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

July/August 2004

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.

The following information is include:

Sincerely,

William M. Graves
Professor & Extension Dairy Scientist

County Extension Director or County Agent

/sar

DAIRYFAX NEWSLETTER

Welcome Dr. Steve Nickerson to UGA

The Dairy Teaching, Research & Extension group at UGA would like to take this opportunity to welcome Dr. Steve Nickerson to Georgia. Dr. Nickerson moved to Athens in July and is already working very hard in his new position as Department Head of the Animal & Dairy Science Department at UGA. Dr. Nickerson was the former Department Head at Virginia Tech in Blacksburg. He is a native of New England and has a B. S. degree from the University of Maine as well as an M. S. and Ph. D. from Virginia Tech. He has served on the faculty at Louisiana State University from 1981 to 2001 as the Director of the Mastitis Research Laboratory at the Hill Farm Research Station. Dr. Nickerson is known nationally & internationally for his work with mastitis while at LSU. He is currently serving as Editor of the Journal of Dairy Science and very active with the National Mastitis Council**.** We are very fortunate to have a new department head with so much dairy expertise and interests.

Editors's footnote- As many of you know Dr. Joe West has spent countless hours the past 18 months serving as our Interim Department Head. His efforts are certainly appreciated and our department has benefitted tremendously from his leadership and commitment to keep our ship on course during some difficult administrative times. Thank you for all you have done. We know you are looking forward to revitalizing your research program and spending more time with your family.

Harvest Corn for Optimum Quality

Dr. John K. Bernard
Dairy Research and Extension

It is almost time to harvest corn silage. With high corn prices, it is important to optimize nutrient quality and digestibility. For producing high quality corn silage, corn should be harvested at the correct stage of maturity, chopped at the correct theoretical length of cut, inoculated with a bacterial inoculant, and the silo filled, packed quickly and covered to preserve nutrients.

Ideally, corn should be harvested at 35% dry matter at the 3/4 milk line stage of maturity. Corn that is harvested at a more advanced stage of maturity has less digestible energy and will not support high levels of milk production. Since it is impossible to harvest all corn to meet these criteria, harvest should start when the grain has reached the ½ milk line. This will result in higher moisture concentrations in the resulting silage. Harvest can be delayed by using an on board kernel processor, especially when the grain has reached the 3/4 milk line stage of maturity. One of the challenges in harvesting at a set stage of maturity or moisture content is that many of the corn varieties planted for silage have more "stay green" characteristics which cause the grain to dry faster than the stove. Kernel processing is essential for these varieties so that the grain can be digested by the cow.

The theoretical length of cut (TLC) that is idea varies from one farm to the next because of the mix of feeds available. Corn cut at a shorter TLC packs tighter whereas longer TLC is more desirable for the health of the cow. If a kernel processor is used, the effective particle size is reduced because of the crushing and tearing action of the processor and the TLC should be increased to 3/4 inch. Some have suggested that the TLC be increased to 1 inch, especially for herds that feed diets based primarily on corn silage.

We conducted a trial at the Tifton Dairy Research in which we compared corn (3/4 milk line) harvested at 3/4 or 1 inch with no, aggressive (2-mm) or moderate (8-mm) kernel processing. As TLC increased, more aggressive kernel processing was necessary to avoid a depression in nutrient digestibility and milk yield. Minimal differences were observed in milk yield and composition between 2 and 8-mm when corn was cut at 3/4 TLC. For herds that feed up to five pounds of dry matter from long stem hay or haylage, a shorter TLC should be adequate to maintain rumen health.

A proven inoculant should be added to the corn at harvest to promote rapid fermentation. Many inoculants also slow or prevent secondary fermentation when the silo is opened, which is important for maintaining nutrient quality. An inoculant that has research data to support the companies claims will likely cost more than a "look alike" product that may or may not work. Remember to follow the storage and handling instructions as most products are live products and will not survive extreme conditions or poor handling.

The quicker that a silo can be filled, packed, and covered, the fewer nutrients are lost during fermentation. One of the more important steps in preserving the nutrients harvested, is to adequately pack the silage remove oxygen and then cover it immediately with plastic to keep additional oxygen and rain from entering the pack. The plant cell continues to respire, burning up soluble sugars and proteins after the corn plant has been chopped until the cell runs out of oxygen. Poorly packed silage has more oxygen trapped in the pile, so respiration continues longer, uses up more digestible nutrients and generates heat as a by-product. Once the oxygen has been used up, anaerobic fermentation takes over producing lactic, acetic, and propionic acids until the pH of the silage drops to around 4.

Covering the silage with plastic and then tires, or something to keep air from getting under the plastic, reduces nutrient lost. Air can penetrate packed silage up to three feet. Kansas State researchers reported that nutrient losses in the top 3 feet of the silo were 16 to 37% greater in silos that were not covered with plastic compared with those that were properly covered. Much of the loss is due to digestible nutrients that were burnt up during respiration which cannot be seen compared to the thin layer of rotten material on the top of most silos.

It is important to harvesting corn at the correct stage of maturity at the TLC needed to maintain a healthy rumen and optimize nutrient digestibility. Preserving those nutrients properly not only reduces the amount of purchased grain, but increases the milk production potential of the diet.

Can We Decrease The Dose of GnRH Used in Ovulation Synchronization?

Dr. Bill Graves, Lauren McKee and Jillian Fain
Animal & Dairy Science Department

Through the use of ultrasonography, follicular development studies have resulted in a new method for the synchronization of ovulation (Ovsynch). Many Georgia producers refer to this procedure as "C-L-C." This is based on the trade names and sequence of the hormones used (Cystorelin-Lutalyse-Cystorelin). Two injections of GnRH, 7 days before and 2 days after prostaglandin (PGF2∝), will effectively synchronize ovulation in more than 90 percent of lactating cows treated. Time of ovulation occurs 24 to 32 hours after the second injection of GnRH.

There is limited data indicating that doses of 50 µg of GnRH may be as effective as the standard protocol's 100 µg. This lower dosage will lower costs. It is important when trying the lower dosage to use a 20 gauge 1 ½ inch needle with the GnRH and get the entire dose in the animal. Our group recently completed a study to determine the effectiveness of decreasing the dose of GnRH (Cystorelin®, Merial Limited, Duluth, GA) used in the ovulation synchronization (Ovsynch) protocol. First service lactating Holstein cows (n=100) at the University of Georgia Dairy Center in Athens were randomly assigned to 1 of 4 treatment groups. All cows received 25 mg of PGF2α (Lutalyse®, Pfizer Animal Health, New York, NY) 11 days (d -11) prior to starting Ovsynch. Cows in treatment 1 received 100 µg GnRH on day 0, 25 mg PGF2α on day 7, and 100 µg GnRH on day 9. Treatment 2 received 50 µg GnRH on day 0, 25 mg PGF2α on day 7, and 100 µg GnRH on day 9. Treatment 3 received 100 µg GnRH on day 0, 25 mg PGF2α on day 7, and 50 µg GnRH on day 9. Treatment 4 received 50 µg GnRH on day 0, 25 mg PGF2α on day 7, and 50 µg GnRH on day 9.

Blood samples were collected on days -11 and 0 for progesterone anaylsis. All cows were artificially inseminated (AI) 16-20 hours after the second GnRH injection. Pregnancy was checked via ultrasound at 35-40 days and 55-60 days after AI.

The 100 cows averaged 2.3 lactations, 68 days in milk and 88 lb of milk on DHIA. Pregnancy rates at 35-40 days were 52%, 32%, 44%, and 56% for treatments 1, 2, 3, & 4 respectively. At 55-60 days, the rates were 36%, 28%, 36%, and 48%. Embryonic losses between day 40 and 60 were 16%, 4%, 8%, & 8%. Overall pregnancy rates were 46% at 40 days and 37% at 60 days. A total of 14 of the 100 cows were considered to be noncyclic (both blood samples < 1.0 ng/ml progesterone) and only 2 of these were pregnant at 35-40 days versus 44 of the 86 cyclic cows (either or both samples > or = 1.0 ng/ml).

A total of 28.8% of 28 were pregnant at 55-60 days when the highest temperature-humidity index (THI) on the day bred was > or = 80, 45.2% of 31 when the THI was between 70-79 and 36.6% of 41 when the THI high was 69 or <. During the 11 months of this study, days open on DHIA decreased 34 days.

A comparison of hormone cost per cow and per pregnancy for each of the four treatment groups is shown below. GnRH cost per cow was $6.80 less for treatment 4 (half/half) versus treatment 1 (full/full). GnRH cost per pregnancy decreased by $23.61 from treatment 1 (full/full) to treatment 4 (half/half). PGF cost per cow was the same for all four treatment groups since all cows received 25 mg of PGF. However, PGF cost per pregnancy was less for treatment 4 (half/half) than for any of the others due to the higher pregnancy rate in that group. Total hormone cost per cow was $16.60 for treatment 1 (full/full) versus $9.80 for treatment 4 (half/half). This was a reduction of $6.80 in hormone cost per cow. The reduction in hormone cost per pregnancy with treatment 4 (half/half) was even more substantial. In treatment 4 (half/half) total hormone cost per pregnancy was only $20.21 compared to $46.11 in treatment 1 (full/full). Treatment 2 (half/full) was actually the most expensive in terms of cost per pregnancy with a total cost of $47.14. The reduction in cost per pregnancy from using two 50 µg doses of GnRH instead of two 100 µg doses was $25.70.

Comparison of Costs of Hormones and Pregnancies for Each Treatment Group

Item	Treatment 1 Full/Full	Treatment 2 Half/Full	Treatment 3 Full/Half	Treatment 4 Half/Half
# Pregnant 60 days post AI	9	7	9	12
GnRH $/cow	13.60	10.20	10.20	6.80
GnRH $/pregnancy[a]	37.78	36.43	28.33	14.17
PGF $/cow	3.00	3.00	3.00	3.00
PGF $/pregnancy[a]	8.33	10.71	8.33	6.25
Total hormone $/cow	16.60	13.20	13.20	9.80
Total hormone $/pregnancy[a]	46.11	47.14	36.67	20.41

[a]Cost per pregnancy was calculated as total hormone cost for treatment group divided by the number of cows pregnant at 60 days post AI. Each group contained 25 cows.

Using the half/half dose technique provides us the opportunity to breed all animals treated at a designated time and at lower costs. To maintain effectiveness, animals should be bred 8 to 18 hours after the second GnRH injection. Note that animals between day 5 to 12 of their cycle respond best to Ovsynch. Additionally, heifers do not respond as well to this treatment because of possible differences in follicular waves.

It is important to note that administering two injections of PGF 14 days apart and 12 days prior to initiating the Ovsynch protocol has been shown to improve pregnancy rates in studies at Florida and Kansas. This program is referred to as the Presynch Program (L-L-C-L-C in Georgia?).

It is also important to note that although it is not necessary to see animals in standing heat for them to be inseminated with this protocol, some animals will display heat after the first two injections. Breeding these animals on detected heat prior to the last GnRH injection will lower costs. Also, open animals will return to estrus and should be watched as well. Resynching works well for many producers.

This study was paid for through the support of the Florida-Georgia Dairy Research Check Off Program. If you have been reluctant to try Ovsynch because of the costs, this fall you may want to give the low dose procedure a try.

Tifton Dairy Center Update

Drs. John Bernard, Joe West, and Larry Newton
Animal & Dairy Science Department

The past two years have been challenging with low milk prices, budget cuts, and labor shortages, but things typically get better with time. We are currently milking more cows than anytime previously thanks in part to the transfer of some cows from the Athens herd. Milk prices have increased which helps with our budget and we will finally have a staff of six full time employees again. The corn silage and hay crops are looking very good as we have been fortunate to have rain this past month.

Aaron Musick joined the staff January 1, 2004 as the manager of the dairy. He is a native of Virginia and received both his B.S. and M.S. degrees from Virginia Tech in Dairy Science. As an undergraduate he worked as a student worker and advanced to the assistant herdsman position after receiving his B.S. Aaron has been busy since arriving and is doing a fine job managing the dairy center.

We currently have three graduate students at the Tifton Campus who are actively involved with our research program as well as one additional student who will move to Tifton after completing course work in Athens. Together, we have completed several research trials and have several others projects currently underway.

One of the trials we completed this past year involved harvesting corn silage at either 3/4 or 1 inch theoretical length of cut (TLC) with or without kernel processing. The processor was set at either 2 or 8 mm and the corn was harvested at 3/4 milk line stage of maturity. Kernel processing increased starch digestibility as expected. However, at 1" TLC both starch and fiber digestibility were reduced for corn processed at 8 mm compared with 2 mm. This reduced energy availability resulting in lower milk yield although cows consumed similar amounts of dry matter. Results of the trial indicate that if corn silage were harvested at a 1 inch, it should be aggressively processed (2-mm). Less aggressive processing (8-mm) did not to alter milk yield when corn was chopped at 3/4 inch. This research was supported by the Florida Milk Check-Off.

When tropical storms prevent cotton harvest, the quality of both the lint and the whole cottonseed declines. One of the problems with these cottonseed is that they have elevated concentrations of free fatty acids in the oil (FFA). In a normal year, the high FFA is 12%, but concentrations may approach 40% in certain situations. We have been conducting research to determine the feeding value of these off quality seed as there was not data available on this subject. To date we have three trials in which cottonseed with FFA of 3 to 35% have been fed. The results indicate that increasing FFA in whole cottonseed does not alter intake or milk yield, however milk fat percentage deceases when FFA concentrations exceed 24%. If problems with intake or production do occur, factors other than FFA are involved. This research has been supported by the Florida Milk Check-Off, Georgia Cotton Commission, and Cotton Incorporated.

As stated previously, we are currently working on several projects. One project involves comparing different systems for cooling cows. The free stall barn was equipped with high-speed, high-volume fans and high pressure misters when it was built. We have installed a set of high-volume, low speed fans and a sprinkler system that will allow the comparison of different fans, sprinklers versus misters, as well as different approaches for operation of the sprinklers (defined time versus 24 hour per day during periods of extreme heat stress). We will also measure the body temperature of cows using several different continuous temperature probes to determine the effectiveness of each system.

Dates To Remember

October 10, 2004	Commercial Dairy Heifer Show, GA National Fair, Perry
October 15 - 17, 2004	Open & Junior Dairy Shows, GA National Fair, Perry
November 16 - 17, 2004	Southeast Dairy Herd Management Conference, Farm Bureau Bldg., Macon

How to Manage High Milk Prices – The University Way

Dr. Lane O. Ely
Extension Dairy Specialist

The high milk prices on the farm have gotten the attention of everyone – dairy farmers, processors, consumers, bankers, suppliers, and politicians. Everyone has ideas and plans for the added income to producers. The only sure thing that can be stated is the high prices will not last and lower prices will be back.

Over the years the best advice to manage the high milk prices has been to save some of the increased income to use when the low prices return. Money spent should be on things that have long term benefit such as lowering debt, repairing worn out facilities or improving facilities to increase production efficiency or expanding production capability or resources (cows, feed, facilities, equipment). All are areas that need to be examined.

All of this is good advice, but for the UGA Dairy it has to be modified for the University way of budgeting. The University is part of the State of Georgia. Our budget has to be zero on June 30th every year. There can be no carryover for savings or money to be put together with next year's budget to do a large scale project. Also, no debt can be carried over to be paid out of next year's milk check. To accomplish this involves a lot of planning and hopefully accurate projections of income. Income projection was especially interesting this year with the increasing milk price per cwt and reducing our herd size by sending cows to Tifton. This number seemed to be revised every month.

The University also has some spending deadlines such as vehicles in April, purchase orders
May 25th, and items over $5,000 must be bid. All of this is easy to do if you receive a budget on July 1st for the year, but if your budget is based on milk sales that change every month, the process becomes more challenging. What do we do if we buy a truck in April, prices fall and we do not have enough money to pay students to milk the cows?

As part of the discussion for the downsizing and conversion to the Teaching Dairy, a list of renovation projects was made. This list was used as part of our budgeting process. Some of the projects were too expensive to be accomplished now.

How did we spend our money? We were able to purchase a new truck, silage chopper, corral fencing to replace the exercise corral built in 1975 and a solid separator for the manure system. The solid separator is part of a plan that was initially proposed 15 years ago to upgrade the manure handling system. Finally, part of it has been funded. Hopefully milk prices will stay high enough this year to allow us to complete phase III of the manure system upgrade. We hope to have a complete system one day.

The added milk income makes for more difficult decisions when all of the money has to be spent by June 30th. Accurate financial records are critical for these decisions to be made.

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.
Agri-Fresh Dairy	Laurens	H	5	198	97	82.9*	2.8	2.35	24596	3.3	802	2.9	715
Vista Farm	Jefferson	H	5	80	100	75.2	3.2	2.39	22382	3.5	781	3.1	687
Williams Dairy	Morgan	H	5	507	94	74.4*	3.8	2.85	25432	3.8	955	2.9	732
Gin Branch Farm	Laurens	H	5	43	95	73.2*	3.5	2.54	21626	3.8	815	3.0	656
Brenneman Farms	Macon	H	5	105	100	73.1	2.7	2.01	18466	3.0	547	3.1	565
Dave Clark	Morgan	H	5	876	92	72.3*	3.0	2.18	24806	3.2	800	2.9	726
Irvin R. Yoder	Macon	H	5	141	95	71.0	3.4	2.43	23456	3.6	848	3.0	712
Mark E. Yoder	Macon	H	5	122	96	67.6	3.6	2.46	21956	3.4	749	3.1	671
Copelan	Putnam	H	5	30	90	67.4	3.2	2.13					
Marvin Yoder	Macon	H	4	140	94	67.0	3.5	2.33	22064	3.5	781	3.0	661
Cecil Dueck	Jefferson	H	5	51	98	66.5	3.7	2.46	23478	3.4	806	2.9	689
Stovall Dairy Inc.	Madison	H	5	168	100	66.5	3.6	2.42	19223	3.6	687	2.9	565
Rufus Yoder Jr.	Macon	H	5	129	96	65.8	3.4	2.26	20186	3.6	734	3.1	633
Rodger's Hillcrest Farms Inc.	McDuffie	H	5	355	96	65.7	3.4	2.22	21271	3.8	798	3.0	643
Martin Dairy L.L.P.	Hart	H	5	297	97	65.6	3.3	2.18	21257	3.6	764	3.0	643
Ray Lovett	Pierce	H	5	397	95	65.5*	2.9	1.89	20983	3.1	653	2.9	618
Wright, Whitty, & Davis Dairy	Appling	H	5	1117	87	64.9*			22639				
Eugene King	Macon	H	5	81	96	64.6	3.4	2.18	18909	3.7	701	3.2	602
Maco Farm	Macon	H	5	121	98	64.4	2.8	1.81					
Aurora Dairy Georgia - LLC	Mitchell	H	5	3430	94	64.1	3.6	2.33	20843	3.8	790	3.0	624

[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.
Agri-Fresh Dairy	Laurens	H	6	207	95	75.1*	3.1	2.32	24731	3.2	798	2.9	722
Williams Dairy	Morgan	H	6	511	91	74.8*	4.0	3.01	25388	3.8	963	2.9	735
Marvin Yoder	Macon	H	6	135	96	68.9	3.7	2.53	22007	3.6	786	3.0	659
Dave Clark	Morgan	H	6	856	91	68.6*	3.2	2.19	24870	3.2	802	2.9	729
Vista Farm	Jefferson	H	6	80	100	68.1	3.1	2.09	22423	3.5	782	3.1	690
Mark E. Yoder	Macon	H	6	117	96	66.0	3.5	2.34	21922	3.4	752	3.0	668
Al & Richard Kinder	Hart	H	6	317	96	62.5	3.1	1.95	20536	3.3	674	3.0	615
Rufus Yoder Jr.	Macon	H	6	131	95	61.4	3.3	2.02	20251	3.6	735	3.1	635
Wright, Whitty, & Davis Dairy	Appling	H	6	1140	86	60.8*			22803				
Gin Branch Farm	Laurens	H	6	480	94	60.7	3.5	2.11	22110	3.8	832	3.0	670
Russell Johnston	Morgan	H	6	103	89	60.6	3.6	2.20	19243	3.8	728	3.1	593
Martin Dairy L.L.P.	Hart	H	6	294	9000	60.6	3.4	2.06	21294	3.6	761	3.0	644
Rodger's Hillcrest Farms Inc.	McDuffie	H	6	396	90	60.6	3.2	1.96	21268	3.7	788	3.0	644
Moriah Dairy Inc.	Brooks	H	6	456	92	60.5*	3.3	1.97	18801	3.3	629	3.0	560
Brenneman Farms	Macon	H	6	105	94	60.3	2.6	1.59	18657	2.9	548	3.0	568
Aurora Dairy Georgia - LLC	Mitchell	H	6	3424	94	59.8*	3.6	2.13	20826	3.8	787	3.0	624
Cecil Dueck	Jefferson	H	6	52	100	59.7	3.6	2.15	23190	3.5	801	2.9	683
Krulic Dairy Farm, Inc.	Screven	H	6	109	87	59.6	3.5	2.06	22113				
Doug Chambers	Jones	H	5	251	88	59.2	3.1	1.86	18430				
Brooksco Dairy	Brooks	H	6	2385	91	59.1*			22462				

[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 (*), ndicates 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.
Williams Dairy	Morgan	H	5	507	94	74.4*	3.8	2.85	25432	3.8	955	2.9	732
Berry College Dairy	Floyd	J	5	24	88	52.0	5.0	2.59	20881	5.1	1059	3.6	745
Gin Branch Farm	Laurens	H	5	43	95	73.2*	3.5	2.54	21626	3.8	815	3.0	656
Mark E. Yoder	Macon	H	5	122	96	67.6	3.6	2.46	21956	3.4	749	3.1	671
Cecil Dueck	Jefferson	H	5	51	98	66.5	3.7	2.46	23478	3.4	806	2.9	689
Irvin R. Yoder	Macon	H	5	141	95	71.0	3.4	2.43	23456	3.6	848	3.0	712
Stovall Dairy Inc.	Madison	H	5	168	100	66.5	3.6	2.42	19223	3.6	687	2.9	565
Vista Farm	Jefferson	H	5	80	100	75.2	3.2	2.39	22382	3.5	781	3.1	687
University of Georgia	Clarke	H	5	106	94	61.7	3.8	2.36	20044	3.7	739	3.0	605
Agri-Fresh Dairy	Laurens	H	5	198	97	82.9*	2.8	2.35	24596	3.3	802	2.9	715
Marvin Yoder	Macon	H	4	140	94	67.0	3.5	2.33	22064	3.5	781	3.0	661
Aurora Dairy Georgia - LLC	Mitchell	H	5	3430	94	64.1	3.6	2.33	20843	3.8	790	3.0	624
Russell Johnston	Morgan	H	5	104	89	63.6	3.6	2.32	19140	3.8	723	3.1	589
Anthony's Dairy	Sumter	H	5	818	87	61.3*	3.8	2.30	21032	3.9	814	2.9	613
Earnest R. Turk	Putnam	H	5	360	95	59.8	3.8	2.29	20472	3.9	806	3.0	618
Rufus Yoder Jr.	Macon	H	5	129	96	65.8	3.4	2.26	20186	3.6	734	3.1	633
Hammock Dairy	Jones	H	5	166	96	64.0	3.5	2.25	19538	3.6	712	2.9	572
Ed Boehs	Jefferson	H	5	118	97	62.0	3.6	2.24	19662	3.6	713	3.1	604
Krulic Dairy Farm, Inc	Screven	H	5	110	89	63.3	3.5	2.23	22059				
Rodgers' Hillcrest Farms Inc.	McDuffie	H	5	355	96	65.7	3.4	2.22	21271	3.8	798	3.0	643

[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.
Williams Dairy	Morgan	H	6	511	91	74.8*	4.0	3.01	25388	3.8	963	2.9	735
Marvin Yoder	Macon	H	5	135	96	68.9	3.7	2.53	22007	3.6	786	3.0	659
Mark E. Yoder	Macon	H	6	117	96	66.0	3.5	2.34	21922	3.4	752	3.0	668
Agri-Fresh Dairy	Laurens	H	6	207	95	75.1*	3.1	2.32	24731	3.2	798	2.9	722
Russell Johnston	Morgan	H	6	103	89	60.6	3.6	2.20	19243	3.8	728	3.1	593
Coastal Plain Exp. Station	Tift	H	6	149	93	57.1	3.9	2.20	18751	3.9	732	3.1	572
Dave Clark	Morgan	H	6	856	91	68.6*	3.2	2.19	24870	3.2	802	2.9	729
Cecil Dueck	Jefferson	H	6	52	100	59.7	3.6	2.15	23190	3.5	801	2.9	683
Aurora Dairy Georgia - LLC	Mitchell	H	6	3424	94	59.8*	3.6	2.13	20826	3.8	787	3.0	624
Gin Branch Farm	Laurens	H	6	48	94	60.7	3.5	2.11	22110	3.8	832	3.0	670
Vista Farm	Jefferson	H	6	80	100	68.1	3.1	2.09	22423	3.5	782	3.1	690
Troy Yoder	Macon	H	6	142	95	57.8	3.6	2.08	20355	3.6	734	3.0	613
Martin Dairy L.L.P	Hart	H	6	294	90	60.6	3.4	2.06	21294	3.6	761	3.0	644
Krulic Dairy Farm,Inc.	Screven	H	6	109	87	59.6	3.5	2.06	22113				
Beaver Dam Farm L.L.C.	Hart	H	6	185	94	54.9	3.8	2.06	19517	3.8	748	3.1	609
Curtis Strange	Morgan	J	6	12	100	53.2	3.8	2.04	14964	4.1	619	3.3	489
Rufus Yoder Jr.	Macon	H	6	131	95	61.4	3.3	2.02	20251	3.6	735	3.1	635
University of Georgia	Clarke	H	6	89	87	54.8	3.7	2.02	19666	3.7	731	3.0	596
Twin Oaks Farm	Jefferson	H	6	104	96	57.4	3.5	2.01	18779	3.6	673	3.2	592
Ralph Adamson Jr.	Lamar	H	6	461	82	57.4*	3.4	1.98	20435	3.6	726	3.0	615

[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).