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Dairy Lines

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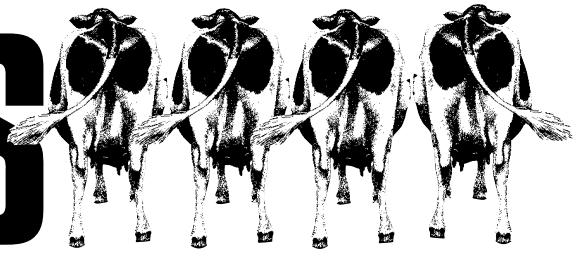
KANSAS DAIRY EXTENSION NEWS



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Upcoming Events

March 2
Ayrshire, Holstein & Jersey Annual Meetings

Kansas Dairy Commission & Kansas Dairy Association Annual Meeting
Holidome, Manhattan

March 3-6
National DHIA Annual Meeting
Kansas City, MO

March 21
Kansas Foraged Grassland Council Annual Meeting
Arkansas City

Can It Be Determined If Individual Cows Are Responding To rBST?

by John F. Smith

When dairy cows are fed a feed additive that increases milk production or given a vaccine to prevent disease, does every cow's milk production go up and does every cow remain free of the disease? The answer to both of these questions is no. How often have you seen a group of sick calves treated with an antibiotic? The majority of calves usually recover from the illness, but aren't there always one or two that recover a little slower, or not at all? This is referred to as biological variability.

To demonstrate the variability associated with milk production, I have graphed the first nine DHIA test days on 10 individual cows from the Kansas State University Dairy, and the average of these 10 cows. You will notice a tremendous difference between cows on a given test day. Individual cows also have big and little differences between test days. But when the milk weights of the 10 cows are averaged, the curve resembles the typical lactation curve that we have locked in our minds.

This variability in milk production is seen whether or not rbST is used on a group of cows. It is important to realize that because of this variability we could very easily take cows

"How often have you seen a group of sick calves treated with an antibiotic?"

continued on page 3<

The Nutrition Program
Considering By-Products?

by J.R. Dunham

"The price of WCS has escalated at least as much as grain and protein supplements..."

With higher than normal feed ingredient prices, consideration should be given to by-product feeds to help control feed costs. There is no inexpensive feeding program today, but by-product feeds can replace some ingredients in the ration and save on feed costs — provided the ration is nutritionally balanced with the addition of by-products.

One of the most commonly fed by-products is whole cottonseed (WCS). The price of WCS has escalated at least as much as grain and protein supplements, and many dairy farmers are wondering if they can still justify feeding WCS. The answer is probably yes, if WCS is fed in the early lactation period as a means of concentrating energy and fiber in the ration.

Wheat mids are a by-product that should receive consider-

continued on page 3<

Heart of America Dairy Herd Improvement Summary (January)

	Quartiles				Your Herd
	1	2	3	4	
Aryshire					
Rolling Herd Average	16,707	14,291	13,499	11,957	
Summit Milk Yield 1st	54.8	50.7	50.0	46.7	
Summit Milk Yield 2nd	67.7	65.3	60.9	58.5	
Summit Milk Yield 3rd	77.3	66.6	64.3	57.6	
Summit Milk Yield Avg.	66.4	60.3	58.4	53.8	
Income/Feed Cost	930	870	778	576	
SCC 1st LACT	182	153	203	111	
SCC 2nd LACT	224	140	247	311	
SCC 3rd+ LACT	349	258	438	368	
SCC Average	267	189	309	279	
Days to 1st Service	84	92	84	81	
Days Open	112	134	130	129	
Projected Calving Interval	394	416	412	411	
Brown Swiss					
Rolling Herd Average	18,986	16,264	14,503	12,274	
Summit Milk Yield 1st	58.9	52.8	49.3	41.7	
Summit Milk Yield 2nd	75.5	66.4	63.2	52.7	
Summit Milk Yield 3rd	61.6	74.1	68.3	56.5	
Summit Milk Yield Avg.	71.5	65.1	61.1	51.3	
Income/Feed Cost	1,421	1,177	952	936	
SCC 1st LACT	191	213	176	235	
SCC 2nd LACT	250	171	319	239	
SCC 3rd+ LACT	395	420	413	560	
SCC Average	294	302	326	397	
Days to 1st Service	85	91	85	108	
Days Open	130	137	140	144	
Projected Calving Interval	418	424	427	428	
Holstein					
Rolling Herd Average	21,432	18,787	16,879	13,939	
Summit Milk Yield 1st	67.4	62.1	56.2	49.1	
Summit Milk Yield 2nd	84.9	78.5	69.8	59.6	
Summit Milk Yield 3rd	89.7	82.4	74.8	63.5	
Summit Milk Yield Avg.	79.2	73.7	66.7	58.0	
Income/Feed Cost	1,492	1,237	1,103	874	
SCC 1st LACT	185	193	217	256	
SCC 2nd LACT	211	232	255	316	
SCC 3rd+ LACT	336	366	406	498	
SCC Average	246	271	304	381	
Days to 1st Service	87	91	90	95	
Days Open	141	138	133	136	
Projected Calving Interval	421	418	413	414	
Jersey					
Rolling Herd Average	15,455	13,324	11,888	10,303	
Summit Milk Yield 1st	50.0	45.4	40.3	35.8	
Summit Milk Yield 2nd	60.9	54.2	48.2	43.7	
Summit Milk Yield 3rd	65.3	57.5	53.3	46.5	
Summit Milk Yield Avg.	58.6	52.7	48.2	42.7	
Income/Feed Cost	1,358	1,023	871	807	
SCC 1st LACT	185	270	267	231	
SCC 2nd LACT	203	263	264	323	
SCC 3rd+ LACT	373	386	407	478	
SCC Average	271	321	333	368	
Days to 1st Service	87	86	91	85	
Days Open	120	117	123	124	
Projected Calving Interval	399	396	401	403	

Milk Quality...

Heifers' SCC may be too High

by J. R. Dunham

The Somatic Cell Count (SCC) is one of the important quality measures of milk. SCC affects the shelf life and flavor of milk as well as the yield of manufactured products, especially cheese.

A dairy's goal should be to produce milk with less than 200,000 SCC. However, most herds do not meet this goal. The Heart of America DHIA Quartile Summary shows that the higher Rolling Herd Average (RHA) quartiles usually have the lowest SCC, yet none average as low as 200,000 SCC.

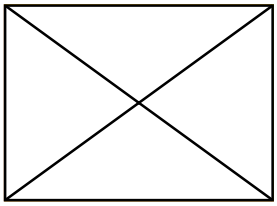
There are many reasons why the SCC is higher than desired, but in too many herds the reason is that fresh heifers are too high. This indicates that the heifers were probably infected with mastitis prior to calving. Once animals have been infected, their SCC tends to remain higher than desired throughout their lifetime in the herd. Thus, many herds could lower the SCC average by reducing the SCC average fresh heifers.

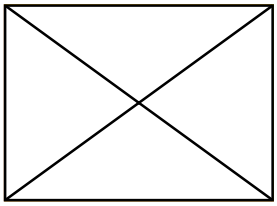
If the first lactation SCC average exceeds 100,000 or the percent of first lactation heifers exceeding 300,000 SCC is greater than 5 percent, too many heifers are probably freshening with mastitis. Notice that all of the quartile averages for first lactation exceed 100,000 SCC. Yet, the SCC average of first lactation heifers in low SCC herds consistently average less than 100,000.

Heifers become infected with mastitis before freshening when sanitation in their environment is less than desirable. Such things as springer heifers wading in ponds before calving or going to feed bunks surrounded by mud holes too often result in heifers freshening that are already infected with mastitis. Usually, springing heifers and dry cows will be in the same lot and the older fresh cows will also have higher than desired SCC averages.

The best way to determine if there is a heifer SCC problem is to review the SCC Report (DHIA-230). Determine how many heifers have a higher than desired SCC the first month of lactation. Heifers with SCC higher than 300,000 are more than likely infected with mastitis.

Every dairy farmers is encouraged to review the SCC report to determine if fresh heifers are contributing too much to the SCC average. In most situations the fresh cows will also be too high.



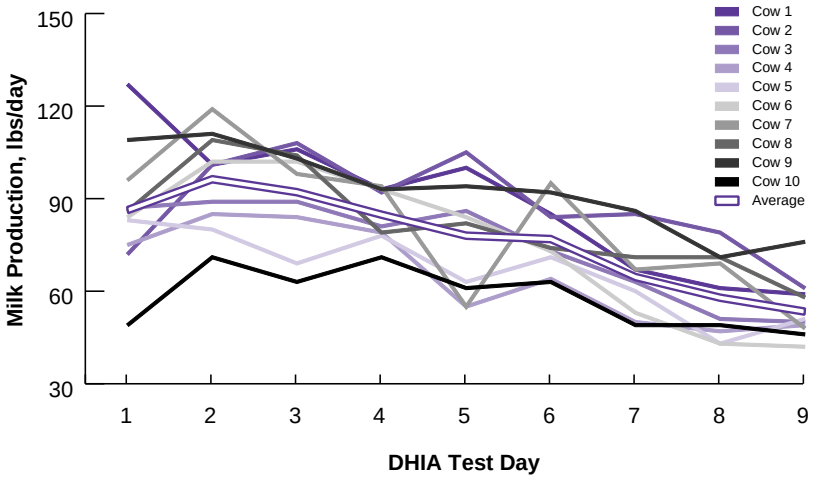


rbST, *continued from page 1*

off rbST that we perceive are not responding, when in reality they may be responding.

The next question that usually comes up is: "Can I tell if an individual cow is responding by using daily milk weights?" Because of the high variability in milk production between different animals (see Graph 1) it is not feasible to determine when an individual cows is responding or is not responding to rbST. At the present time, I'm not aware of a published study that indicates that daily milk weights can be used to determine which individual cows are or are not responding. The temptation is great with a technology such as rbST that permits individual cows to be put on or taken off the product very easily, to quit supplementing certain individual cows. But the practical management key is to supplement groups of cows and monitor the average response of the group.

Graph 1. **Milk Production of Individual cows and average milk production for 10 second and third lactation cows.**



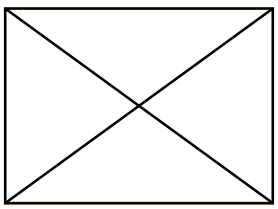
Considering By-products?, *continued from page 1*

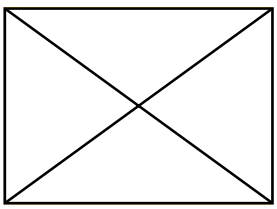
ation in the feeding program. Anytime mids are priced lower than corn, up to 12 pounds per cow can be substituted for corn and soybean meal in the ration. However, the ration must be balanced after including wheat mids to take advantage of the savings in feed costs. Mids also make a good heifer grain.

Table 1 shows the estimated value of some by-products compared to the current price of typical dairy ration ingredients. Whenever these by-products may be purchased for less than the estimated value, savings in feed costs will be realized, provided the ration is balanced. These values can be compared to the prices shown in the Feed Stuffs Prices table.

Table 1.
Estimated value of by-product feeds compared to current feed prices.

	Value ($/ton)
Whole Cottonseed	188.00
Meat and Bone Meal	400.00
Blood Meal	360.00
Corn Hominy	156.00
Corn Gluten Feed	186.00
Corn Gluten Meal	320.00
Distillers Dried Grain	190.00
Brewers Dried Grain	166.00
Wheat Mids	150.00





Hay Prices*

	Location	Quality	Price ($/ton)
Alfalfa	Southwestern Kansas	Premium	95-110
Alfalfa	Southwestern Kansas	Good	85-95
Alfalfa	South Central Kansas	Premium	90-100
Alfalfa	South Central Kansas	Good	80-90
Alfalfa	Southeastern Kansas	Premium	90-100
Alfalfa	Southeastern Kansas	Good	80-90
Alfalfa	Northwestern Kansas	Premium	90-100
Alfalfa	Northwestern Kansas	Good	80-90
Alfalfa	North Central Kansas	Premium	90-105
Alfalfa	North Central Kansas	Good	80-90

Source: USDA Weekly Hay Report, *Week ending 2 February 1996*

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

Feed Stuffs Prices

	Location	Price ($/ton)
SBM 48%	Kansas City	226.50-229.50
Cotton Seed Meal	Kansas City	224-226
Whole Cottonseed	Memphis	165
Meat and Bone Meal	Central United States	217-230
Blood Meal	Central United States	450-455
Corn Hominy	Kansas City	135-138
Corn Gluten Feed	Kansas City	125-135
Corn Gluten Meal 60%	Kansas City	335-345
Distillers Dried Grain	Central Illinois	137-145
Brewers Dried Grain	St. Louis	134-135
Wheat Middlings	Kansas City	111-114

Source: USDA Weekly Feed Stuffs Report, *Week ending 2 February 1996*

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