

# Midwest Perennial Forage Working Group

In-person meeting

Decorah, IA

April 23, 2018

## Present:

Laura Paine

Kent Solberg

Doug Gucker

Erin Meier

Robert Bauer

Nadia Alber

Vance Haugen

Jim Paulson

Joe Sellers

Jane Jewett

Denise Schwab

Peg Sheaffer

Terry VanDerPol

Meghan Filbert

Gene Schriefer

Dick Cates

Introduction of Erin Meier, new director of Green Lands Blue Waters. Previously she was executive director of the SE MN Regional Sustainable Development Partnership. She is currently based in Rochester, MN.

## Round-Robin Updates

### Meghan Filbert

Practical Farmers of Iowa just finished planning a schedule of 25 field days, from June through November. Many of them have a grazing focus. PFI will send a bus to the Grassfed Exchange, June 20 – 22. A field day is scheduled at Weidemeier's dairy on July 14. PFI will bring Annabel Cortamingo to Iowa for a series of workshops in November. Meghan has been working on putting a forage value to cover crops and developing a spreadsheet tool that incorporates cover crop values for scenarios such as within a feedlot operation, harvest of cover crops, and cow/calf grazing. The spreadsheet is available on the Iowa State University Ag Decision Maker website. PFI is hiring a swine/poultry coordinator whose work

will include incorporating small grains into feed rations. Meghan will focus on grazing, including development of a grazing cover crops toolkit.

## Robert Bauer

Southwest Badger RC & D has a Beginning Farmer & Rancher Development Program grant for the grazing mentorship program. They have developed a mentorship toolkit and are working on developing coaching for financial business plan development. The Grazing Broker website allows posting of classified ads for tools and equipment, land available to graze, livestock owners seeking land for grazing, and resource people. They are looking at expanding the website to include grazing cover crops. The SW Badger website includes a pasture soil health and grazing toolkit developed in collaboration with GrassWorks. It includes some information from presentations at the 2017 GLBW conference.

## Nadia Alber

Nadia is associate director for the WI School for Beginning Dairy Farmers, with UW-Madison's Center for Integrated Agricultural Systems. They recently developed a website for distance education. They developed the core curriculum for Dairy Grazing Apprenticeship, which has spread nationally. They can conduct on-site training courses with simultaneous remote site delivery. The Ride to Farm bicycling event is coming up; CIAS is involved.

## Vance Haugen

Retired from UW-Extension after 32+ years. Still doing pasture and grazing consulting, as well as Haugen Enterprises: construction of durable plastic large round bale feeders, and production of kura clover seed. He's working with a U of MN professor on kura clover for buffer areas around drainage ditches, looking at seeding around 3,000 acres.

## Gene Schriefer

Suggested that Meghan and Robert look at data from Kevin Shelley, an agronomist at UW-Madison: he has 3 years of data on cover crop forage use in dairy production. Gene is now the last agricultural Extension agent working on grazing in southwest Wisconsin, although there may be a new hire in Grant County. He's doing more dairy farm financial counseling these days, and spending only about 1/3 of his time on grazing education. He works with Robert Bauer and SW Badger. He's involved with the SARE-funded Kernza project led by Valentin Picasso (UW-Madison). Has worked on cover crops since 2009, promoting them for following corn silage and wheat; and is trying to flesh out the cover crop section of FYI Wisconsin (the UW-Extension website). There is a lot of consternation in WI regarding the grazing of cover crops. A group of pastured poultry producers in SW WI is trying to get a USDA processing plant in their area in order to facilitate sales to Chicago. They have a planning grant to work on this. Cooperative Development Services (CDS) is involved. A Value-Added Producer Grant has been applied for. It will be farmer-owned in some fashion.

## Jim Paulson

Formerly with U of MN Extension. Doing farm transitions work, emergency financial management. Working for Dairy Grazing Apprenticeship on a number of educational projects. Contract researcher with Byron Seeds, which is very forage-oriented. Lives in Caledonia, MN; raising draft and quarter horses.

## Joe Sellers

Planning to retire from Iowa State University on September 7 and spend more time working with the cow operation he co-owns with his brother. PI of a cow systems program the Iowa Beef Center inherited from the Leopold Center; it includes 25 cooperating farmers with operations ranging from year-round confinement to all pasture with no feeding of hay. He's working on the Cow Systems Manual for that project. Another former Leopold Center project is held by the Nutrient Reduction Center and will be featured at the McNay Research Farm field day. Joe has done cover cropping with rye for 45 years. Sometimes it works well, sometimes not so well. Has done a lot of work on spring grazing of cover crops, but producers currently are more interested in fall grazing. Iowa State will not be hiring a new forage specialist. About 2 million acres of pasture has been converted to cropland in Iowa in the past 15 years.

## Denise Schwab

Has been with Iowa State Extension for 35 years. Previous cover crop work focused on spring grazing, but a new Risk Management Agency grant focuses on fall grazing: development of BMPs for fall grazing, information about weather factors, conditions when it would make more sense to not plant.

## Peg Sheaffer

Works at Angelic Organics Learning Center in Caledonia, IL but lives in Brodhead, WI. Previously a full-time farmer raising vegetables, sheep, pastured poultry and pork. Now working with small and medium farmers, many of whom started in vegetable production but are diversifying into livestock. They have lots of production-related technical questions. Angelic will be doing a field day in July that includes grazing planning, and one in October on humane animal husbandry. They have run a Farm Beginnings program for 13 years, and have a farm financial boot camp.

## Terry VanDerPol

Much of her time is spent managing grant funding these days. LSP has revised and updated its Cropping Systems Calculator with a soil erosion component. They are using their conservation lease toolkit in work with women non-operating landowners; trying to raise the bar beyond just talking about conservation to actually re-negotiating leases and getting practices on the ground.

## Laura Paine

WI DNR and University of Wisconsin are involved in a long-term partnership to promote and study grazing on wildlife areas. UW is hiring a new position to support this work. Laura and her husband raise grass-fed beef and are selling feeders to WI Grass-fed Beef Cooperative members. She's on the board of the Michael Fields Agricultural Institute and on the GrassWorks board. GrassWorks is beginning a strategic planning process. Laura is also the program director for Dairy Grazing Apprenticeship, which is now active in 11 states with partner organizations in some states: Cornell University in NY, Pennsylvania

Association for Sustainable Agriculture (PASA). In discussion with Sustainable Farming Association of MN, University of Vermont, Michigan State University.

## Kent Solberg

Sustainable Farming Association of MN Grazing & Livestock Specialist. Minnesota is seeing pushback from MN-DNR re: grazing on public lands, so we have to keep working at it. South Dakota has been doing it for 35 years and is still getting pushback. Graziers are starting a campaign to get local sportsmen to come out for evening pasture walks on farms where grazing is well done. [Note from Joe Sellers: Conversation continues re: conservation grazing in Iowa, also. There's too much interference from higher-level DNR in the management planning.] In Minnesota, the DNR commissioner is supportive and field-level staff are supportive of grazing, but people in between squash it.

SFA held the 5<sup>th</sup> Soil Health Summit in February, then a series of 7 "Café Chats" each attracting about 20 to 45 people. The host cafes asked to do that again; they saw the potential of soil health and also liked the business. Kent and Laura did a joint presentation at the GrassWorks conference on grass-finished beef production. Kent has been working with the Cattlemen's Association in Minnesota and finding a higher level of acceptance of grazing than among dairy producers. The MN Dairy Initiative has been rough going; it's very depressing; we're losing farmers. A U of MN professor's testimony to the MN Legislature on April 18 was messed up, very discouraging and upsetting to many dairy farmers.

"Dirt Rich" field days have involved NRCS and SWCD, Pheasants Forever, the Chippewa 10% Project, U of MN Extension's Silvopasture project, and an energized fence demo with Extension. The Society for Range Management has approached SFA about their international conference coming up next February in the Twin Cities; SFA has been asked to help with pasture and grazing information. In collaboration with U of MN, NRCS, and others, SFA will be bringing Dave Pratt's "Ranching for Profit" workshop to 5 locations in Minnesota in December of 2019.

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## Dick Cates

Retiring from University of Wisconsin at the end of June after 31 years. He started the Wisconsin School for Beginning Dairy Farmers 23 years ago, and now is handing the baton to Nadia Alber, who has worked with him for 6 years. He has seen other people retire and their programs go away, so feels very fortunate to have Nadia picking it up. There have been 550 students through the program, which has a focus on business planning. The Wisconsin School has hosted Ride to Farm as a fundraiser for 15 years and usually has a Secretary of Agriculture as the send-off speaker. This year Dick will be the speaker. Dick has hosted research projects on his farm and will be starting a new one involving mycorrhizal fungi. He's also involved with a farmer-led watershed group, one of 18 in Wisconsin. In his "retirement" he intends to become a volunteer ambulance driver. His son Eric Cates is in the process of taking over the family farm and is involved with the Grazing Broker program.

## Doug Gucker

Has been with U of IL Extension for 5 years and officially is a Local Food and Small Farms Extension Educator. He's vice president of the Illinois Forage and Grazing Council. The Illinois Forage Expo will be June 27, and July 21 will be a dairy and grazing field day at the Dave Suprenant farm, which is part of the RMA grant. Six months ago Suprenants were planning to sell the cows; now two sons may take over the operation. Doug claims to be the only person in Illinois who likes to talk about farm leasing with landowners. His program is working more and more with farm wives; they find them a more receptive audience for production and succession information. They have used Annie's Project; have done a train-the-trainers effort and now are managing it on their own, finding women agricultural professionals to come in and talk to women farmers. The new Dean of Extension in IL is hiring new people and filling agricultural positions.

## Research Projects

### Kernza Project – report by Gene Schriefer

- Kernza is a perennial grain, developed through selection from intermediate wheatgrass.
- The SARE project is led by Dr. Valentin Picasso-Rizzo, looking at resilience of the crop in a forage system. Plots have been in place 3 years at Arlington and 2 years at Lancaster.
- In fall of 2017 there were 8 farms with small plots in southwest Wisconsin.
- Intending to harvest 160 acres this August.
- Monoculture Kernza had the best yield: 90 bu/ac last year. Lowest yield was from Kernza interseeded with red clover.
- Kernza peaks in year 2 & 3 and then grain production declines.
- Spring grazing appears to be no detriment to yield. Graze in spring, harvest grain in August, then have regrowth of 4,000 to 5,000 lbs. of forage/acre later in the fall. An October 12 field day is planned at Lancaster to showcase fall grazing.
- Trelay Seed Co. based in WI is very interested in Kernza.
- Grants are being sought to work on outreach to farmers.

### Discussion of Kernza

- Organic vs. Conventional
  - Organic Kernza is selling for \$1/lb. at farm gate.
  - Kent has seen trainwrecks with organic Kernza due to weed pressure. Early fall establishment is important: if it's up early enough in the spring, it outcompetes everything else.
  - No herbicide is currently labeled for Kernza as a food crop. Several are labeled for intermediate wheatgrass as a forage or seed crop.
- Concerns that the public buzz about Kernza is outpacing the ability of the crop to deliver on promises.

- Some of this is a chicken-and-egg conundrum. You need to create some hype so you can get some funding. Now the funding is in place and the hype has outrun the availability of seed.
- Jack Erisman in central IL has been growing Kernza since 2010. He's been harvesting his own seed and replanting; is up to about 30 acres. He grazes it and takes an occasional grain harvest when conditions are right.
- Other options for Kernza
  - Kernza is a good option for buffer strips.
  - Feed-grade Kernza? Not being looked at yet; the price is too high for feed. However, there was some opinion among the group that some farmers might be more interested in feeding it than in selling it as grain; especially in a small-scale diversified farm situation with livestock.
  - Carbon sequestration & soil health

## RMA Grant: Testing Reduction of Dairy Financial Risk with Grazing and Insurance

### Project overview:

- Seven, possibly eight, dairy farms in IA, IL, WI, and MN; using grazing in various ways and to various degrees.
- Collecting financial data from each farm to plug into the AgFa system developed by Center for Dairy Profitability at UW-Madison.
- Tom Cadwallader, professor emeritus at UW-Madison, is working with DGA and serving as the financial analyst for this project.
- Jim Paulson, Doug Gucker, and Kent Solberg have all been working at collecting financial data from farms.
- We're establishing a schedule of field days featuring the farms in the study.
- We have to write a fact sheet about PRF, the Pasture, Rangeland, and Forage insurance offered by RMA. Jane and Tom will meet with an insurance agent at Joe Tomandl's farm to learn more about it.

### Discussion of RMA Project

- Dick: Troubled that the dairy industry is leaving so much money on the table by not grazing replacement heifers. He hopes the grant project will make that clear.
- Questions re: PRF insurance. Farmers have to pick 2-month intervals to insure. What's the best 2-month interval to choose?
  - In Illinois, 2-month intervals that include February and August have been the best bets for farmers.
  - You're betting on rainfall
  - It doesn't necessarily replace your cost of purchased feed to get through a dry spell
  - Doug mentioned a farmer who has used the money he would spend on the PRF premium to instead install center-pivot irrigation.
- Priorities for fact sheets coming out of the project:
  - Gaming out PRF

- Farm bottom line: numbers and graphics
  - Split out some smaller groups like organic, all-grass, conventional to show financials
    - Organic requires 30% of dry matter intake come from forage during grazing season
  - Labor/Quality of Life
  - Question: Does a grazing dairy system even out peaks and valleys in ROI?
    - Looking at 300-cow dairy AgFa data:
      - 27% return in 2014
      - 2% return in 2015
      - 2% return in 2016
      - Average about 5% return per year
      - Does grazing give a more even year-to-year %? That would be valuable in itself; less anxiety for the farmers.
  - Audiences for information
    - Present the financial data to bankers?
      - Dairy grazing is a possible entry point for beginning farmers; lower capital investment
      - The National Young Farmers of the Year last year started as graziers; as their equity grew they took the cows off grass but kept the heifers out.
      - LSP tried to present their Cropping System Calculator to lenders. They worked hard to get bankers interested but only got 3 or 4 to attend a presentation.
      - Sensitizing bankers to the idea of grazing dairies could be helpful.
    - Field reps for the dairy processing plants
      - Sometimes field reps have been receptive to grazing but the farmers have not been.
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## Discussion of Farm Size & Rural Economies & Trends

- Dick Cates raised the question whether the Center for Dairy Profitability looks at the impact of smaller farms purchasing inputs locally and supporting local dairy infrastructure, vs. large farms shipping milk out and buying inputs from distant sources. “Success” in agriculture is often defined as “big.” Large-scale farmers are respected and looked up to in communities – and are often community-involved good citizens – but their farming practices are doing damage to rural communities.
- Terry: We have to figure out how to tell the story of the value of small-scale family farms. People think they have no agency to make the choices that would support small-scale farmers. A question to ask: do grazing farms bring a son or daughter home to join the operation?
- Joe: Southern Iowa perspective -- Many Iowa farm families are doing really good land management with sustainable practices: crop rotation, grazing – but they aren’t small farms. 700 cows, for example. Some farms have a CAFO for hogs to fund the younger generation’s

participation on the farm. CAFO = 1000 Animal Units. There are grazing + CAFO farms. Sometimes the CAFO is what gets livestock onto the property, and once livestock are present, there are more options.

- Vance: There are other, greater forces operating than what we can control. Trajectory is to march the farmers off the cliff. Innovation means moving farmers farther back in the line going over the cliff.
  - Kent: 30 years ago we couldn't have predicted some of the market trends now in play.
  - Gene: How do you teach a land ethic? Foster relationships, discuss impacts beyond the property line, facilitate upstream/downstream conversations.
  - Iowa was known as a leader in sustainability and conservation back in the 1940s and 50s. Now corn is king, soybean is co-king: big equipment, farmers want a winter vacation and summers at the lake.
  - Some regions have more of a history of livestock and have retained livestock.
  - Culture of livestock: when that has gone away, it's hard to bring it back.
  - The farm crisis hit, and from 1983 to about 2000 there was a break in generational knowledge.
  - For the generations coming back or interested in coming back to the farm, the livestock route is attractive.
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## Small grain production, crop rotations, and grazing:

- PFI's Sarah Carlson will be putting together a small grains conference in Mankato this year. Kent knows an Extension person in southern MN who is interested in exploring small grains in a hog ration.
- Kent has cooperators in MN who routinely graze cattle into January & February. One guy grazes all year except for mud season. One farmer just south of Lake of the Woods is trying to graze until January. He takes a small grain crop off as baleage followed by a forage cover.
- MN FINBIN analysis for 2016 showed -\$43/acre for corn and +\$76/acre for barley.
- A pet food company in Perham, MN is offering lucrative contracts within 100 miles for chickpeas, lentils, barley, field peas.
- Some farmers in Canada are grossing \$1000/acre with \$100/acre planting costs by planting polycultures of grains and legumes and separating the seeds after harvest. (This concept was explored in *Lentil Underground* by author Liz Carlisle, <http://lentilunderground.com/>.)

## Perennial polyculture of warm & cool-season species.

- Warm + cool season hasn't worked well in WI for past 30 years. Now with climate change it may be different.
- In IL, in the humid tallgrass prairie region, better yields are achieved from big bluestem, Indiangrass, and improved varieties of switchgrass. Some cattle producers prefer switchgrass



because it's palatable to the cows. They can take two cuttings in the boot stage: June and August.

- Southern Iowa, harvest of warm-season grass is in July/August to manage for nesting birds.
- Study in Nebraska found 2.8 to 3 lbs. ADG on big bluestem, which was better than switchgrass. The big blue had 62% TDN and 12% CP.
- Indiangrass and big bluestem work better for co-management with cool-season grasses.
- Kent gets 10 to 12 calls per year from people who want to seed warm-season grasses into cool-season swards.
- LSP has data on seeding warm-season annuals into cool-season pastures: millet, sorghum, sunflower, cowpea. Example of a farm near Goodhue: uses a roller-crimper on cool-season grass to knock it back for interplanting of warm-season annuals.
- Dick mentioned a water infiltration study on cover cropped and grazed acres. Water Use Efficiency (WUE) and water retention is becoming a key benefit of perennial forage. Using 90% vs. 40% of the available water makes the difference in viability of a production system.

## Connecting the dots on agricultural systems, climate change, water capture & storage

- In the Driftless region, the hills are like big funnels when there are large rainfall events. A 10" rainfall = flood.
- Water and soil loss is worst on tilled ground, less on overgrazed pasture, least (very low) on managed pasture.
- Managed pasture could be key to water capture and storage, and climate change resiliency.
- We should present information to associations of townships and counties about losses in large rain events, and the ability of pasture and forage to reduce flooding and associated damage to roads, sewers, etc.
- Example of Green Bay: prior to this year, they had never had a 3" rain event. Now they have, and there was flooding. Simulation of a 5" rainfall shows houses washing away.
- NRCS has a watershed tool; can do graphic modeling?

### Land Use Calculators

- Iowa State University has a marginal land calculator
- Pheasants Forever has a calculator based on precision ag data
- AgSolver is based on GIS; uses NRCS soil data. AgSolver is a company that analyzes farmland for profitability potential.
- Illinois has a precision agriculture calculator that uses the AgSolver approach
- Pasture Project – Jim Munsch has a beef calculator, vegetable compass, dairy compass
- Practical Farmers of Iowa and Land Stewardship Project both have calculators

- There are 8 or so different cropping/grazing/land use calculators out there, but who is using them? You can't get someone to use the calculators unless someone sits down with them and walks them through it. What messaging could we do about the calculators?
- We need to do some self-training on the calculators to understand and be able to use them with farmers. Meghan will coordinate with Rebecca Wasserman-Olin from LSP to offer a webinar to the MPFWG members, featuring PFI's cover crop grazing calculator and LSP's Cropping Systems Calculator.

## Possible Next Steps for MPFWG:

- Distill out some project we can work on that address the themes discussed above.
- Try for cultural shift to grazing heifers among conventional dairies
- Update the Contract Grazing series:
  - We get a lot of mileage out of these fact sheets and should put resources into keeping them up-to-date.
  - Add Contract Grazing of Cover Crops – Meghan (with \$ from GLBW); help from Kent and Joe, based on some existing material from Iowa State Univ
  - Add Dairy Heifer Grazing – Laura and Jim will work on this.
  - Contract grazing from the landowner perspective – Robert
- Project topic ideas:
  - Water retention as a soil health theme / Kernza
  - Beginning livestock farmers / Grazing dairy heifers

How do we get into venues where we can speak to conventional farmers? There are venues but it's difficult to get into them. Could create some display panels, do joint staffing of a booth with a related organization.

- Corn/soy conference in WI in January
- Crop Advantage traveling show in Iowa

## Funding & funding uses for GLBW and MPFWG:

- Role of MPFWG (Nadia's observations):
  - Information hub
  - Networking and learning group
  - Education
- Walton Foundation
  - Wants more acreage into perennials
  - Grazing focus, particularly in Iowa and Illinois
  - Focus on farm advisors, not individual farmers
    - Helps get participation if you can offer CEUs to CCAs and NRCS staff
  - Kernza is of interest
- SARE grants

- Research & Education
- Partnership
- Professional Development Program
- MISA – Endowed Chair program
- GLBW funding from foundations – how to trickle it back to Working Groups?
  - Mini-grants we can offer for projects
  - Funding for coordinator position
  - Co-sponsorship of events; this would help to move ideas across state borders and across disciplines
  - Development of materials and classes offered by MPFWG; possibly train-the-trainer sessions for agency staff

## GLBW Conference Session

- Water infiltration in relation to municipal infrastructure: cost/benefit relationship
- Resilience science
  - Include targets for soil health in comprehensive plans at county and township level
  - Reach out to departments of health, DNR
- Connect the dots for policy-makers who haven't thought about the connections:

Perennial forage & pasture -- Continuous Living Cover – Livestock Integration – Soil Health & Water Infiltration

- 2019 conference could be in one of the “I” states – possibly Davenport or Dubuque

## MPFWG Co-Chairs

Discussion of having three-year terms, possible new people to serve as co-chairs. Motion by Joe Sellers to stick with the current co-chairs for now; approved by the group.