

Dairy News

August 2000

Current Research: MSU and Cornell Collaborate on Heat Stress Study

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This summer is typical of those seen in Mississippi – hot and humid. As temperatures soar over 90 degrees dairy cattle are experiencing severe heat stress throughout the southern region, which can compromise cow health, milk quality and production. To combat this, many producers use various combinations of fan and sprinkler systems to cool cows in free stalls, milking parlors and other animal holding areas. While it is known that fans and sprinklers are of great benefit for cooling cows during summer months, how efficient these systems are in helping cows to dissipate heat under varied climatic conditions have not been effectively quantified. Specifically, it is not known entirely how differences in relative humidity and the amount of cow surface wetting from sprinklers might interact with one another to influence the ability of a cow to cool itself effectively.

To study this more thoroughly, MSU is collaborating with Dr. Peter Hillman, a senior lecturer in environmental physiology and agricultural engineering from Cornell University in New York. Dr. Hillman visited MSU in early July as part of a cooperative research project investigating how fan and sprinkler cooling systems interact to facilitate evaporative cooling at the level of the hair coat for cows in Mississippi. These data will be compared to similar studies performed at the University of Arizona last summer and the University of Hawaii later this year. This multi-state effort will determine how the effectiveness of fan and sprinkler systems may differ in locations with similar ambient temperature gradients, but dramatic differences in relative humidity. It is anticipated that further work in this area may provide more precise recommendations regarding the degree of cow surface wetting required to maximize the cooling effects facilitated by sprinkler and fan combinations in different climates. After all, a comfortable cow is an economical cow.

Current Research: American Society of Animal Science & American Dairy Science Association Meet in Baltimore

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From July 24th to July 28th more than 3000 animal scientists, teachers, extension agents, students and industry representatives from around the world descended on Baltimore, MD to share current research and perspectives on animal agriculture as part of the joint annual meeting of American Society of Animal Science (ASAS) and American Dairy Science Association (ADSA). Planned symposia, workshops and individual research and poster presentations were conducted. Topics ranged from “Agricultural Biotechnology in the Global Marketplace” to “Endocrinology and Metabolism in Transition Dairy Cows”.

Mississippi State University had a good showing at the meetings with five abstracts submitted and presented by graduate students from the Department of Animal and Dairy Sciences over the course of the five day conference. Some items of special interest at the meetings included sessions on dairy facilities management, which concentrated on methods for alleviating heat stress and monitoring nutrient intake, the National Germ Plasm Preservation Program, which is a national program established to “bank” (i.e., store) tissues from specific sires and breeds to prevent the loss of genetic diversity, and a special session was presented on the physiology and economics of alternate methods for the initiation and maintenance of lactation. In addition to providing an outlet for the reporting of current research, the meeting also brings together scientists from various institutions with similar research interests, and thus facilitates collaborations between scientists that often de-

velop into multi-state, multi-investigator research projects. Some of these arrangements have become more formalized, and one in particular is a southern regional research project which will examine more thoroughly the influence of heat stress on the high producing dairy cow. This discussion and research group will develop collaborative research investigations to try and establish better ways for cooling cows during the summer months. Finally, advances from industry were also present including a new ultrasound machine for pregnancy detection which was not only affordable, but would fit on your wrist like a watch (though more like the micro-TVs that are now available). These types of devices may become common on dairy farms in the future for use by farm managers for confirming pregnancy and even ovulation as part of a reproductive management program. In short, these meetings are important for us at Mississippi State and other institutions in that they provide a forum for the discussion of recent findings and results between scientists from across the globe. Through this medium, advances in animal science are reported and new technologies presented that will hopefully one-day result in a beneficial tool for dairy and other livestock industries to utilize in production animal agriculture.

Information Age

(reprinted from Georgia Dairyfax)

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It has been said that we live in the information age. We are bombarded by information at an alarming rate. News travels throughout the world in just a few seconds and we are able to see events almost as they happen. The dairy industry has always been dependent upon information and has fully embraced the new technology. The Internet provides a wealth of information on all phases of the dairy industry. Only a few clicks of a mouse and one has access to information on the other side of the country or the other side of the world. We are no longer dependent upon what information is close at hand.

Email, short for electronic mail, has also become important to the dairy industry. It allows people to communicate directly with each other without playing "phone tag". A message is sent via electronic media to another person's electronic mailbox. The receiving individual then reads and responds to the message at their leisure. It may take several messages to fully answer all the questions but it allows both persons to communicate at their convenience. Discussion lists are the electronic counterpart of "bulk mailings". Sending a message to one address results in the distribution of that message to dozens or even thousands of addresses simultaneously. All people on the list have a common interest. These lists have the effect of opening a round table discussion.

There are several active dairy discussion lists. The oldest and most familiar is Dairy-L. Originally developed for extension educators it has grown to 3500 members in all areas of dairy production. It has also become an international list with members from over 60 countries.

Other national/international dairy discussion lists include Dairy Action Discussion List (DAD), E-dairy, and Graze-L. Each has its own subscriber list and focus. Guidelines and protocol also differ from list to list.

Cream-L is a regional dairy discussion list that has been established to provide a forum for people to discuss issues more specific to the Southeastern United States. The intent is to provide information and discuss issues of concern to people in this region of the country.

Welcome to the information age and may all your travels be smooth.

Upcoming Events

Aug. 31 -Tupelo State Fall Dairy Show

Lee County Ag. Complex, Verona, MS
 Sept. 16 -Columbia State Fall Dairy Show
 Columbia, MS
 Oct. 12-14 - Mississippi State Fair Dairy Shows
 Fairgrounds, Jackson, MS
 Nov. 9-Mississippi/Louisiana Dairy Mgt. Conference
 Percy Quin State Park, McComb, MS

JUNE 2000 HONOR ROLL HERDS*

DAIRY	COUNTY	NO. COWS	LBS. ECM	2X 3X	Rolling Herd Average			
					MILK	FAT	PROT	DOT
HERITAGE DAIRY	TATE	413	76.2	2X	23872	964	766	06/12
MS.STATE UNIVERSITY	OKTIBBEHA	165	74.1	2X	21024	800	695	06/14
RONALD H CLARK	LINCOLN	78	63.6	2X	21822	774	720	06/10
J & L DAIRY	WALTHALL	230	63.0	2X	21289	717	685	06/27
COASTAL PLAIN EXP STA	NEWTON	145	62.9	2X	21873	760	692	06/10
THOMPSON BROTHERS	MARSHALL	139	62.4	2X	20981	800	681	05/30
MACTOC FARM	OKTIBBEHA	195	61.6	2X	23059	844	769	06/01
MELVIN NICHOLSON	NEWTON	124	61.2	2X	22665	794	758	06/27
J & L DAIRY	WALTHALL	230	59.8	2X	21193	695	686	05/30
BRAD BEAN	AMITE	223	59.3	2X	22161	831	706	06/14
DIXIE DAIRY SALES	CARROLL	302	58.2	2X	18614	781	580	06/25
MILTON & TERRY JEFCOAT	JONES	219	57.4	2X	21289	699	695	06/20
ROWZEE JERSEY FARM	NEWTON	150	56.5	2X	17451	819	676	06/19
MACTOC FARM	OKTIBBEHA	201	55.3	2X	22736	831	758	06/29
THOMPSON BROTHERS	MARSHALL	136	54.1	2X	20867	800	677	06/27
CLEMMER AND HILL DAIRY	TIPPAH	130	53.1	2X	18727	634	623	06/07
KNIGHTS DAIRY FARM	JONES	133	52.4	2X	20593	700	673	06/21
JEFCOAT & WILLIAMS DAIRY	JONES	64	50.5	2X	20734	703	656	06/13
SPEAKS & SON	WALTHALL	397	50.2	2X	17469	696	565	05/27
FREEMAN DAIRY	PIKE	128	49.5	2X	20779	697	694	05/30
LEON BARDWELL DAIRY	LINCOLN	47	49.3	2X	20491	625	641	06/03
PAUL W EDWARDS	NEWTON	138	49.3	2X	18512	694	601	05/30
NORTH MS BR EXP STA	MARSHALL	111	49.3	2X	21383	738	677	06/15
PAT ARD	LINCOLN	163	49.2	2X	16134	599	539	06/06
SPEAKS & SON	WALTHALL	391	49.0	2X	17629	700	566	06/29

Top 25 herds enrolled on supervised DHIA testing programs by test day energy corrected milk for all cows.

** ECM = (.3246 x test day milk) + (12.86 x test day lbs. fat) + (7.04 x test day lbs. protein)



July 2000 BFP Price

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 Dairy Economist, MSU

Class I Milk Price Falls for First Time in Six Months to \$15.05 per cwt.

With the USDA's implementation of Federal Order reform on January 1, 2000, this newsletter began reporting the Advanced Class I milk price as a barometer, or indicator, of the direction and magnitude of movements in milk prices. The Advanced Class I milk price is to be announced by the USDA each month on the Friday on or before the 23rd of each month and will represent the Class I milk price for the next (or subsequent) month. Thus, the USDA announced on July 21 that the

July 2000 Advanced Class I “base” milk price was \$11.95 per cwt. (for 3.5% butterfat milk). After adding the \$3.10 Class I price differential for the pricing zone which includes Atlanta and Starkville (Oktibbeha County) to this “base” price, the Advanced Class I milk price for June will be \$15.05 per cwt.

The intermediate-term market outlook for dairy product and milk price is “improving” with the onset of the late summer, early-summer milk production deficit period and the beginning of schools after summer recesses. During August, September and October, milk supplies declines as dairy product demands increases, which tend to cause milk prices to trend upward. Thus, prospects for milk prices are improving and where most observers believe that milk prices will increase 15 to 20 percent by October or November. However, the long-term forecast for milk prices during 2001 remains discouraging with most dairy market analysts expecting milk prices to show little improvement over the next 12 to 18 months. Cheese markets have displayed some relatively small price movements during July but have remained in the \$1.20 to \$1.25 per pound range. Butter prices have also shown similar price movements where cash prices for Grade AA butter have fluctuated between \$1.15 and \$1.25 per pound since late-June. Nonfat dry milk (NDM) prices continue to remain at government support levels and have been stuck at \$1.03 per pound for Grade A NDM for the past six months. Notwithstanding the past months of Class III milk prices at or near the government support level, dairy farmer have yet to respond to the recent market signals and reduce the number of cows in their herds. June milk production statistics again demonstrate that dairy producers (in the 20 reporting states) have maintained 65,000 more cows being milked and these cows produced an average of 30 more pounds per cow when compared to June 1999. The extremely hot and dry weather across the South has caused milk output to fall dramatically while these weather conditions have also forced milk production to decline in the North and Upper Midwest. For the first time in 2000, Florida milk handlers imported milk during the third week of July where 50 to 60 loads were shipped in from the Middle Atlantic states (this compares to 0 loads the week before and 13 load imported during this same week of 1999). These “ebbing” milk supplies have bolstered dairy product prices to levels above USDA support prices and reduced the amounts of the USDA’s Commodity Credit Corporation (CCC) weekly purchases to about 7 to 10 million pounds of NDM and no cheddar cheese products. The worsening of summer conditions has forced milk output to decline. Dairy industry observers predict that milk prices will begin their usual seasonal upward trend from August to October with Class III prices expected to peak near the \$12.00 level in October. The strength and stability in butter and cheese prices have provided evidence of some hope for a recovery in dairy product prices which should promote a \$2.00 to \$3.00 per cwt. in Class I milk prices over the next several months. The August Advanced Class I price (for the Atlanta and Starkville, Zones 6, 7 and 8) was reported at \$15.05 per cwt. and represents an DECREASE of 51 cents per cwt. (-3.3%) BELOW the corresponding June price of \$15.56. The August 2000 Class I price is 55 cents per cwt. (or +3.8%) GREATER than the August 1999 Class I price of \$14.50. Dairy producers need to remember that the August Class I price will be the most important factor that will influence the revenues derived from the sale of their milk produced during August. Because 60+ % of Mississippi milk is utilized as Class I products, farmers will not realize any decreases in revenues from this 0.51 decrease in the August price until they receive their “settlement” checks in mid-September as payment for milk sold during August 2000.

Milk Production.

During 2000, increased milk production and excessive milk supplies have plagued the dairy industry and caused milk prices to fall to a level not seen in more than 20 years. Despite these exceedingly low milk prices, dairy farmers have yet to respond by either decreasing the number of cows in their herds or reducing their feed costs. As a result, national milk production increased 2.8% (or 329 million pounds) between June 1999 and June 2000 where 65,000 (10,000 more cows than in May 2000) more cows were milked that yielded an average of 30 more pounds per cow.

Comparing the June statistics for 1999 vs.2000 (for the 20 states that the USDA reports monthly data) 16 states recorded increased output while only four states (Michigan, Minnesota, New York and Wisconsin) noted only slight declines in production. Of the 20 states, the greatest increases in June-to-June output were registered in Indiana (+15.4%), Idaho (+14.6%), New Mexico (+11.5%), California (+6.6%), and Arizona (+6.5%). All three of the southeastern states remaining in this 20-state reporting scheme also recorded increased output between the selected months (i.e.; Kentucky up 2.3%, Florida up 2.0%, and Virginia up 1.3%). For the second (April–June) quarter of 2000, the USDA reports that national production was 2.6% (1.1 billion pounds) greater than the same quarter of 1999. Across the Southeast, milk production increased a little (0.15% or 5 million pounds) where 6 of the 11 states in the region recorded declining output. However, the states of Arkansas, Florida, Kentucky and Virginia each reported increased production ranging from 2 to 3%. Comparing 1999 and 2000 second quarter statistics for Mississippi indicate that milk production fell 2.0% (down 3 million pounds) and farmers milked 2,000 fewer cows (38,000 in 1999 vs. 36,000 in 2000). A continuation of hot and dry summer weather conditions could force milk output to fall off across the U.S. and this would be more likely if the price of cull cows improve

and feed costs were to increase as the summer drought affects forage and feed grain production. Most market analysts believe that the single most important factor that will cause milk output to ebb is increased culling of dairy herds. But even with increased cull cow prices and feed costs, cow numbers are not projected to decline much over the next 6 to 12 months. In the absence of a major weather event, excessive milk supplies are likely to plague the dairy industry through the remainder of 2000 and most of 2001.

Dairy Product Prices.

As summer school recesses end through August and September, dairy product prices are expected to display their usual upward trend as the demand for fluid milk products increase and the normally hot summer temperatures result in declining milk supplies. Despite this positive outlook, dairy product prices seemed to be searching for some direction and momentum during July. As has been the fact since last September, NDM remained at or near the CCC support price level of \$1.03 per pound for Grade A NDM powder. However, butter and cheddar cheese prices have been “bouncing around” but generally trended downward searching for some indication of what the industry has seen in the demand-supply balance during July. The confusion in these markets have been attributed to recent USDA Cold Storage statistics that report increased commercial and government-owned inventory levels of both butter and cheeses that has been countered by increased seasonal demand for dairy products. For example, Grade AA butter prices have continued their downward slide from peak of \$1.3700 per lb. reported on May 26 while cheddar cheese prices that displayed surprising strength during the first half of June have weakened due to the Cold Storage Report. On the Chicago Mercantile Exchange (CME), 40# block prices were reported at \$1.2600 on June 27 and have experienced some fluctuations were \$1.2300 on July 28 -- a 3-cent (-2.4%) decrease over this period. Barrel prices have displayed more variability than block prices during July where the CME reported a cash price for 500# processed barrel cheddar cheese at \$1.2250 per pound on June 27 compared to \$1.1100 on July 28 – a 11.50 cent (-9.4%) decrease during this time span. The butter market continues to be described by the industry as “mixed with weak prices” with most processors waiting to receive orders for the winter Holiday season before making any moves to bid-up butter and milk prices. On June 26, the Grade AA butter price was \$1.1575 per lb. compared to \$1.1625 on July 28 – an increase of 0.50 cents (-0.4%) per lb. CME Grade A NDM prices continue to remain utterly constant near the government support price level and have been recorded at \$1.0300 per lb. since September 1999. The only bright spot in the NDM market is that weekly government (USDA/CCC) purchases of non-fortified and fortified NDM have declined over the past two months from a level of 10 to 12 million pounds per week to about 6 to 9 million pounds. Between October 1, 1999 and July 28, the CCC has purchased more than 406 million lbs. NDM and 6.7 million lbs. of cheddar cheese.

Near-term Market Outlook.

The recent “confused” state of both cheddar cheese and butter markets has led to an increasingly negative dairy market outlook remaining months of 2000. Butter and cheddar cheese prices that seemed to be recovering in June and early July have suffered a marked downturn as the result of reports of increased inventories of these products. Despite this dreary news, milk prices are expected to show their usual upward seasonal trend through the rest of this summer and into the fall. But, the recent weakness in both cheese and butter prices during late July has dampened the amount of anticipated upward movements in Class I milk prices during September, October and November. This feebleness in the market has been exhibited in the falling prices seen in the Class III milk futures contracts prices during the last weeks of July. As a result, the September Advanced Class I milk price for Mississippi (Starkville zone) should remain around the \$15.25 to \$15.50 per cwt. Level. The July Class III (which replaced the BFP) is expected to increase about \$1.00 per cwt. Above the June price and be reported near the \$10.50 level. The CME reported on August 2 that the Class III futures contracts settlement prices were \$10.62 for the July contract, \$10.25 for August, \$10.34 for September, and \$10.90 for October. However, a prolonged period of heat stress that would curtail milk output per cow and restrain milk supplies could reverse this situation very rapidly in October and November which could result in dramatic and significant near-term price increases. As always, dairy farmers (and analysts) must use extreme caution and recall what history has taught us during the past decade where milk prices have been *very* volatile and (wildly) responsive to weather conditions, forage quality and availability, feed costs, and dairy programs that have affected the quantity of milk output.

Federal Dairy Program Provisions of the FY 2001 Agricultural Appropriations Bill

The U.S. House of Representatives and Senate both recently passed their separate and different versions of the Fiscal Year (FY) 2001 Agricultural Appropriations Bill. Each of these pieces of legislation contains various provisions related to federal dairy policy. This newsletter will review the U.S. Senate’s version of this legislation and describe the different elements related to dairy programs. Please note that the House and Senate will meet (probably in September) in a Conference Committee to reconcile the differences in these two versions of this bill and then this legislation must be sent to the President for his signature before these dairy provisions become the law and implemented by various agencies of the USDA.

On July 20th, the Senate passed a \$75.3 billion Agricultural Appropriations Bill for FY 2001 that contains four provisions to dairy policy. The most important feature proposes to extend the Dairy Price Support Program until the end of 2001 at \$9.90 per cwt. (same level as currently set under this program. This dairy policy provision is also found in the House version and thus, is likely to be found in the Conference Committee's "reconciled" bill. The Dairy Price Support Program is important to dairy farmers in Mississippi and across the U.S. because this program establishes a minimum price for cheddar cheese, butter and NDM which, in turn, sets a minimum price for raw milk. When dairy product prices fall near or below these minimum prices, the USDA and its CCC will purchase and remove quantities of these products "off the market" and thereby, supporting milk prices at the \$9.90 per cwt. level. The second important feature of this bill strives to provide direct market loss assistance payments to dairy farmers during 2001 totaling approximately \$443 million. This is similar to the disaster payments that dairy farmers received in 1999 and 2000 that amounted to \$200 million and \$125 million, respectively. The third and fourth dairy provisions of this legislation are not as important to dairy farmers as the first two, but could still help bolster milk prices. The third element places a ban on the use of ultra filtered (UF) dry milk products in natural cheese processing. The final provision authorizes the USDA to re-bid cancelled subsidized dairy product exports funded under the Dairy Export Incentive Program.

Southeast F.O. #7 "Blend" Price Increases 38 cents to \$13.78 in June.

The Southeast Federal Order Milk Market Administrator reported the June 2000 "blend" or uniform price for milk delivered in the Atlanta and Starkville "base" zone of Federal Order (FO) #7 was \$13.78 per cwt. for 3.5% butterfat milk. (Please see the Mississippi map for zones where Zone 5 is minus \$0.20, Zone 6, 7 and 8 are the "base" zones, Zones 9 is plus \$0.20, Zone 10 is plus \$0.30, and Zone 11 is plus \$0.40 per cwt.) The June "blend" price of \$13.78 for the "base" zone of FO #7 represents a INCREASE of 38 cents per cwt. (+2.8%) compared to the May price of \$13.40. The June 2000 blend price is 69 cents per cwt. (or -4.8%) BELOW the June 1999 blend price of \$14.47. Average butterfat test and the butterfat price in each of the four milk class categories has a direct impact on the value of milk pooled in FO #7 and the amount of milk revenues available to be distributed to dairy farmers (but NOT reported in this newsletter). For June, the respective butterfat price and the average butterfat test for each milk class were: Class I, \$1.2195 per lb. and 2.254%; Class II, \$1.4198 per lb. and 6.626%; Class III, \$1.4128 per lb. and 4.050%; and, Class IV, \$1.4128 per lb. and 9.322%. Factoring the average butterfat test (or number of pounds of butterfat) with the pounds of skim milk used in each of the four milk classes provides what this newsletter will describe as the "net" milk price for each class of milk. The June "blend" price of \$13.78 per cwt was determined using the following factors: (1) a "net" Class I price of \$13.25 on 64.26% of the milk marketed; (2) the "net" price for Class II of \$17.13 on 13.22% of the milk; (3) a "net" price of \$10.43 on 18.76% of the milk used for Class III products; and (4) the "net" Class IV price of a "whopping" \$22.75 on 3.76 of the milk marketed.

Uniform or "BLEND" Price -June 2000

North Mississippi:	\$13.58
North Central Mississippi:	\$13.78
South Central Mississippi:	\$13.98
South Mississippi	\$14.08
Coastal Mississippi:	\$14.18

Class I Price for August 2000 (Advance Price)

North Mississippi:	\$14.85
North Central Mississippi:	\$15.05
South Central Mississippi:	\$15.25
South Mississippi:	\$15.35
Coastal Mississippi:	\$15.45

