

October 2009

Pasture News

LaGrange County Soil & Water Conservation District
910 S. Detroit St., LaGrange, IN 46761
260-463-3471 ext 3
www.lagrangeswcd.org

November Pasture Walk
Plan on attending the last pasture walk of 2009
Hosted by Forrest Keefer
3829 W 800 N, Wawaka, Indiana
Tuesday, November 10, 2009

Forrest grazes and milks a 60-head herd of Guersneys. He will be discussing permanent water tanks in his paddocks and use of orchard grass as forage. Forrest has been actively involved in rotational intensive grazing since 1990.

Contact the SWCD office at 463-3471 ext 3 for transportation.

John Belork Pasture Walk

Oct. 13, 2009

On Tuesday morning, October 13, a number of LaGrange County Pasture Walk “regulars” took the SWCD van on a 90 mile trip to the Belork Farm in Starke County, Indiana, for the seventh Pasture Walk of 2009. The day was cool for early October, with temperatures staying in the low 50’s for the day, but the rain held off and the sun made an appearance for the Pasture Walk itself in the afternoon. Altogether, about 20 people showed up for the event, which, what with a late harvest this year and the longer than ordinary drive, was quite a good turnout.

John and Cathy Belork have been regular attendees of the LaGrange County Pasture Walk program for several years. They own a small, high quality cow-calf beef herd of registered purebred Limousins, which they raise on a “grass-only” diet on their 40-acre intensive rotational grazing farm near Hamlet, Indiana. For those who were able to attend, this pasture walk was quite a treat, getting to see the animals and farm about which we had only heard so far.

Since the group travelled farther to this Pasture Walk than usual, Cathy insisted upon including lunch in the Pasture Walk agenda for October. She and her friend Sharon Schmidt prepared the group a wonderful meal of homemade Limousin beef vegetable soup, Limousin meatloaf, baked potatoes, green beans, and topped it all off with a dessert of delicious pies;

pumpkin, cherry, apple, blueberry, custard, peach and black raspberry.

After the meal, Martin got the full-bellied group moving as we gave a round-of-applause to the host and hostesses.



This was followed by introductions and announcements. As usual, Martin informed everyone that a variety of literature related to this specific Pasture Walk and other grazing related practices was available on the table for anyone in attendance. Some of this literature was provided by the LaGrange County Soil and Water Conservation District, and John had also added some information of his own. Kathy announced to the group that she is in need of 2-30 lb. turkeys for Thanksgiving. Galen Nissley announced that Honeyville feed will be continuing their Pasture Walk Special for the month, which is a 5% discount on pasture mineral. After announcements, and learning that Limousin Cattle are special because their name *isn't* spelled

with “E” at the end, we turned it over to John.

Following the meal and a short introduction to the Pasture Walk, John Belork welcomed the group to his farm. His father purchased the 120 acre property in 1935, after having moved to America from Yugoslavia. As immigrants coming directly from eastern Europe, John did not feel that his family was ever well accepted by the local population. His father placed a great emphasis on securing good educations for his children. John himself graduated from Purdue University, starting out majoring in electrical engineering and ending up with a degree in (manufacturing) industrial management. He has led a lifelong career off the farm, working in both manufacturing-related management and is also retired from a military career as a major specializing in the field artillery branch of the US Army.

John has also utilized his education on his farm, but makes sure to emphasize that this education didn't make him a farmer. In everything he does, including his farming, he tries to apply his knowledge of statistical analysis. Mr. Belork is aware that this method of analyzing farming represents his own unique approach on how to maximize forage production by achieving a proper nutrient balance in the soil.

He learned from childhood the importance of keeping livestock healthy, by maintaining a good overall nutrient balance between soil, water, grass, and animals. As a young boy, John himself experienced a mineral deficiency and overcame it by increasing the Magnesium input in his body. He became a healthy boy, and life overall became easier simply by taking a vitamin with a mineral supplement. He prefaced his further statements with the emphasis that anything he says from here-on-out is that of personal opinion.

John and Cathy's current farm operation includes a 19 head cow-calf herd of Limousins, which they rotationally graze on 40 acres. John's particular agricultural interest is in achieving and maintaining a proper nutrient balance in soil, thus maximizing forage production. His basic philosophy is that in order for a farmer to operate a profitable business, he must determine where nutrient deficiencies exist, and then do the minimum necessary to

correct the problem. John says “...figure out what the problem is, and then only fix what's broke!” The Belork's Starke County farm has a wide variation of soil types, ranging from patches of almost pure sand to areas of very heavy organic muck. The group noticed on the drive down that the topography got flatter and flatter, making drainage an important factor in the area where the Belork's live. John bases his soil needs on a nutrient removal rate chart published by IPNI (International Plant Nutrition Institute) which he distributed to the group. John feels that in many cases, the major nutrients necessary to good plant growth and development (Nitrogen, Phosphorous and Potassium) are present in the soil, but plant uptake of these nutrients is restricted by a deficiency of micronutrients such as sulfur, calcium, magnesium and boron. Also, John told the group, many labs make assumptions that are incorrect when interpreting soil test results. The assumption, for example, that most soils contain 5% organic matter, is in most cases incorrect, and can cause misapplication of soil nutrients.

pH is another soil factor that John says is often not dealt with properly. On his farm, he had problems growing alfalfa in areas that pH tested around 6.5. The addition of 22 tons of lime to the acre did not succeed in moving the pH from 6.5 to 7.0. The lime product that was added was not water soluble, and therefore had very little effect on the pH of the soil or of its growing capacity of alfalfa. To quote John “When a fertilizer salesman is trying to sell you dolomite lime—shoot him!—you don't need it!” Cathy hastened to modify John's message “I knew he was gonna say that! Trust me, guys—it's nothing personal!”

John also spoke quite a bit about cation exchange; about molecular structure of ions with positive and negative charges. When you take plain soil, for example, there is a way of measuring magnetism within the soil—a way of measuring the total amount of positive anions and negative cations that the soil can exchange. For example, muck may be able to exchange 50 while sand only 4 or 5 cations. This exchange, John emphasizes, directly correlates to the yield potential of the soil. More cations mean more absorbency, which means more potential capacity to

exchange nutrients. Overall, John makes the point that it all starts with the grass. The better your grass, the more production potential exists. Grass roots must be happy with the biology of the soil.

John's preference is to amend soil nutrient content naturally as much as possible. If you need N (nitrogen), John says, plant a legume and produce that N yourself. And too much of a good thing is not always better. John has seen his cattle eating spring alfalfa get too much nitrogen, noticeable by their bad breath, and can cause more problems than not getting enough. The point being: The cheapest thing to do is to first fix your most limiting nutrient; then go from there.



With that introduction, the group walked out in Field #3. This pasture/hayfield is located directly east of the Belork farmhouse. Here, John did a little demonstration with his tractor and no-till drill. Anxious to find out what the heck John was talking about, the group proceeded to the pastures. First, John showed everyone his John Deere seeder. This no-till drill utilizes carbide tipped cutting wheels, which inject the seed into the ground at exactly ¼" depth. John said that you can theoretically use the seeder on frozen dirt in February. He also emphasized that the seeder works great for legume growth. Thus far, the seeder has helped him attain free Nitrogen in his soil, as it is easy to attain 72 plants per lineal foot of row, or three plants per square foot necessary for free Nitrogen to be fixed in the soil. The field itself contained red and white clover and alfalfa, some of which was frost seeded. John has used this field this year for both grazing and hay production. From Field 3 the group proceeded on to Field 4, which contained a lush growth of red clover about 10-12 inches high. John pointed out the windbreak along the south side of the field, which contained white pine and autumn olive planted about 40 years

ago. This windbreak has been quite effective in controlling wind erosion off the neighboring muck fields in dry spring weather. It should be noted that no conservation service today is still recommending the planting of autumn olive, which is now considered an undesirable invasive plant!

John has Field #5 planted to alfalfa and Alfamate-plus. It showed good growth the day of the Pasture Walk. This field is divided up into a number of grazing paddocks using temporary internal electric fence. John let the south end of the field grow long to use as stockpile forage. The north end had been grazed accidentally back in the spring when the cows broke down the fence. John hadn't planted any grass in this pasture and instead chose to plant 12 pounds of alfalfa/acre. It was previously a hay field and now he used it for the hungry, wandering, grazing Limousins. He grazed it once with all of the Limousins last Spring and it now appeared to be a lush overgrowth of alfalfa and grass. He has had plenty of pasture otherwise on the farm this year, so he is stockpiling this forage for grazing late in the fall or early winter.

At this point in the walk, John was asked about his grazing practices. He says he starts grazing his cattle early in the year, usually in April. He likes to move his cattle to a new paddock once a day. The light ground he grazes first, leaving his heavier soils for later when they dry out sufficiently to avoid soil pugging. He tries to calve his cows in June, but as he uses live breeding (his herd includes two Limousin bulls), timing calving has sometimes been a challenge. John tried AI, but has found live breeding to be much more effective on his particular operation. For a watering system, John has a water fountain near his barn. He would like to install some permanent lane fences and a paddock watering system when time allows. On the west end of the Belork Farm, the soil is very mucky. John planted the southwest corner of Field 5 with a lowland alfalfa mix. This part of the field exhibited a good stand of alfalfa 6"-8" high. John commented that drainage on this part of the farm is a problem, with the ground not solidifying enough to graze it in some years until mid summer. This part of the field has been grazed once this year, with the current growth showing what has come up since August. This large, kidney

shaped pasture is basically a swamp. Well, not now, but apparently it once was before John sloped the land and created a surface culvert to run in to the ditch by the road. In order to counteract the water that was inevitably left over after this process, John added a Lowland 222 & 444 Alfalfa with grass mix because apparently, this combination flourishes in the muck!

The northwest part of Field 5 contained a growth of fescue about 3 feet high, but laying over a very short growth of alfalfa. John's goal was to graze this field to remove some of the fescue and give the alfalfa some sunlight and room to grow. Steve Hooley noticed that something had been nibbling off the tender young alfalfa plants. It appeared the damage had been done by rodents, probably mice or rabbits. Another Pasture Walk attendee suggested that as an alternative to grazing the fescue off, John could make grass hay from this part of the field for his two horses.

Walking across Field 5 back toward the farm buildings, the group noticed some alfalfa with brown leaves. John and Glen Lambright got into a discussion on this topic, considering

boron deficiency as a probable cause for this problem.

The group finished the Walk in the permanent pasture area west of the buildings where the cattle were grazing. John walked out amongst the cows, calves and two bulls, relating to the animals as pets. As the cows walked up to stand near him, one of the Pasture Walk group asked if "Limousin's purred like cats?" The scene really did remind one of an owner interacting affectionate house cats, although many of these "cats" weighed from 1500-1800 lbs! John lectured the group on the history of the Limousin breed, their characteristics, and individual pedigrees. Many of the animals were jet black, but some were also reddish-brown; all were long bodied, healthy and obviously happy.

The Walk concluded up by the Belork farmhouse, with more discussion and more of Cathy and Sharon's delicious pie. Thanks, John and Cathy, for a wonderful lunch and a great 2009 October Pasture Walk!

What's a Limousin?

The Limousin is a breed of beef cattle originally bred in the Limousin and Marche regions of France. The first publication of Limousin ancestry and characteristics was established in 1886 for the improvement of the breed by natural selection. Despite this, the breed may be as old as the history of Europe itself. Cattle found in cave drawings known to be 20,000 years old in the Lascaux Cave near Montignac, France, have a striking resemblance to today's Limousin cattle.

Limousins are a genetic source of larger weaning weights and muscle mass while maintaining relatively low birth weights. Limousins are known for their muscular build, feed efficiency, ease of management and comparable calving ease to other breeds. Limousin cattle produce the leaner cuts of beef that have

become a staple of the modern market.



Limousin cattle have a golden-brown coloration. Other coloration, such as black, has been developed through cross-breeding with other breeds of cattle. In addition to

altering natural coloration other traits, such as polled (a genetic lack of horns), have been introduced through cross breeding.

Limousin breeders have worked extensively on disposition issues since their arrival in North America and currently have a docility EPD. Most producers find them to be as manageable and easy to work with, if not better, than any other beef cattle breeds available today. Information Gathered from Wikipedia Online Encyclopedia

Soil Micronutrient Management *(article references ME, but is applicable to IN)*

Copper (Cu), Iron (Fe), Manganese (Mn), and Zinc (Zn) are required by all plants for proper growth and productivity, but only in minute amounts. Each has several important and specific functions in plant cell metabolism and in photosynthesis. Because they are needed in such small amounts they are only rarely limiting to plant growth or productivity in Maine soils.

All four of these micronutrients are metals, with similar chemistry in well-drained soils. The availability of these metals to growing plants is very dependent on soil pH and organic matter content. The availability of most metals *increases* as the soil pH decreases (becomes more acidic). Availability *decreases* as the soil pH increases (becomes more alkaline). Organic matter or humus will often chelate (form complexes with) these metals, which generally tends to increase or maintain their availability to plants, even at higher pH levels.

Because most soils in Maine have an abundant natural content of these metal micronutrients in the basic mineralogy, managing micronutrient availability is often only a matter of managing the soil for optimum pH and organic matter content. If soil pH is alkaline (above 7.0) and is also low in organic matter, it is likely that the availability of one or more of these metals will be limited. Often the only treatment necessary is to lower soil pH and/or improve soil organic matter content. Specific recommendations will be included, where appropriate, to either lower soil pH by adding yellow sulfur and/or improve soil organic matter content by adding compost, animal manures, or leaves.

If both soil pH and organic matter content are in the optimum range and one or more of copper, iron, manganese, or zinc are below normal levels you may want to consider amending your soil with a safe source of these nutrients. These sources include:

- Azomite or other natural Trace Mineral fertilizers
- Fish meal or liquid Fish fertilizer (if you also need nitrogen and phosphorus)
- Seaweed or Seaweed extract
- Micronutrient “packs” or specific additions to custom-blended fertilizers
- Animal manures and compost (if needed) contain variable amounts of all micronutrients

If a micronutrient soil test level is High or Above Optimum, it does not necessarily follow that it is toxic or harmful to plant growth. High test levels of one or more are not uncommon. Copper, manganese, and zinc do have the potential to be phytotoxic (toxic to plants) under rare circumstances. In most documented cases of phytotoxicity, the test level has been several times higher than the Normal range listed at the bottom of the report. In these rare cases of phytotoxicity, the remedy is to raise the soil pH with a lime application to limit the availability of the problem metal (see pH effects above). In the case of all essential micronutrients, the plant is harmed well below a level that could be a problem for animal or human consumption. This is not the case with certain non-essential metals such as lead, cadmium, and mercury.



Soil Testing: Small Scale Solutions for your Farm in Indiana

Do You Have Problems With:

- Nutrient deficiencies in crops
- Poor plant response from applied fertilizers
- Hard to manage weeds
- Low crop yields
- Poor quality forages
- Irregular plant growth in your fields
- Managing manure or compost applications

How Soil Testing Can Help:

- Determines nutrient levels in the soil
- Determines pH levels (limes needs)
- determines what/how/and why to apply nutrients
- Potential for high yielding crops
- Potential for higher quality crops
- More efficient fertilizer use

Costs: Generally soil tests cost \$7 to \$10 per sample.

The costs of the soil tests vary depending on:

1. Your State
2. The lab that is used
3. The items being tested for (the cost increases as more nutrients are being analyzed)

How Often Should I Soil Test?

Every 3-5 years. More often if manure is applied or you are trying to make or pH changes.

When to soil test?

- Sample fields the same time each year to achieve more accurate trends in the soil fertility.
- For cropland and vegetable production, it is best to sample in the fall
- For pastures and perennial crops, it is best to sample during late summer

How to soil test?

1. Find or select a soil testing lab.

Your local NRCS office can provide information on labs that are available in your area.

2. Tools Needed:

Pail, sampling tube, auger, large bag

3. Sampling Depth:

-for nutrient testing collect samples at

8'' depth: for pH testing collect at 4'' depth.

4. Sampling areas to avoid:

-Farm lanes, field borders, fertilizer bands in crop rows, or any area that is very different from the rest of the field

Collecting the Soil Sample:

*There are several good methods of collecting soil samples utilized. Please contact your local SWCD/NRCS office for details.

What Does a Soil Test Provide?

1. The pH level in your soil. This will tell you if you need to apply lime.
2. The plant available nitrogen (N), phosphorous (P), and potassium/potash (K) levels. This will tell you if you have sufficient P and K levels.
3. Magnesium and calcium levels in the soil.

Technical Help Is Available!

Your local Natural Resources Conservation Service (NRCS) office has experienced conservationists that can assist you with soil testing and interpreting soil tests. They can also help you develop a Conservation Plan to solve other concerns you have identified on your farm.

There is no charge for our assistance. You may also be eligible to receive financial assistance through a state or federal program.

For More Information Contact:

NRCS at the USDA Service Center or LaGrange Co. SWCD

By mail or in person:

LaGrange Co. SWCD
910 S. Detroit Street
LaGrange, IN 46761
www.lagrangeswcd.org

Phone: (260) 463-3471 x 3

Watershed Management Approved for Little Elkhart River

The addendum to the Little Elkhart River Watershed Management Plan (WMP) has been completed and approved by the Indiana Department of Environmental Management (IDEM). The WMP outlines critical areas in all of the sub-watersheds in the Little Elkhart River. Dave Arrington, SNRT Consultant, spent many hours compiling and analyzing data, using those results to determine what was included in the plan. Copies of the completed plan are available by contacting the LaGrange Co. SWCD office at 463-3471 x3. Three of the major goals outlined in the plan include:

- Reduce agriculturally-related non-point source pollution from the region so that surface water quality is improved. This includes installation of fencing along streams; repairing stream bank damage caused by livestock; planting buffer strips adjacent to water bodies; and promoting no-till and reduced-till practices on all crop fields adjacent to surface waters. Extensive water quality monitoring will be done to track progress and the effectiveness of these best management practices.
- Reduce non-point source pollution from faulty or improper septic systems from the regions so that surface waters are improved. Partners to achieve this goal are the local health departments, along with county officials.
- Reduce urban run-off induced non-point source pollution from the region so that surface waters are improved. Education and outreach with urban/lake residents is a key to the success of this goal.

The next phase of this project is implementation which entails installation of best management practices in the watershed. For a list of the practices that can receive cost share funds to improve water quality in the Little Elkhart River Watershed, contact the SWCD office for more information