



**ARIZONA AND NEW MEXICO
DAIRY NEWSLETTER**

**COOPERATIVE EXTENSION
The University of Arizona
New Mexico State University**

APRIL 2006

THIS MONTH'S ARTICLE:

**Evaluate the Efficacy of Your Cooling
System Through Core Body Temperature**

¹MJ VanBaale, ²JF Smith, ²MJ Brouk, and ¹LH Baumgard
¹The University of Arizona, ²Kansas State University



I appreciate the opportunity I was given to work with dairy producers and industry professionals in Arizona over the past few years. The exceptional support myself and the University of Arizona received during my tenure was truly humbling. Research funding support from the United Dairymen of Arizona and their members allowed the extension program to focus on specific needs and issues that directly impacted producers and the overall dairy industry. The unprecedented support by the industry and commitment from the University to serve the dairy industry was the key to the invaluable relationships and accomplishments achieved from research outcomes, as well as events such as Dairy Day and the Arizona Dairy Production Conference. I am grateful for the opportunity, experiences, and life long friendships that I have gained during my in time in Arizona. Farewell to my friends and colleagues who I have been honored to serve during my time as Extension Dairy Specialist at the University of Arizona. I wish you all the best and look forward to working with many of you in the years to come.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matt Van Baale'. The signature is stylized and cursive.

Matt Van Baale

Evaluate the efficacy of your cooling system through core body temperature

¹MJ VanBaale, ²JF Smith, ²MJ Brouk, and ¹LH Baumgard
¹The University of Arizona, ²Kansas State University

The effects of heat stress on animal production are well known and have been investigated and documented for a number of years. It is commonly accepted that a temperature humidity index (THI) ≥ 72 creates a stressful environment for lactating dairy cattle. The basic thermoregulatory strategy of a dairy cow is to maintain a core body temperature higher than ambient temperature to allow heat to flow out from the core via four basic routes of heat exchange (conduction, convection, radiation and evaporation). When ambient temperature conditions approach body temperature the only viable route of heat loss is through evaporation and if ambient conditions exceed body temperature heat flow will reverse and an animal will become a heat sink. Therefore, estimating the thermal environment around animals is necessary to understanding their cooling needs. Because the typical location of cooling equipment relative to animals and because of the positions of the animals themselves within housing facilities, there are a wide variety of microenvironments present within a facility. As a consequence, accurately determining the degree of heat stress that a cow is experiencing over time is a challenge.

Traditionally respiration rate (RR; breathes/minute) has been used as a tool to measure the severity of heat stress on an animal. Although RR will vary with body weight and milk yield of an animal it is a relatively accurate tool for determining the degree of heat stress. Recently, cattle housed in the Animal Research Complex (ARC; Tucson, AZ) environmental facility under thermal neutral conditions ($65.8 \pm 1.0^\circ\text{F}$; $63.5 \text{ THI} \pm 0.7$) for 48 hours followed by heat stress ($98.0 \pm 1.5^\circ\text{F}$; $79.6 \text{ THI} \pm 1.0$) for 16 out of 24 hours/day for 3 days had RR of 50 during thermal neutral and 71 during heat stress conditions, respectively. If the skin surface temperature of a dairy cow is below 95 F the temperature gradient between the core and skin is large enough for an animal to effectively use all four routes of heat exchange. Infrared thermography guns have been shown to be a low cost approach to estimate actual skin surface temperature of animals. However, because of variability in skin surface moisture at a given point in time, the accuracy of infrared guns to predict an animals heat load may be limited. For example, if an animal recently walked under a shade from being out in the sun (solar radiation) the infrared measurement of skin will not be reflective of cows under the shade that were not recently exposed to the sun.

Core body temperature (CBT) has been shown to decrease in cooled cows compared to non-cooled cows. Recently, cattle housed in the ARC environmental facility under thermal neutral conditions ($65.8 \pm 1.0^\circ\text{F}$; $63.5 \text{ THI} \pm 0.7$) for 48 hours followed by heat stress ($98.0 \pm 1.5^\circ\text{F}$; $79.6 \text{ THI} \pm 1.0$) for 16 out of 24 hours/day for 3 days had vaginal temperatures of 101.8°F during thermal neutral and 103.5°F during heat stress conditions, respectively. Our group has measured CBT using intravaginal probes attached to CIDRs (as applicators only) to determine where and/or when cows are getting hot and/or remaining the coolest. These devices are inserted and remain inside the cow's vagina measuring CBT every 60 seconds for up to 6 days. Such technology allows a cows CBT to be monitored and recorded 24 hours/day as they move throughout a facility. Specifically, a holding pen (designed to allow 15square ft/cow), without

proper cooling, is an area where dairy cows may experience severe heat stress (Figure 1), however, if properly cooled vaginal temperature will be reduced (Figure 2).

Figure 1. Two 24 hour periods of elevated vaginal temperature in a holding pen.

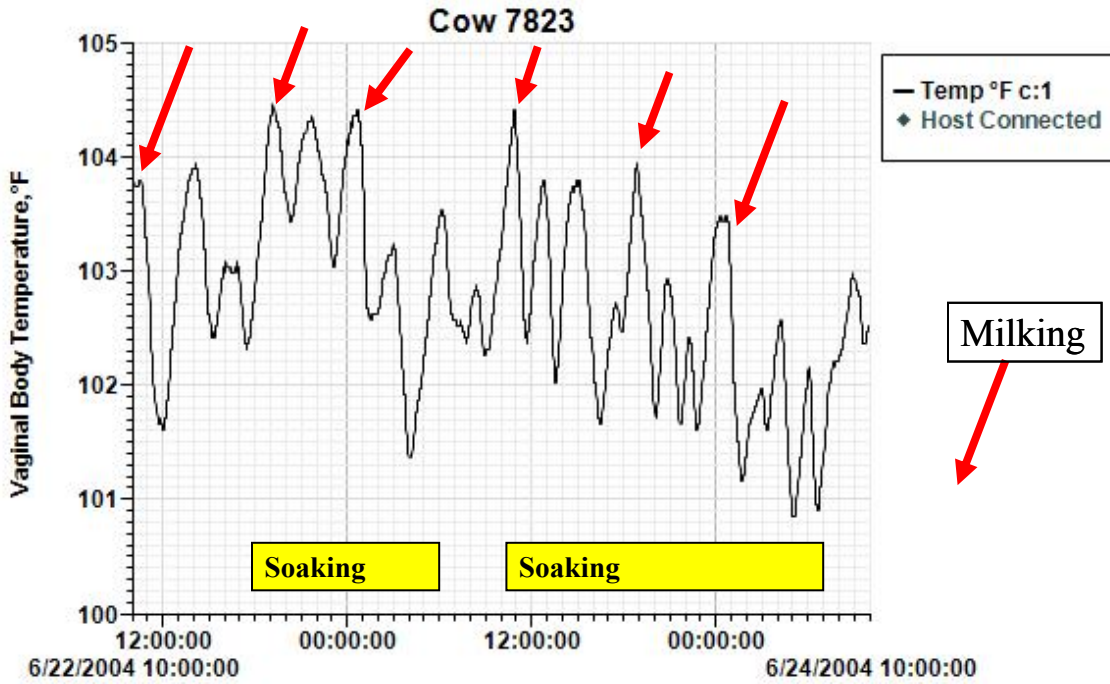
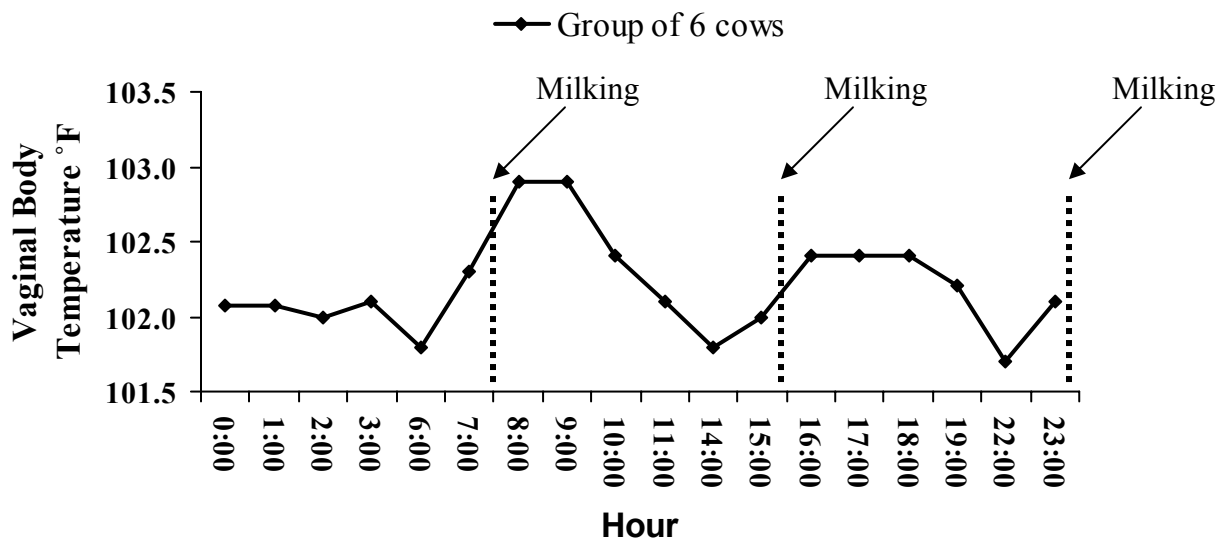


Figure 2. One 24 hour period of excellent holding pen and parlor exit lane cooling.



Utilizing a CBT probe to continuously monitor vaginal (core body) temperature allows a producer to accurately determine where and when a cow is experiencing the most heat stress. As a consequence, management decisions can be made to improve cooling and reduce heat stress thus, improving cow performance. In addition, parlor exit sprinklers have demonstrated that when a cow enters a corral with a wet body surface the moisture will evaporate thus cooling the cow for an additional period of time depending on weather conditions. The effects of barn and cooling system design are important factors in determining the efficacy of cooling on dairy facilities. Factors critical to the correct design and cooling system are obviously dependent on the geographic location of the dairy. Specifically, daily average high and low temperature, annual rain fall, humidity and prevailing winds.

Dairy producers are in business primarily to make a profit, which can be realized by increasing the price received for their product or decreasing the cost of producing it. Cooling systems installed in dairies located in hot semi-arid climates like AZ can contribute up to 20% of the total construction cost (\$200 to \$500/cow). In addition, since variable expenses such as electricity and water can cost \$0.10 to \$0.15 cow/day it is critical that the investment is paying off and cows are being cooled efficiently and effectively. Using intravaginal probes to monitor core body temperature of dairy cows is an inexpensive effective means of evaluating the impact of heat on cows within a facility.

HIGH COW REPORT

JANUARY 2006

MILK

Arizona Owner	Barn#	Age	Milk	New Mexico Owner	Barn #	Age	Milk
* Stotz Dairy	16160	05-03	41,130	* Providence Dairy	9250	05-01	39,590
* Withrow Dairy	5409	05-01	37,360	* Providence Dairy	5601	03-09	37,670
* D & I Holstein	2450	05-04	36,510	* Providence Dairy	8254	-----	36,990
* Mike Pylman	7081	05-06	36,020	* Providence Dairy	9279	05-01	36,670
* Stotz Dairy	18715	03-03	35,880	* S.A.S. Dairy	4335	07-00	36,623
* Dairyland Milk Company	733	06-09	35,190	* Pareo Dairy	1424	07-05	36,466
* Shamrock Farms	Z136	06-04	35,140	* Providence Dairy	832	04-01	36,270
* Dairyland Milk Company	1245	05-01	34,910	* Providence Dairy	9842	04-11	35,710
* Stotz Dairy	18625	03-04	34,460	* Cross Country Dairy	2112	04-03	35,540
* Withrow Dairy	5853	04-09	34,460	* Cross Country Dairy	622	03-04	35,230

FAT

* Stotz Dairy	16160	05-03	1,471	* Pareo Dairy	1424	07-05	1,383
* Dairyland Milk Company	7367	07-00	1,351	* Pareo Dairy	1288	08-02	1,318
* Stotz Dairy	17406	04-03	1,334	* Pareo Dairy	8641	09-00	1,314
* D & I Holstein	2099	05-09	1,332	* Tallmon Dairy	764	04-05	1,310
* Stotz Dairy	20096	03-01	1,298	* Milagro Dairy	9234	05-06	1,303
* Mike Pylman	6875	04-02	1,280	* Cross Country Dairy	111	06-06	1,285
* SW Regional Dairy Cent	63931	04-03	1,277	* Providence Dairy	9250	05-01	1,277
* Parker Dairy	8217	05-11	1,276	* Goff Dairy #2 Dairy	4950	06-06	1,276
* Shamrock Farms	U426	07-02	1,271	* Butterfield Dairy	720	05-06	1,275
* Parker Dairy	7929	06-01	1,261	* New Direction Dairy	7896	-----	1,262

PROTEIN

* Stotz Dairy	16160	05-03	1,088	* S.A.S. Dairy	4335	07-00	1,132
* Stotz Dairy	18708	03-03	1,017	* Milagro Dairy	9234	05-06	1,127
* Withrow Dairy	5409	05-01	1,010	* Tallmon Dairy	235	07-03	1,112
* Mike Pylman	6697	05-07	1,006	* Cross Country Dairy	6262	06-06	1,101
* Stotz Dairy	18625	03-04	993	* Providence Dairy	9279	05-01	1,099
* Stotz Dairy	18703	03-03	984	* Providence Dairy	5601	03-09	1,091
* Stotz Dairy	18786	03-02	981	* Providence Dairy	5264	04-06	1,088
* Parker Dairy	7253	05-03	976	* Providence Dairy	9250	05-01	1,084
* Mike Pylman	2993	04-08	970	* New Direction Dairy	7896	-----	1,060
* Mike Pylman	6875	04-02	969	* Cross Country Dairy	622	03-04	1,059
				* S.A.S. Dairy	4179	07-03	1,059

*all or part of lactation is 3X or 4X milking

ARIZONA - TOP 50% FOR F.C.M.^b January 2006

<u>OWNERS NAME</u>	<u>Number of Cows</u>	<u>MILK</u>	<u>FAT</u>	<u>3.5 FCM</u>	<u>RR</u>
* Stotz Dairy West	2,131	27,911	1,003	28,327	45
* Joharra Dairy	1,400	25,487	872	25,156	27
* Mike Pylman	6,299	24,803	868	24,795	38
* Del Rio Dairy, Inc.	1,136	24,865	864	24,757	35
* Stotz Dairy East	1,141	24,483	872	24,722	22
* Red River Dairy	5,181	24,746	864	24,706	44
Paul Rovey Dairy	149	23,875	873	24,475	58
* Zimmerman Dairy	1,178	24,049	856	24,275	37
* Dairyland Milk Co.	3,084	23,193	818	23,288	37
* Arizona Dairy Company	5,738	23,426	811	23,276	35
Parker Dairy	4,290	22,478	816	22,947	25
* Goldman Dairy	2,224	22,931	792	22,754	25
* Withrow Dairy	5,224	23,855	766	22,732	38
* Danzeisen Dairy, Inc.	1,401	22,485	785	22,447	36
* Yettem	2,864	18,716	866	22,131	23
* Dutch View Dairy	1,790	21,405	767	21,689	29
Lunts Dairy	584	20,854	773	21,548	31
* Shamrock Farm	8,469	22,607	726	21,544	38
* RG Dairy, LLC	1,154	21,403	757	21,526	45
* DC Dairy, LLC	1,016	20,598	731	20,756	28
* Saddle Mountain	3,025	21,152	683	20,218	28
* Jerry Ethington	547	19,907	715	20,198	35

NEW MEXICO - TOP 50% ACTUAL MILK January 2006

<u>OWNERS NAME</u>	<u>Number of Cows</u>	<u>MILK</u>	<u>FAT</u>	<u>3.5 FCM</u>	<u>DIM</u>
* Tallmon Dairy	471	26,563	933	26,615	206
* Pareo Dairy #1	1,476	25,322	904	25,608	211
* Flecha Dairy	2,184	24,779	916	25,568	200
* Providence Dairy	2736	25,947	882	25,522	205
* Pareo Dairy #2	3,403	23,336	943	25,382	189
* New Direction Dairy 2	2,135	24,451	906	25,264	221
* Milagro	3,488	24,201	875	24,654	206
* Do-Rene	2,379	24,611	852	24,458	184
* Macatharn	1,000	23,765	831	23,751	188
* SAS Dairy	1,857	23,655	809	23,347	187
* Goff Dairy 1	4,243	22,457	831	23,186	203
* Cross Country Dairy	3,463	22,966	817	23179	170
* Butterfield Dairy	2,088	23,586	794	23,074	197

* all or part of lactation is 3X or 4X milking

^b average milk and fat figure may be different from monthly herd summary; figures used are last day/month

ARIZONA AND NEW MEXICO HERD IMPROVEMENT SUMMARY FOR OFFICIAL HERDS TESTED JANUARY 2006

		ARIZONA	NEW MEXICO
1.	Number of Herds	43	27
2.	Total Cows in Herd	75,518	55,413
3.	Average Herd Size	1,756	2,052
4.	Percent in Milk	88	86
5.	Average Days in Milk	206	196
6.	Average Milk – All Cows Per Day	63.0	62.8
7.	Average Percent Fat – All Cows	3.6	3.7
8.	Total Cows in Milk	68,956	47,858
9.	Average Daily Milk for Milking Cows	71.9	72.6
10.	Average Days in Milk 1st Breeding	83	72
11.	Average Days Open	165	143
12.	Average Calving Interval	14.1	13.9
13.	Percent Somatic Cell – Low	87	83
14.	Percent Somatic Cell – Medium	8	11
15.	Percent Somatic Cell – High	5	6
16.	Average Previous Days Dry	60	64
17.	Percent Cows Leaving Herd	33	31
		STATE AVERAGES	
	Milk	22,155	23,132
	Percent butterfat	3.50	3.53
	Percent protein	2.90	2.98
	Pounds butterfat	776	819
	Pounds protein	644	688

HIGH COW REPORT

FEBRUARY 2006

MILK

Arizona Owner	Barn#	Age	Milk	New Mexico Owner	Barn #	Age	Milk
* Mike Pylman	21210	04-00	39,910	* Flecha Dairy	4011	05-06	45,470
* Mike Pylman	21476	05-05	35,600	* Flecha Dairy	2030	06-06	41,060
* Stotz Dairy	18216	03-08	35,470	* Providence Dairy	5349	04-05	39,130
* Stotz Dairy	18764	03-04	35,370	* Providence Dairy	8338	-----	37,770
* Stotz Dairy	15981	05-05	35,280	* Providence Dairy	1007	03-11	37,750
* Stotz Dairy	18707	03-04	35,150	* Butterfield Dairy	687	06-06	37,570
* Danzeisen Dairy, LLC	3961	06-02	33,860	* Providence Dairy	4812	05-05	36,970
* Mike Pylman	7924	04-01	33,380	* Providence Dairy	9296	05-02	36,960
* Goldman Dairy	7174	05-01	33,230	* Cross Country Dairy	1665	06-06	36,740
* Mike Pylman	774	02-11	33,020	* Providence Dairy	5589	03-11	36,710

FAT

* Mike Pylman	21210	04-00	1,628	* Flecha Dairy	2030	06-06	1,889
* Mike Pylman	876	02-11	1,361	* Flecha Dairy	4011	05-06	1,849
* Stotz Dairy	15981	05-05	1,347	* Flecha Dairy	7977	05-06	1,616
* Dutch View Dairy	2159	03-07	1,304	* Flecha Dairy	2442	06-06	1,419
* Dutch View Dairy	1339	05-01	1,296	* Flecha Dairy	8058	05-06	1,415
* Goldman Dairy	7174	05-01	1,283	* Flecha Dairy	8200	05-06	1,403
* Stotz Dairy	17657	04-02	1,282	* Flecha Dairy	1108	05-06	1,386
* Mike Pylman	765	02-11	1,274	* Pareo Dairy	8251	05-00	1,366
* Stotz Dairy	18707	03-04	1,271	* Flecha Dairy	8353	05-06	1,354
* Mike Pylman	36	04-10	1,268	* Pareo Dairy	8181	08-09	1,342

PROTEIN

* Mike Pylman	21210	04-00	1,428	* Flecha Dairy	2030	06-06	1,396
* Stotz Dairy	18216	03-08	1,035	* Flecha Dairy	4011	05-06	1,334
* Stotz Dairy	18764	03-04	1,015	* Pareo Dairy	8181	08-09	1,197
* Mike Pylman	7924	04-01	1,010	* Providence Dairy	9670	05-01	1,144
* Stotz Dairy	15981	05-05	1,003	* Providence Dairy	5349	04-05	1,124
* Stotz Dairy	17657	04-02	1,000	* Providence Dairy	4812	05-05	1,108
* Mike Pylman	21061	03-00	996	* Cross Country Dairy	1665	06-06	1,096
* Goldman Dairy	3880	06-06	983	* New Direction Dairy	4536	-----	1,094
* Stotz Dairy	17452	04-04	979	* Providence Dairy	5437	04-03	1,087
* Goldman Dairy	6779	05-04	971	* Butterfield Dairy	1565	05-06	1,086

*all or part of lactation is 3X or 4X milking

**ARIZONA - TOP 50% FOR F.C.M.^b
February 2006**

<u>OWNERS NAME</u>	<u>Number of Cows</u>	<u>MILK</u>	<u>FAT</u>	<u>3.5 FCM</u>	<u>CI</u>
* Stotz Dairy West	2,156	28,214	1,007	28,523	14.8
* Mike Pylman	6,284	25,276	885	25,275	14.5
* Joharra Dairy	1,400	25,487	872	25,156	13.2
* Stotz Dairy East	1,127	24,962	879	25,042	15.0
* Del Rio Dairy, Inc.	1,192	24,783	864	24,722	13.0
* Red River Dairy	5,181	24,746	864	24,706	13.8
Paul Rovey Dairy	149	23,995	870	24,478	13.0
* Zimmerman Dairy	1,192	24,212	861	24,426	14.6
* Arizona Dairy Company	5,738	23,426	811	23,276	14.4
* Dairyland Milk Co.	3,018	23,244	815	23,262	13.7
Parker Dairy	4,273	22,672	826	23,193	14.6
* Withrow Dairy	5,267	24,099	779	23,048	13.2
* Goldman Dairy	2,171	22,866	792	22,726	13.7
* Danzeisen Dairy, Inc.	1,410	22,654	788	22,569	14.8
* Yettem	2,736	18,905	869	22,261	13.3
* RG Dairy, LLC	1,201	21,883	772	21,976	13.9
* Shamrock Farm	8,435	22,804	732	21,726	13.6
Lunts Dairy	584	21,133	774	21,684	13.2
* Dutch View Dairy	1,792	21,224	755	21,416	14.0

**NEW MEXICO - TOP 50% ACTUAL MILK
February 2006**

<u>OWNERS NAME</u>	<u>Number of Cows</u>	<u>MILK</u>	<u>FAT</u>	<u>3.5 FCM</u>	<u>CI</u>
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UNAVAILABLE AT PRESS TIME

* all or part of lactation is 3X or 4X milking

^b average milk and fat figure may be different from monthly herd summary; figures used are last day/month

ARIZONA AND NEW MEXICO HERD IMPROVEMENT SUMMARY FOR OFFICIAL HERDS TESTED FEBRUARY 2006

		ARIZONA	NEW MEXICO
1.	Number of Herds	37	<i>UNAVAILABLE AT PRESS TIME</i>
2.	Total Cows in Herd	71,257	
3.	Average Herd Size	1,926	
4.	Percent in Milk	89	
5.	Average Days in Milk	208	
6.	Average Milk – All Cows Per Day	67.4	
7.	Average Percent Fat – All Cows	3.6	
8.	Total Cows in Milk	67,086	
9.	Average Daily Milk for Milking Cows	75.0	
10.	Average Days in Milk 1st Breeding	82	
11.	Average Days Open	165	
12.	Average Calving Interval	14.2	
13.	Percent Somatic Cell – Low	86	
14.	Percent Somatic Cell – Medium	9	
15.	Percent Somatic Cell – High	5	
16.	Average Previous Days Dry	61	
17.	Percent Cows Leaving Herd	31	
		STATE AVERAGES	
	Milk	22,070	<i>UNAVAILABLE AT PRESS TIME</i>
	Percent butterfat	3.58	
	Percent protein	2.90	
	Pounds butterfat	779	
	Pounds protein	654	

HIGH COW REPORT

MARCH 2006

MILK

Arizona Owner	Barn#	Age	Milk	New Mexico Owner	Barn #	Age	Milk
* Stotz Dairy	18689	03-06	41,400	* Providence Dairy	1887	02-11	39,060
* Stotz Dairy	18502	03-07	41,170	* Providence Dairy	4740	05-08	37,880
* Mike Pylman	5342	07-02	39,560	* Providence Dairy	4019	07-01	36,340
* Danzeisen Dairy, LLC	3857	06-03	36,990	* Wayne Palla Dairy	9345	04-06	36,220
* Withrow Dairy	4041	06-02	34,890	* Providence Dairy	5513	04-03	35,690
* Mike Pylman	21824	04-07	34,700	* Providence Dairy	2985	08-11	35,670
* Withrow Dairy	7265	04-00	34,220	* Pareo Dairy	382	07-02	35,393
* Withrow Dairy	3855	04-08	34,030	* Providence Dairy	9148	05-04	35,350
* Danzeisen Dairy, LLC	3961	06-02	33,860	* New Direction Dairy	3437	-----	35,250
* Mike Pylman	692	03-01	33,430	* Wayne Palla Dairy	2865	04-05	34,880

FAT

* Stotz Dairy	18689	03-06	1,785	* Providence Dairy	2985	08-11	1,370
* Stotz Dairy	18502	03-07	1,462	* Milagro Dairy	4749	06-06	1,335
* Stotz Dairy	18342	03-08	1,342	* Butterfield Dairy	1523	05-06	1,325
* Danzeisen Dairy, Llc.	3857	06-03	1,332	* New Direction Dairy	3437	-----	1,312
* Goldman Dairy	7174	05-01	1,283	* Wayne Palla Dairy	9345	04-06	1,296
* Mike Pylman	21678	06-09	1,280	* Goff Dairy 2 Dairy	1773	06-06	1,272
* Mike Pylman	21824	04-07	1,268	* Pareo Dairy	8970	04-09	1,260
* Stotz Dairy	20247	03-01	1,262	* Pareo Dairy	4704	04-01	1,257
Parker Dairy	7141	05-10	1,260	* Wayne Palla Dairy	2865	04-05	1,249
* Shamrock Farms	7093	04-04	1,235	* Providence Dairy	5374	04-06	1,246

PROTEIN

* Stotz Dairy	18502	03-07	1,225	* New Direction Dairy	3437	-----	1,135
* Stotz Dairy	18689	03-06	1,221	* Providence Dairy	1887	02-11	1,107
* Danzeisen Dairy, LLC	3857	06-03	1,056	* New Direction Dairy	4028	-----	1,076
* Mike Pylman	5342	07-02	1,035	* Wayne Palla Dairy	9345	04-06	1,072
* Shamrock Farms	X626	06-08	1,015	* Mid Frisian Dairy	5406	06-02	1,071
* Stotz Dairy	8422	03-07	1,002	* Milagro Dairy	4749	06-06	1,058
* Shamrock Farms	U820	07-03	988	* S.A.S. Dairy	396	06-05	1,050
* Goldman Dairy	3880	06-06	983	* Providence Dairy	4019	07-01	1,048
* Mike Pylman	692	03-01	977	* New Direction Dairy	1587	06-07	1,041
* Goldman Dairy	6779	05-04	971	* New Direction Dairy	181	-----	1,038

*all or part of lactation is 3X or 4X milking

**ARIZONA - TOP 50% FOR F.C.M.^b
March 2006**

<u>OWNERS NAME</u>	<u>Number of Cows</u>	<u>MILK</u>	<u>FAT</u>	<u>3.5 FCM</u>	<u>DO</u>
* Stotz Dairy West	2,156	27,592	1,015	28,743	194
* Mike Pylman	6,319	27,527	895	25,548	180
* Stotz Dairy East	1,010	25,487	893	25,337	235
* Joharra Dairy	1,400	24,973	872	25,156	109
* Del Rio Dairy, Inc.	1,293	24,383	867	24,749	136
* Red River Dairy	5,181	24,264	864	24,706	162
* Zimmerman Dairy	1,191	23,984	863	24,492	173
Paul Rovey Dairy	149	23,040	870	24,478	162
* Arizona Dairy Company	5,632	23,430	812	23,437	190
* Dairyland Milk Co.	3,025	23,041	818	23,367	151
Parker Dairy	4,213	22,537	831	23,336	164
* Danzeisen Dairy, Inc.	1,392	22,981	819	23,251	164
* Withrow Dairy	5,267	23,852	779	23,048	163
* Goldman Dairy	2,183	22,160	791	22,747	171
* Yettem	2,708	18,355	866	22,246	114
* RG Dairy, LLC	1,242	22,441	777	22,151	171
* Shamrock Farm	8,448	21,160	740	21,939	154
Lunts Dairy	584	20,635	774	21,684	135
* Dutch View Dairy	1,767	20,738	753	21,379	163

**NEW MEXICO - TOP 50% ACTUAL MILK
MARCH 2006**

<u>OWNERS NAME</u>	<u>Number of Cows</u>	<u>MILK</u>	<u>FAT</u>	<u>3.5 FCM</u>	<u>DO</u>
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UNAVAILABLE AT PRESS TIME

* all or part of lactation is 3X or 4X milking

^b average milk and fat figure may be different from monthly herd summary; figures used are last day/month

ARIZONA AND NEW MEXICO HERD IMPROVEMENT SUMMARY FOR OFFICIAL HERDS TESTED MARCH 2006

		ARIZONA	NEW MEXICO
1.	Number of Herds	37	<i>UNAVAILABLE AT PRESS TIME</i>
2.	Total Cows in Herd	71,857	
3.	Average Herd Size	1,942	
4.	Percent in Milk	91	
5.	Average Days in Milk	209	
6.	Average Milk – All Cows Per Day	69.0	
7.	Average Percent Fat – All Cows	3.5	
8.	Total Cows in Milk	68,532	
9.	Average Daily Milk for Milking Cows	75.1	
10.	Average Days in Milk 1st Breeding	82	
11.	Average Days Open	164	
12.	Average Calving Interval	14.1	
13.	Percent Somatic Cell – Low	86	
14.	Percent Somatic Cell – Medium	8	
15.	Percent Somatic Cell – High	6	
16.	Average Previous Days Dry	60	
17.	Percent Cows Leaving Herd	32	
		STATE AVERAGES	
	Milk	22,544	<i>UNAVAILABLE AT PRESS TIME</i>
	Percent butterfat	3.50	
	Percent protein	2.90	
	Pounds butterfat	785	
	Pounds protein	660	



THE UNIVERSITY OF
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