



Your Livestock Production Environment

Often, livestock producers base management decisions on their production environment. There are two factors that affect the production environment: Genetic and Non-genetic drivers.

Non-genetic drivers include:

- ◇ Forage type - grasses or forbs/legumes, cool or warm season, etc.
- ◇ Temperature and humidity
- ◇ Grazing system - continuous or rotational
- ◇ Parasites and disease
- ◇ Marketing

Ask yourself what are your goals and your market end point. Once you have established those, it is time to choose animals that will best complement your non-genetic drivers in your decision making for production.

There are trends that have affected our Genetic drivers in our livestock production environment:

- ◇ Since 1970 there has been improved calf growth and since 1990 there has been improved milk production. These two characteristics are more nutritionally demanding so

they are limited by their environment.

- ◇ Color has shown a 0.5 degree Fahrenheit to 1.0 degree Fahrenheit lower in feedlot conditions (mader et al., 2002) for light vs black ears.
- ◇ Heat tolerance - Slick vs Hairy is determined by a de novo gene affecting a prolactin receptor that has been linked to heat tolerance by affecting hair follicles. De novo means new, whether that means did it just show up or was it a happy mistake from cross breeding? This special heat tolerance is often seen in Brahman, Senepol, Roma, and other breeds. This gene is dominant, so it will be easy to integrate into the herd and for it to show up in the offspring. Selecting for heat tolerance is important to consider in potentially toxic tall fescue based pastures.
- ◇ Cow size influences longevity and fertility. A 1,400 lb cow may produce one less calf vs a 1,100 lbs calf in a lifetime (Doye & Lalman. 2011). As cow weight increases, daily forage intake increased, pounds of beef weaned decreased, herd size decreased, and efficiency decreased (Scasta et al., 2016).

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If you have not done so already, please consider completing the Livestock Program Needs Assessment for Callaway, Cole, Osage, Gasconade, Maries, Montgomery, and Warren Counties. You can scan the QR code below or contact the Callaway County Extension office by phone or email.

Your response will be used to plan and implement future livestock programming and outreach efforts.



Winter Hay Feeding

Do you know the quality of your hay that you plan to feed this winter? If you do not, I recommend that you gather and submit a hay analysis to a laboratory to determine the quality. Sample a few bales of hay from each field and submit a composite sample. The cost is approximately \$20 per sample. This provides a simple and cost effective tool to better match your hay supply to the nutritional needs of your livestock. This will better manage the appropriate amount of supplementation that is fed. The lower quality of hay, the more supplementation that will likely be needed, which increases the winter feeding cost.

As a rule of thumb, bales below 55% TDN or 7% crude protein will require supplementation.

Do you notice a lot of hay being wasted and trampled? Feeder design greatly affects waste. On average, cone feeders had 3.5% hay waste, ring feeders had 6.1% hay waste, trailer feeders had 11.4% hay waste, and cradle feeders had 14.6% hay waste (Buskirk et al. 2003). If you consider unrolling hay, attempt to limit the amount of hay being unrolled at a given time.

Hay waste will increase if more than one day of hay feeding is unrolled.

Increased moisture and temperature will increase the rate of hay spoilage. Waste is greater at the top and bottom of each bale due to absorption. Here are some tips to reduce the rate of hay spoilage:

- ◇ Increase the density of the bale - these bales will hold up to increased moisture and will hold their shape.
- ◇ To decrease ground spoilage - store in a well drained area with up to 6" of rock, pallets, or railroad ties.
- ◇ Store rows end to end facing NW to SE if possible.
- ◇ Avoid stacking uncovered bales outside - stack bales inside in pyramid or on-end to maximize space.

For more questions on hay sampling or feeding contact the Callaway County Extension office by phone or email.

Upcoming Events:

12/6/2024—SEMO Livestock Sales, LLC, Show-Me-Select replacement heifers program sale

12/13/2024—Kirksville Livestock, LLC, Show-Me-Select replacement heifers program sale

12/13/2024—Farmington Regional Stockyards, LLC, Show-Me-Select replacement heifer program sale

12/14/2024—F&T Livestock Market, Show-Me-Select replacement heifers program sale



The Feedstuff Finder enables feedstuff buyers and sellers to make connections. Sellers of co-products and forages can share prices, products, information, and locations. Buyers can identify feedstuff sources by loca-

