Dairy Farmers’ Priorities—2008 Michigan Dairy Industry Survey

A recent Michigan State University Extension Dairy Team survey sought input from dairy producers and allied industry professionals on their priorities. Questions addressed industry, research, educational needs, and other issues. This article summarizes the results of the producer survey. Producers placed greatest emphasis on industry issues such as continuation of the Right-to-Farm program and increasing legislators’ knowledge of agriculture, but also expressed a need for more education on many subjects including getting cows pregnant, using manure as a fertilizer, and profit maximization strategies.

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Last winter, the Michigan State University Extension Dairy Team conducted an industry-wide survey to obtain broad-based stakeholder input to update priorities. Surveys were mailed to 2,237 dairy farmers, 71 herdspersons and management employees, and 171 next-generation family employees associated with Grade A dairy farms in Michigan, as well as 480 allied industry professionals. The survey was developed
based on industry discussion groups convened earlier. Questions addressed industry opportunities, needs, and concerns, as well as research and educational needs. Further questions addressed educational information sources and media, along with demographic and business data.

This article summarizes the opinions of 519 dairy farm owners and operators who participated in the survey, their priorities with respect to industry needs and concerns and their perception of key education, training, and research needs. Compared with the 2007-8 Michigan Agricultural statistics, survey participants operate larger farms. Dairy farm operators with herd sizes smaller than 50 cows were less likely to respond to the survey than other groups. Compared with the 2002 Census of Agriculture, more survey respondents were between 45 to 64 years old; fewer respondents fell into the younger age groups (less than 45 years) and also into the oldest age group (65 years or more).

Industry Priorities and Concerns

Dairy farm owners and operators were asked to rate 12 items according to the priority each topic should receive from the Michigan dairy industry. On a scale from 1 (very low priority) to 5 (very high priority), respondents gave the highest priority to the following policy issues with median ratings of 5. A median rating of 5 signifies that at least 50% of the respondents rated this item as a very high priority. All items below are ordered according to their average ratings, starting with the highest.

Ensure continuation of Right-to-Farm program
Increase legislators' knowledge of agriculture
Communicate to consumers about safety of milk products and technologies used
Promote the value of the dairy industry in Michigan's economy
Maintain adequate access to water resources for agriculture

Median ratings of 4, which signify a high priority rating, were reached by the following issues.

Increase dairy product promotion activities and education, especially targeted to youth
Inform the public about current farming practices
Work with government to enhance plans to deal with potential foreign animal disease outbreaks
Work with legislators to fund dairy industry initiatives
Ensure continuation of Cooperatives Working Together (CWT) program
Promote availability of career opportunities in agriculture

Dairy farm owners and operators also were asked to rate the importance of 21 items to the viability of Michigan's dairy industry. On a scale from 1 (not important) to 5 (very important), respondents gave high priority to the following 16 items with median ratings of 4.

Taking advantage of globalization by increasing dairy exports
New dairy products to increase milk utilization
Increasing legislators' understanding of the tradeoff between the cost and benefits of complying with regulations
Dairy farmers demonstrating environmental stewardship
Improving public understanding of animal welfare
Dairy farmer involvement in the legislative process and representation in regulation development
Dairy industry being proactive on environmental issues, including working actively with government agencies
Methods to improve disease resistance
Greater effort and funding for food safety and inspection programs including imported foods
Improving production efficiencies
Adopting alternative energy technologies
Science-based environmental regulations
Consumer/public acceptance of scientific information
Legal advice on environmental and general agricultural regulations from lawyers specialized in agricultural law
Traceability of agricultural products to their origin to improve food safety
Methods to process manure, including renewable fuel (e.g., methane digesters)

Dairy farm owners and operators were then asked to rate their concerns for the dairy industry. A concern is a potential threat to the industry and individual farms. On a scale from 1 (not a concern) to 5 (great concern), one of 13 concerns rated received a median rating of 5.

Food imports from less regulated countries

Ten concerns received median ratings of 4, signifying a high need for the industry to address them.

Public image of agriculture
Consumer interpretation of dairy product label, e.g., hormone-free, antibiotic-free, rBST-free
Availability of dairy veterinarians
Farm transfer to the next generation
Successfully eradicating TB in Michigan
Loss of farm land due to urban encroachment
Availability and market/consumers’ acceptance of production technologies, e.g., rBST, antibiotics
Planning for and meeting changing state and federal environmental regulations
Farm business growth to improve quality of life
Agro-terrorism and bio-terrorism

Education and Research Needs
In the largest section of the questionnaire, dairy producers were asked about their perception of education, training, and research needs in the areas of environmental management, herd management, farm business management and finance, and human resource management. In considering the survey responses it is important to note that specific groups of farmers may have different research needs and education priorities than reported here as the overall results of the survey. For example, management practices for organic production was of minor interest to survey respondents overall. These are, however, likely to be very important to organic dairy producers (5.5% of the respondents). Another example are human resource management practices, which are of mid-level interest to the average survey participant, but are likely more important to farmers employing a larger number of people.

Herd Management Education and Research Needs. Respondents saw the greatest education and research needs in specific topics of herd management. On a scale from 1 (none) to 5 (a lot), respondents rated 14 out of 26 specific topics with median ratings of 4, indicating significant general needs.

Effective strategies for getting cows pregnant
Fresh cow management
Troubleshooting mastitis and high somatic cell count
Foot health and lameness
Quality, digestibility, and production of feeds
Increasing cow longevity
Lactating cow management
Best management practices for vaccinations
Calf management
Impact of heifer raising methods on performance
Choosing alternative feeds based on feeding value and profitability
Identify bottlenecks to improving herd performance
Reducing the use of antibiotics through best practices
Dry cow management

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Environmental Management Education and Research Needs. In the environmental management area, respondents rated two out of six specific topics with median ratings of 4, indicating significant general needs.

- Using manure as a fertilizer
- Current regulations and environmental laws

Farm Business Management, Finance, and Human Resource Management Education and Research Needs. In the farm business management and finance (20 topics) and human resource management (16 topics) areas, five topics received median ratings of 4, indicating significant general need.

- Profit maximization strategies
- Financial management skills for dairy farmers
- Calculating cost of production
- Use of records to improve financial decisions
- Planning and financing business transfer to the next generation

The top three human resource management topics received median ratings of 3. Eight more human resource management topics also received median ratings of 3, but lower average ratings.

- Communicating with family members involved in the farm
- Motivating employees
- Ensuring job satisfaction and retention of employees

Conclusions and Implications

The opinions of dairy farm owners and operators regarding the large set of industry issues included in the survey have different implications for different industry groups and decision makers. Collective action may be required on many of the priority and viability items, as well as the industry concerns. Although industry groups will set their priorities based on the values and roles within the industry, farmers’ priorities are an important input into the decision making process. In particular, items with median ratings of 5 have a very high priority for the survey respondents. Considering that survey responses often have a tendency towards mid-level ratings, this is a very strong statement by the participating farmers.

In view of the survey responses, there are numerous education and research opportunities to be addressed. The category receiving high median ratings in the education and research area most frequently was herd management. However, educators will have to consider specific topics carefully when setting priorities. The number of highly rated herd management topics does not indicate that topics in other categories would not be important to the long-term sustainability of dairy farming in Michigan and to the individual success of dairy farm operators.

Education and research needs reported here are based on overall ratings of dairy farm owners and operators on the state level. Differences in educational needs and opinions towards research priorities are to be expected based on farm and operator characteristics, as well as management practices. Additional insights will be gained through further analysis of the survey responses. Results from the survey of the allied industry professionals, next-generation family members, and herdpersons also will be summarized. More survey results will be reported in a future issue of the Michigan Dairy Review.

Acknowledgements

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Find the full survey online at: http://www.mdr.msu.edu/vol13no4/survey.pdf

Hoof Health Meetings

These meetings will be from 10:00 am - 3:00 pm and include lunch. Pre-registration is $10 per person. To register or for more information, contact the Extension Dairy Educator for the site you plan to attend.

Dec 15. Franklin Inn, Bad Axe
Contact: Craig Thomas, MSU Extension
810-648-2515

Dec 16. Forward’s Conference Center, West Branch
Contact: Phil Durst, MSU Extension
989-826-1160

Dec 17. Smith Hall, Clinton Co Fairgrounds, St Johns
Contact: Faith Cullens, MSU Extension
989-224-5249

Dec 18. Polkton Township Hall, Coopersville
Contact: Bill Robb, MSU Extension
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Getting Calves Started Well

The current high demand for and high value of replacement heifers means that management of calves and heifers should be a high priority. Common challenges to pre-weaned calves that cause illness and/or death include diarrhea and respiratory infections. Many of the health problems calves face can be controlled by excellent early nutrition and management. This article addresses colostrum, liquid feed, water, and weaning. Making time to feed newborn calves adequate amounts of high-quality colostrum is the single most important step managers can take to ensure healthy, well-grown calves.

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Dairy heifer calves represent a key opportunity to improve the milk production potential of the future dairy herd. Our recommendation is that herds keep death loss of live-born calves to within or below 2 to 5% from birth through the time of weaning, the period of life when dairy calves are most likely to become sick or die. According to data from the National Animal Health Monitoring System (NAHMS) in 2007, average mortality of pre-weaned calves on farms during 2006 was 7.8%. Some herds lose an average of 2% of calves, while others lose 15 to 20%. Death loss is costly to dairy herds and limits the rate of expansion through internal growth of the herd and/or reduces the potential to market extra heifers for dairy purposes.

Keeping calves healthy as well as alive is critical. Common challenges to pre-weaned calves that cause illness and/or death include diarrhea and respiratory infections. Even if calves appear to recover successfully from illness, herd productivity can be impacted by reduced growth rates of sick calves, reduced milk production of cows that experienced sickness as calves, and increased treatment and labor costs for sick calves. Many of the health problems calves face can be controlled by excellent early nutrition and management.

Care at Birth

An excellent calf management program begins with care of the dam prior to calving. About 11 to 13% of calves born to first lactation dams are stillborn, while calves born to older dams are half as likely to be stillborn (1). Calf mortality is influenced by the health of the dam. Additionally, calves have a better chance of survival if stress during the birth process is minimized. Key factors that influence stress include size of calf, health of dam, crowding and cleanliness of the calving environment, and quality of assistance provided. Almost one in five (17.2%) calvings in 2006 required assistance (2). Shortly after delivery into a clean environment, calves should have their navels dipped, not sprayed, with tincture of iodine.

Tracking Performance

Nobody likes to lose calves. Keep a record of each birth and each death. Determine mortality rate for heifer calves over a 6-month period.

Percent stillborn = Number born dead plus calves that died within 24 h birth divided by total number of births.
Percent calf mortality = number died from 24 h after birth through weaning divided by number alive at 24 h after birth.

Checking Your Colostrum Protocol

It is wise to evaluate the outcome of your colostrum program by checking the serum protein levels of young calves. Immunoglobulins are proteins that are transferred from dam to calf through the colostrum. An easy, though indirect, way to check that is by checking the serum total protein level. A sufficient level of immune protection depends on the intake and absorption of immunoglobulins with 10 mg/ml blood serum commonly used as the critical level. Although immunoglobulins are not the only protein in serum, they are the major proteins very early in life when colostrum feeding is adequate.

Work with your veterinarian to check the serum protein levels of a group of calves. Calves can be sampled between days 2-10 of life, although the correlation of total protein with immunoglobulin is better when the sample is taken between days 2 and 5 (3). The target level for total protein is 5.5 g/dL. Serum protein level less than 5.5 g/dL indicates that there has been a Failure of Transfer of Passive Immunity (FTPI).

Take samples from 8 to 12 calves. The goal should be that less than 20% of calves have FTPI. Also look at the absolute values and the range that they represent. Your veterinarian can help you interpret the results.

If the rate of FTPI is greater than 20%, make changes in your colostrum program to give sufficient high quality colostrum to calves sooner. Conversely, if the results are good, then you and your employees are doing a good job of colostrum management.
Colostrum

Consumption of an adequate amount of high-quality colostrum is the single most important management factor in ensuring health and survival of calves and maximize future milk production. Colostrum has the protein, fat, antibodies and vitamins that newborn calves need at birth. These nutrients and immune components equip the calf for a good start, a healthy young life and potentially greater productivity as an adult cow.

Colostrum should be fed as soon as possible after birth, either by milking the dam or feeding preserved colostrum from another dam which has tested negative for Johne’s disease. Feed 2 to 4 quarts of colostrum in the first feeding shortly after birth. If the initial feeding was approximately 2 quarts, then feed an additional 2 quarts within 6 hours, and another 2 quarts 6 hours later. Using a colostrometer will identify the quality of the colostrum, clearly indicating it as green (> 50 mg/ml of antibodies), yellow (20-50 mg/ml) or red (< 20 mg/ml) zone quality. Don’t use low-quality (red) colostrum for first or second feedings to calves. Consider the use of an esophageal feeder to feed at least 6 quarts to the calf within 12-14 hours of birth, in 2 to 3 feedings if calves do not drink this quantity.

Absorption of immunoglobulins from colostrum is greatest right after birth and has decreased significantly by 24 to 48 hours. Therefore, feeding colostrum as soon as possible is critical for adequate absorption of immunoglobulins or passive transfer of immunity. No artificial colostrum substitute is equal to high-quality colostrum when it comes to ensuring sufficient antibody absorption by calves.

Liquid Feed for Calves

Consistency in feeding of calves is important to ensure good health and growth. Time of feeding and the quantity and temperature of liquid feed should be monitored for best results. Sanitation of feeding equipment is also critical.

Milk replacer is the most common choice of liquid feed for calves (2). Milk replacer prices have increased appreciably in recent years. Milk replacer quality can differ and primarily relates to the protein source (plant-based proteins, animal plasma or egg protein vs. milk-based protein) and fat levels. Younger calves less than 4-weeks-old do not efficiently digest plant-based proteins. This is too critical a phase of life to risk use of a low-quality milk-replacer to save a few dollars.

Higher-protein milk replacers are available to encourage higher growth rates in pre-weaned calves. Research is ongoing to indicate if long-term benefits of these accelerated growth programs justify the increased costs, and if there are positive effects on calf health. Some producers have adopted successfully the accelerated growth program, and others have decided to stay with the traditional program that emphasizes earlier intake of calf starter.

Feeding more whole milk or increased amounts of milk replacer in an accelerated growth program makes the calf rely more on nutrients from these sources rather than from starter feed. While early growth may be more rapid, greater reliance on liquid nutrients may delay starter intake and development of the rumen. However, note that calves in cold housing dur-

Checklist for newborn calves

- Feed 2 to 4 quarts colostrum within 1 hour of birth.
- Dip navel with 7% tincture of iodine solution within 1 hour of birth.
- Feed 2 to 3 quarts colostrum 6 hours after first feeding.
- Feed an additional 2 to 3 quarts colostrum 12 hours after first feeding.
- Weigh calf on day 1 of life.
- Draw blood for serum protein analysis 2 to 10 days after birth.
- Offer several ounces of starter grain in first 3 to 5 days of life and thereafter.
- Offer fresh clean water daily beginning at 3 to 5 days of life, offered in a bucket and separated from calf starter.
- Weigh calf at about 2 months of age.
ing the winter do need increased nutrients in order to maintain growth rates while maintaining body heat.

Whole milk generally has higher protein and energy values than many milk replacers. For example, whole milk from Holsteins contains approximately 25% protein and 28% fat on a dry matter basis compared to common milk replacers that are 20% protein and 20% fat.

The majority of farm operations feed a medicated milk replacer (2). Little recent research on this topic is available, but available reports indicate that growth rates and incidence of scours are generally improved in calves fed medicated milk replacer. The advantages of feeding medicated milk replacers are likely greater for calves in more stressful environments.

Waste milk from mastitic cows is frequently used alone or in combination with milk replacer. Potential problems with waste milk can include inconsistency in nutrient content, presence of antibiotics and of pathogens that can infect calves. Pasteurization of raw milk is necessary to kill pathogens that can infect these vulnerable animals. Sanitary handling of pasteurized milk is important to ensure that bacteria are not reintroduced.

### Weaning

The average age at weaning for calves nationwide is about 8 weeks, according to data from the NAHMS study. However, calves can be weaned successfully as young as 4 weeks of age. It takes good calf management which is beneficial in other ways as well. Regardless of age, weaning should be based on consumption of 2 pounds of calf starter per day for 2 consecutive days during summer months, or 2 pounds per day for 3 consecutive days during other times of the year. Not only does it save milk replacer cost but it may decrease labor in preparing milk replacer, cleaning and feeding. In addition, consumption of calf starter provides nutrients that stimulate rumen development and ease the transition to a dry diet.

Weaning can be done gradually or abruptly. If calves are consuming more than 1 lb. of milk replacer powder daily, then consider gradual weaning. Gradual weaning can be accomplished either by dropping a feeding for 5 days before weaning or increasingly diluting the milk replacer with greater amounts of water for 5 days until weaning. Introduce high-quality dry hay after weaning.

### Water

Water promotes consumption of calf starter, indirectly aiding rumen development and increasing growth rates. Water is necessary to promote digestion of calf starter by rumen microbes, resulting in production of volatile fatty acids that stimulate rumen development. Start providing water at 3 to 5 days of age. Provide clean drinking water in a bucket separated from calf starter (4). Most farmers provide water to calves at the same time they begin feeding calf starter. Supply approximately four times (by weight) as much fresh water per day as starter. Estimate water weight as 1 pound per pint or 8 pounds per gallon, so supply 2 quarts of water (4 pounds) if feeding 1 pound of starter per day. Provide water year-round, using warm water several times a day during cold weather.

### Starter

Provide a high-quality calf starter by 3 to 5 days of age. Start with a few ounces of calf starter per day, and remove the leftovers each day before adding fresh starter. Calf starter stimulates rumen development more than consumption of hay. If early weaning is a goal for your calf program, then early development of the rumen is important and will help calves thrive during periods of stress prior to weaning.

### Summary

The current high demand for and high value of replacement heifers means that management of calves and heifers should be a high priority. Making time to feed newborn calves adequate amounts of high-quality colostrum is the single most important step managers can take to ensure healthy, well-grown calves that will produce milk to their potential during lactation. Measuring levels of passive immunity in calves permits effective management of a farm’s colostrum program.

To keep calves healthy and growing well, choose a high-quality milk replacer and avoid milk replacers with plant-based proteins for the first 4 weeks of life. Early weaning of calves can help reduce costs associated with feeding of milk replacer, but doing so successfully requires early introduction and consumption of sufficient amounts of calf starter and water. Remember that calves are babies and high-quality nutrients will help them thrive in spite of typical stresses associated with the pre-weaning period.

### References


Anaerobic Digestion is a natural biological process that offers many environmental protection advantages. In the past, digesters were challenged by management difficulties and lack of profitability. Currently, there are six dairy farm digesters in Michigan, but the need for odor control, the income potential of the renewable energy digesters, and improvements in the technology and the understanding of operational principles are creating additional interest. This overview of anaerobic digestion on dairy farms includes a general cost analysis. Costs can often be offset by the recovery of byproducts when a digestion system is properly designed and managed.

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Anaerobic digestion of animal manure is receiving much attention as a technology to reduce odors, manage nutrients, and produce renewable energy. This interest has been spurred by an influx of people into rural areas and the recent dramatic spikes in energy costs.

The use of on-farm digesters can be traced back to the 1950s. Prior to 2005, there were six farm anaerobic digesters in Michigan—five failed within 6 years and one remained operational for 21 years until it was shut down when the farm sold according to Michelle Crook, Michigan Department of Agriculture. Primary reasons digesters failed in the past were management difficulties and lack of profitability. Currently, there are six dairy farm digesters in Michigan with several additional projects under construction or planned. The need for odor control, the income potential that renewable energy digesters offer, and improvements in the technology and the understanding of operational principles are primary reasons for the renewed interest. Further information on anaerobic digestion projects in Michigan can be found at the state of Michigan website (<http://www.michigan.gov/dleg/0,1607,7-154-25676_25753_25757-83804--,00.html>).

Anaerobic Digestion

The process of anaerobic digestion entails a community of microorganisms that first convert complex organic wastes to organic acids (such as acetic and propionic acids) and then the organic acids to biogas, containing primarily methane and carbon dioxide. Bio-produced methane is a renewable energy source that can be used in boilers, cleaned of impurities to enable insertion in natural gas lines, burned in a generator to produce electricity or simply flared if energy production is not economical. Using the methane as energy or flaring results in a net reduction of carbon dioxide equivalents and other greenhouse gasses enabling the sale of carbon credits. Agricultural methane offsets (carbon credits) are offered to farmers who collect and combust methane gas and thus prevent it from reaching the atmosphere. Further information on carbon credits and agricultural methane offsets can be found at the National Carbon Offset Coalition (www.ncoc.us).

The digester also produces digestate (material remaining after digestion is complete). Digestate is homogeneous, easily transferred through pipes, has few pathogens, and has an unassuming odor. This material can be managed in several ways. Separating the solids and liquid produces a solid phase that is high in phosphorous and fiber and is easily transported. This material is commonly used as animal bedding or as an ideal soil amendment. More novel and experimental uses include the production of construction products such as wall board, decking, and greenhouse pots. The liquid fraction is high in nitrogen and low in phosphorus thus enabling irrigation of fields that may be phosphorus limiting.

To maximize biogas production and the potential return on renewable energy sales, conditions within the digester must be optimized. One important factor is the pH, the amount of acidity in the manure. This is often not an issue with animal manure as it is most often neutral (which also makes it an excellent source for blending with other wastes). Temperature is another important factor. Digesters must be heated in colder climates as the microbial community requires a temperature of about 100°F. The amount of water used in a farm’s manure management is also influential. Excess water results in higher costs to heat digesters and reduces the concentration of organic material. Only enough water should be used to clean barns and make manure transferable.

The amount of organic material is often measured as the biochemical oxygen demand (BOD) or chemical oxygen demand (COD). To increase the BOD and COD (and increase gas production), manure can be blended with more concentrated wastes such as those from food processing, ethanol (stillage), and biodiesel (glycerin) plants.

General Estimates of Cost

A 1400-pound lactating cow produces about 24 gallons of manure/day requiring at least 266 gallons of digester space (1). The net energy produced is about 18,000 BTU/day per dairy cow or 385 Net kW-hour/day per dairy cow, when 35% of this energy is used to heat the digester (2). The U.S. Environmental Protection Agency estimates a digester costs between $200 and $700 per 1000 lbs. live weight (3) while another estimate says $150 to $500 per cow with maintenance between $11,000 and $51,000 annually (4).
Efforts are being made to reduce these costs to the individual farmer. The idea of a centralized anaerobic digester is one that is currently being investigated. A centralized digester shared by farmers reduces upfront costs. However, issues with transfer of the manure, as well as maintenance and ownership, must be overcome. Also, before implementing a large-scale system, it is recommended that farmers have their manure tested for biogas potential.

Biogas-Potential Assay

Michigan State University’s Department of Biosystems and Agricultural Engineering developed an anaerobic laboratory assay designed to determine if further development studies are warranted. This test, conducted in a laboratory, examines the physical characteristics of the manure (COD, % solids, pH, and other important characteristics) both before and after digestion, and biogas production in a simulated digester. An anaerobic respirometer consisting of closed vessels connected to an automated gas measuring system is used for the assay. Figure 1 is a photograph of the laboratory anaerobic respirometers used for biogas determination. These tests are advantageous because they require very little manure (less than 5 gallons), take relatively little time (about a month), are inexpensive, and are easily customized to different mixtures of manure and other agricultural residuals. However, it should be noted that this is only a preliminary test and that the decision to implement an anaerobic digester should not be made based on this test alone. In fact, if this initial test is favorable towards anaerobic digestion, larger pilot-scale studies should be considered. The detailed protocol for this assay can be found at the “Alternatives for Food Processor’s Wastewater” website <http://www.egr.msu.edu/~safferma/Research/Green/greenn-projecttasks.html>.

Conclusions

Anaerobic digestion is a natural biological process that offers many environmental protection advantages. Costs can often be offset by the recovery of byproducts when a digestion system is properly designed and managed. To safely and efficiency maximize gas production and maximize environmental benefits training is needed and dedication required. Running a digester is as much an art as a science.

References

Rating the Accuracy of DHI Production Records

The USDA Animal Improvement Programs Laboratory calculates the Data Collection Rating (DCR) for DHI herds. A herd’s DCR indicates the relative accuracy of individual production records and aids the effective use of DHI records based on varying amounts of data. DCR is based on the frequency of testing, the percentage of milkings weighed and sampled, and the number of test days supervised by a DHI technician. The ratings are useful for genetic evaluations, artificial insemination organizations, and breed associations, among others.

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Dairy producers and agribusiness professionals who use DHI records may have noticed the addition of a value labeled “DCR Milk” on the DHI-202 Herd Summary report. DCR is an abbreviation for Data Collection Rating. DCRs are calculated by USDA Animal Improvement Programs Laboratory (AIPL) and indicate the relative accuracy of individual production records.

Development of DCRs

In the past DHI testing plans were similar for most herds. A “milk tester” (now referred to as DHI technicians) came to the farm each month to collect data about each cow. The test days were unannounced and all milkings were weighed and sampled. As the management needs of dairy producers changed, more DHI testing plans were created. Testing options now include variations in number of milkings weighed and sampled, frequency of test days (more or less than 12 per year), and level of supervision.

To effectively use DHI records based on varying amounts of data, USDA-AIPL developed data collection ratings to determine the relative emphasis to place on each production record in genetic evaluations. DCRs were implemented in 1999.

Factors Influencing DCR

DCR is based on the frequency of testing, the percentage of milkings weighed and sampled, and the number of test days supervised by a DHI technician. The “traditional” milk testing plan of monthly test days with all milkings weighed and sampled by a trained DHI technician has a DCR value of 100.

A DCR greater than 100 is possible when supervised milk weights and/or samples are collected more frequently (e.g., 5 days of data collected each month through electronic meters in the parlor). DCR values are less than 100 for supervised AM/PM testing plans where only a portion of the milkings are weighed and/or sampled at each test day. Test days that occur less frequently than monthly also would result in DCRs less than 100. Unsupervised testing plans are weighted 75% of supervised plans and receive a DCR value no greater than 75.

DCRs are calculated for individual cow production records and are based on a 305-day lactation. Separate DCRs are calculated for milk and components (fat, protein) because some testing plans may result in different amounts of data collected for milk yield compared to the components. For example, in some plans all milk weights are recorded but samples are only collected on a portion of the milkings. Individual cow records that are completed in less than 305 days or are terminated early due to culling or death will have DCRs that reflect the lesser amount of information available.

A DCR also can be calculated for the herd. It is equivalent to the DCR of a cow tested in that herd that reached 305 days in milk on the herd’s most recent test day. See table 1 for sample DCR values based on several of the more common testing plans.

Various Uses of DCR in the Dairy Industry

USDA-AIPL uses DCR values to determine the weighting that each production record should receive in the genetic evaluations. Records that incorporate more data and consequently have higher DCR values will be weighted more heavily when calculating predicted transmitting abilities for bulls and cows. Implementation of DCRs also allowed USDA-AIPL to expand its database to include production records from unsupervised DHI herds (sometimes referred to as owner-sampler).

Artificial insemination (AI) organizations want to know the DCRs for herds that participate in their progeny testing programs. A herd’s eligibility for incentive payments for production records of young sires’ daughters may be dependent on the DCR of the individual production records as well as the herd DCR. Some AI orga-
nizations have a tiered scale of incentives based on the DCR value.

Breed associations report DCR values for production records listed on pedigrees. DCR values also are used to define records that can be used in herd and cow recognition programs.

**Summary**

Level of accuracy of DHI production records is considered by various segments of the dairy industry in determining how to use the records. With significant variations in the type of testing plans used by DHI herds today, it is not enough to just know the type of DHI testing plan for the herd. Consequently, data collection ratings were developed to reflect the relative accuracy of the records. DCR values are used in calculating genetic evaluations, determining incentive payments for herds participating in young sire sampling programs, and recognizing outstanding herd and cow performance by breed associations.

**References**


### Table 1. Data Collection Ratings (DCR) for Example Testing Plans.

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<th>Total No. Supervised Tests</th>
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<td>305</td>
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<tr>
<td>Monthly (AM/PM) 2 out of 3 milkings weighed and sampled</td>
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<td>100</td>
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<td>Quarterly (AM/PM) 1 out of 3 milkings weighed and sampled</td>
<td>3</td>
<td>3</td>
<td>70</td>
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</tbody>
</table>

1 Based on 305 day lactation record

Sample DCRs for additional testing options can be accessed at: <http://www.dhia.org/DCR%20values%20chart.pdf>
Equal Employment Opportunity and the Hiring Process

For many dairy farmers the hiring process is infrequent and can be fraught with potential discriminatory practices for the employer. Consider the following example. A Michigan dairy farmer was looking for a herdsperson after the incumbent had left for a position in California. After sifting through a number of applications, he had narrowed the choice to two applicants. One applicant was Hispanic with 5 years of experience. The other applicant was Caucasian with 1 year of experience. Recently the Department of Homeland Security conducted farm audits in the farmer’s region; therefore, he wanted to avoid any potential problems and made a job offer to the Caucasian applicant. When asked by his daughter why he decided to hire the less experienced candidate, he explained that he wanted to be sure that the job candidate would be an American citizen and avoid future turnover in this important position.

Vera Bitsch
Dept. of Agricultural, Food, and Resource Economics

The United States as a country values fair and equal treatment of all individuals in their employment. Multiple legislation and regulations address discrimination in employment decisions. Although most legislation applies to all employment decision, including hiring, training, evaluation, promotion, compensation, discipline, and termination, questions on how to treat everybody fair and equally often come up during the selection process.

While many federal laws protecting equal employment opportunity exempt small businesses, Michigan laws do not. Michigan laws protect religion, race, color, national origin, age, sex, height, weight, and marital status (Section 206 of Public Act 435 of 1976). They also protect disability, if the specific disability is unrelated to the individual’s ability to perform the duties of a particular job or position with or without reasonable accommodation (Section 206 of Public Act 220 of 1976). Whether an applicant is a union member and an applicant’s veteran status also are questions that should have no place in employment decisions.

As a general rule, all questions during the selection process should be relevant to the job to be filled. In an application form such questions include the identification of the applicant (e.g., name, address, and phone number), interests of the applicant (e.g., the job the applicant is applying for), and a summary of the applicant’s background (e.g., education and training, work history, special qualifications and skills). Citizenship and ethnicity are not typically relevant to agricultural jobs and, therefore, need to be avoided on application forms and must not be taken into consideration when deciding who will receive the job offer. An employer concerned about hiring applicants who will later fail to provide the required documentation for the I-9 form, may include a question in the application form, such as “Are you legally eligible to work in the United States?” It is important to remember that many questions, which must be asked after a job candidate is hired (e.g., marital status), need to be avoided before the job has been offered.

Application forms can be submitted to labor law attorneys for review and, therefore, it is much easier to avoid potentially discriminatory questions on such forms than it is during an interview process. All participants in interview processes must be familiar with the job to be filled and the essential duties of the job, as well as, the relevant qualifications, skills, and experience. By focusing interview questions on these matters and writing down relevant questions before the interview, discriminatory practices can be avoided. In addition, interviewers should take notes during the interview in a neutral language. The best practice is to also train all interviewers which questions not to ask of job applicants. If an applicant brings up any of these topics, such as family and children, disability, or religion, it is best to not dwell on such information and to not ask any follow-up questions. This information also does not need to be included in the interview notes. The author recommends following the general rule to only ask job related questions and avoid all others, even if they legally can be asked in Michigan (e.g., sexual orientation). Also, interview questions should be similar for all job applicants.

A Problematic Decision

The dairy farmer in the initial example made several assumptions, which can be grounds for a discrimination lawsuit.

1. He took applicants’ ethnicity as an indication of citizenship, respectively of non-citizenship. Foreign looking job applicants may be American citizens, even if they speak with an accent. Caucasian looking applicants may be citizens of another country, e.g., Canada, and need a work authorization.

2. He assumed that an employee has to be a citizen to be legally eligible to work in the United States. There are many work visa types that enable foreigners to legally work in the United States. In particular, permanent legal residents (so called Green Card holders) must be equally considered.

3. He assumed that turnover would be related to citizenship status and/or ethnicity. Even if the farmer had data that showed that certain ethnic groups are more likely to leave a job than others, race, ethnicity, and national
origin are protected characteristics which cannot be used in employment decisions. In addition, the author is not familiar with research showing higher turnover based on these characteristics.

The farmer also deprived himself of an experienced employee who may have been able to introduce new technologies and procedures and take on more management responsibility than the individual he decided to hire. The goal of a selection procedure is to hire the best applicant for the job. An applicant’s fit with the farm mission and the existing team can be appropriate selection criteria in addition to skills, experience, and expertise. Discrimination is not only illegal but often times a bad business decision.

In the example, civil penalties for citizenship status or national origin discrimination range from $375 to $3,200 for the first violation and go up subsequently. In addition, “back wages” may have to be paid to the job candidate who was not

See Employment on page 15
Big Changes for 2008 Depreciation plus the Zero Percent Tax Rate

Taxes are complicated, but being informed and doing some effective planning well before deadlines can make them manageable. There are some big tax changes for 2008, including a lowest tax rate of 0% for capital gains and the new requirement that purchases of depreciable equipment be identified as new or used. Knowing what techniques are available and how to employ them can help you minimize your taxes.

Larry Borton
Telfarm Manager
Extension Educator
Southwest Region

The Economic Stimulus Act of 2008 may have resulted in the IRS sending you a check or electronic transfer of funds. The new law also changed some depreciation rules that can affect your tax planning and record keeping long before tax time and make a substantial difference in your income taxes for 2008. Further, the lowest tax rate for long term capital gains is 0%.

On your 2008 depreciation schedule it will be important to specify whether purchased depreciable property is new or used. It can make a large difference in the amount of 2008 additional first year depreciation that is required by the new law. First, let’s check new rules for direct expensing (section 179), then consider bonus depreciation, and finally, look at the 0% long term capital gains rate.

Direct expensing allows an expense deduction in the year of purchase for costs that normally must be deducted or depreciated over many years. The direct expensing maximum limit increased to $250,000 for tax years that begin in 2008 (it was $125,000 in 2007). Eligible property includes pickups over 6,000 pounds Gross Vehicle Weight Rating, farm machinery and equipment, single purpose livestock or greenhouse structures and drainage tile. For example, if a new combine costs $300,000, then the first year amount can be added to the $250,000 first year deduction and the other $50,000 is left for normal depreciation. The $250,000 limit begins phasing out at $800,000 of eligible property purchases placed in service during the tax year. Each dollar of purchases above $800,000 decreases the amount by one dollar. If $1,000,000 of qualified property is placed in service, the direct expensing limit is reduced by $200,000 ($1,000,000 minus $800,000) resulting in a limit of $50,000 ($250,000 minus $200,000). For many farm businesses, direct expensing may provide adequate deductions when added to normal depreciation, but for large farms or those that have deferred income in past years, additional depreciation is available for 2008.

After direct expensing deductions are taken, an additional 50% bonus depreciation is REQUIRED in 2008 for new property (not used) for which the Modified Accelerated Cost Recovery System (MACRS) applies and which have a class life of 20 years or less. This includes most depreciable farm property. The new combine purchased for $300,000 in the previous example could have $50,000 of cost left to depreciate after the expense election of $250,000. Bonus depreciation is 50% of the remaining cost of $50,000 or $25,000. That leaves $25,000 left to depreciate under normal methods. Using IRS depreciation tables for 150% declining balance for seven-year property, the first year deduction for $25,000 amounts to $2,678. Our $300,000 combine is allowed a first year total maximum depreciation of $277,678 ($250,000 direct expensing plus $25,000 bonus plus $2,678 regular). That leaves only $22,322 to depreciate in future years. There is no phase-out of bonus depreciation with an upper limit on qualifying investment property as there is with direct expensing.

Another difference between direct expensing and bonus depreciation involves trade-ins. If an old skid steer loader with a remaining basis (the amount still left on the depreciation schedule) of $10,000 is traded-in and $15,000 cash is paid on the new one, only direct expensing of the boot (cash) paid ($15,000) is permitted. In contrast, bonus depreciation of $12,500 is allowed on the total of the carryover basis of $10,000 plus the boot ($15,000) and the total of $25,000 (50% of $25,000). Note that the amount allowed on the trade-in by the machinery dealer has absolutely nothing to do with the amount of direct expensing or bonus depreciation.

There are unique situations with rules that differ from the general rule for 50% bonus depreciation. A new passenger automobile used 100% for business is limited to an extra $8,000 of depreciation the first year for bonus depreciation rather than 50% of the cost. That amount can be added to the $2,960 normally allowed for 2008 first year automobile depreciation for a total limit of $10,960.

If bonus depreciation is not desired, the IRS rules allow a taxpayer to elect out of the required 50% bonus depreciation by property class (3 year, 5 year, 7 year, 10 year, 15 year or 20 year). The 50% bonus could be used for a dairy barn (10 year) and elected out for farm machinery and equipment (7 year); but all new property within the same class must be treated the same.

The direct expensing maximum limit increased to $250,000 for tax years that begin in 2008 (it was $125,000 in 2007).
Employment

hired. If a discrimination case goes to trial, the candidate may be awarded substantial damage payments. Lastly, there will be costs for the attorneys and the lost management time.

After hiring a new employee the dairy farm employer needs to make sure that all necessary paperwork is completed. Paperwork includes the new hire form and, in particular, the I-9 form. An agricultural employer checklist for employment related paperwork is available at <http://www.msu.edu/user/bitsch>.

Depreciation for 2008 is tremendously flexible and allows for some unique tax planning.

Summary of Key Points

- Note whether purchased depreciable items are new or used.
- Direct expensing maximum limit is $250,000 in 2008.
- 50% bonus depreciation is required on new purchases unless electing out of it by class.
- Zero percent long-term capital gain rate may be available for federal taxes on the gain.

I never recommend business purchases of items just for tax purposes. But I do recommend using tax laws so that no more taxes than necessary are paid. These rules are complicated and the IRS will probably have further guidance on bonus depreciation. If you have questions, contact your Dairy or Farm Management Extension Educator, your tax practitioner, or call the author at MSU Telfarm. 517-355-4700.

Additional Information


This article serves educational purposes only and does not constitute legal advice.

Contact the author at bitsch@msu.edu or visit her website at <http://www.msu.edu/user/bitsch>.
Environmental Management

Keep Nitrogen beneath the Surface

Due to skyrocketing fertilizer prices, manure is receiving serious attention from both livestock and crop producers. Utilizing manure as a primary source of nitrogen (N) has its drawbacks, but they can be overcome with proper management and equipment. The main point is preventing N loss from surface-applied manure. Too often manure is surface applied in the late summer and fall and not incorporated until spring. While tractor fuel is expensive, the N saved can more than offset the cost of incorporation into the soil.

Paul Wylie
County Extension Director
Allegan County

Three reasons to either inject liquid manure or promptly work surface-applied manure into the soil are that it stops ammonium-nitrogen losses, cuts odor generation, and greatly reduces the likelihood of runoff loss of nutrients. These things will reduce your fertilizer bill, improve neighbor relations and protect our environment.

The potential for nitrogen (N) loss when manure is surface applied and left for days or weeks is substantial. Research shows that the loss is significant and with urea N price per pound at 95 cents, this deserves attention. For example, liquid dairy manure has, per 1000 gallons: 28 pounds total N and half that is ammonium N or 14 pounds, 12 pounds of P<sub>2</sub>O<sub>5</sub> (phosphate) and 20 pounds of K<sub>2</sub>O (potash). Research from Vermont showed ammonium N loss was greatest during the first 10 hours after liquid dairy manure was surface-applied. Waiting 24 hours to incorporate the application resulted in a 50% loss of the ammonium N. You might think ammonium N loss is worse from liquid manure, but solid and semi-solid manures lose even more N because there is no liquid to be absorbed into the soil.

For example, if your plan is to apply dairy manure to meet the N recommendation for 150 bu. yield goal of shelled corn you would apply 140 pounds of available N valued at $133, or 10,000 gallons of manure. If you wait 24 to 48 hours to work it in, you still meet Right-to-Farm guidelines. However, you stand to lose 70 pounds of N from the ammonium component. With the current cost of urea N at $0.95/lb., you would have to buy additional fertilizer valued at $66/acre to make up for the loss and still pay the cost to spread the urea.

In the example, there are 200 pounds of K<sub>2</sub>O valued at $114 at today’s prices. The 120 pounds of P<sub>2</sub>O<sub>5</sub> is worth approximately $120, but if you don’t need it, it is worth nothing. Grand total for the 10,000 gallons of manure, is $367. This is the value of readily available nutrients plus 140 pounds of slow release N available in the next 3 years, worth $133 at today’s prices.

This manure application could be worth as much as $500 per acre. The bottom line is, the more valuable something is the better care we tend to take of it. Is it time to re-think your manure application practices? Shouldn’t these valuable nutrients be placed in the root zone where the crop can utilize them?

What kind of equipment should be used to incorporate surface-applied manure? Research in Maryland showed that a chisel plow reduces losses by 80%; a disk reduces losses by 90%, and a moldboard plow by 95% when used to incorporate manure immediately after it was surface-applied.


A Disk Plow being used to incorporate manure for demonstration at the 2006 Great Lakes Manure Handling Expo. Incorporating manure immediately after application can be used to reduce N losses by 80-95%.

Photo courtesy Beth Stuever
Fall Forage Management for Hay and Pasture

The following recommended forage management practices for fall can ensure survival and spring regrowth. The practices outlined in this article address soil fertility, liming, and alfalfa and pasture management. Following these important practices can help plants store carbohydrate and protein reserves in the crowns and roots and spur regeneration and the formation of the shoots and growing points.

Doo-Hong Min
Dept. of Crop and Soil Sciences
Richard Leep

Among the four seasons, fall is one of the most important for forage plants in terms of preparing for winter survival and spring regrowth by storing carbohydrate and protein reserves in the crowns and roots. Fall is also the season for regeneration and the formation of the shoots or growing points. Because plants become dormant in the fall as ambient temperature is getting lower and the day length is shorter, nutrient uptake accordingly becomes slower. Following are the things to consider for fall forage management for hay and pasture to maximize plant survival and spring growth.

1. Soil Fertility and Liming. Because the price of fertilizer is so high these days, it’s important to use phosphorus (P) and potassium (K) efficiently. One of the best ways to save fertilizer costs is to test soil for P and K on hay fields and pasture. In particular, K is related directly to winter survival rate and plants are more susceptible to winter kill when soil K level is lower than the optimum level. Fall is also a good time for liming. Having optimum soil pH is a requirement for healthy forage stands. Grasses generally perform well at a pH of 6.0 or above while most legumes require a pH of 6.5 or more. With low soil pH, poor nutrient uptake can cause poor plant growth which results in poorer winter survival and more weed problems. This can also result in poor animal performance from low forage yield and nutritive value. Because increasing soil pH is a long-term process, it’s important to apply lime materials at least 6–12 months before the results can be shown, depending on the fineness of lime materials (the higher mesh numbers, the quicker response). It’s good to have fine lime materials (particles that pass a 100-mesh sieve react 100% with the soil in 6 months or less) to increase the soil pH in a short time period. In summary, it’s very critical to soil test before applying any P, K, or liming materials to forage fields.

2. Fall Harvest Management of Alfalfa. In the late summer and early fall, alfalfa must either be cut early enough so that it can regrow and then replenish root carbohydrates and proteins or so late that the alfalfa does not regrow more than 8 inches and use root carbohydrates. This is the reason for Michigan’s ‘no-cut’ window beginning in September and lasting until the killing frost. However, recent research in Quebec, Canada has helped to redefine this window. This research assumes that if 500 growing degree days (GDD) accumulate after the last cutting, there will still be enough regrowth of alfalfa for good carbohydrate accumulation before a killing frost. Consequently, there will be good winter survival and yield the following year. So a producer can cut in September without hurting the stand as long as there is enough warm weather remaining in the growing season (accumulation of 500 GDD) before a killing frost. These GDD are calculated as the average of the daily minimum and maximum above 41°F until a killing frost (25°F). The Quebec research also showed that cutting later in the fall was acceptable as long as less than 200 GDD accumulated after cutting. When less than 200 GDD accumulated, there would be little regrowth to use up valuable stored carbohydrates and proteins in the alfalfa roots. This would result in good winter survival of the alfalfa plants. For additional information including probability graphs of late summer growing degree days for your area in Michigan refer to the following web site <http://web1.msue.msu.edu/fis/extension_documents/Alfalfafallcut.htm>.

3. Fall Pasture Management. Most farmers want to extend the grazing season as long as possible before entering winter because the weather condition in the fall is suitable to some degree for forage growth. This can sometimes result in overgrazing the pasture, which is not desirable for stand longevity. Therefore, it’s important to leave 6 inches of stubble before entering winter, which will be helpful to catch snow for moisture replenishment and for regrowth in early spring. Like fall harvest management of alfalfa, testing for soil P, K, and pH will be important to maintain good quality pasture and to follow fertilization recommendations. In particular, if you have a new late summer seeding, leaving the new seeding without grazing is important. Grazing can damage newly planted pasture due to trampling and close grazing. Fall is also a good time to check the status of your pasture to see if it needs to be frost-seeded next spring using red clover. To do this, pastures should be closely grazed or mechanically mowed in the late fall or winter to open stands and expose soil. A chain drag or light disking also can be an option to help open the stand to increase the opportunity for better seed-to-soil contact.
**Great Lakes Regional Dairy Conference: Another Great Program, A New Location**

Phil Taylor  
Extension Dairy Educator  
Eaton, Barry, Calhoun, and Ionia Counties

The 2009 Great Lakes Regional Dairy Conference (GLRDC) is moving to west Michigan for its 7th Annual conference for the international dairy industry in the Great Lakes Region and beyond. You can expect the same inspiring and educational programs that have been offered in the past to continue in 2009. The new venue will be the Crowne Plaza Hotel and Conference Center on 28th Street just east of I-96 in Grand Rapids.

The conference will be held Thursday through Saturday February 5-7, 2009. Conference registration begins on Thursday at 9:30 a.m. and the program kicks off at 10:30 a.m. The educational program committee has constructed a conference program that will provide stimulating and thought provoking options for dairy producers of all sizes and interests. The opening session will focus on the bigger picture of world agriculture. Jay Waldvogel, senior vice president of strategy and international development for the Dairy Farmers of America, will speak on Opportunities and Risks for the U.S. in the New Global Dairy Environment. Iowa grain farmer Wayne Humphreys will provide a fun and thought provoking look at how our attitude, communications, enthusiasm and sincerity (ACES) can change the world around us.

The conference will again include participation from producer peers during two panel sessions, one highlighting the use of genomics and the other dealing with contract heifer raising agreements. Also continuing from last year is the herdserson session that will be concurrent with the Thursday night banquet. This session allows local farm managers and herdsersons to take in part of the conference if they are not able to do so during the day. See the program schedule below for the topics included in this year’s session.

New this year will be a day-long seminar on Friday for grazing enthusiasts and inclusion of four Friday afternoon workshops from which attendees can choose. The conference program committee has released its tentative program schedule is shown below. More information is available through the conference web site at <http://www.glrdc.msu.edu> including how you can participate in sponsoring the conference. Details about speakers, program content, including the partner’s program, and registration will be posted to the web site as final arrangements are made.

The GLRDC Planning Committee cordially invites you to participate in the 2009 Great Lakes Regional Dairy Conference and hopes to see you there!

**Thursday February 5, 2009**

9:30 Registration and Exhibitor Showcase  
10:30 Opportunities and Risks for the U.S. in the New Global Dairy Environment, Jay Waldvogel, Senior Vice-President for Strategy and International Development, DFA  
11:15 Leading with Your ACES, Wayne Humphreys, Iowa Farmer and Agriculture Speaker  
1:00 Cows Built To Last: Conformation from the Inside Out, Dr. Gordon Atkins, Dairy Practitioner & Instructor at the University of Calgary School of Veterinary Medicine  
2:00 The BIG News in Dairy Genetics, Dr. Bennet Cassell, Professor of Dairy Science, Virginia Tech  
3:15 Practical Genomics: Something for Everyone (Producer Panel)  
4:00 Cow Comfort: The Buck Starts Here, Dr. Nigel Cook, Clinical Assistant Professor, Farm Animal Production, University of Wisconsin-Department of Veterinary Medicine  
5:00 Heifer Sale and Social Hour. Exhibitor Showcase (Continues)  
6:15 Dinner  
Opening Remarks and Speaker Introduction, Dr. Janice Swanson, Michigan State University Director of Animal Welfare, Department of Animal Science  
Dinner Speaker: Animal Producers from Mars, Animal Lovers from Venus: Directing Agriculture through the Curves of Ethics, Attitudes and Expectations, Dr. Wes Jamison, University of Florida  
7:15 Herdserson Session  
Cow Comfort: The Buck Starts Here, Dr. Nigel Cook, Clinical Assistant Professor in Food Animal Production Medicine, University of Wisconsin-Madison, School of Veterinary Medicine  
Best Heifer Management Practices for Building Tomorrow’s Herd, Tom Earleywine, Director of
Nutritional Services, Land O’Lakes Animal Milk Products

Friday February 6, 2009
8:00 Best Heifer Management Practices for Building Tomorrow’s Herd, Tom Earleywine
8:45 Experiences with Custom Heifer Contract Agreements – Producer Panel
9:30 Exhibitor Showcase (Continues)
10:00 Which Workers Last Longer: Cows or Employees? Maintaining Positive Communications and Interrelationships with Your Employees, Dr. Bernie Erven, Professor Emeritus of Agricultural Economics, The Ohio State University
11:15 $16 Milk: Where’s the Profit? Income Over Feed Cost and Other Input Cost Issues, Dr. Ken Bailey, Professor of Agricultural Economics, Pennsylvania State University
10:30 Dairy Grazing Seminar – Concurrent Sessions – See Workshop Session 3 program.
1:00 Concurrent Producer Workshop Sessions
Workshop 1 – Managing Your Margins, Dr. Ken Bailey
Workshop 2 – Don’t Raise A Stink: Manure Management Issues
  ■ Manure Storage Structures – Getting It Right, Michelle Crook, Design Engineer, Michigan Department of Agriculture
  ■ Methane Digester Experiences in Michigan – Charles Gould, Extension Educator, Manure and Nutrient Management, Michigan State University Extension
  ■ Understanding Carbon Credits and Trading, Dr. Jim Dragun, Agronomist/Soil Scientist, The Dragun Corporation
Workshop 3 – Dairy Grazing Seminar – Begins at 10:30 AM
  ■ Income over Feed Cost Considerations for Economical Supplementation of Grazing Dairy Cows, Dr. Ken Bailey, Professor of Agricultural Economics, Pennsylvania State University
  ■ Kellogg Biological Station Grass-Based Dairy Project: An Update. Mat Haan, Grass-Based Dairy Project Coordinator
  ■ Producer Viewpoint – Guest Grazier Spotlight
  ■ A Summary of Michigan Dairy Farm Conversions to Management Intensive Grazing. Phil Taylor, Extension Educator, Dairy, Michigan State University Extension
  ■ Start-up Versus Conversion: A Look at Two Options for Beginning Grazing. Phil Taylor, Extension Educator, Dairy, Michigan State University Extension
  ■ Considerations for Future Pasture Forage Establishment. Dr. Rich Leep, Professor of Crop and Soil Science, Michigan State University
  ■ Producer Viewpoint – Guest Grazier Spotlight
  Workshop 4 – Optimizing Hoof Health: What It Really Takes, Dr. Gordon Atkins
3:00 Ice Cream Sundae Break – Exhibitor Showcase
5:00 Social and Silent Auction
6:00 Dairy Industry Night Banquet and Program

Saturday February 7, 2009
Michigan Dairy Breed Organizations Seminar
8:00 Continental Breakfast with invited speaker
9:00 All-Breeds Bulletin (PDCA meeting)
9:30 Brunch
10:30 Breed meetings and youth activity
12:00 Noon – Conference concludes

Dale Rozeboom Gives a presentation at the 2008 Great Lakes Regional Dairy Conference.

Photo courtesy Laura Moser
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**Don’t miss Manure $ense: Making the most with your manure**

Feb. 3 at the RESA Center in St. Johns

Feb. 17 at the Farm Bureau Building in Bad Axe

Feb. 25 at the Miller Library in Zeeland

More info is available at: <http://www.animalagteam.msu.edu>. More details in the next issue of MDR.

**Printing and distribution of Michigan Dairy Review is supported by a competitive grant from funds of the Michigan Animal Agriculture Initiative administered by MSU’s Animal Industry Coalition.**
Michigan Milk Market Update

Christopher Wolf
Dept. of Agricultural, Food and Resource Economics

The Cooperatives Working Together (CWT) program recently completed a fifth round of herd retirements. The results of the five rounds of herd retirements are displayed in table 1. With respect to the increasing average bid each round, recall that milk prices in 2003 were at the tail end of 18 months near support price. Milk prices were higher for the next four rounds and the average bid reflects this pattern as it generally has cost more with each round. Prior to 2007, the program made an effort to remove more milk from growth regions. The most recent round accepted 201 bids with 15 coming from Michigan. As of August 2008, Michigan had 348,000 milk cows, an increase of 10,000 over the previous August. The US had a total of 9.28 million milk cows, an increase of 1.3 percent over a year earlier.

Exports of US dairy products have been up sharply in the past 2 years aided by a weak dollar and slow domestic economic growth. Lower export sales are forecasted for 2009. That activity may be curtailed by a strengthening dollar and a softening international demand with worldwide economic woes. The link between fuel prices and commodity prices continues to be evident from the recent corn and soybean price declines following the significant oil price decline. The price of dairy feed in August was 50% higher than a year earlier. The US price of alfalfa hay was $180/ton, a 30% increase over the previous year.

### Outlook

The milk price outlook depends heavily on feed prices and their effect on milk production. Following a year of 2% growth in milk production, the forecast is for a slowdown to less than 1% growth. The slowing economy likely means fewer meals at restaurants which translates to less cheese consumption. USDA is forecasting Class III prices at $16.55 to $17.85 for the first two quarters of 2009. At the current time, milk futures will need to recover substantially to reach that price level.

### Table 1. Summary of CWT Herd Requirements

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<tr>
<td>Cows retired</td>
<td>32,724</td>
<td>50,478</td>
<td>65,644</td>
<td>52,783</td>
<td>24,585</td>
</tr>
<tr>
<td>Milk removed (lbs.)</td>
<td>608 million</td>
<td>908 million</td>
<td>1.2 billion</td>
<td>1.0 billion</td>
<td>432 million</td>
</tr>
<tr>
<td>Bids submitted</td>
<td>2,038</td>
<td>763</td>
<td>651</td>
<td>1,374</td>
<td>607</td>
</tr>
<tr>
<td>Bids accepted</td>
<td>299</td>
<td>363</td>
<td>448</td>
<td>333</td>
<td>201</td>
</tr>
<tr>
<td>Average accepted bid ($/cwt)</td>
<td>4.03</td>
<td>5.24</td>
<td>6.75</td>
<td>5.50</td>
<td>6.10</td>
</tr>
<tr>
<td>Maximum accepted bid ($/cwt)</td>
<td>4.99</td>
<td>7.63</td>
<td>na¹</td>
<td>na¹</td>
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¹Not applicable

### More Information

More on milk market trends and developments can be found at the MSU Extension Dairy Team website at <http://www.dairyteam.msu.edu>.
Calendar of Events
October - February

Central MI Ag Market Update Meeting
Dec 4, 10am
MAC in Middleton
Speaker: Natalie Rector, “Making $ and Sense of Manure”
Contact: Faith Cullens, 989-224-5249

On-Farm Anaerobic Digester Operator Certification Program
Nov. 22
Allegan MSUE 9:30 -3pm
Contact: 616-846-8250

Central MI Ag Market Update Meeting
Jan 22, 2009 10am
Clinton Co Courthouse
Speaker: Vera Bitsch, “Labor Management”
Contact: Faith Cullens, 989-224-5249

Agriculture’s Conference on the Environment
Jan. 28, 2009
Lansing Convention Center in Lansing
Contact: 517-241-2232

Great Lakes Regional Dairy Conference
Feb. 5-7, 2009
Crowne Plaza Hotel in Grand Rapids
Contact: <http://www.glrdc.msu.edu/>

The Dairy Practices Council Annual Conference
November 5-7 2008
Kellogg Hotel & Conference Center
Michigan State University
East Lansing, Michigan

The DPC 39th Annual Conference presents outstanding speakers on issues challenging the dairy industry and afternoon Task Force sessions are reserved for work on developing new guidelines. Participants have the opportunity to exchange information with dairy personnel from industry, regulatory agencies and academia, all at one gathering. Everyone is welcome to become involved with guideline development by attending open Task Force sessions.

Thursday, Nov. 6 morning speakers will address:
Tanker cleaning, national transportation issues, the greening of the dairy lab, animal handling ethics, antibiotic resistance, innovation in dairy, water buffalo mozzarella in Michigan, starting a niche business, and other issues.

Friday, Nov. 7 morning speakers will address:
Raw milk, outbreak of listeria monocytogenes from pasteurized milk in Massachusetts, environmental quality issues facing Dairy Farms, a new food safety audit system, farm and plant energy decisions, and other issues.

Complete program can be found on DPC website.

For more information, and a registration packet please contact:
The Dairy Practices Council®
51 E. Front St., Suite 2
Keyport, NJ 07735
Tel./Fax: (732) 203-1947
Email: dairypc@dairypc.org
www.dairypc.org

Feeding the Herd Discussions
Discussions focus on feed and milk prices, alternative feeds evaluation and forage quality. 11am to 2pm. Call 616-846-8250 to register.

Dates and Locations
Oct. 28: Clarksville at the Clarksville Experiment Station
9302 Portland Rd.
Oct. 29: Lakeview at the Tamarack District Library. Co-sponsor Vita Plus and Riverdale Feed & Grain
Oct. 30: Hudsonville at the Farmers Co-op Elevator 3300 Prospect St. Co-sponsor Farmers Co-op Elevator
Nov. 11: Fremont at Samuel’s Restaurant 1042 W. Main. Co-sponsor Fremont Co-op

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