Determining Forage Inventory for a Beef Cow/Calf Herd

By Sandy Stuttgen, Extension Taylor County & Richard Halopka, Extension Clark County

Complete four steps to inventory the forage available on your farm:

Step One: Write down farm livestock numbers and what they weigh

Example: 20 beef cows, each weighs 1,400 lbs.

1 beef bull, weighs 1,400 lbs.

10 head of youngstock (retained heifers):

- beginning weight: 575 lbs.
- overwintered for 7 months (*in our example, Nov 1 – May 31, approximately 210 days*)
- gaining 2 lbs. per day
- ending weight: 995 lbs.
- average weight = (575 + 995) / 2 = 785 lbs.

Step Two: Determine DM forage requirements of herd per day *(each animal eats 2% of its body weight daily, DM basis)*

20 cows x 1,400 lbs. x .02 (DM) = 560 lbs.DM/day

10 heifers x 785 lbs. x .02 (DM) = 157 lbs. DM/day

1 bull x 1,400. X .02 (DM) = 28 lbs. DM/day

Add the amounts together: 560 + 157 + 28 = 745 lbs. DM/day

Step Three: Calculate the DM forage required for the feeding period – *thoughtfully consider your winter feeding period. Don't be overly optimistic or you may be forced to purchase forage during an inconvenient time for a higher price.*

Total DM x days feeding period = forage required DM basis

745 lbs. DM x 210 days = 156,450 lbs.

156,450 lbs. / 2,000 = 78 tons of DM forage, converted to feeding dry hay @ 85% DM: 78 T / 0.85 = 92 T dry hay

Add 10% waste factor, approx. 100 T needed for the feeding period

10% waste may be achieved on well-managed operations; don't be overly optimistic on your farm!

Peer reviewed by Matthew Lippert, Extension Wood County and Bill Halfman, Extension Monroe County

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Step Four: Inventory all forages available on the farm

Measure, count, record (written record). Don't guess on weights, dimensions or quality.

A. Accurately measure:
   1. Weigh a few bales or full chopper boxes to serve as an approximation for all the others

      Two trips over the scale: full – empty = weight of as-fed forage

      Count the number of bales placed in storage or loads placed in the silos, bunkers or drive-over piles
   2. Dimensions of bales, chopper boxes, silos, bunkers or drive-over piles along with conversion tables may used to estimate amount of forage

B. Convert high moisture forages to their DM basis:

   For example*:* 2,000 lbs. as fed @ 40% DM = 2,000 x.040 = 800 lb. DM forage

   2,000 lbs. as fed @ 85% DM = 2,000 x 0.85 = 1,700 lbs. DM forage

   1. Need 78 T DM forage, how many tons of 40% DM haylage are required, assuming 10% waste?

      78 T / 0.40 = 195 T as fed haylage + 10% waste, approx. 215 T haylage or 9' x 180' bag or 16' x50' silo

   2. Need 78 T DM forage, how many round bales are needed with 85% dry matter hay?

      78 T / 0.85 = 92 T as fed haylage + 10% waste, approx. 100 T as fed hay = 200 - 1,000 lb. round bales.

C. Determine quality (lab analysis) - anticipate issues/supplements needed

D. Devise a plan - don't wait to do inventory when supplies are short!

   Four management decisions to make when the managing forage inventory

   1. **<u>Reduce storage and feeding waste</u> - is not uncommon to observe 25-30% wasted feed in Wisconsin!**
   2. Purchase forage – prices often cheaper when supply is high, right after harvest
   3. Purchase alternatives – explore options with a nutritionist
   4. Reduce herd inventory – seek advice from the market

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