



STRETCHING HAY SUPPLIES FOR BEEF COW HERDS IN A SHORTAGE YEAR

Abnormal weather years usually cause a series of events to happen in a cow-calf operation. Generally, the first hay crop is good to excellent, the second one is short, and the third one is non-existent. Or, in some years because of frost damage, the usually large first crop is poor, followed by decent production in the second and third crops.

Additionally, pastures get very short due to many circumstances, which then requires producers to supplement the grazing. Because hay is the quickest and simplest resource available, many producers utilize their valuable winter feed resource just to get them to cornstalk grazing. As a result, it is not unusual for operations to go into the winter feeding months 50-75% short of what is needed to make it to spring turnout.

Many options exist

Fortunately, the beef cow is highly adaptable when it comes to feedstuffs and energy concentrations. High-concentrate feeding is an extremely viable option that producers should consider; it is covered in a separate fact sheet, called "High-Concentrate Feeding Beef Cows to Reduce Hay Needs."

Iowa beef producers, because of corn production, have many potential co-products available that work well to

supplement and stretch a short hay supply. Yes, if the hay crop is short, most likely the corn crop will be short as well. But, in most drought years, there will be cornstalks available for grazing and harvesting, although it will not be as plentiful. Past experience with drought-stricken corn has shown that total corn and forage yield will decrease by 30-70%, so normal stocking and harvest rates must be adjusted accordingly.

Drought corn that is harvested as silage is another option that works extremely well in stress years. A separate fact sheet that reviews nutrient value and feeding recommendations for drought corn silage is available and is called "Feeding Drought Corn Silage to Beef Cows."

Iowa's large ethanol and corn sweetener industry has resulted in huge quantities of co-products that can be utilized to supplement beef cow rations. The main co-products available in Iowa are wet and dried distillers grains, wet condensed distillers solubles and corn gluten feed. Limited research has been done with distillers grains, but extensive work with corn gluten feed has been done. Distillers grains and corn gluten feed are high protein feeds that have energy levels comparable to corn grain. A second advantage that these products have is that the starch has been removed in the manufacturing process, thus leaving a product that does not interfere with fiber digestion in beef cattle rations.

Table 1. Average nutrient values of feedstuffs available for supplementing hay shortages.^a

	Feedstuff			
	Dried distillers grains	Corn gluten Ffeed	Cornstalks	Corn silage
% Crude protein	30	20	6	8.4
% TDN	90	83	51	70
Net energy, maintenance	1.00	.92	.45	.74
Net engery, gain	.70	.62	.21	.47
% Calcium	.20	.08	.37	.23
% Phosphorus	1.00	.54	.12	.22

^aAll values on 100% dry matter basis.



Table 1 shows the average nutrient values for some of the feeds that can be utilized to stretch rations. Notice how the corn co-products are quite high in protein and energy in comparison to cornstalks, and they work effectively in overcoming the nutrient shortcomings.

Tables 2-4 give ration suggestions when only 10 lbs of

first-crop, brome-mixed hay is available per head daily. This would mirror a producer's situation when he is short of hay by 60-75%. Because substantial quantities of high-energy feedstuffs are used in these rations, you will not be full-feeding cows, but rather they will be on limited intakes.

Table 2. Rations stretching hay using various feedstuffs for dry 1350 lb. British bred beef cows in mid pregnancy.^a

Feedstuff	Mid pregnancy; dry cows			
	Ration 1	Ration 2	Ration 3	Ration 4
Brome mix hay	10	10	10	10
Cornstalks	18	--	--	--
Dried distiller grain ^c	--	7.5	3.5	--
Corn grain	--	--	3.5	--
Corn silage	--	--	--	26
Consumption ratio ^b	.83	.50	.48	.68

^aFeed free-choice mineral and vitamin mix.

^bA consumption ratio of .71 indicates that the ration provides 71% of expected "full-feed" intake.

^c10% more dried corn gluten feed can replace dried distiller grain.

Table 3. Rations stretching hay using various feedstuffs for dry 1350 lb. British bred beef cows in late pregnancy.^a

Feedstuff	Late pregnancy; dry cows			
	Ration 1	Ration 2	Ration 3	Ration 4
Brome mix hay	10	10	10	10
Cornstalks	20	--	--	--
Dried distiller grain ^c	4	13	6.5	--
Corn grain	--	--	6.5	--
Corn silage	--	--	--	46
Consumption ratio ^b	.99	.60	.65	.94

^aFeed free-choice mineral and vitamin mix.

^bA consumption ratio of .71 indicates that the ration provides 71% of expected "full-feed" intake.

^c10% more dried corn gluten feed can replace dried distiller grain.



In rations provided in tables 2-4, if you have better access to dry corn gluten feed instead of distillers grains, the substitution rate would be 10% more gluten feed than dried distillers grains. For instance, if 4 lbs of dried distillers grains are recommended, then you would want to feed 4.4 lbs of dried corn gluten feed.

Practices for success

1. You may have to adjust the corn or concentrate intake to achieve the desired weight and/or body condition score. Smaller cows will require less supplemental feed than recommended in these rations, while larger exotic breed cows will require 10-20% more.

2. Make sure the bunk space is adequate so all cows get their share. With the rations that supply less than .90 on the consumption ratio, cows should be in a securely fenced lot. Why? Because these limited-intake rations will leave cows hungry, and they will have a desire for more dry matter intake. You might consider offering a round bale of a lower-quality feedstuff, such as cornstalks, soybean resi-

due, oat straw, etc. This will provide “filler” and reduce the incidence of fence riding.

3. Do your best at mixing these rations. Poorly mixed rations will result in ration hot spots and inadequate nutrition for some of the cows.

4. Make every affordable effort to reduce feed waste. If you are using hay rings or panel feeders, be certain they are in a good state of repair. If you are unrolling hay bales out in the open field, be sure to only feed what is needed on a daily basis. Feeding more than one day’s feed supply results in substantial feed waste.

5. For some producers, tub grinding feeds, combining together total mixed rations (TMR) and feeding in bunks, tires or other types of feeders have dramatically reduced feed waste and lowered winter feeding bills.

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