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Dear Dairy Producers:

GEORGIA DAIRYFAX

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The enclosed information was prepared by the University of Georgia Animal and Dairy Science faculty 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,

Wm. Graves

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Professor & Extension Dairy Scientist
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County Extension Director or County Agent

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DAIRYFAX NEWSLETTER

Closure of Earthen Animal Waste Impoundments: Experiences and Perspectives from the State of Georgia

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Key Points/Take Home Message

Though different options exist, closure of earthen animal waste impoundments is often a high cost undertaking. A major complicating factor is the amount of lagoon solids or sludge stored and the amount of nearby land available for application at agronomic rates. Proper management throughout the operation of lagoons, in particular, can reduce the expense and complication of closure. Planning for eventual closure may include consideration of technical issues, logistics and financial preparation.

Background

During the nineteen-seventies a focus was made to address point source pollution in the United States. Municipal and industrial sources were primarily targeted; however animal agriculture had to address the many direct discharges coming from feeding operations. Lagoons were touted as low maintenance systems for managing manure and many were installed across the country where once there had been direct discharges. Since that time lagoons and other liquid or slurry storage structures have become the industry standard for animal feeding operations in many regions of the U.S. and across the world

The early optimistic wisdom was that organic solids would anaerobically digest in a lagoon and a farmer would only need to manage the stored liquid. The reality is lagoon solids must be managed with greater diligence than first thought. Many farms have grown beyond the design of their lagoons, in addition to ignoring the buildup of solids, therefore impacting the performance of these engineered structures. Farms that close, adopt new waste handling technologies, or no longer need liquid storage or treatment structures are left with an environmental (and financial) liability. Considering this history, lagoon closure has presented itself as a challenge to farmers and landowners as well as Extension educators and other technical service providers.

No matter why a lagoon or waste storage facility ceases to be used, it will need to be cleaned out at some point so that it no longer represents an environmental threat. Though lagoon closure is addressed in the current animal feeding operation laws, Georgia still has a large number of unused and abandoned lagoons. The Natural Resources Conservation Service (NRCS), of the United States Department of Agriculture, has written a Conservation Practice Standard that covers this subject. It is Code 360, Closure of Waste Impoundments. The

Georgia water quality regulations for animal feeding reference this standard in the liquid storage facility provision. A summary of the document follows:

There are three options for managing the earthen impoundment after closure:

1. Complete closure and fill.
2. Breaching the lagoon berm.
3. Conversion to a farm pond or irrigation storage structure.

In any case, the first steps are the same: 1) Remove all pipes or other structures that convey waste into the structure. Pipes should be dug up and ditches refilled; 2) Remove as much of the stored waste and sludge as practical. This can be done by agitating the lagoon and pumping as much material out as possible, refilling with water and repeating until most material has been removed. Alternatively, the effluent (relatively dilute liquid on top) can be pumped out, and the sludge can be removed using a slurry pump or excavation equipment; and 3) All material must be land applied at agronomic rates.

If the lagoon is to be completely closed, it should then be filled in and the land returned to its approximate original contours. Soil should be mounded slightly in the lagoon area (5% slope) in order to allow for settling and to encourage surface water to run away from the site. Vegetation should be established on the site to prevent erosion. If the lagoon berm is to be breached, all surface water runoff should first be diverted away from the lagoon. The breach should have sufficient side slope to prevent erosion. (Maximum 3:1 slope.) The NRCS can help with this design. The breach should be deep enough to allow all water to flow from the structure and prevent ponding. Vegetation should be established on the entire site including the sides of the breach to prevent erosion.

If the lagoon is to be used as a farm pond, a watering source for livestock, or an irrigation storage pond, the structure should meet the requirements for these types of structures. A properly designed lagoon will probably meet those requirements without major alterations, but the NRCS should be able to provide technical assistance to assure this requirement is met. Water quality samples should be taken and submitted to assure safety before allowing livestock to drink from a converted lagoon. Dissolved oxygen (DO) levels should be higher than 3 milligrams per liter and nitrate nitrogen should be below 30 milligrams per liter.

The closure standard describes the need to apply waste water and solids at agronomic rates. This is consistent with nutrient management plans in place on permitted animal feeding operations. Depending on the amount of land available, this step in closure may take months or years. A pitfall experienced by several farmers in Georgia is the loss of available land on or near the farm for receiving wastes. In one case a farmer had already sold all of his land except a small parcel containing the lagoon and animal housing. He is now facing expensive pumping, tanking and shipping of the lagoon contents.

During the waste removal step, it may be advantageous to separate liquid and solids, especially if shipping of material off site will be required. This may allow for high nutrient lagoon solids to be economically shipped away from the area immediate to the structure being closed. This is particularly important if the traditional land application areas are already high in soil phosphorus. Similarly, if water is pumped off the top, the remaining lagoon solids or

sludge may require a bulking agent to make it mechanically removable and transportable.

The University of Georgia has assessed a technology with lagoon closure or remediation in mind. In a full-scale field test, a geotextile filtration tube was used to dewater lagoon solids from a first stage dairy lagoon. Slurry was pumped from the lagoon into the tube which measured 100 ft (30.5 m) in length by a 45 ft (14 m) circumference. Lagoon solids were trapped in the tube with filtered liquid seeping through and being redirected to the lagoon. Filling and dewatering is repeated until the solids storage capacity of the tube was met. At that point, the dewatered solids were sampled and spread with a manure spreader as solids. The solids could have been exported from the farm more economically than sludge or slurry.

The tube removed approximately 93% of the dry matter from the waste stream. In this test, approximately 90% of organic nitrogen and 60% of phosphorus were removed from the waste stream, while smaller amounts of ammonium nitrogen (23%) and potassium (19%) (both highly soluble) were removed. Subsequent repetitions showed that the tube could be filled as often as every 2-4 days, therefore reducing the time necessary to fill a bag with solids to less than a month. The process shows promise as an alternative for dewatering lagoon solids. It is a relatively slow process, which may be a disadvantage in some cases, but is relatively inexpensive and, because waste is safely contained as a solid, it provides flexibility in both timing and location of application so that it can be advantageously used on cropland.

Conclusions

Abandoned and unused lagoons represent a major environmental and financial liability. University of Georgia animal waste specialists receive frequent questions on this issue from many stakeholders including: land owners, buyers and sellers of property, realtors and even beneficiaries of inherited farms and properties. Costs associated with closing liquid manure storage structures are variable, but almost always higher than anticipated. Because of this, many landowners are shocked at the expenses associated with properly closing such a structure.

The author's experiences in Georgia suggests that removal of the lagoon solids or sludge costs between 0.01 USD and 0.05 USD/ gallon (3.78 L). To put this in perspective, a small half acre (0.20 hectare) lagoon 6 feet (1.8 meters) deep could cost between $10,000 and $50,000 for waste removal. A 2 acre (0.81 hectare) swine lagoon in South Georgia was recently converted to a farm pond for 15,000 USD. In this case, the farm had plenty of land on which to irrigate water and apply excavated sludge. A recent estimate to remove the contents of a 4 acre (1.62 hectares) lagoon on a land application limited site was $100,000.

Properly managing solids in lagoons throughout their operation will enhance digestion and allow for easier cleaning and closure. Slurry storages or manure storage ponds may still pose challenges in removal of waste. They are often smaller and engineered for more frequent and total cleanouts. The recommendations mentioned here can be applied to most earthen manure structures, for example, lagoons and storages. It is imperative that farmers consider lagoon closure before they are faced with it. This may include financial, technical and logistical preparation and planning.

References

Closure of Waste Impoundments: Code 360. Field Office Technical Guide. Natural Resources Conservation Service (NRCS), of the United States Department of Agriculture (USDA)

Supplemental Cooling for Dry Cows

John K. Bernard and Joe W. West
Dairy Research and Extension

The benefits of providing supplemental cooling for lactating cows to maintain intake and milk yield are well understood by dairy producers. Today, many producers are also providing supplemental cooling for dry cows as well. Many producers bred cows to calve later in the fall after temperatures begin to decline and heat stress is not as severe. Even with this approach, milk yield is less than desired until December or January. Many of the problems associated with getting cows to milk in the fall can be linked to heat stress they endure during their dry period.

Dry cows experiencing heat stress have lower feed intakes. The reduction in intake is related to a desire to reduce the amount of heat generated from digestion, but more frequently they prefer to stay in the shade rather than come out into the sun to eat out of a trough placed in the open. This results in erratic intakes that may result in body weight losses during the dry period. The lower intake occurs during the time when the fetus requires more nutrients for growth. Previous research has shown that providing shade improves the birth weight of calves and milk yield.

In recent years, several producers have either build barns for housing dry cows or provided space in their existing barn for dry cows. The barns are equipped with fans and sprinklers. Most producers indicate improved cow health at calving, lower death losses, and improved milk yield in the subsequent lactation. Unfortunately there is limited research data to adequately measure the response of supplemental cooling for dry cows because of the cost of conducting these type of trials.

Results of a trial conducted in California were recently reported on the benefits of providing supplemental shade and fans for dry cows prior to calving. The cows were assigned to dry lots with feed alleys equipped with either sprinklers or sprinklers, fans and shade for the two weeks prior to calving. The research did not observe any difference in health or metabolic measures at calving of immediately after. This may be related to less severe heat stress during the trial than we typically observe during July through mid October. Cows provided supplemental shade, sprinklers, and fans produced 3.1 lb/d more milk during the first 60 days of lactation than cows provided only sprinklers. Based on these responses, the researchers projected a positive return on investment for providing supplemental cooling and shade.

Providing supplemental shade and cooling for dry cows should be considered as a means of improving cow health and milk yield. Given the degree of heat stress we typically experience in the Southeast, the return on investment should be greater than any other region

of the country.

The Georgia Dairy Industry: Will the Southeast and Georgia Have a Future?

Lane O. Ely
Extension Dairy Scientist

Is there a dairy industry in Georgia? Yes, there is, but people are asking how viable is it and how long will it last? Recently a report (Shepard, 2006 Georgia Milk Producers Annual Meeting) stated that by 2013 there would be no dairy farms in Georgia. As we look back at dairy farm numbers over the last 10, 20, 30, 40, 50, 60 years, we have seen a decline in dairy farm numbers during any time period. Projecting the decline in dairy farms resulted in the zero value in 2013. What if we look at cow numbers? The rate of decline has been much less for cow numbers so we should have dairy cows until 2055 even though the dairy farms will be gone. Looking at milk production is even more interesting. The last five years we have seen 1% decrease per year but if you compare milk production today to 30, 40, 50 years ago, we have increased milk production. If we make the same extrapolation as with dairy farms and cow numbers for milk production, the trend line shows we should continue to have increasing milk production. Obviously, we have to carefully interpret these trends. These trends are important if we want to try to change their directions.

The dairy industry in Georgia is at a crossroads. Looking at the states around us (Tennessee, South Carolina, North Carolina, Alabama, Mississippi), they have suffered larger declines than Georgia. Florida has held numbers for dairy cattle and milk production the best of the Southeast states over the last two decades.

The Southeast has a significant amount of milk transported in from other regions to meet the demands here. As this increases, the Southeast loses support services and control of the milk market and prices. To keep control, the Georgia dairy industry must reverse its decline.

So why did Georgia lose dairy farms? If we look at the last 30 years, I will make some observations (my own) that have caused the decline.

1) **Real estate values.** The traditional areas of dairying in Georgia were around the cities. Starting in the 1960's, many of these cities expanded, resulting in increased land values as farms were sold for houses. Most of these dairy farmers did not relocate their dairy farms. Contrast this with California, where the dairies in the L.A. basin sold, moved to Chino Valley, sold again, moved to Central Valley, sold again, and today are located in Kansas, Nebraska, West Texas and New Mexico.
2) **Dairy Tradition.** Many of our Georgia dairy farmers in th e1970's and 1980's had been put into the dairy business by Farmers Home Administration because of poor corn and soybean prices and yields due to the droughts. Many of these crop producers had a hard time adjusting to dairy production. High prices in the 70's due to parity covered up poor management. When surpluses resulted in low milk prices and President Reagan’s policy of competitive prices, many of these producers were not able to continue. When the diversion program was offered in the late 80's, Georgia had the largest sign-up of

any state. This loss of milk made the area very attractive to the surpluses of other regions.

3) **Federal Orders.** As Federal Orders have been consolidated, they have increased in size. This results in more milk being marketed on the order. For the Southeast, this also has lowered the class 1 utilization and lowered the price to dairymen. Because the order is larger, it is easier and cheaper for milk to be shipped into the Southeast order.

4) **Public Encouragement.** In the mid 1980's, Georgia was the focus of the US and world dairy industry with the arrival of Masstock to set up dairying in Montezuma. All of the dairy magazines had articles on the new enterprise and why they had come to Georgia. Also in the articles were the comments by the Georgia dairy industry that we did not need newcomers to the state. The state government and its Department of Industry and Tourism withdrew their support of the program to bring new dairies into Georgia. In the 20 years since, several areas have increased their dairy numbers (Idaho, New Mexico, West Texas, Kansas, Nebraska, South Dakota, North Dakota, and Indiana) with just this type of program and public support. Where would we be today if we had done that in the 1980's.

What is the attraction to increase milk production in the Southeast? The number one reason is the potential of the milk market. Population has and will continue to increase dramatically. Georgia and Florida have doubled their population in the last 20 years. The Southeast is a deficit milk production area that has an increasing market. The demand is tremendous for the production.

Second, there is land available in South Georgia and other states to place dairies. With the interstates, access to markets south (Florida) and north (Atlanta) are easy. The long growing season allows for double and triple cropping. This is an advantage with nutrient management plans as we can support more cows per acre.

Finally, dairies can make a significant economic impact in rural South Georgia. Economic development groups are recognizing this as the textile industry is leaving the South. Custom growing of forages and custom harvesting offers economic opportunities for the other agricultural enterprises. The trickle effect on the local economy for a dairy has been estimated to be $3.50 for every $1.00 of dairy income.

What can we do to encourage an increase in the Georgia dairy industry?

1. **Compete.** Many areas have mounted aggressive campaigns to attach new dairies. There are studies in may areas of the US for economic feasibility and development, advertising (16 groups were at World Dairy Expo promoting their dairy potential), permitting dairy property for development, developing support systems, (financing, crop production, services) and even some investor groups have built dairies to sell as a turn-key operation. We have a lot of catching up to do but Georgia Milk Producers have formed a committee to encourage dairy expansion. They have worked with Regional Economic Development Committees to demonstrate the economic impact of dairies in the community. They are working on putting information into the dairy world. This is very competitive as we have a surplus of milk in the U.S. As it becomes more expensive to move milk, the Southeast with its expanding market has a selling point to make for local production.

2. **Politics.** The Georgia dairy industry (producers and interested persons) need to be political in the broadest sense. They do not have to just be concerned with the elected officials but also the decision makers for the milk marketing cooperatives, banking and financial institutions, economic development committees, regulatory agencies and the general public. The knowledge and awareness of agriculture and where food comes from is at an all time low. Much of the public is bombarded with a negative image of agriculture. These people become decision makers. An example of this is the Dairy Business Analysis Program (DBAP) that collects and summarizes financial data for dairy producers. The objective is to help dairy producers make better managerial decisions. An interesting sidelight is that one of the most interested groups in the summary are financial institutions. The DBAP leaders have spent time explaining dairy management, best management practices and milk marketing to the lenders so they can understand the financial summary. As our federal order has gotten larger and dairy cooperatives have expanded to cover the nation, our local and regional interests often are lost in board meetings and decision making. We as a group need to keep our interest in the minds of individuals and the public.
3. **Be Positive.** When milk prices are falling and feed costs are rising, it is hard to be positive. A negative comment always seems to grow larger but it seems as if a barrage of positive comments often has a better outcome. To me, an argument of “local safe high quality supply of milk” will infuence more people that “the cost of milk is too low to make a profit at our dairy”. To obtain this supply of local milk, the price will need to be higher. Which argument will the general public respond to?

I feel there is a future for the Georgia dairy industry but we need to work to make it happen. (The views and opinions are mine, Lane O. Ely. I have discussed and debated these points with many people over the years. If you have any questions or comments let me know.)

Protocols Are Here!

Warren Gilson
Extension Dairy Scientist

Have you ever forgotten to do a chore or performed it later than you would have liked? All of us have had this happen to us at one time or another. It has probably happened more times than we would like it to occur or admit.

A new tool is available through PCDART to assist in making sure this doesn’t happen to your dairy herd. It is called Protocols. This feature allows producers/managers to develop a list of procedures, which are to be followed when certain criteria are met. In this way, all animals within the herd are handled appropriately at the correct time. No more missed vaccinations, treatments, etc., because someone overlooked a particular cow or event.

We all follow protocols every day, many of which are unwritten. Writing them down ensures consistency. If you think about it, you probably follow the same routine almost every morning when you get out of bed. It may vary slightly if something unexpected occurs, but otherwise it’s probably pretty routine. It’s probably so routine that someone close to you could probably list the steps in order with amazing accuracy.

There are a number of routine procedures we perform on the dairy farm. We vaccinate cows and replacements at various times in their lives. We have a set procedure for handling cows when they are dried off and when they calve. We probably handle all calves the same when they are born. All of these and many more are protocols that we are following.

The new feature of PCDART allows the development of protocols to ensure that all animals are identified at the appropriate time. For example, say you have a voluntary waiting period of 60 days and want to begin an ovulation synchronization program to group all cows so they are bred for the first time as soon after 60 days as possible. A protocol would be developed which established when the injections would be administered to achieve this result. Depending upon the synchronization scheme, cows would be selected at the appropriate time, after calving, for enrollment in the protocol. All cows, that met the criteria, would be listed for treatment. Treatments would then be administered to each of the cows and recorded. Thus, each cow that was eligible for synchronization would be properly treated so that none of the injections was missed. This has the added benefit of making it easier for employees to know which animals are to be treated and with what treatment. The manager may not even need to be present or provide instructions for the employees. They in essence obtain their instructions from protocols.

Protocols can be very simple are complex. It all depends upon the need. They may also be extended over several days or weeks such as the handling of recently fresh cows. If cows are drenched with something on the day they calve and the temperature is recorded on all cows for the first ten days of lactation, both of these are included in the protocol along with any other treatments that might be routinely administered. The important thing is to be sure all of the necessary steps are included.

We all follow protocols whether we call them that or not. Now we have a tool through PCDART that helps to ensure that the ones we use with our dairy herd are followed in a timely and correct manner. Take a look at your dairy and determine which protocols you are using. Write them down and then put them into PCDART. Once you begin using them, I think you will find that they make your job of managing these routine duties much easier.

HOARD'S DAIRYMAN BULL LIST NOW AVAILABLE ONLINE

Dr. Bill Graves
Extension Dairy Scientist

You can now find Hoard's Dairyman Bull List online at www.hoards.com. Many of you who use this list may find this very helpful. As you know, the Hoards list ranks bulls according to net merit. Net merit is a very popular ranking tool, because it uses so many economically important traits. For those with internet access, you can download the complete bull list. To download, go to Hoard's website and click on the icon "May 2006 Bull List" found in the lower right. Your computer will then download a PDF of the list that will appear in the next issue. To read the list, you will need Adobe Reader. That program is available for no charge at www.adobe.com.

Update on the UGA Teaching Dairy

Lane Ely
Extension Dairy Scientist

Where is the rain? Like everyone in Georgia, we are asking where the rain is this year. Wheat silage harvest was ok but less than last year and first cutting hay was ok. Since then we have received little rain, with pastures, hay fields and summer silage turning brown. It may be a very expensive forage year if this continues. It has also been very hot during this time period. Our milk production has held up very well. Part of this positive response is due to opening the front panels of our free stalls and taking the plywood sliding off the north side of the barn. This has allowed more air flow and has definitely made the barn more comfortable.

Our conversion to sand bedding continues to be very positive. Free stall usage is excellent. Somatic cell count continues to be below 200,000 as we enter the summer months.

Like everyone else we would like to see the return of higher milk prices, at least to the average level of the last few years. It is frustrating to have a shortage of milk in the Southeast and to have milk prices fall because of a nationwide surplus.

If you are on campus or in the Athens area, we would be glad to have you visit the UGA Teaching Dairy. Call and we would be glad to give you a tour.

Corn Silage Harvest Time is Here

John K. Bernard
Dairy Research and Extension

Corn silage harvest will begin very soon. The cost of producing corn is higher this year, so producers should work to harvest their crop to optimize quality. Nutrient losses naturally occur and steps should be take to minimize losses. Some areas that producers can focus on include timely harvest, inoculation, adequate packing, and covering the silage.

When to Harvest? Ideally, corn silage should be harvested when it reaches 35% DM. This corresponds to ½ to ⅔ milk line for most hybrids. The grain in hybrids that have high stay green characteristics will be more mature and these hybrids should be kernel processed to maximize starch digestibility.

Chop length and kernel processing. Many producers have choppers that are equipped with onboard kernel processors. When kernel processors are used, the chop length should be ¾ inch to maintain the effectiveness of the fiber. The rollers should be set to bust the cob when the corn grain is immature to minimize runoff. Once the grain reaches ½ to ⅔ milk line, the rollers should be set to aggressively process corn (1-2 mm) to maximize starch digestibility.

Silage inoculates Microbial inoculates are beneficial for reducing the time required to reach an anaerobic state, but many also prevent secondary fermentation when the silo is opened. Not all bacteria that have a similar name are effective, so price should not be the criteria used for selection. Only inoculates that have good research data to support their effectiveness should be used. Inoculates should be stored in a cool, dry area before use and only mix what

can be used in one day. Inoculates should be applied at the chopper for optimum coverage and the equipment should be calibrated to ensure adequate coverage.

Packing This is the most important job once the decision to chop has been made. The tighter the silage is packed, the lower the nutrient losses through respiration and secondary fermentation. With today's high capacity choppers, make sure that the pack tractor can keep up with silage delivery. The fill rate (tons/h) should equal the tractor weight (lbs) divided by 800. If one tractor is not adequate, a second should be added. Dry matter losses after 180 days of storage are only 10% when silage has a density of 22 lb DM per cubic foot, but increase to 20.2% if the density is only 10 lb DM per cubic foot.

Cover silo as soon as possible The silage should be covered with plastic as soon as possible after filling. Plastic should contain a UV inhibitor. The dry matter losses are 16 to 37% higher in the top 3 foot of silos without covers compared with those covered with plastic. Delays in covering the silo result in higher pH because of extended respiration and shorter bunk life once the silo is opened.

Attention to these details will help preserve the nutrients harvested and support higher milk yield when the silage is fed. This is especially important when milk prices are lower and all other input cost have increased.

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	4	79	100	83.0	2.6	2.16	23292	3.3	770	3.0	704
Irvin Yoder	Macon	H	3	147	91	80.3	3.4	2.71	24100	3.6	873	3.1	755
Troy Yoder	Macon	H	4	136	96	77.6	3.1	2.44	21366	3.5	755	3.1	658
Scott Glover	White	H	4	95	97	77.0	3.4	2.61	23395	3.8	898	3.0	700
Brooksco Dairy	Brooks	H	4	2522	92	76.8*			24467				
Dave Clark	Morgan	H	4	821	88	76.6*	3.4	2.62	25226	3.4	847	2.9	728
Martin Dairy L.L.P.	Hart	H	3	294	95	75.9	3.8	2.86	23563	3.6	852	3.0	697
Mark E. Brenneman	Macon	H	4	120	98	75.8	3.1	2.35	18783	3.4	632	3.1	583
J. Everett Williams	Taliaferro	H	4	641	94	74.3*	3.4	2.49	25461	3.7	937	3.1	779
R & D Dairy	Laurens	H	3	106	98	73.7	3.0	2.18	21080	3.4	719	3.0	630
Cecil Dueck	Jeferson	H	4	70	100	73.6	3.2	2.35	22907	3.5	805	3.1	703
Marvin Yoder	Macon	H	4	133	92	73.3	3.4	2.51	20483	3.7	752	3.1	625
Krulic Dairy Farm, Inc.	Screven	H	4	111	92	73.1	3.1	2.25	24393	3.6	874	3.0	738
Coastal Plain Exp Station	Tift	H	4	202	93	71.0	3.5	2.52	22635	3.8	852	3.0	674
Twin Oaks Farm	Jefferson	H	4	75	100	70.9	3.2	2.29	19211	3.5	681	3.2	609
Williams Dairy	Morgan	H	4	125	96	70.9	3.1	2.18	22559	3.6	815	3.0	684
Rufus Yoder Jr.	Macon	H	3	133	96	70.8	3.3	2.32	22283	3.4	763	3.1	690
Louis Yoder	Macon	H	4	137	96	70.8	3.2	2.28	22052	3.3	724	3.1	673
C.A. Boehs Dairy	Jefferson	H	4	74	89	70.3	3.5	2.46	20615	3.6	746	3.1	646
Stanley Yoder	Macon	H	4	133	93	70.1	3.4	2.36	19050	3.6	678	3.1	582

[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.
Martin Dairy L.L.P.	Hart	H	3	294	95	75.9	3.8	2.86	23563	3.6	852	3.0	697
Irvin Yoder	Macon	H	3	147	91	80.3	3.4	2.71	24100	3.6	873	3.1	755
Stovall Dairy Inc.	Madison	H	4	159	96	68.0	3.9	2.64	21741	3.9	847	2.9	634
Dave Clark	Morgan	H	4	821	88	76.6*	3.4	2.62	25226	3.4	847	2.9	728
Scott Glover	White	H	4	95	97	77.0	3.4	2.61	23395	3.8	898	3.0	700
Johnson Dairy Farm	Ware	H	4	370	99	64.7	3.9	2.55	19064	3.8	724	3.1	596
Coastal Plain Exp Station	Tift	J	4	24	96	54.2	4.7	2.55	16974	4.8	812	3.5	588
Coastal Plain Exp Station	Tift	H	4	202	93	71.0	3.5	2.52	22635	3.8	852	3.0	674
Marvin Yoder	Macon	H	4	133	92	73.3	3.4	2.51	20483	3.7	752	3.1	625
J. Everett Williams	Taliaferro	H	4	641	94	74.3*	3.4	2.49	25461	3.7	937	3.1	779
C. A. Boehs Dairy	Jefferson	H	4	74	89	70.3	3.5	2.46	20615	3.6	746	3.1	646
Troy Yoder	Macon	H	4	136	96	77.6	3.1	2.44	21366	3.5	755	3.1	658
W.T. Meriwether	Morgan	H	4	120	98	65.9	3.7	2.42	19834	3.9	771	3.2	627
David L Moss	Morgan	H	4	117	93	61.2	3.9	2.41	20544	4.2	856	3.0	616
Stanley W. Yoder	Macon	H	4	133	93	70.1	3.4	2.36	19050	3.6	678	3.41	528
Aurora Dairy Georgia- LLC	Mitchell	H	4	3390	88	65.6*	3.6	2.36	20642	3.6	745	3.0	622
Mark E Brenneman	Macon	H	4	120	98	75.8	3.1	2.35	18783	3.4	632	3.1	583
Cecil Dueck	Jefferson	H	4	70	100	73.6	3.2	2.35	22907	3.5	805	3.1	703
Ray Ward Dairy	Putnam	H	4	132	100	68.7	3.4	2.35	22004	3.7	806	2.9	647
Sparkman Dairy	Colquitt	J	4	526	94	49.6	4.7	2.34	15497	4.9	762	3.6	551

[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.
Irvin Yoder	Macon	H	5	145	93	82.0	3.6	2.94	24678	3.6	891	3.1	769
Lamar Anthony	Sumter	H	4	989	94	78.3*	3.3	2.94	24495	3.3	817	3.0	731
Vista Farm	Jefferson	H	5	77	100	78.1	3.1	2.42	23324	3.3	775	3.0	704
Brooksco Dairy	Brooks	H	5	2538	93	76.3*			24667				
Dave Clark	Morgan	H	5	869	90	75.6*	3.3	2.50	24995	3.4	851	2.9	723
Scott Glover	White	H	5	98	95	74.7	3.6	2.67	23693	3.8	904	3.0	710
Martin Dairy L.L. P.	Hart	H	5	294	94	72.4	3.5	2.54	23423	3.6	849	3.0	691
Coastal Plain Exp Station	Tift	H	5	214	93	70.9	3.5	2.50	22795	3.8	856	3.0	678
Troy Yoder	Macon	H	5	138	100	70.9	3.5	2.50	21960	3.6	788	3.1	672
J. Everett Williams	Taliaferro	H	5	638	93	70.3*	3.7	2.60	25287	3.7	926	3.1	773
Marvin Yoder	Macon	H	5	134	90	70.3	3.5	2.48	20811	3.7	762	3.0	634
Krulic Dairy Farm, Inc.	Screven	H	5	112	91	69.4	3.5	2.42	24338	3.6	871	3.1	738
Coastal Plain Exp Station	Tift	H	5	237	94	69.3	4.0	2.75	22162	3.8	852	3.0	668
R & D Dairy	Laurens	H	5	106	96	69.2	3.2	2.24	21975	3.3	735	3.0	655
R & D Dairy	Laurens	H	4	106	96	68.3	3.3	2.22	21628	3.4	727	3.0	647
Kent Walker	Greene	H	5	117	95	68.1	3.44	2.31	21422	3.7	785	2.9	612
Agri-Fresh Dairy	Laurens	H	5	218	95	67.9*	3.7	2.51	21082	3.4	726	3.0	624
Terry Embry	Putnam	H	5	725	93	67.7*			21164				
Lawayne Weaver	Macon	H	5	165	93	67.6	3.3	2.25	20678	3.5	730	3.1	643
Mark Yoder	Macon	H	5	120	93	67..5	3.5	2.37	20588	3.6	745	3.1	639

[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.
Irvin Yoder	Macon	H	5	145	93	82.0	3.6	2.94	24678	3.6	891	3.1	769
Coastal Plain Exp Station	Tift	H	5	214	93	70.9	3.9	2.77	22795	3.8	856	3.0	678
Scott Glover	White	H	5	98	95	74.7	3.6	2.67	23693	3.8	904	3.0	710
Coastal Plain Exp Station	Tift	J	5	23	96	55.0	4.9	2.67	17117	4.8	820	3.5	593
Lamar Anthony	Sumter	H	4	989	94	78.3*	3.3	2.61	24495	3.3	817	3.0	731
J. Everett Williams	Taliaferro	H	5	638	93	70.3*	3.7	2.60	25287	3.7	926	3.1	773
Berry College Dairy	Floyd	J	5	28	82	48.3*	5.3	2.58	18729	58.0	944	3.6	666
Martin Dairy L.L.P.	Hart	H	5	294	94	72.4	3.5	2.54	23423	3.6	849	3.0	691
W.T. Meriwether	Morgan	H	5	115	96	61.0	4.2	2.54	19783	3.9	774	3.2	626
Agri-Fresh Dairy	Laurens	H	5	218	95	67.9*	3.7	2.51	21082	3.4	726	3.0	624
Dave Clark	Morgan	H	5	869	90	75.6*	3.3	2.50	24995	3.4	851	2.9	723
Troy Yoder	Macon	H	5	138	100	70.9	3.5	2.50	21960	3.6	788	3.1	672
C. A. Boehs Dairy	Jefferson	H	5	75	92	66.3	3.8	2.49	20705	3.6	749	3.1	648
Marvin Yoder	Macon	H	5	134	90	70.3	3.5	2.48	20811	3.7	762	3.0	634
Cecil Dueck	Jefferson	H	5	67	100	67.2	3.7	2.46	22816	3.5	801	3.1	702
Earnest Turk	Putnam	H	5	332	96	64.6	3.8	2.44	21199	3.8	805	3.1	655
Stovall Dairy Inc	Madison	H	5	157	99	67.4	3.6	2.43	21640	3.9	842	2.9	631
Vista Farm	Jefferson	H	5	77	100	78.1	3.1	2.42	23324	3.3	775	3.0	704
Krulic Dairy Farm, Inc.	Screven	H	5	112	91	69.4	3.5	2.42	24338	3.6	871	3.1	738
University of GA Dairy Farm	Clarke	H	5	100	98	67.0	3.6	2.38	18854	3.7	697	3.1	578

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