PENNSYLVANIA CERTIFIED ORGANIC

Organic Dairy Matters®

A bi-monthly resource for Organic Dairy Producers published by Pennsylvania Certified Organic Nov/Dec 2006

Calendar of Events

Jan 9–11
Keystone Farm Show York Fairgrounds, York, PA. www.keystonefarmshow.com/

Jan 11
Annual Vermont Grazing Conference, Vermont Technical College, Randolph Center, VT. Jennifer Colby, VT Pasture Network Outreach Coordinator: 802-656-0858, jcolby@uvm.edu

Feb 1
National Organic Action Plan: What will Organic Look Like in the Next 10–20 Years?, Penn Stater Conference Center Hotel, State College , PA. Contact Liana Hoodes: (845) 744-2304 or liana@hvc.rr.com

Feb 1–3
PASA 16th Annual Farming for the Future Conference. Penn Stater Conference Center, State College, PA. PASA: www.pasafarming.org or 814-349-9856.

Feb 6–7
Lancaster Eco-Farm Days, Bird-in-Hand, PA, Hosted by PCO member Levi Miller. Contact Levi Miller: 717-661-8682

Feb 20
Northwest PA Grazing Conference. Dubois PA. 814-375-1372.

Feb 14–16
Organic Livestock Health and Management Conferences (for extension agents, veterinarians and other professionals). Alfred State College, Alfred, NY. Lisa McCrory: 802-434-4122.

Feb 23–25
Sustainable Farming Conference. Laurelville Mennonite Center, Mt. Pleasant, PA.

PCO Annual Meeting Focuses on Livestock Production

Marvin Hall

Linda Tikofsky

Pennsylvania Certified Organic held our annual membership meeting on December 5, 2006 at the Ramada Inn located in State College. The event was well-attended by PCO members, with more than 130 people coming out for a day filled with informative presentations, exhibits, great food and conversation. Guest speakers included Marvin Hall, Professor of Forage Management at Penn State, Linda Tikofsky, Senior Extension Associate and veterinarian working for Cornell University's Quality Milk Production Services, Robert van Saun, Extension Veterinarian and Professor of Veterinary Science at Penn State, and Kathy Arnold, a New York organic dairy farmer. In this issue, we have have been fortunate enough to include articles written by two of our guest speakers at the Annual Meeting: Marvin Hall and Linda Tikofsky.

Understanding Forage Plant Growth Simplifies Management

Dr. Marvin Hall
Dept. of Crop & Soil Sciences,
Penn State University

As shown by this research trial, grass quickly surpasses alfalfa growth (photo taken 14 days after harvest). Photo credit: Marvin Hall.

Unlike grain crops, the value of forages is based on the yield and value of the whole plant. Forage yield, persistence, and, to some extent, quality have been improved through plant breeding. However, understanding how the plant grows and develops will assist in managing to provide ideal growing conditions which are essential if a producer is to capture the superior genetic potential of forage varieties.

Forage growth is driven by photosynthesis, a process that captures the sun's energy and converts it into chemical energy. Glucose sugar is the primary chemical energy product of photosynthesis. Glucose combines with other nutrient elements to provide all the components needed for plant growth.

Living cells extract energy from glucose through a process called respiration. In the most basic sense, for plants to have sustained growth glucose production by photosynthesis must be greater than glucose use by respiration.

Cells divide and then begin to enlarge and form secondary cell walls which contain lignin that inhibits cell digestibility. Leaf cells contain relatively little lignin where as the cell wall of stems cells contain more lignin, become thicker and are less digestible to cattle as they age. Continuous cell division and the collective enlargement of individual cells accounts for plant growth. Legumes and grasses grow differently, and these differences in growth affect how

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Preventing Mastitis: An 8-Step Plan

By Dr. Linda Tikofsky,
Quality Milk Production Services

(article summarized by Melanie Saffer,
PCO Assistant Certification Director)

Mastitis can be quite a headache for organic dairy farmers, resulting in high somatic cell counts (SCCs) in bulk milk and decreasing overall milk quality. For anyone considering transitioning to organic milk production, it is particularly important to get cases of mastitis under control. Linda Tikofsky, DVM of Quality Milk Production Services at Cornell has devised an 8-Step Plan for Better Udder Health based on a program developed by The National Mastitis Council. The plan can easily be used by organic dairies to reduce mastitis and therefore enhance both milk production and quality.

1. *Set farm specific udder health goals*.

Some realistic goals for most farms include: bulk tank SCC levels of less than 200,000 cells per milliliter, having fewer than 5% new infections each month, and keeping clinical mastitis and chronic infections down to 2–3 percent.

2. *Implement a plan to regularly monitor udder health*

Conducting a monthly cell count test of all lactating animals is one way to regularly evaluate udder health. These tests can be done through organizations such as the Dairy Herd Improvement Association (DHIA). Visual observation, monitoring with a strip cup or CMT test are other options for monitoring udder health. If two consecutive DHIA test reveal high cell counts in an animal, she should be cultured and based on those results changes in milking order or administration of an alternative therapy should be considered.

3. *Proper milking procedures*

Milking infected animals last can greatly reduce the spread of mastitis in a milking herd. Following a proper milking procedure can also help to decrease stress of the animals and therefore enhance milk out. Below is a list of some other components of a good milking procedure:

Cleaning dirty teats before milking (using a teat dip approved for organic production) and wiping clean with a single use towel prior to attaching milking units.

Wearing nitrile or latex gloves while milking makes it easier to clean gloved hands between cows.

Forestripping or removing 3 to 4 squirts of milk from each teat before milking. This allows higher SCC milk of infected animals to be purged and stimulates milk letdown response. This should always be done in a manner that prevents contamination of bedding.

Preventing overmilking or machine stripping, which can cause problems such as damage on teat ends and development of scar tissue. Scar tissue on teat ends removes natural antibacterial keratin which develops on teat ends and can leave the animals more vulnerable to infection.

Ensuring that all animals are housed in a clean, dry, comfortable environment with appropriately-sized stalls will help to prevent damage to teats and subsequent mastitis. Photo credit: Robert James, Virginia Tech Dairy Science Department.

4. *Maintain milking equipment regularly*

Replace rubber milking liners regularly and any other rubber parts of milking equipment as needed. Changing liners every 60 days or approximately every 800 milkings is recommended to prevent mastitis-causing bacteria from growing in the cracks of aging rubber. Have your milking system thoroughly checked two times a year by a professional to look for problems that can push mastitis-causing bacteria into the teat during milking.

5. *Evaluate dry cow management*

Allowing a cow to dry off in a clean and comfortable environment is important for reducing the risk of mastitis. Frequently cleaning stalls and providing the animal with clean and dry bedding when temporarily housed in the winter are good steps toward maintaining a clean and comfortable environment. In the warmer months, pasture is the preferred environment for dry cows, provided precautions are taken to minimize their contact with muddy areas.

6. *Institute biosecurity and culling guidelines*

If contagious mastitis is persistent in your herd, it is important to cull infected animals for the protection of the rest of the herd. Cows with consistently high cell counts should not be bred back and should be removed from the herd.

7. *Environment*

In addition to providing a clean and comfortable environment as previously mentioned, make sure stalls are sized appropriately to prevent damage to teats and subsequent mastitis. Controlling flies using methods approved for organic production will help reduce the spread of mastitis by flies.

8. *Youngstock and replacements*

Calves can spread mastitis by suckling from infected cows to uninfected cows if allowed to roam among the milking herd. This type of spreading can be minimized by placing calves in calf hutches or by separating the infected cows. All herd replacements, including first calf heifers should be cultured when they freshen. Infected animals can be identified early and managed appropriately to keep cases of mastitis below your minimum goal.

The traditional treatment for bovine mastitis is to administer antibiotics. However, because antibiotics are PROHIBITED for use in organic dairy production, it is important to develop a way to manage mastitis to prevent it from becoming a problem for your organic herd. If your dairy is planning to transition to organic production it is important to get this and any other health issues under control before beginning your herd's transition.

Forage Plant Growth

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digestible various parts of the plants are as they age.

Legumes, like alfalfa and clover, grow from the bottom up. The part of the plant closest to the ground is the oldest, and the part highest up is the youngest, which contains the least amount of lignin and is therefore more digestible. Grasses, on the other hand, grow from the bottom of each internode, pushing older, less digestible tissue up. This means that the tops of legumes and the bottoms of grasses contain less lignin, and are more digestible. These differences in where legumes and grasses grow also affect how grasses and legumes compete with each other in a mixture. If animals graze high then they remove the growing point of legumes (at the top of the plant) but the growing point of the grass remains intact further down the stem. In this situation the legume must start growing again from buds at the base of the plant while the grass continues to grow from its growing points and soon shades the legume.

Management Tips for Optimum Forages Growth

- Select species and varieties with proven high-yield potentials and persistence (disease resistance and winter hardiness) in your region.
- Soil test, then adjust soil fertility and pH according to the soil test recommendation.
- Inoculate legume seeds. Check with your certifier to find out which inoculants are allowed for use in organic production.
- Plant forage seeds 3/8 inch deep at an adequate rate for your area, and insure good seed-to-soil contact for rapid germination and emergence.
- Replace needed soil nutrients annually, based on soil tests.
- Follow a harvest schedule which meets forage quality needs and leads to the desired life expectancy of the alfalfa stand.

Dear Buttercup

Dear Buttercup,

I am confused about whether I can use a product for my certified organic dairy herd. I understand the NOP standards say that I am allowed to use ivermectin as a parasiticide for emergency use only (not for routine use) on my dairy herd. However, I am not sure about which products this includes. I have heard about a product called Eprinex, made by Ivomec. Is this the same as ivermectin?

— Concerned and checking in advance

Dear Concerned,

This is a great question, because there has been some confusion lately about this very product, especially among our new and transitioning farmers. Section 205.603 (a) (13) states: *Ivermectin* - prohibited in slaughter stock, allowed in emergency treatment for dairy and breeder stock when organic system plan-approved preventive management does not prevent infestation. Milk or milk products from a treated animal cannot be labeled as provided for in subpart D of this part for 90 days following treatment. In breeder stock, treatment cannot occur during the last third of gestation if the progeny will be sold as organic and must not be used during the lactation period for breeding stock.

Ivermectin is the generic name for a parasiticide made by a variety of manufacturers and used to treat a variety of worm, mite, and lice infestations. The most common manufacturer of ivermectin is a company called Merial, which manufactures the product under the brand name Ivomec. The confusion seems to arise because there are other parasiticides manufactured under the name Ivomec that are not Ivermectin, and are therefore NOT allowed for use in organic production. Eprinex is one of these products. The best thing to do is call your certifier to double check whether the product you would like to use is ivermectin BEFORE you use it. If possible, send a product label so that your certifier can review the product based on complete information. Also, remember that the restrictions listed above apply to ivermectin. Keep in mind that many products have very similar names (for example, PCO has reviewed about 30 products called "CMPK"). Thanks for the great question and keep up the good work!

— Buttercup

September/October 2006

SPONSORS

ADVERTISING

Classified Ads

FOR SALE

■ NOFA–NY Certified organic dairy cows; up to 15 available; most are bred to calve in spring or summer of 2007. Northeastern PA. Call for details. Mark Lichtenstein 570-448-2658 or marklichtenstein@yahoo.com.

■ Certified organic hay (Michigan). Small square bales alfalfa/mixed grass. Second cutting has RFV of 135, and third cutting has RFV of 150. Can arrange shipping. Alvin Martin (989) 872-4575.

■ PCO-certified timothy mix (Snyder County). Approx. 800 pound, round bales. $140/ton first cutting and $160/ton second cutting, plus delivery. Marvin Weaver: (570) 374-8750.

■ PCO-certified organic hay and baleage. 1st and 2nd cutting, 4×4 net-wrapped round bales, dairy quality or dry cow quality. Trucking available. Dave Johnson at Provident Farms: (570) 324-2285, (570) 772-6095 or provident@epix.net.

■ Organic baleage. Certified by NOFA-NY. Rotocut and net wrapped, individually and in tubes. 1st–4th cutting, can ship anywhere. Phil May: (585) 610-0490 or (585) 593-0571.

■ Certified organic hay (Allegany County, NY). 4×4 round bales, first cut, $30 each. Hay certified by NOFA-NY. (716) 244-7038 or hfjk@localnet.com.

■ PCO-certified organic rye seed (Lebanon County). Combine run, $10.25/bu.; cleaned, $11.15/bu. Steve Musser: (717) 228-0477 or stevemusser@evenlink.com.

■ Certified organic grass hay (Rexville, NY). Baleage or dry round bales. Delivery available. Will Comley: 607-225-4320.

■ MDA-certified organic alfalfa and orchard grass mixed hay (Chestertown, MD). Small, square bales; 2nd & 3rd cuttings; good dairy quality; $200/ton plus freight. Michael Moore: (410) 778-0710 or mrmoore@dukesmoore.com.

■ QAI-certified organic hay and corn (Michigan). Alfalfa, alfalfa/grass mix and grass hay, large square bales. Can arrange delivery. Ed Zimba: (989) 872-2680.

■ PCO-certified organic hay and 2nd and 3rd cutting baleage. Delivery available. Tioga County. Call John Painter: 814-367-5238.

WANTED

■ Certified-organic dry cow hay (Lancaster County). Amos J. Stoltzfus: (717) 442-0208.

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PCO Materials Scoreboard: Sept.–Nov. 2006

Attention: PCO reviews materials requested for use by our clients as part of their applications or initial reviews. PCO has not evaluated the effectiveness of these materials and in no way endorses their use. Manufacturers and distributors of products listed as allowed are not permitted to use this information to advertise or sell their products. Use of the Pennsylvania Certified Organic (PCO) name or logo on product packaging or marketing materials is expressly prohibited.

Note: Materials listed in the Materials Scoreboard have been reviewed by PCO since September 2006. For a complete list of allowed materials, see the PCO Materials List.

Allowed Materials

Feed Additive/Supplements

AgRezyme	*MS Bio-Ag*
Dry Cow Mineral	*Crystal Creek*
Dry Cow 10-1 + Organic SE	*Nu-Feeds, Inc.*
Dry Cow 20-1 + Organic SE	*Nu-Feeds, Inc.*
Dynamate	*Mosaic Feed Ingredients*
Feed Grade Sodium Bicarbonate	*Arm & Hammer/Church & Dwight Co., Inc.*
Flo Bond	*Brookside Agra*
Heifer Pride	*Crystal Creek*
NBC 15 in 1	*Nu-Feeds, Inc.*
PAV 478	*Renaissance Nutrition, Inc.*
Ruma Gold	*Hess Farm Supply*
Rumin Bal 10-1	*Nu-Feeds, Inc.*
Rumin Bal 20-1	*Nu-Feeds, Inc.*
SQ-810	*Arm & Hammer/Church & Dwight Co., Inc.*
Trace Two/T2	*Free Choice Enterprises*
Vital Detoxx	*Homestead Nutrition, Inc.*
Zar-Min	*Zeo, Inc.*

Cleaners/Sanitizers

Acid 40 CIP Cleaner ▲	*American Labs, Inc.*
Ajax Dish Soap ▲	*Colgate Palmolive Co.*
Ami H-D Acid Cleaner ▲	*Animal medic*
Dairy Star Liquid CIP Detergent ▲	*WestfaliaSurge*
Duopfan ▲	*WestfaliaSurge*
FC 297 CIP Acid Cleaner ▲	*IBA, Inc.*
Gil Chlor 12.5 II ▲	*Gilmer Industries*
Gil E-Z CIP ▲	*Gilmer Industries*
Iosan Detergent–Germicide ▲	*West Agro, Inc.*
Liquid Hot Rod ▲	*Universal*
Oracid ▲	*WestfaliaSurge*
Phos-Free ▲	*IBA, Inc.*
Universal Sheen-Ezey ▲	*DeLaval*

Fertilizer/Soil Amendments

Disper-Sul	*Martin Resources, Inc.*
Organic Ten (10-0-0) ■	*Agri-Energy Resources*

Crop Production Aids

America's Best Inoculant (Dry, Liquid and Sterile Peat Formulas)	*Advanced Biological*
BXi	*MS Bio-Ag / Petrik Labs*
Nitragin "S" Culture Soybean Inoculant	*Nitragin*
Pit and Pen	*MS Bio-Ag*
Pit and Pen Ultra	*MS Bio-Ag*
Silage Saver	*MS Bio-Ag*
Silo King WS Special	*Agri-King*

Livestock Medical Treatments

1% Iodine Sanitizing Pre and Post Milking Teat Dip	*Westfalia Surge*
ActiveOxy 55 Teat Dip	*Boumatic, LLC*
ActiveOxy110 Teat Dip	*Boumatic, LLC*
Aloe Vera Juice	*Fruit of the Earth*
Aloe Vera Liquid Supplement	*Entrenet Nutritional*
Digital Dermatitis Treatment	*Colebrook Animal Hospital*
Fastrack Jump-Start Gel	*Conklin Products, Inc.*
Full-Bac Sanitizing Teat Dip	*IBA, Inc.*
Gil Aloe Coat Teat Dip	*Gilmer Industries*
Gil Aloe Protect Teat Dip	*WestfaliaSurge*
Hydrafeed	*A&L Labs, Inc.*
K.O. Dyne	*WestfaliaSurge*
Masto Cream	*Washington Homeopathics*
Nasalgen IP Vaccine	*Schering-Plough*
Royal EXR Capsules	*Van Beek Scientific, LLC*
Super 2X teat Dip*	*A & L Laboratories*

** Restricted at 205.603(a)(4) Allowed when alternative germicidal agents and/or physical barriers have lost their effectiveness.*

Teat Kote 10/111	*WestfaliaSurge*
Theratec Plus Teat Dip	*WestfaliaSurge*
Theratec Teat Dip Concentrate	*WestfaliaSurge*
Vitamin C Injectable Solution	*IVX Animal Health*

Livestock Production Aid

EnviroShield	*INTI Service Corp.*

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Restrictions

- ▲ Rinse thoroughly; no food contact
- ■ See Raw Manure restriction 205.203(a)(a)
- ● Prohibited except for use as cleaner
- ◗ See Botanical Pestiside Restriction

PCO Materials Scoreboard: Sept.–Nov. 2006

Prohibited Materials

Fertilizer/Soil Amendments

Amaze 5-16-4	*International Ag Labs, Inc.*
High Calcium Quicklime	*Carmeuse Lime*
UAJA Compost	*UAJA*
Nutriplant AG 6-4-3	*Access Business Group International LLC*
Nutriplant SD 0-0-0	*Access Business Group International LLC*
Nutriplant SL 0-0-0 0	*Access Business Group International LLC*

Feed Additive/Supplements

Aloe Vera Liquid Suplplement	*Entrenet*
Breeder Boost 8645	*ADM Alliance Nutrition*
DA Micronutrient PreMix	*Xtra Factors, Inc.*
Formula M	*Frank Lampley*
Fresh-Ensile Super Concentrate Recharge Pack	*IBA, Inc.*
Gro-Rite Calf Starter	*Lancaster Ag Products*
Penny Organic Dry Cow	*Penny Nutrition*
Pro-Zyme Plus	*IBA, Inc.*
Royal Pect Plus	*Van Beek Scientific, LLC*

Crop Production Aids

Fresh-Ensile	*IBA, Inc.*
Opti-Sile Concentrate	*IBA, Inc.*
Preservor	*IBA, Inc.*

Livestock External Parasite Control

Vapona Insecticide	*Gordon's Chemicals*

Livestock Medical Treatments

Blue Ribbon Calf Electrolyte Pack	*Merricks, Inc.*
Chlorhexidine Udder Wash	*AST, Inc.*
Equi-Phar MG-60, Topical Poultice	*Vedco.*
IvoMec Eprinex Parasiticide	*Merial*
RumaStart Capsules	*Van Beek Scientific, LLC*
Spectrum Udder Wash	*WestfaliaSurge*
Starguard 10K (Dairy Star Brand)	*WestfaliaSurge*
White Liniment	*Durvet*

Workshops of Interest Offered at the 2007 PASA Farming for the Future Conference

February 1¬3, 2007 • Penn Stater Conference Center • State College, PA

■ **Cover Crop Selection for Weed Control and Soil Quality**
Bill Curran (Penn State), Ron Hoover (Penn State) and Dave Wilson (Rodale Institute)

■ **How Herbivores Eat** (Two sessions)
Fred Provenza (Utah State University)

■ **Starting a Dairy Operation from Scratch**
Clifford Hawbaker (Hamilton Heights Dairy Farm)

■ **Equipping the Value-Added Dairy Farm**
Dale Martin (Agri-Service LLC)

■ **Raising Dairy Calves Naturally**
Rodney Martin (Bridge View Dairy)

■ **Making the Soil, Pasture and Animal Health Connection**
Michelle Gauger (PASA), Ron Hoover (Penn State) and David Wolfgang (Penn State)

■ **Transitioning a Dairy Farm to Organic**
Sarah Flack (NOFA-VT) and Patty Neiner (PCO)

■ **Weed the Soil, Not the Crop**
Anne and Eric Nordell (Beech Grove Farm)

■ **Starting and Growing a Yogurt Business**
Jack and Ann Lazor (Butterworks Farm)

For more information about registering for this year's PASA conference, visit www.pasafarming.org or call 814-349-9856