

HARDING COUNTY AG NEWS

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Fall Forage Update

Forage Sample Analysis for Harding County-Supplementing Fundamentals 2009

If you recall, in 2004 monitoring sites were set up throughout the county as a better means for determining loss for FSA programs. As a bonus, the clippings were sent to be analyzed for nutrient content. 2009 marks the 5th year of reporting the nutrient analysis of the forage samples. We will do this each year hoping that it will aid you in your supplementing decisions. If you have questions about a site nearest you, please call the office. These values are on a dry matter basis representing ranches from one end of the county to another. Samples were taken on October 14, 15, and 16.

This year, samples were collected after several moderate freezes. We usually try to wait until complete dormancy to get the most accurate winter reading. Although we had some nights down into the lower twenties, it was obvious that the soil and grass had not experienced a very hard freeze. The late rains and warm afternoons actually caused some green near the crown area. Thus, a lot of the sites collected had a small amount of green in them. I believe this is evident as we had the highest protein average (6.04) and one of the lowest ADF percentages (43.58) in the last 6 years of data. I do not think that 6% protein is a true reflection of our forage in the coming winter months.

2009 Forage Sampling Data- Harding County

#	CP%	ADF%	TDN%	Calcium	Phosphorus	Aluminum	Copper	Iron	Manganese	Molybdenum	Zinc	RFV
1	5.76	43.54	43.77	0.34	0.1	892	8.61	654	54.2	0.3	26.3	72
2	5.47	41.2	46.93	0.31	0.08	1570	11.7	1130	77.4	0.3	22.7	74
3	7.19	48.38	37.23	0.31	0.06	1000	9.24	658	46.7	0.3	19.4	64
4	No	Grass	To	Collect								
5	6.55	41	47.2	0.33	0.12	751	7.81	549	54.6	0.3	21.8	72
6	5.14	43.43	43.92	0.34	0.11	1530	7.56	1110	112	0.3	19.7	72
7	7	41.54	46.47	0.47	0.06	1420	11.9	964	89	0.3	20.4	75
8	5.65	44.69	42.22	0.39	0.11	577	9.19	339	109	0.3	21.6	69
9	3.72	46.22	40.15	0.22	0.08	617	4.81	469	34.3	0.3	12.4	67
10	4.31	44.91	41.92	0.32	0.07	1030	11.8	565	42.5	0.3	25.6	68
11	7.36	44.36	42.66	0.34	0.08	1020	7.87	708	55	0.3	20.7	73
12	8.33	40.11	48.4	0.32	0.13	1100	12	711	60.6	0.3	22.4	77
Avg	6.04	43.58	43.72	0.34	0.09	1046.09	9.32	714.27	66.85	0.30	21.18	71.18

The following information on how to digest this chart is presented almost verbatim every year after we analyze forage. I believe it is a simple, common sense way of looking at your supplementation strategy (if any) for the winter. I also believe that cow efficiency and management can go a long way to not having to supplement at all.

This chart indicates that we should be supplementing protein in amounts that help increase forage digestibility. When crude protein levels are below 7%, we should start to think about supplementing. That is pretty much every winter in Harding County. In order to determine how much to feed and how often, ask yourself a simple question:

Do my cows have grass to eat in the pasture? If yes, is it brown or green? If green, don't feed. If brown, protein is likely deficient and inhibiting digestion. Feed a high protein supplement greater than or equal to 32% CP at .1-.3% of body weight per day. If forage is inadequate, de-stock. Then determine if green or brown. If green, supplement a 20% or less CP source at .4-.8% of body weight per day, as energy is deficient. If brown, supplement a 20-28% CP source at .3-.5% of body weight per day. If forage shortage is severe and brown, supplement with a 20% or less CP source at .4-.8% of body weight per day and then hope it rains.

This is simply a guide to help, and is not perfect. It simply says to use high protein in small amounts/d if you have grass and higher energy in larger amounts/d if you don't.

Higher protein feeds will cost more per ton than higher energy feeds because corn and other cereal starches are usually cheaper. However, it is useful to figure cost on a \$/lb CP basis because you will feed less of it and hopefully get more bang for your buck on a daily forage utilization basis.

Remember that these comments are for cows. Growing and developing animals may require more energy for their growth and maintenance requirements.

Mineral supplementation is a tricky issue. I would pay attention to the Phosphorus, Copper, and Zinc. The requirements for cattle are: **.18-.22% for P, 10-12ppm for Cu and 30-40ppm for Zn**. This data shows that all 3 of these are deficient (copper marginal). We all know that this country is low P, and most folks that feed a mineral have the required P in it. Furthermore, Cu and Zn deficiencies have been the blame for low immune response in calves from NE New Mexico. That, and the fact the high Fe and Mo levels can inhibit them from working. Ironically, some folks don't have any trouble with health in their calves and don't even feed a mineral. It is a very regional issue (even pasture to pasture).

Clipping Data

This year, I would like to include the monitoring side of the data to start showing some trends and differences. Six years is barely enough to show any of these. Monitoring is a subjective issue and the best monitoring technique is dictated by whoever you talk to next. However, the critical thing is to be consistent and keep it simple. We use the RAM (Random Assessment Methodology) because it is simple and quick. It simply involves taking ground level and landscape pictures, and collecting the information in the below charts. We compare the clipping data to a base of a thousand pounds per acre. This base was arbitrarily assigned by looking at NRCS ecological site data and adjusting the production on what our normal rainfall has been in the last 30 years, instead of using the 1912 average of 16.67 inches per year. In other words, under normal conditions using a rest rotational system or a conservative deferred grazing system, you should be able to grow a thousand pounds of forage. Some of the ecological sites we looked at in our county indicated that we should be able to grow two thousand pounds of forage in a year. We do not believe that is indicative of the current weather patterns.

These data below pretty much follow what I believe the “coffee shop talk” would be describing the “good” and “bad years”. The last 6 years of data are pretty poor except for 2005, and 2006 and they are barely above average for our clipping base. Also, rain and whether patterns are unique as the sites with the highest production also had the highest growing season rainfall the last 6 years.

The concern I believe that we should have is will the trend continue for less production? I don’t believe that I have ever seen such a lack of residual forage base in the county. Yes, there are some good spots, but the bad spots outnumber the good by a long shot. Continued lack of precipitation during the growing season and lack of late winter moisture continue to hinder production.

Please feel free to call the office if you have any questions about any of the data.

Clipping Data (Site numbers for monitoring do not correlate with site numbers for the analysis)

2004 Range Site Monitoring Program

Site	Dominant Ground Cover	Dominant Species	Avg. Stubble Height in	Soil Moisture in	LBS/Acre	Normal Production lbs/acre	% Production Loss
1	Vegetation	Blue Grama	2	>12in	576	1000	-42.40%
2	Vegetation	Blue Grama	3.5	>12in	768	1000	-23.20%
3	Vegetation	Blue Grama	5	>12in	1420	1000	42.00%
4	Vegetation	Blue Grama	3	>12in	710	1000	-29.00%
5	Vegetation	Blue Grama	3	>12in	768	1000	-23.20%
6	Vegetation	Blue Grama	3.5	>12in	806	1000	-19.40%
7	Vegetation	Blue Grama	4	>12in	1075	1000	7.50%
8	Vegetation	Blue Grama	2	>12in	537	1000	-46.30%
9	Vegetation	Blue Grama	4	>12in	1440	1000	44.00%
10	Vegetation	Blue Grama	2.5	>12in	556	1000	-44.40%
11	Vegetation	Blue Grama	3	>12in	960	1000	-4.00%
		Avg	3.23		874.18	1000.00	-12.58%

2005 Range Site Monitoring Program

Site	Dominant Ground Cover	Dominant Species	Avg. Stubble Height in	Soil Moisture in	LBS/Acre	Normal Production lbs/acre	% Producti Loss
1	Vegetation	Blue Grama	4.35	<12in	1901	1000	90.10%
2	Vegetation	Blue Grama	3	<12in	1114	1000	11.40%
3	Vegetation	Blue Grama	3.85	<12in	1133	1000	13.30%
4	Vegetation	Blue Grama	4.4	<12in	2016	1000	101.60%
5	Vegetation	Blue Grama	2.35	<12in	614	1000	-38.60%
6	Vegetation	Blue Grama	3.3	<12in	1229	1000	22.90%
7	Vegetation	Blue Grama	3.1	<12in	941	1000	-5.90%
8	Vegetation	Blue Grama	2.75	<12in	826	1000	-17.40%
9	Vegetation	Blue Grama	2.75	<12in	1383	1000	38.30%
10	Vegetation	Blue Grama	1.83	<12in	653	1000	-34.70%
11	Vegetation	Blue Grama	2.9	<12in	1094	1000	9.40%
		Avg	3.14	<12in	1173.09	1000.00	17.31%

2006 Range Site Monitoring Program

Site	Dominant Ground Cover	Dominant Species	Avg. Stubble Height in	Soil Moisture in	LBS/Acre	Normal Production lbs/acre	% Producti Loss
1	Vegetation	Blue Grama	3.5	<12in	2227	1000	122.70%
2	Vegetation	Blue Grama	3.45	<12in	691	1000	-30.90%
3	Vegetation	Blue Grama	4.2	<12in	1920	1000	92.00%
4	Vegetation	Blue Grama	4.75	<12in	2208	1000	120.80%
5	Vegetation	Blue Grama	1.9	<12in	460	1000	-54.00%
6	Vegetation	Blue Grama	1.57	<12in	460	1000	-54.00%
7	Vegetation	Blue Grama	3.2	<12in	1248	1000	24.80%
8	Vegetation	Blue Grama	3	<12in	902	1000	-9.80%
9	Vegetation	Blue Grama	3.4	<12in	1613	1000	61.30%
10	Vegetation	Blue Grama	2.68	<12in	921	1000	-7.90%
11	Vegetation	Blue Grama	2	<12in	691	1000	-30.90%
		Avg	3.06	<12in	1212.82	1000.00	21.28%

Harding County Cooperative Extension Service

2005

2009



2007 Range Site Monitoring Program

Site	Dominant Ground Cover	Dominant Species	Avg. Stubble Height in	Soil Moisture in	LBS/Acre	Normal Production lbs/acre	% Producti Loss
1	Vegetation	Blue Grama	3.6	<12in	1536	1000	53.60%
2	Vegetation	Blue Grama	2.25	<12in	921	1000	-7.90%
3	Vegetation	Blue Grama	2.25	<12in	1228	1000	22.80%
4	Vegetation	Blue Grama	3.15	<12in	1497	1000	49.70%
5	Vegetation	Blue Grama	1	<12in	576	1000	-42.40%
6	Vegetation	Blue Grama	0.9	<12in	250	1000	-75.00%
7	Vegetation	Blue Grama	1.45	<12in	576	1000	-42.40%
8	Vegetation	Blue Grama	1.2	<12in	614	1000	-38.60%
9	Vegetation	Blue Grama	1.25	<12in	921	1000	-7.90%
10	Vegetation	Blue Grama	1.55	<12in	538	1000	-46.20%
11	Vegetation	Blue Grama	1.4	<12in	672	1000	-32.80%
12	Vegetation	Blue Grama	2.4	<12in	748	1000	-25.20%
		Avg	1.87	<12in	839.75	1000.00	-16.03%

2008 Range Site Monitoring Program

Site	Dominant Ground Cover	Dominant Species	Avg. Stubble Height in	Soil Moisture in	LBS/Acre	Normal Production lbs/acre	% Producti Loss
1	Vegetation	Blue Grama	3.15	<12in	845	1000	-15.50%
2	Vegetation	Blue Grama	2.2	<12in	653	1000	-34.70%
3	Vegetation	Blue Grama	2.2	<12in	442	1000	-55.80%
4	Vegetation	Blue Grama	1.55	<12in	326	1000	-67.40%
5	Vegetation	Blue Grama	1.4	<12in	500	1000	-50.00%
6	Vegetation	Blue Grama	3.25	<12in	960	1000	-4.00%
7	Vegetation	Blue Grama	2.15	<12in	518	1000	-48.20%
8	Vegetation	Blue Grama	2.8	<12in	729	1000	-27.10%
9	Vegetation	Blue Grama	1.45	<12in	614	1000	-38.60%
10	Vegetation	Blue Grama	3.15	<12in	500	1000	-50.00%
11	Vegetation	Blue Grama	1.1	<12in	460	1000	-54.00%
12	Vegetation	Blue Grama	1.2	<12in	230	1000	-77.00%
		Avg	2.13	<12in	564.75	1000.00	-43.53%

2009 Range Site Monitoring Program

Site	Dominant Ground Cover	Dominant Species	Avg. Stubble Height in	Soil Moisture in	LBS/Acre	Normal Production lbs/acre	% Producti Loss
1	Vegetation	Blue Grama	2.55	<12in	980	1000	-2.00%
2	Vegetation	Blue Grama	1.75	<12in	710	1000	-29.00%
3	Vegetation	Blue Grama	3.85	<12in	730	1000	-27.00%
4	Vegetation	Galleta	2.2	<12in	403	1000	-59.70%
5	Vegetation	Blue Grama	0.5	<12in	100	1000	-90.00%
6	Vegetation	Blue Grama	1.8	<12in	500	1000	-50.00%
7	Vegetation	Blue Grama	1.35	<12in	326	1000	-67.40%
8	Vegetation	Blue Grama	1.1	<12in	230	1000	-77.00%
9	Vegetation	Blue Grama	1.3	<12in	460	1000	-54.00%
10	Vegetation	Blue Grama	2.3	<12in	441	1000	-55.90%
11	Vegetation	Blue Grama	1.45	<12in	211	1000	-78.90%
12	Vegetation	Blue Grama	1.05	<12in	230	1000	-77.00%
		Avg	1.77	<12in	443.42	1000.00	-55.66%