

一个有价值的、高效的监测奶牛核心体温的系统 DVM-Systems from USA



<http://www.dvmsystems.com/>

- Fresh-cow-protocol-monitor-disease
- Managing fresh cows to keep productivity high
- Monitoring Postpartum Health in Dairy Cows



我国“十五”以来奶牛养殖业发展迅速。奶牛作为人类食物供应链的重要来源之一,养殖成本高,技术复杂。多数奶牛场由于缺乏有效的疾病监测管理机制,使奶牛频频发生各种疾病,严重影响了奶业发展和食品安全,因而迫切需要加强奶牛养殖的科学管理。远程、实时监测奶牛体温,给疾病诊断和发情状况判断提供科学依据, DVM的产品是世界上唯一的无线、无电池的核心体温传感器。DVM传感器可永久的滞留在牛副胃的网状组织内,传递动物的核心体温和识别号ID。TempTrack DVM™软件分析牛的温度记录,与关键奶牛个体健康数据,演算产生一个日常预警报,提供牛乳房炎、子宫炎、肺炎和其他健康问题的早期预警。本系统为奶牛疾病及分娩期预测提供了有效工具,对其他大型动物的监测也具有指导意义。

保持奶牛的健康,你就会从中受益,从而提高盈利能力和收入。

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一旦农场开始例行监测奶牛的核心体温, 成果是如此地明显:

- (1) 及早发现奶牛潜在的严重疾病(乳房炎、子宫炎、肺炎) 和更加及时治疗;
- (2) 保护奶牛哺乳期内进入最高出奶率, 并提升牛奶的品质;
- (3) 预防未来的生殖问题, 提高母牛的生产率;
- (4) 早期病牛的确和防止病牛治疗之前的疾病的传染, 减少治疗病牛的费用;
- (5) 减少宰杀病牛和奶牛死亡带来的损失。



Early Identification of Illness Can Increase Your Profits





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Reduced Mortality Rate

A Colorado dairy operator using the DVM bolus has reduced his death loss from 7.5% to 5.5% (a decrease of 26.7%). With temperature alerts, the dairy operator is paying closer attention to his animals and is responding to his animal's health needs quicker. Based on his herd size of 1,350 cows his annual savings culling cows are approximately \$32,400 based on a 2 percentage point reduction in death loss (27 cows) and with a replacement value of \$1,200 per cow as shown here:

Replacement Cost	\$1,200
Annual Savings in Mortality 26.7% reduction	\$32,400

Increased Milk Production

A dairy operation in Canada using the DVM bolus increased milk production by 7 to 10 pounds per cow per day. Milk weight loss is probably the most significant immediate impact of disease such as mastitis and longer term impact of metritis. One of the most significant impacts to your dairy's bottom line is higher somatic cell counts (SCC) caused by mastitis. On average, each increase of 100K in SCC equals one lost pound of milk production per day per cow across your entire herd. Using the 1,350 herd size from above, milk production would increase by 2.83 pounds/cow/day (or 5%, based on average milk production of 20,396 lbs./year/cow, the annual improvement in milk production is as follows:

Milk Price cwt	\$17.00
5% Annual Improvement in Milk Production	\$237,062

The total annual savings and improved milk production at \$17 cwt is as follows (with a herd size of 1350):

Replacement Cost	\$1,200
Total Annual Savings @ 2% Mortality Savings and 5% Improved Milk Production at \$17 cwt	\$269,462

Earl Aalseth DVM, stresses use of an aggressive fresh cow program including the use of frequent temperature monitoring and says "Indeed this simple, fast program might capture up to 50 percent of the cow health opportunities available."

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"Mark Kinsel DVM, says "a thermometer is one of your major weapons in the fight against fresh-cow disease, since it provides a base from which most ensuing disease management decisions are made."

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Note: Individual farm results vary based upon many different factors, your results may be higher or lower than those shown. Automatic temperature monitoring and alerts are an important part of a comprehensive aggressive fresh cow program.



DVM Products and Services

- Wireless Battery Free Temperature Sensing Bolus
- TempTrack® Software



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- Panel Readers
- Hand Held Reader
- Prefabricated Reader Set
- Custom Software
- System Consultation
- Sort Gate Integration

DVM Product and Software Features

- Automatic Temperature Tracking
- TempTrack® proprietary software algorithms analyze temperature, milk weight, individual cow health information and other data
- Advanced bolus design requires no battery
- Tamper proof identification
- Future Enhancements based upon university research of DVM Systems' products at the Nova Scotia Agricultural College and Colorado State University.
- Identification of ovulation in up to 80% of cows to significantly improve breeding success and reduce use of pre-synch drugs.
- Improve cows artificial insemination success rate eliminating false positive and silent estrous issues found with most cow heat detection systems
- Return cow to her natural ovulation cycle allowing 2nd servicing as early as 18 days after artificial insemination (ai).
- Calving alerts (to address calving issues and to schedule labor efficiently)
- Complies with applicable FDA regulations (Certified by Keller & Heckman LLP)
- One year equipment warranty



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- FCC and ETL certified

Research Information

1. "Body temperature has been described as the "single most useful measurable parameter and a sensitive indicator of the reactions of the animal to physico-environmental factors, disease processes, and physiologic functions such as nutrition, lactation, and reproduction" (Nakamura et al., 1983)
2. "Postparturient cows are highly susceptible to disease, which may result in decreased milk production, death and culling. Early disease detection increases cure rates and minimizes production losses." (S. E. Dobberstein, S. M. Scott, J. R. Wenz, and W. Wailes, Integrated Livestock Management, Dept of Clinical Sciences and Dept of Animal Sciences, Colorado State University, Fort Collins, CO.)
3. "Early identification of nonpregnant dairy cows post breeding can improve reproductive efficiency and pregnancy rate by decreasing the interval between AI services and increasing AI service rate. Thus, new technologies to identify nonpregnant dairy cows early after artificial insemination (AI) may play a key role in systematic management strategies to improve reproductive efficiency and profitability on commercial dairy farms." (Paul M. Fricke, When to Identify Nonpregnant Lactating Dairy Cows Using Transrectal Ultrasonography and Why, American Dairyman, January, 2011)
4. "Fever is a critical symptom, and often surfaces 24 to 36 hours before other symptoms, such as reduced appetite, low production or general depression. Early detection and prompt treatment are critical to limiting the damaging effects of metritis. By the time a veterinarian is called, the sick cow likely has gone off-feed, putting her into a negative energy balance that could affect future reproductive performance. Early detection allows for early intervention with veterinary-prescribed treatments." (Protect your cows from the damaging effects of metritis, Austin Belschner, DVM, MS)
5. "Automatic temperature monitoring systems may also be used in identifying the onset of calving (Aoki et al., 2005, Nielsen et al., 2001, Wrenn et al., 1958). Body temperature has been demonstrated to drop between eight to 48 hours before calving. The ability to predict calving time would be useful in assisting difficult births. Consequently, calf mortality rates may decrease and reproductive function of the dam could improve." Automatic temperature








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monitoring: What are the potential benefits? Jeffery Bewley, Graduate Research Assistant, Purdue University, for Progressive Dairyman

6. "Timely rebreeding of postpartum lactating cows is essential for reducing average days open and the corresponding calving interval. A successful breeding program enhances profitability by maximizing the time cows spend in the most productive portion of lactation." (Paul M. Fricke, Aggressive Management Strategies for Improving Reproductive Efficiency in Lactating Dairy Cows
7. "Clinical disease is like the tip of the cow health problem iceberg. For each case of clinical disease, there are perhaps 10 times the cows afflicted with subclinical disease that go undiscovered. (Earl Aalseth, Pilchuck Veterinary Hospital, Fresh Cow Management: What is important, what does it cost, and what does it return?, Western Dairy Management Conference, 2005)

Selected Independent Research Papers - Fresh Cow Programs and Temperature Monitoring

Benefits

-  [Monitoring Postpartum Health in Dairy Cows – Risco](#)
-  [Managing Fresh Cows to Keep Productivity High](#)
-  [Fresh Cow Protocol to Monitor Disease](#)
-  [Favor Fresh Cows](#)
-  [When to Identify Nonpregnant Lactating Dairy Cows Using Transrectal Ultrasonography and Why](#)
-  [Aggressive Mgt Strategies for Improving Reproductive Efficiency in Lactating Dairy Cows](#)
-  [Fresh Cow Managment-Aalseth](#)

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