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Dairy Lines

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KANSAS DAIRY EXTENSION NEWS

http://www.oznet.ksu.edu/dp_ansi/dairylin.htm

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Upcoming Events

All Kansas Holstein Show
April 26
Hutchinson, Kansas

1997 Western Kansas Dairy Conference
May 29–31
Dodge City, Kansas

Hay Quality Will Affect Production and Profits

by J.R. Dunham

With today's high cost for protein supplement, high quality alfalfa is an extremely valuable ingredient for dairy rations. Protein is the most expensive nutrient in dairy rations, hence the value of alfalfa increases rapidly as the protein content increases. Alfalfa can be an excellent source of protein—it all depends on quality.

The quality of alfalfa is more variable than any other ingredient in dairy rations. Intake, digestibility, and protein content all depend on its quality. Considering the combination of quality and yield, alfalfa is never better than it is at bud stage of maturity. Although yield will increase somewhat to full bloom, percentage protein, digestibility and intake all decrease as maturity goes past bud stage. Between bud and full bloom stages, alfalfa digestibility decreases one-fifth, protein percentage decreases one-third, and consumption decreases two-fifths.

Not all alfalfa can be harvested at the ideal stage of maturity due to weather and other factors. However, some management practices can help supply the best quality forage to the milking herd. Harvesting first cutting alfalfa as haylage can reduce the risk of weather damage. Storing alfalfa in separate locations to be fed according to quality to different groups of animals will solve the problem of trying to make milk from lower quality alfalfa.

The most widely accepted measure of alfalfa quality is Relative Feed Value (RFV). Alfalfa RFV is determined by the content of Acid Detergent Fiber (ADF) and Neutral Detergent Fiber (NDF). ADF is an evaluation of digestibility and NDF indicates how well the forage will be consumed. Both characteristics are important in feeding programs.

Low quality alfalfa will have a RFV of about 100 and intake will be severely restricted. Some hay may test in excess of 200. Dairy quality hay will have a RFV of 160 to 180. Hay with a RFV less than 140 should not be considered for high producing cows. Some hay may test in excess of 200, but the rate of passage will likely be too high unless the amount fed is somewhat limited. Table 1 illustrates the effects of quality (RFV) on dry matter intake and income over feed cost.

Hay Quality, continued on page 2

Heart of America Dairy Herd Improvement Summary (March)

	Quartiles				Your Herd
	1	2	3	4	
Ayrshire					
Rolling Herd Average	16,102	13,709	12,989	10,618	
Summit Milk Yield 1st	57	49	50	43	
Summit Milk Yield 2nd	70	62	60	52	
Summit Milk Yield 3rd	74	67	62	54	
Summit Milk Yield Avg.	67	60	56	51	
Income/Feed Cost	1,067	966	1,062	747	
SCC 1st LACT	223	317	228	264	
SCC 2nd LACT	279	267	155	518	
SCC 3rd+ LACT	295	433	751	741	
SCC Average	268	352	355	578	
Days to 1st Service	87	84	83	104	
Days Open	126	138	123	152	
Projected Calving Interval	408	420	405	434	
Milking Shorthorn					
Rolling Herd Average	14,638	12,842	11,817	9,895	
Summit Milk Yield 1st	44	49	44	44	
Summit Milk Yield 2nd	58	56	56	35	
Summit Milk Yield 3rd	71	62	60	53	
Summit Milk Yield Avg.	57	57	52	49	
Income/Feed Cost	1,271	1,291	826	640	
SCC 1st LACT	475	214	220	591	
SCC 2nd LACT	388	208	1211	68	
SCC 3rd+ LACT	570	738	712	97	
SCC Average	468	475	695	366	
Days to 1st Service	97	91	90	97	
Days Open	131	136	107	119	
Projected Calving Interval	413	418	387	401	
Holstein					
Rolling Herd Average	21,851	18,812	16,816	13,757	
Summit Milk Yield 1st	71	63	58	50	
Summit Milk Yield 2nd	90	80	72	60	
Summit Milk Yield 3rd	95	85	77	65	
Summit Milk Yield Avg.	85	76	69	59	
Income/Feed Cost	1,868	1,553	1,530	1,027	
SCC 1st LACT	265	287	345	415	
SCC 2nd LACT	271	314	383	473	
SCC 3rd+ LACT	445	491	562	722	
SCC Average	335	378	450	576	
Days to 1st Service	91	93	95	100	
Days Open	142	141	137	142	
Projected Calving Interval	422	421	417	420	
Jersey					
Rolling Herd Average	15,818	13,342	11,717	9,751	
Summit Milk Yield 1st	51	45	40	36	
Summit Milk Yield 2nd	63	55	49	42	
Summit Milk Yield 3rd	67	58	53	46	
Summit Milk Yield Avg.	60	53	48	42	
Income/Feed Cost	1,545	1,144	1,033	853	
SCC 1st LACT	286	269	272	498	
SCC 2nd LACT	252	289	402	517	
SCC 3rd+ LACT	448	487	519	701	
SCC Average	344	376	431	602	
Days to 1st Service	87	83	97	89	
Days Open	123	119	128	124	
Projected Calving Interval	402	398	407	403	

Hay Quality, continued from page 1

The most valuable nutrient in alfalfa is protein. However, the protein content is not part of the formula for determining RFV. Fortunately, the protein content of hay is usually high in high RFV hay. Make sure, though, that the analysis for protein is high when selecting high RFV hay. Then, balance the ration to take advantage of the value of protein. You will be maximizing nutrient intake from the forage component of the ration to help control feed costs.

Table 1. Effects of Alfalfa Quality on Dry Matter Intake.

Alfalfa RFV[1]	Alfalfa dry DMI (lb)	Estimated Milk (lb)	Feed cost (cwt milk)	Income Over Feed Cost/Cow
160	32.6	68.0	$5.73	$3.58
149	31.0	64.6	$5.78	$3.37
138	29.5	61.4	$5.84	$3.17
129	28.2	58.6	$5.90	$2.99
107	27.0	56.1	$5.96	$2.83

[1]Alfalfa Prices: RFV 160 = $120.00, RFV 149 = $115.00, RFV 138 = $110.00, RFV 129 = $105.00, RFV 107 = $100.00.

New Faculty Member Joins K-State

Dr. Tim Rozell joined the faculty in Animal Sciences and Industry on March 1, 1997. He completed his Ph.D. in Animal Science from Washington State University in 1993, and subsequently worked as a postdoctoral fellow in molecular biology at the University of Iowa. At K-State, Dr. Rozell will be teaching undergraduate courses in Anatomy and Physiology and Lactation Physiology, and his research will focus on developing strategies to increase reproductive efficiency in dairy cattle and to invent methods for nonsurgical castration of farm animal species.

Dr. Rozell grew up on a beef cattle farm in Southwest Missouri, and was involved in raising replacement Holstein heifers for dairy operations. Additionally, he maintained a small herd of dairy cows and both milked and raised calves on these cows.

Tim and his wife, Marcia, their two children, Sam and Josie, and an entire pack of border collies moved to Manhattan in mid-February. Dr. Rozell is anxious to start his teaching and research programs, and looks forward to the opportunity to discuss production concerns with Kansas dairy farmers.

1997 Western Kansas Dairy Conference

May 29–31, 1997
Days Inn Dodge House
Dodge City, Kansas

sponsored by the Western Kansas Rural Economic Development Alliance

In response to adding over 12,000 dairy cows in the past two years, the Western Kansas Rural Economic Development Alliance (wKREDA) invites you to attend a special dairy conference serving large dairies. Enjoy the charm of historic Dodge City while learning why Western Kansas is the newest dairy place to grow!

Join us for an exciting three days in one of the fastest-growing dairy areas in the United States! Attend seminars and visit some of the newest and largest dairies!

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Monty Hemenover, Protiva

In-depth Review of Financing Options

Dairy Facilities and Their Designs
Jake Martin, Ag Engineer

Water Rights
Dan Rogers, State of Kansas

Animal Feed Stuff
Steve Hessman, The Hay Market News

Animal Waste and Lagoons
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Cimarron Dairy

Hodgeman County Dairy

For more information contact:
Joann Knight at 316-227-9501 or FAX at 316-227-2957.
Visit the conference site at www.wkreda.com

Hay Prices*

	Location	Quality	Price ($/ton)
Alfalfa	Southwestern Kansas	Premium	125–145
Alfalfa	Southwestern Kansas	Good	115–125
Alfalfa	South Central Kansas	Premium	110–120
Alfalfa	South Central Kansas	Good	90–100
Alfalfa	Southeastern Kansas	Premium	110–120
Alfalfa	Southeastern Kansas	Good	95–110
Alfalfa	Northwestern Kansas	Premium	110–120
Alfalfa	Northwestern Kansas	Good	80–90
Alfalfa	North Central Kansas	Premium	110–120
Alfalfa	North Central Kansas	Good	90–100

Source: USDA Weekly Hay Report, *Week ending April 4, 1997*

*Premium Hay RFV = 170–200

Feed Stuffs Prices

	Location	Price ($/ton)
SBM 48%	Kansas City	299.50–302.50
Cotton Seed Meal	Kansas City	211–211.50
Whole Cottonseed	Memphis	145
Meat and Bone Meal	Central United States	285–295
Blood Meal	Central United States	560
Corn Hominy	Kansas City	102–107
Corn Gluten Feed	Kansas City	105–107
Corn Gluten Meal 60%	Kansas City	340–350
Distillers Dried Grain	Central Illinois	130–145
Brewers Dried Grain	St. Louis	134
Wheat Middlings	Kansas City	88–92

Source: USDA Weekly Feed Stuffs Report, *Week ending April 2,*

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