



Technical Services Global Newsletter

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Technical Services Mission:

To support ABS Global products, people, and services in a manner that provides direct income for shareholders while maximizing customer profits

Monthly TS Highlight



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Hello from ABS headquarters in DeForest. It is a pleasure to be the highlight for the Technical Services Global Newsletter. ABS Technical Services strives to provide up-to-date technical expertise and quality support to our field staff and valued customers. I am excited to join the team and be a part of this effort.

As a Technical Service Consultant, I use my background and bilingual skills to work with key customer visits and training programs with an emphasis on reproduction, synchronization, and heat expression. Globally I am involved in developing our RMS® program in Puerto Rico, and supporting our business in Chile and Mexico.

Originally from Bogotá, Colombia I earned my D.V.M from the Universidad Nacional De Colombia and went on to obtain an M.S. from Utah State University. Just prior to joining ABS I completed my Ph.D. in Reproductive Physiology from the University of Wisconsin-Madison.

My wife and I have two daughters. When we are not busy with work and running our family restaurant, we relax with friends and family.

Hopefully I will have the opportunity to meet and work with many of you during my career at ABS. Best Wishes to All!

Want to contribute next month?

Contact Angela Storch (astorch@absglobal.com).

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2005 Western Dairy Management Conference Session – RMS Highlight

By: [Angela Storch, MS](#)

Over 80 producers, dairy industry consultants, and ABS and Balchem personnel joined the ABS Global Technical Service Team and Balchem Corporation for a pre-conference symposium in conjunction with the 2005 Western Dairy Management Conference. The purpose of the symposium was to increase awareness and knowledge on factors affecting dairy reproduction and highlight the value of improved pregnancy production and dairy profitability.

This newsletter will highlight Dr. David Prentice's presentation on the RMS® advantages of improved reproductive performance and dairy profitability. Look for further WDMC symposium coverage in the upcoming newsletters.

In December of 2002, ABS began to work with a 2500+ cow dairy which had recently converted to A.I. breeding after Trichomoniasis was diagnosed in their natural service program. Both pregnancy inventory and rates were closely monitored as the RMS program got underway and necessary management changes were made to improve cow



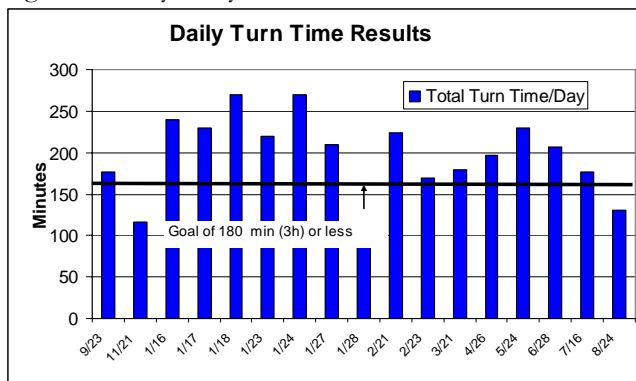
flow. Additionally, with the assistance of the herd veterinarian, a synchronization program was implemented to ensure animals received their first insemination by 90 days in milk (DIM) and were promptly re-inseminated after being found open on herd check.

Performance improved, but not to the desired goal. In the spring of 2003, diagnostic testing was completed. Positive results for Leptosirosis (L. Hardjo-Bovis) initiated the implementation of Spirovac® vaccine and LA200 for dry cow treatment. BVD Type 1 and II comparative serology also indicated type II BVD was likely linked to reduced fertility and increased pregnancy wastage. These results prompted a change from a killed to a modified live BVD vaccine as well as a more stringent biosecurity program for incoming herd replacements.

Synchronization compliance, heat detection accuracy and cyclicity are monitored through blood progesterone tests to ensure service efficacy. ABS personnel accuracy (100%) and compliance with synchronization shots (93%) surpassed goals of 85% and 90% respectively.

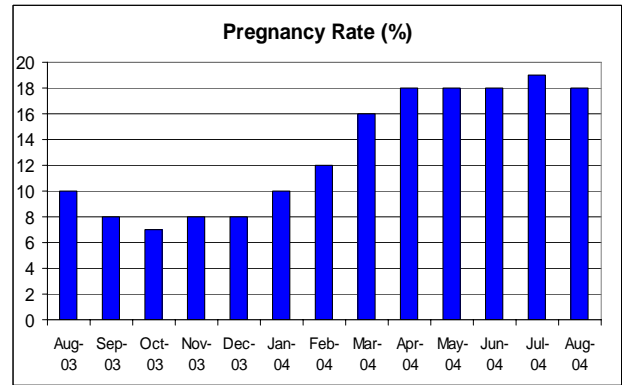
Currently, ABS personnel proactively monitor and track different management factors (cow comfort, cud chewing, manure and body condition scores, etc.) reporting any changes that may impact repro performance back to the dairy managers. For example, excessive time on concrete from extended turn times can negatively impact hoof health and heat expression. The dairy improved efficiencies and cow flow to achieve total turn times well within goal range (see Figure 1).

Figure 1: Dairy Daily Turn Time Results



Due to the RMS and dairy management team effort, pregnancy rate (PR) improved over 8 percentage points (see Figure 2). With the value of 1% improvement in PR at \$20-\$23 per cow per year (Overton 2003), the dairy has improved profitability approximately \$184 per animal which is from improved pregnancy production resulting in improved milk flow and young stock additions.

Figure 2: Dairy PR August 2003 to August 2004



The improved reproductive performance was a result of time, diagnostics and key protocol changes. Developing goals with the dairy's reproductive and observation data helps the producer and management team benchmark reproductive performance and intervene with solutions when needed. Ultimately, the dairy will optimize and realize profitability from their quality reproductive program.

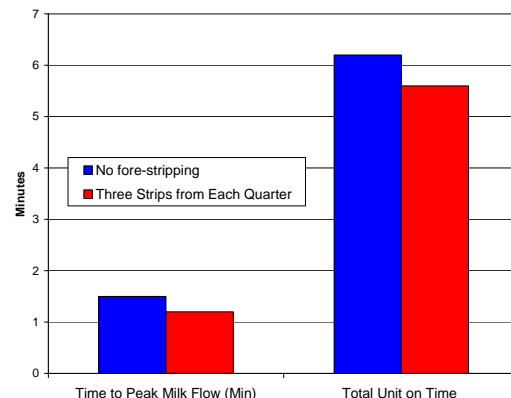
Effects of Fore-stripping during Pre-milking Prep

By: [Kylene Anderson](#)

The decision to fore-strip or not fore-strip cows is a subject that presents much debate in parlor management. At the 2005 NMC Annual Meeting, this topic was covered by several industry experts.

In a presentation by Ynte Schukken of Cornell University, milk flow characteristics were evaluated comparing minimal udder preparation to three strips taken from each quarter. In the study, while prepping the udder, all cows' teats were disinfected and the time from disinfection to unit attachment was 90 seconds.

The key difference in the preparation was the use of fore-stripping. The advantage in fore-stripping can be seen by the reduction in time to peak milk flow and total unit on time¹ (see figure below).



In a separate presentation by Dr. David Reid and Terry Battcher of Bou-Matic, the impact of fore-stripping was evaluated in comparison to cows that had not been previously fore-stripped in the milking preparation (Table 1 – results)².

Table 1

	Average Lbs./Minute	Peak Flow Lbs./Minute	Seconds Low Flow
No Fore Stripping	6.45	7.07	62
Fore Stripping	6.92	9.02	44

Reid and Battcher further mentioned the use of adequate pre-milking preparation could allow the automatic take off settings to be adjusted to improve the milkability of the herd by reducing the total milking time. This would result in healthier teat ends and improved overall udder health.

In addition to benefits presented at NMC, it is commonly supported that fore-stripping will aid in:

- Early mastitis detection
- Loosening of organic matter on teats
- Increase teat contact time for more oxytocin letdown

Each dairy management team, depending on parlor size, design, herd size, and willingness to train milkers, needs to make appropriate management decisions on how to implement fore-stripping into the milking routine. For more information in the steps of good milking preparation, please refer to the “Milk ‘Em for All Their Worth” video available on CD by contacting ABS customer service (1-800-ABS-STUD).

References:

- ¹ Schukken, Y. H., Petersson, L.G., Nydam, D., Baker, D.E., and the FAME team. Using Milk Flow Curves to Evaluate Milking Procedures and Milk Equipment. NMC Annual Meeting Proceedings (2005)
- ² Reid, D.A., and Battcher, T. On-Farm Evidence of the Rold of Fore-Stripping in Pre-Milking Hygiene Routines. NMC Annual Meeting Proceedings (2005)

Level of Milk Production and Multiple Ovulations in Lactating Dairy Cows

(Adapted from Lopez, H. et al (2005) J. Dairy Sci. 88:2783–2793)

The study objective was to evaluate factors associated with spontaneous multiple ovulations in lactating dairy cows. Ovaries of cows [n = 267; >50 days in milk (DIM)] were evaluated weekly using ultrasound to determine spontaneous (i.e., no

hormonal treatment) ovulation rate starting at 50 DIM and continuing until pregnancy diagnosis. Cows were fitted with a transmitter to record standing activity during estrus, and serum progesterone concentration was assessed weekly starting at wk 1 postpartum for all cows. Overall, 76 (28.5%) cows were anovular and 191 (71.5%) were ovular by 71 DIM. Incidence of anovulation was not associated with level of milk production but was associated with lower body condition. For anovular cows (n = 41) that spontaneously recovered, the multiple ovulation rate at first ovulation was 46.3%. For second and subsequent ovulations (n = 463), the level of milk production for 14 d preceding estrus was associated with increased ovulation rate. To illustrate, incidence of multiple ovulations was 1.6% (2/128), 16.9% (32/189), and 47.9% (70/146) for ovulations when cows were producing <35, 35 to <45, and ≥45 kg/d, respectively.

Author (Lopez, H.) Comments:

If milk production is increasing in your herd, it is likely double ovulation rate will increase and eventually you might observe an increase in the number of twins born (particularly for cows producing > 90 lbs/d of milk near the time of breeding). The following proactive management practices can be incorporated:

- **Routinely evaluate for twin pregnancies at vet check on all cows or specifically high producers.** Twin Bearing cows are at higher risk for dystocia due to malpresentation. A prior diagnosis of twin pregnancy is valuable in alerting producers to cows more likely to encounter problems at calving.
- **Adjust the nutritional management of twin bearing cows prior to calving.** Twin bearing cows have greater energy needs during the latter part of gestation.
- **Adjust calving dates for twin bearing cows.** Twin bearing cows calve earlier and excessive body condition loss is common; ensure they spend enough time in the close-up pen.
- **Implement a system to monitor and treat cows that have calved twins.** Twin bearing cows are at a higher risk for post-partum problems.

Monitor Reproduction with Blood Progesterone Testing

By: Hernando Lopez, PhD

Managing a successful artificial insemination program includes not only time, technique, and expertise but also monitoring to maximize results.



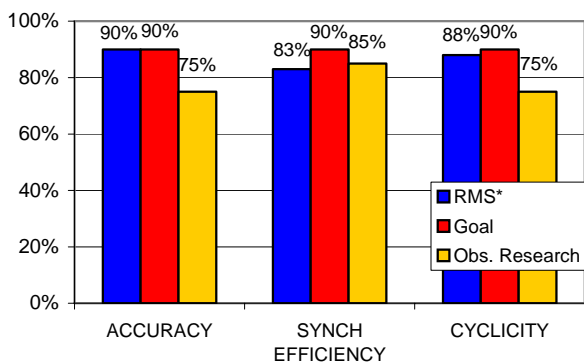
Blood progesterone concentrations can be used to evaluate heat detection accuracy, synchronization efficiency, and animal cyclicity.

Inaccurate heat detection is costly. Research has estimated between 5 to 25% of cows are not in heat when inseminated and in some problem herds this number can be as high as 60%. Additionally, low heat detection accuracy can increase the incidence of pregnancies lost because insemination of pregnant cows can induce embryonic death or abortion. In general, a heat detection accuracy of 90% is an acceptable goal.

Monitoring synchronization protocol efficiency can be challenging. To obtain good efficiency requires all protocol injections to be administered correctly and given at the appropriate times. In practice, it can be difficult to track compliance on injections. However, according to university research, when the protocol is correctly applied, a synchronization rate ranging from 80-90% can be obtained for Ovsynch and Presynch-Ovsynch protocols. This number can be used as a reasonable goal to evaluate synchronization efficiency of the protocol in your herd.

The negative impact of anovulation on reproductive efficiency is well known. Non-cycling cows do not conceive and might not respond to synchronization protocols delaying the occurrence of first ovulation. Although they do not ovulate, some show heat and might be inseminated, resulting in a considerable loss of semen and labor. Research has reported between 15 and 25% of cows are non-cycling by 45 to 70 days postpartum. A high incidence of non-cycling cows is associated with poor timed breeding results. In general, a percent cycling of 85-90% is an acceptable goal.

Figure 1: Blood Progesterone Testing Results for RMS dairies, Goals and Observed Research.



*Routine monitoring of RMS® dairies (n=782) has assisted ABS customers in improving their heat detection accuracy, synchronization efficiency and cyclicity to high levels.

ABS Global Technical Services offers blood progesterone testing for use in reproductive management and monitoring. For more information regarding sample collection, submission and charges, contact ABS Technical Services:

absconsulting@absglobal.com

1-800-356-5331 ext. 1427 or 1426

Visit on the web:

http://www.absglobal.com/tech_serv/resources/dairy/reproductivevmanagemnt.phtml

References available upon request

DC305 Online Training

By: Angela Storch, MS

Dairy Comp 305 is a powerful dairy records management tool used by many dairy producers to record, monitor and manage on-farm data and implemented changes. The University of Minnesota College of Veterinary Medicine Outreach Program currently offers introductory and more advanced online DC305 training in reproduction and somatic cell count data management.

Participation in the online DC305 allows ABS to better understand program basics and strengthen the support level and assistance we can provide to our customers. To date, over 45 ABS individuals have participated.

ABS continues to research and develop new training opportunities in an effort to provide avenues for continued education of ABS field staff and representatives.

For more information on the DC305 online training:

http://www.cvm.umn.edu/outreach/events/dairy_comp305

