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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.

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Sincerely,

Sha Tao

Associate Professor

UNIVERSITY OF GEORGIA EXTENSION

2021 State Commercial Dairy Heifer Show

The Show Goes on

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The dairy industry is best described as having resilience, ingenuity, work ethic and a passion for what they do. Today I watch as these same qualities carry forward in the youth they are helping to develop. In a year that brought so much sadness and uncertainty, the Commercial Dairy Heifer Project continued to thrive and ultimately shine. I hope that reading about this show, the successes of these youth and their determination to carry on brings you hope on this new day of 2021.

2021 State Commercial Dairy Heifer Show

There were 244 heifers that weighed in on February 17th for the State Commercial Dairy Heifer show, which was up 16 heifers from 2020. At the halter were 205 (up 9 from 2020) young people that were looking forward to the fun, learning and competition that the barn and ring would bring. Showmanship was a daylong event that began bright and early on February 18th. Serving as judge for both showmanship on the 18th and weight classes on the 19th was Justin Burdette of Pennsylvania. Justin is a dairyman and co-owner of Windy Knoll View farm. In addition he is a well-known judge both nationally and internationally serving multiple times as a judge for World Dairy Expo.

First Place Showmanship Winners:

Grade	Showmanship Winner	County
4th	Brooke Padgett	Hall 4-H
5th	Abigail Ullom	Coweta 4-H
6th	Christopher Nunnally	White Co FFA
7th	Caeden Swartz	Coweta 4-H
8th	Jack Keener	Clear Creek Middle FFA
9th	Laurel Christopher	White Co FFA
10th	Angelica Smith	Houston Co FFA
11th	Torrie Reed	Gilmer Co FFA
12th	Alyssa Ashurst	Gilmer Co FFA

Taking the top placing 4-H members in 6th-12th grades, the judge named the Master 4-H Showman as Caeden Swartz (7th grade). Following this the judge then evaluated the top placing FFA member from 6th-12th grades to name Angelica Smith of Houston Co FFA (10th grade) as Supreme FFA Showman.

The next day brought conformation classes where animals were split by weight into 20 classes and making four divisions. These heifers weighed in at 255-774 pounds.

Division 1 Class Winners and Championship

Heifers weighing 255 – 346 pounds

Class	Weight	Heifer Number	Showman	County
1	262	9334	Lily Atkins	Newton 4-H
2	292	9625	Mallory Kilgore	Hall 4-H
3	305	9038	Catlyn Johnson	Morgan 4-H
4	331	8947	Jiles Coble	Burke 4-H
5	341	8035	Ashlyn Reddick	Burke FFA

Class	Weight	Heifer Number	Showman	County
Champion	292	9625	Mallory Kilgore	Hall 4-H
Reserve	341	8035	Ashlyn Reddick	Burke FFA

Division 2 Class Winners and Championship

Heifers weighing 350 – 439 pounds

Class	Weight	Heifer Number	Showman	County
6	357	9517	Abigail Ullom	Coweta 4-H
7	373	9039	Maggie Harper	Morgan 4-H
8	389	8975	Kacy Kimbral	Dawson FFA
9	409	9149	Trent Maddox	Jasper FFA
10	439	8849	Anthony Powers	Rutland FFA

Class	Weight	Heifer Number	Showman	County
Champion	409	9149	Trent Maddox	Jasper FFA
Reserve	407	9648	Michael Bushey (2nd Place Class 9)	Clear Creek FFA

Division 3 Class Winners and Championship

Heifers weighing 447 – 574 pounds

Class	Weight	Heifer Number	Showman	County
11	456	9335	Lily Atkins	Newton 4-H
12	484	9653	Jack Keener	Clear Creek FFA
13	522	9166	Sydney Coble	Burke 4-H
14	554	8823	Hannah Newberry	Rutland FFA
15	568	9591	Abby Joyner	Burke 4-H

Class	Weight	Heifer Number	Showman	County
Champion	554	8823	Hannah Newberry	Rutland FFA
Reserve	484	9653	Jack Keener	Clear Creek FFA

Division 4 Class Winners and Championship

Heifers weighing 578 – 774 pounds

Class	Weight	Heifer Number	Showman	County
16	588	9651	Torrie Reed	Gilmer FFA
17	612	9367	Emma Turner	Oconee FFA
18	642	9511	Sarah Ullom	Coweta 4-H
19	678	9616	Luke Huff	Oglethorpe FFA
20	692	9302	Angelica Smith	Houston FFA

Class	Weight	Heifer Number	Showman	County
Champion	692	9302	Angelica Smith	Houston FFA
Reserve	588	9651	Torrie Reed	Gilmer FFA

Overall Top Five Heifers

	Weight	Heifer Number	Showman	County
Champion	692	9302	Angelica Smith	Houston FFA
Reserve	554	8823	Hannah Newberry	Rutland FFA
3rd	588	9651	Torrie Reed	Gilmer FFA
4th	484	9653	Jack Keener	Clear Creek FFA
5th	409	9149	Trent Maddox	Jasper FFA

Overall Top Five County Groups

	County
Champion	Gilmer FFA
Reserve	Houston FFA
3rd	Rutland Middle FFA
4th	White County FFA
5th	Burke 4-H

The show this year was tremendous for a number of reasons. The enthusiasm of the youth, the quality of the animals but also the endurance and resilience of this project made for a stellar year.

As if things could not get any better, there was an additional recognition that made this year's show extra special.

2021 Georgia Junior Livestock Show Book dedication – Mrs. Carol Williams

The 2021 Georgia Junior Livestock Show book was dedicated to Mrs. Carol Williams. We could not be prouder to have Mrs. Carol, as most people call her, serve as an advocate and major supporter for the commercial dairy heifer program. She is most deserving of this honor and is the first female to receive it. A few excerpts from the dedication are below.

Through her dedication and support, Carol was instrumental in helping launch Georgia's first Commercial Dairy Heifer Show Program.

While involved with many aspects of WDairy's growth and supporting the Georgia Commercial Dairy Heifer project, Carol also serves as president of the Georgia Dairy Youth Foundation, a non-profit organization that promotes dairy projects and events in Georgia for students in 4-H and FFA.

She believes the program helps develop crucial life skills for youth as well as acquiring first-hand knowledge and experience in agricultural education. When at any show, especially the State Commercial Dairy Heifer Show, you can always find Mrs. Williams providing support. She is always willing to provide guidance, encouragement and a helping hand.

Congratulations, Mrs. Carol Williams!

Group of UGA investigators set to study the gastrointestinal microbiome of dairy-beef steers

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You've heard the term microbiome everywhere lately, but what exactly is the microbiome? The microbiome generally is used to describe the microbial population that lives in a certain niche (such as the gut), and plays important roles in host animal growth and development in many ways. For example, the microbiome of the gut of cattle is crucial in helping them digest their feed. In fact, the microbiome activity is precisely why cattle can consume large quantities of forages and other fibrous feedstuffs while growing and remaining healthy. Upon entering the rumen (or forestomach) feeds are immediately colonized by the residing microbes, which start the break down/digestion process. Complex carbohydrates that are part of the feeds (e.g. cellulose; which cannot be degraded by the animal) are fermented (think beer or wine making) to produce useful end products such as volatile fatty acids, which are later absorbed by the animal and used for energy. In cattle as much as 80% (depending on the conditions) of their metabolizable energy may come from volatile fatty acids (Ahmad et al., 2020).

Previous research carried out at UGA has demonstrated how cattle's gastrointestinal microbiome can affect animal performance including important traits like feed efficiency (Welch et al., 2020) and carcass quality (Krause et al., 2020). Now, UGA Researchers are set to investigate the microbiome of dairy-beef steers produced by inseminating Holstein cows with high-quality Angus bulls. Drs. Dean Pringle, Francis Fluharty, Jeferson Lourenco, and Todd Callaway from the Department of Animal and Dairy Science, along with Drs. Brad Heins and Emmanuel Rollin (College of Veterinary Medicine) are investigating the impacts of pre-weaning feeding regimen on the ruminal and fecal microbiomes of dairy-beef steers. More specifically, the research team will investigate if the amount of milk replacer fed during the weaning period has any effect on their microbial populations, and if those differences persist during their growth until they are finished at ~ 1,300 pounds.

The researchers' hypothesis is that a greater nutrient intake at earlier ages (i.e. greater intake of milk replacer) will improve the transition of the rumen from being a calf to a full-fledged adult ruminant, and if the microbiome of the dairy-beef steers will be permanently altered. In addition, they expect to see variations in the steers' microbiomes during their life cycle, as they are weaned and transition to a high-grain feedlot type of diet. Following weaning, the steers will be transitioned to full feed and managed under a typical early weaning program designed for beef production. Steers will be slaughtered at a similar weight endpoint (~ 1,300 pounds) and their carcass traits will also be determined. Ruminal and fecal samples will be collected from the steers at 5 timepoints: 1) one week before weaning, 2) one day post-weaning, 3) 4 weeks post-weaning, 4) at the beginning of the finishing period, and 5) at the end of the finishing period. Blood samples will also be collected from the steers at the first 3 collection points to evaluate blood β-hydroxybutyrate, which serves as an early indicator of rumination.

This research will be funded by the Georgia Commodity Commission for Beef, and is expected to be concluded next year. The results of this study are aimed at improving how we can feed dairy-beef steers to maximize their carcass quality and increase your profitability!

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Managing higher feed cost and spring surplus prices

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Since last spring, cash market prices for dairy products have not changed greatly with 40 lb block cheese and butter priced at $1.87 and $1.7725 per lb. on March 16, 2020 and $1.80 and $1.715 per lb. on March 15, 2021. However, CME May corn and soybean meals futures prices have increased significantly from $3.675/bushel and $299.50/ton in 2020 to $5.34/bushel and $406.84/ton in 2021. These changes in feed ingredient prices has reduced returns during normal times, the impact is enhanced during the spring when milk production above your base is penalized by lower prices. There is no one solution that will reduce feed cost and increase returns across all farms, but there several things producers should consider.

1. Identify which cows are paying their feed bill. You can use the last test day information from PCDART or your daily milk weights to calculate the income over feed cost (IOFC) for individual cows. Transfer the average milk weight into a spreadsheet for each cow along with the last fat test to calculate the value of the milk produce. Subtract the daily feed cost from the income to determine IOFC. For cows that have high SCC, you may also want to deduct a penalty, especially if you are not receiving a SCC premium. This will help you see which cows (or groups) are making a reasonable return as well as identify cows that you may want to cull.

2. Cull cows that are not paying their way, have high SCC, have been bred several times and are open, or other criteria you have for culling. Be mindful not to cull healthy, pregnant cows that are due to calve in late summer when you need to build base.

3. Review your ration and feeding program with your nutritionist to see if there are opportunities for reducing feed cost. This may be using different ingredients that are more competitively priced or eliminating an additive that is not providing a health benefit or return on investment. The reality is that for most dairy producers, rations have been formulated so that there are not a lot of opportunities for reducing feed cost greatly without compromising production. However, if you have not sorted cows into different groups this is a great way to reduce feed cost as a cheaper ration can be fed to lower production cows. Lower producing cows can also be fed more forage to reduce feed cost. If you choose this route, check forage inventories and get prices for any forages you may need to purchase to evaluate the cost/return of this option.

4. Changes in feed management often improve production efficiency (lbs milk/ lbs DMI) and reduce the cost of production. Provide at least 24 linear inches of feed bunk space to minimize competition and optimize intake and production, especially for fresh and high producing cows. It is not uncommon to see that reducing the total number of cows in that pen does not reduce production, but supports higher milk yield when feed bunk space has been limited. Most often, cow comfort also increases as the pens are overcrowded and reducing the stocking density to 100% supports improved cow comfort, health, and efficiency.

5. Spring forage harvest is underway or will be shortly providing the opportunity to harvest high quality winter annual forage (cut in late vegetative stage of maturity, wilt to at least 35% or higher DM, inoculate, and store properly). This forage can be used to increase the amount of forage fed and reduce purchased grain.

6. One possibility for late lactation cows or low producing cows is to reduce the number of times the cow is milked. Research indicates that milking once daily will reduce milk yield without compromising health or production in the next lactation. If this option is used, you should only target cows to be dried off within the next 60 to 90 days. If you are shipping more milk than you have base, this would reduce the amount of milk that is penalized while reducing labor and feed cost (less grain). These cows should be managed to prevent excess body weight gain so they will be productive when they freshen later in the summer and early fall when additional milk production is needed to build base.

7. Measure feed shrinkage to determine where you can make improvements. For many farms, this is one of the biggest opportunities to reduce feed cost. Calculate one days total cost to determine what the impact of reducing by 2% (or more based on your actual shrinkage) for a year to determine what the potential can be. Some areas to examine include: spilled feed when handling and mixing the TMR; adjusting ingredients for changes in DM content to maintain proper nutrient profiles in rations and maintain more consistent milk production; reduce the amount spoiled or spilled silage and hay; train feeder on mixing the TMR correctly (proper ingredient amounts, order ingredients are added to the mixer, mixing time, etc.); calibrate the scales on mixer wagon; improve silage face management; and reduce storage and feeding waste of round bales. Many of these can be improved by changing how things are done rather than making investments in facilities that might be considered later.

8. Temperatures are warming, clean and inspect your fans and sprinklers to make sure they are ready to run (if you have not already done this). This will help maintain intake, production, and efficiency.

9. Check water troughs to make sure they are clean and providing enough water for your cows. This is something that is frequently overlooked. The recommended amount of space is 3 linear inches of water space per cow, more is better especially for fresh cows and during heat stress as water consumption increases. If water intake is limited due to availability or quality, cows will not consume enough and production will suffer proportionally.

If you and our consultant have not walked the facilities recently to specifically examine management practices and identify opportunities for improvement, now would be a good time to do that. Fine tuning daily task as well as refining your feeding management can reduce feed cost by reducing shrink or increasing milk yield to reduce the cost of production to offset higher feed cost.

Consider laboratory confirmation when *Staphylococcus aureus* mastitis is suspected, even when using on-farm culture

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On-farm milk culture is a valuable tool to decrease costs associated with mastitis, such as milk discard due to antibiotic contamination, antibiotic usage, and laboratory culture. On-farm milk culture allows producers to 1) identify presence or absence of bacteria and 2) presumptively differentiate between types of bacteria within 24 hours of detection. Depending on the plan designed by your Mastitis Team, the most appropriate type and duration of antibiotic therapy can be determined with no negative effect on overall disease outcome. On-farm culture also allows for identification of quarters that do not need antibiotic therapy. As many as 40-50% of clinical cases no growth when cultured, suggesting that at the time of clinical diagnosis the quarter had already bacteriologically cured and an antibiotic regimen would not be necessary at the time. In Figure 1, you can see the diversity of pathogens that can be detected with laboratory testing of milk samples. Note that the percentage of samples that were tested and no growth was detected was 31.2% in this particular study.

Bacteria identified by laboratory culture[1]	Number	Prevalence, %
Streptococcus uberis	134	24.9
Streptococcus sp.	56	10.4
Escherichia coli	49	9.1
Streptococcus dysgalactiae	40	7.8
Staphylococcus sp.	28	5.2
Klebsiella sp.	16	3.0
Mixed infection	14	2.2
Trueperella pyogenes	10	1.9
Staphylococcus aureus	7	1.3
Enterococcus sp.	7	1.3
Gram-negative bacilli	5	0.9
Pseudomonas sp.	1	0.2
No growth	168	31.2
Contamination	3	0.6
Total	538	100

[1] Results from standard laboratory culture performed by the Quality Milk Production Services laboratory at Cornell University (Ithaca, NY).

doi:10.1371/journal.pone.0155314.t001

Figure 1. *Milk culture results from Quality Milk Production Services; Cornell University*
Source: Ganda et al., 2016

To presumptively identify Gram-positive vs. Gram-negative or staphylococci vs. streptococci vs. Gram-negative, various agar plates and systems are available. The most comprehensive plan is the Minnesota Easy® Culture System from the UM Veterinary Diagnostic Lab (https://dairyknow.umn.edu/topics/milk-quality/minnesota-easy-culture-system-user-s-guide/). With this system, producers may implement either a bi-plate or tri-plate culturing method. The bi-plate is plate with 2 distinct growth sections that allows for detection of Gram-positive vs. Gram-negative, whereas the tri-plate is plate with 3 distinct growth sections that allows for detection of staphylococci vs. streptococci vs. Gram-negative (Figure 1). Aside from initial supply costs as well as materials to collect and plate, plates themselves for the Minnesota Easy® Culture System cost $2 (bi-plate) and $3.15. Another option is to use a system with 4 growth sections, termed "quad" plates (https://cdnmedia.eurofins.com/eurofins-us/media/1708595/dqci-quad-plate-manual.pdf). These plates allow for detection of staphylococci vs. streptococci vs. Gram-negative with an additional section for overall growth that serves as a control and may be useful when concerned about sampling and plating technique (Figure 2). These plates run $3 - $4. Yet another option that is relatively new to the market within the last 5 years is AccuMast®. Differentiation of staphylococci vs. streptococci vs. Gram-negative can be achieved with the addition of species-specific identifications for some pathogens such as, *Staphylococcus aureus*, S*treptococcus uberis*, and *Escherichia coli*, as a result of media that results distinctly colored bacterial colonies (Figure 3). While very informative, costs are higher at $7 per plate meaning a 4 quarter culture would be $28.

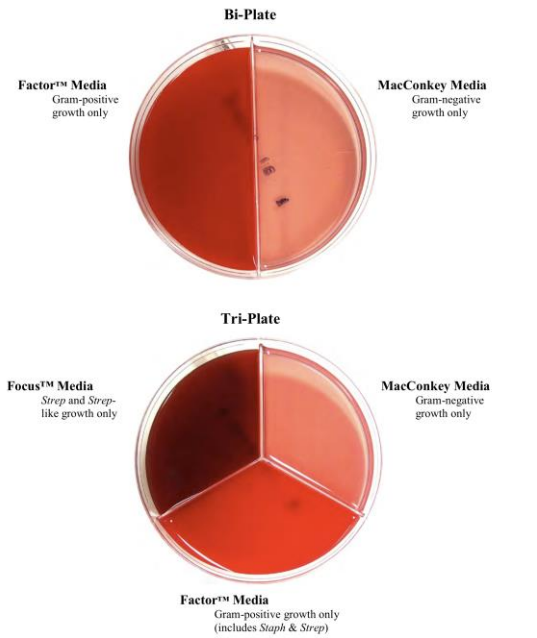

Figure 1. *Minnesota Easy® Culture System*
Source: https://dairyknow.umn.edu/topics/milk-quality/minnesota-easy-culture-system-user-s-guide/

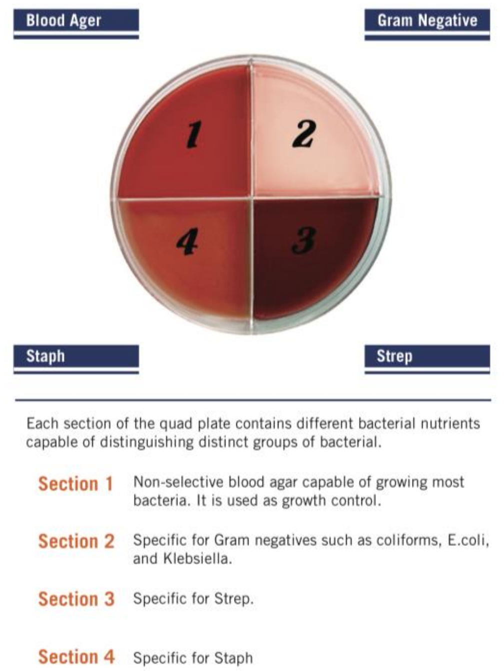

Figure 2. *Eurofins Quad Plate*
Source: Eurofins DCQI Quad Plate User's Manual

Aside from identifying presence or absence of infectious pathogen, on-farm culturing is widely implemented to identify animals with contagious pathogens, such as *Staph. aureus*. As you can see in Figures 4 and 5, *Staph. aureus* is commonly detected on these medias with growth on the respective section (staphylococci or a combination staphylococci and streptococci section) **AND** the appearance of hemolysis. Most types (i.e. strains) of *Staph. aureus* possess the ability to break down red blood cells, which is hemolysis. Those that do not have hemolysis are traditionally presumptively identified as coagulase-negative staphylococci

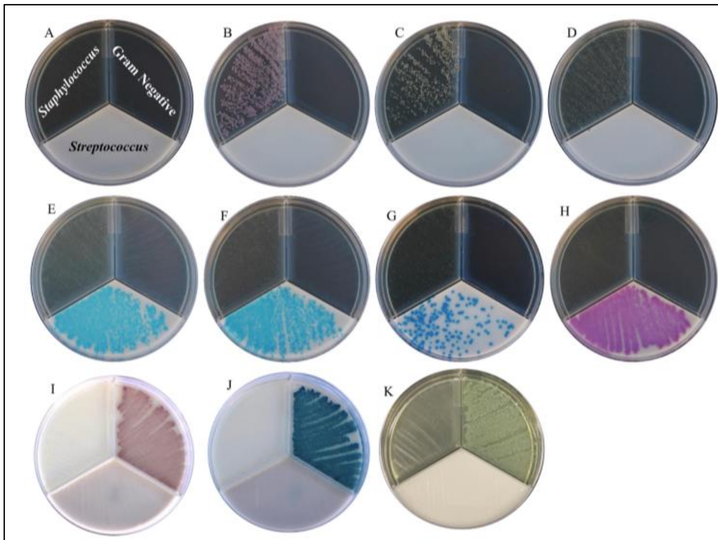

Figure 3. *AccuMast® system from FERA Diagnostics and Biologicals*
Source: Ganda et al., 2016

(CNS) because *Staph. aureus* produces an enzyme called coagulase, whereas many other common staphylococci do not. Thus, the traditional and simplistic way to identify most strains of *Staph. aureus* on agar plates is with the presence of hemolysis. However, a small percentage of *Staph. aureus* strains do not display hemolysis when cultured, meaning that these bacteria would not have the "clearing" of blood on the plates seen in Figure 4 and 5. As you can imagine this would be problematic for identifying those cows infected with *Staph. aureus* compared to those that are not.

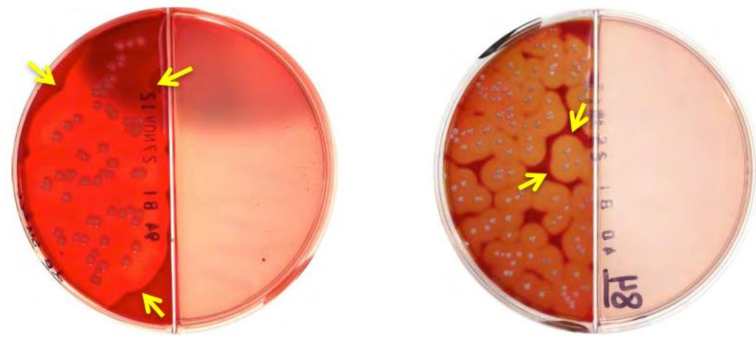

Figure 4. ***Staph aureus*** **on a Bi-plate showing a clear zone of hemolysis (indicated by arrows).**

Figure 5. Another example of ***Staph aureus*****. Zone of hemolysis indicated by arrows.**

Figure 4. *Minnesota Easy® Culture System: Staph. aureus*
Source: https://dairyknow.umn.edu/topics/milk-quality/minnesota-easy-culture-system-user-s-guide/

A recent study we published was a decade-long case study from a Georgia dairy farm (Ryman et al., 2020). Clinical and subclinical samples were collected and cultured with basic microbiological laboratory techniques. Identifications of staphylococci were made with visual assessment of colonies and absence or presence of hemolysis. Suspected CNS and *Staph. aureus* colonies were further tested with basic biochemical tests that could be performed on-farm. We collected a total of 222 mammary secretions and milk samples from Holstein heifers and lactating cows. Surprisingly, data showed that 63.96% of isolates initially presumed to be CNS isolates were identified as non-hemolytic *S. aureus*. Only 26.58% of samples that were presumed to be CNS isolates were identified correctly. Shocking, right? All of those quarters misdiagnosed meant those animals remained in the herd potentially becoming reservoirs for *Staph. aureus* spread. Cows diagnosed with *S. aureus* should be considered for extended intramammary antibiotic therapy, a different intramammary antibiotic, separation, altered milking order to prevent spread, or more commonly, culling.

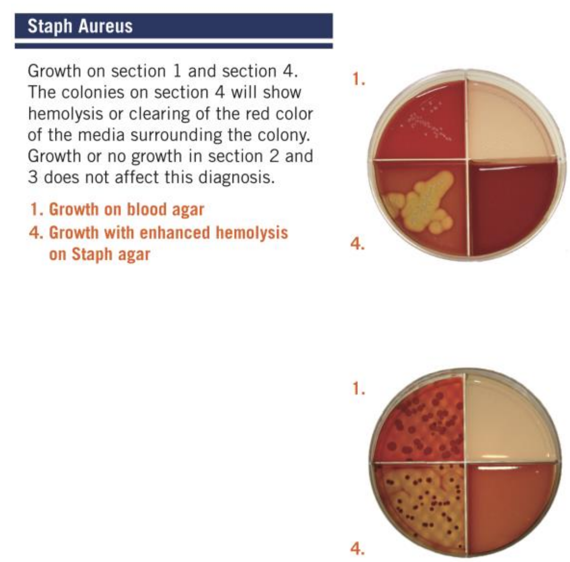

Figure 5. *Eurofins Quad Plate: Staph. aureus*
Source: Eurofins DCQI Quad Plate User's Manual

While it is possible that this very high rate of incorrect diagnosis could be related to particular types of bacteria on this farm, it still shines a light on an important topic related to on-farm milk culture. Also, it should serve as a word of caution. In animals that are suspected to have *Staph. aureus*, it is prudent to do additional tests (either on farm or in a professional laboratory) to eliminate those "what-if" situations and work with a team to establish the best proactive and reactive plan. Some on-farm systems recommend the use of a coagulase test in the event that *Staph.*

aureus is suspected. A coagulase test determines whether bacteria is capable of producing a coagulase enzyme that coagulates blood or plasma. This is one test that we used in the studied reference above. In fact, the Minnesota Veterinary Diagnostic Lab offers coagulase kits that could be used in conjunction with on-farm culture. While this does eliminate the possibility of incorrect identification of *Staph. aureus* since there are some types of non-*Staph. aureus* bacteria that produce coagulase, it could reduce the number of misdiagnoses that may be made. While the AccuMast system discussed earlier may have a high cost and thus reduce the usefulness of it for many operations, they do offer a product called AccuStaph® which enables culturing of 4 quarters for the detection of various staphylococci, including Staph. aureus (Figure 6). Each of these plates are $7, but with the ability to plate 4 quarters on 1 plate, the cost is $1.75/sample.

As you can see, it can all get very complicated and you may risk making an uninformed choice for that infected quarter or cow. If a cow has repeated episodes of clinical mastitis and elevated somatic cell counts or if there is any doubt, the producer should consider sending that sample off for analysis in a lab. We hope to expand previous work and assess farms in Georgia to determine the prevalence of these atypical non-hemolytic *Staph. aureus* strains. If you are currently performing on-farm milk culturing, please reach out to me (vryman@uga.edu) and your local ANR Extension Agent! We'd love to hear from you and assist in any changes that could be made.

A final word → Working with a Mastitis Team will contribute to a more comprehensive Mastitis Prevention and Control Program. You, as dairy producers, have enough on your plate. Let a team tackle some of these questions when possible! Lastly, but certainly not least, it is important that a veterinarian be part of this team.

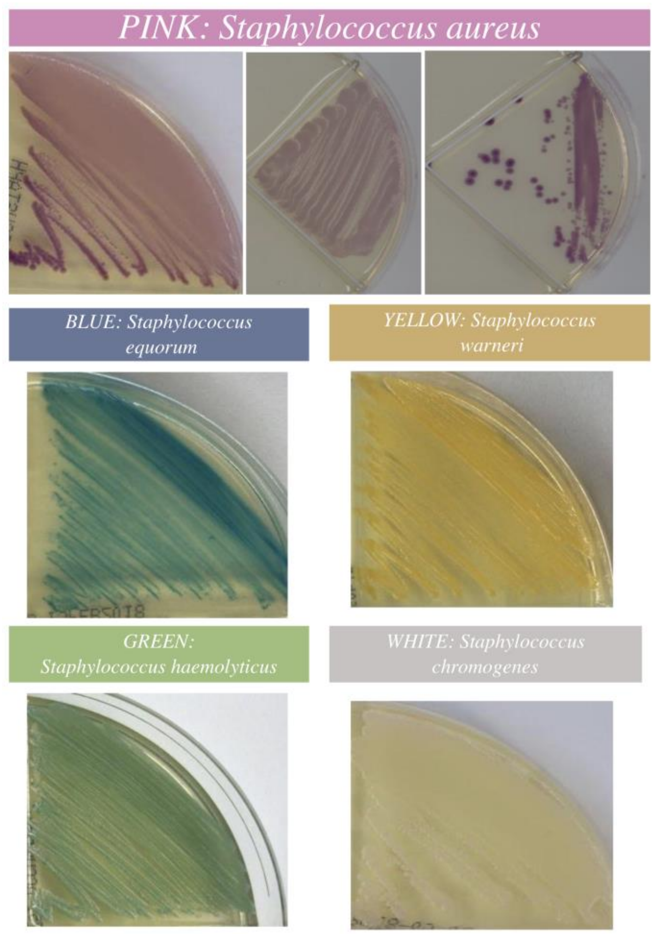

Figure 6. *AccuStaph® system from FERA Diagnostics and Biologicals*
Source: *https://feraah.com/large-animal/accustaph/*

Reference:

1) Ganda, E. K., Bisinotto, R. S., Decter, D. H., & Bicalho, R. C. (2016). Evaluation of an on-farm culture system (Accumast) for fast identification of milk pathogens associated with clinical mastitis in dairy cows. *PloS one*, *11*(5), e0155314.
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Where there's a will, there's a way

A short, reproductive story

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Not all accidents have a happy ending. In the realm of the dairy industry these days, we'll take any misfortunes that become a "hoorah" moment. I teach a number of applied classes here at UGA, my focus is always to combine the science with real world application because what's the purpose of knowledge if you do not know how to work with it. In a recent course called Applied Animal Reproduction, we were confronted with an unfortunate situation. A scan of herd records to identify open cows for a palpation lab warm up, identified an animal that was identified as pregnant 45 days carrying calf but somehow received a dose of Lutalyse. Containing PGF2α, a luteolytic hormone, Lutalyse administration the day before was a surefire guarantee that the pregnancy was aborting.

Learning does not just happen in the good moments but in the bad equally so…

Our goal at that time was to investigate what was going on in the cow at ~30 hours post Lutalyse injection. Students were charged to make visual observations of the animal (discharge, behavior, etc.) but noted nothing out of the ordinary. Ultrasound then afforded us a closer look. Reading in gray scale, and evaluating the ovaries first, we located a CL, a few small follicles and two follicles approximately 12 mm in size. We then moved to the uterus where we quickly identified the pregnancy and further surveyed the contents of the uterus. Uterine fluid appeared clean and without debris, the fetus and associated anatomical structures normal and the heart still beating. The class then reviewed the luteolytic cascade and the resulting implications for the pregnancy relative to time and assumed we were a touch too early to see the impacts of the injection.

Hope and ingenuity when combined can breed wonderful results.

So the question became, what if we could save the pregnancy? Was there the potential to salvage it? To turn an unfortunate situation into a learning experience with positive results was well worth a try.

- First we needed to reestablish a positive endocrine environment, one that was rich in progesterone. For this we reached for the CIDR, a source of progesterone that can be found in circulation hours after insertion.
- Next, we needed to set her up to be self-supporting, as we couldn't leave a CIDR in for months. For this, we needed her to make a new CL or CLs to replace the one that was degraded by the Lutalyse. The ovarian scan indicated that we had at least two decent sized follicles (~12 mm) to potentially work with. In an attempt to force them to ovulate and form new CLs, we administered a dose of Factrel (GnRH).
- Then…we waited.

Figure 1: *Pregnancy at 46 days*

One week check in

At one week following our salvage attempts we found the following:

- CIDR still in place
- No abnormal vaginal discharge
- Two new CLs on the ovary where the previous 12mm follicles were located
- A fetal heartbeat

The CLs were still young by progesterone standards thus we decided to give them a few more days to mature and reach maximum progesterone production. While we waited, the CIDR remained in place as support. We kept a watchful eye to make sure the CIDR was not causing irritation or infection

Two week check in

At two weeks following our attempts to save the pregnancy we found the following:

- The CIDR was still in place
  - At this point we chose to remove it. Upon removal we noted that it was still clean and free of signs of infection.
  - This decision was made understanding that it was the animal's turn to take over control and responsibility for the pregnancy.
- The two induced CLs remained
- Heartbeat of fetus was still present
  - The fetus was also sexed at the time and determined to be a bull (go figure!)

Three week check in

- Dam and calf are still well and healthy

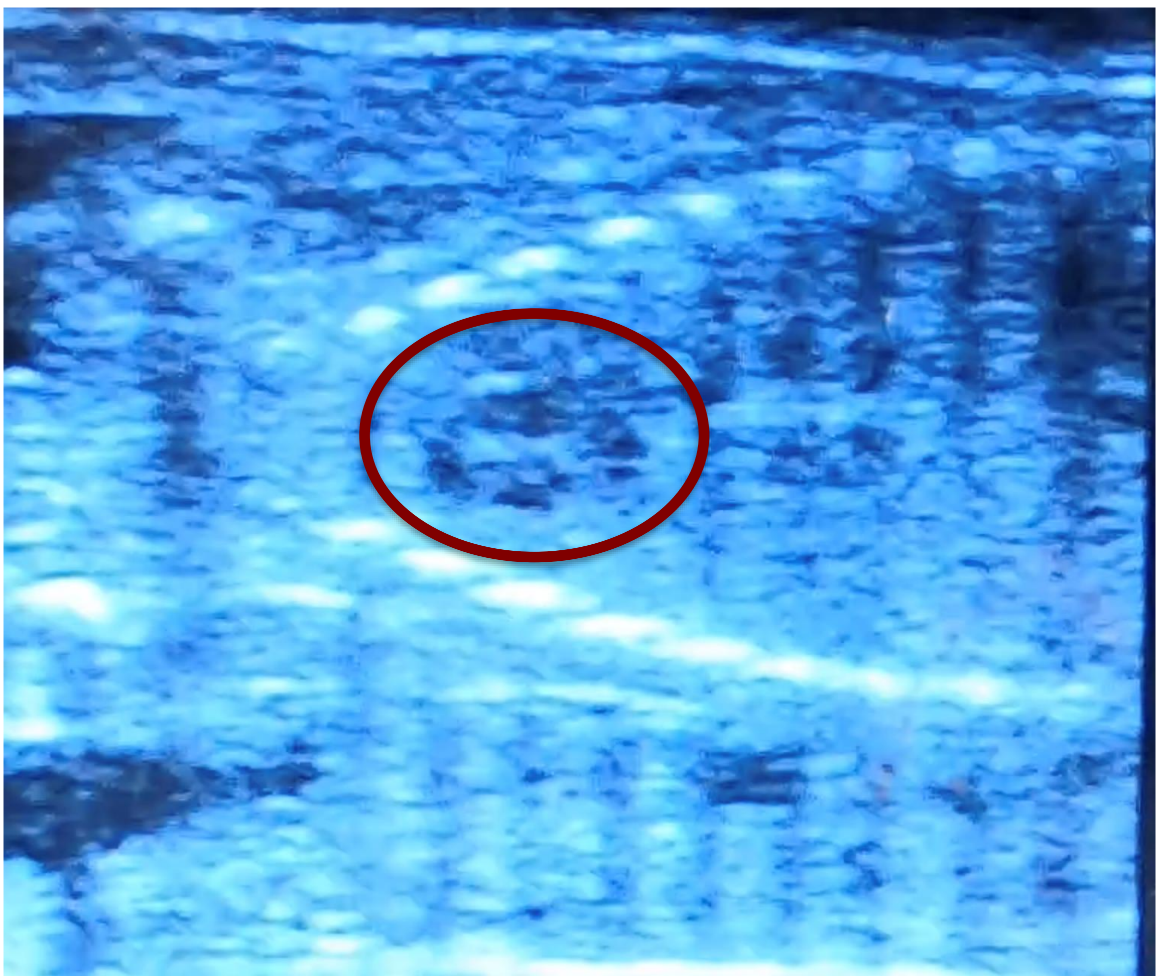

Figure 2: *Ultrasound image of pregnancy at approximately 90 days with red circle identifying the heart.*

Not all unfortunate situations in life have favorable outcomes. However, we secure the unfavorable outcome if we do not even try to change the course we have headed down. In this situation, we not only changed the course of events for this pregnancy but we also had some of the most impactful applied learning that you can have in an academic career. In closing, the above short story is an example of knowledge put to work with a dash of hope. It is not presented as a treatment or research study with repeatable findings.

Genetics, diet, or gut bacteria: which one will save you the most money?

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The cost of feed does not discriminate against production systems. For both beef and dairy producers feed prices account for 60-75% of the costs associated with production. As cattle producers, there is little we can do to decrease the price of feed we have to buy from outside our farm; however, there is the potential to decrease the amount of feed our animals require. For years we have been focused on improving feed efficiency in our cattle through the use of Expected Progeny Differences (EPD) by selecting bulls to breed to our cows who are quantified as more feed efficient. For a while, this seemed to be a simple solution. What we do not often think about is what feed that selected sire was eating when its efficiency was measured. Typically, these EPD's are based upon data from steers fed high grain rations, but here in Georgia our cows and heifers are fortunate enough to spend the majority of their productive lives on pasture. But this had us question, does genetic selection for growth on grain benefit our pasture fed cows and heifers?

We know that cattle have tons of microorganisms that reside within the first chamber of their stomach—the rumen. But did you know that these microorganisms aren't just freeloaders? These little organisms have a big job—to degrade feedstuffs (e.g., starch, fiber, etc.) that their cattle host eats and turns those feedstuffs into energy that the cow can absorb and use! What you feed your cattle dramatically impacts the rumen environment. So, when we change the diet of cattle from grain to forage (or vice versa) we actually change what microorganisms are present, which in turn changes how much energy is available for the host animal. This is why we wondered, what if the microbial population of the gut could be modified to enhance feed efficiency on pasture? By increasing the efficiency of our breeding herd, then we can increase the number of cows that can run in your pastures, resulting in more calves produced (and potentially earlier breeding), and ultimately more profit for our producers.

Thanks to the generosity of the Georgia Beef Commission, we are a step closer to answering these questions. We recently chose 24 Angus heifers selected for differing feed efficiencies (12 high, 12 low) and individually fed them a grain diet and a hay diet. Every week intake and body weight was recorded, and every two weeks blood, rumen, and fecal samples were collected. We're currently trying to use all of this collected data to track heifer feed efficiency throughout the feeding period, and to determine what bacteria were present in the rumen and if they were responsible for making some heifers more efficient than others.

While the findings of this study can open doors in the field of ruminant research, they can mean so much more for producers – especially here in Georgia. We aim to determine if selecting sires for efficiency EPD's is worth your money, and to see if we can identify a link between changes in gut bacteria and cattle growth efficiency. From this, we can begin to identify which bacteria are responsible for high efficiency on pasture—as opposed to those important when cattle are fed grain. In the future, this could give us the potential to manipulate present gut bacteria in our herd to make more efficient animals. In turn, this should allow producers to add additional cows and heifers to their herd, without needing more land to feed them.

While this study is aimed at Georgia beef cattle production, its potential impact could be felt in all cattle sectors, including dairy production. Manipulating the gastrointestinal microbiome of dairy cows to be more efficient on pasture, just before they're turned out to dry, means that animal will be more efficient at gaining back weight before lactation. Potentially, this could mean the animal expending less energy on putting back on weight, and able to devote more energy to its immune system – meaning less mastitis. On the other hand, this gives us the potential to make animals more efficient on grain, potentially increasing milk yield or milk fat. The question that could be answered for beef producers, grass-fed dairies, and maybe even yourself right now– am I paying too much for semen by selecting for grain-driven EPDs?

Top GA DHIA By Test Day Milk Production – December 2020										
					Test Day Average				Yearly Average	
Herd	County	Br.	Test Date	[1]Cows	% in Milk	Milk	% Fat	TD Fat	Milk	Lbs. Fat
DAVE CLARK*	Morgan	H	11/30/2020	1246	89	97.2	4.3	3.63	31162	1264
WDAIRY LLC*	Morgan	X	12/7/2020	2032	86	91.9	4.5	3.55	27868	1224
DANNY BELL*	Morgan	H	12/3/2020	324	91	91.6	4.3	3.53	29463	1219
SCHAAPMAN HOLSTEINS*	Wilcox	H	11/28/2020	719	89	91.3	3.6	2.82	26828	969
DOUG CHAMBERS	Jones	H	12/20/2020	442	88	85.6	3.7	2.67	26588	964
SCOTT GLOVER	Hall	H	12/2/2020	190	89	81.2	4.1	2.96	26696	1025
A & J DAIRY	Wilkes	H	12/8/2020	417	91	79.4			28200	
OCMULGEE DAIRY	Houston	H	12/22/2020	343	88	76.5	3.7	2.34	22620	832
SOUTHERN ROSE FARMS	Laurens	H	12/29/2020	75	88	73.2	3.9	2.26	20524	825
EBERLY FAMILY FARM	Burke	H	12/14/2020	1006	89	72.3	4.2	2.67	24792	952
VISSCHER DAIRY LLC*	Jefferson	H	12/9/2020	923	85	71.9	3.7	2.2	21841	731
BOBBY JOHNSON	Grady	X	12/17/2020	647	93	71.4			23071	
JERRY SWAFFORD	Putnam	H	11/24/2020	158	84	65.5	4.2	2.01	18619	743
HORST CREST FARMS	Burke	H	12/28/2020	185	87	65.5	3.9	2.18	21295	796
UNIV OF GA DAIRY FARM	Clarke	H	12/15/2020	142	87	65.1	4.4	2.17	20141	838
RYAN HOLDEMAN	Jefferson	H	12/4/2020	99	91	64.1	3.8	1.96	19587	794
DAVID ADDIS	Whitfield	H	12/16/2020	44	78	63.5	3.7	2.19	15979	613
RUFUS YODER JR	Macon	H	11/23/2020	154	90	63.4	4	2.22	20288	767
MARTIN DAIRY L. L. P.	Hart	H	12/2/2020	314	92	63.2	4.3	2.23	23351	934
JAMES W MOON	Morgan	H	12/14/2020	136	86	61.4	3.9	2.03	17114	

[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 – December 2020										
					Test Day Average				Yearly Average	
Herd	County	Br.	Test Date	[1]Cows	% in Milk	Milk	% Fat	TD Fat	Milk	Lbs. Fat
DAVE CLARK*	Morgan	H	11/30/2020	1246	89	97.2	4.3	3.63	31162	1264
WDAIRY LLC*	Morgan	X	12/7/2020	2032	86	91.9	4.5	3.55	27868	1224
DANNY BELL*	Morgan	H	12/3/2020	324	91	91.6	4.3	3.53	29463	1219
SCOTT GLOVER	Hall	H	12/2/2020	190	89	81.2	4.1	2.96	26696	1025
SCHAAPMAN HOLSTEINS*	Wilcox	H	11/28/2020	719	89	91.3	3.6	2.82	26828	969
EBERLY FAMILY FARM	Burke	H	12/14/2020	1006	89	72.3	4.2	2.67	24792	952
DOUG CHAMBERS	Jones	H	12/20/2020	442	88	85.6	3.7	2.67	26588	964
OCMULGEE DAIRY	Houston	H	12/22/2020	343	88	76.5	3.7	2.34	22620	832
SOUTHERN ROSE FARMS	Laurens	H	12/29/2020	75	88	73.2	3.9	2.26	20524	825
RODNEY & CARLIN GIESBRECHT	Washington	H	12/21/2020	395	91	60.9	4.2	2.25	21854	865
MARTIN DAIRY L. L. P.	Hart	H	12/2/2020	314	92	63.2	4.3	2.23	23351	934
RUFUS YODER JR	Macon	H	11/23/2020	154	90	63.4	4	2.22	20288	767
JUMPING GULLY DAIRY LLC	Brooks	X	12/3/2020	1193	87	56.9	4.1	2.2	16206	635
VISSCHER DAIRY LLC*	Jefferson	H	12/9/2020	923	85	71.9	3.7	2.2	21841	731
DAVID ADDIS	Whitfield	H	12/16/2020	44	78	63.5	3.7	2.19	15979	613
HORST CREST FARMS	Burke	H	12/28/2020	185	87	65.5	3.9	2.18	21295	796
UNIV OF GA DAIRY FARM	Clarke	H	12/15/2020	142	87	65.1	4.4	2.17	20141	838
BOB MOORE #2	Putnam	H	12/10/2020	600	91	53.4	4.5	2.16	18860	827
BUDDHA BELLY FARM LLC	Brooks	X	12/14/2020	729	84	58.7	4	2.09	15861	646
JAMES W MOON	Morgan	H	12/14/2020	136	86	61.4	3.9	2.03	17114	

[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 – January 2021										
					Test Day Average				**Yearly Average**	
Herd	**County**	**Br.**	**Test date**	**[1]Cows**	**% in Milk**	**Milk**	**% Fat**	**TD Fat**	**Milk**	**Lbs. Fat**
DAVE CLARK*	Morgan	H	1/4/2021	1218	89	95.3	3.8	3.21	31140	1259
SCHAAPMAN HOLSTEINS*	Wilcox	H	12/30/2020	748	89	93.3	3.7	3.13	27191	982
SCOTT GLOVER	Hall	H	1/5/2021	185	89	89.5	3.9	3.15	26738	1026
DANNY BELL*	Morgan	H	1/7/2021	315	91	89	4.5	3.83	29543	1233
DOUG CHAMBERS	Jones	H	1/25/2021	463	88	87.4	3.7	2.86	26774	973
WDAIRY LLC*	Morgan	X	1/11/2021	2038	86	87.1	4.5	3.37	27909	1234
A & J DAIRY*	Wilkes	H	1/12/2021	419	91	83.5			28040	
TROY YODER	Macon	H	1/12/2021	304	91	77.2	4	2.63	24669	964
OCMULGEE DAIRY	Houston	H	12/22/2020	343	88	76.5	3.7	2.34	22620	832
BOBBY JOHNSON	Grady	X	1/24/2021	649	92	75.5			23142	
EBERLY FAMILY FARM	Burke	H	1/18/2021	1026	89	73.9	4.1	2.65	24672	954
SOUTHERN ROSE FARMS	Laurens	H	12/29/2020	75	88	73.2	3.9	2.26	20524	825
MARTIN DAIRY L. L. P.	Hart	H	1/7/2021	304	91	71.3	4.1	2.41	22886	918
RODNEY & CARLIN GIESBRECHT	Washington	H	1/25/2021	393	92	66.9	3.9	2.23	22091	876
HORST CREST FARMS	Burke	H	12/28/2020	185	87	65.5	3.9	2.18	21295	796
UNIV OF GA DAIRY FARM	Clarke	H	1/18/2021	134	86	65.1	4.5	2.44	19953	834
JERRY SWAFFORD	Putnam	H	1/26/2021	156	83	65.1	4	2.3	18425	731
RYAN HOLDEMAN	Jefferson	H	1/22/2021	98	90	64.3	4	2.33	19583	790
W.T.MERIWETHER	Morgan	H	1/13/2021	68	87	62.6	3.8	1.95	18977	687
JAMES W MOON	Morgan	H	1/15/2021	129	86	61.6	4	2.15	17278	

[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).***

Top GA DHIA By Test Day Fat Production - January 2021										
					Test Day Average				Yearly Average	
Herd	County	Br.	Test Date	[1]Cows	% in Milk	Milk	% Fat	TD Fat	Milk	Lbs. Fat
DANNY BELL*	Morgan	H	1/7/2021	315	91	89	4.5	3.83	29543	1233
WDAIRY LLC*	Morgan	X	1/11/2021	2038	86	87.1	4.5	3.37	27909	1234
DAVE CLARK*	Morgan	H	1/4/2021	1218	89	95.3	3.8	3.21	31140	1259
SCOTT GLOVER	Hall	H	1/5/2021	185	89	89.5	3.9	3.15	26738	1026
SCHAAPMAN HOLSTEINS*	Wilcox	H	12/30/2020	748	89	93.3	3.7	3.13	27191	982
DOUG CHAMBERS	Jones	H	1/25/2021	463	88	87.4	3.7	2.86	26774	973
EBERLY FAMILY FARM	Burke	H	1/18/2021	1026	89	73.9	4.1	2.65	24672	954
TROY YODER	Macon	H	1/12/2021	304	91	77.2	4	2.63	24669	964
BOB MOORE #2	Putnam	H	1/14/2021	599	91	61.2	4.4	2.54	18796	821
UNIV OF GA DAIRY FARM	Clarke	H	1/18/2021	134	86	65.1	4.5	2.44	19953	834
MARTIN DAIRY L. L. P.	Hart	H	1/7/2021	304	91	71.3	4.1	2.41	22886	918
BERRY COLLEGE DAIRY	Floyd	J	1/11/2021	33	83	50.6	5.2	2.37	15657	742
OCMULGEE DAIRY	Houston	H	12/22/2020	343	88	76.5	3.7	2.34	22620	832
RYAN HOLDEMAN	Jefferson	H	1/22/2021	98	90	64.3	4	2.33	19583	790
JERRY SWAFFORD	Putnam	H	1/26/2021	156	83	65.1	4	2.3	18425	731
JUMPING GULLY DAIRY LLC	Brooks	X	1/9/2021	1184	87	58	4.1	2.3	16304	640
SOUTHERN ROSE FARMS	Laurens	H	12/29/2020	75	88	73.2	3.9	2.26	20524	825
RUFUS YODER JR	Macon	H	1/28/2021	118	89	61.3	4.1	2.25	20103	768
RODNEY & CARLIN GIESBRECHT	Washington	H	1/25/2021	393	92	66.9	3.9	2.23	22091	876
HORST CREST FARMS	Burke	H	12/28/2020	185	87	65.5	3.9	2.18	21295	796

[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 – February 2021										
					Test Day Average				Yearly Average	
Herd	County	Br.	Test Date	[1]Cows	% in Milk	Milk	% Fat	TD Fat	Milk	Lbs. Fat
DAVE CLARK*	Morgan	H	2/1/2021	1195	89	98.6	4	3.64	31190	1254
SCHAAPMAN HOLSTEINS*	Wilcox	H	1/31/2021	746	89	94.9	3.6	3.17	27575	995
DANNY BELL*	Morgan	H	2/4/2021	315	91	90.4	4.3	3.56	29563	1242
WDAIRY LLC*	Morgan	X	2/8/2021	2046	86	87.3	5	3.81	27831	1244
A & J DAIRY*	Wilkes	H	2/10/2021	419	91	86.7			28066	
SCOTT GLOVER	Hall	H	2/5/2021	183	88	84.6	4.1	3.23	26664	1025
DOUG CHAMBERS	Jones	H	2/22/2021	448	88	83.5	3.8	2.94	26859	977
MARTIN DAIRY L. L. P.	Hart	H	2/1/2021	295	90	80.9	3.8	2.79	22719	911
OCMULGEE DAIRY	Houston	H	2/24/2021	329	87	77.7	3.7	2.71	22671	836
BOBBY JOHNSON	Grady	X	2/21/2021	623	92	75.1			23171	
VISSCHER DAIRY LLC*	Jefferson	H	2/3/2021	932	86	74.6	3.8	2.51	22384	761
EBERLY FAMILY FARM	Burke	H	2/15/2021	1065	89	73.9	4	2.62	24579	952
JERRY SWAFFORD	Putnam	H	2/23/2021	143	83	72.1	4.1	2.69	18622	739
WHITEHOUSE FARM	Macon	H	1/27/2021	244	89	70.5	3.8	2.34	20128	776
HORST CREST FARMS	Burke	H	1/28/2021	174	87	67.7	4.3	2.51	21038	790
BOB MOORE	Putnam	H	2/11/2021	539	91	67.4	4.2	2.71	18941	824
JAMES W MOON	Morgan	H	2/15/2021	126	86	67.2	4.1	2.54	17383	
RODNEY & CARLIN GIESBRECHT	Washington	H	1/25/2021	393	92	66.9	3.9	2.23	22091	876
UNIV OF GA DAIRY FARM	Clarke	H	2/19/2021	138	86	66.6	4.1	2.41	19852	831
FRANKS FARM	Burke	B	2/16/2021	184	89	65.3	4.3	2.28	19468	799

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Top GA DHIA By Test Day Fat Production – February 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	X	2/8/2021	2046	86	87.3	5	3.81	27831	1244
DAVE CLARK*	Morgan	H	2/1/2021	1195	89	98.6	4	3.64	31190	1254
DANNY BELL*	Morgan	H	2/4/2021	315	91	90.4	4.3	3.56	29563	1242
SCOTT GLOVER	Hall	H	2/5/2021	183	88	84.6	4.1	3.23	26664	1025
SCHAAPMAN HOLSTEINS*	Wilcox	H	1/31/2021	746	89	94.9	3.6	3.17	27575	995
DOUG CHAMBERS	Jones	H	2/22/2021	448	88	83.5	3.8	2.94	26859	977
MARTIN DAIRY L. L. P.	Hart	H	2/1/2021	295	90	80.9	3.8	2.79	22719	911
BOB MOORE	Putnam	H	2/11/2021	539	91	67.4	4.2	2.71	18941	824
OCMULGEE DAIRY	Houston	H	2/24/2021	329	87	77.7	3.7	2.71	22671	836
JERRY SWAFFORD	Putnam	H	2/23/2021	143	83	72.1	4.1	2.69	18622	739
EBERLY FAMILY FARM	Burke	H	2/15/2021	1065	89	73.9	4	2.62	24579	952
JAMES W MOON	Morgan	H	2/15/2021	126	86	67.2	4.1	2.54	17383	
HORST CREST FARMS	Burke	H	1/28/2021	174	87	67.7	4.3	2.51	21038	790
VISSCHER DAIRY LLC*	Jefferson	H	2/3/2021	932	86	74.6	3.8	2.51	22384	761
UNIV OF GA DAIRY FARM	Clarke	H	2/19/2021	138	86	66.6	4.1	2.41	19852	831
BUDDHA BELLY FARM LLC	Brooks	X	2/5/2021	601	84	62.8	3.8	2.38	15885	637
DAVID ADDIS	Whitfield	H	2/16/2021	50	80	60.8	4.2	2.36	16299	620
BERRY COLLEGE DAIRY	Floyd	J	2/8/2021	32	83	53.4	5	2.35	15657	749
WHITEHOUSE FARM	Macon	H	1/27/2021	244	89	70.5	3.8	2.34	20128	776
RYAN HOLDEMAN	Jefferson	H	1/22/2021	98	90	64.3	4	2.33	19583	790

[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 Lows Herds for SCC –TD Average Score – December 2020									
Herd	**County**	**Test Date**	**Br.**	**[1]Cows**	**Milk-Rolling**	**SCC-TD-Average Score**	**SCC-TD-Weight Average**	**SCC-Average Score**	**SCC-Wt.**
BERRY COLLEGE DAIRY	Floyd	12/14/2020	J	31	15695	1.7	52	1.8	75
DAVID ADDIS	Whitfield	12/16/2020	H	44	15979	1.9	91	1.3	80
DANNY BELL*	Morgan	12/3/2020	H	324	29463	2	134	2	141
SCOTT GLOVER	Hall	12/2/2020	H	190	26696	2.1	118	2.4	170
JAMES W MOON	Morgan	12/14/2020	H	136	17114	2.1	145	2.6	250
WDAIRY LLC*	Morgan	12/7/2020	X	2032	27868	2.1	159	2.2	182
DAVE CLARK*	Morgan	11/30/2020	H	1246	31162	2.3	181	2.2	200
EBERLY FAMILY FARM	Burke	12/14/2020	H	1006	24792	2.4	173	2.1	173
DOUG CHAMBERS	Jones	12/20/2020	H	442	26588	2.4	212	2.4	220
RYAN HOLDEMAN	Jefferson	12/4/2020	H	99	19587	2.4	225	3	381
VISSCHER DAIRY LLC*	Jefferson	12/9/2020	H	923	21841	2.5	214	2.5	182
UNIV OF GA DAIRY FARM	Clarke	12/15/2020	H	142	20141	2.6	166	2.6	191
ALEX MILLICAN	Walker	11/17/2020	H	94	16998	2.6	171	2.2	189
SOUTHERN ROSE FARMS	Laurens	12/29/2020	H	75	20524	2.7	248	2.9	228
ALBERT HALE	Oconee	12/1/2020	H	98	12425	2.8	194	3.1	283
JERRY SWAFFORD	Putnam	11/24/2020	H	158	18619	2.9	203	2.8	209
RODNEY & CARLIN GIESBRECHT	Washington	12/21/2020	H	395	21854	2.9	238	2.6	233
JUMPING GULLY DAIRY LLC	Brooks	12/3/2020	X	1193	16206	3	251	2.9	255
BUDDHA BELLY FARM LLC	Brooks	12/14/2020	X	729	15861	3	276	3.3	302
FRANKS FARM	Burke	11/23/2020	B	212	20148	3.1	179	2.3	175

[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 Lows Herds for SCC –TD Average Score – January 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	1/12/2021	H	46	16151	1.2	111	1.3	87
SCOTT GLOVER	Hall	1/5/2021	H	185	26738	1.8	90	2.4	164
BERRY COLLEGE DAIRY	Floyd	1/11/2021	J	33	15657	1.9	59	1.8	75
WDAIRY LLC*	Morgan	1/11/2021	X	2038	27909	2.2	132	2.3	183
DANNY BELL*	Morgan	1/7/2021	H	315	29543	2.2	140	2	141
ALEX MILLICAN	Walker	1/20/2021	H	91	16929	2.2	193	2.1	192
JAMES W MOON	Morgan	1/15/2021	H	129	17278	2.3	141	2.6	240
TROY YODER	Macon	1/12/2021	H	304	24669	2.3	147	3	232
RODNEY & CARLIN GIESBRECHT	Washington	1/25/2021	H	393	22091	2.3	153	2.6	224
DAVE CLARK*	Morgan	1/4/2021	H	1218	31140	2.3	181	2.2	200
EBERLY FAMILY FARM	Burke	1/18/2021	H	1026	24672	2.4	176	2.2	175
DOUG CHAMBERS	Jones	1/25/2021	H	463	26774	2.4	215	2.4	219
ALBERT HALE	Oconee	1/4/2021	H	96	12230	2.7	181	3.1	277
SOUTHERN ROSE FARMS	Laurens	12/29/2020	H	75	20524	2.7	248	2.9	228
MARTIN DAIRY L. L. P.	Hart	1/7/2021	H	304	22886	2.8	292	3	298
FRANKS FARM	Burke	12/29/2020	B	212	19827	2.9	198	2.3	178
JERRY SWAFFORD	Putnam	1/26/2021	H	156	18425	2.9	263	2.8	214
W.T.MERIWETHER	Morgan	1/13/2021	H	68	18977	3	214	3.3	362
RYAN HOLDEMAN	Jefferson	1/22/2021	H	98	19583	3	280	3	386
UNIV OF GA DAIRY FARM	Clarke	1/18/2021	H	134	19953	3.1	210	2.7	193

[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).

Top GA Lows Herds for SCC –TD Average Score – February 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	2/16/2021	H	50	16299	1.4	111	1.3	93
BERRY COLLEGE DAIRY	Floyd	2/8/2021	J	32	15657	1.6	48	1.7	68
DAVE CLARK*	Morgan	2/1/2021	H	1195	31190	2	124	2.1	197
ALEX MILLICAN	Walker	2/17/2021	H	87	16774	2	148	2.1	190
SCOTT GLOVER	Hall	2/5/2021	H	183	26664	2.1	87	2.4	153
WDAIRY LLC*	Morgan	2/8/2021	X	2046	27831	2.1	137	2.3	183
EBERLY FAMILY FARM	Burke	2/15/2021	H	1065	24579	2.2	169	2.2	176
UNIV OF GA DAIRY FARM	Clarke	2/19/2021	H	138	19852	2.3	112	2.7	191
RODNEY & CARLIN GIESBRECHT	Washington	1/25/2021	H	393	22091	2.3	153	2.6	224
DANNY BELL*	Morgan	2/4/2021	H	315	29563	2.4	165	2	141
DOUG CHAMBERS	Jones	2/22/2021	H	448	26859	2.4	233	2.4	220
FRANKS FARM	Burke	2/16/2021	B	184	19468	2.5	253	2.4	190
JAMES W MOON	Morgan	2/15/2021	H	126	17383	2.6	225	2.6	233
VISSCHER DAIRY LLC*	Jefferson	2/3/2021	H	932	22384	2.7	194	2.5	184
JUMPING GULLY DAIRY LLC	Brooks	2/5/2021	X	1132	16363	2.7	198	2.9	248
BUDDHA BELLY FARM LLC	Brooks	2/5/2021	X	601	15885	2.9	221	3.2	294
W.T.MERIWETHER	Morgan	2/9/2021	H	78	18733	2.9	249	3.3	354
WHITEHOUSE FARM	Macon	1/27/2021	H	244	20128	2.9	258	2.7	292
MARTIN DAIRY L. L. P.	Hart	2/1/2021	H	295	22719	2.9	314	3.1	306
JERRY SWAFFORD	Putnam	2/23/2021	H	143	18622	3	228	2.8	209

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