Animal and Dairy Science Department
Rhoades Center for Animal & Dairy Science - Athens
http://www.caes.uga.edu/departments/animal-dairy-science/about/newsletters.html

Telephone: (706) 542-0658
Fax: (706) 542-9316

GEORGIA DAIRYFAX

Dear Dairy Producers:

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.

INSIDE THIS ISSUE: April May June, 2021

Sincerely,

Sha Tao

Associate Professor

UNIVERSITY OF GEORGIA EXTENSION

Dairy Dawg and Youth Updates

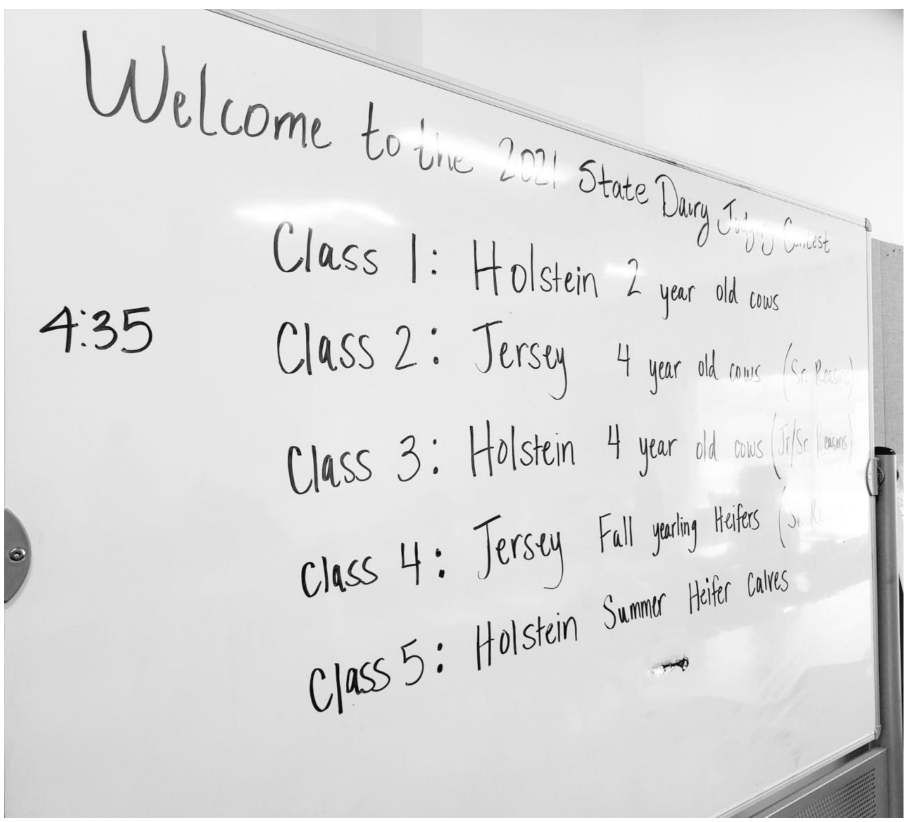
Jillian Bohlen, Ph.D., Associate Professor and Dairy Extension Specialist
706-542-9108 / jfain@uga.edu
Department of Animal and Dairy Science, UGA

State Dairy Judging Contest

The 2021 State Dairy Judging Contest was held in person on Friday, March 26th. Located at the UGA Teaching Dairy in Athens, this year's competition hosted 26 young people. Though numbers for the event were down slightly this year, everyone was happy to be back face-to-face for a youth contest.

High individual in the Senior Contest was Jazmine Ralston from Gordon County while the Junior High individual was Maggie Harper from Morgan County. Winning the Senior competition with an opportunity to compete nationally this fall was Gordon County with members Jazmine Ralston, Katie Reynolds, Joshua Carr and Breana Manning. The winning Junior team was from Burke County with members Sara Morgan Sapp, Macy Doyen, Emree Williams and Victoria Chamberlin.

A big thanks to the UGA Dairy Science Club for working weeks up to the contest to halter break animals for the contest as well as leading and helping to officiate the day of. Congratulations to everyone on a wonderful event!



2021 State Dairy Judging Class lineup at the UGA Teaching Dairy in Athens.

Youth members view a haltered Holstein class for the 2021 State Dairy Judging Contest.

Dairy Science Club members that worked to make the 2021 State Dairy Judging Contest a success for youth in the state.

Contest results are announced here https://www.youtube.com/watch?v=94cqO_Tv0_4

Class critiques are located at the link below

https://www.youtube.com/watch?v=YLTKMP5WWFs

Above links may also be located on the Georgia 4-H YouTube Channel

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State Dairy Quiz Bowl Contest

The 2021 State Dairy Quiz Bowl Contest was held virtually on Thursday, May 13th. In total, there were 4 Junior and 6 Senior Teams that competed for top honors in this double elimination contest. The teams this year were incredibly competitive and excelled despite the virtual format. The youth in this contest not only showed up with understanding of the dairy industry but also incredible enthusiasm for the competition. All in all, the youth collaborated, buzzed, laughed and made a great state contest.

The team winning the Senior Contest and with a chance to compete national this fall was from Oconee County with members Alicia Carnes, Alyssa Haag, Robie Lucas and Kalani Washington. The team winning the Junior Contest was from Burke County with members Maggie Cunningham, Macy Doyen, Sara Morgan Sapp and Emree William.

Winning Senior team from Oconee County for the 2021 State Dairy Judging Contest

Contest results are announced here

https://www.youtube.com/watch?v=HflZ232ZwU4

Link above is also located on the Georgia 4-H YouTube channel.

2021 University of Georgia Dairy Scholarships

The University of Georgia Animal and Dairy Science department is proud to be able to offer a number of scholarships to students actively engaged and interested in the dairy industry. These scholarships are made possible through generous donors and their support allows us to not only attract but also retain students in the field of dairy.

Georgia Dairy Memorial Scholarships

Jorja Cooper

Sabrina Dinh

Tate Hunda

Alex Schlottman

Rebecca and Louis Boyd Scholarship

Kenne Hillis

Southeast Milk Scholarship

Dawson Fields

Herbert Henderson Scholarship

Alanis Reyes

H.D. Thames Scholarship

Miralee Shaffer

Benjamin Forbes Outstanding Dairy Science Senior

Kenne Hillis

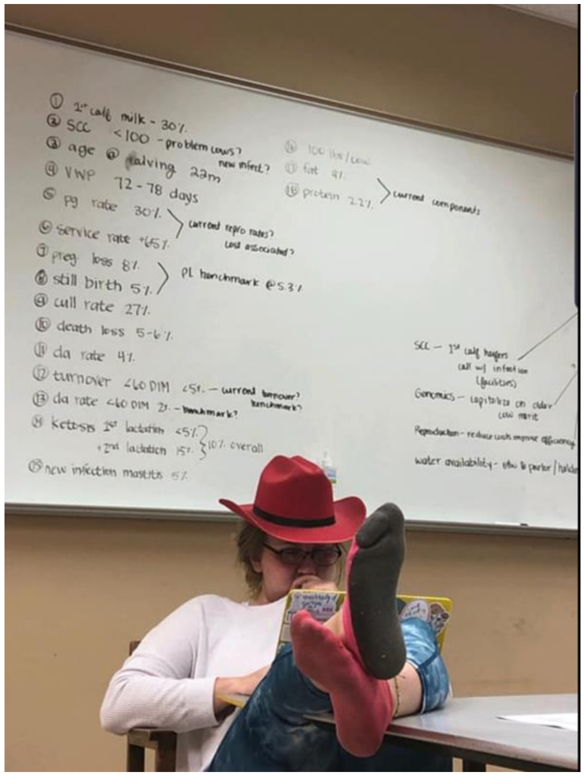
Please watch the video below for all departmental scholarships as well as an update on the Dairy Science Program at UGA (begins at 22:54).

https://www.youtube.com/watch?v=QSG_kZIcB2s&t=5s

Dairy Dawgs and the 2021 North American Intercollegiate Dairy Challenge

The 2021 North American Intercollegiate Dairy Challenge was held virtually March 31st – April 2nd. Though not an ideal way to critically evaluate their host dairy farm in Wisconsin, the contest still highlighted the rigor and engagement with industry professionals that it is known for. The competing team from the University of Georgia included Kenne Hillis, Will Strickland, Alyssa Rauton and Tate Hunda. The team spent relentless hours combing data, watching videos of on farm operations and management, interviewing farm staff and ultimately putting together a presentation that offered strengths, weaknesses and areas of opportunity for the farm.

Though the team did not place in the top two, which are the only placings announced, they were commended on numerous occasions for their involvement and professionalism. Their work ethic and dedication to more fully immerse in dairy beyond the scope of the classroom is commendable.



Alyssa Rauton works with her team to analyze farm records.

2021 North American Intercollegiate Dairy Challenge team members featuring L to R: Will Strickland, Alyssa Rauton, Kenne Hillis and Tate Hunda

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Updates and Announcements

- The delegation from the University of Georgia will virtually attend and compete in the American Dairy Science Association Meetings in July for which Alyssa Rauton will complete her duties as national president. Please wish them well on a great meeting and successful competitions.

- The Southeast Dairy Youth Retreat typically scheduled for summer is canceled.

- The National 4-H Dairy Conference typically scheduled for fall is canceled.

Changes keep occurring

Lane O. Ely, Ph.D., Professor Emeritus
laneely@uga.edu
Department of Animal and Dairy Science, UGA

As one gets older, one is supposed to become wiser. At least as one gets older, they should have more experiences to make decisions. This last year with Covid restrictions one had a lot of time to study and think. I spent a lot of time reading and thinking about the past and the future. I thought about the dairy industry of fifty years ago as I was starting college.

The dairy industry was focused in the upper Midwest and Northeast. California was a large dairy state but half a country separated it from the population of the east. Milk was not shipped across the country as it is today. The average herd size was less than 50 cows. Many Midwest dairy farms were 30 cows and the producer had off farm jobs. The most common housing was stanchion barns or tie stall barns with the cows being milked there. The most common parlor was a flat barn. This was often the old stanchion barns used as a parlor as the herd expanded.

Some new ideas were being introduced to the dairy industry and in the classroom. They were freestall housing, total mixed rations and computer ration balancing, increased benefits of AI and bull selection and importance of raising replacements. How many of you remember trying to make a ration with four ingredients using the Pearson Square or simultaneous equations? All of these are accepted industry standards today. Today computer programs are balancing rations for nutrients and economics.

Some of the early commercialization of the computer was due to the dairy industry. Many universities acquired their first computers due to dairy scientists working on dairy records, genetics and ration formulation.

In the Southeast, most states had a milk commission. The focus of these commissions was on the state with local co-ops, production to meet the fluid and class II demand, and setting prices to have an adequate supply. Most cows were on pasture and production dropped dramatically in the summer. Early work was being done on the use of silage to provide more consistent and higher nutrient value to the cows for increased milk production. The idea that shade, fans and cooling would increase milk production was being researched and introduced.

So why as the population of the Southeast doubled and tripled with a corresponding demand for milk, did the Southeast dairy industry decline into a heavily deficit milk production area instead of increasing to meet the demand? One thing that happened was the milk commissions were declared illegal and co-ops consolidated so control was lost locally. The increased population growth occurred in the areas where many of the dairy farms were located and most of these producers did not relocate to new farms. It is not unusual to be driving through a neighborhood and see an old silo standing today in a neighborhood.

Also in the 1970’s under President Jimmy Carter, the level for parity was increased resulting in higher milk prices. This was a signal to increase production which resulted in surpluses of 6 % or more in the milk supply. The result was lower milk prices. To help the dairy industry, the dairy buyout and diversion program was initiated in the 1980’s. The unexpected result was that the highest sign up was in the Southeast, the area of milk deficit. This was added to the idea for the co-ops that it was cheaper to ship surplus milk from one area than to encourage local production. Today the Southeast continues to be a deficit milk producing area. The Southeast does not produce enough milk to even meet the fluid demand. Only Georgia and Florida in the Southeast have held their production with the use of the ideas and technology introduced over the years. There has been an increase of barns with shade, fans and cooling to combat the summer temperatures. Also a benefit of the housing is keeping cows out of the mud. Increased use of TMR's and better forage production have resulted in more consistent and better nutrition for milking cows. The number of dairies in Georgia has decreased like the rest of the Southeast but the overall number of cows has not decreased as much. This has been accomplished as 100 cow dairies have expanded to 200 cows, then increased to 500 cows and some going to over a 1,000 cows. Also in the 2000's, several grazing dairies started in Georgia giving a boost to cow numbers and state milk production. When I came to Georgia, there were over 1.200 dairies. Today there are about 125 dairies but they produce more milk than those 1,200 dairies did.

When I started graduate school, the Central Valley of California was expanding its dairy farms. Producers were selling their farms in the Los Angeles area where they hauled feed in and milk and manure out. Many of them moved to the San Joaquin Valley (lower Central Valley) where they purchased irrigated land to grow their forage (mainly alfalfa) and increased their herds from 500 to 1500 or more cows. This led California to become the leading dairy state. Most of this growth was on the East Side of the Valley as the west side of the Valley was dry land grazing. Then the Federal and California government built the California Aquaduct to move water from Northern to Southern California. This opened the west side of the valley to fruit and nut trees, alfalfa and grapes. At this time there was little corn grown but this increased as the dairies started to include corn silage in their diets.

Today there are some surprising changes as one drives through the Central Valley. Much of the alfalfa and cotton fields are now fruit and nut orchards with drip irrigation. It is surprising to see mile long drip irrigation lines. Water allocation to agriculture has been cut as the population grows. Not only does one see the conversion to crops requiring less water but also fallow fields and dead orchards due to no water being available. The other huge change one sees is the amount of corn grown. Corn grown not only for silage but also a lot of acres being grown for grain. The last few years has seen a decline in California dairies as producers have moved to other states or closed their operations. A variety of reasons have contributed to this: low milk prices, surplus milk and limited processing capacity, limited availability of water, and the cost of environmental regulations. Many of these factors are having the same effect in other parts of the country.

Corresponding with this decrease in dairy farms, dairy programs at universities have also decreased. When I started college, all land-grant universities had dairy farms and many had more than one. Today less than half of the universities have a dairy farm. Also the number of faculty focused on dairy has declined at a time when there is increased interest and demand for dairy graduates.

The last fifty-five years have seen many changes in the dairy industry. It will be interesting to see how the changes in the next fifty years affect the dairy industry.

Lagoon wastewater treatment to forage before harvest and its impact on the silage microbiota

Osman Y. Koyun, Graduate student,
Jeferson Lourenco, Ph.D. Postdoctoral Researcher, jefao@uga.edu
Todd Callaway, Ph.D. Associate Professor, todd.callaway@uga.edu
Sha Tao, Ph.D. Associate Professor, stao@uga.edu/706-542-0658
John K. Bernard, Ph.D., P.A.S., Dipl. ACAN, Professor Emeritus, jbernard@uga.edu
Department of Animal and Dairy Science, University of Georgia, Athens GA

The use of wastewater from lagoons on farm to irrigate crops is commonly used as a source of nutrients in irrigation to grow forage in many developing or developed parts of the world especially where freshwater sources are limited and water scarcity has become a problem. Even when cattle producers have copious amounts of water, producers have found the idea of conserving and reusing their water attractive. Climate change, population growth, urbanization, overuse of groundwater and aquifers, chemical spills and harmful leakages can impact the quality and availability of water sources, yet these are just the tip of the iceberg of the impactors that affect the use and recycling of water around the world. Agriculture accounts for almost 70% of global freshwater use (Food and Agriculture Organization, 2012), so failing to supply adequate amounts of water towards this sector will inevitably affect crop and animal production. This seems like a vicious cycle at the end of the day, but wastewater has been utilized for watering crops around the world. As an example, at least 20 million hectares in 50 countries are irrigated with untreated or treated wastewater.

What is wastewater and why has its use become so widespread in agriculture? Livestock animals produce a considerable amount of manure and urine every day, which is then collected in a lagoon, and along with the water content, it is utilized for irrigation purposes. This application provides benefits to producers as wastewater contains nutrients (carbon, nitrogen, phosphorus, potassium, and micro-minerals) as well as moisture that can supply the nutritional requirements of forages, and reduce expenses on chemical fertilizer and freshwater use, even reducing the need to purchase feed from outside thanks to sufficient or higher crop yields. Yet, the other side of the coin is there are repercussions from using wastewater in crop production. The use of wastewater for irrigation can lead to nitrate contamination in domestic water supplies and introduce inorganic contaminants to the soil as well. Applying wastewater to forage can also cause delay in maturity if the treatment has excessive levels of nitrogen for forage production. Moreover, wastewater contains bacteria from the manure and the environment, and this microbial "wash" can colonize the plants; however, the microbial population of wastewater can include some pathogenic microbes. Transmission of pathogenic bacteria (e.g., fecal coliforms, *E. coli* O157 H7, *Salmonella* spp., *Campylobacter* spp., *Listeria* spp., *Bacillus* spp., *Shigella* spp., and *Vibrio cholerae*), viruses such as Enteroviruses, protozoa (*Entamoeba histolytica* cysts), as well as parasitic worm (*Ascaris lumbricoides)* eggs to the crops via wastewater and then feeding these pathogen-contaminated crops to animals can lead to a high colonization in the gut of the host. This can cause severe disease or dysfunction because what you provide to your cattle can drastically impact the gut health and functionality. Cattle colonized by these pathogens or parasites may not perform to their utmost growth or milk production, or even can super-shed these notorious pathogens to the environment and introduce them broadly on the farm and into the food chain, causing diseases in humans as well.

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We know that utilizing wastewater for forage irrigation is common in agriculture, but we really do not know if the use of wastewater-treated forage would change the microbial population on the silage in a way that makes end-product feeds less desirable or unhealthy for animals. If so, we then asked ourselves "Can we use a silage inoculant to counteract this alteration of the microbial population of silage as well as to improve the silage quality?" Well, we are one step closer to find answers to these questions thanks to the generosity of Southeast Milk Checkoff Committee. We recently carried out an experiment in which standing forage (triticale) was treated with wastewater (from a dairy lagoon) at different timepoints (21, 14, or 7 days prior to harvest) and then treated with a commercial silage inoculant (containing *Pediococcus pentosaceus* and *Lactobacillus buchneri*) at the time of harvest.

The chemical composition and fermentation profiles of the ensiled forage were analyzed, and bacterial strains present in the samples were identified using Next Generation Sequencing (NGS) technology. Overall, timing of waste application resulted in minor differences in the chemical composition and fermentation profile of the ensiled forage, but the differences were not consistent for any particular time of application. Ash concentrations were highest when lagoon wastewater was applied to standing forage 21 days prior to harvest when compared to other timepoints, which may reflect greater uptake of minerals or residual solids remaining on the forage due to the lagoon wastewater treatment. Total volatile fatty acid concentrations were not different among treatments, but lactic acid concentrations were lowest when lagoon wastewater was applied 21 days prior to harvest when compared to other timepoints. Acetic acid concentrations were higher when lagoon wastewater was applied 21 days prior to harvest and were found at intermediate and lowest concentrations at 14 and 7 days prior to harvest, respectively. Acetic acid concentrations were higher when silage inoculant was applied compared with control, which is consistent with the use of the inoculant containing *L. buchneri*.

These differences potentially reflect how the growing forage utilized the nutrients provided by the wastewater treatment. Inoculation of the forage at harvest resulted in more consistent, positive effects on fermentation end products which is expected with an application of a silage inoculant containing *Lactobacillus buchneri*. Also, the forage ensiled well and the drop in pH was greater when a silage inoculate was applied. Neither inoculation of the forage nor wastewater treatment affected the concentration of pathogens in the silage; however, those two factors did impact the overall microbial composition of the silage. The addition of forage inoculant reduced microbial richness, diversity, and evenness, meaning it made the bacterial population of the silage less diverse. In addition, it selected for specific microbial taxa such as *Lactobacillus* and *Pediococcus*, at the expense of other taxa such as *Enterococcus*, *Leuconostoc*, *Weissella*, and several other minor genera. Application of water lagoon 21 days prior to harvest increased microbial richness and tended to increase microbial diversity, but the effects on specific taxa were less evident.

These findings suggested that wastewater treatment 7, 14, or 21 days prior to harvest do not have a strong impact on the silage microbiota. On the other hand, utilization of forage inoculant significantly changed the microbial composition of silage, and selected for microorganisms that are typically considered more beneficial. Although we tested the effect of treating lagoon wastewater on standing triticale prior to harvest and treating the forage with a silage inoculant (containing *Pediococcus pentosaceus* and *Lactobacillus buchneri*) at harvest, alternative forage types (e.g., corn, bermudagrass, or wheat) and other promising bacterial strains (*Bacillus subtilis, Enterococcus faecium, L. acidophilus, L. bulgaricus, L. brevis, L. casei, L. hilgardii, L. lactis, L.*

rhamnosus, L. paracasei, L. plantarum, L. salivarius, Pediococcus acidilactici, or *P. cellicola*) as silage inoculants still await to be explored. However, the fact remains that silage inoculants do result in changes in the silage quality and stability due to a more consistent fermentation that produces more lactic acid, which reduces the pH of silage to act as a preservative, enabling you to harvest more energy from your fields.

The scoop on teat dips

go get a scoop of ice cream for June Dairy Month!

Valerie Ryman, Ph.D., Assistant Professor and Extension Dairy Specialist
706-542-9105/vryman@uga.edu
Jenna Williamson, Graduate Student
Department of Animal and Dairy Science, UGA

Application of teat dip is a critical step in both pre- and post-milking procedures. Teat dipping is a cornerstone of the 5-Point Mastitis Control Plan developed 50 years ago and remains a critical piece of any mastitis prevention and control plan. In fact, the Pasteurized Milk Ordinance (PMO) that sets the basic standards for Grade A milk, includes a statement regarding utilization of a solution to disinfect teats prior to and after milking. The goal of pre- and post-dipping is to kill sufficient numbers of microorganisms on the teat skin in an effort to reduce the risk/incidence of mastitis. Based on decades of research, current recommendations are that pre-milking teat dip should be applied and remain on the fully dipped teat for at least 30 seconds before being completely wiped off, whereas post-dip should be fully applied and left on the teat after milking. Over the years there have been an abundance of germicidal teat dip products developed, many of which are still on the market, so it is easy to become overwhelmed with selecting a teat dip. The purpose of this article is to briefly discuss types of teat dips as well as to provide some general tips on how to get the best use out of the product you select.

We can talk about "types" of teat dips in a few different ways including, but not limited to:

1. Class (iodine vs. chlorine dioxide vs. etc.)
2. Pre- vs. post-dip
3. Form (spray, dip, foam)
4. "Traditional" vs. barrier

I want to begin with class of teat dip since the most important characteristic of any teat dip is that it functions as a disinfectant. Major classes of disinfectants are (ordered by availability and use in the US market):

- Iodine
- Chlorhexidine
- Chlorine dioxide
- Peroxide
- Other (bleach not included as it is NOT recommended for use as a teat dip)

Properties and important points for each of the above are included in the following table: (table adapted from https://www.webpages.uidaho.edu/avs472/Word/Mastitis%20and%20Milking/Classes-Types-of-Teat-Dips-Cornell.pdf .)

Disinfectant[1]	Estimated market share (%)	Efficacy against mastitis-causing pathogens	Advantages	Disadvantages	Brand examples
Iodine	65	All known bacteria, most other (yeast, mold, algae)	• Gold-standard • Most tested of all dips • Available in several concentrations[2]	• Can be expensive, especially with emollients • Needs emollients or buffer to protect skin	Bovadine® Transcend
Chlor-hexidine	10	Most bacteria	• Not irritating to teat tissues • Can be long-acting if applied correctly	• *Serratia* and *Pseudomonas* can survive • Need a minimum content of 0.5%	Epic
Chlorine dioxide	10	Most bacteria, molds, yeasts	• When combined with lactic acid, can improve teat skin condition • Similar effectiveness to iodine for most pathogens	• Must be mixed just prior to use • Can still be effective at high organic loads	Vanquish™ Velocity™
Peroxide	10	Most bacteria	• When combined with lactic acid, can improve teat skin condition	• Not shelf-stable for long-periods • High organic load decreases effectiveness[3]	Prima™ Assure
Other (e.g., lactic acid, glycolic acid)	2-? (growing)	Depends on product	• Range of costs • Most are gentle on teat skin	• Range of effectiveness • Limited data	OceanBlu™ (glycolic acid) Lactisan™ (lactic acid)

[1]While not banned in the US, nonylphenol ethoxylates (NPEs) are banned in many other countries, thus it is advised to select a product that is NPE-free
[2]Minimum of 0.5% recommended for pre-dip and 1% for post-dip
[3]In general, too much organic matter is going to reduce effectiveness of ANY dip, so do a dry wipe with either a gloved hand or clean towel to remove organic matter prior to pre-dipping

As you are probably fully aware, there are a variety of dip options…too many… that may be viable candidates for a dairy operation. From the perspective of a Dairy Extension Specialist, iodine-based dips are an optimal choice given decades of research results showing it to be a gold-standard in teat disinfection, however, this may not always be feasible for every operation. When selecting an alternative option, care should be taken to make sure that teat health, mammary health, and milk quality are not suffering. If considering a switch to something different, make sure to ask the question "why do I want to switch and how do I know it will work?" If the reason is increasing somatic cell count (SCC) or a rise in mastitis cases, it may not necessarily be a failure of the dips. Perhaps some of the following questions need to be asked:

Are employees applying the dip correctly (fully) and for the appropriate amount of time? Are teats clean when the dip is applied? If the dip requires mixing, are they being mixed correctly? If dip becomes contaminated during milking, is it replaced before continuing to use on cows? Are there chronic and/or subclinical cows in the herd that are contributing to increased SCC? Are beds being groomed appropriately and re-bedded as needed?

If cost is the concerning factor (as it has been for us in the past at the UGA Teaching Dairy using Bovadine® as our post-dip, one of my favorites…but costly!), work with your salesperson, your milk co-op representative, and your local and state Cooperative Extension agents and specialists to find a similar alternative that has been thoroughly tested and doesn't compromise other aspects of animal health and economic productivity. It is important to mention that you CAN ask a company for the research data that shows effectiveness against the major mastitis pathogens! When switching make sure to make a note of the day/milking shift the change was made and closely monitor the following at a minimum:

- Incidence of new infections; even better if you culture milk and can pinpoint problem pathogens
- Teat skin and teat end health; observe whether teats appear dry/chapped, or the teat end is rough/raised
- Change in SCC
- Overall behavior of cows and employees

Unfortunately, what works for a fellow producer may not always work across the board!

A couple other topics that I want to briefly touch on are:

- What are the differences in pre- and post-dips?
- Which form of application (dip vs spray vs foam) is most effective?
- Is a barrier dip necessary?

What are the differences in pre- and post-dips?

Generally speaking, there are two main differences in pre- and post-dips: 1) the concentration or level of disinfectant and 2) the skin conditioner, or emollient, content. In practice, pre-dips have a lower disinfectant concentration compared to post-dips, particularly iodine-based dips. This doesn't mean that you can't use similar germicidal contents, but increased germicidal content for pre-dipping could increase your costs without benefit, and a lower disinfectant concentration for post-dips could result in increased mastitis and SCC. For most companies, there are recommended guidelines for products as to how they should be used (pre- vs post-dip). Follow those guidelines! The second distinct difference in pre-dips and post-dips, is that pre-dips don't usually need a high skin conditioner content, whereas post-dips should contain ample skin conditioners. The appropriate percentage of emollient really depends on environmental and structural factors, such as housing and weather. Assessing teat skin and teat end health will aide in determining whether the current dip is appropriate.

Which form of application (dip vs spray vs foam) is most effective?

All forms of application (dip, spray, and foam) CAN be effective if applied correctly, meaning the entire teat including the teat end is covered in dip (Figure1). Dip cups are the most common form of application and can be highly effective if the cup is a non-return cup that is appropriately sized/shaped, kept clean through milking, functions properly, and applied correctly. For example, a Thrifty Dipper is an excellent option to reduce dip waste, but if bristles become bent or heavily contaminated, application and efficacy is decreased tremendously.

Figure 1. *Teat that has been fully dipped with an iodine-based teat dip*

Foam dips can be an excellent secondary option as coverage and efficacy can be as exceptional as, if not better than, dip cups. Generally, less product is going to be used thus reducing costs associated with dip, however, make sure that the product you use is labeled for foam usage. Not all products will work as effectively just because it is added to a foaming dip cup.

Lastly, spraying can be as effective as the other two IF it is applied correctly. Unfortunately, spraying is typically the form that is most often incorrectly applied. In fact, many say it is much easier to apply it incorrectly than it is to apply it correctly. For most spraying system, either a couple passes or deliberate rotation must be included in application to ensure that the entire teat surface is covered; sides, teat end, everything. As an additional comment, high emollient dips do not work well in many situations with sprayer systems.

If there are any doubts as to whether teat dips, in any form, are being applied correctly the easiest way to check is by doing the "towel test". Take a white towel or paper towel and wrap it around the teat after dip application, making sure to include the teat end. You should be able to observe complete coverage of the dip (Figure 2). If not, it will be quite clear that technique needs to be improved or method of application needs to be changed.

Figure 2. *Towel test showing poor coverage of spray dip (top), compared to dip cup (bottom) Source:https://hoards.com/article-26866-teat-disinfectants-are-bacteria-busters.html*

Is a barrier dip necessary?

Barrier tips are not necessary in many cases, especially herds where lactating cows remain in the barn during the duration of their cycle. Barrier dips can be extremely useful in situations where cows may be at risk of exposure to increased organic matter and moisture, e.g., manure, mud, etc. Since many of these dips form a waxy coat there is physical protection of the teat, not just a chemical/germicidal protection. However due to their thick consistency and associated active ingredients, they may take several minutes to dry, an important point as they are only fully effective once dried. As a final note, barrier dips should ONLY be used as a post-dip.

There are of course many other topics within this category that we didn't get to (types of skin conditioners as an example), so if there are further questions, please don't hesitate to reach out to Extension so that we can serve as a resource and guide you through any questions you have. As always, thank you to all the producers for everything you do. Happy National Dairy Month!

Efficient water usage is critical for sustainable dairy production

Thiago N. Marins, DVM, Graduate Student, tnmarins@uga.edu
Sha Tao, Ph.D., Associate Professor, stao@uga.edu/229-386-3216
Department of Animal and Dairy Science, UGA

Climate change is a growing concern for livestock industry. It tends to increase global temperature and affect rainfall availability (Lacetera, 2019). The changing climate will profoundly impacts all regions in the world, directly or indirectly impairing animal production (Nardone et al., 2010). In contrast, the growing world population requires the increment and intensification of animal production to ensure sufficient food supply. According to Food and Agriculture Organization of the United Nations the world food production needs to be duplicated by 2050 relative to 2009 to ensure sufficient human consumption. Global production of dairy products is also expected to rise by 22% over the next decade. This partially is achieved through the dairy intensification (OECD/FAO, 2018). Therefore, there is a strong need for increased dairy production. However, it is known that livestock production requires a significant amount of natural resources (land, water, and energy), and it has been indicated that the livestock industry contribute to climate change (de Vries and de Boer, 2010); then the increment in natural resource consumption has put extra pressure on the environment and sustainability. Thus, practices that effectively use available resources have acquired an essential role in livestock industry to minimize the environmental impact and establish a sustainable food production system. Surprisingly, public engagement with climate change and sustainability is still poor in U.S. A survey reported by the Pew Research Center (2020) indicate that climate change is viewed as a nonurgent issue by U.S. adults, ranking below the economy, health care, foreign policy, violent crime, gun policy, and other issues.

Dairy farming has rapidly changed over the past 50 years (OECD/FAO, 2018). Genetic selection, enhancement on reproduction rates, improved nutrition and management, adoption of technology for close monitoring behavior and enhancing cow health have not only improved feed conversion efficiency of dairy cattle but also reduced the footprint of greenhouse gas (carbon dioxide, nitrous oxide, and methane), and improved the efficiency of water and land utilization of the dairy farms (Rotz et al., 2010; Ibidhi and Ben Salem, 2020; Naranjo et al., 2020). These contribute to the improved sustainability of dairy sector (Capper and Cady, 2020; Naranjo et al., 2020). However, it is crucial to maintain the continuous effort to improve efficient use of natural resources on dairy farms.

Globally, we are facing water scarcity (UN-Water, 2021). In certain regions of U.S., this has become a severe issue. This has driven political and economic decisions for water conservation. For example, the outrage heat, wildfire and droughts occurred recently in California has promote first water trade on the stock market in late 2020 (Chipman, 2020). This will allow investors to make wagers on the price of water. Although this new scheme of trading water helps farmers better budget this natural resource, it may increase water price. Time is required to visualize the real effects of this action on the balance of supply and demand of this new commodity, its price risks, and population's usage. However, it is predictable that similar situation will occur in other regions of U.S. and globally, as water scarcity will be amplified by population growth and climate change (Heinke et al., 2019).

Water is crucial for milk production. On one hand, it is a feedstuff required for all essential

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functions of an animal. Sufficient supply of high-quality water is critical for cow performance, health, and welfare, and farm profitability. Water intake of dairy cattle is determined by factors such as nutrition (ingredient, diet formulation, dry matter intake, etc.), milk production (e.g. higher producing cows drink more water), category and physiological status (lactating cows, dry cows, heifers), cow health (mastitis, indigestion, etc.), weather conditions (e.g. cows drink more water in warmer condition), and water quality (mineral content, contamination, etc.) (NRC, 2001). For example, a recent study reported that dairy cows consumed less water that is contaminated with manure compared with clean water (Schütz et al., 2021). Additionally, water is a vital agricultural resource to support producing milk, being necessary and massively used in the daily routine (e.g., equipment washing and cleaning, irrigation and forage/grain production, and cooling cows, etc.).

Seeking for water conservation methods should be constant on dairy farms. Different managements, equipment, technology, and facilities can be used for water conservation, such as re-use water from effluent ponds, store and re-use plate cooler water, re-use detergent wash, mechanical scrapers, catch rain water from shed roof, etc. Minor events may also compromise sustainable water usage and lower farm efficiency; for example, lack of attention on water leaking from water trough due to a broken float valve, and long and undiscriminating use of water hose to wash the milk parlor. Thus, actions should be adopted for water conservation. Using water meters on wells to monitor fresh water pumping is the initial step to evaluate water usage on farm. However, this cannot reflect the water budget of the entire system. The adoption of deeper and routine monitoring of water budget is a tool that provides the direct and indirect water usage in different sectors of a dairy farm. This may induce changes in management decisions that substantively reduce the annual farm water consumption. For instance, Le Riche et al. (2017) reported that close monitoring water usage using water flow meters in different sectors (water trough, barns, milk parlor, sanitization system, milk pre-cooling system, cow cooling system, and general farm cleaning) of a free-stall dairy farm in Canada could lead to management changes that result in as much as 18.9% reduction on annual farm water consumption.

However, it is important to note that the routine monitoring of water usage in different sectors in a farm is uncommon, especially in the southern dairy farms. Southern dairy farms are unique because of the prolonged summer with high ambient temperature and humidity (West, 2003). The increased water usage becomes inevitable in warmer months to cool cattle, which could account for 20-40% of the total water usage in a southern confined dairy farm (Belflower et al., 2012). The evaporative cooling system including fans and soakers over the feed line is commonly seen in the southern dairy farm. Although effective in cooling cows, it costs significant amount of water. Therefore, water saving cooling system that also provides sufficient heat abatement should be considered in the future for southern dairy farms. This is a subject that deserves extensive studies for sustainable milk production.

Certainly, there is a gap in knowledge regarding water usage and conservation methods on dairy farms. This, however, is a part of the sustainable milk production, and cooperative efforts among producers, researchers, and industry personnel are essential to develop a long-term sustainable dairy industry.

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Dr. Jillian Bohlen receives Hoard's Dairyman Youth Development Award

It is a great pleasure to announce that our own Dr. Jillian Bohlen receives this year's Hoard's Dairyman Youth Development Award. Below is the official announcement from the American Dairy Science Association (ADSA, https://www.adsa.org/About-ADSA/Awards/2021/Award-Jillian-Bohlen). Jillian, we are all very proud of you! Congratulations!

"The American Dairy Science Association® (ADSA®) is pleased to announce Jillian Bohlen as the 2021 recipient of the Hoard's Dairyman Youth Development Award. Bohlen will be recognized during the virtual ADSA Annual Meeting.

The Hoard's Dairyman Youth Development Award was created to recognize a candidate who has had significant involvement in dairy-related youth activities in either a professional or volunteer capacity for a minimum of 10 years. The recipient shall be highly regarded in the dairy industry for his or her role in personal development of dairy youths and for enhancing knowledge of and interest in the dairy industry. The winner need not be a member of ADSA and may have worked with youths of any age, up to and including college, in many possible capacities, such as coach, counselor, teacher, adviser, mentor, chaperone, or supervisor.

Jillian Bohlen truly believes in providing opportunities to young people. Facilitating 10 different events for more than 375 young people annually, she coordinates the state's 4-H Dairy Quiz Bowl, 4-H Dairy Judging competitions, and the Commercial Dairy Heifer project and shows, and she serves as advisor to the University of Georgia Dairy Science Club, ADSA Student Affiliate Division (SAD) delegation, and Dairy Challenge coach. Her contribution to collegiate development alone includes taking student groups to more than 40 professional development events across the United States. Bohlen has mentored two Genevieve Christen Award winners, served as advisor to the ADSA-SAD board, and received the ADSA-SAD Outstanding Advisor Award (2008). Her service to youths beyond state borders includes hosting multiple Southeast Dairy Youth Retreats, ADSA-SAD regional conferences, regional Dairy Challenges, and most recently the North American Intercollegiate Dairy Challenge, where she welcomed 240 students representing 43 universities to Tifton, Georgia, in 2019.

It is with great pleasure that ADSA and Hoard's Dairyman present Jillian Bohlen with the 2021 Hoard's Dairyman Youth Development Award."

Important Dates

2021

2021 UGA/UF Virtual Corn Silage Tour

- June 25, 2021, 9am to noon
- Please visit https://site.extension.uga.edu/burkeag/2021/06/corn-silage-virtual-field-day/

The American Dairy Science Association (ADSA) Virtual Annual Meeting

- July 11-14, 2021
- https://www.adsa.org/Meetings/2021-Annual-Meeting

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Top GA DHIA By Test Day Milk Production – March 2021										
					Test Day Average				Yearly Average	
Herd	County	Br.	Test Date	[1]Cows	% in Milk	Milk	% Fat	TD Fat	Milk	Lbs. Fat
GODFREY FARMS INC*	Morgan	HO	3/1/2021	1188	90	92.6	4	3.41	31471	1248
SCHAAPMAN HOLSTEINS*	Wilcox	HO	3/28/2021	736	90	91.3	3.6	3.13	28237	1012
SCOTT GLOVER	Hall	HO	3/3/2021	176	89	89.3	3.8	3.1	26890	1036
WDAIRY LLC*	Morgan	XX	3/8/2021	2025	86	89.1	4.7	3.69	27893	1259
A & J DAIRY*	Wilkes	HO	3/10/2021	408	91	87.7	0	0	28252	0
DANNY BELL*	Morgan	HO	3/4/2021	316	90	86.9	4.4	3.54	29448	1242
DOUG CHAMBERS	Jones	HO	3/22/2021	447	87	84.8	3.7	2.92	26711	969
SOUTHERN ROSE FARMS	Laurens	HO	2/24/2021	34	86	83.7	3.9	2.78	21043	821
TROY YODER	Macon	HO	3/3/2021	307	88	81.3	3.9	2.85	24478	951
MARTIN DAIRY L. L. P.	Hart	HO	3/1/2021	283	90	80.4	3.8	2.95	22797	904
RODNEY & CARLIN GIESBRECHT	Washington	HO	2/26/2021	366	91	76.5	3.9	2.7	22427	888
OCMULGEE DAIRY	Houston	HO	3/25/2021	348	87	76	3.6	2.55	22743	840
JERRY SWAFFORD	Putnam	HO	3/23/2021	142	84	75	3.8	2.71	19175	757
EBERLY FAMILY FARM	Burke	HO	3/15/2021	1051	89	74.4	3.7	2.49	24230	934
BOBBY JOHNSON	Grady	XX	2/21/2021	623	89	73.3	0	0	23025	0
UNIV OF GA DAIRY FARM	Clarke	HO	3/15/2021	138	85	69	3.8	2.2	19869	823
HORST CREST FARMS	Burke	HO	3/25/2021	176	88	66.9	3.8	2.3	20728	793
FRANKS FARM	Burke	BS	3/16/2021	185	89	66.8	4.2	2.41	19462	802
RYAN HOLDEMAN	Jefferson	HO	3/22/2021	92	87	66.3	3.8	2.44	18845	756
W.T.MERIWETHER	Morgan	HO	3/9/2021	77	87	64.8	3.6	2.24	18619	673

[1]Minimum herd or permanent string size of 20 cows. Yearly average calculated after 365 days on 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).

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Top GA DHIA By Test Day Fat Production – March 2021										
					Test Day Average				**Yearly Average**	
Herd	**County**	**Br.**	**Test Date**	**[1]Cows**	**% in Milk**	**Milk**	**% Fat**	**TD Fat**	**Milk**	**Lbs. Fat**
WDAIRY LLC*	Morgan	XX	3/8/2021	2025	86	89.1	4.7	3.69	27893	1259
DANNY BELL*	Morgan	HO	3/4/2021	316	90	86.9	4.4	3.54	29448	1242
GODFREY FARMS INC*	Morgan	HO	3/1/2021	1188	90	92.6	4	3.41	31471	1248
SCHAAPMAN HOLSTEINS*	Wilcox	HO	3/28/2021	736	90	91.3	3.6	3.13	28237	1012
SCOTT GLOVER	Hall	HO	3/3/2021	176	89	89.3	3.8	3.1	26890	1036
MARTIN DAIRY L. L. P.	Hart	HO	3/1/2021	283	90	80.4	3.8	2.95	22797	904
DOUG CHAMBERS	Jones	HO	3/22/2021	447	87	84.8	3.7	2.92	26711	969
TROY YODER	Macon	HO	3/3/2021	307	88	81.3	3.9	2.85	24478	951
SOUTHERN ROSE FARMS	Laurens	HO	2/24/2021	34	86	83.7	3.9	2.78	21043	821
JERRY SWAFFORD	Putnam	HO	3/23/2021	142	84	75	3.8	2.71	19175	757
RODNEY & CARLIN GIESBRECHT	Washington	HO	2/26/2021	366	91	76.5	3.9	2.7	22427	888
BOB MOORE	Putnam	HO	3/11/2021	521	91	64.7	4.1	2.59	19423	834
OCMULGEE DAIRY	Houston	HO	3/25/2021	348	87	76	3.6	2.55	22743	840
EBERLY FAMILY FARM	Burke	HO	3/15/2021	1051	89	74.4	3.7	2.49	24230	934
RYAN HOLDEMAN	Jefferson	HO	3/22/2021	92	87	66.3	3.8	2.44	18845	756
FRANKS FARM	Burke	BS	3/16/2021	185	89	66.8	4.2	2.41	19462	802
JUMPING GULLY DAIRY LLC	Brooks	XX	3/5/2021	1081	91	59.4	4	2.38	16414	640
JAMES W MOON	Morgan	HO	3/19/2021	127	85	60.4	4	2.3	17390	438
HORST CREST FARMS	Burke	HO	3/25/2021	176	88	66.9	3.8	2.3	20728	793
W.T.MERIWETHER	Morgan	HO	3/9/2021	77	87	64.8	3.6	2.24	18619	673

[1]Minimum herd or permanent string size of 20 cows. Yearly average calculated after 365 days on 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).

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Top GA DHIA By Test Day Milk Production – April 2021										
					Test Day Average				Yearly Average	
Herd	County	Br.	Test date	[1]Cows	% in Milk	Milk	% Fat	TD Fat	Milk	Lbs. Fat
GODFREY FARMS INC*	Morgan	HO	4/5/2021	1189	90	93.6	4	3.44	31356	1242
SCOTT GLOVER	Hall	HO	4/9/2021	172	88	92.9	3.9	3.14	26992	1037
WDAIRY LLC*	Morgan	XX	4/12/2021	1990	86	92.8	4.3	3.52	27971	1259
SCHAAPMAN HOLSTEINS*	Wilcox	HO	3/28/2021	736	90	91.3	3.6	3.13	28237	1012
DANNY BELL*	Morgan	HO	4/8/2021	322	90	90.1	4.1	3.43	29424	1247
A & J DAIRY*	Wilkes	HO	4/15/2021	406	92	88	0	0	28252	0
DOUG CHAMBERS	Jones	HO	4/26/2021	441	87	87.2	3.5	2.81	26782	972
RODNEY & CARLIN GIESBRECHT	Washington	HO	3/31/2021	375	90	78.1	3.8	2.73	22453	890
OCMULGEE DAIRY	Houston	HO	4/28/2021	353	87	76.7	3.6	2.55	22923	848
MARTIN DAIRY L. L. P.	Hart	HO	4/5/2021	283	90	75	3.7	2.75	22881	904
BOBBY JOHNSON	Grady	XX	4/22/2021	611	89	74.6	0	0	22621	0
JERRY SWAFFORD	Putnam	HO	4/27/2021	141	84	72.6	3.7	2.46	19619	773
MARK E BRENNEMAN	Macon	HO	3/29/2021	119	76	72	3.9	2.41	18645	735
EBERLY FAMILY FARM	Burke	HO	4/19/2021	1058	89	71.6	3.7	2.46	24126	927
VISSCHER DAIRY LLC*	Jefferson	HO	4/1/2021	857	88	71.5	0	0	22977	723
UNIV OF GA DAIRY FARM	Clarke	HO	4/19/2021	140	84	70.7	3.8	2.3	19883	814
WHITEHOUSE FARM	Macon	HO	4/12/2021	236	85	69.6	3.9	2.08	19532	751
HORST CREST FARMS	Burke	HO	4/28/2021	168	87	68.1	3.8	2.2	20588	793
FRANKS FARM	Burke	BS	4/20/2021	190	89	67.2	4.1	2.45	19395	804
RYAN HOLDEMAN	Jefferson	HO	3/22/2021	92	87	66.3	3.8	2.44	18845	756

[1]Minimum herd or permanent string size of 20 cows. Yearly average calculated after 365 days on 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).

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Top GA DHIA By Test Day Fat Production - April 2021										
					Test Day Average				Yearly Average	
Herd	**County**	**Br.**	**Test Date**	**[1]Cows**	**% in Milk**	**Milk**	**% Fat**	**TD Fat**	**Milk**	**Lbs. Fat**
WDAIRY LLC*	Morgan	XX	4/12/2021	1990	86	92.8	4.3	3.52	27971	1259
GODFREY FARMS INC*	Morgan	HO	4/5/2021	1189	90	93.6	4	3.44	31356	1242
DANNY BELL*	Morgan	HO	4/8/2021	322	90	90.1	4.1	3.43	29424	1247
SCOTT GLOVER	Hall	HO	4/9/2021	172	88	92.9	3.9	3.14	26992	1037
SCHAAPMAN HOLSTEINS*	Wilcox	HO	3/28/2021	736	90	91.3	3.6	3.13	28237	1012
DOUG CHAMBERS	Jones	HO	4/26/2021	441	87	87.2	3.5	2.81	26782	972
MARTIN DAIRY L. L. P.	Hart	HO	4/5/2021	283	90	75	3.7	2.75	22881	904
RODNEY & CARLIN GIESBRECHT	Washington	HO	3/31/2021	375	90	78.1	3.8	2.73	22453	890
BOB MOORE	Putnam	HO	4/15/2021	509	91	64.7	4.1	2.6	19669	841
OCMULGEE DAIRY	Houston	HO	4/28/2021	353	87	76.7	3.6	2.55	22923	848
EBERLY FAMILY FARM	Burke	HO	4/19/2021	1058	89	71.6	3.7	2.46	24126	927
JERRY SWAFFORD	Putnam	HO	4/27/2021	141	84	72.6	3.7	2.46	19619	773
FRANKS FARM	Burke	BS	4/20/2021	190	89	67.2	4.1	2.45	19395	804
RYAN HOLDEMAN	Jefferson	HO	3/22/2021	92	87	66.3	3.8	2.44	18845	756
MARK E BRENNEMAN	Macon	HO	3/29/2021	119	76	72	3.9	2.41	18645	735
JAMES W MOON	Morgan	HO	4/15/2021	125	85	64.6	3.8	2.3	17244	525
UNIV OF GA DAIRY FARM	Clarke	HO	4/19/2021	140	84	70.7	3.8	2.3	19883	814
HORST CREST FARMS	Burke	HO	4/28/2021	168	87	68.1	3.8	2.2	20588	793
WHITEHOUSE FARM	Macon	HO	4/12/2021	236	85	69.6	3.9	2.08	19532	751
RUFUS YODER JR	Macon	HO	4/29/2021	102	88	62.8	3.7	2.03	18116	698

[1]Minimum herd or permanent string size of 20 cows. Yearly average calculated after 365 days on 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).

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Top GA DHIA By Test Day Milk Production – May 2021										
					Test Day Average				Yearly Average	
Herd	County	Br.	Test Date	[1]Cows	% in Milk	Milk	% Fat	TD Fat	Milk	Lbs. Fat
GODFREY FARMS INC*	Morgan	HO	5/3/2021	1167	90	98.4	3.8	3.43	31315	1239
WDAIRY LLC*	Morgan	XX	5/10/2021	1987	87	92.7	4.4	3.59	28095	1262
SCHAAPMAN HOLSTEINS*	Wilcox	HO	5/2/2021	735	90	90.3	3.5	2.97	28562	1023
DANNY BELL*	Morgan	HO	5/6/2021	315	90	89.1	4.1	3.34	29541	1248
A & J DAIRY*	Wilkes	HO	5/12/2021	394	92	89.1	0	0	28412	0
SCOTT GLOVER	Hall	HO	5/6/2021	165	88	88.9	3.7	2.87	27126	1041
DOUG CHAMBERS	Jones	HO	5/24/2021	440	87	84.4	3.5	2.53	26702	970
TROY YODER	Macon	HO	4/28/2021	309	88	80.4	3.6	2.61	24871	966
RODNEY & CARLIN GIESBRECHT	Washington	HO	5/24/2021	358	91	79.2	3.7	2.82	22755	894
OCMULGEE DAIRY	Houston	HO	4/28/2021	353	87	76.7	3.6	2.55	22923	848
EBERLY FAMILY FARM	Burke	HO	5/17/2021	1047	89	72.7	3.8	2.45	24066	926
BOBBY JOHNSON	Grady	XX	5/22/2021	633	90	72.4	0	0	22893	0
JERRY SWAFFORD	Putnam	HO	5/25/2021	141	84	71	3.6	2.3	19891	780
UNIV OF GA DAIRY FARM	Clarke	HO	4/19/2021	140	84	70.7	3.8	2.3	19883	814
HORST CREST FARMS	Burke	HO	4/28/2021	168	87	68.1	3.8	2.2	20588	793
FRANKS FARM	Burke	BS	5/18/2021	184	89	65.5	4.1	2.41	19560	810
VISSCHER DAIRY LLC*	Jefferson	HO	5/12/2021	829	88	64.5	3.6	2.1	22807	681
JAMES W MOON	Morgan	HO	5/12/2021	126	86	62.9	3.9	2.26	17557	547
BOB MOORE	Putnam	HO	5/12/2021	503	92	62.9	4.1	2.55	19820	845
RUFUS YODER JR	Macon	HO	4/29/2021	102	88	62.8	3.7	2.03	18116	698

[1]*Minimum herd or permanent string size of 20 cows. Yearly average calculated after 365 days on 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).*

UNIVERSITY OF GEORGIA EXTENSION

Top GA DHIA By Test Day Fat Production – May 2021										
					Test Day Average				Yearly Average	
Herd	County	Br.	Test Date	[1]Cows	% in Milk	Milk	% Fat	TD Fat	Milk	Lbs. Fat
WDAIRY LLC*	Morgan	XX	5/10/2021	1987	87	92.7	4.4	3.59	28095	1262
GODFREY FARMS INC*	Morgan	HO	5/3/2021	1167	90	98.4	3.8	3.43	31315	1239
DANNY BELL*	Morgan	HO	5/6/2021	315	90	89.1	4.1	3.34	29541	1248
SCHAAPMAN HOLSTEINS*	Wilcox	HO	5/2/2021	735	90	90.3	3.5	2.97	28562	1023
SCOTT GLOVER	Hall	HO	5/6/2021	165	88	88.9	3.7	2.87	27126	1041
RODNEY & CARLIN GIESBRECHT	Washington	HO	5/24/2021	358	91	79.2	3.7	2.82	22755	894
TROY YODER	Macon	HO	4/28/2021	309	88	80.4	3.6	2.61	24871	966
OCMULGEE DAIRY	Houston	HO	4/28/2021	353	87	76.7	3.6	2.55	22923	848
BOB MOORE	Putnam	HO	5/12/2021	503	92	62.9	4.1	2.55	19820	845
DOUG CHAMBERS	Jones	HO	5/24/2021	440	87	84.4	3.5	2.53	26702	970
EBERLY FAMILY FARM	Burke	HO	5/17/2021	1047	89	72.7	3.8	2.45	24066	926
FRANKS FARM	Burke	BS	5/18/2021	184	89	65.5	4.1	2.41	19560	810
UNIV OF GA DAIRY FARM	Clarke	HO	4/19/2021	140	84	70.7	3.8	2.3	19883	814
JERRY SWAFFORD	Putnam	HO	5/25/2021	141	84	71	3.6	2.3	19891	780
JAMES W MOON	Morgan	HO	5/12/2021	126	86	62.9	3.9	2.26	17557	547
HORST CREST FARMS	Burke	HO	4/28/2021	168	87	68.1	3.8	2.2	20588	793
MARTIN DAIRY L. L. P.	Hart	HO	5/3/2021	117	89	60.1	4	2.18	22597	894
VISSCHER DAIRY LLC*	Jefferson	HO	5/12/2021	829	88	64.5	3.6	2.1	22807	681
RUFUS YODER JR	Macon	HO	4/29/2021	102	88	62.8	3.7	2.03	18116	698
W.T.MERIWETHER	Morgan	HO	5/7/2021	77	89	62.7	3.3	1.99	18854	675

[1]***Minimum herd or permanent string size of 20 cows. Yearly average calculated after 365 days on 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).***

UNIVERSITY OF GEORGIA EXTENSION

Top GA Low Herds for SCC – TD Average Score – March 2021									
Herd	**County**	**Test Date**	**Br.**	**[1]Cows**	**Milk-Rolling**	**SCC-TD-Average Score**	**SCC-TD-Weight Average**	**SCC-Average Score**	**SCC-Wt.**
DAVID ADDIS	Whitfield	3/9/2021	HO	49	16401	0.8	132	1.3	95
BERRY COLLEGE DAIRY	Floyd	3/9/2021	JE	33	16204	1.7	67	1.6	58
UNIV OF GA DAIRY FARM	Clarke	3/15/2021	HO	138	19869	1.8	100	2.6	186
SCOTT GLOVER	Hall	3/3/2021	HO	176	26890	1.9	67	2.3	141
DONALD NEWBERRY	Bibb	3/11/2021	HO	113	15300	2	118	3.1	311
WDAIRY LLC*	Morgan	3/8/2021	XX	2025	27893	2.1	146	2.2	182
DOUG CHAMBERS	Jones	3/22/2021	HO	447	26711	2.2	155	2.3	214
RODNEY & CARLIN GIESBRECHT	Washington	2/26/2021	HO	366	22427	2.2	211	2.5	222
FRANKS FARM	Burke	3/16/2021	BS	185	19462	2.3	183	2.4	192
GODFREY FARMS INC*	Morgan	3/1/2021	HO	1188	31471	2.4	172	2.2	199
EBERLY FAMILY FARM	Burke	3/15/2021	HO	1051	24230	2.5	196	2.2	180
JAMES W MOON	Morgan	3/19/2021	HO	127	17390	2.5	243	2.5	228
JERRY SWAFFORD	Putnam	3/23/2021	HO	142	19175	2.6	208	2.8	212
ALBERT HALE	Oconee	3/1/2021	HO	95	11589	2.7	150	3	271
DANNY BELL*	Morgan	3/4/2021	HO	316	29448	2.7	194	2.1	146
TROY YODER	Macon	3/3/2021	HO	307	24478	2.7	196	2.9	228
MARTIN DAIRY L. L. P.	Hart	3/1/2021	HO	283	22797	2.7	257	3	304
SOUTHERN ROSE FARMS	Laurens	2/24/2021	HO	34	21043	2.8	226	3	241
W.T.MERIWETHER	Morgan	3/9/2021	HO	77	18619	2.8	257	3.2	357
RUFUS YODER JR	Macon	3/9/2021	HO	108	19066	2.8	274	2.8	285

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UNIVERSITY OF GEORGIA EXTENSION

Top GA Low Herds for SCC –TD Average Score – April 2021									
Herd	**County**	**Test Date**	**Br.**	**[1]Cows**	**Milk-Rolling**	**SCC-TD-Average Score**	**SCC-TD-Weight Average**	**SCC-Average Score**	**SCC-Wt.**
DAVID ADDIS	Whitfield	4/12/2021	HO	49	16372	1	28	1.3	95
SCOTT GLOVER	Hall	4/9/2021	HO	172	26992	2	86	2.2	135
DANNY BELL*	Morgan	4/8/2021	HO	322	29424	2	117	2	143
WDAIRY LLC*	Morgan	4/12/2021	XX	1990	27971	2	136	2.2	179
ALEX MILLICAN	Walker	4/6/2021	HO	87	16850	2	137	2.2	192
GODFREY FARMS INC*	Morgan	4/5/2021	HO	1189	31356	2.1	164	2.2	194
DOUG CHAMBERS	Jones	4/26/2021	HO	441	26782	2.1	166	2.3	209
BERRY COLLEGE DAIRY	Floyd	4/5/2021	JE	33	16199	2.2	106	1.7	63
RODNEY & CARLIN GIESBRECHT	Washington	3/31/2021	HO	375	22453	2.2	167	2.5	224
JAMES W MOON	Morgan	4/15/2021	HO	125	17244	2.2	169	2.5	221
MARK E BRENNEMAN	Macon	3/29/2021	HO	119	18645	2.2	219	1.9	176
FRANKS FARM	Burke	4/20/2021	BS	190	19395	2.3	135	2.5	187
UNIV OF GA DAIRY FARM	Clarke	4/19/2021	HO	140	19883	2.3	177	2.5	186
EBERLY FAMILY FARM	Burke	4/19/2021	HO	1058	24126	2.5	223	2.2	184
RUFUS YODER JR	Macon	4/29/2021	HO	102	18116	2.8	232	2.9	282
MARTIN DAIRY L. L. P.	Hart	4/5/2021	HO	283	22881	2.8	233	3	302
DONALD NEWBERRY	Bibb	4/13/2021	HO	107	15659	2.8	248	3	298
SCHAAPMAN HOLSTEINS*	Wilcox	3/28/2021	HO	736	28237	2.8	281	2.8	247
JERRY SWAFFORD	Putnam	4/27/2021	HO	141	19619	2.9	208	2.8	218
RYAN HOLDEMAN	Jefferson	3/22/2021	HO	92	18845	2.9	213	3	376

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UNIVERSITY OF GEORGIA EXTENSION

Top GA Low Herds for SCC –TD Average Score – May 2021									
Herd	**County**	**Test Date**	**Br.**	**[1]Cows**	**Milk-Rolling**	**SCC-TD-Average Score**	**SCC-TD-Weight Average**	**SCC-Average Score**	**SCC-Wt.**
DAVID ADDIS	Whitfield	5/4/2021	HO	50	16395	1.1	53	1.2	93
SCOTT GLOVER	Hall	5/6/2021	HO	165	27126	1.5	69	2.2	129
ALEX MILLICAN	Walker	5/4/2021	HO	87	16178	1.5	124	2.2	192
FRANKS FARM	Burke	5/18/2021	BS	184	19560	1.9	135	2.4	182
BERRY COLLEGE DAIRY	Floyd	5/3/2021	JE	34	15878	2	230	1.7	77
EBERLY FAMILY FARM	Burke	5/17/2021	HO	1047	24066	2.1	167	2.2	184
DOUG CHAMBERS	Jones	5/24/2021	HO	440	26702	2.1	208	2.3	214
GODFREY FARMS INC*	Morgan	5/3/2021	HO	1167	31315	2.2	178	2.2	193
RODNEY & CARLIN GIESBRECHT	Washington	5/24/2021	HO	358	22755	2.2	224	2.5	229
DANNY BELL*	Morgan	5/6/2021	HO	315	29541	2.3	161	2	141
TROY YODER	Macon	4/28/2021	HO	309	24871	2.3	166	2.9	223
WDAIRY LLC*	Morgan	5/10/2021	XX	1987	28095	2.3	170	2.2	178
UNIV OF GA DAIRY FARM	Clarke	4/19/2021	HO	140	19883	2.3	177	2.5	186
JERRY SWAFFORD	Putnam	5/25/2021	HO	141	19891	2.4	159	2.8	220
JAMES W MOON	Morgan	5/12/2021	HO	126	17557	2.5	175	2.5	216
VISSCHER DAIRY LLC*	Jefferson	5/12/2021	HO	829	22807	2.5	183	2.6	196
GRASSY FLATS	Brooks	5/20/2021	XX	834	17427	2.6	195	2.8	239
W N PETERS	Monroe	4/28/2021	XX	101	15240	2.6	218	3	324
RUFUS YODER JR	Macon	4/29/2021	HO	102	18116	2.8	232	2.9	282
MARTIN DAIRY L. L. P.	Hart	5/3/2021	HO	117	22597	2.9	251	3	294

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UNIVERSITY OF GEORGIA EXTENSION