

Northeast Pasture Consortium News Update December 2018

Linking Graziers, Researchers, Extension, and Technicians

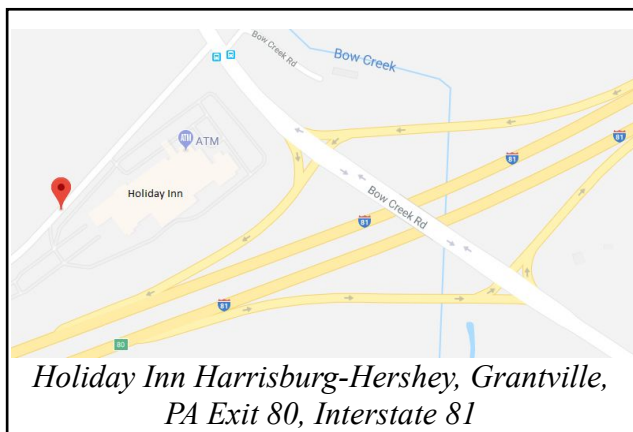
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James Cropper, Executive Director & Editor



2019 NORTHEAST PASTURE CONSORTIUM ANNUAL CONFERENCE

The 2019 annual conference will be held in Grantville, PA at the **Holiday Inn Harrisburg-Hershey** on February 19 and 20 prior to the PA Forage Conference being held on February 21 at the same location. The Holiday Inn Harrisburg-Hershey is located at 604 Station Road, Grantville, Pennsylvania off I-81, exit 80.



To make **room reservations** at the Holiday Inn Harrisburg-Hershey call (717) 469-0661. The **room rate is \$99.00 per night**, plus taxes and gratuities. Room reservations must be guaranteed by a major credit card or a cash deposit. **Tell them you are with the NE Pasture Consortium.** It is very important for those needing a hotel room to make reservations at the Holiday Inn Harrisburg-Hershey so that we meet our guaranteed number of room rentals. **NOTE: To get the discount room rate, make your reservation by February 11.** Reservations received after February 11th will be accepted on a space available basis and at an additional charge.

The **full conference registration fee** for all public sector members attending is **\$300**. This includes the cost of coffee breaks and lunch for

each of the two days of the meeting and an evening dinner on February 19. **Register by February 11, 2019** either on-line or by contacting Cheryl Herrick at: cheryl.herrick@uvm.edu or postal address: UVM Center for Sustainable Agriculture, James Jeffords Bldg., 63 Carrigan Dr., Rm. 105, Burlington, VT 05405, or by phone: 802-656-5459. **On-line at:**

<https://www.regonline.com/builder/site/?eventid=2550780>

Other registration options are available for farmers, and for others opting to attend only a portion of the conference.

Driving Directions:

From the East:

I-78 West to I-81 South to Exit 80. Right off the Exit, then first left onto Station Road.

From the West:

PA Turnpike to Exit 226 to I-81 North to Exit 80. Left off the Exit and left onto Station Road.

From the South:

I-81 North to Exit 80. Turn left off the exit and then turn left onto Station Road. Hotel is on left.

From the North:

I-81 South to Exit 80 turn right off the exit then turn left onto Station Road.

From Harrisburg International Airport:

Route 283 West to Route 283 North to Route I-81 North. Hotel is located off of Exit 80 of I-81. The Holiday Inn offers shuttle service. Radius Covered: 25 miles (Airport is 20 miles away). Cost: \$50.00

From Philadelphia International Airport (PHL):

Take I-95 South to Route 476 North. Follow 476 North to 76 Route 76 West. Follow Route 76 West to the Pennsylvania Turnpike. Take the PA

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Turnpike to Exit 247. Follow Route 283 North to I-83 North to I-81 North. Hotel is located at Exit 80 of I-81.

This Holiday Inn has hosted many forage and pasture conferences over the years. It is a fine facility and easily accessed from I-81.



Below are pictures of the conference room and dining room facilities.



Plan on attending as we have some new and very interesting technical sessions again. The sessions are:

- How to Transition a Dairy Farm from Confinement Feeding to Pasture,
- Promoting Clover Growth in Pastures,
- Managing Pastures before, during, and after Weather Extremes,
- Meat Marketing Strategies with Small Meat Processors,
- Dairy Issues – Grass-Only Milk, A1 versus A2 beta-casein milk, and Milk Fatty Acid

- Analy-sis to Adjust Dairy Rations, and
• Producer Showcase.

2019 Northeast Pasture Consortium Annual Conference Agenda

February 19

- | Time | Activity |
|----------|--|
| 10:00 AM | Welcome & Introduction of Participants - <i>Jim Cropper, Executive Director presiding, Grande Room I & II</i> |
| 10:20 AM | Session 1 – How to Transition a Dairy Farm from Confinement Feeding to Pasture - <i>Moderators, Fay Benson & Daimon Meeh, Grande Room I & II</i>
Speaker:
Dale Johnson , Principal Agent, Farm Management, Western Maryland Research and Education Center, Keedysville, MD - <i>The economics of grazing systems and the financial tools you need to use to assess the financial condition of your farm during this difficult economic climate of the dairy industry.</i>
Farmer Panel:
Eric Ziehm , Dairy Farmer, High Meadows of Hoosic LLC, Hoosic, NY
Doug Martin , Dairy Farmer, Pleasant Valley Jerseys LLC, Chambersburg, PA |
| 12:00 PM | Lunch – Grande Room III & IV |
| 1:00 PM | Session 2 – Promoting Clover Growth in Pastures: Why? – New & Old reasons, and How? <i>Moderator, Sid Bosworth, Grande Room I & II</i>
Speakers:
Tracy Neff , Genetic Advancement/Sales and Support, King's AgriSeeds, Inc., Manchester, PA
Michael Flythe , Research Microbiologist, USDA-ARS, Forage-Animal Production Research, Lexington, KY
Ed Rayburn , Forage & Pasture Specialist, West Virginia University Extension, Morgantown, WV |
| 2:30 PM | Session 3 – Meat Marketing Strategies with Small Meat Processors <i>Moderator, Kevin Jablonski, Grande Room I & II</i>
Speaker:
J Michael Smucker, President, Smucker's Meats, LLC, 735 Pinkerton Rd., Mount Joy, PA |
| 3:15 PM | Poster Session (<i>authors present</i>), Congressional Room |
| 3:45 PM | Session 4 – Dairy Issues: Grass Only Milk, A1 versus A2 beta-casein milk, and Milk Fatty Acid Testing to Adjust Dairy Rations. <i>Moderator, Kathy Soder, Grande Room I & II</i>
Speakers:
Fay Benson , Small Dairy Support Cornell Univ. SCNY Regional Team - Education Coordinator NY Dairy Grazing Apprenticeship & Project Manager NY Organic Dairy Initiative, Cortland, NY
Peggy Tomasula , Research Leader, USDA-ARS, Dairy & Functional Foods Research Unit, Wyndmoor, PA
Kevin Harvatine , Associate Professor of Nutritional Physiology, Penn State University, Department of Animal |

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Science, University Park, PA

5:30 PM **Adjourn for the Afternoon**

6:00 PM **Dinner** – Grande Room III & IV

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Time Activity

7:30 PM- **Evening Session - Producer Showcase - Moderator,**
9:00 PM *Jessica Williamson*, Grande Room I & II

Speakers:

Glen Cauffman, Pure American Naturals Angora Goat Farm, Millersville, PA

Another speaker to be announced

February 20

7:00 AM **Breakfast** – Grande Room III & IV

8:00 AM **Session 5 – Managing Pastures before, during, and after Weather Extremes.** *Moderator, Jenn Colby*, Grande Room I & II

Speaker:

Joshua Faulkner, Research Associate, Farming & Climate Change Coordinator, Department of Plant and Soil Science, University of Vermont, Burlington, VT

Farmer Panel:

Matt Bomgardner, Dairy Farmer, Blue Mountain View Farm, Annville, PA

Duane Hertzler, Dairy Farmer, Moo Echo Farms, Loysville, PA

9:30 AM **Break** – Grande Room I & II

10:00 AM **Public and Private Sectors Research and Education Priorities Deliberation Breakout sessions**

Public Sector – *Chair, Fay Benson,*

Recorder, Daimon Meeh, Grande Room I & II

Private Sector – *Chair, Don Wild,*

Recorder, Gary Burley, Congressional Room

12:00 PM **Lunch** – Grande Room III & IV

1:00 PM **Sector Reports** - *Jim Cropper, Executive Director* *presiding*, Grande Room I & II

Private Sector report – *Don Wild, Co-Chair Elect*

Public Sector report – *Fay Benson, Co-Chair Elect*

2:00 PM **Business Meeting** – *Jessica Williamson, Public Sector Co-Chair and Cliff Hawbaker, Private Sector Co-Chair, Presiding*, Grande Room I & II

Margaret Smith, Administrative Advisor to NERA1603 (Northeast Pasture Consortium), NERA1603 Project for 2016-2021

Election of Private Sector and Public Sector members-at-large to serve on the Executive Committee of the NE Pasture Consortium

Other business to come to the Floor, such as resolutions and changes to Consortium research and extension priorities.

Jim Cropper, Executive Director, Thank you to the outgoing Executive Committee members, Welcome to the new Executive Committee members, and Announcement of the 2018 Public and Private Sector Co-Chairs

3:00 PM **Conference Adjourns**

Note that our 2-day conference this year has a new start time and adjournment time. Both start and end times were recommended by members. February 18 is a federal holiday so our start time on February 19 was moved to 10:00 AM to allow federal employees to travel to the conference on a nonholiday. Our conference adjourns on February 20 at 3:00 PM to allow travelers to return home on the same day if not staying over for the Pennsylvania Forage Conference.

Another new feature is the use of farmer panels to learn more about a subject by engaging our resident experts to tell us how they apply the art of grazing management and manage a grazing-based farm. This fulfills the Consortium's obligation to educate as well as to provide coordinated research on grazing enterprises. Who knows, perhaps as they speak on a topic that they know so well, it might spark an urge to research an area that has heretofore not been on a researcher's radar.

We are not having cooperating federal agency reports this year given orally by agency representatives of Agricultural Research Service, National Institute of Food and Agriculture, and Natural Resources Conservation Service. Although these oral reports are useful, we decided it best to focus on research and education needs since it is our primary mission and given the reduced time our conference has to work with this year. We encourage our federal partners to bring a poster paper to the poster paper session on newsworthy events happening in their agency to support grazing lands in the northeast US and elsewhere where similar pastures exist. A call for poster papers will follow.

Introducing our Farmer Panel

Members

Transitioning From Confinement to Pasture

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Eric Ziehm, High Meadows of Hoosic LLC, Hoosic, NY

Eric Ziehm and partner Sam Cottrell started a new organic dairy, High Meadows of Hoosick, in June of 2018. It went into business when many conventional farms are struggling to survive in this time of low milk prices and rising production costs.

Located in Rensselaer County hill country, the 300-acre farm has sweeping panoramic views all the way into nearby Vermont, where the 306-foot-high Bennington Monument stands out, towering above surrounding treetops. Because the farm had gone years without any kind of chemical input —fertilizers or pesticides — it was ideal for organic certification.

Ziehm's motivation for starting the business was to try a different way to dairy farm. He is part owner, with his brothers Stuart and Brian, of a 1,200-cow conventional dairy, Tiashoke Farms, in nearby Buskirk.

Organic dairy production involves entirely different and somewhat more demanding practices. Cows primarily graze on pasture and may not be administered antibiotics. But organic milk is sold at a higher price than conventional milk.

"I was searching for a secure milk market, something that was more sustainable that we could count on," Eric Ziehm said. All of High Meadow's milk goes to New Hampshire-based Stonyfield, which uses it to make organic yogurt and other milk products. High Meadows is part of the Stonyfield Direct Milk Supply program, which aims to support Northeast family farms by providing resources and technical assistance during their first two years of operation. The Londonderry, N.H.- based company hopes to continue growing the small-scale organic dairy industry.

"Cattle hadn't been milked here since 1993, but it was still used for raising heifers and crop production," Ziehm said. "The former owners, Burt and Irene Luke, did a tremendous job of maintaining and preserving the farm's beauty. When we walked in here, there wasn't any cleanup to do. It was in good working condition. So, we were able to step in, build fences and really go forward with it."

But improvements, including a large new free-stall barn capable of holding 200 cows, have cost more than \$1.5 million, Ziehm said. At first cows were milked in the farm's old stanchion barn, but a temporary new milking parlor was set up until a permanent large facility, ordered from Ireland, could be installed. The new milking parlor, with mechanized milking machines, was completed in January 2019.



New free stall barn at High Meadows

At present, the herd numbers about 80 animals but plans for considerable expansion on the horizon.

"We transitioned heifers out of our conventional herd, a lot of Jersey, Jersey crosses and smaller breed cattle that would be good grazers," Eric Ziehm said. "They're organic now because they have been through a full year of transition. Then we purchased two small herds, one in Vermont, the other in central New York, which were

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already certified organic. So, we could bring them here and start milking on day one.”

Organic dairy farming requires a lot of record-keeping to maintain certification. “It is a challenge,” Eric Ziehm said. “The biggest learning curve is pasture management. We’re really trying to educate ourselves on an everyday basis, looking at the grass, looking at the cows, and talking with people involved with pasture management and grazing. But when you break it all down, it’s still land, cattle and people. The key is, can we make a solid rate of return on our investment? I guess I’ll tell you next year when we know the first year’s numbers,” he said, smiling.

Adapted from a *Lancaster Farming* article by Paul Post and from *The Berkshire Eagle* article by Elodie Reed.

Doug Martin, Pleasant Valley Jerseys LLC, Chambersburg, PA

Doug and Julie Martin along with two of their children, Grant Martin and Jill Wisner, own and operate Pleasant Valley Jerseys LLC in Chambersburg, PA. They milk 350 Jerseys. The farm transitioned to a grazing herd more than 20 years ago. Initially they saw grazing as a way to increase their herd size without having to build new facilities. Doug will share with the audience the keys to a successful transition and how grazing can improve the bottom line for other confinement dairies.



Cow on pasture at Matt Bomgardner’s farm. Note body condition and sward height at turn-in.



Cattle lane and paddock water trough at Blue Mountain View

Managing Pastures before, during, and after Weather Extremes

Matt Bomgardner, Dairy Farmer, Blue Mountain View Farm, Annville, PA

Matt is the third generation to operate Blue Mountain View Farm, a 150-acre dairy in Annville, Lebanon County. In 2000, Matt’s father began his herd grazing and in 2005 Matt returned to the farm, expanding the herd and grazing acres from 30 acres/60 cows to 105 acres/90 cows. Matt and his wife bought the farm in 2012 and in 2018 the farm completed the 3-year transition to certified organic production.

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The dairy herd is fed a mixed ration using forage and grains to help supplement pasture. Matt is passionate about grazing and the way it benefits farm finances, family life-style, and the environment. In addition to being a board member and a grazing mentor of the PA Grazing Lands Coalition, he also leads the Lebanon County Grazing Network. Matt's hobbies and interests include involving his three children into the farm, hunting, fishing, and cooking. The family raises 100% of their own meat including pastured hens, broilers, beef, and an occasional pig. They also maintain a vegetable garden where Matt experiments with cover crops such as buckwheat, sun hemp, cow peas, and brassica mixes.



Matt Bomgardner pointing to his dairy cow herd on lush forage.

Questions he can answer as a mentor: Confinement to grazing transitions, transition to organic, grazing dairy genetics, dairy financials, high milk production grazing, record keeping and data analyzing, cover cropping.

To get more insight into Matt's thoughts on having cows on pasture grazing and feeding them a partial total mixed ration at the same time visit this URL: <https://padairygrazing.wordpress.com/>

Duane Hertzler, Dairy Farmer, Moo-Echo Farms, Loysville, PA

Duane and his wife June started Moo-Echo Farms in 1978 with 60 cows. Initially they were a total confinement operation with a milking parlor.

In the early 90's he and June transitioned to a grass-based operation, and he's been grazing ever since. He's keeping grazing in the family, and has transitioned ownership of Moo-Echo Farms over to his son Neil, and daughter-in-law Kilah.

They now have a herd that consists of 300 milking cows and 300 young stock and as of 2017 are considered an organic dairy operation.



Duane wears many hats these days! He serves on the National Grazing Lands Coalition board representing the Northeast Dairy industry as well as serving on the PA Grazing Lands Coalition board representing the PA Forage and Grassland Council. He's a mentor for the PA Center for Dairy Excellence, and is a Dairy Commissioner for the PA Animal Health & Diagnostic Commission.

In 2000, Duane won the Mid-Atlantic Master

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Farmer award, the Charles Conan award in 2006, and in 2010 he was recognized for his contributions to the Pennsylvania Forage Industry. On top of all of this, he's grandpa to six grandsons and two granddaughters!

Moo-Echo Farm (then) was a model grazing dairy for the USDA-NRCS Employee Development Center Pasture Ecology II course contracted with Penn State University back at the turn of the 21st Century. It was a course to train NRCS employees on how to work with dairy farms that fed feed supplements to their dairy cows while on pasture. Feed rations have a very big impact in allocating pasture to the lactating cows and on soil fertility.



Duane feels that the PAGLC brings together grass-minded farmers, educators, and industry to learn and increase knowledge and understanding of grass-based farming and conservation.

Pennsylvania Forage Conference, February 21, 2019

The Pennsylvania Forage Conference will be held at the Holiday Inn Harrisburg Hershey in Grantville the day after our 2019 Conference.

8:15-9:00 REGISTRATION / Visit Exhibitors
9:00-9:30 Weather Update – 2019 Growing Season – Kyle Imhoff
9:30-10:15 Diseases Updates – Dr. Alyssa Collins

10:15-10:45 BREAK / Visit Exhibitors
10:45-12:00 Forages from PA to CA: Many Systems, Common Goals – Dr. Charlie Brummer
12:00-1:00 LUNCH / Awards / Visit Exhibitors
1:00-1:45 Operation Overview – George Lake
1:45-2:00 BREAK / Dessert / Visit Exhibitors
2:00-2:30 Eco-types and Endophytes – What's New in Tall Fescue Varieties? – Dr. Charlie Brummer
2:30-3:00 PANEL – Expert Panel

For More information contact:

Terri Breon

Email: PAForageGrassland@gmail.com

Here is an article on a grass-finished beef farm hot of the press of the Angus Journal. Dr. Scott Barao worked with us to host the 2017 Northeast Pasture Consortium Conference in Hagerstown, MD. He also spoke at our Conference. The article is about Hedgeapple Farm that he oversees as Executive Director of the Jorgensen Family Foundation that owns Hedgeapple Farm. This articles stresses how important it is to have high quality pasture in front of beef cattle being pasture-finished (in this case, on alfalfa and orchardgrass mostly).

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Cow-calf herd on rotational pasture Hedgeapple Farm, Buckeystown, MD

Two Steps to Quality

Forage-finished beef operation has consistent following from consumers.

Story & photos by Becky Mills, field editor
Angus Journal January 2019

Hedgeapple Farm isn't the most convenient place to buy forage finished beef. It's only open three days a week, and beef is all you'll find. There isn't so much as a bun in sight. Combine that with the crammed-full lives of suburban consumers, and Scott Barao says they do succumb to the occasional temptation of buying their beef at Wegman's or Trader Joe's when they pick up the rest of their groceries. His regulars confess, "I ran out of your ground beef, but yours is so much better."

Barao, executive director of the Jorgensen Family Foundation, which owns the Buckeystown, Md., cattle operation, and herdsman Jay Fulmer, aren't surprised. Both give the credit to a combination of high-quality forages grazed by top-quality Angus cattle.

Forages

Alfalfa is the centerpiece of the growing and finishing process, joined by orchard grass. Cattle graze the perennials from the time they are weaned at 8 months until harvest, which is typically 20-22 months for steers and 18-20 months for heifers.

"If they don't gain 1.8 to 2.2 pounds a day, they aren't going to produce an acceptable carcass," says Barao.

"You don't want them falling off," he emphasizes. Barao, who was a University of Maryland Extension beef specialist before he came to Hedgeapple in 2006, says "They have to be on a rising plane of nutrition. If you screw up in this system, you're done; there is no compensatory gain."



Scott Barao sitting on the steps to the log cabin meat market.

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Clemson University animal scientist Susan Duck-ett agrees with Barao. “Successfully finishing cattle on forage starts with high-quality forage and grazing management,” she says. “We like to keep them growing and gaining. There can be some fluctuation, but it is better if they stay on a positive rate of gain.” When she is forage-finishing beef, her goal is 2 pounds per day.

To keep the forage at its most nutritious, Fulmer moves the growing and finishing cattle to a fresh paddock every day. “It all comes down to dry-matter intake and quality of forages,” he says. “That’s why these feeders get fresh forage every day — so they can eat constantly. It’s palatability. If it is fresh and green and growing, they eat more of it.”

Fulmer doesn’t have a formula for stocking density or paddock size. He points to a paddock and says, “If they act hungry, I’ll make it bigger. It is more art than science.”

Fresh Forages

Since their customers want beef year-round that means Barao and Fulmer have to provide quality forage year year-round. Alfalfa comes the closest to meeting that need. “To us, alfalfa is a warm-season grass,” says Barao. “It has the level of nu-trition that we need and the ability to stand up to grazing.” “The taproot will grow in the summer,” says Fulmer. “Even in a drought year, we’ll still get growth out of alfalfa.”

While part of their stands are a mix of 75% alfalfa and 25% orchardgrass, they do graze pure stands of the legume, which brings up the risk of bloat.

“We have lost cattle to bloat,” says Barao, “but we try to keep them full and keep them on it all the time.” He also says they wait until the dew dries before they move cattle to a fresh stand. Fulmer adds, “We try not to graze it when it is immature; we try to get it a little more lignified.”

While alfalfa is the star of the grazing show, Fulmer is a fan of orchardgrass. “We’ll have grazing by late April. It depends on the weather in the fall, but usually we’ll have grazing through October,” he says. “It has palatability and stayability. It is leafy and lasts pretty long in the field. Alfalfa can be a little persnickety.” The downside of orchard-grass is it does not produce well in the summer heat, he says.



Jay Fulmer moves the growing and finishing cattle at Hedgeapple Farm to a fresh paddock daily so they have the most nutritious forage possible.

At times, Barao and Fulmer also grow some summer annuals, like Sudax, a hybrid sorghum-sudangrass, and will get two grazings before fall. They are also experimenting with a high-sugar perennial ryegrass, but say they need more time before they decide whether to add it to the grazing menu for keeps.

Grazing Strategies

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While Barao and Fulmer also work to keep high-quality forages in front of the brood cows and nursing calves, they typically move them once a week, rather than every day. Cows and calves also have access to Kentucky 31 tall fescue part of the year. “It is durable,” says Fulmer. “It will take trampling and overgrazing probably better than any other grass.” He tends to avoid grazing it in the late spring and summer, when the endophyte in the Kentucky 31 can decrease cow heat tolerance, milk production, and reproduction, and gains in the calves. It is a key part of the grazing system in the fall and winter, when endophyte levels are lower. Fulmer says, “It is good for stockpiling. Orchardgrass doesn’t hold the quality in the winter like fescue. I usually have the fall-calving cows grazing it at least until January.”

Even with their careful selection of forages and conscientious grazing management, MD winters can be tough. For the 90 days or so when they do not have standing forage available, they rely on balage, or hay harvested at higher moisture levels and wrapped in plastic so it ensiles. Most of their balage is alfalfa or alfalfa-orchardgrass.

“With balage, we can make the first cutting earlier and capture the quality of the forage,” says Barao. “If you put up alfalfa as dry hay, you lose a lot of the leaves. We are all about the quality of the forage. We could never get the gains we need on dry hay, even alfalfa.” He estimates the protein is around 18%, with 60-62% total digestible nutrients (TDN), but says, “The best indication of forage quality is animal performance.



For quality forage year-round Barao and Fulmer rely on alfalfa. Although care needs to be taken on pastures to prevent bloat, the legume is drought-tolerant and they regularly graze stands of 75% alfalfa or greater.

Genetics

While carefully managed, quality forages are obviously a must in forage-finishing program, Barao and Fulmer are just conscientious about the cattle genetics. The herd, which was formed in the mid-60’s, is 100% Angus. Barao says, “To produce consistency, we need the right genetics – genetics with a high probability of success.” He had no desire to change or add breeds.

“Angus cattle are a no-brainer,” he explains. “The gene pool is deep enough to allow me to fashion a retail product that meets consumer demands but stay within our resources.” He continues, “I have a defined carcass that works.” That carcass comes from a forage-finished steer weighing 1,150 lb. to 1,250 lb., or heifer weighing 1,050 lb. to 1,150 lb.

Barao says the majority of those carcasses are on the high side of Select to low-Choice with 0.3 inch of backfat.

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While Angus cattle are definitely the chosen breed, Barao gets more specific when it comes to the type of Angus he prefers. When he was with the University of Maryland, he managed the historic Wye herd in Queenstown, MD, and became intimately familiar with its genetics. He says that herd, closed since 1958, provided the traits that work for the 100-cow Hedgeapple operation, as well as their three cooperator herds. “They are moderate-framed and easy-fleshing. Their \$EN (energy dollar value index) is off the charts. That’s why they do so well in forage-finishing systems.” He adds, “They have good udders and milk well.” Fulmer adds, “Most of our cattle that do well are Wye-influenced.”

Tracking the pedigrees of the Hedgeapple cattle is no problem, because although the majority of the calves are marketed as beef through their retail store, all are registered.

Says Barao: “We’re Angus breeders. We do sell some bulls, and we need to support the Association. We keep good data and do ultrasound for marbling.”

He wants to continue to hear the same refrain from his customers when they stray and buy forage-finished beef elsewhere. That is, “Yours is so much better.”

Producing with a purpose

On a late May day, Scott Barao was piloting his Polaris Ranger® down the lane between paddocks, and swerved to avoid a small box turtle. Instinctively, he pulled over and put the little guy in the next paddock, hopefully out of harm’s way. “Our goal is to be environmentally sustainable and economically sustainable,” comments Barao, the executive director of both Hedgeapple Farm and the Jorgenson Family Foundation.

The need for environmental sustainability is obvious. “We’re farming in the Chesapeake Bay

drainage basin,” says Barao. “We have a mile of river frontage on one of the major tributaries of the bay, the Monocacy River. Stewardship of the land is as important as stewardship of the animals.” In keeping with that stewardship, in 1997 the Jorgenson Family Foundation put 250 acres of the farm in a permanent easement with the Maryland Environmental Trust.

Even more visible are the farm’s everyday practices — like frequent rotation of cattle to fresh paddocks and pastures, so the forages aren’t over-grazed and the ground subject to erosion. There is also the new concrete-floored 100×160-foot feed-ing barn. Now, rather than feed balage in a sacri-fice paddock, where the ground can get chewed up, growing and finishing cattle eat balage in the barn. Their manure is collected and stored until it is spread back on the pastures in the place of commercial fertilizer.

When John and Barbara Jorgenson formed the foundation in 1997, part of their mission was to provide a profitable and sustainable farming model in the Mid-Atlantic Region. That is also visible. “We demonstrate to other cattle producers how you can keep a family farm 100% grass-based and as low-input as possible,” says Barao.

That mission is in the form of the Angus herd, and the product, forage-finished beef, sold in a re-stored 1700s log cabin-turned-market. “We open-ed it in November of 2006. Then we were completely vertically integrated,” Barao says.



After starting with 40 or 50 head, they now market ground beef, steaks and roasts year-round from 120 forage-finished steers and heifers, both from the Hedgeapple Angus herd and those of their co-operators. In addition, they host tours and field days for producers so others can see their grazing, cattle management and environmental practices firsthand.

Editor's note: Becky Mills is a cattlegwoman and a freelance writer from Cuthbert, Ga. Some text was changed from original article for clarity and formatting issues.

Since we have a session on Promoting Clover Growth in Pastures, I thought this list of reasons to add legumes to pastures was quite appropriate. We have known for some time that red clover was good at reducing the alkaloid toxicity of Kentucky 31 tall fescue, but we only surmised as to the reason why it was. Now, with some new research, it has been found to have a natural chemical in it that counteracts the effect that the alkaloid has on constricting blood vessels of grazing animals.

Keeping legumes in pastures is challenging, but they are worth it as you will find out below. Are you up to the challenge? The Promoting Clover Growth in Pastures session may be able to point the way to success.

Ten Reasons to Add Legumes to Your Pastures

1. Lower Nitrogen Costs: Legumes have the ability to obtain nitrogen from the atmosphere and fix it in nodules on the roots. The amount of nitrogen fixed varies depending on species, stand density, soil fertility, weather, and the amount of leaf surface on the legumes. The range is 60 to 200 pounds per acre per year. Among the common legumes used in US forage production, alfalfa produces the most nitrogen.

2. Improved Forage Quality: Forage quality of legumes is generally higher than that of most grasses at the same stage of maturity. Legumes are generally higher in crude protein, digestibility, and mineral content and are digested quicker than most grasses.

3. Better Growth Distribution: The addition of legumes to grass pastures often extends the grazing season and fills voids in grass monocultures. Some legumes, particularly alfalfa, can furnish quality grazing during the summer months, when cool-season pastures are less productive.

4. Increased Forage Yield: The total yield from grass/legume mixtures is usually increased over straight grass pastures. Studies at the University of Kentucky show that red clover grown with tall fescue pastures produces more total yield than tall fescue fertilized with 180 pounds of N per acre.

5. Reduced Risk: Mixtures of grasses and legumes constitute a lower risk than a pure stand of either. Mixed stands are less susceptible to devastation from disease, insects, and adverse weather.

6. Soil Health Benefits: Legumes can improve

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soil tilth by creating very water stable soil aggregates (wet coffee grounds looking soil particles) and deep root channels, which improves soil drainage and the amount of air that is in the soil.

7. Reduced Animal Toxicities: Growing legumes with tall fescue is the number one strategy used to combat endophyte problems associated with tall fescue. Grass tetany problems can also be greatly reduced with legumes in the diet (better source than grass for soluble magnesium).

8. Environmental Acceptance: Because of the legume plant's ability to "fix" nitrogen through Rhizobium bacteria, legumes provide natural, slow-release nitrogen. Because of their flowering habit, legumes furnish pollen and nectar to honey-bees and other pollinators, such as butterflies.



Honey bee sipping nectar on a white clover blossom.

9. Aesthetic: Legumes and other forbs provide color & diversity to grass meadows and pastures. This diversity is especially enhanced when pairing a legume with a grass that are compatible with each other. Just having lots of herbaceous species of one major group is diversity in number but not necessarily helping produce a healthy, well functioning pasture ecosystem.



Bobolink in a meadow of grass and vetch. They require grassland habitat.

10. Increased Profit Potential: More milk production, higher weaning weights, higher average daily gains, and higher reproductive efficiency are common, when legumes make up a significant portion (at least 30% by weight) of the forage mix.

Legumes are agronomically sound, environmentally friendly, and economically advantageous.

Adapted from article in: Management Intensive Grazing in the Ozarks, Edited by Mark Kennedy & Jim Cropper

The News Update Credo

The Northeast Pasture Consortium News Update is published semi-annually, late summer and winter issues. The goal of these news updates is to keep our Consortium members abreast of the latest research and technology that most impact pasture-based farmers, inform them about the upcoming annual conference, and provide a forum to guide and formulate good policies and best management practices that keep pasture-based farms profitable, efficient, and environmentally sound.