Cooperative Extension Service
The University of Georgia College of Agricultural and Environmental Sciences

Dairy Production and Management Benchmarks

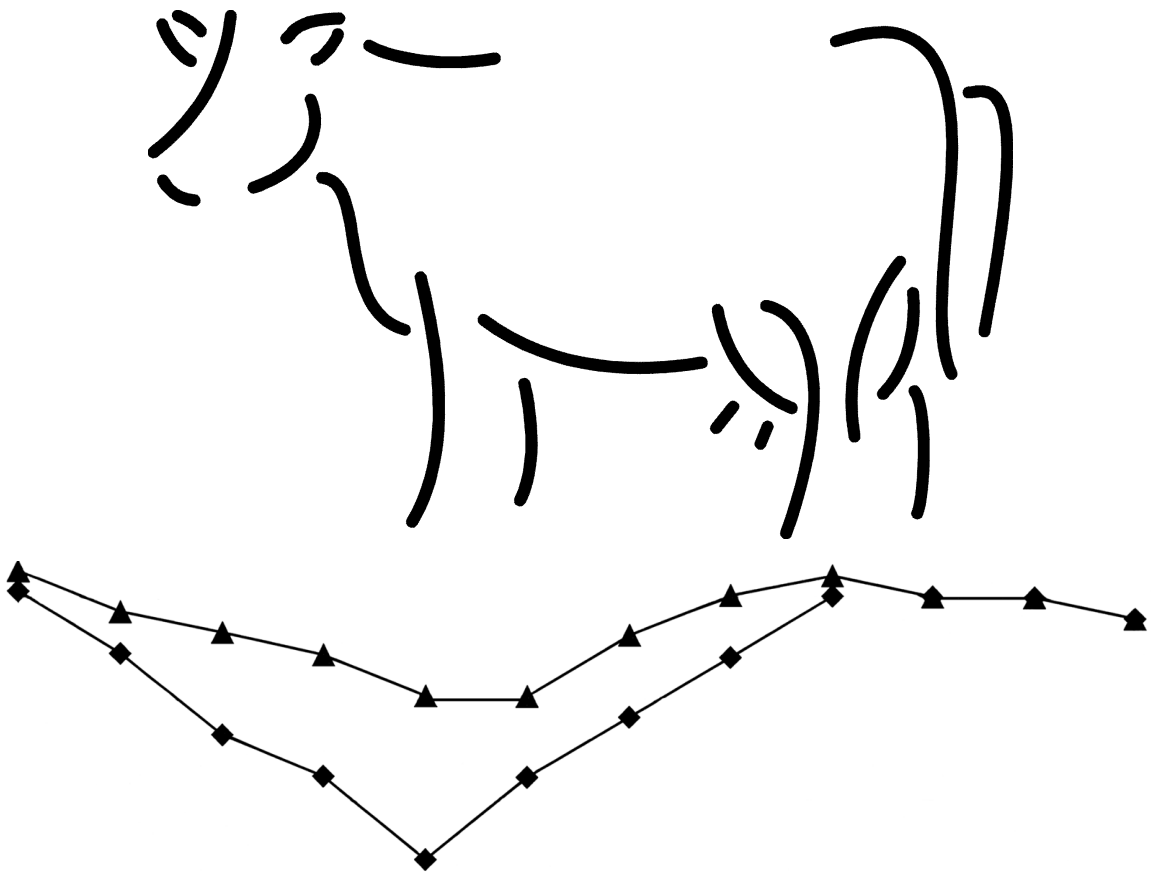

Table of Contents

Introduction . . . 3
Methods . . . 3
Rolling Herd Average Production . . . 3
Trends in Monthly Milk Production . . . 4
Monitoring Stage of Lactation Production . . . 5
Summit Milk Production . . . 5
Other Management Factors . . . 6
Summary . . . 6
References . . . 6
Additional Information . . . 6
Table 1. Rolling Herd Average Production in the Northeast Region by Herd Size . . . 7
Table 2. Rolling Herd Average Production in the Mid-South Region by Herd Size . . . 9
Table 3. Rolling Herd Average Production in the Midwest Region by Herd Size . . . 11
Table 4. Rolling Herd Average Production in the South Region by Herd Size . . . 13
Table 5. Average Daily Milk Production by Stage of Lactation for the Northeast Region by Herd Milk Production Level . . . 15
Table 6. Average Daily Milk Production by Stage of Lactation for the Mid-South Region by Herd Milk Production Level . . . 17
Table 7. Average Daily Milk Production by Stage of Lactation for the Midwest Region by Herd Milk Production Level . . . 18
Table 8. Average Daily Milk Production by Stage of Lactation for the South Region by Herd Milk Production Level . . . 20
Table 9. Average Daily Milk Fat and Protein Percent for the Northeast Region by Herd Milk Production Level . . . 21
Table 10. Average Daily Milk Fat and Protein Percent for the Mid-South Region by Herd Milk Production Level . . . 22
Table 11. Average Daily Milk Fat and Protein Percent for the Midwest Region by Herd Milk Production Level . . . 23
Table 12. Average Daily Milk Fat and Protein Percent for the South Region by Herd Milk Production Level . . . 24
Table 13. Summit Milk by Region and Herd Milk Production Level . . . 25
Table 14. Reasons Cows Left the Herd in the Northeast Region and Herd Milk Production Level . . . 27
Table 15. Reasons Cows Left the Herd in the Mid-South Region and Herd Milk Production Level . . . 27
Table 16. Reasons Cows Left the Herd in the Midwest Region and Herd Milk Production Level . . . 28
Table 17. Reasons Cows Left the Herd in the South Region and Herd Milk Production Level . . . 28
Table 18. Age of Herd and Distribution by Region and Herd Milk Production Level . . . 29

Dairy Production and Management Benchmarks

J.W. Smith, A.M. Chapa, L.O. Ely and W.D. Gilson

Introduction

An abundance of information and resources are available through the Dairy Records Management Systems (DRMS), Raleigh, NC, for use in herd management analysis. The DHI-202 Herd Summary Report is a valuable source of information. Many herd management strengths and weaknesses can be uncovered using herd summary data.

The purpose of this bulletin is to provide production and management benchmarks for Holstein herds processed by DRMS. Some examples of using and applying benchmark values are provided. However, this bulletin should be viewed primarily as a comprehensive resource of production and management benchmark values. These benchmarks will be useful to dairy producers, dairy managers, consultants, veterinarians and agribusiness representatives as a first step in the analysis of herd management practices.

Methods

Herd Summary information was obtained from the DRMS, Raleigh, North Carolina, for Holstein herds last tested in November or December, 2000. Data analysis was performed using the Statistical Analysis System (SAS) (1). Research has shown that management variables may differ by region of the country, herd size and milk production level. Consequently, benchmark values are presented for Northeast, Mid-South, Midwest and South regions (Figure 1). Within regions, values are further subdivided by either herd size or rolling herd average milk production. Values in all tables and graphs were limited to herds with a minimum of 25 cows and a rolling herd average of 12,000 pounds or more. All analyses and calculations are based on herd average information and not individual cow data.

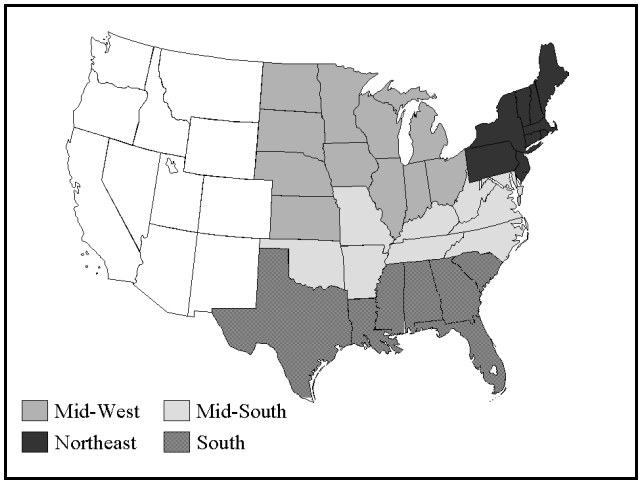

Figure 1. Map of United States Showing Four Regions

The number of observations, mean, standard deviation and percentile ranks were calculated for certain benchmarks values. Following are definitions of these terms:

N: The number of observations (herds) included in a specific analysis. Each variable was analyzed separately so N differs depending upon the number of herds having a specific variable.

Mean: The average calculated as the sum of all observations divided by N.

Standard Deviation (SD): A measure of the variability of the observations. The larger the SD the greater the variation is among the observations.

Percentile Rank: Percentiles are defined as a value such that X% fall short of the value and Y% exceed the value. For example, if a bench-mark value is at the 75th percentile, then 75% of the herds analyzed had values below and 25% of the herds had values above the benchmark. A herd value at the 75th percentile rank is in the top 25% of all herds analyzed.

Rolling Herd Average Production

The Dairy Herd Improvement (DHI) rolling herd average (RHA) is the logical first management item to consider when beginning a herd analysis. The RHA measures the annual overall performance and efficiency of all cows in a herd. High producing cows

generally are more efficient than lower producing cows. Factories that produce at full capacity are usually more efficient, since fixed costs (buildings, machinery) are spread out over more units of production. Likewise, high producing cows tend to be the most efficient since fixed costs (body maintenance requirements, taxes, insurance) are spread out over more pounds of milk, which reduces the overall cost per pound.

RHA is not a direct measure of profitability. It does not provide information related to operating costs, debt load or the cost of producing a hundred pounds of milk. The RHA does not reveal anything about a farm's cash flow position. A farm with a high RHA could have a reduced cash flow just because the current month's production is down.

It is possible for dairy producers with high RHAs to go broke. Debt level and/or operating costs may be so high that no level of production can support the farm. Other producers can live comfortably on average or below average RHAs. These herd owners may not be as efficient as they could be but are probably as efficient as they want to be. Some producers may be willing to sacrifice some production (RHA) because low cost inputs are available, such as relatively inexpensive feedstuff. These situations may be profitable but analyze them carefully by partial budgeting to determine if the decreased costs will more than offset the lost income from lower production. Such decisions should be based on facts and not hunches.

The RHA doesn't provide everything we want to know about a farm's performance. A high RHA should not be a goal in and of itself for most dairy producers. However, improving a RHA by applying management practices that have been shown to be cost effective is a worthwhile goal for any producer. The RHA should not be used to evaluate current management practices. Rather the RHA is an indicator of herd management during the past 365 days and can be used to evaluate changes in management practices over time.

Many factors including calving interval, mastitis, feed quality, days dry, culling rate, herd health and heifer raising practices directly or indirectly affect the RHA. The RHA is only one factor to consider when evaluating a herd. Accurate evaluation of the total performance of a herd requires more information than just the RHA. If the RHA increases or decreases significantly, one should ask why the change occurred and pinpoint the cause.

Tables 1-4 (beginning on page 7) show the rolling herd average milk, fat, protein, fat percent and protein percent by region and by herd size groups within region. For example, Joe Dairyman has a herd of 110 Holstein cows in South Carolina with a rolling herd average for milk of 20,501 pounds. He refers to the 100-149 size cow group in Table 4 (page 13). The mean or average milk production for 155 herds was 17,665 pounds. Production for his herd is above the 75th percentile rank of 20,481 pounds. This places Joe Dairyman's herd with a RHA of 20,501 pounds in the top 25 percent of the 155 herds analyzed.

Trends in Monthly Milk Production

Several terms express how much milk is produced or is expected to be produced by an individual or group of dairy cows. The Test Day Average (milking cows) shows the current production situation in a dairy herd. This figure is calculated by dividing the sum of all the test day milk weights by the total number of milking cows with milk weights on test day.

The dollar value of Test Day Average Production (milking cows) times the number of milking cows determines how much cash is available from the sale of milk. This "average" is what pays the bills, feeds the family and services debt. Many management factors such as changes in feeding or forage quality can affect this average. Other less direct factors such as changes in the weather, genetics and stage of lactation can also affect the Test Day Average. Stage of lactation or average days in milk for the herd influences the Test Day Average since peak production occurs early in lactation and steadily declines to the dry off date. Consequently, test day production catches each cow at a different stage of lactation.

In order to remove the effect of average days in milk upon test day production, another measure of daily performance has been developed called "Standardized 150 Day Milk." This number estimates what an average cow in the herd would be producing if she were at day 150 of her lactation. Cows in early lactation are projected ahead to day 150; whereas cows in later lactation are adjusted to day 150. This provides the means to compare average production at different times of the year without the influence of days in milk.

Figures 2-4 (page 5) show the monthly trend for days in milk, test day milk and standardized 150 day milk by region. Note the significant drop in test day milk production during the summer months, especi-

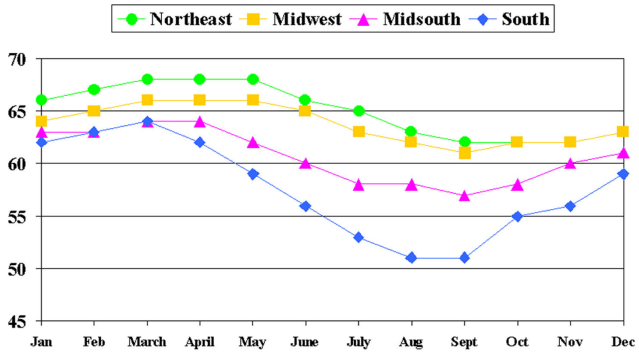

Figure 2. Average Test Day Milk by Month by Region.

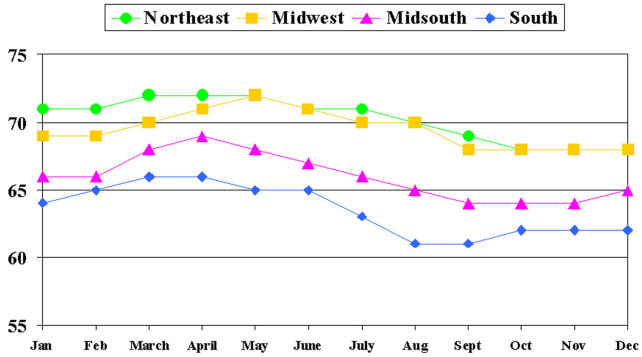

Figure 3. Average Standardized Milk by Month by Region.

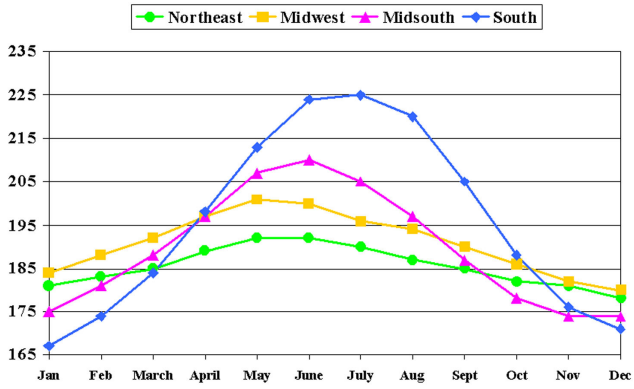

Figure 4. Average Days in Milk by Month by Region.

ally in the South region and to a lesser extent in the Mid-South. One factor that contributes to the decline in summer production is a corresponding rise in days in milk during the same months. The decline in production during the summer has a significant affect on a dairy's cash flow. The standardized 150 day milk value also declines during the summer but to a lesser degree since the effect of days in milk has been removed. Many other factors may cause 150 day milk to change such as feeding, nutrition, mastitis and heat stress. Much of the drop in standardized milk during the summer months is undoubtedly related to heat stress. Average daily milk, standardized milk and days in milk curves for individual herds would be expected to differ from these standard curves. However, the standard curves can be used to compare and evaluate individual herd curves.

Monitoring Stage of Lactation Production

Lactation milk production is dependent upon the level of peak or summit production and the level of persistency throughout the remainder of the lactation. Since lactation curves vary depending upon age, an examination of the stage of lactation production by lactation group is recommended. Tables 5-8 (beginning on page 15) show milk production by stage of lactation for three lactation groups (1, 2 and 3+) by herd milk production level in four regions. Joe Producer in Georgia with a herd average of 19,745 pounds wants to know the expected produc-tion of second lactation cows at days 1-40 in milk. He refers to Table 8 (page 20) for the south region. Under second lactation cows days 1-40 in milk, he finds 77 pounds of milk as the average production for cows in herds with a rolling herd average of 19,000-19,999 pounds.

Tables 9-12 (page 21) provide fat and protein percentages by stage of lactation in the same format as indicated for milk production. Values in these tables are averages for all lactation groups only.

When evaluating a herd for milk or component levels by stage of lactation, particular attention should be given to the number of milking cows represented at each stage of lactation for the herd being evaluated. If only a few cows (fewer than 5) contributed to the average, the probability of an accurate comparison is reduced.

Summit Milk Production

Summit milk is the average of the two highest of the first three test days milk production. Summit milk is highly correlated with the rolling herd average. An increase of 1 pound summit milk production will usually result in an increase of about 225 pounds milk for the lactation. Summit milk production by region and herd milk production is in Table 13 (page

25). The average summit milk production for a herd should be evaluated for each lactation group. Then evaluate how well one lactation group is performing compared to another using the ratios in Table 13. A larger than expected deviation in summit yields among cows of different age groups may indicate that management conditions vary among the groups.

For example, Gil Cowman in Florida with a rolling herd average of 19,542 pounds has summit milk production of 63 pounds and 83 pounds for his first and second lactation cows respectively. The expected values for a 19,000-pound herd average in Table 13 for the South region is 65 pounds and 81 pounds. The ratio of first lactation cows compared to second lactation cows (1:2) is 80. This means that for this herd average and region, first lactation cows produce summit milk levels of about 80 percent of second lactation cows. The ratio of Joe's cows is 63/83 or 76. The summit yield for his first lactation cows is lower than expected compared to other herds (63 pounds vs. 65 pounds). Also, the average summit production of his first lactation cows is lower than expected compared to his second lactation cows (76% actual vs. 80% expected).

Other Management Factors

Reasons Cows Leave the Herd

The percentage of cows entering and leaving the herd (turnover) can significantly affect the rolling herd average and should receive consideration during a herd production evaluation. Tables 14-17 (beginning on page 27) show the percent cows entering and leaving the herd by region and herd milk production level. Also included are the percent cows leaving the herd for specific reasons. These values are calculated as the number of cows leaving for a specific reason ÷ the total cows leaving the herd x 100. Since only numbers of cows are listed on the producer's DHI-202 for reasons leaving the herd, this calculation to percentages is required to make a comparison with the values in the reference tables.

Average Age and Distribution of Herd by Age

The average age of a herd and the distribution of cows within age groups are factors that affect herd production. Table 18 (page 29) shows the average age of cows within three lactation groups and the percent distributed by region and herd average production.

The optimum age of a herd and the distribution of cows by lactation group is probably unique for each herd since many factors affect herd age. The percentage of cows entering and leaving the herd is a major factor affecting herd age. Other management practices including culling strategies and the availability of replacements are also important.

Summary

Comparison of herd performance with benchmark values is the first step in the analysis of herd management production practices. After identifying management weaknesses, attention should focus on the causes of suboptimal performance. Correcting management deficiencies requires the setting of goals and monitoring progress toward achieving those goals.

References

SAS/STAT® User's Guide: Statistics, Version 6.12. 1996. SAS Inst., Inc., Cary, NC.

DHI-202 Herd Summary Fact Sheet: A-1. 1997. Dairy Records Management Systems, Raleigh, NC.

Additional Information

For additional information on dairy production and management, refer to the following website:

http://www.ads.uga.edu/groups/dairy

Table 1. Rolling Herd Average Production in the Northeast Region by Herd Size

Up to 50 cows

				Percentile Rank				
	N	Mean	SD	10th	25th	50th	75th	90th
Milk (lbs)	1428	20091	2852	16500	18232	20181	21896	23471
Fat (lbs)	1420	754	103	616	680	746	809	870
Protein (lbs)	1420	612	88	498	555	615	666	719
Fat (%)	1421	3.7	0.2	3.5	3.6	3.7	3.8	4.0
Protein (%)	1421	3.0	0.1	2.9	3.0	3.0	3.1	3.1

50 to 99 cows

				Percentile Rank				
	N	Mean	SD	10th	25th	50th	75th	90th
Milk (lbs)	2000	20643	3093	16694	18569	20636	22582	24524
Fat (lbs)	1978	764	112	625	688	763	835	900
Protein (lbs)	1978	636	98	516	573	638	698	753
Fat (%)	1985	3.7	0.2	3.5	3.6	3.7	3.8	3.9
Protein (%)	1985	3.1	0.2	3.0	3.0	3.1	3.1	3.2

100 to 149 cows

				Percentile Rank				
	N	Mean	SD	10th	25th	50th	75th	90th
Milk (lbs)	570	20850	3004	16975	18876	20821	22804	24462
Fat (lbs)	557	777	114	633	708	782	847	912
Protein (lbs)	557	646	93	524	588	648	708	755
Fat (%)	559	3.7	0.3	3.5	3.6	3.7	3.8	4.0
Protein (%)	557	3.1	0.1	3.0	3.0	3.1	3.2	3.2

150 to 249 cows

				Percentile Rank				
	N	Mean	SD	10th	25th	50th	75th	90th
Milk (lbs)	341	21519	2879	18066	19338	21294	23469	25280
Fat (lbs)	329	800	102	666	721	802	875	930
Protein (lbs)	329	667	85	559	600	663	729	778
Fat (%)	331	3.7	0.2	3.4	3.6	3.7	3.8	3.9
Protein (%)	331	3.1	0.1	3.0	3.0	3.1	3.1	3.1

Table 1 (continued)

250 to 349 cows

				Percentile Rank				
	N	Mean	SD	10th	25th	50th	75th	90th
Milk (lbs)	129	22133	2774	18712	20092	22433	24226	25436
Fat (lbs)	121	818	107	686	746	817	888	961
Protein (lbs)	121	681	82	579	628	689	741	775
Fat (%)	127	3.7	0.3	3.4	3.5	3.7	3.8	4.0
Protein (%)	127	3.1	0.1	3.0	3.0	3.1	3.1	3.2

350+ cows

				Percentile Rank				
	N	Mean	SD	10th	25th	50th	75th	90th
Milk (lbs)	170	23122	2698	18954	21173	23487	25134	26120
Fat (lbs)	164	836	101	699	752	849	908	951
Protein (lbs)	164	701	81	577	643	715	762	797
Fat (%)	166	3.6	0.2	3.4	3.5	3.6	3.8	3.9
Protein (%)	166	3.1	0.1	2.9	3.0	3.0	3.1	3.1

Table 2. Rolling Herd Average Production in the Mid-South Region by Herd Size

Up to 50 cows

				Percentile Rank				
	N	Mean	SD	10th	25th	50th	75th	90th
Milk (lbs)	189	18119	2690	14615	16168	18019	19928	21495
Fat (lbs)	189	648	103	525	572	634	715	809
Protein (lbs)	189	570	84	463	511	566	627	682
Fat (%)	189	3.6	0.2	3.3	3.4	3.6	3.7	3.9
Protein (%)	189	3.1	0.1	3.0	3.1	3.1	3.2	3.2

50 to 99 cows

				Percentile Rank				
	N	Mean	SD	10th	25th	50th	75th	90th
Milk (lbs)	723	18901	3074	14659	16566	18985	21094	22559
Fat (lbs)	702	678	115	521	593	680	761	818
Protein (lbs)	700	591	93	464	518	594	656	702
Fat (%)	713	3.6	0.3	3.3	3.4	3.6	3.7	3.8
Protein (%)	711	3.1	0.1	3.0	3.0	3.1	3.2	3.3

100 to 149 cows

				Percentile Rank				
	N	Mean	SD	10th	25th	50th	75th	90th
Milk (lbs)	477	19276	2882	15489	17428	19284	21422	22929
Fat (lbs)	461	694	115	550	624	689	778	843
Protein (lbs)	459	603	89	481	543	602	662	715
Fat (%)	465	3.6	0.3	3.2	3.5	3.6	3.8	3.9
Protein (%)	462	3.1	0.1	3.0	3.0	3.1	3.2	3.2

Table 2 (continued)

150 to 249 cows

				Percentile Rank				
	N	Mean	SD	10th	25th	50th	75th	90th
Milk (lbs)	269	19583	3106	15705	17235	19514	21594	23547
Fat (lbs)	257	718	132	546	615	725	803	882
Protein (lbs)	257	615	95	495	540	622	678	734
Fat (%)	261	3.6	0.3	3.3	3.5	3.7	3.8	4.0
Protein (%)	261	3.1	0.1	3.0	3.1	3.1	3.2	3.2

250+ cows

				Percentile Rank				
	N	Mean	SD	10th	25th	50th	75th	90th
Milk (lbs)	118	20185	3185	15827	18000	20257	22010	24583
Fat (lbs)	111	746	122	577	656	740	822	927
Protein (lbs)	109	630	115	495	561	638	688	761
Fat (%)	114	3.7	0.3	3.4	3.5	3.7	3.8	3.9
Protein (%)	112	3.1	0.2	3.0	3.1	3.1	3.2	3.2

Table 3. Rolling Herd Average Production in the Midwest Region by Herd Size

Up to 50 cows

				Percentile Rank				
	N	Mean	SD	10th	25th	50th	75th	90th
Milk (lbs)	778	19479	3168	15456	17242	19336	21619	23452
Fat (lbs)	774	736	127	575	650	728	820	895
Protein (lbs)	774	607	100	482	538	605	671	733
Fat (%)	777	3.8	0.3	3.5	3.6	3.7	3.9	4.1
Protein (%)	776	3.1	0.1	3.0	3.0	3.1	3.2	3.2

50 to 99 cows

				Percentile Rank				
	N	Mean	SD	10th	25th	50th	75th	90th
Milk (lbs)	1720	19978	3131	16052	17843	19937	21979	23986
Fat (lbs)	1704	751	125	595	666	747	827	912
Protein (lbs)	1704	624	95	505	559	623	684	748
Fat (%)	1708	3.8	0.3	3.5	3.6	3.7	3.9	4.1
Protein (%)	1708	3.1	0.1	3.0	3.1	3.1	3.2	3.2

100 to 149 cows

				Percentile Rank				
	N	Mean	SD	10th	25th	50th	75th	90th
Milk (lbs)	663	20982	3130	16914	18763	20847	23014	24890
Fat (lbs)	646	790	133	626	695	782	869	958
Protein (lbs)	646	654	94	527	589	652	715	775
Fat (%)	651	3.8	0.3	3.5	3.6	3.7	3.9	4.1
Protein (%)	651	3.1	0.1	3.0	3.0	3.1	3.2	3.2

Table 3 (continued)

150 to 249 cows

				Percentile Rank				
	N	Mean	SD	10th	25th	50th	75th	90th
Milk (lbs)	358	21377	3021	17511	19504	21104	23379	25330
Fat (lbs)	352	805	116	664	728	804	882	953
Protein (lbs)	352	666	87	551	612	664	727	779
Fat (%)	357	3.8	0.3	3.5	3.6	3.7	3.9	4.1
Protein (%)	357	3.1	0.1	3.0	3.0	3.1	3.2	3.2

250+ cows

				Percentile Rank				
	N	Mean	SD	10th	25th	50th	75th	90th
Milk (lbs)	222	22473	2811	18796	20607	22392	24457	25805
Fat (lbs)	212	828	115	703	754	822	892	968
Protein (lbs)	212	693	84	583	634	691	752	796
Fat (%)	218	3.7	0.3	3.4	3.5	3.7	3.8	4.0
Protein (%)	218	3.1	0.1	3.0	3.0	3.1	3.1	3.2

Table 4. Rolling Herd Average Production in the South Region by Herd Size

Up to 100 cows

				Percentile Rank				
	N	Mean	SD	10th	25th	50th	75th	90th
Milk (lbs)	136	17842	3027	13510	15599	17908	19775	21821
Fat (lbs)	111	619	114	455	544	622	701	763
Protein (lbs)	110	562	95	432	492	562	624	680
Fat (%)	117	3.4	0.3	3.0	3.3	3.5	3.6	3.9
Protein (%)	116	3.1	0.1	3.0	3.0	3.1	3.2	3.2

100 to 149 cows

				Percentile Rank				
	N	Mean	SD	10th	25th	50th	75th	90th
Milk (lbs)	155	17665	3254	13600	14822	17464	20481	22181
Fat (lbs)	119	642	135	462	525	649	743	820
Protein (lbs)	119	571	105	421	480	582	644	706
Fat (%)	127	3.5	0.3	3.2	3.4	3.6	3.7	3.8
Protein (%)	127	3.1	0.1	3.0	3.1	3.1	3.2	3.2

150 to 249 cows

				Percentile Rank				
	N	Mean	SD	10th	25th	50th	75th	90th
Milk (lbs)	195	18009	2905	14627	15676	17549	19977	22212
Fat (lbs)	132	664	130	506	567	654	753	826
Protein (lbs)	132	578	102	478	511	586	646	699
Fat (%)	145	3.6	0.3	3.3	3.4	3.6	3.7	3.9
Protein (%)	144	3.1	0.2	3.0	3.1	3.1	3.2	3.2

Table 4 (continued)

250 to 499 cows

				Percentile Rank				
	N	Mean	SD	10th	25th	50th	75th	90th
Milk (lbs)	144	18684	3109	15075	16234	18398	20757	22680
Fat (lbs)	90	724	126	562	644	712	818	889
Protein (lbs)	90	624	93	490	562	628	692	741
Fat (%)	96	3.6	0.3	3.3	3.5	3.6	3.8	3.9
Protein (%)	96	3.1	0.1	3.0	3.1	3.1	3.2	3.3

Herd Size 500+ cows

				Percentile Rank				
	N	Mean	SD	10th	25th	50th	75th	90th
Milk (lbs)	117	19595	2891	15738	17560	19341	21701	22926
Fat (lbs)	50	743	100	603	674	755	810	885
Protein (lbs)	50	663	82	556	598	665	715	775
Fat (%)	58	3.5	0.3	3.3	3.4	3.5	3.6	3.7
Protein (%)	58	3.5	0.4	3.0	3.1	3.1	3.2	3.3

Table 5. Average Daily Milk Production by Stage of Lactation for the Northeast Region by Herd Milk Production Level.

Herd Average (lbs)	Lactation	Stage of Lactation (Days)					Avg
		1 - 40	41 - 100	101 - 199	200 - 305	306+	
14000 - 14999	1	48	48	44	35	30	39
	2	61	58	47	35	29	43
	3+	65	60	49	38	29	46
	All	57	55	47	36	29	43
15000 - 15999	1	50	49	45	38	32	42
	2	63	60	48	38	31	46
	3+	67	64	52	39	31	48
	All	61	59	50	38	31	46
16000 - 16999	1	52	53	49	41	34	45
	2	66	64	53	43	34	50
	3+	72	72	56	42	33	54
	All	63	64	54	42	34	50
17000 - 17999	1	54	56	52	44	36	48
	2	71	68	58	45	35	54
	3+	75	73	60	46	34	57
	All	67	68	57	45	35	54
18000 - 18999	1	56	59	54	47	40	50
	2	73	71	61	48	37	58
	3+	77	78	64	48	36	61
	All	70	71	60	48	38	57
19000 - 19999	1	58	62	57	50	43	53
	2	77	76	65	51	39	61
	3+	81	81	67	51	39	64
	All	72	74	64	51	40	60
20000 - 20999	1	60	64	60	53	45	56
	2	81	80	67	53	41	64
	3+	84	86	71	54	42	68
	All	76	77	67	54	43	63
21000 - 21999	1	61	66	62	55	47	58
	2	83	82	72	56	44	66
	3+	87	89	74	57	44	71
	All	78	80	70	56	45	66

Table 5 (continued)

Herd Average (lbs)	Lactation	Stage of Lactation (Days)					Avg
		1 - 40	41 - 100	101 - 199	200 - 305	306+	
22000 - 22999	1	63	68	66	59	50	61
	2	86	86	75	61	47	70
	3+	90	92	78	60	47	74
	All	80	83	73	60	48	69
23000 - 23999	1	65	72	68	62	53	64
	2	88	90	79	62	50	73
	3+	93	95	82	64	50	78
	All	81	86	76	63	51	72
24000 - 24999	1	66	74	72	65	56	67
	2	89	93	82	66	53	77
	3+	95	98	85	68	52	81
	All	83	89	80	66	54	75
25000 - 25999	1	68	76	76	69	61	70
	2	93	96	85	70	55	80
	3+	96	101	89	72	56	84
	All	85	91	83	70	58	**78**
26000 - 26999	1	67	79	79	71	62	72
	2	94	97	90	73	58	83
	3+	100	106	94	76	60	88
	All	85	94	87	73	61	81
27000+	1	74	83	82	76	67	77
	2	98	106	97	81	64	89
	3+	103	108	97	81	67	91
	All	90	98	92	79	66	85

Table 6. Average Daily Milk Production by Stage of Lactation for the Mid-South Region by Herd Milk Production Level.

Herd Average (lbs)	Lactation	Stage of Lactation (Days)					Avg
		1 - 40	41 - 100	101 - 199	200 - 305	306+	
14000 - 14999	1	47	49	46	41	35	42
	2	56	57	49	40	32	46
	3+	60	60	52	41	34	49
	All	56	58	50	41	34	47
15000 - 15999	1	47	49	47	42	37	44
	2	62	59	54	44	36	51
	3+	64	64	56	45	35	54
	All	60	60	53	44	36	51
16000 - 16999	1	49	53	51	46	39	48
	2	66	64	57	47	38	55
	3+	70	69	60	48	38	59
	All	63	64	57	47	39	55
17000 - 17999	1	52	56	53	48	40	49
	2	69	66	59	48	40	56
	3+	71	72	62	49	38	60
	All	65	67	59	48	39	56
18000 - 18999	1	56	60	57	52	44	54
	2	72	74	65	52	42	62
	3+	76	78	67	53	42	65
	All	69	71	64	52	43	60
19000 - 19999	1	57	62	58	54	46	55
	2	75	75	67	53	43	63
	3+	79	80	69	54	43	66
	All	71	73	65	54	44	62
20000 - 20999	1	59	65	62	57	47	58
	2	78	80	71	58	45	67
	3+	82	84	73	59	46	70
	All	73	77	69	58	46	65
21000 - 21999	1	60	66	65	60	50	61
	2	82	82	73	60	48	70
	3+	85	87	77	61	49	74
	All	76	80	72	60	50	68

Table 6 (continued)

Herd Average (lbs)	Lactation	Stage of Lactation (Days) 1 - 40	41 - 100	101 - 199	200 - 305	306+	Avg
22000 - 22999	1	62	69	67	61	52	63
	2	85	86	75	62	50	73
	3+	89	90	78	62	51	76
	All	78	81	74	62	51	70
23000 - 23999	1	65	72	71	65	56	66
	2	87	88	79	66	52	76
	3+	90	94	83	68	54	79
	All	80	84	78	66	54	73
24000+	1	70	76	77	71	61	72
	2	90	94	84	71	60	81
	3+	96	98	89	72	58	85
	All	85	90	83	72	60	78

Table 7. Average Daily Milk Production by Stage of Lactation for the Midwest Region by Herd Milk Production Level.

Herd Average (lbs)	Lactation	Stage of Lactation (Days) 1 - 40	41 - 100	101 - 199	200 - 305	306+	Avg
14000 - 14999	1	47	49	44	38	34	40
	2	61	56	48	40	34	46
	3+	62	60	50	39	31	48
	All	58	56	48	39	33	45
15000 - 15999	1	49	51	47	43	35	44
	2	62	60	52	43	36	50
	3+	69	66	55	44	35	53
	All	61	60	52	44	35	50
16000 - 16999	1	50	54	50	45	38	47
	2	66	65	56	44	36	52
	3+	70	68	58	46	36	55
	All	62	63	55	46	36	52
17000 - 17999	1	54	57	53	48	41	50
	2	68	67	58	49	38	55
	3+	73	73	61	48	37	59
	All	65	67	58	48	39	55
18000 - 18999	1	55	61	56	51	43	53
	2	72	72	62	50	39	58
	3+	77	76	65	51	39	62
	All	68	70	62	51	41	58

Table 7 (continued)

Herd Average (lbs)	Lactation	Stage of Lactation (Days) 1 - 40	41 - 100	101 - 199	200 - 305	306+	Avg
19000 - 19999	1	57	63	59	53	44	55
	2	74	76	66	53	41	62
	3+	78	80	68	54	41	64
	All	69	73	65	53	42	60
20000 - 20999	1	60	64	62	57	48	58
	2	78	80	69	56	44	65
	3+	81	83	72	56	44	68
	All	72	76	68	56	46	64
21000 - 21999	1	61	68	64	59	51	61
	2	81	83	72	59	46	68
	3+	84	88	75	59	46	71
	All	75	79	71	59	48	66
22000 - 22999	1	62	69	67	62	53	63
	2	85	85	76	62	50	71
	3+	88	90	79	63	49	75
	All	77	81	74	62	51	69
23000 - 23999	1	63	71	70	65	56	66
	2	88	88	79	65	51	75
	3+	90	94	82	66	52	78
	All	80	84	77	65	53	72
24000 - 24999	1	65	74	73	67	57	68
	2	92	94	82	68	52	78
	3+	93	99	86	68	54	82
	All	82	88	81	68	55	75
25000 - 25999	1	65	76	76	71	61	70
	2	94	95	86	71	56	81
	3+	97	100	89	75	57	84
	All	85	90	84	72	58	78
26000 - 26999	1	67	79	81	75	65	74
	2	96	98	91	77	62	86
	3+	99	105	95	79	62	89
	All	87	93	88	77	63	82
27000+	1	73	83	85	79	68	78
	2	98	108	96	81	63	90
	3+	104	111	100	80	64	94
	All	90	100	94	80	66	86

Table 8. Average Daily Milk Production by Stage of Lactation for the South Region by Herd Milk Production Level.

		Stage of Lactation (Days)					
Herd Average (lbs)	Lactation	1 - 40	41 - 100	101 - 199	200 - 305	306+	Avg
14000 - 14999	1	46	49	45	40	35	43
	2	61	58	51	41	33	49
	3+	63	62	54	41	34	53
	All	59	58	51	41	34	49
15000 - 15999	1	47	51	48	43	36	44
	2	63	61	53	42	35	52
	3+	63	66	57	45	33	56
	All	60	61	53	44	34	51
16000 - 16999	1	49	55	51	46	39	48
	2	63	66	57	46	36	55
	3+	67	69	59	48	37	58
	All	62	65	56	47	37	54
17000 - 17999	1	51	58	54	48	41	50
	2	66	70	60	48	35	58
	3+	71	72	64	48	38	61
	All	64	69	59	48	39	56
18000 - 18999	1	53	61	58	52	42	53
	2	71	73	65	51	40	62
	3+	74	77	67	51	41	64
	All	68	71	64	52	71	60
19000 - 19999	1	56	63	61	56	45	56
	2	77	77	69	55	43	66
	3+	79	81	71	57	43	68
	All	72	74	66	56	44	6
20000 - 20999	1	57	65	63	57	48	58
	2	79	80	72	55	44	67
	3+	81	83	72	56	45	70
	All	73	76	69	57	46	65
21000 - 21999	1	59	67	65	61	48	60
	2	78	82	74	61	49	70
	3+	81	86	75	60	48	71
	All	73	78	70	60	49	66
22000+	1	62	72	71	67	55	66
	2	85	89	80	66	54	76
	3+	90	92	82	67	53	79
	All	80	85	77	67	54	73

Table 9. Average Daily Fat and Protein Percent for the Northeast Region by Herd Milk Production Level.

Herd Average (lbs)		Stage of Lactation (Days)					
		1 - 40	41 - 100	101 - 199	200 - 305	306+	Avg
		%					
14000 - 14999	Fat	4.19	3.75	3.81	4.05	4.17	3.96
	Protein	2.95	2.77	3.02	3.26	3.51	3.11
15000 - 15999	Fat	4.21	3.77	3.86	4.05	4.24	3.98
	Protein	3.03	2.83	3.06	3.32	3.57	3.16
16000 - 16999	Fat	4.18	3.75	3.80	4.02	4.24	3.96
	Protein	2.98	2.83	3.06	3.32	3.55	3.15
17000 - 17999	Fat	4.13	3.74	3.75	3.97	4.14	3.91
	Protein	2.98	2.83	3.04	3.29	3.52	3.13
18000 - 18999	Fat	4.14	3.72	3.76	3.99	4.15	3.92
	Protein	3.00	2.86	3.08	3.32	3.54	3.15
19000 - 19999	Fat	4.15	3.68	3.72	3.96	4.12	3.89
	Protein	2.99	2.85	3.06	3.30	3.51	3.14
20000 - 20999	Fat	4.08	3.65	3.70	3.93	4.12	3.85
	Protein	2.97	2.83	3.05	3.29	3.51	3.12
21000 - 21999	Fat	4.10	3.62	3.68	3.91	4.09	3.84
	Protein	2.97	2.83	3.04	3.29	3.49	3.12
22000 - 22999	Fat	4.04	3.63	3.67	3.88	4.07	3.82
	Protein	2.97	2.83	3.04	3.27	3.48	3.11
23000 - 23999	Fat	4.06	3.62	3.64	3.87	4.07	3.80
	Protein	2.97	2.85	3.05	3.28	3.48	3.12
24000 - 24999	Fat	4.03	3.55	3.58	3.78	3.99	3.74
	Protein	2.96	2.83	3.02	3.24	3.44	3.09
25000 - 25999	Fat	3.95	3.53	3.58	3.77	3.95	3.72
	Protein	2.94	2.82	3.02	3.23	3.43	3.08
26000 - 26999	Fat	4.01	3.53	3.54	3.76	3.92	3.70
	Protein	2.99	2.82	3.01	3.23	3.43	3.09
27000+	Fat	3.96	3.54	3.56	3.71	3.96	3.71
	Protein	2.95	2.81	3.01	3.21	3.41	3.09

Table 10. Average Daily Fat and Protein Percent for the Midsouth Region by Herd Milk Production Level.

Herd Average (lbs)		Stage of Lactation (Days)					
		1 - 40	41 - 100	101 - 199	200 - 305	306+	Avg
		%					
14000 - 14999	Fat	4.02	3.78	3.81	4.11	4.21	3.97
	Protein	3.13	3.02	3.22	3.48	3.62	3.31
15000 - 15999	Fat	3.96	3.71	3.78	4.06	4.13	3.88
	Protein	3.17	3.00	3.17	3.42	3.58	3.23
16000 - 16999	Fat	3.99	3.71	3.76	4.02	4.15	3.87
	Protein	3.17	3.03	3.21	3.44	3.59	3.26
17000 - 17999	Fat	3.97	3.68	3.70	3.94	4.12	3.83
	Protein	3.13	3.02	3.19	3.40	3.55	3.23
18000 - 18999	Fat	4.02	3.65	3.73	3.97	4.12	3.86
	Protein	3.12	2.97	3.16	3.40	3.57	3.22
19000 - 19999	Fat	3.99	3.63	3.66	3.92	4.10	3.83
	Protein	3.11	2.99	3.15	3.37	3.55	3.22
20000 - 20999	Fat	4.07	3.64	3.67	3.89	4.07	3.83
	Protein	3.08	2.96	3.12	3.35	3.51	3.19
21000 - 21999	Fat	4.07	3.63	3.67	3.92	4.12	3.83
	Protein	3.10	2.96	3.12	3.36	3.52	3.19
22000 - 22999	Fat	4.08	3.64	3.65	3.91	4.04	3.81
	Protein	3.06	2.93	3.10	3.33	3.46	3.16
23000 - 23999	Fat	4.04	3.59	3.56	3.79	4.02	3.77
	Protein	3.05	2.92	3.05	3.29	3.47	3.14
24000+	Fat	3.90	3.54	3.54	3.74	3.98	3.69
	Protein	3.03	2.93	3.11	3.31	3.48	3.16

Table 11. Average Daily Fat and Protein Percent for the Midwest Region by Herd Milk Production Level.

Herd Average (lbs)		Stage of Lactation (Days)					
		1 - 40	41 - 100	101 - 199	200 - 305	306+	Avg
		%					
14000 - 14999	Fat	4.35	3.96	3.98	4.22	4.31	4.14
	Protein	3.07	2.97	3.19	3.40	3.56	3.25
15000 - 15999	Fat	4.28	3.87	3.93	4.13	4.25	4.05
	Protein	3.09	2.98	3.20	3.41	3.59	3.25
16000 - 16999	Fat	4.26	3.84	3.90	4.08	4.24	4.02
	Protein	3.11	2.99	3.18	3.39	3.59	3.24
17000 - 17999	Fat	4.28	3.87	3.89	4.10	4.22	4.04
	Protein	3.07	2.96	3.16	3.38	3.55	3.23
18000 - 18999	Fat	4.33	3.91	3.90	4.11	4.18	4.04
	Protein	3.08	2.96	3.16	3.37	3.53	3.22
19000 - 19999	Fat	4.28	3.80	3.83	4.02	4.15	3.97
	Protein	3.06	2.94	3.14	3.35	3.53	3.20
20000 - 20999	Fat	4.29	3.79	3.81	3.99	4.11	3.96
	Protein	3.04	2.94	3.13	3.33	3.51	3.18
21000 - 21999	Fat	4.29	3.80	3.79	3.96	4.10	3.95
	Protein	3.05	2.94	3.12	3.33	3.50	3.18
22000 - 22999	Fat	4.30	3.80	3.77	3.94	4.07	3.93
	Protein	3.06	2.93	3.12	3.31	3.46	3.17
23000 - 23999	Fat	4.22	3.75	3.74	3.90	4.02	3.89
	Protein	3.04	2.91	3.09	3.30	3.46	3.15
24000 - 24999	Fat	4.31	3.74	3.70	3.87	4.05	3.88
	Protein	3.00	2.87	3.06	3.25	3.44	3.12
25000 - 25999	Fat	4.29	3.78	3.78	3.91	4.03	3.91
	Protein	3.01	2.92	3.08	3.26	3.44	3.13
26000 - 26999	Fat	4.23	3.68	3.64	3.82	3.97	3.83
	Protein	3.01	2.89	3.05	3.23	3.38	3.11
27000+	Fat	4.16	3.66	3.59	3.77	3.89	3.77
	Protein	3.02	2.86	3.03	3.22	3.38	3.10

Table 12. Average Daily Fat and Protein Percent for the South Region by Herd Milk Production Level.

Herd Average (lbs)		Stage of Lactation (Days)					
		1 - 40	41 - 100	101 - 199	200 - 305	306+	Avg
		%					
14000 - 14999	Fat	3.72	3.59	3.63	3.94	4.04	3.70
	Protein	3.14	3.00	3.12	3.40	3.57	3.16
15000 - 15999	Fat	3.66	3.43	3.40	3.82	3.97	3.59
	Protein	3.15	3.00	3.14	3.43	3.56	3.20
16000 - 16999	Fat	3.87	3.59	3.52	3.74	3.92	3.57
	Protein	3.09	2.96	3.08	3.30	3.46	3.04
17000 - 17999	Fat	3.82	3.54	3.56	3.95	4.10	3.72
	Protein	3.12	2.96	3.11	3.36	3.53	3.15
18000 - 18999	Fat	3.82	3.57	3.58	3.86	4.00	3.72
	Protein	3.11	2.99	3.14	3.40	3.53	3.19
19000 - 19999	Fat	3.82	3.55	3.61	3.86	4.03	3.73
	Protein	3.08	2.95	3.12	3.36	3.52	3.18
20000 - 20999	Fat	3.91	3.58	3.62	3.86	4.07	3.78
	Protein	3.14	2.98	3.15	3.38	3.55	3.22
21000 - 21999	Fat	3.98	3.64	3.69	3.90	4.12	3.85
	Protein	3.11	2.97	3.10	3.35	3.51	3.19
22000+	Fat	3.93	3.61	3.59	3.76	4.01	3.74
	Protein	3.11	2.96	3.10	3.33	3.49	3.17

Table 13. Summit Milk by Region and Herd Milk Production Level.

Northeast

Herd Average (lbs)	N	Lactation (lbs)				Ratio		
		1	2	3+	Avg	1:2	2:3	1:3
14000	74	53	65	70	64	82	93	76
15000	138	55	66	72	66	83	92	76
16000	210	57	71	77	70	80	92	74
17000	353	60	75	81	73	80	92	74
18000	450	63	79	84	76	80	94	75
19000	586	65	82	88	79	79	93	74
20000	608	67	86	92	82	73	93	73
21000	648	70	89	95	85	79	94	74
22000	479	72	92	97	87	78	95	74
23000	384	74	96	101	90	77	95	73
24000	272	76	99	104	92	77	95	73
25000	162	79	102	107	95	77	95	74
26000	94	80	104	111	97	77	94	72
27000	98	86	110	115	102	78	96	75

Mid-South

Herd Average (lbs)	N	Lactation (lbs)				Ratio		
		1	2	3+	Avg	1:2	2:3	1:3
14000	82	53	63	68	63	84	93	78
15000	122	53	65	70	64	82	93	76
16000	164	56	68	75	68	82	91	75
17000	176	60	72	77	70	83	94	78
18000	227	63	77	82	74	82	94	77
19000	225	65	80	85	77	81	94	76
20000	202	67	84	89	80	80	94	75
21000	201	69	87	92	83	79	94	75
22000	133	71	90	95	85	79	95	75
23000	60	72	94	99	88	76	95	73
24000	97	79	99	104	93	80	95	76

Table 13 (continued)

Midwest

Herd Average (lbs)	N	Lactation (lbs)				Ratio		
		1	2	3+	Avg	1:2	2:3	1:3
14000	82	53	63	68	62	84	93	78
15000	156	55	66	72	65	83	92	76
16000	269	58	70	74	68	83	94	78
17000	320	61	74	79	71	82	90	73
18000	383	63	77	82	74	82	94	77
19000	449	65	81	86	77	80	94	76
20000	488	68	85	89	80	80	96	76
21000	416	70	88	93	83	80	95	75
22000	365	72	91	96	86	79	95	75
23000	265	74	94	99	88	79	95	75
24000	185	76	98	103	91	78	95	74
25000	119	78	101	106	94	77	95	74
26000	77	81	105	110	97	77	95	74
27000	91	86	112	116	103	77	97	74

South

Herd Average (lbs)	N	Lactation (lbs)				Ratio		
		1	2	3+	Avg	1:2	2:3	1:3
14000	54	53	62	68	62	85	91	78
15000	73	55	65	71	64	85	92	71
16000	76	58	70	75	68	83	93	77
17000	89	61	74	78	71	82	95	78
18000	85	63	78	82	74	81	95	77
19000	72	65	81	85	76	80	95	76
20000	73	68	86	90	80	79	96	76
21000	53	69	86	92	82	80	93	75
22000	103	74	92	98	87	80	94	76

Table 14. Reasons Cows Left the Herd in the Northeast Region and Herd Milk Production Level.

Herd Average (lbs)	N	Entering %	Leaving %	Died	Dairy	Low Prod	Repro	Mastitis	Udder	Feet and Legs	Injury	Disease	Not Reported
				---------- as a % of left herd cows ----------									
14000	75	29	31	19	4	5	20	8	0.5	6	34	1.0	2
15000	137	30	31	13	4	7	18	9	0.8	4	39	2	2
16000	206	32	31	14	3	7	20	8	0.7	5	37	2	3
17000	351	32	32	13	5	7	20	9	2	6	32	2	3
18000	447	33	32	12	4	7	20	10	2	6	35	2	2
19000	577	34	32	11	5	8	19	10	2	6	33	3	2
20000	605	34	32	11	6	8	20	11	2	6	30	3	3
21000	640	34	33	11	6	8	21	12	2	7	28	3	2
22000	469	35	32	10	6	8	20	12	3	6	28	3	2
23000	380	37	34	9	9	7	20	14	3	6	25	3	2
24000	268	38	34	11	8	7	19	14	2	7	27	3	2
25000	159	38	35	10	9	7	19	15	3	6	27	2	2
26000	94	39	35	10	10	7	21	16	4	7	21	2	0.8
27000	95	40	36	9	12	8	20	13	3	6	26	3	1

Table 15. Reasons Cows Left the Herd in the Mid-South Region and Herd Milk Production Level.

Herd Average (lbs)	N	Entering %	Leaving %	Dairy	Low Prod	Repro	Disease	Died	Mastitis	Udder	Feet and Legs	Injury	Not Reported
				---------- as a % of left herd cows ----------									
14000	83	30	31	24	6	8	19	11	2	3	15	1	11
15000	120	33	33	21	7	10	18	8	3	4	14	2	13
16000	159	36	32	19	6	12	18	10	2	4	15	4	11
17000	170	34	32	19	6	11	20	11	3	5	15	3	7
18000	219	36	35	18	7	10	19	12	3	6	13	3	9
19000	219	36	36	15	7	9	20	13	3	5	17	4	6
20000	199	38	36	16	6	8	21	12	3	6	15	4	7
21000	192	36	36	14	7	9	22	11	4	7	15	4	6
22000	131	41	38	11	10	11	20	13	4	7	15	3	5
23000	59	41	39	12	11	12	19	15	5	6	12	4	3
24000	92	41	40	13	11	12	18	17	3	6	12	4	3

Table 16. Reasons Cows Left the Herd in the Midwest Region and Herd Milk Production Level.

Herd Average (lbs)	N	Entering %	Leaving %	Died	Dairy	Low Prod	Repro	Mastitis	Udder	Feet and Legs	Injury	Disease	Not Reported
				as a % of left herd cows									
14000	81	31	32	16	3	10	21	12	2	3	14	5	14
15000	150	34	34	17	3	11	18	11	3	3	16	3	14
16000	265	35	35	17	3	11	20	12	3	3	16	3	12
17000	312	37	36	16	3	12	19	12	2	4	16	4	12
18000	373	36	36	16	3	13	20	11	3	4	17	4	8
19000	433	38	36	15	3	11	20	12	3	4	18	4	9
20000	479	39	38	14	4	11	20	12	3	5	18	4	8
21000	401	40	37	14	4	12	21	12	4	5	16	4	8
22000	354	39	38	13	6	11	21	12	4	5	15	4	9
23000	252	39	37	14	6	11	21	14	4	5	15	4	8
24000	179	42	39	13	9	11	21	12	4	5	18	4	4
25000	118	40	38	12	8	10	19	13	4	6	15	5	8
26000	74	42	39	10	12	10	18	12	4	5	17	5	6
27000	89	41	39	12	14	8	17	12	4	5	16	4	7

Table 17. Reasons Cows Left the Herd in the South Region and Herd Milk Production Level.

Herd Average (lbs)	N	Entering %	Leaving %	Died	Dairy	Low Prod	Repro	Mastitis	Udder	Feet and Legs	Injury	Disease	Not Reported
				as a % of left herd cows									
14000	54	27	31	23	3	12	15	6	3	4	16	2	17
15000	71	33	33	22	3	14	24	6	2	4	16	2	6
16000	74	35	35	22	2	10	22	7	4	6	13	4	10
17000	82	38	36	18	4	12	23	8	3	5	14	3	10
18000	81	35	36	22	4	12	22	8	4	6	12	5	6
19000	71	39	35	20	3	14	25	8	3	7	11	4	5
20000	73	38	37	19	4	12	19	10	3	7	15	4	5
21000	52	39	37	18	6	12	23	10	2	9	11	4	4
22000	103	38	36	17	6	12	21	11	3	6	14	5	4

Table 18. Age of Herd and Distribution by Region and Herd Milk Production Level

Northeast

Herd Average (lbs)	N	Lactation				Lactation		
		1	2	3+	All	1	2	3+
		Months				(%)		
14000	73	29	44	75	56	27	22	51
15000	74	28	42	74	55	27	28	50
16000	138	28	42	73	54	27	23	50
17000	211	28	42	71	51	30	25	44
18000	354	27	41	70	50	30	25	45
19000	451	27	41	70	49	31	26	43
20000	609	26	40	68	47	33	26	41
21000	648	26	40	67	47	34	26	40
22000	479	26	40	66	46	34	26	40
23000	384	25	39	66	46	35	27	38
24000	272	25	39	65	44	36	27	37
25000	162	25	39	64	43	38	27	36
26000	94	25	39	64	42	38	27	34
27000+	98	25	40	65	43	38	27	34

Mid-South

Herd Average (lbs)	N	Lactation				Lactation		
		1	2	3+	All	1	2	3+
		Months				(%)		
14000	83	28	42	74	55	27	24	50
15000	122	28	43	73	53	30	23	47
16000	164	28	42	72	52	30	24	46
17000	176	28	42	72	51	31	25	44
18000	227	28	42	71	50	33	26	41
19000	225	28	42	70	48	35	27	38
20000	202	27	42	68	47	35	27	38
21000	201	27	41	68	47	35	26	38
22000	133	27	41	68	46	37	27	36
23000	60	27	41	38	46	37	27	36
24000	97	26	40	66	44	38	28	33

Table 18 (continued)

Midwest

Herd Average (lbs)	N	Lactation				Lactation		
		1	2	3+	All	1	2	3+
		Months				(%)		
14000	83	28	42	72	52	29	25	46
15000	156	28	42	71	50	32	25	43
16000	269	28	42	70	50	32	25	42
17000	320	27	41	69	48	34	26	40
18000	383	27	41	69	48	34	26	40
19000	449	27	41	68	46	36	27	37
20000	488	27	41	67	45	37	26	36
21000	416	26	40	66	45	38	26	36
22000	365	26	40	67	45	38	27	35
23000	265	26	40	66	44	39	27	34
24000	185	26	40	65	43	39	27	34
25000	119	25	39	65	43	39	28	33
26000	77	26	40	65	43	40	27	33
27000+	91	25	39	65	42	39	28	33

South

Herd Average (lbs)	N	Lactation				Lactation		
		1	2	3+	All	1	2	3+
		Months				(%)		
14000	54	27	41	72	53	26	25	49
15000	73	27	42	72	51	30	25	45
16000	76	27	41	71	50	32	26	42
17000	89	27	42	70	48	36	26	39
18000	85	27	42	69	48	34	28	38
19000	72	26	42	68	46	37	26	37
20000	74	26	41	67	46	36	27	38
21000	53	26	41	68	46	38	27	35
22000	103	26	41	67	45	37	28	35

When you have a question ...

Call or visit your local office of The University of Georgia's Cooperative Extension Service.

You'll find a friendly, well-trained staff ready to help you with information, advice and free publications covering agriculture and natural resources, family and consumer sciences, 4–H and youth development, and rural and community development.

The University of Georgia and Ft. Valley State University, the U.S. Department of Agriculture and counties of the state cooperating. The Cooperative Extension Service, the University of Georgia College of Agricultural and Environmental Sciences offers educational programs, assistance and materials to all people without regard to race, color, national origin, age, sex or disability.

An Equal Opportunity Employer/Affirmative Action Organization
Committed to a Diverse Work Force

Bulletin 1193 **Revised February, 2002**

Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, The University of Georgia College of Agricultural and Environmental Sciences and the U.S. Department of Agriculture cooperating.

Gale A. Buchanan, Dean and Director