Animal and Dairy Science Department
Rhodes Center for Animal & Dairy Science

Telephone: (706) 542-2581
Fax: (706) 542-9316

GEORGIA DAIRYFAX

http://www.ces.uga.edu/Agriculture/asdsvm/Dairyscience/dairypage.HTML January/February 2005

Dear Dairy Producers:

The enclosed information was prepared by the University of Georgia Animal and Dairy Science faculty & graduate students in Dairy Extension, Research & Teaching. We trust this information will be helpful to dairy farmers and dairy related businesses for continued improvement of the Georgia Dairy Industry.

Sincerely,

_____ _____

William M. Graves
Professor & Extension Dairy Scientist

County Extension Director or County Agent

/ach

Baby It's Cold Outside – Feeding Calves This Winter

Dr. Josie Coverdale
Extension Animal Scientist

Winter brings all kinds of problems for raising calves. Lower temperatures, increased precipitation and poor ventilation can often to lead to decreased growth rates or even death in young calves. Calves are born with extremely low energy reserves and limited insulation. A young calf will only survive less than one day in cold weather without energy intake. This makes feeding young calves in winter critical to their health, growth and survival.

What feels cold to a calf?

All animals have what is referred to as a thermoneutral zone. When ambient temperatures are in this thermoneutral zone the animal does not expend energy heating or cooling itself. The lower temperature at which an animal must start expending energy to heat itself is referred to as the lower critical temperature. However, age has a large impact on the thermoneutral zone and the lower critical temperature. Calves less than 3 weeks of age have a lower critical temperature of 59^0F. Older calves (greater than 3 weeks) have a lower critical temperature of 23^0F. This means that once the environmental temperature reaches this lower critical point, your calves will require more energy for maintenance. If this increased need for energy is not met, growth rates will suffer.

How can energy be increased?

Calves, particularly the very young, need increased energy in their diet during cold weather to meet increased maintenance energy (ME) requirements. For example a 100 pound calf requires 1,735 kcal of ME per day when the ambient temperature is 68^0F. However, when ambient temperature drops to 41^0F, the calf requires 2,437 kcal of ME. This is a 41% increase in maintenance energy needs!

Extra energy can be added to a calf's diet in a number of ways. Producers can increase the amount of liquid diet fed, add additional solid content to the liquid diet, or supplement fat to the liquid diet. Increasing the amount of liquid diet offered can be accomplished by an additional feeding. Calves should be given an extra bottle during the middle of the day. Not only does this give the calf additional nutrients, but it also encourages them to stand and possibly consume solid feed. The concentration of solids in the milk can also be increased to provide energy. However, the dry matter (solid) portion of the milk replacer solution should be no greater than 20%. When mixed according to directions, most milk replacers contain 12% solids. Finally, supplemental fat can be added to the milk or milk replacer. These fat supplements are approximately 60% fat and 7 to 10% protein. Fat supplements are added at a rate of ¼ to ½ pound per day. While these supplements add a considerable amount of energy, they can be costly and may depress starter intake. During very cold weather (less than 32^0F), the depression in starter intake is minimal.

What about older calves?

A ruminating calf can tolerate lower temperatures more effectively than a calf only consuming a liquid diet. Therefore, starter intake should always be encouraged. Not only is this beneficial for the calf, but it is also cost effective for the producer. During winter, the availability of free water is critical. Intake of water has been shown to encourage starter intake in all ages of calves. In addition, intake of warm water during the winter will help counteract the effects of cold stress.

By simply increasing energy when temperatures get cold, offering free water and supplying plenty of starter, your calves can have a successful winter. These tips coupled with good management will get your calves off to a great start!

Editor's Note- The Animal & Dairy Science Department is grateful to have Dr. Josie Coverdale as a member of our faculty. Dr. Coverdale is trained as a nutritionist and has both teaching and extension responsibilities. She spends most of her time working with our horse program and teaching students. She also helps to coordinate our horse judging program. Dr. Coverdale received her B.S. from Texas A & M, and her M. S. and Ph.D. from Iowa State University. She has conducted and published several research projects with dairy calves. We appreciate Dr. Coverdale sharing her expertise in this area, as well as her help here at UGA.

UGA Production Sale for Undergraduate Teaching

Dr. Lane O. Ely
Extension Dairy Scientist

The Animal and Dairy Science Department at The University of Georgia will again sponsor a production sale for the benefit of the Undergraduate Teaching program. The University of Georgia Teaching Dairy will have six heifers in the sale. The sale will be held on Wednesday, March 9th at the Animal and Dairy Science Arena. We look forward to having you attend and participate in the sale. The six animals at the sale this year are:

Number 2059 U-GA Dos Dorie

Born: 12-18-2002
PTAM + 710 PTAF + 11 PTAP + 14 PTA$ + 257
Sire: Ked MTOTO Jewel Dos-ET
Dam: U-GA Astre Aphrodite
Best ME 25,009 3.6 F 3.1 P
Pregnant to: MR ITO Brutt-ET
PTAT + 1.90 40 F 45 P PTAM + 1585
Due to Calve: 4-23-2005

Number 3039 U-GA Allen Addison

Born: 8-23-2003
PTAM + 567 PTAF + 31 PTAP + 19 PTA$ + 239
Sire: Canyon-Breeze Allen-ET
Dam: U-GA Merrill Marcie (GP80)
Best ME 24,395 3.8 F 3.1 P

Lifetime milk 56,516 Last Test Day 80 lbs
Pregnant to: Be-Ware Juror Geno
PTAT + 1.75 PTAM + 1285 16 F 30 P
Due to Calve: 9-11-2005

Number 3046 U-GA Equity Emmy

Born: 9-11-2003
PTAM + 890 PTAF + 4 PTAP + 6 PTA$ + 119
Sire: Eastview Emory Equity-ET
Dam: U-GA Elevation Ella
Best ME 28,254 3.5 F 3.0 P
Lifetime milk 176,887
Bred to: Regancrest Juror Bond 0n 1-14-2005
PTAT + 2.09 PTAM + 1641 54 F 43 P

Number 3065 U-GA Marshall Marvel

Born: 12-15-2003
PTAM + 1611 PTAF + 36 PTAP + 40 PTA$ + 347
Sire: Mara-Thon BW Marshall-ET
Dam: U-GA Starboy Sonya
Best ME 16,973 3.5 F 3.1 P

Number 3066 U-GA Geno Galore

Born: 12-16-2003
PTAM + 866 PTAF + 26 PTAP + 18 PTA$ + 245
Sire: Be-Ware Juror Geno
Dam: U-GA Mathie Montana
Best ME 23,719 4.8 F 3.1 P

Number 3067 U-GA Geno Geri

Born: 12-20-2003
PTAM + 1192 PTAF + 10 PTAP + 33 PTA$ + 353
Sire: Be-Ware Juror Geno
Dam: U-GA Duster Domino (GP82)
Best ME 28,283 3.5 F 3.1 P

We hope you will be able to attend the sale. If not we will gladly accept telephone bids at 706-542-9107. The proceeds of the sale will benefit the undergraduate teaching program in the Animal and Dairy Science Department.

How We Handle Cows is Important

Dr. Warren Gilson
Extension Dairy Scientist

We all know that it is better to handle dairy cows gently so as to minimize stress during milking and hence improve milk production. Cows that are handled gently generally have smaller flight zones, meaning we can move closer to them before they move away. They also produce more milk. Recent evidence however, indicates that it may be more important than we thought.

Researchers from Canada reported on the correlation between how cows were handled and the amount of milk they produced. The cows that were handled gently, spoken to and touched more often were less frightened, more easily moved and produced more milk. One study even suggested that 30 percent of the variation in milk production between farms could be explained by the manner in which the cows were handled. They also found that herds which handled their cattle in a manner which increased stress had lower conception rates.

The researchers studied the idea that cows could become fearful of one individual and not another. Two individuals repeatedly handled the cows for several days. One individual was gentle, always speaking softly, stroking them and rewarding them with feed. The other individual was always abusive, striking them, shouting and occasionally using a cattle prod. After several days, the cow's response to the individual was evaluated by having them simple stand near the cows during milking so they could be seen. The simple presence of the abusive individual, increased the residual milk by 70 percent. This phenomenon indicates that just the presence of the abusive individual inhibits the milk ejection process.

This phenomenon makes sense when we think about how we react to stressful situations. Our level of anxiety increases significantly. This is caused in part by the release of adrenaline (epinephrine) and norepinephrine. These two hormones interfere with the release and action of oxytocin which is responsible for the milk ejection response. Anything which interferes with this response reduces the amount of milk harvested and increases the amount of residual milk. Subsequent research was performed to identify what constituted abusive behavior. Obviously, the use of a cattle prod was found to be abusive. They also observed that shouting was perceived by the cattle as being as abusive as the cattle prod. Slapping with the hand and twisting of the tail were considered abusive but not to the extent of the other treatments.

What does this mean on the farm? It indicates that everyone who is in contact with the cows should handle them in such a manner that they do not frighten the cows. Individuals who are abusive should be retrained to eliminate abusive behavior or removed from all contact with the cows. This means that they should not even be in the presence of the cows during milking.

This sounds like drastic action, but the research indicates there may be an increase of 3 to 6 pounds or more, in milk production per cow per day. This translates into 1000 to 2000 extra pounds of milk every year. Evaluate your cattle handling procedures and those of your employees. Are the cows fearful of some individuals? If so, take time to correct the behavior of those individuals or move them to another role on the farm where they do not have contact with the cows. The results may be a significant improvement in milk production.

The Contributions of Dairy Cows to Air Pollution

Dr. John Bernard
Extension Dairy Scientist and Researcher

Air quality is a problem in many areas throughout the world. Steps have been taken to reduce emissions from factories, automobiles, and other know sources of ozone forming gases. In recent years, the focus has also included agriculture. Recent legislation passed in California set rigid standards for the amount of ozone forming gases collectively called volatile organic compounds (VOC) emitted by agricultural operations. However, limited data were available on what "normal" VOC should be for dairy operations which were suspected of being the number two contributor in many areas of California.

Researchers at the University of California at Davis have been conducting a study to determine the amount of VOC emitted by dairy cattle. Cows have been housed in special environmental chambers that allow precise measurement of volatile organic gases and other pollutants such as methane and ammonia. Preliminary data from the first three months of the study indicate that dairy cows and their waste only emit one half of the volatile organic compounds that were originally estimated from data collected in 1938. Approximately 40 percent of the total VOC emissions are from manure and urine, which is much lower than most had predicted. One of the larger contributors to VOC was the gases' carbon dioxide and methane emitted when the cow belches.

Carbon dioxide and methane are byproducts of the microbial fermentation of feeds the cow consumes each day. Feeding an ionophore is one available technology that can be used to reduce the methane production. Other management practices that can be used include sampling and testing ingredients frequently and balancing rations to optimize ruminal fermentation.

Air quality will be more of an issue in the future as more and more people move to rural areas and the size of dairies' increase. Dairy producers should take a proactive approach to minimize potential problems. As Dennis Frame pointed out at the Southeast Dairy Herd Management Conference, a clean farm generally is not expected to be a source of air pollution but an unkept farm looks like a haven to all kinds of problems to the average urbanite. Using good common sense about when and where to spread manure, especially on windy days, will prevent many problems. Buffers that reduce visibility of normal structures (lagoons, silage pits, etc.) also help change air currents which may help dilute odors and VOC.

Although we do not have stringent air quality regulations in the Southeast today, all producers should be proactive to reduce potential problems. The old saying that an ounce of prevention is worth a pound of cure certainly applies to issues related to air and water quality.

Dates to Remember:

February 26-27: State Commercial Heifer Show, Perry
March 9: UGA Heifer Sale, UGA Teaching Arena-Athens
March 15-16: SUDIA Annual Meeting, Atlanta
April 15: Athens Spring Dairy Show, UGA Teaching Arena-Athens
April 16: State 4-H& FFA Dairy Judging Contest, UGA Teaching Arena-Athens
March 23: Dairy Cattle Sale, Irvin Yoder & Family-Montezuma

Different Major Breakdowns Implemented by Holstein Association

William Graves & Jillian Fain
Extension Dairy Scientists

Starting on December 1, 2004, Holstein Association classifiers began using different major breakdowns to score cows. The focus of this change is to reward animals that possess both dairyness and strength with somewhat higher Final Scores. According to the Holstein Association, the most profitable, longer lasting cows are those who have the dairyness to produce high volumes of milk along with the necessary strength to sustain that production and remain healthy. The old breakdowns are based on the current PDCA score card established in 1994. Both are shown below:

Major Breakdowns for Cows

Current PDCA Breakdowns		***New Holstein Assn. Breakdowns***	
FRAME	*15*	*FRONT END/CAPACITY*	*20*
DAIRY CHARACTER	*20*	*DAIRY STRENGTH*	*20*
BODY CAPACITY	*10*	*RUMP*	*5*
FEET & LEGS	*15*	*FEET & LEGS*	*15*
UDDER	*40*	*UDDER*	*40*

The weight given to feet & legs as well as udder remains the same. However, frame, dairy character & body capacity have been modified. Rump, stature & front end receive primary consideration when evaluating frame. Barrel receives primary consideration when evaluating body capacity. Openness, angularity & strength of the ribs, thighs, withers and neck get major consideration with dairy character. With the new breakdowns, rump is classified as a singularly important trait, while strength of front end and capacity have been lumped together in a broader category. Furthermore, "dairy character" while carrying the same weight has been replaced with "dairy strength" to focus on a more balanced cow with increased production and longevity.

Dairy character is best indicated by clean-cut, angular, open conformation and a strong refined appearance. Does it involve the perfect blend of strength and dairy? A frail cow cannot meet the energy requirements for high production. We still teach the current PDCA breakdown that emphasizes openness & angularity. A heavy coarse cow usually converts a higher proportion of feed into fat deposits rather than milk.
Character after all is the combination of qualities or features that distinguishes one person, group, or thing from another. In a cow, we look for her ability to milk.

The PDCA will meet in April and this topic will be discussed. We are not sure how the members are thinking, but hope they are not too quick to change. We welcomed the move from general appearance to frame and feet & legs. However, we are not as comfortable in switching frame, dairy character & body capacity.

On pedigrees, you'll notice that initially most animals will have underlined breakdowns. That means they were done with the old system. The new scores will start to show up primarily on the left side of the pedigree, while the older animals with the underlined breakdowns will move back into the pedigree. For more information on classification, contact the Holstein Association, 1 Holstein Place, Brattleboro VT 05302-0808. Phone: (800) 952- 5200. *www.holsteinusa.com*

How Am I Doing?

Dr. Lane O. Ely
Extension Dairy Scientist

In order to evaluate how a dairy is doing, a checkup of performance should be done on a regular basis. This should involve comparisons to benchmark data and your previous performance. I routinely put the UGA Teaching Dairy numbers through our Dairy MAP (Management Analysis Program) on a quarterly schedule. The benchmarks in the program are sorted for our herd size and region. It highlights the areas that may need improvement.

For the past year, our reproduction program had been in the 90th percentile for days open, days to first service and number of cows pregnant. When we ran the program in November all of these values had dropped to the 50th percentile. Days to first service had risen from 72 to 101 days, days open had gone from 95 to 145 days, and number of confirmed pregnant cows was zero cows for the previous two months.

We were in the middle of a disaster that needed to be corrected or were we? To see the situation, we needed to go beyond just the numbers and see what management practices may need to be changed.

First, we need to examine the objectives of the program. The UGA Teaching Dairy needs calves for our lab practicum class and introduction to animal science class for handling, castration and dehorning labs. In the fall, these labs are the last two weeks of October and first two weeks of November. Last year, we conducted a research trial that 100 cows were synchronized and bred after 54 days in milk. The program was successful as we lowered days to first service and days open, but we ended up with several cows who calved in July and August.

Our calving area (a pasture) has no shade or cooling so there was a potential for increased calving difficulty and poor milk production due to the heat. We were able to overcome that by adding fans to part of our hay barn and create a dry lot for calving. In fact, this worked very well as the cows calving last summer entered the herd very easily and are milking well. The second problem with the summer calving was that the calves were too old for lab classes, so we had a shortage of animals for class this fall.

What did we do? We decided that we would not have any cows calving in June, July and August in 2005. To do this we did not breed any animal in September, October or November, resulting in our poor reproduction marks for our quarterly evaluation.

Did it work? We started breeding the week after Thanksgiving and we now have 29 cows confirmed pregnant to calve in September 2005. All of the calves should be available for class next fall. So far, the changes have accomplished their objective. So we are not in the middle of a reproductive disaster.

When you evaluate your dairy herd, look at the numbers and see where you are and then look behind the numbers to see why you are there. Do you need to make changes? Are your changes working? Keep evaluating.

2004 Georgia Cream of the Crop

Dr. Warren Gilson
Extension Dairy Scientist

Each year the Georgia Cooperative Extension Service and the Southeast Dairy Herd Improvement Association recognize the top herds in the state based on their rolling herd average for milk and fat. The standards for this year were as follows:

An official DHIA yearly herd average of: 21,510 pounds of milk and/or 764 pounds of fat for the Holstein breed and 16,776 pounds of milk and/or 605 pounds of fat for all others breeds. The herds must also have a minimum size of 25 cows for the herd or official string within the herd and have had a minimum of 9 tests within the year.

The following herds were recognized at the recent Georgia Milk Producers Annual Meeting:

BROOKS COUNTY *- Johnny Widdon, CEC*			
Brooks County Dairy - Holstein	2280 cows	21927 M*	
COLQUITT COUNTY - *Scott N. Brown, CEC*			
Sparkman Dairy - Jersey	463 cows	14,380 M	690 F
FLOYD COUNTY - *Sylvia Johnson, CEC*			
Berry College - Jersey	27 cows	19,500 M	1004 F
HALL COUNTY - *Billy Skaggs, CEC*			
Scott Glover - Holstein	102 cows	21,167 M	816 F
JEFFERSON COUNTY - *Jim Crawford, CEC*			
Cecil Dueck - Holstein	53 cows	22,557 M	804 F
Vista Farm - Holstein	83 cows	22,166 M	772 F
LAURENS COUNTY - *Raymond Joyce, CEC*			
Agri-Fresh Dairy - Holstein	186 cows	24,397 M*	775 F
Gin-Branch Farm - Holstein	46 cows	22,706 M	846 F
MACON COUNTY - *Jeremy Kichler, CEC*			
Irvin R. Yoder - Holstein	135 cows	23,534 M	851 F
Mark E. Yoder - Holstein	131 cows	22,116 M	807 F
Marvin Yoder - Holstein	112 cows	21,814 M	752 F
MCDUFFIE COUNTY - *Frank M. Watson, CEC*			
Rogers' Hillcrest Farms Inc. - Holstein	380 cows	21,222 M	771 F
MITCHELL COUNTY *-Brad Mitchell, CEC*			
Aurora Dairy Georgia - Holstein	3271 cows	20,292 M*	767 F

MORGAN COUNTY - *Bobby Smith, CEC*			
Williams Dairy - Holstein	511 cows	25,290 M*	970 F
Dave Clark - Holstein	855 cows	25,638 M*	826 F
PIERCE COUNTY - *John Ed Smith, CEC*			
Wright, Whitty & Davis Dairy - Holstein	157 cows	22,381 M*	
PUTNAM COUNTY - *Keith Fielder, CEC*			
Ray Ward Dairy - Holstein	113 cows	21,091 M	814 F
Earnest R. Turk - Holstein	356 cows	21,121 M	842 F
Copelan Dairy - Holstein	27 cows	21,703 M	700 F
SCREVEN COUNTY- *Ray Hicks, CEC*			
Krulic Dairy Farm - Holstein	112 cows	22,201 M	805 F
SUMTER COUNTY - *Frank A. Latimore, CEC*			
Anthony's Dairy - Holstein	815 cows	20,822 M*	810 F
TIFT COUNTY - *T. Brian Tankersley, CEC*			
Coastal Plain Exp. Station - Jersey	32 cows	14,635 M	708 F
WARE COUNTY - *James Jacobs, CEC*			
Moody's Dairy - Holstein	1001 cows	21,702 M	

**Milked three times a day*

Dave Clark from Morgan County was recognized as the high herd for milk for 2004 with a herd average on 855 cows of **25,638 pounds of milk. Berry College** from Floyd County was recognized as the high herd for fat with a herd average of **1004 pounds of fat** on 27 cows.

The standards for next year are: 22,618 pounds of milk and/or 764 pounds of fat for Holstein herds and 16,056 pounds of milk and/or 702 pounds of fat for all other breeds.

Congratulations to all of the winners and best of luck to all herds in the coming year.

TOP 20 DHIA HERDS BY TEST DAY FAT PRODUCTION

					Test Day Average				Yearly Average				
							Fat			Fat		Protein	
Herd	County	Br.	Mo.	Cows	% Days in Milk	Milk	%	Lbs.	Milk	%	Lbs.	%	Lbs.
Scott Glover	White	H	12	93	91	68.5	4.0	2.76	21771	3.9	841	3.0	651
Williams Dairy	Morgan	H	12	524	88	70.9*	3.8	2.72	25851	3.9	999	3.0	771
Krulic Dairy Farm, Inc.	Screven	H	12	121	94	69.0	3.9	2.69	23128	3.8	874	3.1	709
Scott Glover	White	H	12	90	91	66.5	4.0	2.66	22006	3.9	850	3.0	656
Vista Farm	Jefferson	H	12	87	91	71.3	3.7	2.63	22514	3.5	784	3.0	682
Ray Ward Dairy	Putnam	H	12	147	86	64.1	4.1	2.61	21083	3.8	810	2.9	617
Earnest R. Turk	Putnam	H	12	380	86	60.4	4.3	2.57	21257	4.0	858	3.0	644
Cecil Dueck	Jefferson	H	12	59	92	69.6	3.7	2.55	23125	3.6	843	3.0	685
Dave Clark	Morgan	H	12	859	83	70.9*	3.6	2.53	25174	3.3	825	3.0	743
Berry College Dairy	Floyd	J	11	30	77	48.1	5.1	2.47	19037	5.0	961	3.6	677
Anthony's Dairy	Sumter	H	12	870	86	61.4*	3.9	2.38	20764	3.9	816	2.9	609
Gin Branch Farm	Laurens	H	12	54	91	65.0*	3.6	2.35	22402	3.7	826	3.0	677
Beaverdam Farm L.L.C.	Hart	H	12	181	90	54.0	4.3	2.33	19599	3.9	755	3.1	615
David L. Moss	Morgan	H	12	115	83	53.6	4.3	2.33	18728	4.2	792	3.0	570
Sparkman Dairy	Colquitt	J	12	442	86	44.8	5.1	2.30	14968	4.8	724	3.5	531
Irvin R. Yoder	Macon	H	12	131	80	61.8	3.7	2.27	23032	3.6	836	3.1	704
Lawayne Weaver	Macon	H	12	133	86	56.8	4.0	2.27	18587	3.8	705	3.2	596
Kent Walker	Greene	H	12	119	90	60.7	3.7	2.25	20544	3.5	727	2.9	588
Mark D. Brenneman & Sons	Macon	H	12	111	88	60.0	3.7	2.24	18239	3.4	618	3.1	562
Lee Whitaker	McDuffie	H	12	375	86	59.8	3.7	2.21	20527	3.6	747	3.0	626

[1]Minimum herd size of 10 cows. Yearly average calculated after 365 days on test. (Mo.) column indicates month of test. Test day milk, marked with an asterisk (*), indicates herd was milked three times per day (3X).

Information in this table is complied from Dairy Records Management Systems Reports (Raleigh, NC).

TOP 20 DHIA HERDS BY TEST DAY MILK PRODUCTION

					Test Day Average				Yearly Average				
							Fat			Fat		Protein	
Herd	County	Br.	Mo.	Cows	% Days in Milk	Milk	%	Lbs.	Milk	%	Lbs.	%	Lbs.
Vista Farm	Jefferson	H	12	87	91	71.3	3.7	2.63	22514	3.5	784	3.0	682
Williams Dairy	Morgan	H	12	524	88	70.9*	3.8	2.72	25851	3.9	999	3.0	771
Dave Clark	Morgan	H	12	859	83	70.9*	3.6	2.53	25174	3.3	825	3.0	743
Cecil Dueck	Jefferson	H	12	59	92	69.6	3.7	2.55	23125	3.6	843	3.0	685
Krulic Dairy Farm, Inc.	Screven	H	12	121	94	69.0	3.9	2.69	23128	3.8	874	3.1	709
Scott Glover	White	H	12	93	91	68.5	4.0	2.76	21771	3.9	841	3.0	651
Rodger's Hillcrest Farms Inc.	McDuffie	H	11	393	88	67.3	3.1	2.09	21629	3.5	764	3.0	656
Larry Moody	Ware	H	12	961	84	66.7			21629				
Scott Glover	White	H	12	90	91	66.5	4.0	2.66	22006	3.9	850	3.0	656
Gin Branch Farm	Laurens	H	12	54	91	65.0*	3.6	2.35	22402	3.7	826	3.0	677
Ray Ward Dairy	Putnam	H	12	147	86	64.1	4.1	2.61	21083	3.8	810	2.9	617
Brooksco Dairy	Brooks	H	12	2330	88	63.6*			21719				
Irvin R. Yoder	Macon	H	12	131	80	61.8	3.7	2.27	23032	3.6	836	3.1	704
Agri-Fresh Dairy	Laurens	H	12	204	84	61.8*	3.5	2.18	23801	3.2	751	2.9	702
Anthony's Dairy	Sumter	H	12	870	86	61.4*	3.9	2.38	20764	3.9	816	2.9	609
Gene Bowen	Pierce	H	12	216	92	61.2*			18395				
Kent Walker	Greene	H	12	119	90	60.7	3.7	2.25	20544	3.5	727	2.9	588
Rufus Yoder, Jr.	Macon	H	12	62	81	605	3.6	2.17	21339	3.5	754	3.1	665
Earnest R. Tuck	Putnam	H	12	380	86	60.4	4.3	2.57	21257	4.0	858	3.0	644
Mark E. Yoder	Macon	H	12	113	84	60.4	3.2	1.93	21953	3.4	753	3.1	676

[1]Minimum herd size of 10 cows. Yearly average calculated after 365 days on test. (Mo.) column indicates month of test. Test day milk, marked with an asterisk (*), indicates herd was milked three times per day (3X).

Information in this table is complied from Dairy Records Management Systems Reports (Raleigh, NC).

TOP 20 DHIA HERDS BY TEST DAY FAT PRODUCTION

					Test Day Average				Yearly Average				
							Fat			Fat		Protein	
Herd	County	Br.	Mo.	Cows	% Days in Milk	Milk	%	Lbs.	Milk	%	Lbs.	%	Lbs.
Cecil Dueck	Jefferson	H	11	52	90	70.0	3.8	2.64	22908	3.6	832	3.0	677
Scott Glover	White	H	10	93	87	63.7	4.1	2.59	21375	3.9	826	3.0	640
Williams Dairy	Morgan	H	11	520	85	67.7*	3.7	2.53	25531	3.9	983	3.0	756
Ray Ward Dairy	Putnam	H	11	148	87	63.9	3.8	2.46	21164	3.9	816	2.9	618
Krulic Dairy Farm, Inc.	Screven	H	11	116	92	69.3	3.5	2.43	22785	3.8	862	3.1	695
Earnest R. Tuck	Putnam	H	11	380	86	57.4	4.1	2.38	21283	4.0	854	3.0	643
Dave Clark	Morgan	H	11	859	77	61.5*	3.6	2.19	25320	3.2	822	3.0	747
Vista Farm	Jefferson	H	11	87	84	60.6	3.6	2.16	22287	3.5	776	3.1	680
Russell Johnston	Morgan	H	11	102	88	54.0	4.0	2.16	20186	3.9	781	3.1	635
Tim Groff	Burke	H	11	51	94	61.1	3.5	2.14					
Martin Dairy L.L.P.	Hart	H	10	288	86	57.1	3.7	2.14	21754	3.6	776	3.0	655
J B Gay & Son	Jenkins	H	11	290	91	54.9	3.8	2.09	20682				
Lee Whitaker	McDuffie	H	11	349	78	56.5	3.6	2.06	20493	3.6	747	3.0	625
Gin Branch Farm	Laurens	H	11	52	85	55.0	3.7	2.05	22390	3.7	831	3.0	674
Sparkman Dairy	Colquitt	J	11	436	87	45.7	4.5	2.05	14731	4.8	712	3.5	522
Franks Farm	Burke	H	11	58	93	54.7	3.7	2.03	16317	3.8	612	3.1	511
Ralph Kotal	Hart	H	11	58	86	58.0	3.4	2.00	19711	3.4	680	3.1	604
Kent Walker	Greene	H	11	114	87	55.0	3.6	2.00	20675	3.5	726	2.9	591
Rufus Yoder, Jr.	Macon	H	11	130	88	54.0	3.7	1.99	21120	3.5	748	3.1	659
Dan Durham	Greene	H	11	86	87	56.7	3.5	1.97	18913	3.6	680	3.1	580

[1]Minimum herd size of 10 cows. Yearly average calculated after 365 days on test. (Mo.) column indica7es month of test. Test day mk, marked with an asterisk (*), indicates herd was milked three times per day (3X).

Information in this table is complied from Dairy Records Management Systems Reports (Raleigh, NC).

TOP 20 DHIA HERDS BY TEST DAY MILK PRODUCTION

					Test Day Average				Yearly Average				
							Fat			Fat		Protein	
Herd	County	Br.	Mo.	Cows	% Days in Milk	Milk	%	Lbs.	Milk	%	Lbs.	%	Lbs.
Cecil Dueck	Jefferson	H	11	52	90	70.0	3.8	2.64	22908	3.6	832	3.0	677
Krulic Dairy Farm, Inc.	Screven	H	11	116	92	69.3	3.5	2.43	22785	3.8	862	3.1	695
Williams Dairy	Morgan	H	11	520	85	67.7*	3.7	2.53	25531	3.9	983	3.0	756
Ray Ward Dairy	Putnam	H	11	148	87	63.9	3.8	2.46	21164	3.9	816	2.9	618
Scott Glover	White	H	10	93	87	63.7	4.1	2.59	21375	3.9	826	3.0	640
Dave Clark	Morgan	H	11	859	77	61.5*	3.6	2.19	25320	3.2	822	3.0	747
Tim Groff	Burke	H	11	51	94	61.1	3.5	2.14					
Vista Farm	Jefferson	H	11	87	84	60.6	3.6	2.16	22287	3.5	776	3.1	680
Brooksco Dairy	Brooks	H	11	2338	86	59.9*			21742				
Larry Moody	Ware	H	11	977	83	58.5			21593				
Ralph Kotal	Hart	H	11	58	86	58.0	3.4	2.00	19711	3.4	680	3.1	604
Earnest R. Turk	Putnam	H	11	380	86	57.4	4.1	2.38	21283	4.0	854	3.0	643
Martin Dairy L.L.P.	Hart	H	10	288	86	57.1	3.7	2.14	21754	3.6	776	3.0	655
Mar-Leta Farm	Wilkes	H	11	168	88	56.9			19097				
Dan Durham	Greene	H	11	86	87	56.7	3.5	1.97	18913	3.6	680	3.1	580
Lee Whitaker	McDuffie	H	11	349	78	56.5	3.6	2.06	20493	3.6	747	3.0	625
Cory Johnson	Bacon	H	11	433	85	56.3*			19106				
Ivan Peters	Jefferson	H	10	84	90	55.8	3.5	1.95	18587	3.6	667	3.2	586
RA McElmurray & Son	Richmond	H	10	155	92	55.7	3.3	1.84	19813	3.4	674	3.0	599
Ralph Adamson Jr.	Lamar	H	11	442	81	55.4	3.2	1.76	19544	3.5	691	3.1	602

[1]Minimum herd size of 10 cows. Yearly average calculated after 365 days on test. (Mo.) column indicates month of test. Test day milk, marked with an asterisk (*), indicates herd was milked three times per day (3X).

Information in this table is complied from Dairy Records Management Systems Reports (Raleigh, NC).