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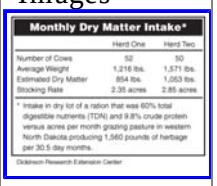
# BeefTalk: Cow Size – Dry Lot Versus Pasture

**The search for feed resources is not for the faint of heart.**

Images




Monthly Dry Matter Intake

By Kris Ringwall, Beef Specialist

NDSU Extension Service

The weather remains dry. The search for feed resources, the key to any beef operation, is not for the faint of heart.

Recent discussion focused on the feed requirements for two sets of cattle at the Dickinson Research Extension Center. Responses from nutritionists were sought regarding needed feed for the two groups (herds) if they were kept in confinement for four months.

The first herd averaged 1,216 pounds (856 to 1,395 pounds). The second herd averaged 1,571 pounds (1,350 to 1,935 pounds), so there is a difference of 355 pounds of body weight between the two herds.

If each herd was 50 cows, the set with smaller cattle would need 84 tons of dry-matter feed. The set with larger cattle would need 104 tons of the same feed. (A detailed analysis of feed and requirements would be needed to balance the ration and make sure the cattle dietary needs are met.)

The next question was how this difference in weight and feed requirements impacts the stocking rate for the two groups of cattle. Lee Manske, DREC range management specialist, provided insight into the appropriate stocking rates.

Manske noted that there are several points producers should consider as stocking rates are calculated and how cow size impacts pasture management.

An animal unit (AU) is considered one mature cow of approximately 1,000 pounds, either dry or with calf up to 6 months of age or the equivalent, that consumes a standard amount of forage.

An animal unit month is the amount of dry forage required by one AU for one month based on a forage allowance of 26 pounds per day.

The length of the average grazing season month is 30.5 days and available forage is considered as 25 percent of average standing herbage weight. Average monthly herbage biomass weight for western North Dakota equals 1,560 pounds per acre during the grazing season and the typical grazing season on native rangeland is 4.5 months (137 days) from early June to mid-October.

Utilizing those principles, the standard 1,000-pound cow would have a stocking rate of 2.03 acres per month in western North Dakota. The calculation is fairly straightforward. The cow is one animal unit that has a daily forage dry-mater intake of 26 pounds and a monthly dry-mater intake of 793 pounds.

The 793 pounds is multiplied by four months (remember the desired amount of intake while grazing is 25 percent of available grass), so the required production per cow/calf pair is 3,172 pounds. If 1,560 pounds of forage is expected to be produced on native range, then 2.03 acres per month are required to maintain a 1,000-pound cow and her calf.

Using the same process, a 1,216-pound cow actually is 1.1580 animal units and a 1,571-pound cow is 1.4032 animal units. The group of smaller cows would require a daily forage intake in the range of 30.11 pounds of dry matter and

the group of larger cows would require a daily forage intake of 36.48 pounds of dry matter.

Using the same multiplication factors as described for the 1,000-pound cow, the stocking rate for the group of cows that averages 1,216 pounds would be 2.35 acres per month. The group of cows that averaged 1,571 pounds would need 2.85 acres per month.

Let us assume a herd of 50 cows had normal forage during the grazing season. The landmass required would be 456.75 acres for 1,000 pound cows, 528.75 acres for the 1,216 pound cows and 641.25 acres for the 1,571-pound cows.

In a normal year, the heavier cows would require approximately 23 more tons of feed if maintained in a dry lot for 4.5 months. If on pasture, the heavier cows would need approximately 113 more acres.

Either way, approximately 23 tons of feed are needed for the larger cows. By the way, keep in mind the calves need feed, too. More later.

May you find all your ear tags.

Your comments are always welcome at http://www.BeefTalk.com.

For more information, contact the NDBCIA Office, 1041 State Ave., Dickinson, ND 58601, or go to http://www.CHAPS2000.com on the Internet.

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Attachments

PDF - Monthly Dry Matter Intake (bt052208.pdf - 16.08 Kb)

EPS - Monthly Dry Matter Intake (bt052208.eps - 216.08 Kb)