2008 Penn State Dairy Cattle Nutrition Workshop

November 11, 2008

12:00 – 5:00 **Feed Management Planner Symposium**

12:00 – 1:00	Lunch	
1:00 – 1:20	Introduction to Workshop and Resource Materials	*Ms. Virginia Ishler, Penn State*
1:20 – 1:40	Defining the Purpose: Feed Management as part of CNMP	*Ms. Jana Malot, NRCS*
1:40 – 1:50	The Certification Process	*Dr. Joe Harrison, Washington State University*
1:50 – 2:15	Identify Conditions Where Practice Applies	*Dr. Sarah Dinh, Penn State*
2:15 – 2:45	Assessing the Opportunities: Opportunity Checklist	*Dr. Rick Kohn, University of Maryland*
2:45 – 3:00	Break	
3:00 – 3:30	Economic Evaluation: Alter Feed Management or Export Manure	*Ms. Becca White, Washington State University*
3:30 – 4:15	Feed Management Plan Development	*Ms. Virginia Ishler*
4:15 – 5:00	Implement and Monitor	*Ms. Jana Malot and Mr. Tim Pilkowski, NRCS*
5:00	Adjourn or Certification Exam	

November 12, 2008

7:00 – 8:15 Registration

8:00 – 12:15 **Zinpro Performance Minerals Preconference Symposium**

8:00 – 8:25	Coffee and Danish	
8:25 – 8:30	Introduction	
8:30 – 9:15	Dairy Industry Outlook	*Mr. Gary Genske, Genske, Mulder & Co. LLP*
9:15 – 10:00	Role of Trace Minerals in the Immune System	*Dr. Dana Tomlinson, Zinpro*
10:00 – 10:30	Break	
10:30 – 11:15	How Does Cow Comfort Influence Cow Health and Performance?	*Dr. Nigel Cook, University of Wisconsin-Madison*
11:15 – 12:00	Building A Better Trace Mineral Program	*Dr. Mike Socha, Zinpro*
12:00 – 12:15	Questions for the morning's speakers & Wrap up	*Genske, Tomlinson, Cook, Socha*
12:15 – 2:00	Lunch	

12:15 – 2:00 Visit exhibits

2:00 – 3:15 First workshop session

3:30 – 4:45 Second workshop session

5:00 – 7:00 Reception in exhibit area, sponsored by Alltech

7:30 – 10:00 Ice cream social and "bear pit" session
Finding the Right Balance: Mineral Supplementation of Prepartum Diets.....
Moderator: Dr. Bob Van Saun, Penn State; Panel: Drs. Jesse Goff, Jim Ferguson, and Mike Socha

November 13, 2008

6:30 – 7:45 Breakfast sponsored by Prince Agri Products .....
Principles of Immune Function and the Impact to Dairy Profitability ..... *Dr. Ken Zanzalari, Prince*

8:15 – 9:00 Nutrition with $6 Corn ..... *Dr. Normand St-Pierre, The Ohio State University*

9:00 – 9:30 Farm Injury: A Number One We Don't Want..... *Dr. Dennis Murphy, Penn State*

9:30 – 10:15 Employing Cereal Chemistry Techniques in Grain and Corn Silage Analysis.....
.....*Mr. Pat Hoffman, University of Wisconsin-Madison*

10:15 – 10:45 Break – All-day break sponsored by Lallemand Animal Nutrition, Varied Industries Corporation, and Venture Milling

10:45 – 11:25 Morning Session II ..... *Choose one of the four topics below*

11:30 – 12:10 Morning Session III ..... *Choose one of the four topics below*

Johne's Disease, Crohn's Disease and Your Health ..... *Dr. Bob Whitlock, University of Pennsylvania*
The evidence suggesting a relationship of Johne's and Crohn's disease will be explored. Johne's has been shown to infect over 70% of US dairy herds and the organism has been isolated from pasteurized milk. What is the risk to our health?

Mycotoxins in Forages: Potential Sources of Contamination to Lactating Dairy Cattle .....
.....*Dr. Duarte Diaz, Novus International*
Does visibly moldy forage contain mycotoxins? Can normal looking forage contain mycotoxins? Mold growth and mycotoxin production will be discussed as well as the potential of these toxins to cause production losses.

What Are We Learning about Reducing Nutrient Excretion in the Mid-Atlantic Region?.....
.....*Dr. Jim Ferguson, University of Pennsylvania and Dr. Charles Stallings, Virginia Tech*
Learn about the Chesapeake Bay Project and the Virginia "P Project." Rations, fecal analysis, MUN and production data on farms in the Chesapeake Basin will be presented, and discussion will cover challenges to reducing N and P from PA agriculture and N and P efficiencies. Also, hear about a VA project using incentive payments to reduce P feeding. Discuss assumptions used in developing farm reports, changes in farmer acceptance, and impacts of reduced P feeding.

Effective Risk Communication Strategies for the Dairy Industry .....
.....*Dr. Monique Mitchell Turner, University of Maryland*
This session will cover the best practices in communicating risks to consumers in order to help them make more informed decisions. A focus will be paid to communicating uncertainty and communicating in times of crisis or stress.

12:10 – 1:15 Lunch

1:15 – 2:15 First workshop session

2:30 – 3:30 Second workshop session

Workshop Descriptions—November 12, 2008

Each participant can attend 2 workshops this afternoon. *Use these descriptions to rank your preferences on the registration form. Please mark at least 5; 1 = first choice. Due to space restrictions, workshops will be assigned in the order registrations are received. Numbers in parentheses indicate the participant limit for each workshop.*

Nutrition and Management Factors Affecting Immune Competence of the Dairy Cow—How does the cow's environment affect immune competence? Discussion will focus on cow stressors such as cow comfort, lameness, SCC, stocking density, heat abatement and water quality and how they negatively affect cow health and reproduction. Benchmarks for each area will be provided. (50) *Instructor: Dana Tomlinson, Zinpro*

Water Quality Issues for Dairy Cattle—Water quality is often overlooked as a potential cause of low milk production or herd health issues. This presentation will focus on common water quality issues that can impact dairy herds including data from several recent rural water quality studies in Pennsylvania. Water testing strategies to detect problems will be also discussed. (50) *Instructor: Bryan Swistock, Penn State*

Transition Cow Facility Design: Minimizing the Bottlenecks to Optimize Health and Productivity—This session will highlight a plan to size transition cow facilities appropriately to manage the cow with minimal disturbance from the dry period through to early lactation. (60) *Instructor: Nigel Cook, University of Wisconsin-Madison*

Nutrient Movement through the Soil and Manure Sampling—Air and water quality concerns are influencing dairy feed formulation. This workshop will introduce attendees to environmental concerns associated with manure nutrients, explain possible pathways of manure nutrient movement, present manure sampling basics, and wrap-up with a Q & A session where all nutrient management topics will be open for discussion. (40) *Instructor: Robb Meinen, Penn State*

Are The Right Cows Leaving the Herd?—Removal of cows from the herd can either have a beneficial effect or a negative effect on overall profitability of the dairy. In this session we will look at why and when cows leave the herd including milk production, disease and pregnancy status. (30) *Instructor: Mike Socha, Zinpro*

The ABC's of Developing Your Dairy Workforce—This session will provide ideas and suggestions for working with dairy owners to develop outstanding performance in their dairy managers, feeders and other workers. Employee development is a sound investment and can provide positive returns on that investment both in bottom line to the dairy and performance of the workers. (30) *Instructor: Lisa Holden, Penn State*

Basic DHI Records Analysis: Reading and Interpreting the 202 Reports—Participants in this workshop will learn a systematic approach to reading and interpreting paper DHI records. In addition they will determine the economic impact of current herd performance using a simple records analysis spreadsheet. (36)
Instructors: Brad Hilty and Ken Griswold, Penn State

Shrink the Shrink—Feedstuff shrink is a stealthy, expensive problem on a lot of dairies. Minimizing the amount of shrink is a great way to reduce feed costs. This discussion will review management practices that reduce shrink, including forage harvest, storage, and feedout; TMR load preparation; and feeding to a low refusal rate. (40)
Instructor: Bill Stone, Diamond V Mills

Dairy Detectives: Putting Data to Work—This session will use actual case studies and real farm data to determine the extent of, and to solve dairy cattle problems. Workshop will focus on: 1. Gathering and using data that is readily available to assess the actual profit loss from an "on farm" problem. 2. Using the data to solve the problem. 3. Evaluating the response to the recommended solutions. (35) *Instructors: Gabriella Varga, Penn State and Tom Nauman, Hoober Feeds*

PDMP Corn Silage Hybrid Testing—This analysis provides unbiased yield and forage quality information. Open discussion will evaluate performance of corn silage and determine what this means for dairy producers. (60)
Instructors: Dave Hileman, Hilecrest Farm; Chris Canale, Cargill; and Greg Roth, Penn State

Metabolic Disease and Immunity in the Transition Cow—Why are dairy cows immune-suppressed around the time of calving? How do hypocalcemia, negative energy balance, protein deficiency, and vitamin insufficiency affect the immune system? Is there a tie-in between retained placenta and uterine health and immune function at calving? Can management factors help improve the immune responsiveness of the transition dairy cow? (50)
Instructor: Jesse Goff, West Central Soy

Forage Analyses 101—Forages are the main ingredients in most dairy rations and also the most variable, so analyzing them often and understanding what those analyses mean will lead to better ration formulation. Discussion will focus on basic interpretation of forage analyses and how the nutrient composition impacts utilization of the forage and incorporation into the ration. (30) *Instructor: Sarah Dinh, Penn State*

Workshop Descriptions—November 13, 2008

Each participant can attend 1 two-hour workshop OR 2 one-hour workshops this afternoon. *Use these descriptions to rank your preferences on the registration form. Please mark at least 5; 1 = first choice. Workshops will be assigned in the order registrations are received. Numbers in parentheses indicate the participant limit for each workshop.* ***Please note, if you choose a 2-hour session you will only attend 1 workshop.***

ONE-HOUR SESSIONS:

Managing Injury Hazards and Risks on Dairy Farms—Injury hazards and risks on dairy farms are numerous, persistent, and insidious. But they can be controlled and mitigated. The focus of this workshop will be on the application of safety management principles to hazards and risks associated with dairy farms. (35)

Instructor: Dennis Murphy, Penn State

Novel Feeding Systems for Dairy Replacement Heifers—Costs of rearing replacement heifers have risen dramatically. This workshop will address feeding systems to potentially reduce feed cost, including limit feeding, tropical corn silage, low phosphorus supplementation, feeding straw and distillers grains. (50)

Instructor: Pat Hoffman, University of Wisconsin-Madison

Protein Degradability in the NRC 2001 Model—Discussion on estimating ruminal degradability of feedstuffs, requirements, and analysis of the impact protein degradability has on milk protein synthesis and milk nitrogen efficiency in dairy cows. (40) *Instructor: Alex Hristov, Penn State*

Assessing the Value of Feeds Using the Sesame Software—We now see feed prices changing more in a week than what we used to see in one year. These changes affect herd profitability. At any point in time, there are always underpriced feeds to be purchased – and overpriced ones that shouldn't. Learn how Sesame can help sort out the bargains from the rest. FIRST SESSION ONLY. (40) *Instructor: Normand St-Pierre, Ohio State*

Mycoplasma Herd Infections: Easy to Get, Hard to Get Rid Of—Expansion and commingling increase the risk of introducing mycoplasma to a herd. Learn the key factors and risks associated with this pathogen. Discussion will include therapy protocols and immunization, but will emphasize early recognition and prevention. (40)

Instructor: Dave Wolfgang, Penn State

Using Income Over Feed Costs to Manage Profit on PA Dairies—Hear about a new research and demonstration project for PA farmers that will involve reporting and analyzing income over feed costs monthly. Learn the importance of using income over feed costs in farm management and how to get involved in this project, either personally or through your customers and clients. (20) *Instructor: Mark Douglass, Penn State*

TWO-HOUR SESSIONS:

Remember the Basics When Evaluating Reproductive Performance—Good reproductive performance is essential to the profitability of a dairy business. The basics of reproductive physiology will be reviewed using specimens. The diagnostic indicators for reproductive performance and major bottlenecks affecting performance will be discussed. (30)

Instructor: Mike O'Connor, Penn State

Take Your CPM Skills to the Next Level—The nutrition model in CPM-Dairy is version 5 of the Cornell Net Carbohydrate and Protein System. Unique features of CPM-Dairy are expanded carbohydrate fractions, a sub model to predict ruminal metabolism and intestinal absorption of LCFA, an automatic nutrient balancing system, and guidelines to evaluate rations. BRING YOUR LAPTOP; ADVANCED SESSION. (30) *Instructor: Bill Chalupa, Global Dairy Consultancy Co., Ltd*

Lameness: A Puzzle with A Lot of Pieces—This workshop will give an overview of how lameness develops, as well as look at some of the most common pieces of the lameness puzzle. Cadaver specimens will be used to demonstrate the anatomy of the bovine foot as well as common lameness problems. (30)

Instructors: Ernest Hovingh and Bob Van Saun, Penn State

Advanced DHI Data Analysis—Learn how to interpret DHI data with PCDart, DairyComp 305 and The Penn State Dairy Data Analysis Tool. Participants will generate graphs and reports that allow them to comprehensively analyze herd performance. Participants must know how to use a computer and have basic knowledge of PCDart. COMPUTER LAB. (28)

Instructors: Brad Hilty and Rob Goodling, Penn State

**FNMP$: Economics of Feed Management Planning**—Inexpensive by-product feeds often contain more phosphorus than needed in the ration. Participants will learn how to use the FNMP$ tool to make decisions about the impact that high phosphorus feeds can have on whole-farm nutrient management. BRING YOUR LAPTOP. (20)

Instructors: Joe Harrison and Becca White, Washington State University