Ruminants have a distinct advantage compared to other livestock because of their ability to process highly fibrous, otherwise nonutilizable, feedstuffs into a marketable product. Oftentimes, this conversion advantage is only referenced to specific, industry-related outcomes such as body condition, parturition and/or weight gain. However, a bigger picture perspective points to the societal benefits these animals possess. Ruminants are both “cellulose converters,” and they thrive in geographic regions that would otherwise go underutilized. This is especially true for cattle based on their contribution to human-consumable protein (per capita beef consumption is approximately 55 pounds) and the overall magnitude of the cattle industry’s economic impact ($88.25 billion in receipts).
Considering beef’s broader contribution and the likelihood that hay and pasture costs make up between 30 and 35 percent of a spring-calving cow herd’s total production cost, it is imperative for operations to strive for efficient capture, allocation and utilization of forage resources. This can be done through a systematic grazing management plan and an efficient supplemental feeding program that includes hay as a potential option. Fortunately, this past summer was pretty good to us, and quite a bit of excess forage production was available to capture. However, often quantity doesn’t correlate to quality, which begs the question of how to ensure we properly allocate and utilize hay during the upcoming feeding season regardless of whether the hay is raised or purchased.

If hay will be supplemented, there is no substitute for a nutrient analysis. Testing is preferably done prior to purchasing and especially before feeding to determine any major deficiencies and additional nutrient needs.

Allocation is also of utmost importance and can alter the overall efficiency by which these “stored” nutrients are utilized. Most often, allocation consists of a hay bale sometimes in a ring, in the middle of a pasture, or next to mineral and a water source. Although this is commonly the case, it isn’t the most efficient means of feeding hay. Minimally, use a bale ring to maintain the integrity of the bale for as long as possible and to reduce losses caused by trampling and contamination from urination and defecation. To further reduce wastage, consider labor availability and minimize the amount of hay offered, but be sure to meet the daily intake needs of the animals being fed especially if a hay ring isn’t being used.

Many producers trying to further improve the overall efficiency of feeding hay are investigating other means of allocation. Bale processors are one such mechanism of choice and are used to deliver hay in both pasture (windrows/troughs) and pen environments.

Here at the Noble Research Institute, we have been processing hay at our Oswalt cattle facility for the last year and feeding cows and calves in windrows and bunks. From a strictly nutritional perspective, processing (i.e., lightly chopping) hay improves utilization due to the increased accessibility of structural and nonstructural carbohydrates in the hay to the microbial population in the animal’s rumen, especially for roughages that are lower in quality. Operationally, the processor is very easy to use and does a good job of uniformly chopping most roughage sources given, including bermudagrass, alfalfa, soybean, rye/ryegrass, switchgrass and native grass.

Overall, we have witnessed less wastage when “windrowing” cows in the pasture, but we have had some difficulty feeding in our concrete bunks (especially in high winds). As with any piece of equipment, we continue to learn more and better ways to use it. A good example is using the processor to cover newly constructed pond dams and right-of-ways, where it worked very well.

As one would imagine, the biggest potential downside is the machine cost. This has to be weighed on a case-by-case basis depending on the size of the operation, access to resources (labor, hay quality, capital, etc.) and the value placed upon convenience.