

The BovLine

From the desks of C.J. Johanns, DVM, MS & A.M. Daniels, DVM Ames, IA phone (515) 292-3815

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Matters of fact:

- New Zealand is first in butter consumption at 26 lb/person/year. The US spreads on 4.6 lb/person/yr
- There are an estimated 920 different cows breeds in the world
- Cows can detect odors up to five miles away
- There are approximately 350 squirts in a gallon of milk
- Cows can see color
- A cow's heart weighs about 5 lbs and pumps 400 pints of blood through the udder to produce one pint of milk
- The estimated cost of one case of milk fever is \$334, retained membranes \$300, and ketosis \$145.
- October 1st marks the 25th Anniversary of service to Midwest dairy producers by Dr. Johanns -

Congratulations!

Post-Partum Benchmarks

- Displaced abomasums <3%
- Ketosis <2%
- Milk Fever <6%
- Retained placentas <8%

Welcome to our first newsletter!

We hope that you enjoy this first issue of *The BovLine*. The purpose of writing and distributing a newsletter is to inform our clients of new ideas, information, products, research, and techniques in the dairy industry. Topics that will be covered include health, reproduction, nutrition, housing, milk quality, research updates and economics. Regular columns that will appear in each issue will be John's Corner, a section devoted to educating clients on this devastating disease, and On-Line, a section to assist and direct your internet activities. Be sure to let us know what you think about our newest service —

The BovLine!



Health - Managing the Post-Partum Dairy Cow Minimizing the costly effects of the "Post-Partum Disease Complex" requires close observation and rapid intervention during the first 10 days fresh.

The post-partum period is a time of dynamic change for a cow. After delivering a calf, her ration, herdmates she is grouped with, and daily routine suddenly change. Her metabolic needs also change; the demand for energy and calcium increase, she loses body condition, and her uterus contracts. Milk yield increases dramatically after calving, peaking around seven weeks post-partum. Increases in dry matter intake lag behind the rate of increasing milk yield and peak near 12 weeks post-partum. This lag results in

an energy deficit, which the cow responds to by mobilizing body tissue to supply the remaining energy needs for milk yield.

The "Post-Partum Disease Complex" consists of ketosis, hypocalcemia, metritis, retained placenta, and displaced abomasum. All these diseases are related to each other as a cause or effect of the other.

Published research has shown that when lactation number and season of calving is controlled, 62% of the variation in cumulative 120-day milk yield can be predicted using the first five-

On-Line



We can be reached on-line @
cjohanns@ames.net or amdaniels@ames.net

Dairy-L is an internet discussion group for those interested in the dairy industry. Subscribers send in questions and other subscribers send back input. It is a free service. To subscribe send a message to:

listserv@umdd.umd.edu

in the body of the message write "subscribe". You will be mailed back messages confirming your subscription and directions on how to use the list.

Check out these websites:

www.agrisurf.com (the farmer's search engine)

www.dairy.nu (dairy futures, dairy hedging and more)

www.moomilk.com (dairy education fun site)

www.inform.umd.edu (the national dairy database full of up-to-date dairy publications)



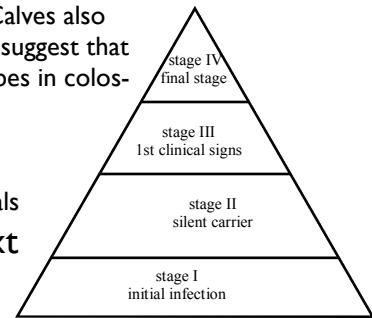
Research Update

Are you using oral calcium chloride gel on fresh cows? A study in the July 1999 issue of *The Journal of the American Veterinary Medical Association* reports that using products containing 50 grams of calcium may be inadequate. Calcium gel given 24 and 48 hours after parturition did not have significant effect on blood mineral concentrations, parturient disorders, reproductive performance, and milk production in dairy cows with retained fetal membranes. Our recommendation is to administer 100 grams of calcium when using these products, as this dose has been shown to increase blood levels.

Johne's

Corner The basics

Johne's disease was identified more than a century ago, yet remains a common and costly infectious disease affecting the intestinal tract. Johne's disease should be considered a herd, not an individual animal, problem. Animals most commonly affected are cattle, sheep, and goats, although wild ruminants, non-ruminants, and non-human primates have been reported as being infected. Johne's disease is caused by a bacterium named *Mycobacterium avium subspecies paratuberculosis*. It is a distant relative of the bacterium that causes tuberculosis in humans. The bacteria grow and multiply inside the immune cells of animals. Once excreted in the feces, the soil or water can become contaminated. Because Johne's is a slowly progressive infection, signs of the disease may not be seen until years after initial infection. These signs include long-lasting diarrhea and weight loss despite a good appetite. Affected cattle generally do not have a fever but appear weak and unthrifty. The bacteria are taken up by cells in the small intestine. As the body tries to rid itself of these bacteria, the immune response causes a thickening of the intestinal lining, preventing it from functioning normally. As a result, poor absorption of nutrients and eventual diarrhea result. Stages of Johne's disease are diagrammed below. For each animal in stage IV, 5 to 15 other animals are estimated to be at various stages of infection on the farm. The most common source of infection is manure. Most infections begin during the early months of a calf's life. Ponds and troughs contaminated with infected feces are another source of infection. Calves also contract Johne's from infected colostrum and milk. Studies suggest that 36% of stage III and stage IV cows could have Johne's microbes in colostrum. Becoming infected before birth is possible. Studies have shown that in disease stages III and IV in the dam, 8 to 40% of their fetuses were infected while in the uterus. Early detection of Johne's positive animals is an important step in managing this disease on dairies. **Next issue —Tests for Johne's**



is is-

Health cont.

day average milk yield. Therefore, the goal of any post-partum program should be to maximize the potential for milk production by keeping the cow at the feed bunk and aiding future reproductive performance by stimulating rapid uterine contraction. Cows with any difficulties should be identified as early as possible within the first 10 days post-partum.

The program in Table I was put together by a veterinarian in California for use in large dairies. The concepts are good and can be applied for use in small dairies as well.

This program is designed to serve as a guideline of treatment approach. By treating cows with problems in a systematic manner, one can customize protocols to suit the management style and response of the cows to treatment. Be sure to read drug labels and observe withdrawal guidelines.

Investing time, labor, and supportive care during the critical first 10 days post-partum pays off.

Table I

	Has fever (> 102.5° F)	Normal temperature (< 102.5° F)
	looks sick	looks OK
1st day	treat for 3 days with 1 drug from each group <ul style="list-style-type: none"> •uterine contractors •fever reducers •energy providers •calcium source •systemic antibiotics 	treat with 1 drug from each group <ul style="list-style-type: none"> •uterine contractors •fever reducers •energy providers •calcium source •No antibiotics!
2nd day	repeat treatment	if fever persists, repeat above but add antibiotics, repeat for 3 days if normal temp, recheck the following day
3rd day	repeat treatment	same as day 2
	calcium source	oral calcium drench or gel, IV calcium gluconate (Rx)
	energy providers	IV dextrose, oral propylene glycol drench or gel
	fever reducers	Aspirin boluses, Flunixin injection (Banamine) (Rx)
	glucose promoters	Predef 2X (Rx)
	systemic antibiotics	penicillin, ampicillin (Polyflex) (Rx), ceftiofur sodium (Naxcel) (Rx), ceftiofur hydrochloride (Excenel) (Rx)
	uterine contractors	ECP—I - 2 cc treatment only (Rx), oxytocin next 2 days (Rx)