

Utilizing Poor Quality Forages

Drought conditions that continue to persist have cattlemen looking at poor quality forages to feed the cowherd. Poor quality hay, wheat straw, cornstalks, and CRP hay will be considered this year. While these forages have some feed value, most times they need supplemented to meet cow requirements.

Forage	Crude Protein (%)	NDF (%)	TDN (%)
Poor Grass Hay*	11	72	52
Wheat Straw*	3	81	43
Cornstalks*	5	70	54
CRP Hay**	9	66	50

*These values are adapted from 2011 Feed Composition Tables in Beef Magazine

**These values are adapted from "CRP Usually Needs Help" by Daryl Strohhenn, ISU Beef Specialist

Listed below is the nutrient requirements of a 1200 and 1400 lb. cow with average milk. Poor quality forages fail to meet nutrient requirements the majority of the time, thus they need supplemented. Another concern is palatability. Cows will normally consume around 1.5% of body weight when offered poor quality forages free-choice. At that percentage, a 1400 lb. cow consumes 21 lbs. of forage. That intake not sufficient to provide adequate nutrition, given the poor nutrient density of the feedstuff. Low nutritional value and palatability make supplementation of poor quality forages a must.

Table 5. Daily Dry Matter Intake and Diet Nutrient Densities for Beef Cows—Mature Weight = 1,200 Pounds

	Months Since Calving												
	1	2	3	4	5	6	7	8	9	10	11	12	
1,200-pound cow weaning 558-pound calf													
DM, lb./day	26.8	27.8	28.4	27.4	26.5	25.7	24.2	24.1	24.0	23.9	24.1	24.6	
TDN, %	58.7	59.9	57.6	56.2	54.7	53.4	44.9	45.8	47.1	49.3	52.3	56.2	
CP, %	10.1	10.7	9.9	9.2	8.5	7.9	6.0	6.2	6.5	7.0	7.7	8.8	

Table 6. Daily Dry Matter Intake and Diet Nutrient Densities for Beef Cows—Mature Weight = 1,400 Pounds

	Months Since Calving												
	1	2	3	4	5	6	7	8	9	10	11	12	
1,400-pound cow weaning 612-pound calf													
DM, lb./day	29.5	30.5	31.3	30.3	29.4	28.6	27.2	27.0	26.9	26.8	27.0	27.6	
TDN, %	58.0	59.1	56.8	55.5	54.1	53.0	45.0	45.8	47.3	49.5	52.6	56.6	
CP, %	9.8	10.3	9.6	8.9	8.3	7.7	6.0	6.2	6.5	7.0	7.8	8.9	

*Table adapted from Alabama Cooperative Extension's "Nutrient Requirements of Beef Cattle." Based on NRC 1996

So what to supplement with? In recent years we have relied heavily on co-products (CGF, DDGS, Soyhulls, etc.) to provide a cheap protein and energy supplement. The persistent drought of 2012 has caused co-product feeds to rise in price and created availability issues. Producers this year may be looking at liquid feeds, protein tubs, and even drought stressed corn silage to supplement poor quality forages. Below is a list of supplements that compliment poor quality forages.

<u>Supplement</u>	<u>DM (%)</u>	<u>Crude Protein (%)</u>	<u>TDN (%)</u>
Corn Gluten Feed*	90	22	80
Corn Silage*	35	8	70
Corn Grain*	88	9	88
DDGS*	89	28	98
Soyhulls*	90	13	77
Mix 30**	43	38	109

*These values are adapted from 2011 Feed Composition Tables in Beef Magazine

**These values are adapted from MIX 30

TABLES: Below are tables that show the needed supplementation levels when feeding poor quality forage. This example assumes free choice access to the forage and a 1400 lb. cow in mid and late gestation

Mid-Gestation (1400lb cow)

	Poor Hay	Straw	Stalks	CRP Hay
CGF, lbs	0	6	3	3
Corn, lbs	0	6	3	3
Corn Silage, lbs	0	20	10	10
DDGS, lbs	0	6	3	3
Soyhulls, lbs	0	7	3.5	3.5

Late-Gestation (1400lb cow)

	Poor Hay	Straw	Stalks	CRP Hay
CGF, lbs	2.5	9	6	6
Corn, lbs	2.5	9*	6	6
Corn Silage, lbs	7	30	20	20
DDGS, lbs	2.5	9	6	6
Soyhulls, lbs	3	7	7	7

***Liquid feeds** such as MIX 30 can improve palatability, reduce forage waste, while providing some nutrient value. While the liquid supplement may be enough to meet mid-gestation requirements, it is likely going to be only part of a supplementation program during late-gestation and lactation.

* Negative associative effects occur when corn is supplemented to a forage-based diet at this level.

For more info on utilizing poor quality forages:
<http://web.extension.illinois.edu/oardc/>

