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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.

INSIDE THIS ISSUE: October November December, 2020

Sincerely,

Sha Tao

Associate Professor

UNIVERSITY OF GEORGIA EXTENSION

Herd it Through the Bovine

Dairy Keeps on Mooving - Georgia 4-H and Collegiate Events

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The holiday season is finally upon us and everyone is definitely looking forward to a time of rest and good cheer. Despite the challenges that the past year brought, I remain continuously amazed at the dedication and work ethic of our young people here in the state. I have watched over the past nine months as these young people with full commitment, continued to engage in dairy programming through activities in 4-H and at the University of Georgia. This year has certainly provided a lot of novelty to the events that they are participating in but their interest in immersing themselves in all things dairy has not waned.

The Georgia National Fair Commercial Dairy Heifer Show

The Georgia National Fair Commercial Dairy Heifer Show looked a little different this year. The fair food smells and fairgoers in the barns were absent but the good-hearted comradery and competition was ever present in the dairy ring. Another tremendous turnout of youth for the show this year with over 100 heifers exhibited by over 70 young people. With Katie Coyne out of Wisconsin picking the lineups, this year's show turned out to be one of great opportunity as well. Her time in the ring was spent not only selecting exceptional young people and calves but in educating on how to advance on future show days. The tables below present the top exhibitors for both the Commercial Dairy Heifer Showmanship and Weight classes.

Georgia National Fair Commercial Dairy Heifer Showmanship

Grade	Placing	Name	County/FFA Chapter
4th-5th Grade	1st	Brooke Padgett	Hall Co 4-H
	2nd	Liam Page	Oconee Co 4-H
6th Grade	1st	Audrey Williams	Morgan Co 4-H
	2nd	Peyton Clark	Madison Co Middle FFA
7th Grade	1st	Michael Bushey	Clear Creek Middle FFA
	2nd	Laci James	Summerville Middle FFA
8th Grade	1st	Jack Keener	Clear Creek Middle FFA
	2nd	Lane Bridges	Chattooga Co FFA
9th Grade	1st	Laurel Christopher	White Co High FFA
	2nd	Zoey Guy	Houston Co FFA

10th Grade	1st	Angelica Smith	Houston Co FFA
	2nd	Noel Pickel	Morgan Co 4-H
11th Grade	1st	Torrie Reed	Gilmer Co High FFA
	2nd	Octavia Bushey	Gilmer Co High FFA
12th Grade	1st	Trent Maddox	Jasper Co High FFA
	2nd	Eliza Jane Glover	White Co High FFA

Georgia National Fair Commercial Dairy Heifer Weight Classes

Div 1 Classes	Placing	Name	Ear Tag #	County/FFA Chapter
1	1st	Ryleigh Goss	9546	Madison Co Middle FFA
	2nd	Caroline Hunter	9383	Colquitt Co 4-H
	3rd	Ashlyn Reddick	8034	Burke Co High FFA
2	1st	Sydney Coble	9166	Burke Co 4-H
	2nd	Leah Higginbotham	7628	Elbert Co 4-H
	3rd	Levi Hunter	9382	Colquitt Co FFA
3	1st	Angelica Smith	9302	Houston Co FFA
	2nd	Laci James	9263	Summerville Middle FFA
	3rd	Zoey Guy	9303	Houston Co FFA

Division 1 Champion: Angelica Smith

Division 1 Reserve: Laci James

Div 2 Classes	Placing	Name	Ear Tag #	County/FFA Chapter
4	1st	Jayla Boyd	9141	Summerville Middle FFA
	2nd	Caleb Williams	9301	Houston Co FFA
	3rd	Jiles Coble	8933	Burke Co 4-H
5	1st	Noel Pickel	8870	Morgan Co 4-H
	2nd	Mary Anna Bentley	9135	Chattooga Co FFA
	3rd	Sydney Coble	8948	Burke Co 4-H
6	1st	Luke Huff	8899	Oglethorpe Middle FFA
	2nd	Morgan Griggs	9071	Gilmer Co High FFA
	3rd	Luke Huff	8898	Oglethorpe Middle FFA
7	1st	Alyssa Ashurst	9070	Gilmer Co High FFA
	2nd	Sydney Coble	8946	Burke Co 4-H

	3rd	Trinity Dismuke	7894	Winder Barrow FFA

Division 2 Champion: Luke Huff

Division 2 Reserve: Morgan Griggs

Div 3 Classes	Placing	Name	Ear Tag #	County/FFA Chapter
8	1st	Abby Joyner	9160	Burke Co 4-H
	2nd	Luke Huff	8897	Oglethorpe Middle FFA
	3rd	Cort Shelnutt	8982	Dawson Co FFA
9	1st	Octavia Bushey	9069	Gilmer Co High FFA
	2nd	Michael Bushey	8585	Clear Creek Middle FFA
	3rd	Gabby Darlington	8817	Houston Co FFA
10	1st	Trent Maddox	8659	Jasper Co High FFA
	2nd	Eliza Jane Glover	9087	White Co High FFA
	3rd	Maddox Pardue	9096	White Co High FFA

Division 3 Champion: Trent Maddox

Division 3 Reserve: Octavia Bushey

Top 5 Heifers

5th – Morgan Griggs (Division 2, Class 6)

4th – Luke Huff (Division 2, Class 6)

3rd – Angelica Smith (Division 1, Class 3)

2nd - Octavia Bushey (Division 3, Class 9)

1st – Trent Maddox (Divison 3, Class 10)

Congratulations to all exhibitors!

Youth were also busy this fall with a new competitive event!

This fall two groups from Georgia, Tift and Coweta counties participated in the Dairy Educational Event offered in lieu of the national 4-H dairy quiz bowl competition. The team from Tift was the winning State Dairy Quiz Bowl team and thus competed in this national event. That team included Amare Woods, Lydia Connell, Jordan Daniels, Seth Jones, Dana Wells and was coached by Justin Hand. The team from Coweta was first runner up at the State Dairy Quiz Bowl and attended this national event as in a learning capacity. This team included Jennifer Brinton, Michael Whitlock, Leopold Joh (Abraham) and was coached by Pam Brinton. This first ever event for young people tested knowledge through scenario based activities. With each scenario based

on various aspects of the dairy operation, teams were asked to report on the strengths and areas to improve with regards to management practices. We certainly appreciate their efforts in representing the state of Georgia at this national event.

Before we all hit the books again in the new year, Coweta county will participate in the 4-H Virtual Dairy Judging contest offered through Utah State. Please wish them well in their preparations for this competition and ultimately during the event.

UGA Competes in First Ever Virtual Dairy Challenge

On the Collegiate front, a five-member team from the University of Georgia recently competed in the Southern Region Dairy Challenge. This event, built on the framework of evaluating the strengths, weaknesses and opportunities for a dairy operation was offered this year for the first time virtually. Held over several weeks, this event consisted of analysis of farm data, developing critique and suggestions with the help of an expert consultant and attending numerous education talks. This years team members were Will Strickland, Alyssa Rauton, Tate Hunda, Kenne Hillis and Dawson Fields. Congratulation to the team for taking home a first place finish!

University of Georgia CPES Dairy. R.I.P.

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Changes are always difficult. Especially this year, change has been a way of life and adjustments are difficult.

In September, the University of Georgia closed the dairy research unit at Tifton. The usual reasons for the closing were given: 1) decreased income due to the milk market, 2) retirement of faculty and 3) expenses are too high. The fourth reason (often not stated) is that the resources could be used for other programs. I used the statement "the usual reasons" as these are stated in almost every closing of university dairy herds over the last 50 years. John Bernard had a good summary of the history of the Tifton dairy and its accomplishments in the last DairyFax (July August September 2020).

Figure 1. *Coastal Plain Experiment Station Dairy, Tifton. 1947*

In the 1960's, the University of Georgia had dairy herds in Griffin, Athens, Tifton, Blairsville, Calhoun and Midville at the experiment stations located there. Several of these locations also had processing units that provided fluid milk and products to university facilities and the local communities. The university also had working relationships with dairies in the State Prison system and State Hospitals.

Today only the dairy herd at Athens remains in operation. People tend to forget that the University closed the Athens dairy 20 years ago. Student protest, industry questions and famer

involvement caused a compromise to be reached to leave the dairy open with a change in funding from experiment station to teaching budget.

Looking at the US, when I started college every land-grant university had a dairy hard with many schools (including University of Georgia) having more than one herd. Today only about a third of land-grant universities have a dairy herd. Many do not have a dairy scientist on their faculty. When I joined the University of Georgia faculty, there were 20 dairy faculty members including 2 agricultural economists and 4 dairy manufacturing faculty. Today there are 4 dairy faculty positions.

How did the situation change to cause the decrease in dairy research and support in land-grant universities?

1) Dairy numbers. There has been a decrease in dairy farms in the US for several decades. The news this year has been the loss of 10% of the dairy farms in Wisconsin. Forty-five years ago there were over 2000 dairy farms in Georgia. Today there are 125 dairy farms. University administrators, like politicians, count voters. This has led to a feeling that dairy is not as important because there are fewer producers. Economic impact or that some of the dairies employee 50 to 60 people does not count in their calculation of impact.

2) Milk supply. Today the 125 dairies in Georgia produce more milk than the 2000 Georgia dairy farms did 45 years ago. This increase in milk production is the results of research. Improved nutrition, genetics, facilities, management and reproduction have increased milk per cow. The US produces more milk than is consumed in the US. Much of the milk supply in the US is moved around to meet the demand within the US. At various periods, surplus milk has found a home overseas that has helped improve milk prices. The problem is that this has not been consistent resulting in increased surplus and lower prices in the US. The solution has been the decrease in dairy farms as economics, retirement of older farmers and other economic opportunities have impacted survival. Lower milk prices also put pressure on universities as dairy farms are looked at as a profit center. As cost increase and price drop, administrators look for other uses for these resources.

3) Milk production research dollars. Because the dairy industry has been successful in producing milk, research funds have been decreased for milk production as the need for more milk is not a priority. Overall funding for agricultural research has decreased with dairy production falling farther behind. For example, the dairy checkoff funds can only be used for milk products research not milk production research.

4) Regionalization or survival of the fittest. For over thirty years, university administrators have discussed cooperative agreements that would have regional or centralized dairy programs at select schools. Other schools would have other regional programs. This concept has never been fully implemented due to difficulty agreeing on who would give up and who would get different programs. In dairy, there are some programs that have survived that have attained a regional importance. Several universities do cooperate on specific programs that cover areas of dairy production. With the increase in on-line learning, the potential for cooperative classes at different universities leading to a degree is increased.

What does the future hold? That is the question as changes occur. Many of the practices that are used in dairying were discovered and tested over 20 years ago. Many times the most important information universities provided was what did not work. Do you see negative information today published?

The hope is that these changes will lead to a dairy industry that is at its best in the future.

Summer annuals as a source of stored forage

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Summer annuals are frequently planted for forage production on non-irrigated land or planted later in the growing season after the first corn crop or another crop has been harvested and before winter annuals are sown. Most producers have traditionally planted forage sorghum; however, infestations by the sugar cane aphid have caused some producers to consider alternatives that are not susceptible to damage by the sugar cane aphids. Earlier this year we reported that either brown mid-rib forage sorghum or brown mid-rib pearl millet can support equal milk yield when fed along with corn silage based on a research trial conducted at the Dairy Research Center in Tifton.

To provide additional information, we recently completed a trial evaluating the yield and nutrient content of Tiftleaf Pearl Millet III (TLM), an improved brown mid-rib pearl millet (EXM, Exceed), iron clay cowpeas (ICP), Lad forage soybeans (FSB), or combinations of EXM and ICP (MCP) and EXM +FSB (MSB). Each entry was planted at recommended seeding rates on non-irrigated land in the spring (May) or late summer (August) in replicated plots. The planting rates are provided in Table 1. Fertilization was according to UGA recommendations at planting. Forage was harvested when the millet reached the soft dough stage of maturity and ICP and FSB had pods. The first planting in late May of 2019 was followed by drought shortly after the seed sprouted. The drought persisted resulting in a very poor growth, which was not adequate for harvest.

Table 1. Seeding rates for summer annuals planted in the spring or late summer.

	Seeding Rate[1], lbs/acre	
Forage	Late Summer	Spring
Tiftleaf III pearl millet (TLM)	16.51	13.65
Exceed pearl millet (EXM)	15.88	15.88
Iron clay cowpeas (ICP)	32.08	27.31
Lad forage soybeans (FSB)	57.80	54.63
EXM + ICP (ECP)[1]	26.70	28.00
EXM + FSB (ESB)[1]	36.20	36.15

[1]Seeding rate was ½ of the full rate for each forage

The late summer planting in August, 2019 had sufficient rainfall and resulted in very good growth for all summer annuals (average 6.23 ton DM/acre) except for the forage soybeans which had limited height and forage yield (0.68 ton DM/acre, Table 2). Because of the limited yield, the FSB were not harvested or sampled for nutrient content. Crude protein was higher than expected for TLM and EXM and could have been due to residual N in the plots from the previous crop. Both MCP and MSB had higher concentrations of crude protein compared with ICP. The lower crude protein observed for ICP is most likely due greater to leaf loss that occurred during harvest. Concentrations of ADF and $aNDF_{OM}$ were lower and fat was higher for at concentrations for ICP compared with the other forages that is normal for legumes compared with grasses. Minor differences were observed in fermentation profiles, but all forages were well fermented.

Results of the spring 2020 planting are presented in Table 3. All forages grew well and did not experience drought. No differences were observed in yield, but the ICP were significantly lodged

which prevented harvest. Yields for both pearl millets were lower than expected and may have been due to leaching of N from these plots. Crude protein concentrations were highest for FSB, MSB, and MCP compared with TLM and EXM as expected. Concentrations of ADF and $aNDF_{OM}$ were lowest for FSB, intermediate for MCP and MSB, and highest for TLM and EXM. Fat concentrations were lowest for FSB compared with all other forages. As with the fall harvest, all forages fermented well with minor differences observed in their fermentation profiles.

The results of this trial indicate that forage soybeans work best when planted early in the season. The iron clay peas grew well in both seasons, but are best when planted with pearl millet due to the potential for lodging. Planting of pearl millet and either iron clay peas or forage soybeans resulted in higher concentrations of crude protein. While these initial results provide information producers can use to make decisions for the coming year, additional research should be conducted to evaluate these forages in additional growing seasons to get a better idea of what to expect.

I would like to thank the Georgia Beef Checkoff for funding in support of this research that would not have been possible without the funding.

Table 2. Yield and chemical composition of summer annual forages planted in late summer of 2019.

Item	TLM[1]	EXM	ICP	FSB	ECP	ESB	SEM[2]	*P*
Yield, ton DM/acre	7.30[a]	6.58[a]	5.42[a]	0.68[b]	6.44[a]	5.42[a]	1.11	0.0345
Chemical composition								
DM, %	21.83[b]	22.00[b]	32.31[a]	NA[3]	20.32[b]	20.97[b]	1.89	0.0027
CP, % of DM	18.87[b]	18.52[b]	17.96[b]	NA	19.86[a]	20.60[a]	0.35	0.0003
$aNDF_{OM}$, % of DM	53.05[a]	51.24[a]	32.90[a]	NA	51.34[b]	50.34[b]	0.49	<0.0001
ADF, % of DM	41.63[a]	40.32[a]	28.53[b]	NA	40.20[a]	40.93[a]	0.96	<0.0001
EE[4], % of DM	2.38[b]	2.23[b]	3.75[b]	NA	2.29[b]	2.41[b]	0.11	<0.0001
pH	3.75[a]	3.69[a]	4.10[b]	NA	3.69[a]	3.75[a]	0.04	<0.0001
Ammonia, % of DM	0.45[f]	0.38[ef]	0.31[e]	NA	0.43[f]	0.47[f]	0.04	0.0650
Ammonia, % of CP	14.85	12.99	10.76	NA	13.31	14.38	1.44	0.3508
Total VFA, % of DM	16.304[f]	11.032[ef]	10.044[e]	NA	13.080[ef]	10.633[ef]	1.635	0.0958
Lactic acid, % of DM	16.199[f]	10.942[ef]	9.768[e]	NA	12.828[ef]	10.587[ef]	1.635	0.0930
Acetic acid, % of DM	0.093[a]	0.072[a]	0.027[b]	NA	0.022[b]	0.042[a]	0.020	<0.0001
Butyric acid, % of DM	0.001[b]	0.004[a]	0.000[b]	NA	0.006[a]	0.000[b]	0.001	0.0040

[abcd]Means in the same row with different superscripts differ ($P < 0.05$).

[ef]Means in the same row with different superscripts differ ($P < 0.10$).

[1]TLM = Tiftleaf III pearl millet; EXM = Exceed pearl millet; ICP = Iron clay cowpeas; FSB = Forage soybeans; ECP = Exceed pearl millet plus cowpeas; and ESB = Exceed pearl millet plus forage soybeans.

[2]SEM = Standard error of the mean.

[3]No samples were collected due to the low yield.

[4]EE = Ether extract.

Table 3. Yield and chemical composition of summer annual forages planted in spring of 2020.

Item	TLM[1]	EXM	ICP	FSB	ECP	ESB	SEM[2]	*P*
Yield, ton DM/acre	3.29	4.13	3.67	5.40	7.79	6.13	1.37	0.6399
Chemical composition								
DM, %	44.80^{ab}	47.81^{c}	NA	45.29^{bc}	48.61^{c}	42.39^{a}	0.99	0.0005
CP, % of DM	9.82^{a}	9.72^{a}	NA	18.53^{d}	11.39^{b}	13.84^{c}	0.19	<0.0001
aNDF$_{OM}$, % of DM	69.97^{d}	67.35^{c}	NA	56.04^{a}	64.76^{b}	63.49^{b}	0.66	<0.0001
ADF, % of DM	37.56^{c}	33.35^{a}	NA	38.58^{d}	34.19^{a}	35.67^{b}	0.31	<0.0001
EE[4], % of DM	1.88^{a}	2.40^{b}	NA	1.71^{a}	2.58^{b}	2.53^{b}	0.10	<0.0001
pH	4.07^{ab}	4.15^{b}	NA	4.27^{bc}	4.00^{a}	4.20^{bc}	0.05	0.0043
Ammonia, % of DM	0.41^{a}	0.51^{b}	NA	0.74^{c}	0.53^{b}	0.55^{b}	0.03	<0.0001
Ammonia, % of CP	25.92^{ab}	32.43^{a}	NA	25.02^{ab}	29.03^{ab}	24.58^{b}	1.96	0.0407
Total VFA, % of DM	7.788^{a}	5.670^{b}	NA	5.563^{b}	5.598^{b}	5.756^{b}	0.227	<0.0001
Lactic acid, % of DM	7.300^{a}	5.311^{b}	NA	4.689^{b}	5.173^{b}	4.938^{b}	0.218	<0.0001
Acetic acid, % of DM	0.302^{b}	0.204^{a}	NA	0.716^{d}	0.290^{b}	0.511^{c}	0.020	<0.0001
Butyric acid, % of DM	0.073^{a}	0.086^{ab}	NA	0.089^{a}	0.074^{a}	0.144^{b}	0.017	0.0303

[abcd]Means in the same row with different superscripts differ ($P < 0.05$).

[1]TLM = Tiftleaf III pearl millet; EXM = Exceed pearl millet; ICP = Iron clay cowpeas; FSB = Forage soybeans; ECP = Exceed pearl millet plus cowpeas; and ESB = Exceed pearl millet plus forage soybeans.

[2]SEM = Standard error of the mean.

[3]No sample was collected due to the low yield.

[4]EE = Ether extract.

Prototheca, molds, and yeasts are on the naughty list this year

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Amidst all of the difficulties and strange occurrence of 2020, on the mastitis front I've been asked about and observed more *Prototheca*, yeast, and mold mastitis than typical. The major groups of pathogens that cause mastitis are bacteria (such as staphylococci or streptococci), algae (such as *Prototheca*), yeasts, & molds. Discussion of *Prototheca*, yeasts, and molds generally do not come up too often, thankfully, because they are notoriously unlikely to cure, not responsive to antibiotics since those drugs target bacteria, and can be devastating for SCC & milk production.

For those reasons, I wanted to present a few key items to consider if you suspect these uncommon bugs. The last section of the table highlights what each of these look like on blood agar should you be doing on-farm culture. If you suspect any of these, send your sample to a lab for confirmation. Most labs can specifically check for *Prototheca* in your bulk tank.

Prototheca	
Disease presentation	Clinical and subclinical mastitis
Source of infection	Wet areas, (stagnant water) manure, bedding; improper full insertion of intramammary antibiotic cannula
Contagious spread possible?	**Yes**
Treatment recommendation	None
Prevention recommendation	Keep bedding & environment clean, dry; maintain best milking procedures; separate known *Prototheca*-positive cows, practice partial insertion of intramammary antibiotic cannula when administering treatments
Control recommendation	Isolate and cull due to potential contagious spread
Appearance on blood agar	Creamy or greyish white colonies that grow AFTER 24-36 hours at 37°C. Colonies are typically dry in appearance. *Prototheca* colonies are typically confused with staphylococci and streptococci.

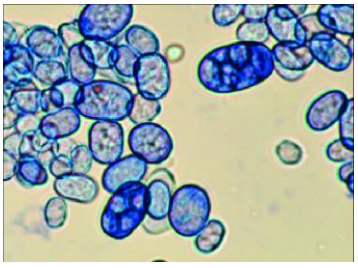

Figure 1. *Prototheca in milk*
Source: Bozzo et al., 2014,

Figure 2. *Prototheca on blood agar*
Source: NMC, Inc. Laboratory Handbook on Bovine Mastitis 3rd Edition

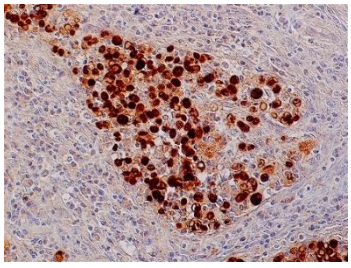

Figure 3. *Prototheca in mammary tissue*
Source: http://www.prototheca.com/Diagnostics/Histology.htm

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Yeast and Molds	
Disease presentation	Clinical and subclinical mastitis
Source of infection	Most commonly improper full insertion of intramammary antibiotic cannula, poor teat hygiene
Contagious spread possible?	**Yes, when improper procedures are used**
Treatment recommendation	None
Prevention recommendation	Maintain best milking procedures; practice partial insertion of intramammary antibiotic cannula when administering treatments, ensure that teat end has been thoroughly sanitized before administering intramammary antibiotics or teat sealant
Control recommendation	Maintain best milking procedures, consider culling if infection has not remedied in 2-3 months
Appearance on blood agar	Yeast: White or off white colonies that appear wet or mucous-like and grow well within 24-48 hours at 37°C. Gram stains are often required to confirm. Yeasts may be confused with staphylococci. Mold: White, off-white, or gray colonies that may look cloud-like or "poofy" and grow well within 24-48 hours at 37°C.

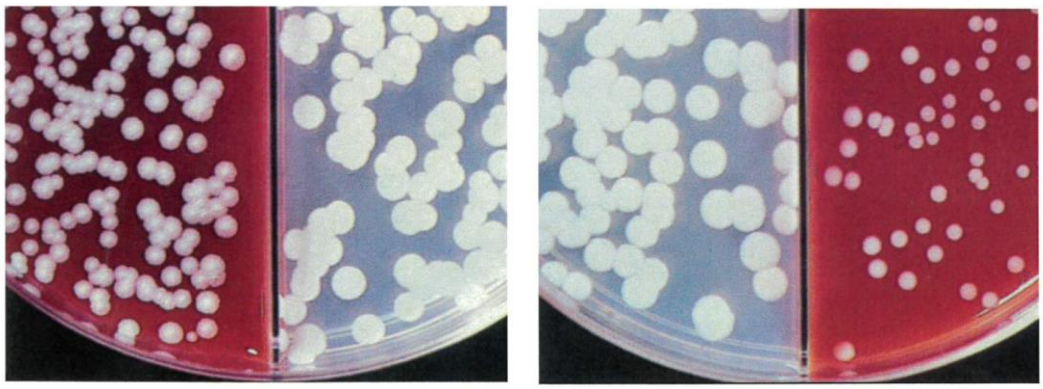

Figure 4. *Far left: Dry yeast colonies on blood agar, Far right: Moist yeast colonies on blood agar*
Source: NMC, Inc. Laboratory Handbook on Bovine Mastitis 3rd Edition

Lastly, I'd like to personally thank all of the dairy producers and affiliated industry professionals for everything you do and have done this year. We, at UGA, are forever grateful for the sacrifices you make every day. Merry Christmas and Happy New Year. We all hope and pray that 2021 brings the much needed relief that our industry so desperately needs.

Silent heat, Missed heat

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For so many reasons the song "Silent night" is a traditional favorite during the holiday season. Though the song and its meaning brings such great joy to so many, the rendition denoted in this article's title gives producers the opposite feeling. Silent heats represent not only missed opportunity but also longer days open and increased potential for culling. With the metabolic demands on cattle, facilities potentially confounding the ability to express heat and human error with adequate identification it is not far fetched to believe that a high number of dairy cows are classified as "anestrous" or having silent heats as they exit the voluntary wait period.

The reason for low heat detection rates within or outside of the VWP is not just relegated to animals not expressing heat. The issue could be more widespread to include lack of observations (labor problem) or anovular (non cycling) animals. This discussion is going to focus on a low number of recorded heats as a result of **true anestrus** (without heat) as well as **missed heat** observations. Herein there is a purposeful delineation from anovular (non cycling) cows as the conditions and treatment thereof are robust enough for a future, stand alone discussion. However, if a producer is interested in teasing out the anovular cows out it will necessitate routine ultrasound exams for a corpus luteum or assessment of progesterone values. Anovular animals would lack a corpus luteum (CL) on repeated ultrasounds and have consistently low blood progesterone.

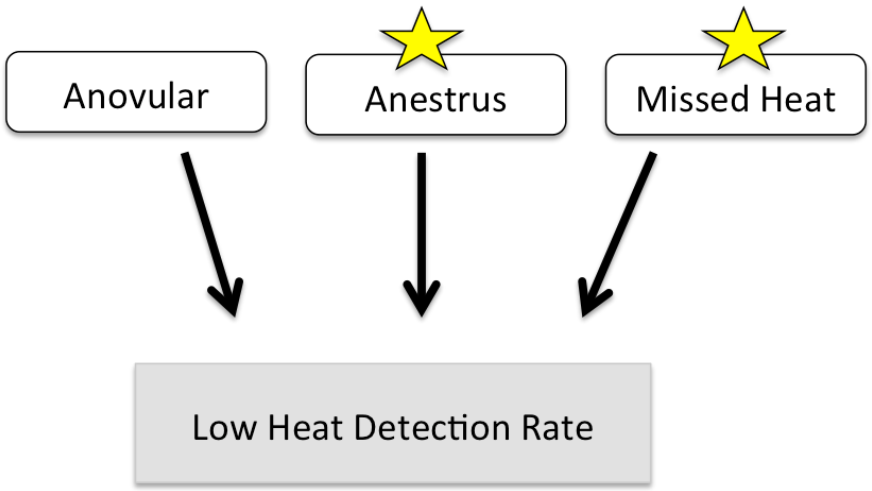

Figure 1: *Anovular and anetrous animals are common reasons for low numbers of recorded heats. Human error with detection and/or subtlety in heat expression will also contribute to the issue. Starred contributors are the focus of this discussion.*

The term "silent" as it relates to heat in dairy cattle describes a condition where cattle are cycling but are not expressing outward signs of heat/receptivity. The more appropriate term of anestrous is used to describe an animal that is literally "without estrus". Both terms are commonly used as misnomers to likewise describe animals that are not observed in heat as a result of subtle expression or missed detection. Really the latter is a missed heat, not silent. The likelihood of missing heats

in the dairy herd even with trained personnel can be remarkably high. Lopez and coworkers in 2004 discusses this real potential when characterizing heats in dairy cows related as it related to milk production level (Table 1).

Table 1: Characteristics of estrus (heat) for low and high production cows.

Characteristic	Low Producers	High Producers
Average milk production (kg/day)	33.5	46.4
Duration of estrus (hours)	10.9	6.2
Total standing events (number)	8.8	6.3
Total standing time (seconds)	28.2	21.7

Adapted from Lopez et al., 2004

Differentiating between silent and missed heats is an important evaluative step when trying to improve overall heat detection rate. That said whittling down where problem lies is tricky. Overall there is a commonality among anestrous animals that may help. Most (not all) animals that are truly classified anestrous are generally early in lactation during their first attempts at resumption at cyclicity post partum. Much of our knowledge of anestrous animals concludes that progesterone priming following her first (or second) ovulation post partum is needed for normal heat expression. For this reason, observable heats may not come until after the conclusion of the VWP when she is on her third or fourth complete cycle post partum. Thus most anestrous animals are merely in a transient state.

Determining if Postpartum Anestrus is a Problem:

- Make a goal to heat check animals still within the VWP as you would your breeding herd.
- Concurrent with the previous goal is to achieve a 50% or greater heat detection rate in the breeding herd. This assures that the labor based skill is appropriate
- Anestrus is this a problem if
    - More than 10-15% of the herd are not showing any heats prior to the conclusion of the VWP

Clues that Missed Heats are the Culprit:

The following would more likely implicate that human labor or effective heat detection is likely the cause to missed heats:

- Short or long estrous intervals
    - Exceeding 10% of intervals 3-17 days or over 25 days.
- Cows checked pregnant to an earlier service than last recorded.
- Annual heat detection rate less than 50%
- Short or long estrous intervals
    - Exceeding 10% of intervals 3-17 days or over 25 days.
- Cows checked pregnant to an earlier service than last recorded.
- Annual heat detection rate less than 50%

Although the anestrous animal is likely a temporary state, the ability to smoothen out her transition for earlier expression of estrus can play a key role in reducing days to first service and decreasing total days open. Maintaining adequate energy in the ration, acceptable body condition score while reducing pathological conditions, stress and facility limitations can all improve estrous expression. Both presence and strength of estrous expression improve heat detection rates.

Suggestions to help facilitate more heats detected:

- Try to concentrate the breeding herd together to improve estrous expression and observation
- Utilize progesterone as a primer with or without implementing synchronization strategies
- Look for the more subtle signs (chin resting, vocalization)
    - These become less subtle when activity monitoring is implemented
- Consider activity monitoring
    - Higher potential to overcome labor limitations and pick up subtle heats.

In conclusion, silent heats and missed heats can prove detrimental to a reproductive program. One, silent heats, seem to point more to a transition cow issue while the other, missed heats, lends more to a labor issue. Focusing on the latter, missed heats, will help not only heat detection rates but in identifying if anestrous animals are a problem in the herd.

Below are three tables sharing reproductive numbers on herds in Georgia. Data presented in tables below generated from data compiled by Dairy Records Management Systems for herds on test within the state. These tables are provided for an opportunity to reflect and evaluate your own reproductive program. This level of insight is necessary to make progress moving forward. In that same vein, I hope the new year brings everyone hope for progress as families, farms and as a vibrant industry.

Table 2:

Herds with 1 – 250 cows

	Herd Size (1 -250 Lactating Cows)			
	# of Herds	Average	Minimum	Maximum
Number of Cows-All Lact	19	134.9	46	241
Number of Cows-1st Lact	19	53.5	10	90
Number of Cows-2nd Lact	19	36.8	10	61
Number of Cows-3rd Lact	19	44.6	10	101
Days in Milk	19	196.6	93	363
Cows Left Herd for Repro-All Lact %	19	8.3	0	32
Cows Left Herd for Repro-1st Lact %	19	1.8	0	6
Cows Left Herd for Repro-2nd Lact %	19	2.9	0	9
Cows Left Herd for Repro-3rd Lact %	19	3.7	0	19
Rolling Milk	19	18253.9	12425	26696
Preg Rate-Year Ave	10	12.2	3	21
Days Open-Proj Min-Total Herd	19	196.9	120	327
Proj Calving Interval	19	15.7	13.2	20
Actual Calving Interval	19	14.9	13.2	18.6
Voluntary Waiting Period(VWP)	19	60.8	45	80
Days to 1st Serv-Total Herd	19	120.7	81	202
Con Rate for Past 12M-1st Serv	19	52.4	27	98
Con Rate for Past 12M-2nd Serv	19	54.5	22	100
Con Rate for Past 12M-3rd+ Serv	19	44.5	0	100
Serv per Preg-All Lact	19	2.9	1.1	6.8
Heats Observed for Year %	19	27.9	1	59

Table 3:

Herds with 251 – 500 cows

	Herd Size (251 - 500 Lactating Cows)			
	Number of Herds	Average	Minimum	Maximum
Number of Cows-All Lact	8	354.5	298	437
Number of Cows-1st Lact	8	149.4	133	172
Number of Cows-2nd Lact	8	103	64	145
Number of Cows-3rd Lact	8	102.1	68	141
Days in Milk	8	184.9	168	210
Cows Left Herd for Repro-All Lact %	8	9.9	0	19
Cows Left Herd for Repro-1st Lact %	8	2.3	0	4
Cows Left Herd for Repro-2nd Lact %	8	3.5	0	6
Cows Left Herd for Repro-3rd Lact %	8	4.5	0	10
Rolling Milk	8	24096.1	17159	29463
Preg Rate-Year Ave	7	16.6	11	25
Days Open-Proj Min-Total Herd	8	157.1	116	239
Proj Calving Interval	8	14.4	13	17.1
Actual Calving Interval	8	13.6	12.8	15.1
Voluntary Waiting Period(VWP)	8	57.4	45	60
Days to 1st Serv-Total Herd	8	99	71	134
Con Rate for Past 12M-1st Serv	8	39	22	63
Con Rate for Past 12M-2nd Serv	8	39.1	25	68
Con Rate for Past 12M-3rd+ Serv	8	39.4	21	76
Serv per Preg-All Lact	8	3.1	2	4.5
Heats Observed for Year %	8	44	24	72

Table 4:

Herds with 500 – 2000 cows

	Herd Size (501 - 2000)			
	Number of Herds	Average	Minimum	Maximum
Number of Cows-All Lact	5	902.4	600	1246
Number of Cows-1st Lact	5	332.8	215	517
Number of Cows-2nd Lact	5	255.6	148	338
Number of Cows-3rd Lact	5	314	207	401
Days in Milk	5	171.4	137	209
Cows Left Herd for Repro-All Lact %	5	7.4	0	25
Cows Left Herd for Repro-1st Lact %	5	2.4	0	9
Cows Left Herd for Repro-2nd Lact %	5	2	0	7
Cows Left Herd for Repro-3rd Lact %	5	3	0	10
Rolling Milk	5	24719.8	18860	31162
Preg Rate-Year Ave	5	15.6	9	25
Days Open-Proj Min-Total Herd	5	161.8	139	186
Proj Calving Interval	5	14.5	13.8	15.3
Actual Calving Interval	5	13.9	13.1	14.8
Voluntary Waiting Period(VWP)	5	63	60	75
Days to 1st Serv-Total Herd	5	98.6	68	155
Con Rate for Past 12M-1st Serv	5	42.8	22	96
Con Rate for Past 12M-2nd Serv	5	40.6	22	93
Con Rate for Past 12M-3rd+ Serv	5	35.2	17	75
Serv per Preg-All Lact	5	3.8	1.2	5.3
Heats Observed for Year %	4	61.8	48	77

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Graves, W.M. (2017). *Heat detection strategies for dairy cattle*. UGA Bulletin 1212.

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Heat stress alters cow behavior

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Cow behavior is a critical component of animal welfare. It is an area that has not been studied extensively. However, current research suggest many management and nutritional decisions can alter a cow's behavior. This will in turn affect animal productivity, health and welfare. Notably, heat stress is an important factor that alters cow behavior. Time budgets is an active response of a cow to the surrounding environment. Under thermal neutral conditions, studies conducted in northern states indicate that lactating dairy cows spend ~ 12 h/d lying down on freestalls, ~ 5-6 h/d standing in stalls or alley, ~ 4 h/d eating, in addition to milking.

Under heat stress condition, the most pronounced changes in cow behavior are increased standing time and concomitantly reduced lying time. Under grazing conditions without showers or pivots, heat-stressed cows always seek shade and stand longer as solar radiation increases. Similarly, when cows are housed under a barn, they spend more time standing but less time lying during heat stress. The longer standing time caused by heat stress may be an adaptive response to increase heat loss through greater skin surface area exposed to air flow, especially when there is no supplemental heat abatement. In a study conducted in open lots, Allen et al. (2013) reported that the body temperature of the lactating cow was positively correlated with her standing time, and a cow standing up during summer had a higher body temperature than the one lying down. When evaporative cooling system including soakers and fans is provided in a freestall barn, heat-stressed lactating cows also spend more time standing beneath the soakers and fans in the alley to receive cooling. Additionally, cows like to stand around water trough when supplemental cooling is lacking or insufficient. It is not uncommon cows gather around water trough in a free stall barn during summer. One interpretation of this behavior is the ineffectiveness of evaporative cooling provided over the feed line.

Time spent standing and lying not only represents animal wellbeing but also affects the health and performance. The most common disease associated with cow behavior is lameness. In Wisconsin, increased claw horn lesions is typically observed in late summer. This is partially attributed to the increased standing time and frequent occurrence of subacute ruminal acidosis caused by heat stress during summer (Cook, 2004). Lying behavior could also change milk production of the cow by affecting mammary blood flow. Compared with standing, lying increases mammary blood flow. This potentially results in increased nutrient uptake by mammary gland and milk synthesis. Grant (2011) reported that a one-hour increase in lying time is associated with 2-3.5 lb increase in milk yield each day from studies conducted in the northern state. It is important to confirm this relationship between cow behavior and milk yield during summer in the southeastern states.

It is important to provide evaporative cooling in the freestall barn during summer. Soakers and fans over feed bunks are effective to cool cows, but it also results in extended standing time in the alley. Forced ventilation, such as fans, over freestalls should be installed to bring cows back to stalls. However, in extreme heat stress conditions, fans alone is insufficient to cool cows, and foggers or misters can be installed in front of fans to provide some evaporative cooling. However, cautions should be made to ensure the water system over freestalls does not wet the bedding

material. A humidity controller may be used to deactivate the water system over the stall area whenever ambient relative humidity is high (for example, ≥ 85%).

References

Allen, J. D., S. D. Anderson, R. J. Collier, and J. F. Smith. 2013. Managing heat stress and its impact on cow behavior. Page 150-162 in Western Dairy Management Conference. Reno, NV.

Cook, N. B. 2004. Lameness treatment rates in Wisconsin dairy herds. Page 50-51 in Proc. 13th International Ruminant Lameness Symposium, Maribor, Slovenia.

Grant, R. 2011. Taking advantage of natural behavior improves dairy cow performance.

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2020-2021

Georgia Dairy Conference

- January 18-20, 2021
- Savannah Marriott Riverfront, 100 General McIntosh Boulevard, Savannah, GA 31401
- http://www.gadairyconference.com/

Top GA DHIA By Test Day Milk Production – September 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	8/31/2020	1253	89	95.7	3.8	3.18	30992	1254
DANNY BELL*	Morgan	H	9/3/2020	320	92	86.8	4.1	3.21	29500	1201
DOUG CHAMBERS	Jones	H	9/21/2020	433	89	83.1	3.7	2.48	26102	940
SCHAAPMAN HOLSTEINS	Wilcox	H	9/23/2020	688	90	82.2	3.5	2.36	26621	949
A & J DAIRY*	Wilkes	H	9/4/2020	391	91	82.1			28588	
SCOTT GLOVER	Hall	H	8/24/2020	194	89	80.7	3.8	2.69	26811	1030
J.EVERETT WILLIAMS*	Morgan	X	9/7/2020	2030	87	80.3	4.2	2.85	27616	1196
EBERLY FAMILY FARM*	Burke	H	9/14/2020	1043	88	73.9	3.8	2.38	25045	959
TROY YODER	Macon	H	8/31/2020	296	88	71.5	3.8	2.22	23523	933
OCMULGEE DAIRY	Houston	H	8/26/2020	336	87	69.8	3.6	2.1	21914	817
MARTIN DAIRY L. L. P.	Hart	H	9/25/2020	301	92	63.9	4.2	2.3	23801	937
COASTAL PLAIN EXP STATION	Tift	H	8/20/2020	256	90	63.1	4.3	2.29	22441	878
BOBBY JOHNSON	Grady	X	9/7/2020	604	93	63.1			23352	
RODNEY & CARLIN GIESBRECHT	Washington	H	8/17/2020	339	88	62.9	3.9	2.33	19985	784
HORST CREST FARMS	Burke	H	8/26/2020	192	86	59.3	3.9	2.03	20877	788
JERRY SWAFFORD	Putnam	H	9/22/2020	141	85	58.4	4	1.85	18616	751
FRANKS FARM	Burke	B	9/22/2020	209	89	58.4	4.3	2.22	20494	828
RUFUS YODER JR	Macon	H	8/29/2020	167	90	57.4	3.8	1.93	20143	751
UNIV OF GA DAIRY FARM	Clarke	H	9/18/2020	140	89	57.3	4	1.95	19886	831
W.T.MERIWETHER	Morgan	H	9/8/2020	69	85	57.1	3.5	1.64	18883	676

[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 – September 2020										
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Herd	County	Br.	Test Date	[1]Cows	% in Milk	Milk	% Fat	TD Fat	Milk	Lbs. Fat
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DAVE CLARK*	Morgan	H	8/31/2020	1253	89	95.7	3.8	3.18	30992	1254
J.EVERETT WILLIAMS*	Morgan	X	9/7/2020	2030	87	80.3	4.2	2.85	27616	1196
SCOTT GLOVER	Hall	H	8/24/2020	194	89	80.7	3.8	2.69	26811	1030
DOUG CHAMBERS	Jones	H	9/21/2020	433	89	83.1	3.7	2.48	26102	940
EBERLY FAMILY FARM*	Burke	H	9/14/2020	1043	88	73.9	3.8	2.38	25045	959
SCHAAPMAN HOLSTEINS	Wilcox	H	9/23/2020	688	90	82.2	3.5	2.36	26621	949
RODNEY & CARLIN GIESBRECHT	Washington	H	8/17/2020	339	88	62.9	3.9	2.33	19985	784
MARTIN DAIRY L. L. P.	Hart	H	9/25/2020	301	92	63.9	4.2	2.3	23801	937
COASTAL PLAIN EXP STATION	Tift	H	8/20/2020	256	90	63.1	4.3	2.29	22441	878
FRANKS FARM	Burke	B	9/22/2020	209	89	58.4	4.3	2.22	20494	828
TROY YODER	Macon	H	8/31/2020	296	88	71.5	3.8	2.22	23523	933
OCMULGEE DAIRY	Houston	H	8/26/2020	336	87	69.8	3.6	2.1	21914	817
HORST CREST FARMS	Burke	H	8/26/2020	192	86	59.3	3.9	2.03	20877	788
ROGERS FARM SERVICES	Tattnall	H	9/15/2020	170	95	45.3	4.7	2	17400	778
WHITEHOUSE FARM	Macon	H	9/11/2020	224	90	55.2	4.1	1.96	20660	792
BERRY COLLEGE DAIRY	Floyd	J	9/14/2020	31	84	50	4.5	1.95	16173	743
UNIV OF GA DAIRY FARM	Clarke	H	9/18/2020	140	89	57.3	4	1.95	19886	831
RUFUS YODER JR	Macon	H	8/29/2020	167	90	57.4	3.8	1.93	20143	751
JERRY SWAFFORD	Putnam	H	9/22/2020	141	85	58.4	4	1.85	18616	751

[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 Milk Production – October 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	9/28/2020	1271	90	95.5	4	3.39	31076	1257
DANNY BELL*	Morgan	H	10/1/2020	327	92	91.7	4.3	3.53	29476	1208
J.EVERETT WILLIAMS*	Morgan	X	10/5/2020	2050	87	89.6	4.5	3.4	27650	1203
SCHAAPMAN HOLSTEINS	Wilcox	H	10/29/2020	707	89	87.6	3.6	2.52	26720	958
DOUG CHAMBERS	Jones	H	10/26/2020	429	89	82	3.8	2.49	26347	951
A & J DAIRY*	Wilkes	H	10/13/2020	411	91	81.5			28378	
TROY YODER	Macon	H	9/30/2020	302	89	76.5	4	2.72	23686	939
SCOTT GLOVER	Hall	H	10/7/2020	199	89	75.1	3.9	2.43	26716	1026
EBERLY FAMILY FARM	Burke	H	10/12/2020	1030	88	73.5	3.8	2.44	25036	958
RODNEY & CARLIN GIESBRECHT	Washington	H	10/7/2020	350	89	68.4	4	2.27	20850	818
OCMULGEE DAIRY	Houston	H	10/27/2020	344	88	67.2	3.8	2.1	22364	825
RUFUS YODER JR	Macon	H	10/13/2020	172	90	66.8	3.9	2.37	20184	759
UNIV OF GA DAIRY FARM	Clarke	H	10/18/2020	139	89	66.2	4	2.13	19964	832
MARTIN DAIRY L. L. P.	Hart	H	9/25/2020	301	92	63.9	4.2	2.3	23801	937
HORST CREST FARMS	Burke	H	10/27/2020	195	87	62.3	3.7	2.02	21351	799
WHITEHOUSE FARM	Macon	H	10/22/2020	231	90	61.5	3.8	1.81	20499	791
JERRY SWAFFORD	Putnam	H	10/27/2020	151	85	59	4	1.78	18659	748
SOUTHERN ROSE FARMS	Laurens	H	9/28/2020	91	88	57.2	3.8	1.59	20602	840
BOBBY JOHNSON	Grady	X	10/9/2020	640	94	56.8			23417	
BOB MOORE #2	Putnam	H	10/14/2020	574	90	56.8	4.5	2.23	18931	820

[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 - October 2020										
					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	10/1/2020	327	92	91.7	4.3	3.53	29476	1208
J.EVERETT WILLIAMS*	Morgan	X	10/5/2020	2050	87	89.6	4.5	3.4	27650	1203
DAVE CLARK*	Morgan	H	9/28/2020	1271	90	95.5	4	3.39	31076	1257
TROY YODER	Macon	H	9/30/2020	302	89	76.5	4	2.72	23686	939
SCHAAPMAN HOLSTEINS	Wilcox	H	10/29/2020	707	89	87.6	3.6	2.52	26720	958
DOUG CHAMBERS	Jones	H	10/26/2020	429	89	82	3.8	2.49	26347	951
EBERLY FAMILY FARM	Burke	H	10/12/2020	1030	88	73.5	3.8	2.44	25036	958
SCOTT GLOVER	Hall	H	10/7/2020	199	89	75.1	3.9	2.43	26716	1026
RUFUS YODER JR	Macon	H	10/13/2020	172	90	66.8	3.9	2.37	20184	759
MARTIN DAIRY L. L. P.	Hart	H	9/25/2020	301	92	63.9	4.2	2.3	23801	937
RODNEY & CARLIN GIESBRECHT	Washington	H	10/7/2020	350	89	68.4	4	2.27	20850	818
BOB MOORE #2	Putnam	H	10/14/2020	574	90	56.8	4.5	2.23	18931	820
BERRY COLLEGE DAIRY	Floyd	J	10/15/2020	30	84	53.4	5	2.22	16088	743
UNIV OF GA DAIRY FARM	Clarke	H	10/18/2020	139	89	66.2	4	2.13	19964	832
FRANKS FARM	Burke	B	10/20/2020	209	90	52.7	4.4	2.11	20386	827
OCMULGEE DAIRY	Houston	H	10/27/2020	344	88	67.2	3.8	2.1	22364	825
W.T.MERIWETHER	Morgan	H	10/5/2020	67	85	56.5	3.9	2.04	18944	682
HORST CREST FARMS	Burke	H	10/27/2020	195	87	62.3	3.7	2.02	21351	799
EUGENE KING	Macon	H	9/25/2020	138	91	55.9	3.9	1.85	19464	705
ROGERS FARM SERVICES	Tattnall	H	10/13/2020	179	95	43.6	4.6	1.81	17243	780

[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 Milk Production – November 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	11/2/2020	1240	89	93.8	4	3.3	31169	1262
DANNY BELL*	Morgan	H	11/5/2020	323	91	92	4.2	3.41	29472	1216
SCHAAPMAN HOLSTEINS*	Wilcox	H	11/28/2020	719	89	91.3	3.6	2.82	26828	969
J.EVERETT WILLIAMS*	Morgan	X	11/9/2020	2022	86	90.8	4.5	3.55	27745	1214
SCOTT GLOVER	Hall	H	11/2/2020	198	89	85.1	4	2.77	26659	1024
A & J DAIRY	Wilkes	H	11/11/2020	412	91	83			28326	
DOUG CHAMBERS	Jones	H	10/26/2020	429	89	82	3.8	2.49	26347	951
TROY YODER	Macon	H	11/6/2020	298	90	78.2	3.8	2.61	24100	951
EBERLY FAMILY FARM	Burke	H	11/16/2020	1024	89	72.9	3.8	2.47	24908	953
OCMULGEE DAIRY	Houston	H	11/24/2020	352	88	72.7	3.7	2.3	22512	829
VISSCHER DAIRY LLC*	Jefferson	H	10/29/2020	897	85	72.4	3.2	1.93	21572	723
UNIV OF GA DAIRY FARM	Clarke	H	11/16/2020	140	88	68.7	4.2	2.34	20107	837
BOBBY JOHNSON	Grady	X	11/17/2020	666	93	66			23191	
HORST CREST FARMS	Burke	H	11/24/2020	192	87	64.9	4	2.18	21421	801
MARTIN DAIRY L. L. P.	Hart	H	11/3/2020	306	92	64.4	4.1	2.16	23611	938
RUFUS YODER JR	Macon	H	11/23/2020	154	90	63.4	4	2.22	20288	767
BOB MOORE #2	Putnam	H	11/12/2020	581	91	62	4.3	2.28	18986	831
WHITEHOUSE FARM	Macon	H	10/22/2020	231	90	61.5	3.8	1.81	20499	791
JUMPING GULLY DAIRY LLC	Brooks	X	11/6/2020	1205	86	61.4	3.5	1.92	16048	631
DAVID ADDIS	Whitfield	H	11/18/2020	46	78	59.7	3.8	2.02	15779	611

[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 – November 2020										
					Test Day Average				Yearly Average	
Herd	County	Br.	Test Date	[1]Cows	% in Milk	Milk	% Fat	TD Fat	Milk	Lbs. Fat
J.EVERETT WILLIAMS*	Morgan	X	11/9/2020	2022	86	90.8	4.5	3.55	27745	1214
DANNY BELL*	Morgan	H	11/5/2020	323	91	92	4.2	3.41	29472	1216
DAVE CLARK*	Morgan	H	11/2/2020	1240	89	93.8	4	3.3	31169	1262
SCHAAPMAN HOLSTEINS*	Wilcox	H	11/28/2020	719	89	91.3	3.6	2.82	26828	969
SCOTT GLOVER	Hall	H	11/2/2020	198	89	85.1	4	2.77	26659	1024
TROY YODER	Macon	H	11/6/2020	298	90	78.2	3.8	2.61	24100	951
DOUG CHAMBERS	Jones	H	10/26/2020	429	89	82	3.8	2.49	26347	951
EBERLY FAMILY FARM	Burke	H	11/16/2020	1024	89	72.9	3.8	2.47	24908	953
UNIV OF GA DAIRY FARM	Clarke	H	11/16/2020	140	88	68.7	4.2	2.34	20107	837
OCMULGEE DAIRY	Houston	H	11/24/2020	352	88	72.7	3.7	2.3	22512	829
BOB MOORE #2	Putnam	H	11/12/2020	581	91	62	4.3	2.28	18986	831
RODNEY & CARLIN GIESBRECHT	Washington	H	11/23/2020	360	90	59.6	4.3	2.24	21493	849
RUFUS YODER JR	Macon	H	11/23/2020	154	90	63.4	4	2.22	20288	767
HORST CREST FARMS	Burke	H	11/24/2020	192	87	64.9	4	2.18	21421	801
MARTIN DAIRY L. L. P.	Hart	H	11/3/2020	306	92	64.4	4.1	2.16	23611	938
BERRY COLLEGE DAIRY	Floyd	J	11/16/2020	30	83	49.5	5.2	2.13	15865	742
DAVID ADDIS	Whitfield	H	11/18/2020	46	78	59.7	3.8	2.02	15779	611
VISSCHER DAIRY LLC*	Jefferson	H	10/29/2020	897	85	72.4	3.2	1.93	21572	723
JUMPING GULLY DAIRY LLC	Brooks	X	11/6/2020	1205	86	61.4	3.5	1.92	16048	631
FRANKS FARM	Burke	B	11/23/2020	212	90	51.2	4.2	1.9	20148	820

[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 – September 2020									
Herd	**County**	**Test Date**	**Br.**	**[1]Cows**	**Milk-Rolling**	**SCC-TD-Average Score**	**SCC-TD-Weight Average**	**SCC-Average Score**	**SCC-Wt.**
BRENNEMAN FARMS	Macon	9/22/2020	H	47	20403	1.2	77	1.4	105
BERRY COLLEGE DAIRY	Floyd	9/14/2020	J	31	16173	1.3	52	1.9	82
DAVID ADDIS	Whitfield	9/11/2020	H	43	15585	1.3	79	1.3	85
DANNY BELL*	Morgan	9/3/2020	H	320	29500	1.3	85	2	140
MARK E BRENNEMAN	Macon	9/10/2020	H	128	19222	1.6	132	2.1	182
DAVE CLARK*	Morgan	8/31/2020	H	1253	30992	2	221	2	180
ALEX MILLICAN	Walker	9/11/2020	H	91	16918	2.1	260	2.3	207
EBERLY FAMILY FARM*	Burke	9/14/2020	H	1043	25045	2.3	218	2.2	178
UNIV OF GA DAIRY FARM	Clarke	9/18/2020	H	140	19886	2.4	178	2.6	187
J.EVERETT WILLIAMS*	Morgan	9/7/2020	X	2030	27616	2.4	230	2.2	171
FRANKS FARM	Burke	9/22/2020	B	209	20494	2.7	179	2.1	171
SCOTT GLOVER	Hall	8/24/2020	H	194	26811	2.7	211	2.5	177
MARTIN DAIRY L. L. P.	Hart	9/25/2020	H	301	23801	2.7	246	3	291
RODNEY & CARLIN GIESBRECHT	Washington	8/17/2020	H	339	19985	2.7	304	2.5	232
W N PETERS	Monroe	8/26/2020	X	128	15750	2.7	335	3.1	390
DOUG CHAMBERS	Jones	9/21/2020	H	433	26102	2.8	251	2.5	219
JAMES W MOON	Morgan	8/31/2020	H	132	17550	2.8	338	2.7	278
RUFUS YODER JR	Macon	8/29/2020	H	167	20143	2.9	313	2.6	245
WHITEHOUSE FARM	Macon	9/11/2020	H	224	20660	2.9	389	2.7	301
JERRY SWAFFORD	Putnam	9/22/2020	H	141	18616	3	272	2.8	211

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Top GA Lows Herds for SCC –TD Average Score – October 2020									
Herd	**County**	**Test Date**	**Br.**	**[1]Cows**	**Milk-Rolling**	**SCC-TD-Average Score**	**SCC-TD-Weight Average**	**SCC-Average Score**	**SCC-Wt.**
BRENNEMAN FARMS	Macon	9/22/2020	H	47	20403	1.2	77	1.4	105
DAVID ADDIS	Whitfield	10/19/2020	H	49	15404	1.8	54	1.3	87
BERRY COLLEGE DAIRY	Floyd	10/15/2020	J	30	16088	1.8	69	1.9	81
ALEX MILLICAN	Walker	10/20/2020	H	91	16935	2.1	89	2.2	198
EBERLY FAMILY FARM	Burke	10/12/2020	H	1030	25036	2.1	156	2.2	175
DANNY BELL*	Morgan	10/1/2020	H	327	29476	2.2	158	2.1	145
J.EVERETT WILLIAMS*	Morgan	10/5/2020	X	2050	27650	2.3	190	2.2	175
DAVE CLARK*	Morgan	9/28/2020	H	1271	31076	2.3	242	2.1	192
SCOTT GLOVER	Hall	10/7/2020	H	199	26716	2.5	210	2.5	179
WHITEHOUSE FARM	Macon	10/22/2020	H	231	20499	2.5	244	2.7	293
UNIV OF GA DAIRY FARM	Clarke	10/18/2020	H	139	19964	2.6	210	2.6	189
JUMPING GULLY DAIRY LLC	Brooks	10/9/2020	X	1150	15813	2.6	218	3	263
DOUG CHAMBERS	Jones	10/26/2020	H	429	26347	2.6	280	2.4	218
FRANKS FARM	Burke	10/20/2020	B	209	20386	2.7	181	2.2	175
MARTIN DAIRY L. L. P.	Hart	9/25/2020	H	301	23801	2.7	246	3	291
JAMES W MOON	Morgan	10/12/2020	H	137	17327	2.7	300	2.7	288
EUGENE KING	Macon	9/25/2020	H	138	19464	2.8	223	2.4	199
JERRY SWAFFORD	Putnam	10/27/2020	H	151	18659	2.9	201	2.8	206
SOUTHERN ROSE FARMS	Laurens	9/28/2020	H	91	20602	3	164	2.9	201
RODNEY & CARLIN GIESBRECHT	Washington	10/7/2020	H	350	20850	3	291	2.5	234

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Top GA Lows Herds for SCC –TD Average Score – November 2020									
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	11/18/2020	H	46	15779	1.1	32	1.3	75
BERRY COLLEGE DAIRY	Floyd	11/16/2020	J	30	15865	1.6	49	1.8	75
EBERLY FAMILY FARM	Burke	11/16/2020	H	1024	24908	2	152	2.1	172
DANNY BELL*	Morgan	11/5/2020	H	323	29472	2.1	127	2	141
J.EVERETT WILLIAMS*	Morgan	11/9/2020	X	2022	27745	2.2	163	2.2	178
SCOTT GLOVER	Hall	11/2/2020	H	198	26659	2.3	151	2.5	181
DAVE CLARK*	Morgan	11/2/2020	H	1240	31169	2.3	223	2.1	198
UNIV OF GA DAIRY FARM	Clarke	11/16/2020	H	140	20107	2.4	166	2.6	188
WHITEHOUSE FARM	Macon	10/22/2020	H	231	20499	2.5	244	2.7	293
ALEX MILLICAN	Walker	11/17/2020	H	94	16998	2.6	171	2.2	189
VISSCHER DAIRY LLC*	Jefferson	10/29/2020	H	897	21572	2.6	188	2.4	175
DOUG CHAMBERS	Jones	10/26/2020	H	429	26347	2.6	280	2.4	218
ALBERT HALE	Oconee	11/4/2020	H	108	12586	2.8	211	3.1	289
JUMPING GULLY DAIRY LLC	Brooks	11/6/2020	X	1205	16048	2.8	259	2.9	259
JERRY SWAFFORD	Putnam	10/27/2020	H	151	18659	2.9	201	2.8	206
RODNEY & CARLIN GIESBRECHT	Washington	11/23/2020	H	360	21493	2.9	226	2.6	233
JAMES W MOON	Morgan	11/13/2020	H	136	17128	3	205	2.7	261
FRANKS FARM	Burke	11/23/2020	B	212	20148	3.1	179	2.3	175
DONALD NEWBERRY	Bibb	10/29/2020	H	112	14163	3.1	243	3.1	300
RYAN HOLDEMAN	Jefferson	10/20/2020	H	104	19643	3.1	432	3	383

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