Correct Storage Vital For Dairy Cattle Vaccines

In a way, dairy cattle vaccines are like milk. They don’t keep forever, and they certainly won’t retain their effectiveness if they’re not stored properly.

“Most vaccines should be stored at 35 to 45 degrees Fahrenheit,” notes John Maas, an Extension veterinarian at the University of California-Davis.

How do you know the correct storage temperature for a particular vaccine? Maas says it’s as simple as taking the time to read the label.

“Vaccines should be stored at the recommended temperatures from the time they’re manufactured until the time you use them,” Maas states. “Overheating vaccines can cause problems, because the proteins in them will break down and not produce the desired immune response.”

Letting a vaccine become too cold is another mistake.

“Worse than overheating, freezing vaccines will decrease their effectiveness even faster,” Maas warns.

He explains that 35 degrees on the low side and 45 degrees on the high side is a “strict range.” And that temperature range applies to both killed vaccines and modified-live ones.

“Almost all killed vaccines contain an adjuvant that aids in the immune response, as do some live vaccines,” Maas says. “High or low storage temperatures cause these mixtures to separate and lose their effectiveness.”

**GOOD REFRIGERATOR**

An important “tool” for storing vaccines within the accepted temperature range is a good refrigerator. While a fridge for vaccines need not be new, it should not be an appliance that’s just one step away from being recycled.

“It turns out that many of the refrigerators we use for storing cattle vaccines and drugs are cast-offs from some other use and may not be functioning properly,” Maas says. “A survey at the University of Nevada-Reno found that 25 percent of refrigerators failed to maintain temperatures to keep vaccines in the safe range, and most of the failures had to do with freezing the vaccines.”

Maas adds that the insides of some of these refrigerators were as cold as 10 degrees Fahrenheit, and they stayed at that coldness for extended periods of time.

“Many of the old refrigerators tend to freeze items stored in the back, near the coils, and overheat items stored near the front or in the door because the rubber seals no longer work,” the veterinarian says.

**BUY A THERMOMETER**

Figuring out whether or not the refrigerator you use for storing vaccines is within the proper temperature range is as easy as buying a thermometer that records minimum and maximum temperatures. See Storage on page 10.
This Professional Dairy Producer Always Looking to Improve

Tony Brey is a young, progressive dairy producer and partner in Cycle Farm Registered Holsteins, located in Sturgeon Bay, Wis. He and his parents, Bill and Clarice Brey, own 250 registered Holsteins and 200 heifers, and have an RHA of 23,000 milking twice per day. They crop 700 acres of corn, alfalfa and wheat.

In addition to the day-to-day dairying, Tony also focuses on the herd’s genetics. The herd had a breed age average (BAA) of 107.6 last year, which ranked Cycle Farm first in the nation for its herd size.

“Genetics is a strength of ours,” Tony says.

The Brey family has a reputation for using cutting-edge reproductive techniques. They use an Ovsynch protocol with either sexed semen or embryos in their heifers. All of the cows are registered, giving Cycle Farm additional income selling embryos and cattle.

Tony attends PDPW’s educational programs throughout the year. “PDPW brings in the best people from around the country to teach on relevant topics. And because it’s producer-driven, we get great ideas for content. I like that the people behind the organization are doing the same things that I’m doing every day,” he said.

Cycle Farm Registered Holsteins partners: Tony Brey, far right, stands next to his wife, Moriah, followed by his brother, Jacob, and parents, Bill and Clarice Brey.
Learning to Better Manage Price Risk and Opportunity

In his opening remarks at the PDPW Business Conference, Dr. David Kohl remarked that there is more opportunity for dairy producers in the next 10 years than there has been in the last 30. Adding that there also will be more risk than ever before, Dr. Kohl cited the need for dairy producers to protect risk and manage opportunity three dimensionally: on the milk side, the feed side and the financing side.

Commodity marketing is a whole new management area and a whole new layer of decision-making for most dairy producers. As we talk with producers about commodity marketing, there’s a recognition of the need to engage but still confusion about how to do it well. In fact, a recent Dairyline poll indicated that respondents, by a 2:1 margin, reject the use of dairy options and futures trading. Why the reluctance? And how can producers meet this new management challenge head on?

Here are three possible reasons for producers’ hesitancy, and our coaching to help you get engaged:

**Reason 1:** Lack of understanding/knowledge of how marketing tools work. Better to do nothing than to do it wrong.

Our response: It’s time to bite the bullet and learn. We agree with Dr. Kohl that volatility will bring unprecedented risks and opportunities. Volatility will largely stem from factors that impact milk prices—energy and feed.

We’re seeing more investment dollars flowing into these markets, increasing producers’ cost structure. The highs will get higher for milk, but we can still fall back to the same lows, despite a higher cost structure. Producers will need to be able to weather through these lows. There are ways to do it, using tools that help minimize loss in bear markets and maximize opportunity in bull markets. Knowing how and when to apply these tools takes knowledge that can be obtained from experience or from a professional advisor.

**Reason 2:** Bad past experiences. Perhaps you locked in milk before a market climb without reownership. Now you’re afraid to lock in a price because you might miss out on possible opportunity.

Our response: Learn from mistakes. Don’t give up. Once you learn how the tools work, you’ll see that there are a variety of strategies that allow you flexibility, so you can lock in prices to minimize losses, but maintain flexibility if prices go to profitable levels.

**See Opportunity on page 8**
The Professional Dairy Producers Foundation, which raises funds and awards grants for educational programs and initiatives, got a $12,150 boost for its dairy education programs thanks to seven items auctioned off live at the Professional Dairy Producers of Wisconsin Business Conference March 16 in Madison. The organization’s Silent Auction raised an additional $14,500 toward dairy education. That’s a total of $26,650 raised to help fund programs such as the Professional Dairy Producers of Wisconsin’s Youth Leadership Derby, mentor program and community education about dairying.

Topping the live auction at $3,700 was an elite genetics Holstein calf, Jenny-Lou Million 2069, purchased by Ripp’s Dairy Valley LLC of Dane, Wis. This young calf was donated by the Mitch Breunig family of Mystic Valley Dairy.

Other live auction items included:
- A GEA WestfaliaSurge Rotating Cow Brush that saw the gavel fall at $2,200 and was purchased by Warmka Holsteins of Fox Lake, Wis.
- 100 units of Semex semen with a tank, donated by Semex and AI24, that sold for $2,100 to Merry-Water Farms, Inc. of Lake Geneva, Wis.
- A Wisconsin Golf Package featuring gift certificates to five of Wisconsin’s premier golf courses auctioned off for $1,800 to DIC-Wisconsin Farms, Inc. of Dorchester, Wis. The package was donated by the five participating courses, plus AgStar, Stewart-Peterson and Diamond V Mills.
- A Door County Walleye Trip donated by ANIMART that sold for $1,000 to Maple Ridge Dairy, Stratford, Wis.
- A Pheasant Hunt package found that final bid with Quality Liquid Feeds of Medford, Wis. for $650. This fun package was donated by Sharon Brantmeier of Ameriprise Financial and Don Meyer, Rock River Laboratory.
- A handmade quilt crafted by Karla Zimmerman was purchased by Badgerland Financial for $700.

JoAnn Maedke, Foundation board member and coordinator of the Live and Silent Auctions, had high remarks for donors and buyers.

“The Foundation is truly a blend of industry and dairy producers working together for future education,” Maedke stated. “I am extremely grateful to be part of an industry with such great cooperation and commitment to education.”

The Foundation was established in 2002 by Professional Dairy Producers of Wisconsin as a vehicle to raise funds and award grants for educational programs for dairy producers and the public. The Foundation is a 501(c)(3) organization. For more information, visit www.dairyfoundation.org.
Squeeze Out Every Last Drop

With tight profit margins for milk producers, maximizing feed efficiency is increasingly important. Feeding Levucell SC®, rumen specific live yeast, has shown to improve rumen health and enhance digestibility through its synergistic effect with beneficial rumen bacteria.

Improved digestibility means the cows are getting more nutrients from their feed!

Levucell SC Improves Feed Efficiency by:
- Increasing Fat Corrected Milk Yield
- Improving Fiber Digestibility
- Limiting the Risk of Acidosis

For more information, visit www.LallemandAnimalNutrition.com

After submission of an extensive research dossier with innovative data on Levucell SC, the Center for Veterinary Medicine of the FDA have agreed to allow an important functionality claim “to aid in maintaining cellulolytic bacteria population in the rumen of animals fed greater than 50% concentrate.”

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LALLEMAND ANIMAL NUTRITION
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The Capital Factor in Farm Business Management

For most farm businesses, capital is not an infinite resource. Each farm business has a specified amount of capital and a unique blend of capital allocation based upon enterprise type, operation size, investing and spending habits, profit objectives and future plans.

Capital is an important area to assess based upon the farm business’ past financial performance and its future plans.

In my last article, I introduced the concept of the “Five Cs of Credit”–Character, Capacity, Collateral and Conditions – and took some time to review the Character factor. In this article we will explore the second “C”: Capital.

While lenders typically analyze numerous ratios and indicators related to capital depending on the nature of the farming operation and the credit request at hand, this discussion will focus on capital decisions as they relate to farm business management from a practical, profit-driven perspective.

PERIODIC FINANCIAL STATEMENTS

It is essential to have a good recordkeeping system and to prepare regular financial statements, also known as balance sheets. These statements will allow you to monitor the unit’s overall financial position, to examine trends – including potential strengths and weaknesses–and to make informed decisions regarding capital resource allocation. Balance sheets are typically prepared on an annual basis, or more often such as quarterly or monthly depending on the nature of the operation.

WORKING CAPITAL

It is important for a farm business to build and maintain an adequate level of working capital.

Working capital is generally defined as cash and current assets that will be converted to cash within a 12-month period minus any payables and liabilities that require repayment within the next 12 months. Strong working capital levels allow a farm business to weather adversity and volatility, pay down debt ahead of schedule, expand or diversify the business, and allow greater flexibility in overall decision making.

The last two years have proven to be a challenging time for most areas of agriculture given volatile commodity prices and rising input costs. It is in these volatile times that cash is truly “king” and shows why it is so important for a farm business to build liquidity reserves during good times.

DEBT & LEVERAGE

As the old saying goes, sometimes “It takes money to make money.” Investing and borrowing decisions require the examination of many factors, including capital replacement or expansion needs, future plans for the business (phase down or get bigger, specialize or diversify), operational efficiencies, profit opportunities and so forth.

As another old saying goes, “Too much of a good thing can be a bad thing.” Thus, every farm business has a debt threshold in which too much debt will render the unit unable to generate a profit and repay the debt. Whenever additional debt is considered, it is wise for you to consult with the farm’s other key managers and a trusted financial advisor such as the farm’s lender to assist with a cost and benefit analysis of a proposed capital purchase and the subsequent debt load.

OPPORTUNITY COSTS

When considering capital allocation, it is prudent to not only examine the costs and benefits of a proposed capital purchase but also to analyze the “opportunity cost” of the decision. In other words, consider what opportunities the farm business will forego due to the proposed purchase.

For example, if the Jones Farm wishes to expand its land base and buy the neighboring 150-acre farm, it will tie up some of its working capital for the down payment, incur long-term debt to finance the purchase and increase its interest expenses and principal repayment obligations for the next several years. However, if the Jones Farm does not buy this parcel of land, what other investing opportunities might come into play over the next several years that would provide even greater opportunities for the business to fulfill its long-term objectives and increase overall profitability?

The moral of the story is that every capital purchase decision has a trade-off known as an opportunity cost that must be considered.

‘PLAN B’

Most capital purchase decisions are ones that will impact an operation for several
Delegates at the 26th Annual International Animal Health and Nutrition Symposium will explore and discuss sustainable strategies for the dairy industry such as, creating value by branding milk, promoting our good industry practices, using new strategies to protect our herds – the single most expensive investment on your dairy farm – and utilizing alternatives for reducing rising feed costs.

This year’s Alltech Symposium offers our industry the rare opportunity to learn from a unique group of speakers including: One of the top business leaders of the 20th Century, John Y. Brown Jr., so recognized by Harvard Business School, will teach delegates how to promote our image as we deliver healthy, traceable food. One of America’s greatest college basketball coaches, John Calipari, will share his 10 rules for bouncing back and creating a winning team. University of Illinois Professor Jim Pettigrew will be awarded the Medal of Excellence for his work that will move us beyond using grains.

For the full program, or to request an invitation, please contact your local Alltech representative, visit www.alltech.com/symposium or email us at symposium@alltech.com.

Delegates who are members of ARPAS and AAVSB will be able to earn CEUs.
Vaccination Programs
For Breeding Age Heifers
Begin Far Earlier

You have a big investment of
time, money and genetics in
your heifers. At breeding time
you're taking another step
toward getting a new crop of
calves from them.

But before those heifers are
bred, make sure they're on
schedule with their
vaccinations.

Most dairy farms no longer
vaccinate all their cattle each
spring and fall. Instead, producers increasingly
understand the importance of
keeping dairy animals of all
ages current with varying
schedules of vaccinations
throughout the year.

"In general, to prepare heifers
for breeding, we like to have
their vaccinations already
completed—or the final one
given—at 12 months of age, in
anticipation of breeding," says
Dr. Sheila McGuirk, a professor
of large-animal medicine and
food animal production
medicine at UW-Madison.

McGuirk says the foundation
of a vaccination program for
breeding age heifers is made up
of the "so-called 'five viruses'":
infectious bovine rhinotracheitis
(IBR), para influenza 3 (PI3),
both types of bovine viral
diarrhea (BVD), and bovine
respiratory syncitial virus
(BRSV).

Having heifers ready to get
vaccinations when they're 12
months old means making sure
their initial vaccinations were
given at the right times.

McGuirk recommends that
calves be given a round of
vaccinations when they are
three months old, with the
second round of vaccinations
administered a month later.

With those vaccinations in
place, heifers about to be bred
can be vaccinated one more
time, at 12 months old.
Following that kind of schedule,
McGuirk says, gives heifers
"three opportunities to
respond" and build up their
immune defenses.

Along with the five viruses,
McGuirk suggests vaccinating
dairy cattle against Lepto
hardjo bovis, the bacterium
that causes leptospirosis. She adds
that calves can face a challenge
from leptospirosis when they're
three or four months old,
depending on the level of
infection in a farm's herd

Many dairy producers
vaccinate against salmonella,
too. In young calves, salmonella
manifests itself as scours and
respiratory problems, McGuirk
explains, adding that "it can
also affect many bodily
systems."

Other diseases dairy
producers might want to protect
their cattle against include
Coliform mastitis, scours,
brucellosis and clostridia.

Most Wisconsin dairy
producers, McGuirk says, are
vaccinating their calves, heifers
and adult cows at the right
times and the right way.

"The things producers
sometimes fail at is getting in a
booster, particularly for BRSV
and lept. They require a
booster," the veterinarian
stresses.

"And then it's remembering to
come back before breeding and
emphasize getting a final shot

Opportunity
Continued from page 3
report recommend is a methodical,
step-by-step approach that builds
the best possible average
price for milk over time. This
approach differs from a
"shotgun" approach where you
commit a great percentage of
your milk at a given price and
hope that decision is a good
one. Selling in methodical,
smaller increments over time
increases the probability that
all of your decisions add up to
the best possible price over
the long haul.

Reason 3: Waiting for prices to
climb before I do anything.
Why "lock in" a loss now?
Our response: True, you do
not want to lock yourself into
a low price with no
opportunity to capture higher
prices if they become
available. That's why we design
strategies that help clients
establish a worst-case floor.
Then, we might use a tool like
options to be sure we are able
to take advantage of better
prices if they occur.

Because prices spend more
time below the generally
accepted mark of profitability
(see chart), it is important to
minimize losses during those
times, and capture as much
opportunity during the good
times.

Marketing is another frontier
of opportunity that has
opened up in recent years. To
capture that opportunity,
you'll need to commit time to
learning how to manage this
new frontier. Like all new
business opportunities, you
need to either become an
expert or hire one to help you
grow your expertise. Doing so
will position your dairy for
success long term.

Stewart-Peterson is a
corporate sponsor of PDPW
and a supporter of the
Professional Dairy Producers
Foundation. You can find more
educational resources at www.
stewart-peterson.com, or call
800-334-9779.

The Milk-Feed Ratio has
been above 3.0 only 33 percent
of the time since 1985. (3.0 is
the generally accepted
threshold for profitability.)
This underscores the
importance of managing your
marketing well, taking as much
profit margin as possible as a
cushion against the negative
months. Source: Stewart-
Peterson, Inc.

The data contained herein
is believed to be drawn from
reliable sources but cannot be
guaranteed. Neither the
information presented, nor any
opinions expressed constitute
a solicitation of the purchase
or sale of any commodity.
Those individuals acting on
this information are
responsible for their own
actions. Commodity trading
may not be suitable for all
recipients of this report.

Futures trading involves risk
of loss and should be carefully
considered before investing.
Past performance may not be
indicative of future results.

Matt Mattke, Market360® Advisor,
Stewart-Peterson, Inc.

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</tr>
</tbody>
</table>

See Heifers on page 10
Cow comfort equals productive and healthy animals. That’s why proper ventilation is so important. The right fans can save you energy and money while keeping your cows comfortable all year round. The wrong fans can cost you twice as much to operate, raising your energy costs and reducing your bottom line.

But how do you know which fans are “right” for your farm? Ask Focus on Energy. We offer technical assistance and financial incentives to help you select and install energy-efficient fans that are good for you and your cows. Call on us for tips and advice about:

- High-performance fan components
- High-efficiency motors
- Programmable fan controls
- Smart fan installation
- High-velocity, low-speed (HVLS) fans
- First costs versus operating costs

To learn more about how Focus on Energy can help you reduce energy costs and improve your animal’s health and comfort, call 800.762.7077 or visit focusonenergy.com.
Heifers
Continued from page 8
at getting things in them that might affect their reproductive efficiency.”

Once cattle have reached adulthood and have had their primary vaccinations and boosters, many vaccinations need to be administered just once a year.

“The trouble is, a lot of cows aren’t on an annual cycle,” McGuirk states. “A lot of cows have longer lactations than 365 days, so the vaccination management has to make sure that a cow is milking for 400 days, for example, is ready to breed again and also stays healthy when she goes into a different group.”

For farmers who want to administer some vaccinations on their own – but under a veterinarian’s supervision, McGuirk offers this advice. “It’s critical that people vaccinate on label. Administer it exactly as the label describes.

“If the label says to give it subcutaneously, do so to protect carcass quality. If the label says a booster is needed, make sure you do administer one.”

McGuirk adds that the label might state that the booster shot can be given two to four weeks later. However, she says she generally prefers to wait the full four weeks.

She also urges producers to “remember to limit the number of gram-negative bacterial components in a vaccine to two at one time” since they tend to cause problems with adverse reactions.

In any case, a vaccination program for calves, heifers and cows needs to be specifically tailored to each farm’s needs. That also means working closely with a veterinarian, McGuirk says.

“ It’s a critical thing,” she says. “A lot of people think there’s a vaccination template out there. But both the components and the timing of the program should be very strategically placed, because the goals are to have optimal immunity at the time these cattle are at risk or most challenged. It may depend on the farm. The agents or diseases we’re most concerned about will differ from farm to farm.”

By Ron Johnson

The foundation of a breeding-age heifer vaccination program is made of five viruses: infectious bovine rhinotracheitis (IBR), para influenza 3 (PI3), both types of bovine viral diarrhea (BVD), and bovine respiratory synctial virus (BRSV).

Storage
Continued from page 1
maximum temperature and placing it in the appliance. Maas advises leaving the thermometer in the refrigerator for several days, moving it to several locations, to check for cold spots and warm spots.

“These thermometers can be purchased for less than $20,” Maas says. “They’re made in electronic and magnetic form.

“Simply go on the web and type in ‘recording thermometers’ and browse the various offerings until you find one that suits your needs. Leave a thermometer in your storage refrigerator and monitor it from time to time.”

Directions can change
Many dairy producers have administered vaccines to their cattle for years and figure they know all about using and storing them. But Waldner says that might not necessarily be the case.

“There are many new products on the market that are exceptions with regard to frequency of administration and handling, compared to older, conventional vaccines,” he explains. “It’s important that all vaccines are handled and stored properly to maintain their potency. And always read and follow the instructions carefully.”

By Ron Johnson
PDPW’s Business Conference Provided
Wealth of Information For Producers
To ‘Imagine Dairy—Real Results’

If you weren’t among the 1,350-plus dairy producers from Wisconsin and other states who attended PDPW’s business conference March 16-17 in Madison, then you missed out on hearing numerous powerful speakers who delivered an abundance of information to help producers achieve real results. But, because PDPW’s mission is “to share ideas, solutions, resources and experiences that help dairy producers succeed,” here is a brief synopsis of just four keynote and specialty sessions conducted during the two-day conference.

Dr. David Kohl, business coach and president of AgriVisions LLC, a knowledge-based consulting business: During his presentation “Capitalizing on the Three O’s of Business Success: Optimism, Opportunities and Oneself,” Dr. Kohl pointed out that optimism should reign as agriculture is one of the new engines of growth and opportunity will be available to all sizes and types of dairy operations.

“One size does not fit all. You can be successful with any type of business model. The traditional dairy operation will survive,” he said, adding that successful dairy producers will need to take key steps for a bright future, including having a strong focus on business management, engaging consumers and special interest groups, making educational investments in themselves and maintaining a balanced lifestyle.

Addressing the “oneself” of his presentation, Dr. Kohl urged dairy producers to be proactive in their businesses, noting that producers must also be cognizant of the forces driving change in the industry and the choices producers make.

“Special interest groups and consumers will have a bigger effect on our industry than will government,” Dr. Kohl said. Ninety-nine percent of people communicating through social media, and thus influencing perceptions, are two generations removed from the farm, he said, underscoring the need for producers to reach out and engage people outside of the industry.

“Job one—talk to people outside of the industry,” he said. He believes that by being a leading voice for the industry, producers can help shape perceptions.

Dr. Janice Swanson, director of Animal Welfare at Michigan State University, shared insight regarding six advances in technology that can assist producers in continuously improving their herd health systems, which in turn benefits both the cow and the operation. The six tools discussed were 1) ice tags or pedometers to track the number of steps an animal takes during the course of the day to monitor exercise and activity; 2) thermography that can indicate swelling or inflammation the cow may be experiencing and help the herd manager treat the animal before injuries become a major issue; 3) force plates which help determine the weight of the animal without using large scales and shows if the animal is shifting her weight improperly due to lameness; 4) video observation so producers can

See Results on page 12
Results
Continued from page 11

view their animals and monitor activity from their office or home; 5) wireless accelerometers that attach to the cow’s leg and tracks her movement and activity; and 6) a backpack-type ice sampler that will automatically draw blood samples from livestock without the need to corral them or cause stress.

Michael Stolp of Northwest Farm Credit Services didn’t mince words in his “Family Business: Putting the Wheels Under the Bus” session.

“It’s time to stop acting like kid brothers, and start acting like business partners,” Stolp stated. He pointed out that family businesses include different perspectives based on whether people are owners, family members or employees and, as such, each person carries a different perspective about what the business is all about, how it should operate, what its priorities ought to be, where it should head in the future, etc. And, when families fail to recognize those different perspectives as just that—different, problems can arise.

“Different is just different,” Stolp said. “We’re not wrong just because we bring a different perspective to the business. But we have to be open and honest about this, and to realize there is a richness in the diversity we can bring together in family businesses.”

To get to the heart of individual differences and what makes—or breaks—each person in the business, Stolp encouraged people to examine their own behavioral styles according to the DiSC method that covers four key behaviors: Dominance, Influence, Steadiness and Conscientiousness.

After one identifies his/her style, Stolp said communication typically opens up. From there, people may develop a code of conduct. Unlike business by-laws or job descriptions, these codes Stolp has seen developed by families spell out how they will treat each other so that “family businesses don’t have to spin out of control.”

Another tip from Stolp was need to create a business history timeline with narratives for why certain achievements were milestones and what differences they made in the operation, as well as lessons learned. Doing this, Stolp said, can help the next generation of family members understand how and why certain changes in business are held in such esteem by their aging parents.

Stolp also encouraged family businesses to distill values such as honesty, integrity, industry leadership and fun in the business and to develop a consensus-based vision for the future.

“Remember, we’re all different, and that’s OK, he said.
Kevin Bernhardt with UW-Platteville and the UW-Extension Center for Dairy Profitability addressed risk management, particularly marketing milk and contracting inputs, and wanted dairy producers to understand one thing: “You don’t put money in your pocket from the milk price, but from the margin.”

“If you take the risk away, you’re taking opportunity away,” Bernhardt said. “That’s the way risk works, and the way risk management works.”

Bernhardt urged dairy producers to balance production management, cost management and marketing—and use marketing as a way to create margins between production and cost.

Bernhardt walked workshop participants through production and price histories on milk. From 1980 to 2003, the average price paid for 100 pounds of milk was $11.94. From 2004 to 2009, the average price was $14.69. He noted that, while it may appear that the average
With dairy producers being paid for pounds of fat and protein, evaluating the herd’s milk components has merit and may be more important than simply looking at pounds of milk produced.

Randy Shaver, UW-Madison Extension Dairy Nutritionist, explains that determining milk composition goals for a herd can be challenging.

“The pay prices per pound of fat, protein and other solids produced and the add-on premium per hundredweight of milk change over time,” Shaver states, “so the right milk composition depends on each herd and their current pay prices for each component.”

Shaver, however, stresses the importance of evaluating an individual herd and creating goals. He says the first step for stability of components is comparing your herd’s test with the breeder average, as seen in the adjacent table.

If the milk fat test values are considerably higher and the protein-to-fat ratio is lower than the set averages, feeding for an increase in milk production could help profits. Contrarily, if milk fat test values are lower or the ratio of protein-to-fat is higher, feeding more grain in hopes of increasing milk yield may adversely affect cow health.

Shaver acknowledges these protein-to-fat ratios as a benchmark for producers to work from.

“If the butterfat is very high, there may not be enough starch or grain in the herd’s diet to support normal rumen function,” Shaver states.

With difficulty in determining the short-term economic piece of the components puzzle, feeding for healthier cattle generates the most income in the long run. Luckily, the ration for cow health is somewhat synonymous with the diet for balanced fat and protein yields.

“First, you need a well-balanced diet,” Shaver encourages. “Work with a nutritionist to put together a diet that will keep cows healthy by creating the right balance of fiber and carbohydrates. Keep the rumen healthy and dry matter intake up (a good rule of thumb is 3.5 to 4 percent of the cow’s bodyweight), and the milk components should follow.”

Still, examining a ration deficiency could lead to the source of a milk component shortage.

The diet may affect milk fat production the most. Forage percentages and particle size, after-feeding sorting and level/source of supplemental fat in

See Rations on page 14
Rations  
Continued from page 13  
Continued from page 13

"Forages that are chopped too finely and rations without adequate coarse particles lack the effective fiber necessary to stimulate cud chewing and saliva flow for buffering rumen acidity, which can result in reduced milk fat test," Shaver says.

"Rations that contain high levels of supplemental fat—or if the supplemented fat is from sources high in unsaturated fatty acids [such as distiller's grains], it can cause milk fat test depression."

A balanced ration, however, does not end with butterfat production. Beyond dietary starch content and digestibility, milk protein is affected by the content of crude protein in the ration and the rumen degradability of fed protein. To maximize this component, rations should to be formulated for adequate crude and rumen proteins and evaluated for amino acid status.

Symptoms of an unbalanced diet go far beyond the milk check. Laminitis and acidosis can and roper dp rof i t so ove rti m e , with lost cattle and decreased production. Plus, a ration with inadequate forage can result in breeding problems, mastitis and immobility.

"The message really is finding that balance for your herd," Shaver states. "If you keep an eye on prices, the diet can be tweaked for the higher-valued component, but finding the balance again is like walking a tight rope."

"Feed for healthy cattle, and the components should come."

By Jeffrey Hoffelt
The New Dual Chamber Cow Waterbed totally cushions the cow as she goes to the laying position.

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And Waterbeds Last & Last & Last & Last For Years!
Safety
Continued from page 14

Tinnitus—ringing in the ears—can show up long before you notice hearing loss. While ringing is the most common sign, tinnitus may also show up in the form of chirping, clicking, hissing, roaring or whistling sounds, according to NIOSH. Tinnitus or hearing loss, visit a health care provider to have your hearing tested as soon as possible. Once you lose your hearing, it is impossible to get it back.

If you’ve been meaning to replace worn, loose or unbalanced machine parts, this may be the best time to do so. Fixing equipment as well as keeping it well lubricated and maintained helps to reduce equipment noise.

NIOSH also recommends you “make hearing protection convenient.” For example, get in the routine of putting a pair of earplugs in your pocket when you get dressed each morning. If you’re working in the fields, hang your earmuffs on the machinery’s steering wheel so they’re waiting for you when you start the day.

Tips for selecting and using hearing protection include:

• Everyone’s ears are different, and one size does not necessarily fit all. Make sure you can fit at least half the earplug into your ear and that it stays firmly in place. If it doesn’t, you should get a different size earplug.

• Make sure your hands are clean when putting in your earplugs. Dirt, grease and grime can irritate your ears. If you’re in a place where you can’t wash your hands, earmuffs or pre-molded plugs are probably your best bet.

• You know your earplug is inserted properly if your voice sounds deeper or louder.

• When you’re done with your earplugs, twist them slightly to break the seal and remove them safely from your ears. You can cause damage to your ears if you just pull on them without breaking the seal.

Farming is certainly filled with more hazards than the average occupation. However, taking just a few minutes to practice these simple steps to prevent sun damage and hearing loss can help eliminate some of the risk you face from day to day.

By Andrea M. Bloom

Summary
Continued from page 12

price paid for milk has jumped to a new high, there is only five years of history to tell whether it’s a true increase or just a shifting up. “If the average has jumped, then the volatility around this price has also jumped,” Bernhardt said. His Class III milk price charts bore witness: Since 2004, milk prices have ranged from a high of nearly $21 for 100 pounds and a low of just over $9 for 100 pounds.

Adding that producing milk takes a lot of inputs and the greater costs for dairy farmers—whether they buy it or grow it themselves—is feed for their cows, Bernhardt tracked corn prices from 1866 to 2009. This look backwards showed 20- to 30-year periods of rather stable prices for corn combined with fluctuation and periodic market corrections in which the average price moved upward. The period ending around 2005 showed nominal corn prices averaging about $2.50 a bushel. Since then, that price has jumped to $4.13 a bushel.

“Is this an anomaly or is it a new average?” the agricultural economist asked rhetorically. “It depends on what happens in the next couple years.”

The futures market, Bernhardt said, allow producers to manage their exposure to pricing risks—to lock in their prices for milk as well as their prices for inputs. He encouraged producers to do so on both sides of the ledger, realizing they also need to be able to live with the fact that they won’t always be buying at the lowest price nor selling at the highest price.

“If you’re going to put price security on the milk price side, a good marketer also needs to look at the input or cost side of the operation,” Bernhardt said. The risk management specialist said management does matter for today’s successful dairy producers, and that requires a knowledge of marketing.

“And if you’re going to do marketing, make sure it’s a part of—not all, but a part of—your management,” he added. “Will you always get better than the cash price offered for milk when you’re using futures? No,” he stated. “But, you have to remember, it’s the margin between that price and your inputs that counts. That’s where you make your money.”

More complete information about these and the many other keynote and specialty sessions at PDPW’s 2010 Business Conference is available online at www.pdpw.org. Just click on the “PDPW BUSINESS CONFERENCE—Press releases recapping the event” link and take your pick of topics.
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MUeller
The Dairy Cow’s Time Budget and Cow Comfort – Part 1

Life in a freestall environment presents the cow with many challenges, and understanding the stresses on the dairy cow’s time budget helps us understand the impact of poor cow comfort.

The dairy cow is a workaholic. She spends much of her life operating at three times the energy cost of maintenance—something humans only approach while performing strenuous physical activities on a par with jogging six or more hours a day or competing in the Tour de France—and the dairy cow operates at this level for a lifetime. So, if our cows make Lance Armstrong look like a “couch potato,” it seems reasonable to examine her daily requirement for food and rest so we can make sure we are providing for her needs to accomplish her goals.

Certain components of the cow’s day are fixed and non-negotiable:
1. The cow has to spend a large proportion of the day eating to fuel the large fermentation vat she carries around with her. The TMR-fed, freestall-housed dairy cow eats for an average of 4.5 h/d.
2. She needs to drink around 25 gallons of water per day—more in hot climates—and she will spend an average of 0.5 h/d at or around a waterer.
3. Milking time is usually spent outside the resting area in all but tiestall herds, and, in 17 Wisconsin herds milking 2-3 times a day, the average cow spent 2.7 h/d out of the pen milking.

With these fixed non-negotiable time slots, 7.7 hours have been taken out of the cow’s time budget, leaving less than 17 hours remaining in the pen. Time left in the pen will be spent performing three activities: lying down, standing in an alley and standing in a stall. The average freestall cow spends 2.0 h/d standing in an alley socializing, moving

See Comfort on page 20

Figure 1. Association between last recorded DHIA milk yield (lbs) and daily lying time (h/d) for 250 time budgets from 208 cows in 17 herds.
Just as spring field work is beginning, dairy farmers will want to keep an eye on what is taking place in the State Capitol. It won’t be easy because, while the final floor sessions of the 2009-10 Legislature are taking place in April and May, bills being debated and voted on are the ones of great importance to the dairy industry.

According to the Legislative Session scheduled final legislative floor periods are set for April 13-22 and May 4-6 (for “limited business” only).

Specifically, the following are measure impacting use of water and impacts on water quality and quantity—especially groundwater:

**GROUNDWATER PROTECTION BILLS**

The Groundwater Protection Bill, AB 844, (SB 620 is the companion bill) was introduced on March 12 by Senator Mark Miller (D-Monona) and Rep. Spencer Black (D-Madison). AB 844 was assigned to the Assembly Committee on Natural Resources, which held a hearing on this bill March 31.

A hearing on SB 620 has also been held by the Senate Committee on the Environment. These bills (AB 844 AND SB 620), if enacted into law, would fundamentally revise the state’s groundwater law.

Attorney Jordan Lamb, legal council for PDPW, put together four main points of concern about this measure. They include:

- Transferring power from the Legislature to an unelected subcommittee of the unelected Groundwater Council to designate an area as a “groundwater management area” with only passive legislative review. Lamb said designating such an area “should be done by statute.”
- Grants counties (or groups of counties) the power to regulate groundwater and surface water through groundwater management plans that are subject to legislative or administrative rule review. Lamb emphasizes, “the power to regulate groundwater and surface water uses is a power that belongs at the state, not at the local level.”
- Allows “any person” to file a petition with DNR requesting environmental review of a proposed high-capacity well that may impact a surface water. That person does not have to have any connection to the well or the property or the watershed. “This is a dangerous precedent that could expose Wisconsin farmers to expensive and burdensome legal challenges,” Lamb said.
- Eliminates protection for existing high capacity wells. This bill grants DNR the authority to modify the approval of an existing high capacity well. “This is a fundamental shift from current law, under which existing high cap well approvals remain in effect indefinitely as long as they are compliant with the approval terms and with state law. This is, in effect, the retroactive application of a law onto existing high cap wells,” Lamb pointed out.

SB 632—Another bill, introduced on March 18, is Senate Bill 632. The lead author of this bill is Senator Dave

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“Every day farmers are faced with making decisions that affect their operation and its profitability. Often times saving energy does not rise to the top of their priority list,” says Rich Hacker, Focus on Energy Sector Manager.

Focus on Energy’s no-cost services include expert assistance and energy assessments to identify energy efficiency opportunities, technical expertise to help select and implement cost-effective projects and practices as well as financial incentives to help cover the costs of energy-saving equipment upgrades.

“Wisconsin has had a long history of energy-efficiency programs dating back to the 1980s. Many of the Focus staff have been through the ‘highs’ and ‘lows’ of public interest in energy efficiency,” says Hackner. “The difference today is that more people realize that energy prices are going up, that supplies can be disrupted and that the best way to hedge against price and supply uncertainty is to better manage how they use energy.”

The Craves, like other energy-conscious dairymen, have taken advantage of programs such as Focus on Energy that offer financial assistance for implementing energy-saving practices. They received aid from utility companies and other sources to install a manure digester on their farm.

“We knew it would help with environmental management, odor control and nutrient management,” Crave says. “We would also benefit in marketing the cheese product. The timing was right when expanding the rest of the farm.”

The digester heats all other buildings on their farm, including the cheese factory, and offers great returns for the Craves. They use the digester’s liquid byproducts as fertilizer on fields and the solid byproducts as bedding and in a line of organic potting soil.

“Check tax codes and grants, make sure you have the right people working with you,” Crave states.

“These aren’t everyday topics. It’s not our every day field. We need to ask the experts.”

Focus on Energy provides information on new technologies, education, training and assistance with construction and energy efficient designs in addition to renewable energy resources. An expert will come out to the farm to discuss facility operation, examine systems and equipment and evaluate energy usage to estimate energy savings and find ways to reduce costs. Following the assessment, you get a report of the findings, list of recommendations and summary of supporting Focus on Energy financial incentives.

“Start with the basics. Soil, water, machinery, work with electrical contractors to find out if you’re being efficient,” Crave states. “Some little changes have proven to offer big returns. Work with vendors and contractors. Sometimes they need to lean in, too.”

See Energy on page 23

Comfort

Continued from page 18 between the feed bunk and stalls and returning from the parlor.

Once in the stall, the average cow spends 2.7 h/d standing in the stall and 11.9 h/d lying in the stall on average.

Lying behavior is typically divided into about 7 visits to a stall each day—called a lying session—and each session is categorized by periods standing and lying, called bouts.

The average cow has 13 lying bouts per day, and the average duration of each bout is 1.2 h.

Most cows will stand after a lying bout, defecate or urinate, and lie back down again on the opposite side.

MINIMUM DAILY REST PERIOD

Studies show that cows target around 12-13 h/d lying time, and this is in agreement with the lying times found in well-designed freestall facilities.

It is commonly suggested that cows’ make more milk when they are lying down as blood flow through the external pudic artery increases by about 25% when lying compared to standing up, and failure to achieve adequate rest has negative impacts on lameness, stress hormones such as cortisol, and growth hormone concentrations.

Requirement for rest is a threshold event, and all cows, regardless of yield, require a minimum period, which in a freestall environment, I suggest is around 12 h/d. In other situations, the threshold may be much less. For example, grazing cattle seem to do quite well resting for 10-11 h/d at pasture.

Factors which challenge the cow’s time budget will impact the time available for rest, and the common challenges presented cows with on a daily basis include prolonged time spent milking, competition for stalls due to overstocking, poor stall design, inadequate heat abatement and excessive time spent in lock-ups.

The impact of each challenge on dairy cow health and productivity will be discussed in Part 2 and Part 3 of this three-part series. Look for Parts 2 and 3 in upcoming issues of Dairy’s Bottom Line.

Dr. Nigel B Cook Dip. ECBHM, MRCVS
University of Wisconsin-Madison, School of Veterinary Medicine

Table 2. Target group size based on minimizing time out of the pen milking to 2.8 h/d in 3X milking herds.

<table>
<thead>
<tr>
<th>Parlor Size</th>
<th>Maximum group size = Cows milked in 3.8 turns</th>
</tr>
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<tbody>
<tr>
<td>Double 8</td>
<td>61</td>
</tr>
<tr>
<td>Double 12</td>
<td>91</td>
</tr>
<tr>
<td>Double 16</td>
<td>122</td>
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<td>Double 20</td>
<td>152</td>
</tr>
<tr>
<td>Double 30</td>
<td>228</td>
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Legislation
Continued from page 19
Hansen (D-Green Bay). This bill has been referred to the Senate Committee on Environment, chaired by Senator Mark Miller (D-Monona). The committee approved the measure and it is now awaiting scheduling for debate on the senate floor.

This measure relates to “control of nonpoint source water pollution in certain areas with carbonate bedrock (Karst).” Under SB 632, the DNR, in consultation with DATCP, is required to promulgate rules to limit pollution of groundwater caused by spreading of any kind of waste, including animal waste, septage, sewage sludge and industrial waste, on land (land spreading).

The rules, under this bill, apply to certain areas with carbonate bedrock that are susceptible to groundwater contamination caused by land spreading and that are not sufficiently protected by the current nonpoint source water pollution bills.

The rules promulgated under this bill apply to susceptible areas in Brown, Calumet, Door, Kewaunee, Manitowoc and any other county that opts to have them apply. The bill further requires DATCP to make its existing rules concerning nutrient management consistent with the new DNR rules concerning land spreading on susceptible lands in covered counties. Enforcement can be through DNR-issued citations. This bill includes ag facilities or practices that were in existence before Oct. 14, 1997, without regard to whether financial assistance (cost-sharing) is available.

NR 151-The comment period has ended for revisions to the DNR’s revised NR 151 rule (on nonpoint source pollution). Under this revised rule, for the first time the DNR would set numerical limits for Phosphorous runoff from any field. There are other issues in this rule as well. The DNR board is expected to discuss and act on NR 151 at the June meeting.

The DNR sets the bar on this rule, but it is DATCP that sets the standards. So once the DNR’s work on this rule has been completed, it will be sent to the DATCP.

The DNR Board meeting dates are June 22 and 23 in Fitchburg.

LIVESTOCK SITING

The comment period on comments relating to review of the Livestock Siting Bill has ended. Livestock Siting is expected to be an agenda item at the DATCP’s May 12 board meeting in Madison.

GENERAL PERMITS

Something new is being proposed by the DNR and it is General Permits (GP) or general permitting. The DNR has long required Wisconsin Pollutant Discharge Elimination System (WPDES) permits for concentrated animal feeding operations or CAFOs (1,000 to 5,720 animal units). Now, it is proposing GPs be required for small and medium CAFOs (less than 1,000 animal units).

Hearings on this proposal are planned on this proposal, with the last one planned for April 13 at the Fitchburg Community Center at 1 p.m.

USE VALUE

It appears threats to the Use Value Assessment of Farmland Law are again surfacing. These threats are primarily coming from cities and villages.

Representatives of these municipalities are making it appear as though owners of ag land are not paying “their fair share” of property taxes.

Any owner of farmland is encouraged to keep their eyes and ears pealed for anything related to this important law. Suggestions that the law could be tweaked for any purpose are dangerous because opening up the law could again lead to lawsuits and possible weakening of the law.

Two lawsuits have already gone all the way to the state’s highest court and while farmers won those suits, they are not guarantees they would always be successful.

By Joan Sanstadt

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Energy

Continued from page 20

Orion Ag, a manufacturer of energy-efficient lighting systems, does no-cost, on-farm assessments similar to Focus on Energy’s program. Orion Ag also looks for grants and other financial incentives for farmers to implement energy-efficient systems on their farms.

“I am sick and tired of farmers getting the short end of the stick,” says Mike Ontrop, National Sales Manager for Orion. “I want farmers to be as independent as they can be.

“Anything that I can do to cut their costs and increase productivity, that’s what I’ll do.”

Orion works to help farmers conserve energy through better systems, control energy by being more efficient and create renewable energy through natural light in addition to solar and wind power through hydraulics.

“I believe that the farm can become independent of power companies,” Ontrop says. “With the technology we have now, we can take the farm off the grid during the day and just pay for energy at night - and that’s cheap.”

One of Orion’s energy-saving solutions is long-day lighting.

“We’re basically creating long days,” Ontrop says. “Cows produce the most on long days. We create summer lighting all year long.”

Regardless of where you turn for advice, the message is clear: Look for opportunities on your farm to save money and increase productivity by saving energy.

“But don’t do it because the money is there. Do it because it’s something you want to do and because it’s good for the farm,” Crave states.

“It’s like going to school and getting scholarships. You have to want to be there first, you don’t go just for the scholarship money.

“The programs that we implement now will still be yielding generations from now.”

To contact Focus on Energy call 1-800-762-7077 or visit their website at www.focusonenergy.com.

By Katie Dogs

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