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Dairy Lines

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DAIRY EXTENSION SERVICE NEWS

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Upcoming Events
Kansas & Oklahoma

Kansas State Fair
Hutchinson, Kansas
September 6
4-H Dairy Judging Contest
September 7
Jersey and Guernsey Shows
September 8
Holstein Show
September 9
Celebrity Milking Contest

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Pasture as a Nutrient Source for Lactating Dairy Cows

by Dan Waldner

The general perception is that pasture-based dairy herds are low-producing herds. However, under intensive grazing management and proper supplementation, pasture-based dairy operations can achieve excellent production levels.

Maintaining forage quality and supply is key to making pasture-based dairying work. Major factors affecting these areas include: forage species, season of year, soil fertility, stocking rate, and type of grazing management. If pastures are too mature, producers have several options for maintaining pasture quality: harvesting paddocks for hay, lead grazing with the milking herd and cleaning up with dry cows or heifers, adjusting paddock size or stocking rate, or mechanically clipping paddocks.

Keep in mind only excellent-quality pasture can support intakes sufficient to meet the energy requirements of the lactating dairy cow with minimal grain feeding. Grain-to-milk ratios of 1:3 are necessary for milk yields of more than 60 pounds per day with good pasture. Fair or poor quality pasture will not support intakes necessary to maintain production.

Concentrate Composition

Careful consideration should be given to the selection of ingredients fed to lactating cows on pasture since excellent-quality pasture is highly digestible and contains high levels of protein and low levels of fiber. As with any feeding program, the "trick" is to maximize rumen microbial production and then provide the animal with additional nutrients to maintain high milk production.

As is the case with excellent-quality pasture, the majority of the protein is degraded in the rumen. Therefore, the diet requires adequate levels of ruminally available carbohydrate in order to "capture" the pasture protein as microbial protein. In addition to maximizing rumen microbial production, providing ruminally available carbohydrates in the form of non-fiber carbohydrate (NFC) will help meet the grazing cow's need for additional energy due to increased activity as compared to cattle in confinement.

However, caution should be used when formulating diets with high levels of NFC. Most pasture-based operations feed only twice a day and high levels of NFC can lead to digestive upset and low fat tests. Generally, it is recommended that along with the traditional grains such as corn, feeds such as soyhulls, whole cottonseed,

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Heart of America Dairy Herd Improvement Summary (July)

	Quartiles				Your Herd
	1	2	3	4	
Ayrshire					
Rolling Herd Average	16,419	15,000	13,737	11,765	
Peak Milk Yield 1st	60.0	58.0	49.0	45.7	
Peak Milk Yield 2nd	74.5	72.5	68.5	60.7	
Peak Milk Yield 3rd	92.0	75.5	68.5	62.3	
Peak Milk Yield Avg.	73.5	70.0	59.5	57.7	
Income/Feed Cost	987	904	795	764	
SCC Average	267	307	423	506	
Days to 1st Service	75	73	76	82	
Days Open	134	115	116	157	
Projected Calving Interval	13.6	13.0	13.0	14.4	
Brown Swiss					
Rolling Herd Average	20,729	16,229	14,734	13,721	
Peak Milk Yield 1st	69.3	55.7	55.0	50.0	
Peak Milk Yield 2nd	88.0	69.3	72.3	62.0	
Peak Milk Yield 3rd	91.3	81.0	76.3	69.0	
Peak Milk Yield Avg.	83.0	71.0	67.7	58.7	
Income/Feed Cost	1,507	1,460	988	734	
SCC Average	349	338	572	226	
Days to 1st Service	70	64	110	75	
Days Open	143	143	176	133	
Projected Calving Interval	13.9	13.9	15.0	13.6	
Holstein					
Rolling Herd Average	21,927	19,032	16,987	13,632	
Peak Milk Yield 1st	77.3	67.5	61.9	52.4	
Peak Milk Yield 2nd	95.3	84.8	76.5	64.2	
Peak Milk Yield 3rd	102.3	91.0	83.1	69.4	
Peak Milk Yield Avg.	91.2	81.4	74.7	63.8	
Income/Feed Cost	1,722	1,457	1,226	909	
SCC Average	339	375	432	514	
Days to 1st Service	86	88	86	87	
Days Open	147	150	165	178	
Projected Calving Interval	14.0	14.1	14.7	15.1	
Jersey					
Rolling Herd Average	15,582	13,445	11,737	9,237	
Peak Milk Yield 1st	53.9	47.6	39.4	35.4	
Peak Milk Yield 2nd	65.6	58.1	53.1	42.9	
Peak Milk Yield 3rd	71.9	59.1	58.1	45.4	
Peak Milk Yield Avg.	64.0	55.0	51.6	42.4	
Income/Feed Cost	1,560	1,105	1,059	511	
SCC Average	332	278	322	456	
Days to 1st Service	93	68	102	63	
Days Open	133	129	147	143	
Projected Calving Interval	13.6	13.5	14.1	13.9	

Upcoming Events, continued

September 12
Milking Shorthorn Show
September 13
Brown Swiss and Ayrshire Show

State Fair of Oklahoma
Oklahoma City, Oklahoma
September 13
4-H/FFA Dairy Cattle Judging Contest
September 12–16
Dairy Show

Tulsa State Fair
Tulsa, Oklahoma
September 20
4-H/FFA Dairy Cattle Judging Contest
September 18–21
Dairy Show

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wheat midds, or corn gluten feed should be incorporated. These feeds can deliver appropriate levels of highly digestible carbohydrate to the rumen, to compliment the protein in the pasture, while providing an additional source of fiber. Additionally, use of these feeds will generally provide a safety factor to reduce the possibility of digestive upset. Feeding more than two times a day can also provide additional benefit, especially if grain intakes exceed 16 pounds per day and the feed is fed in meal form.

Since pasture-based rations provide adequate amounts of soluble and degradable protein, high-producing cows often need some source of rumen undegradable protein in order to meet requirements for high milk production. By products such as brewers grains, distillers grains, corn gluten meal, blood meal, and fish meal can be used to provide additional protein. However, the response from ingredients high in rumen undegradable protein are highly dependent on the other ingredients in the diet, as well as the grazing management conditions and production level of the cows. Use of these feeds may minimize ruminal ammonia concentrations, which have been linked to metabolic and reproductive problems.

Summary

- Feeding programs for lactating dairy cows must be developed to compensate for the variation in nutrient content of pasture. Consideration should be given to the botanical composition of the pasture and growth stage of the forages in the pasture.
- Adequate energy must be provided to account for the increase in maintenance requirements. Provide adequate rumen available carbohydrate to compliment the soluble protein in the pasture.
- Protein concentration of the grain mix must be adequate to meet the requirements for peak milk yield. Supplemental grains should be formulated to minimize soluble protein through selection of protein supplements which are not highly degraded in the rumen.
- Supplemental grains should maximize the use of high fiber ingredients to hedge against possible digestive upset and low fat test. Feeding grain three or more times per day will provide additional benefit.

Find Out More!

Contact your extension livestock or agronomy personnel or a qualified nutritionist to see what can be done on your farm to improve pasture quality, supplement properly and ultimately improve production and your bottom line.

Don't Forget the Heifers

by James R. Dunham

Feeding and management of replacement heifers during July and August can have a big impact on their performance this fall. All too often, fall freshening heifers are a disappointment. They either do not milk as well as expected and / or too many freshen with high somatic cell counts (SCC).

Many of the problems with fall freshening heifers are associated with heifers on pasture. If heifers are not supplemented with grain during the hot months, they will probably not be as large as expected and production will be depressed. The quality of grass in pastures during the hot months will not provide enough protein and energy to meet requirements for adequate growth. In fact, the nutrients provided on mature grass is about enough to meet maintenance requirements. Most heifers will require 7 to 8 pounds of a 16 percent protein grain mix in order to grow adequately.

A lot of dry cows are also pastured with the bred heifers. The same disappointment is often seen in the fresh cows since the pasture did not provide enough nutrients for adequate body condition as they approached freshening. Feeding dry cows and springing heifers the same grain mix usually works well.

SCC problems in fall freshening heifers may be caused by springing heifers standing in ponds or by flies. If the dry cows are with the heifers, expect the same problems when they freshen. Moving springers from pasture to a dry lot can solve this problem. Even in a dry lot, heifers may become infected with mastitis if muddy conditions develop around the feed bunk.

Fly control is always important, but even more so as cows and heifers approach freshening. Flies can spread mastitis causing bacteria from one teat to another. Thus, too many heifers and cows are infected with mastitis when they freshen.

Hay Prices*—Kansas

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

Source: USDA Weekly Hay Report, *Week ending August 1, 1997*

*Premium Hay RFV = 170–200
Good Hay RFV = 150–170

Hay Prices—Oklahoma

	Location	Quality	Price ($/ton)
Alfalfa	Central / Western, OK	Premium	110–130
Alfalfa	Central / Western, OK	Good	80–110
Alfalfa	Panhandle, OK	Premium	110–120
Alfalfa	Panhandle, OK	Good	90–110

Source: Oklahoma Department of Ag, *July 31, 1997*

Feed Stuffs Prices

	Location	Price ($/ton)
SBM 48%	Kansas City	288.50–291.50
Cotton Seed Meal	Kansas City	185–189
Whole Cottonseed	Memphis	175
Meat and Bone Meal	Central United States	260–268
Blood Meal	Central United States	565
Corn Hominy	Kansas City	92–94
Corn Gluten Feed	Kansas City	N / A
Corn Gluten Meal 60%	Kansas City	355–360
Distillers Dried Grain	Central Illinois	115–123
Brewers Dried Grain	St. Louis	108
Wheat Middlings	Kansas City	60–64

Source: USDA Weekly Feed Stuffs Report, *Week ending August 1, 1997*

Mother Cows Need "Mothering" During the Dry Period

by James R. Dunham

There are at least seven things you can do for dry cows that will pay big dividends when they reach their next lactation, so why not turn the tables and "mother" those dry cows? They'll love you for it and you'll love those dollar dividends!

Here's what you can do:

1. Plan for a 60-day dry period. Forty-five days is long enough, but some cows calve two weeks early.
2. Turn dry by discontinuing milking abruptly. Reduce grain feeding a week before drying on cows producing more than 50 pounds of milk.
3. Dry-treat all quarters at drying off time. Mastitis treatments usually are most effective during the dry period. Identify all dry treated cows to avoid milking dry cows.
4. Separate dry cows from milking cows since they usually need different rations.
5. Provide dry hay or pasture for the dry cows. If dry cows are pastured, keep them out of ponds. Year-round silage feeding can cause some digestive problems in the next lactation. Grass hay is preferred to alfalfa. Grass hay supplemented with a grain balanced for protein, NEL, calcium, phosphorus, and vitamins A, D, and E will be a good nutrition program. Provide trace mineralized salt free choice.
6. Two to three weeks before calving, increase the rate of grain feeding to about 1 percent of body weight.
7. Provide a clean place for calving, it can help reduce post-calving problems.

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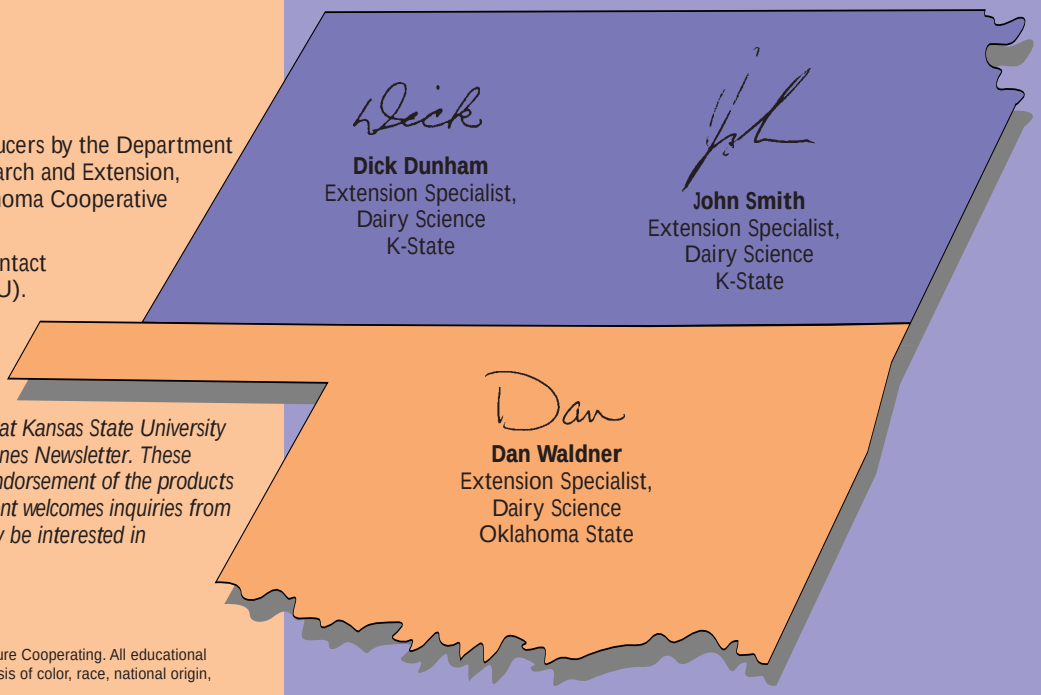

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