



Penn State Cooperative Extension Capitol Region Dairy Team

**COWS, STREAMS,
AND PONDS
— SHOULD THEY MIX?**

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Every dairy producer has heard of the importance of water to the dairy cow. Water makes up about 70 percent of a cow's body tissues, and the whole milk she produces contains 87 percent water. Moreover, an average lactating cow drinks about 20-40 gallons of water daily, even more in hot weather. Water is important for milk production, rumen fermentation and nutrient digestion, cow cooling in the summer, and normal body function.

Although cattle need plenty of clean, fresh water available daily, problems can arise when cattle have access to streams and ponds on your farm as a source of water. Although cattle have used natural water spots for hundreds of years, there are many problems associated with cattle standing in streams and wet areas on your farm. Researchers have suggested that poor water quality may cause a cow to drink less water, decreasing milk production.

For these reasons stream bank and pond fencing are not words used only by environmentalists these days — and here are some of the reasons why:

- Ponds and slow-moving streams/wet areas can be vast sources of bacteria! Are you seeing a significant amount of mastitis or blind quarters in your first calf heifers or newly fresh cows? It may be that a pond or creek on your farm is to blame. Ponds and spots of standing or slow moving water can harbor environmental organisms that cause mastitis, including coliforms and pseudomonas bacteria. Heifers and dry cows that are kept in pastures or lots with access to still water can freshen with more mastitis problems.

- Since flies often breed around standing water and manure, you can see increased incidence of mastitis and pinkeye when cattle have access to these areas during summer weather. It is believed that flies can spread *Staph Aureus* from infected cows to other animals in the herd.

- Other bacteria found in standing or running water may even cause reproductive problems. Leptospirosis organisms can live in puddles, ponds and other wet sites. Lepto is spread in the urine of rodents, deer, and other wildlife. Lepto is known to cause abortion and is sometimes difficult to detect in a herd.

- If cattle with Johne's Disease are allowed to defecate in ponds or areas of standing water on the farm, these may become a source of contamination for replacement heifers in the herd, according to one University of Pennsylvania researcher.

- Cattle have better foot health when their feet are kept clean and dry. Cattle that stand



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in manure or water for extended periods of time have softer hooves and are more susceptible to foot injury and disease. The organisms responsible for foot rot originate in the gastrointestinal tract and are shed into the environment by manure; wet areas with standing water and mud can be heavily contaminated with these bacteria. It is also believed by many veterinarians that cattle housed in continually wet and muddy conditions have a much higher incidence of strawberry heel warts.

- Cattle may actually prefer clean water! Research conducted by Montana State University indicates that more than 75 percent of cows and calves prefer to drink from a watering tank rather than a pond, when both sources are similar distances from the cattle. In a two-year study from southwest Virginia at two different cow/calf operations, the animals had a choice of drinking from the headwaters of a stream running through a pasture or from a spring-fed water trough. Of these, the cattle chose to drink from the trough 92 percent of the time. When the water trough was offered as an alternative water source, the time spent in the stream was reduced by more than 50 percent.

If the water quality is poor, it can also have a negative affect on cattle performance. Although research is limited in this area, it is believed that high amounts of nitrates (greater than 100 parts per million, or ppm) will cause reproductive problems in addition to human health risks. According to Dr. Arlen Mills, sulfate levels above 500-600 ppm may cause diarrhea or other problems. There is a publication available from Penn State titled "Water Intake and Quality for Dairy Cattle". Contact your local extension agent for a copy of DAS95-8.

- Cattle access to streams can damage waters. Heavy populations of cows or dairy heifers can cause damage to stream banks by destroying vegetation, causing erosion. If allowed to stand in streams and ponds, they leave heavy deposits of feces and sediment. This manure and urine left by cattle in the streams or ponds

Glimpses From The Past



The year was 1947. The place is Elmer Smoker's farm, Intercourse. Daughter Martha Smoker drives the W-C Allis pulling the Model 76 New Holland baler. The bale loader in the background was designed and built by Ike Smoker, Elmer's brother. The man on the load is Lester, Martha's young brother. New Holland manufactured Ike's loaders at Belleville. This account and many more interesting stories will be included in a history lecture, "The Beginning of New Holland Machine Company," in 1895 when even the most simple farm chores was back breaking work.

Sponsored by the Swiss Pioneers Preservation Associates, admission is free May 2 at Christian Aid Ministries, Ephrata 7:30 p.m.

Maryland Posts Pasture Walk Schedule

FREDERICK and HAGERS-TOWN, Md. — Maryland Cooperative Extension offices in Frederick and Washington counties have announced this season's pasture walk schedule, offering tours of a wide range of innovative grazing operations in northern Maryland as well as one farm in southcentral Pennsylvania.

All walks are from 10 a.m. until noon unless otherwise indicated:

- May 8. Cove Mt. Farm, 10:30 a.m.-2 p.m. — seasonal, grass-based dairy now in its sixth year of operation with 240 cows and 200 acres of pasture managed by the Moyer Family. Cove Mt. Farm is located in southwest Franklin County on State Hwy. 456, 10 miles south of Rt. 16 or 7 miles north of I-70 exit 5 near Hancock, Maryland. Pre-registration is not required.

leaves rich amounts of nutrients including nitrogen and phosphorus, which can cause "eutrophication." This nutrient increase will in turn cause a growth of waterweeds and algae, which reduces the amount of oxygen available in the water to support fish and other marine life. These algae also reduce the amount of light available to underwater marine plants and vegetation.

I have yet to meet a farmer who truly does not care about water quality on their land or surrounding waterways. Most farmers are the original "stewards" of the environment, protecting the land and the soil for future generations. And, to quote Frank Lucas from our local NRCS, "There is nothing in the stream that is good for the cows, and there is nothing in the cows that is good for the stream."

Fencing your animals out of ponds and streams truly makes sense, not only from an environmental standpoint but a herd health standpoint. A buffer area will allow wildlife and plant life to flourish and cut down on erosion.

You can still allow an access point for livestock to drink, if necessary. In many cases, however, an alternative source of water is inexpensive to install and maintain, particularly when compared to the cost of some of the problems associated with cows drinking from the farm pond or stream.

- May 15. Andrew Toms, 9422 Dublin Road, Walkersville, Md. — 60-cow, new startup grazing operation using Marshall annual ryegrass. From Frederick, take Biggs Ford Road exit toward Walkersville. Go one mile to Dublin Rd. Turn left onto Dublin and go about mile to farm on the left.

- June 5. Lewin Eby Farm 7776 Neck Rd, Williamsport — 70 cow grass-based dairy converted from a grain operation several years ago. Will discuss transition to grass and forage supply management. From Rt. 68 turn onto Spellman Rd. (Rt. 63) past Gowers Mill. Turn right onto Falling Waters Rd. Go about one mile and turn left onto Neck Rd. Go about 1.2 miles to the farm lane on the right.

- June 19. Wet Meadows Farm, David and Angie Leach, E. Grimes Road, Emmitsburg, Md. — 90-cow Jersey and Holstein dairy using perennial ryegrass and timothy. From Emmitsburg, take Old Frederick Road south to immediate left onto Keysville Road. Go approximately four miles to East Grimes Rd.

- July 3. Mike Stivers Farm, 17707 Millers Sawmill Rd., Sharpsburg — 45 beef cow-calf operation with spring and fall calving. Converted from row crops to grass. Variety of grasses from native pasture to improved orchardgrasses and fescues to warm season grass. From Sharpsburg, proceed south on Harpers Ferry Rd. Turn right onto Millers Sawmill Rd. and go to the first farm on the left.

- July 17. Hedge Apple Farms, 7 p.m., 3735 Buckeystown Pike, Buckeystown, Md. Angus cow-calf operation featuring fertilizer trials, Max Q fescue, warm season grasses and grass-finished, direct marketed beef. From Frederick, go south on I-270 to exit 31. Go south on Rt. 85 (Buckeystown Pike) about three miles. The farm will be on your left.

- July 31. Glenn Shirley, 149 Barnhart Road, Westminster, Md. — 80-cow dairy moving toward season calving. From Westminster, go north on Rt. 97 to Union Mills. Turn right onto Old Hanover Rd. Go about 3 miles to Barnhart Road. Turn right and go about mile to farm on right.

- Aug. 7. Creek Bend Farm (Harry Strite), 11917 Snug Har-

bor Lane, Williamsport — 80 cow grass-based seasonal dairy. Experienced grazer working with crossbreeding, a variety of cool season grasses (some under irrigation), forage supply and surplus management. From Rt. 63 one mile north of Williamsport, turn west on Wright Rd. Turn right onto Kemps Mill Rd. At the Conococheague bridge, turn onto Snug Harbor Lane and follow it through the campground to the farm.

- August 21: Holterholm Farms, Ron and Kathy Holter.

- Sept. 4 Jacob Horst Farm, 20807 Leiters Mill Rd., Hagerstown — 90 cow grazing dairy farm also feeding a TMR. Most of the farm is in permanent grazing and a portion is reserved for a doublecrop. From Rt 60 (Leitersburg Pike) turn north onto Millers Church Rd. At Leiters Mill Rd., turn left and turn into the first farm lane on the left.

- Oct. 2. Craig Leggett Farm, 8128 Old National Pike, Boonsboro. This is the second farm of this 100 cow hybrid (European style) system where most of the heifers are grazed and most of the farm's cut and carry forage is produced. SARE grant site examining Italian ryegrass/sorghum double crop systems. On Alt. Rt. 40 about one mile north of Boonsboro.

- Nov. 6 Peace Hollow Farm (Myron Martin), 2148 Rohrer-ville Rd., Brownsville — 70 cow hybrid dairy farm based on a 50 acre Marshall annual ryegrass/corn silage double crop system with the balance of the farm in permanent grazing. Also a SARE grant site. From Boonsboro, go south on Rt. 67 to Brownsville. The farm is on the west side of the road just south of Brownsville.

- Dec. 4. Western Maryland Research and Education Center, Keedysville. Compare new annual and Italian ryegrass plots and a new seeding of perennial grasses to previous years plotwork. Recap the 2003 season and plan 2004 activities. From I-70 take exit 29 south onto Rt. 65 (Sharpsburg Pike). Go about 7.5 miles and turn left onto Keedysville Rd. Go .9 miles and turn left into WMREC.

Call (301) 791-1304 (Washington County) or (301) 694-1594 (Frederick County) for more information.