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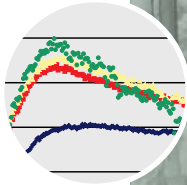
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602	391
591	398

The Green Liner File

Promoting healthy dairy products and practices.

Reflecting on Years of Success

Whenever the economy dips, it is certain that businesses will make adjustments. It is not uncommon for a business to make decisions that take them "off track" no matter what their financial status. As the country goes through a particularly tough patch right now, we know how important it is to make sure our decisions support our company's efforts.

Over the past few years, Lauren AgriSystems has added products and conducted research to enhance the performance of Lauren Tri-Circle® Liners. The intent of our original product was to allow dairymen to use the benefits of vacuum without causing the damage experienced historically using traditional liner designs. Lauren Liners have shown a level of performance on teat ends, squawks, kickoffs, and falloffs that is consistently higher than other products by researching, understanding and designing success into our products. New ideas led to new research which has led to new products that can benefit

dairymen everywhere. With our long term customers (3 or 4 years with green liners) we receive the additional benefit of getting more information which confirms the performance of Lauren Liners will support good management over time.

What seemed to be a complicated issue with exacting requirements has turned out to be much simpler. We have found holes in the traditional research and engineered our products not just to work with each other, but to enhance each other. This in turn has made it easier to evaluate, install, and monitor parlor performance. There is no substitute for the hard work that leads to success, but there is no reason to make it harder than it needs to be to succeed.

As more and more dairies find benefit in using the information and products that Lauren has generated, our market share has grown. Whether it is in liner or shell design, pulsation settings or analysis, improving dairy floor design, or even in a

simple part like a hose, Lauren has continued to stay "on track" with our mission – to bring value to dairymen.

It is hard to believe that Lauren Tri-Circle® Liners have been in the market for almost five years now. What started out as a flooring idea to help keep cows comfortable during milking has grown into a methodology of milking cows comfortably. It has been an exciting time and we look forward to continued growth with our customers.

Sincerely,

President, Lauren AgriSystems



Lauren AgriSystems' Updates!



PARLORPRO: Released in July of 2008, ParlorPro's initial program *iTeat* has allowed certified teat scorers to enter their scores and view results instantaneously. Since July, ParlorPro has seen much growth. In addition to unveiling its website: www.parlorpro.com, it has included two new programs: 1) Pulsator Analysis - a tool to determine non-conforming pulsators (see page 4) and 2) Audits - the ability to track a great deal of dairy info. A redesigned squawk counter and a prep procedure analysis tool are both coming soon.

NATIONAL MASTITIS COUNCIL: As always Lauren AgriSystems values research and innovation, we take the time to see what the dairy industry is exploring. This year while attending the 48th NMC Annual Proceedings in Charlotte, NC not only did we participate on committees and publish a technology poster but we got to see just what the industry is talking about. A big focus during the proceedings was Statistical Process Control (SPC) with emphasis on dairy management. Taking existing and new technology and bringing the historical process control that we've seen in manufacturing to the dairy industry, helps producers focus on milk quality and production. These discussions particularly touched home for us, as we have also brought technology into the dairy industry with the introduction of ParloPro and its use of handheld devices. We, as well as those associated with NMC continue to look at ways to merge existing and new technology to help dairymen and their cows.



LAUREN NT LINERS: Many of you are aware that we have gone to a non-twist version of the Lauren Liner. In conjunction with the new Lauren 608 Shell, the new Lauren NT Liner takes performance to the next level. The two products work together to create a non-twisting liner, and seal better at both the mouthpiece and shoulder of the liner. This benefits not only the life of the liner, but also the life and cleanliness of your pulsators. Balance of the liner and shell is also a great benefit, milkers love the feel of the shell and its ease of handling as well as the way it hangs on the cow. Contact your local dealer or Lauren AgriSystems Rep to get more information on the NT Liner or 608 Shell.



Dairy Spotlight: Hammink & Hammink South Dairies

**Bruce, South Dakota - Hammink Dairy, 550 Milk cows - Double 12 Parallel
Hammink South Dairy, 1400 Milk cows - 60 Stall Rotary**

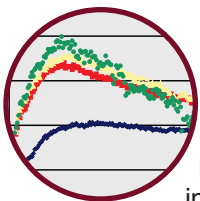
Wim Hammink immigrated from Holland in 1995 with his wife and three children, he started Hammink Dairy in 1996. "When I started Hammink Dairy, a Double 12 Parallel, I milked by myself with a traditional liner and grew tired of chasing squawks," said Wim Hammink. Wim liked what he was experiencing in South



Dakota, after only being there just two years, he and his wife, Nicolien, started to help others from Holland immigrate to the U.S. to start their own dairies; they formed Hammink Dairy Consulting and Development in 1997. Since then, they have helped develop over 15 dairies in the South Dakota region, focusing on turn key projects. Nowadays Wim and his milkers chase less squawks using the green liner, "We tried a lot of liners before Lauren's." In addition to eliminating squawks, they have seen faster milking, less fallofs, and better teat ends. Their success with Lauren Liners has now carried over to an additional dairy, Hammink South, a 60 Stall Rotary built in 2008 just 1 mile south of Hammink Dairy.



Ron Meyer and Wim Hammink



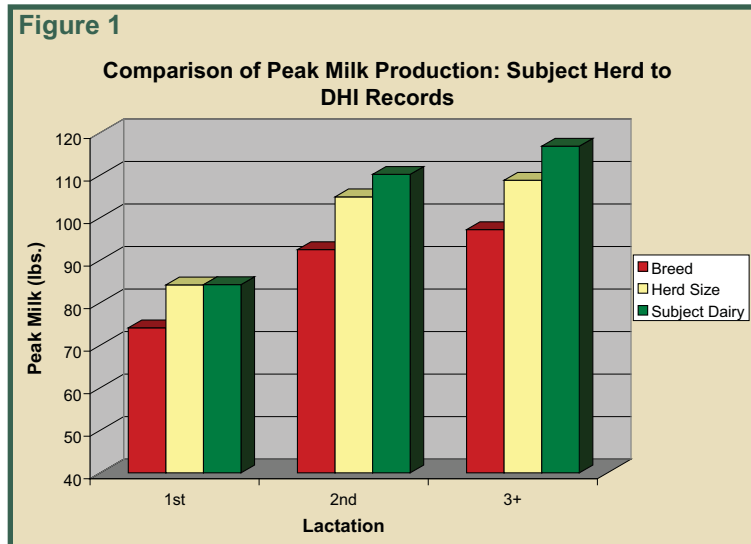
Case Study: Long Term Use of the Lauren Liner and Peak Milk Production

Lauren AgriSystems is committed to researching and understanding our products and how they impact the dairy industry. With close to five years behind us in liner sales, we decided to evaluate dairies that have been using the Lauren Liner for a prolonged time period. This study compares peak milk production from a dairy using Lauren Liners for 4+ years to data from a population of dairies. Peak milk (PM) is often used as an indicator of how well a dairy is performing.

Monitoring milk production on a dairy is a useful tool. In fact, PM production is used by many people to predict the total milk that will be produced during lactation. This combined with an understanding of persistency in a herd provides a clear picture of milk production throughout lactation. PM is defined as the highest point of production that a cow reaches in its lactation. This generally happens within the first 100 days in milk. The level of PM production attained is dependent on many variables – genetics, breed, nutrition, and even the time of year that calving occurs is known to affect PM. It is also commonly accepted that cows reaching higher PM will produce more milk throughout their entire lactation. PM can be derived from daily milk weights on dairies with metering systems or from monthly testing records.

DATA COLLECTION

Lactation records from Hi Hills Farms (Nashville, OH) were reviewed due to their long term use of the Lauren Liners. The subject dairy has been using the liners exclusively for over four years. This dairy milks approximately 450 Holstein cows, 2 times a day in a double 10 herringbone, and they are on a monthly DHI testing schedule. Their records were compared to a collection of Holstein DHI records which were compiled from over 576,000 cows (1). Further comparison was made with a subset of the Holstein records segregated by herd size. Herd sizes ranging from 250-500 cows were represented in this data which totaled approximately 90,000 cows (2). The analysis was completed using comparisons of the average PM values and the change in PM from lactation to lactation.



GROUP COMPARISONS

It is generally accepted that PM increases as lactation increases, and this can be seen in Figure 1. This graph shows the PM production levels for each of the groups different lactations. In lactation 1, the subject dairy and the herd size group PM production were almost equal and each were 10.0 lbs. over the breed group. In lactation 2, the subject dairy exceeded the breed group by 17.7 lbs. and the herd size group by 5.3 lbs. Lactation 3 shows the subject dairy exceeding the breed group by 19.6 lbs. and the herd size group by 8.0 lbs.

The percentage increase from subsequent lactations was also analyzed. Calculating the percentage change between lactations can tell us if a certain group showed more or less improvement over others regardless of the starting value for each. The data shows that the subject dairy showed greater increase from first to second lactation (23.5%) and second to third and above lactations (5.7%) than the other two groups (Figure 2.). The subject dairy not only started with one of the highest PM values, but also increased at a greater rate than the other two groups in following lactations.

DON'T GIVE THE CREDIT TO THE LINER!

The data presented in this article clearly indicates that a continued high level of PM production can be attained while using Lauren Liners. In fact, we believe that nutrition, breed, genetics, and transition management are the biggest contributors to PM. Developing and maintaining a plan for these is a necessity to achieve your desired level of PM production. This dairy obviously places importance on the factors mentioned above which reflects good management decisions.

Comparing PM production between dairies can be effective, but needs to be done properly. Use caution when comparing monthly to daily records, as monthly records can be more than 10lbs. less than daily records. If you have questions or would like to see your PM in a similar comparison, please contact Lauren AgriSystems at research@lauren.com or 330-308-7322 and ask to have your PM production analyzed.

REFERENCES

1. AgSource Cooperative Services. <http://documents.crinet.com/AgSource-Cooperative-Services/DHI/breedaverages1208.pdf> Accessed February 25, 2009.
2. AgSource Cooperative Services. <http://documents.crinet.com/AgSource-Cooperative-Services/Learning-Center/holsteinsbyherdsize408E.pdf> Accessed February 25, 2009.

Figure 2. Increase in PM (percent) from first to second and second to third lactation for three groups of cows.

Lactations	By Breed	By Herd Size	Subject Dairy
1st to 2nd	19.9	19.7	23.5
2nd to 3+	4.8	3.6	5.7



Ratio	
A+B	C+D
602	391
591	398

Pulsator Analysis: A Tool for Diagnosing Pulsation

Pulsation is a key component in the milking system and the force which drives the interaction between your cows and the milking machine. So it's important to have the ability to recognize when your pulsation system is running correctly or when improvements need to be made.

Lauren AgriSystems stepped out of the traditional pulsation analysis box and created a spreadsheet that allows the user to easily identify where a pulsation system stands overall, and where each pulsator is performing within it. Pulsation recordings can be manually entered or uploaded from certain devices to the spreadsheet. Malfunctioning pulsators are then flagged which makes them easily identifiable and simplifies the process of diagnosing a pulsation system. The tedious work of looking over individual pulsator recordings one at a time and the uncertainty of which pulsators are good or bad is virtually eliminated.

Total	A	B	C	D	Ratio		Pulsation Spreadsheet Example: Double 6 Parlor											
Average	97	502	154	243	60	40	Side #1 Phases				Ratio		Side #2 Phases				Ratio	
Stations	A	B	C	D	A+B	C+D	A	B	C	D	A+B	C+D	A	B	C	D	A+B	C+D
1	100	502	150	241	602	391	95	508	150	246	603	396						
2	100	491	151	247	591	398	97	503	150	242	600	392						
3	89	511	151	249	600	400	98	499	150	252	597	402						
4	97	506	151	246	603	397	97	503	149	251	600	400						
5	95	506	153	245	601	398	94	506	182	218	600	400						
6	101	497	157	245	598	402	106	494	151	239	600	390						

Pulsation settings are vital to milking and need to be evaluated on a regular basis. Getting regular pulsation readings is just the first step in monitoring pulsation. Analyzing pulsation readings to know what type of maintenance to perform on individual pulsators is the next step. This is where you can save time and money with ParlorPro. If you would like to find out more about this spreadsheet and other tools to manage dairy information, visit www.parlorpro.com, or call your local Lauren AgriSystems Rep.

New Additions: Lauren AgriSystems welcomes three new dealers to our ever growing dealer family!

Holstein Supply
 Dumas, Texas
 806-934-0132

Giles Dairy Service
 Springville, Utah
 801-489-0460

Valley Farmers Co-Op
 Athens, Tennessee
 423-745-0443



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