



GEORGIA DAIRYFAX

<http://www.ces.uga.edu/Agriculture/asdsvm/Dairyscience/dairypage.HTML>

July/August 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.

- **Got Milk? Dairy Sales Increase at World's Largest Retailer** by Dr. William Graves 2
- **McClain new manager of industry relations** by SUDIA 2
- **Whats happening at the UGA teaching dairy** by Dr. Lane Ely 3
- **Dates to remember** 4
- **Supreme court vacates ruling on dairy check-off** by SUDIA 4
- **Southeast Dairy Herd Management Conference** by Dr. Lane Ely 4
- **Why not Herd bulls?** by Dr. William Graves 5
- **UGA rises to meet the dairy challenge.** by Dr. William Graves and Jillian Fain 6
- **Pasturization-Why?** by Dr. Lane Ely 7
- **Top 20 DHIA Herds** by Test Day Milk and Fat Production for March/April 2005 9

Sincerely,



William M. Graves
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County Extension Director or County Agent

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DAIRYFAX NEWSLETTER

Got Milk? Dairy Sales Increase at World's Largest Retailer

By Dr. William Graves
Professor & Dairy Scientist

Operating the WAL-MART way, the world's largest retailer sold \$258 billion in sales last year. Forty percent of those sales were in grocery items. By increasing efficiency and lowering costs, and adopting new changes like shelf ready raw meat products, WAL-MART continues to dominate retail sales. Of course this has affected every level of the supply chain. All retailers are now paying more attention to consumer demands for products.

Of 11 major departments at WAL-MART, percentage sales of red meat grew the most at 181%. Deli was second at 34%. Dairy was third in sales growth at 29%. Fresh eggs were up 26% and packaged meat increased 26%.

Some believe that price pressure reduces quality. Consumers make the final decision. The first dairy case I remember seeing in a WAL-MART was very small and by the front door. They made it convenient to grab a gallon as you went out the door. Now almost half of their sales are groceries. I also remember the effect of Bi-Lo moving into Newberry, SC when I was a child. My uncles independent grocery business found it difficult to compete with the lower prices offered by a grocery chain. The other day I was at the post office in watkinsville and noticed Fed Ex had a pickup box in the front. It reminded me of that first milk cooler in walmart.

With new dietary guidelines that recommend Americans include 3 to 4 servings of milk, cheese or yogurt every day, sales should continue to grow. Also, the benefits of "3 A Day" to help burn more fat and lose weight in a reduced caloric diet will continue to help drive dairy sales. Currently, there are more than 50 studies linking dairy to weight management. The future is bright. Larger, plastic bottles are increasing in popularity in schools and at fast food establishments. There is new evidence that milk helps to ease arthritis, as well as increases the absorption of folic acid and decreases heart disease. Natures most perfect foods are full of healthy benefits for us all. The future looks very bright.

McClain New Manager of Industry Relations

Milk is thicker than blood in the McClain family. Eric McClain's father was a dairy farmer. Both his grandfathers were dairy farmers. His father-in-law was a dairy farmer. Today, he not working for jsut his family. He's working for every farmer in the Southeast. McClain is SUDIA's new manager of Industry Relations for the entire SUDIA area.

In his new position, McClain works with farmers to make sure their voices are represented as SUDIA works to build demand for dairy foods. He travels throughout the Southeast to meet with state American Dairy Association boards, oversees major events and communicates with allied dairy groups. We are excited to have Eric's expertise and hopes he spends as much time as possible in Georgia. (Source: SUDIA)

What is Happening at the UGA Teaching Dairy

By Dr. Lane Ely
Extension Dairy Scientist

Like everyone in the southeast, the UGA teaching dairy has been trying to survive the rain and heat this summer. We have had too much rain or it has been too hot. Because of the rain and cooler temperatures, spring crop production was excellent and pastures had an excess of grass available. Our wheat silage crop this spring yielded twice the silage as last year. Quality was variable because the rain caused time to be extended and some of the wheat was harvested too mature.

The first cutting of hay crops also had excellent yield and quality. The second cutting also would have been excellent except when it was ready to be cut, the hurricanes hit. We are now about three weeks past prime harvest date. Hopefully we will get it harvested soon.

With the reduction in herd size and the excellent wheat silage, it was decided not to plant any sorghum this summer. We have enough silage in storage to get to next spring's wheat crop. About 1/3 of the wheat crop was put up in bags this year.

Our partial seasonal calving program is looking good. The objective is to not calve during summer because of potential problems and because of the need for calves for classes in the fall and spring. Our last calf was born on May 15. Our next calf is due on September 3. We have 46 cows and heifers scheduled to calve in September and October. We should have ample calves available for Introduction to Animal Science and Lab Practicum classes this fall.

Construction projects are continuing. The third phase of our redesigned manure management project is underway. Construction of the sand trap at the free stall barn and connection to the solid separator should be finished this summer. This will allow us to change free stall bedding to sand from sawdust. Sawdust has been very difficult to get this year. We are all looking forward to seeing how the new system will work.

Our second construction project is renovation of the third row of free stalls in the herd barn. We are putting up new posts and loops as we add sand for bedding. The free stalls are 30 years old and in need of repairs. The original free stall design for the barn has a solid wood panel at the head of the free stalls forming a 4 foot high wall. In the new design, we are removing the wood panels. The free stall loops will be attached to two steel bars. We hope this open design will increase air flow for increased cow comfort. Classes start in August. Hopefully the dairy and students will both be ready for fall classes

Dates To Remember

**September 27- Reproduction Workshop- Madison
(Farm Bureau Contact-Bobby Smith 706-342-2214)**

**September 27- Reproduction Workshop-Montezuma
(Fire Station Contact Jessica Klingener 706-468-1612)**

October 8&9-Commercial Heifer Show-Perry

October 14-16-GA National Open and Junior Dairy Shows-Perry

November 9&10-Southeast Dairy Conference, Farm Bureau-Macon

Supreme Court vacates ruling on dairy checkoff

The U.S. Supreme Court recently wiped away an appeals court ruling that found the dairy checkoff unconstitutional. The high court's decision was made a week after it rejected a case challenging the legality of the beef checkoff. The dairy case, Cochran v. USDA, is now in the hands of the Third Circuit Court of the Appeals in Pennsylvania. The Third Circuit has several options for how to proceed. It could hold a full re-briefing with oral arguments, it could ask the parties for written comment, or it could issue a new decision without any new input. (Source: SUDIA)

SE Dairy Herd Management Conference

by, Dr. Lane O. Ely
Extension Dairy Scientist

The 2005 SE Dairy Herd Management Conference will be held November 9 and 10 at the Georgia Farm Bureau Building in Macon. Topics to be covered include Dairy Records that make Sense, Composting Dairy Mortalities, Fat Utilization in the Transition Cow, By-Product Management, Chromium Application for Dairy Cows, Tunnel Barn Update, What Dairies are Doing to Thrive, Factors Affecting Dairy Cattle Lameness, Accelerated Growth Programs for Calves, Rewards and Reservations, Geotube for De-watering Lagoon Sludge; Lagoon Renovation, Mastitis Management in Heifers and Optimizing Silage Quality for Dairy Cattle.

Continuing Education Credits will be available for Nutrient Management Certification. We look forward to seeing you at the Conference this year. If you have any questions, contact our office or your county agent.

Why Not Herd Bulls?

Dr. William Graves

Daughters of proven A.I. bulls produce more milk than those sired by non-A.I. bulls. Israeli scientists reported that cows that were pregnant survived 420 days longer than herdmates that were open. It is important that we get animals pregnant, maximize the genetic potential available through A.I. and remember the disadvantages of herd bulls.

Herd Bull are:

1. Dangerous! People have been hurt and killed each year by herd bulls across the Southeast.
2. Genetically inferior! Using a bull out of one of your best milkers of a neighbor's top cow has no guarantee. When a bull's daughter begin to milk and you recognize their production is inferior to their herdmate, it is too late. Start with a bull that is proven and guaranteed to produce more milk.
3. Carriers of disease! Herd bulls can transmit many diseases including brucellosis, vibriosis, IBR and trichomoniasis. Bulls in A.I. studs are routinely monitored to be disease-free.
4. Possibly subfertile! Herd bulls not only are subfertile during hot weather, but it takes upto six weeks after the weather cools off for them to recover and produce viable sperm.
5. Not always easy calving! With A.I. bull, producers can select those bulls that are known to sire calves fewer difficult births with heifer. There is no way to know until it is too late with herd bulls.

Remember your objectives:

1. Settle the cow or heifer. Get the semen in the right animal, at the right time and in the right place.
2. Obtain calves for replacements from best bulls genetically available. Genetics counts, and milk production is very heritable.
3. Use fertile, disease-free semen available through A.I. bulls. Monitor fertility through ERCR values.
4. Accomplish the above at reasonable cost.
5. Avoid taking unnecessary risks, life is way to short.

UGA Rises to Meet the Dairy Challenge

Jillian Fain and Dr. Bill Graves
Animal and Dairy Science Department

This year the University of Georgia sent its' first team ever to be represented in the North American Intercollegiate Dairy Challenge (NAIDC). The Fourth Annual NAIDC was held in State College, Pennsylvania, and hosted 27 teams from across the United States and Canada. NAIDC is an innovative two-day competition for students representing dairy science programs at North American Universities. It enables students to apply theory and learning from the classroom to a real-world dairy in a consulting position. Each year, four students representing each university are sent to analyze every aspect of a farm in a single day. They are allotted two hours for on farm touring and spend between 5 and 6 hours analyzing farm records through PCDart, DairyComp, or DHI Plus and formulating a presentation. The presentation containing goals and recommendations is given the following day to a group of experts. These experts are looking for recommendations concerning nutrition, reproduction, milking procedures, animal health, calf rearing, housing, and financial management.

Supporting the contest is a tremendous group of sponsors and industry leaders. Students are given a multitude of time at nights to mingle with sponsors and make connections that will benefit them in the future as they look to graduation and a job in the dairy industry. These sponsors not only donate their time to the contest, but donate the funding necessary to put on such a production. The sponsorship money makes the contest virtually cost free to universities, with meals and housing being paid for as well as each university being allotted a travel stipend.

The University of Georgia carried the following four students to the contest: Jennifer Hagen, Frank Jackson III, Tiffany Martin and Matt Sumners. The diversity of this team was tremendous and certainly aided them in the competition. Frank and Matt were veterans of the dairy industry and brought with them a sound knowledge while Jennifer and Tiffany strived to master record programs, nutrition and reproduction. This team did an excellent job and made the University proud being honored with a Silver Award at the 2005 NAIDC. All hopes are that the University of Georgia will continue to be represented in this contest many years to come and make this a permanent part of their education. This year's team was coached by Jillian Fain and Heather Bissette whom would like to thank Drs. Ely, Froetschel, and Graves for their contributions in scheduling as well as conducting practices.



Pasteurization- Why?

By Dr. Lane Ely
Extension Dairy Scientist

Every few weeks, our office receives a phone call asking “where can I buy raw milk?” The answer in Georgia is easy as it is illegal to sell raw milk in Georgia. Raw milk (un-pasteurized) is not allowed to be sold in interstate shipment. Twenty-nine states allow some form of raw milk to be produced. This varies from intrastate use, personal use with no resale or sold only for animal not human use.

Usually the conversation continues “Raw milk is so much better for you than pasteurized milk. It has more nutrients, won’t spoil, has no chemicals and the cows are healthier.” I usually ask where did you get this information and the answer is on the web. If one searches for “raw milk” several sites are identified. Many of the sites discuss “raw milk”, “organic milk” and “pasteurized milk” and often the sites are not clear what product they are discussing.

Raw milk is un-pasteurized and un-homogenized. Organic milk is from cows raised without antibiotics or supplemental hormones and fed forages and grains raised without herbicides or pesticides. Many of the sites discuss cow milk and organic milk as the same product. Pasteurized milk is milk that has been heated. Why do we have pasteurized milk?

Milk from cows, sheep and goats have been used for many centuries as a human food. Fluid milk was converted to cottage cheese, butter, cream and chesses for storage and to use as food. From Greek and Roman times the theory of spontaneous generation explained how living organisms are generated by decaying organic matter. For example, maggots spontaneously appear in meat. This theory also explained how diseases occurred. In 1683, van Leeuwenhoek discovered bacteria with his invention of the microscope. With the microscope, it was shown that decaying organic matter had bacterial growth. As knowledge of bacteria grew, it seemed to support the theory of spontaneous generation. In 1768, Lazzaro Spallanzoni proved that microbes came from the air and could be killed by boiling.

Louis Pasteur in 1854 examined the fermentation process. The process of producing wine, beer and vinegar was very uncertain. Off flavors and undesired products were often the results of the fermentation. Pasteur went to the factory of one of his student’s fathers. Using his microscopy he found that normal production of alcohol occurred when the yeast were plump and budding. When lactic acid would form instead of alcohol, small rod like bacteria were always mixed with the yeast cells. Also, the alcohol was often a mix of any 1 alcohol and other complex organic compounds. This could not be explained by the simple catalytic break down of sugar. Over the next few years, Pasteur identified and isolated several microbes responsible for normal and abnormal fermentations. He showed that if he heated the substrate to moderately high temperatures the microbes would be killed and the mix sterile. Then pure cultures of microbes and yeast could be added to the mix and predictable, consistent fermentations would occur. The heating of the mix for these fermentations to kill the microbes present came to be called pasteurization. Pasteur’s studies of contamination of fermentation clearly showed this was caused by the entry of foreign microbes. Pasteur was able to show that many diseases- cholera, diphtheria, scarlet fever, child birth fever, syphilis, smallpox- were caused by microbes. Pasteur impressed upon his physician colleagues that the avoidance of microbes meant the avoidance of infection. This was the basis of the germ theory of diseases. Milk production increased in the 1870-1890 period with the number of dairy cows doubling in the United States. Fluid milk usage was up because of rail transportation, anti-temperance movement, increased women in the work force and the Victorian view of nursing.

Problems occurred. Milk is desired for its nutritive value to babies but it is also an excellent medium for growth of microbes. Due to poor sanitary conditions, and lack of proper cooling, milk often was contaminated by disease bacteria and caused outbreaks, especially in infants. Also the dairy cow could serve as the reservoir for many diseases that infect humans such as brucellosis and tuberculosis. Especially in the crowded tenements of the large industrial cities, infant mortality was once at a level similar to many undeveloped countries today.

Nathan Strauss, owner of Macy's Department store in New York, wanted to do something to decrease infant deaths due to typhoid fever, diphtheria, and scarlet fever. He started a series of milk deposits in the 1890's in New York city. The milk deposits received milk, tested it, pasteurized it, bottled and distributed the milk to the children in the tenements of New York. The death rate declined in the children and outbreaks of childhood disease was reduced, but the pasteurization of milk was controversial. There were outcries that the "process was not natural. The nutritive value of milk was destroyed, the process was too expensive." Strauss continued to support the depots for the children of the tenements, and by 1897, there were 78 depots opened.

In 1907, there was an outbreak of disease related to raw milk. Oscar Strauss, Nathan's brother, was Secretary of Commerce under Teddy Roosevelt. He ordered the US. Public Health Service to study milk sanitation and pasteurization was recommended to prevent the spread of disease.

In 1908, Chicago passed a law that all milk sold in the city had to be pasteurized to be sold. There continued to be concern that it was too expensive as the price needed was 10 to 15 cents per quart.

The American Medical Association conducted tests on raw milk and pasteurized milk and "found no evidence that pasteurized milk was any less than raw milk."

In 1911, it was shown that humans could get tuberculosis from cows and milk. In 1924, the Pasteurized Milk Ordinance (PMO) was passed. Any milk in the interstate commerce must be pasteurized to be sold. There were provisions for Certified Raw Milk that involved increased standards for the milk to be sold including lower bacteria counts, frequent inspections of cows, workers and farm facilities. The Certified Raw Milk program was removed in the 1980's. The PMO, modified over years, is still today the guidelines for milk to be sold interstate.

Much of the discussion about pasteurization is the same as it was in the early 1900's. Today, scarlet fever, diphtheria, tuberculosis, cholera, or child birth fever are rarely seen in the United States but other problems are seen. The Centers for Disease Control (CDC) reported from 1998-2005 that there had been 39 outbreaks in which un-pasteurized milk or fresh cheese from un-pasteurized milk was implicated. The pathogens included Salmonella, Shiga toxin-producing E. coli, Listeria monocytogens, Campylobacteria and Brucella. The outbreaks occurred in 22 states with an estimated 831 illnesses, 66 hospitalizations and one death.

The people primarily at risk are individuals with undeveloped immune systems, babies and adults with disorders of the immune system. For healthy you people and adults, they may only suffer what they believe to be "stomach flu."

Why do we pasteurize milk? To provide a safe product and prevent the spread of disease. The incidence of problems today is low but the risk is not zero.

TOP 20 DHIA HERDS BY TEST DAY MILK PRODUCTION

Herd	County	Br.	Mo.	Cows	Test Day Average				Yearly Average				
					% Days in Milk	Milk	Fat		Milk	Fat		Protein	
							%	Lbs.		%	Lbs.	%	Lbs.
Williams Dairy	Morgan	H	5	509	92	79.0*	3.9	3.05	26256	3.7	982	3.1	801
Dave Clark	Morgan	H	5	866	92	78.7*	2.9	2.28	25772	3.3	839	2.9	755
Vista Farm	Jefferson	H	5	81	100	75.9	2.7	2.04	24123	3.3	792	3.0	726
Krulic Dairy Farm, Inc.	Screven	H	5	120	92	72.2	3.4	2.46	24310	3.7	888	3.1	750
Lee Whitaker	McDuffie	H	4	371	96	70.4	3.5	2.43	21345	3.6	758	3.1	652
Ray Lovett	Peirce	H	4	348	94	70.3*	2.8	1.98	21948	3.1	686	3.0	655
Larry Moody	Ware	H	5	992	88	69.8	.0		22449				
Agri-Fresh Dairy	Laurens	H	5	200	97	69.7*	3.5	2.41	23668	3.3	782	3.0	703
Brooksco Dairy	Brooks	H	5	2522	90	69.3*	.0		22486				
Aurora Dairy Georgia-LLC	Mitchell	H	5	3638	95	69.2*	3.5	2.42	20481	3.7	766	3.0	616
Anthony's Dairy	Sumter	H	4	830	91	68.7*	3.5	2.43	21201	3.8	808	2.9	622
Brooksco Dairy	Brooks	H	4	2554	90	68.7*	.0		22332				
Lee Whitaker	McDuffie	H	5	369	92	68.6	3.2	2.18	21570	3.5	763	3.1	661
Gene Bowen	Pierce	H	5	274	94	67.2*	.0		20138				
Eugene King	Macon	H	5	95	100	66.7	3.3	2.20	19598	3.7	718	3.1	617
Ray Ward Dairy	Putnam	H	5	136	99	66.4	3.5	2.35	21613	3.7	805	3.0	638
Terry Embry	Embry	H	5	639	91	66.4*	3.4	2.27	19589				
Louis Yoder	Macon	H	5	131	90	66.0	3.1	2.07	20063	3.2	650	3.0	611
Earnest R Turk	Putnam	H	4	368	96	65.8	3.5	2.32	21686	4.0	864	3.1	663
Irvin R Yoder	Macon	H	5	124	90	65.4	3.5	2.28	22159	3.6	802	3.1	685

¹Minimum 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 compiled from Dairy Records Management Systems Reports (Raleigh, NC).

TOP 20 DHIA HERDS BY TEST DAY FAT PRODUCTION

Herd	County	Br.	Mo.	Cows	Test Day Average				Yearly Average				
					% Days in Milk	Milk	Fat		Milk	Fat		Protein	
							%	Lbs.		%	Lbs.	%	Lbs.
Williams Dairy	Morgan	H	5	509	92	79.0*	3.9	3.05	26256	3.7	982	3.1	801
Berry College Dairy	Floyd	J	5	28	100	55.1	5.0	2.74	18477	5.0	926	3.5	654
David L Moss	Morgan	H	5	114	92	36.8	4.0	2.57	20073	4.3	860	3.0	601
Coastal Plain Exp Station	Tift	H	5	201	94	63.0	4.1	2.56	18734	3.7	735	3.1	581
Krulic Dairy Farm, Inc.	Screven	H	5	120	92	72.2	3.4	2.46	24310	3.7	888	3.1	750
Lee Whitaker	McDuffie	H	4	371	96	70.4	3.5	2.43	21345	3.6	758	3.1	652
Anthony's Dairy	Sumter	H	4	830	91	68.7*	3.5	2.43	21201	3.8	808	2.9	622
Aurora Dairy Georgia-LLC	Mitchell	H	5	3638	95	69.2*	3.5	2.42	20481	3.7	766	3.0	616
Coastal Plain Exp Station	Tift	J	5	24	96	49.6	4.9	2.42	13941	4.8	667	3.8	493
Agri-Fresh Dairy	Laurens	H	5	200	97	69.7*	3.5	2.41	23668	3.3	782	3.0	703
W.T. Meriwether	Morgan	H	5	111	95	63.9	3.7	2.39	18476	3.9	719	3.1	575
Ray Ward Dairy	Putnam	H	5	136	99	66.4	3.5	2.35	21613	3.7	805	3.0	638
Earnest R Turk	Putnam	H	4	368	96	65.8	3.5	2.32	21686	4.0	846	3.4	663
Dave Clark	Morgan	H	5	866	82	78.7*	2.9	2.28	25772	3.3	839	2.9	755
Irvin Yoder	Macon	H	5	124	90	65.4	3.5	2.28	22159	3.6	802	3.1	685
Rodgers' Hillcrest Farms, Inc.	McDuffie	H	5	378	92	60.9	3.7	2.28	23108	3.2	740	3.0	698
Terry Embry	Embry	H	5	639	91	66.4*	3.4	2.27	19589				
Lazy S Dairy	Worth	H	5	290	93	64.8	3.5	2.27	20359	3.5	722	3.0	609
Russell Johnston	Morgan	H	5	99	91	62.9	3.6	2.25	20364	3.9	788	3.2	643
Roberts Dairy Inc.	Jones	H	4	145	91	59.9	3.7	2.24	18028	4.0	713	3.1	558

¹Minimum 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).

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							%	Lbs.		%	Lbs.	%	Lbs.
Williams Dairy	Morgan	H	6	521	92	79.9*	3.8	3.02	26395	3.7	985	3.1	808
Martin Dairy L.L.P.	Hart	H	5	296	94	75.4	3.6	2.75	23328	3.6	846	3.0	697
Dave Clark	Morgan	H	6	855	93	74.5*	2.9	2.19	25942	3.2	840	3.8	757
Al & Richard Kinder	Hart	H	5	325	99	72.2	3.3	2.39	20464	3.5	721	3.0	623
Cecil Dueck	Jefferson	H	5	77	99	70.7	3.6	2.51	24301	3.6	886	3.0	732
Brooksco Dairy	Brooks	H	6	2529	94	69.9*			22768				
Ray Lovett	Peirce	H	5	342	92	69.1*	2.9	2.03	22103	3.1	692	3.0	660
Williams Dairy	Morgan	H	6	128	92	68.1	3.3	2.26	23642	3.5	828	3.0	708
Krulic Dairy Farm Inc.	Screven	H	6	118	89	67.9	3.5	2.37	24502	3.6	893	3.1	754
Larry Moody	Ware	H	6	972	85	65.2			22732				
Rufus Yoder Jr.	Macon	H	5	109	97	65.1	3.0	1.93	20765	3.4	702	3.1	648
Wright & Whitty Davis Dairy	Appling	H	5	11180	89	64.9*			21016				
Agri-Fresh Dairy	Laurens	H	6	200	93	64.6*	3.6	2.32	23425	3.3	784	3.0	694
Aurora Dairy Georgia-LLC	Mitchell	H	6	3641	94	64.4*	3.4	2.21	20741	3.7	772	3.0	623
Ed Boehs	Jefferson	H	5	83	99	63.4	3.4	2.16	21174	3.8	798	3.1	653
Harry Schappman	Wilcox	H	6	555	90	62.6			19816				
Vista Farm	Jefferson	H	6	78	100	62.5	2.5	1.29	24129	3.2	782	3.0	727
Scott Glover	White	H	6	101	84	62.0	3.7	2.30	22609	3.9	873	3.0	674
Russell Johnston	Morgan	H	5	103	88	61.5	3.6	2.24	20354	3.9	787	3.2	645
Ray Lovett	Peirce	H	6	336	93	61.5*	3.5	2.15	22309	3.2	704	3.0	666

¹Minimum 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).

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Martin Dairy L.L.P.	Hart	H	5	296	94	75.4	3.6	2.75	23328	3.6	846	3.0	697	
Cecil Dueck	Jefferson	H	5	77	99	70.7	3.6	2.51	24301	3.6	886	3.0	732	
Al & Richard Kinder	Hart	H	5	325	99	72.2	3.3	2.39	20464	3.5	721	3.0	623	
Krulic Dairy Farm, Inc.	Screven	H	6	118	89	67.9	3.5	2.37	24502	3.6	893	3.1	754	
Agri-Fresh Dairy	Laurens	H	6	200	93	64.6*	3.6	2.32	23425	3.3	784	3.0	694	
Scott Glover	White	H	6	101	94	62.0	3.7	2.30	22609	3.9	873	3.0	674	
Williams Dairy	Morgan	H	6	128	92	68.1	3.3	2.26	23642	3.5	838	3.0	708	
David L. Moss	Morgan	H	6	115	87	55.4	4.1	2.26	20369	4.3	874	3.0	610	
Russell Johnston	Morgan	H	5	103	88	61.5	3.6	2.24	20354	3.9	787	3.2	645	
Terry Embry	Embry	H	6	664	90	59.3*	3.8	2.24	20171					
Coastal Plain Exp Station	Tift	H	6	197	90	58.4	3.8	2.23	18947	3.9	743	3.1	586	
Kent Walker	Greene	H	5	112	88	56.1	4.0	2.22	20558	3.7	733	2.9	599	
Aurora Dairy Georgia LLC	Mitchell	H	6	3641	94	64.4*	3.4	2.21	20741	3.7	772	3.0	623	
Dave Clark	Morgan	H	6	855	93	74.5*	2.9	2.19	25942	3.2	840	2.9	757	
Larry Holdeman	Jefferson	X	6	136	96	60.1	3.6	2.18	18981	3.6	692	3.1	590	
Ed Boehs	Jefferson	H	5	83	99	63.4	3.4	2.16	21174	3.8	798	3.1	653	
Franks Farm	Burke	B	6	86	94	49.1	4.4	2.16	17325	4.2	732	3.5	605	
Ray Lovett	Peirce	H	6	336	93	61.2*	3.5	2.15	22309	3.2	704	3.0	666	
Coastal Plain Exp Station	Tift	J	6	24	92	46.4	4.6	2.14	14151	4.8	673	3.5	497	

¹Minimum 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 compiled from Dairy Records Management Systems Reports (Raleigh, NC).