quality factor of the pasture or (2) by using a typical rental rate for a pasture. Most pastures in Mississippi have the potential to support from 1.0 to 1.2 AUM/acre depending on the grazing rotation.

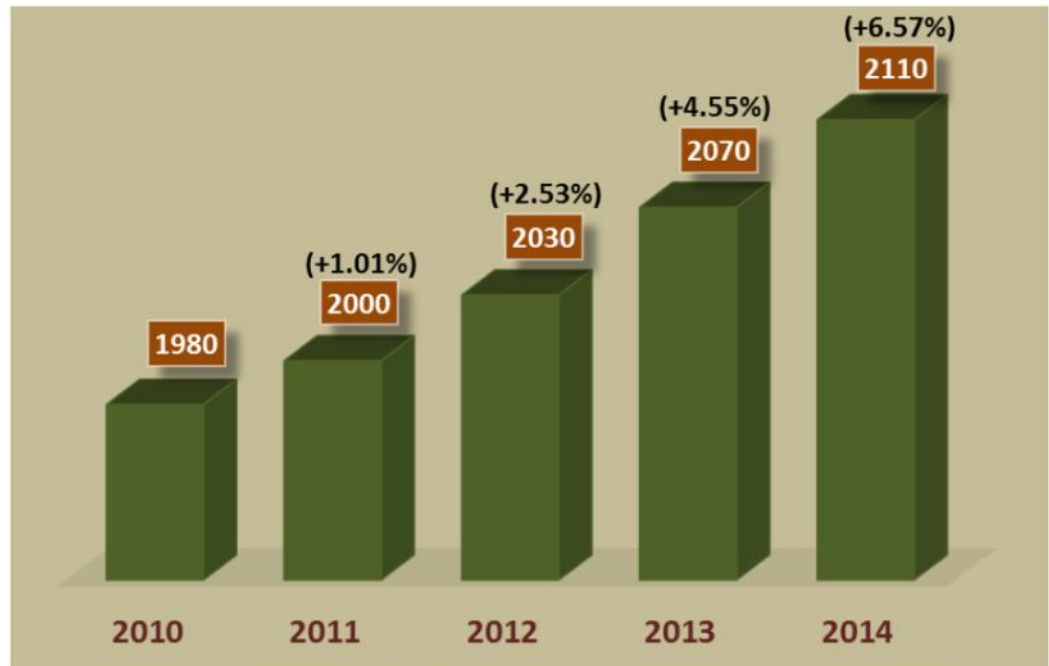


Figure 2. Pasture land average value (\$/acre) in Mississippi from 2010-2014. Numbers in parenthesis represent changes in pasture land value compared to 2010. Source: USDA-NASS, 2014.

- ◆ **Carrying capacity using hay price – Bermudagrass hay at \$70.00/ton and the pasture is mostly a native pasture (fair to good) with a quality factor of 0.15.**

**\$70.00/ton of hay x 0.15 = \$10.50 per AUM, since we could support 1.2 AUM/ace, then the rental price per acre is \$12.60.**

⇒ **Pasture Rent per Pound of Gain** – This is a method that we see commonly used in Mississippi during the winter season on annual ryegrass grazing systems for stocker cattle. Pasture rent is based on the added weight the stockers gained grazing the pasture. To apply this method, stockers need to be weighed individually and an average weight estimated before they are placed on the pasture and after they are taken off. Although this might not be practical, if the cattle are coming from a long distance, sometimes it might be ideal to weigh at the grazing site to account for any weight changes during transportation; however, weights and those measurements need to be discussed and agreed to beforehand. Since annual ryegrass quality is much higher than typical hay in Mississippi, gains from the pastures could be compared to 2/3 or 3/4 the cost of gain in a feedlot system. Animal daily gains in annual ryegrass in Mississippi can range average 1.9 to 2.5 lbs per day depending on the type of stocker (300 – 800 lbs) (Mr. Brad

Jones, M.S., personal communication, Stone Co. Extension). In summer time, those gains can range from 0.75 to 0.85 lbs per day for the same type of livestock according to Mr. Jones. That means that under a typical year, value of gain for stocker cattle on pasture can range from \$0.50 to \$0.60/lb of gain. To determine the value of pasture rent then multiply the ADG for a month times the cost per pound of gain times the number of animals. The stocking rate in Mississippi is 1,200 lbs/ac or 1.2 AU/ac



◆ **ADG x days x cost per pound of gain**

$$2.0 \text{ lbs/day} \times 90 \text{ days} \times \$0.60/\text{lb} = \$108.00/1.2 \text{ AU}$$

One of the more difficult decisions facing renter and landowner in a pasture rental situation is determining a “fair” rate before a rental arrangement can be completed. There is no simple and uniform method to figure rental rates for pastures. Both the renter and the landowner need to have the same understanding regarding the value of the land and sometimes it is difficult to determine what that value might be. There are several factors that could help them in getting to a price and a payment agreement system:

- a. Determine the quality of the pasture for rent.
- b. Determine the land suitability (this can be found in the soil survey).
- c. Determine the length of the grazing season.
- d. Livestock facilities, their conditions and location. The location of the pasture affects the cost incurred by the livestock owner in taking care of his stock.
- e. Identify who will be responsible for overseeing the livestock. In most cases the renter is responsible for all the production activities such as checking in the livestock, animal health (fly control, vaccination, etc.), checking water, and providing salt and minerals.
- f. Determine who would be responsible for land-related activities such as fences, weed and brush control, pasture renovation, and pasture fertilization. These activities are typically negotiable among the renter and the landlord. When it comes to fencing, it is typically the renter’s responsibility to repair the fences with the landowner providing all the necessary materials. These details should be clearly delineated in the leasing document.
- g. The availability of a good quality water source in the pasture or with easy access improves cattle weight gain. If water is unavailable during part of the grazing season, it is important to account for the costs of hauling water or removing livestock.
- h. It is important to agree on the number of livestock that can be used in the pasture. This could be decided on the condition of the pasture, the management goals that the landowner would like to see implemented, the amount of forage that the renter would like to have to meet the desired rates of gain and the income needs of the landowner to meet land payments.
- i. Develop a written contract or rental agreement that provides clear understanding of the terms, conditions, and time of the lease along with signatures (notarized if possible).

There are many ways to determine pasture rental rates and each method presented here has its own strengths and weakness. The common goal of these methods is helping the parties involved to arrive at the appropriate rate for renting/leasing a pasture. Keep in mind that a “fair” rate will depend as well on the money that landowner has invested in the property and the expected return from grazing livestock. Is the land paid for, is there a monthly payment, what are the taxes on the land? In summary, determining the productivity of the pasture is the most difficult part of the decision process. The determination of what is considered “fair” needs to be left to the parties involved.

*For upcoming forage related events visit:*

<http://forages.pss.msstate.edu/events.html>

February 17, 2015 — Central Mississippi Producer Advisory Meeting, Raymond, MS

February 19, 2015 — North Mississippi Producer Advisory Meeting, Verona, MS

February 24, 2015 — Coastal Mississippi Producer Advisory Meeting, Biloxi, MS

April 3, 2015 — Cool-season Forage Tour, Starkville, MS

May 15, 2015 — Alfalfa Field Day, Starkville, MS

June 19, 2015 — Warm-season Forage Tour, Starkville, MS

**Cooperative Extension Service • Mississippi State University**

We are an equal opportunity employer, and all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, disability status, protected veteran status, or any other characteristic protected by law.