Great Lakes Grazing Newsletter

MICHIGAN STATE UNIVERSITY Extension

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Dear Great Lakes Grazier,

Most of us woke up to white stuff covering the ground today; I do believe it is called snow. I for one am glad to have it, as we have had a lot of mud, and snow is a welcome happening compared to mud. I watch my cows laying down chewing their cud with full bellies, and I think they agree that snow is much better than mud.

There are lots of things happening in the grazing world, please look at the calendar of events and attend as much as you can. The closest and maybe largest event, is the Great Lakes Forage & Grazing Conference being held on Thursday March 5 in St. Johns, MI. The flier is in the newsletter. You can sign up by clicking here. Be there or be square!

There will also be an advanced grazing workshop on April 9 & 10 in Brimley, MI at the Waishkey Bay Farm. This advanced grazing workshop is for those people who have multiple years of grazing experience, use some system of "rotational grazing", and want to further enhance the outcomes of their grazing efforts. The emphasis of this workshop will not be on what is the "right" thing to do, but on what ideas and information a producer can use to further their grazing program. Therefore, it will be critical for each person to be prepared to look at their own operations and be ready to write a work plan for the next year and the next 5 years. Each person will be expected to share some of their ideas and participate in the discussion. Please stay tuned for registration details.

Lastly, if you know someone who should be receiving this newsletter, please take a minute to forward your email to them. The forward button allows you to send it to as many friends as you see fit; it also allows them to sign up to receive them if they so choose to. The main reason that we switched to MailChimp for the group is so that we can better manage the mailing list, and give you the option to opt out, or update your information.

Kable M. Thurlow

Kable Thurlow
MSUE Beef & Grazing Educator

Great Lakes Grazing Newsletter

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Volume 9, Issue 1

In this Issue

Upcoming Events

Feb. 11-12, 2020 – Midwest Cover Crops Council Conference, Kansas City, Missouri. Registration here.

Feb. 26, 2020 – Agroforestry-Silvopasture Options, **Beginner Farmer Webinar Series. Register here.**

March 5, 2020 – Great Lakes Forage & Grazing Conference, St. John, MI. Annual meeting of the Michigan Forage Council. This year's keynote speaker in Mike Rankin, editor of Hay & Forage Grower. Registration is open here.

March 7, 2020 - Small Farms for Sheep and Goats, East Lansing, MI. Topics include: Small scale pasture renovation and maintenance. Registration details to be announced.

April 8, 2020 - Measuring Soil Health, Beginner Farmer Webinar Series. Register here.

April TBD, 2020 – Advanced Grazing School, Upper Peninsula, MI. This school will teach advanced skills. Attendees should be experienced graziers or have taken our Beginner Grazing School in the past. Registration details to be announced.

June 1-3, 2020 – North American Alfalfa Improvement Association meeting, Lansing, MI. NAAIC meets every two years, and in 2020 Michigan is hosting. This meeting is oriented to industry and public education sectors. Registration details to be announced.

June 18-20, 2020 -- 6th International Beef Cattle Welfare Symposium. Registration details to be determined.

July 30-31, 2020 – Beginner Grazing School, Hickory Corners and Lake City, MI. Registration details to be announced

Twelve Step Plan to Amazing Grazing for Beef Cattle

Matt Poore and Johnny Rogers.
Department of Animal Science
NC State University

One day last winter as we drove to Roanoke for the American Forage and Grasslands Council Annual Conference we talked at length about why more people don't adopt better grazing management techniques. We realized it might be because we have been practicing Adaptive Grazing Management for so long we forget how we got started. Advanced graziers sometimes turn off novices because what seems obvious to the experienced is a brand new concept to folks just getting started. It is clear, however, that more and more farmers are interested in starting the pursuit of "Amazing Grazing". We get a lot of questions about how to get from a traditionally managed farm to a place where you can see "Amazing Grazing" in action. It doesn't happen quickly, but changing your management approach can turn a system around and begin the soil health building process. Here is a twelve step plan that can help you along the journey.

Step 1. Decide you are ready to become a critical thinker and to manage your farm using ecological principles. Most of us have grown up with a production system that uses a lot of hay and other purchased feeds, is based on continuous or very lax rotational grazing, and that has a focus on a single part of the system, the animal. We have been taught a lot about nutrition, reproduction and genetics, as well as showing animals, but relatively little about managing the complex and dynamic pasture ecosystem. When we get in a drought we hold onto the animals, buy more hay, and allow the pastures to get overgrazed.

The truth is that if you spend a lot of time feeding hay in winter, making hay in summer, and worrying about running out of grass during droughts, there is a better way. Your farm is an ecosystem that includes you, the animals, the forages, the soil, and the water cycle and a million other connections. Once you see it as one system, you have a chance to observe and then guide the system in a direction that benefits your production and personal goals.

Do you want to shorten the hay feeding season, grow more forage with less inputs, and improve your lifestyle? All that is possible, but Adaptive Grazing Management can only work if you admit you don't understand your system but are willing to spend the time and energy

trying to figure it out. The truth is no one really understands these systems, but there are many of us that have decided to devote a lifetime to observing all parts of the system, making management decisions, critically evaluating results, and adapting our management to improve those outcomes.

One key thing to be aware of is that Adaptive Grazing Management means you will spend more time on your feet and less time on equipment. While new remote sensing technologies are being developed, there is no substitute for walking pasture, feeling it under your feet, and spending time putting up polywire and closely observing your cows. The exercise you get from this activity is well balanced and low impact, and can really improve your health and well-being.

Step 2. Surround yourself with like-minded graziers. After you decide to embark on this endless journey to Amazing Grazing, you need to have a support network. We need to keep our current friends, but understand there will be peer pressure to go back to the old ways of doing things. Obviously it is mentally easier to turn on a tractor, spear a bale of hay and deliver it to a hay ring, than to have cows strip grazing behind a single strand of polywire. You may become known among your peers as "that loco guy that spends all winter moving that silly little string".

The best way to succeed is to make a new peer group that has similar goals to your own. Finding them is easy; just attend an Amazing Grazing Workshop or other educational event and engage the more experienced participants with questions. Experienced Adaptive Graziers are very likely to attend these educational events and you will find them amazingly open with sharing their ideas and practices.

Another issue with the way many of us were raised is that we were always in a competitive environment. Competition can be a good thing as long as we have the correct target in mind. Learning from each other about practices that improve our land and profit margins should be our focus instead of bragging about weaning weights at the coffee shop.

Adaptive graziers tend to be open and sharing, and approach life more as a collaborative journey than as a competitive one. As you develop and grow your skills you will see opportunities to host educational demonstrations and workshops, so take advantage of those opportunities to lead and expand your network.

Step 3. Do a preliminary analysis of your system resources. Start with aerial maps that you can obtain off the web or from your FSA office. Evaluate the acreage in each pasture and evaluate pasture condition. The best way to evaluate your forage stand and pasture condition is to do a "point step" analysis which involves randomly walking the pasture, periodically writing down the species of plant you are stepping on (or bare ground), and writing down a preliminary condition score from 1 to 5 (1 = bare with almost no productive forage 5 = as good

as it gets with a diversity of strong and desirable forages and no bare ground). Do this on at least 100 points and get the average for the pasture.

Were you able to identify all the major desirable and undesirable species? If not then reviewing the common weeds and pasture plants would be advised. Was it easy for you to call out a condition score? If not then take time to learn more about this topic. Condition scoring can be a complex subject, but also it is a simple concept you can learn to monitor continuously once you really know your pastures.

Take soil samples from each pasture to determine the pH and soil nutrient levels. Once you are practicing more intensive forms of Adaptive Grazing Management many of the manure and urine nutrients will cycle and reduce your need for fertilizer, but, if you start with low pH or low nutrient levels, you will need to correct them to get the system working. From this systematic approach you can start to better understand your pastures, what the balance of desirable and undesirable species is, identify weak and strong spots, and which pastures will give a bigger response to improved management or complete renovation.

Step 4. Upgrade your electric fences and electric fencing skills. This is a critical step because Adaptive Grazing Management requires animals that are well trained to temporary fencing. You will need high power levels and good fence trouble shooting skills to make that happen. With traditional management and multi-wire perimeter fences, having some power on the fence some of the time may have worked, but it will not work with Adaptive Grazing Management. You need to understand the theory of how electric fence works, and how to use a fault finder to find shorts and keep power on the fence high. Bluntly, if you don't maintain power on electric fence, animals will not respect temporary fence and you will likely abandon the journey to Amazing Grazing.

Step 5. Train your animals to respect a single strand of wire. It is critical that your animals have a high level of respect for temporary electric fence. Electric fence is only a mental barrier, and that is played out to the extreme with a single strand of polywire. However, once animals are well trained to it, it opens up a whole new world based on "The Power of One Wire". Those benefits include improved forage management, easier movement and gathering of animals, ability to flexibly exclude sensitive areas within pasture, and to respond to perimeter fence damage resulting from natural disasters.

To train the animals, set up a single strand of polyire on tread in posts about 18 inches inside of a pen or a small pasture. It is probably better to use a small pasture because it is more the setting where the animals will first encounter polywire cross fences. The key to the training period is that there is plenty of power on the wire and we would recommend a minimum of 5 kilovolts. You might do some feeding under the wire so animals are close to it, and you also

might use the trick of attaching a strip of aluminum foil with peanut butter on it to the wire to attract deer and teach them what polywire is too. It will take a few weeks for this preliminary training period, and then the training goes to the next level with a single strand cross fence.

Step 6. Start cutting individual pastures in half with polywire. The place to start with Adaptive Grazing Management is to divide each permanent pasture in half, with cattle entering the half with the water source whenever you rotate pastures. This change alone will double your stocking density and will start leading to improvements in your system. We recommend using some rigid fiberglass or plastic posts on the ends (and potentially within the line) in these initial temporary divisions because animals, especially wildlife, will still be in the training process. Setting it up so it will not be easily torn down is good to start with, and as you repeat the process again and again you will learn how to make it stronger and more resilient to tear down using only tread in posts. Now you will also start to develop your skills at looking at a grazed sward and determining when to take down the division fence. An average stop grazing height of 2-4 inches in all systems is not a bad rule of thumb, a little on the shorter side for bermudagrass-based systems (2-3 inches) than for fescue-based systems (3-4 inches).

Step 7. Stockpile forage in autumn and strip-graze during the winter followed by dispersed hay feeding. In early summer determine one or more pastures to stockpile for late fall or winter grazing. This might be a mostly fescue field in many areas but could also be a bermudagrass field. Either way, manage the pastures so that the stand is in good shape (either grazed or clipped), and then add about 50 lbs of nitrogen on about September 1, and allow it to grow undisturbed until November 1 for bermudagrass or January 1 for tall fescue. When you start grazing, set up an initial grazing strip that includes the water source and an expected 2 to 3 days of grass. Once the forage has been consumed you will need to move the fence to allocate enough grass to feed your cattle for the next 1 to 3 day grazing period. Moving cattle daily has many advantages but cannot be achieved in all situations. However, moving fence every three days is attainable and still gives great forage utilization. This is a great learning opportunity for you and your animals, and it seems doing some daily moves really helps you develop the skills of forage allocation. Try moving your cattle daily when you can (i.e. weekends) and resume the every third day move during the week.

Calculate the forage needs of your cows and determine an estimate of how much forage is available to target the length of your moves. Of course you need to adapt the size of the offering as you go, but having an idea how many acres should be needed each day will give you a good starting point and a way to calculate a feed budget. . Learning how to step off the length and width of your paddock will help you calculate the land area and forage allocation. After you finish grazing all the stockpiled pastures start unrolling hay or rotating hay rings in areas that can benefit from animal impact and increased nutrients.

Step 8. Start strip grazing with all pasture movements during the growing season. Once you are into spring, continue to use the strip grazing technique, flip flopping two reels so that cows are always on a fresh strip, and keep another 1 to 3 day strip set up ahead of them. Having the next strip set up will help you save time and offer added security in case your polywire is torn down by wildlife or your cattle As long as you are not in an individual pasture more than 10-14 days there is no need to set up a back fence to keep animals off the grazed areas.. If you see animals grazing in the area they already grazed (back-grazing) then you need to make your strips wider as they will always prefer to graze in the fresh strip if there is adequate forage there. This practice that we call modified strip grazing will become your key grazing tool and you will use it as long as you are a grazier. The flexibility in the size of strip you offer allows you to flex with your schedule, and you can also set up multiple strips ahead of time if you have to depend on a helper to periodically move your animals. It also allows you to impact animal performance by varying the stop grazing height. In general the higher the stop grazing height the higher animal performance but the lower grazing utilization efficiency. The reverse is true....at lower stop grazing height performance will be lower but utilization efficiency can be high. On general terms use a higher stop grazing height with growing cattle or thin cows and a shorter stop grazing height with brood cows in good body condition.

Step 9. Develop a comprehensive grazing plan acceptable to NRCS and other governmental agencies. As you start to optimize the use of your current infrastructure you will see opportunities to improve by adding additional perimeter fencing, watering points, and permanent cross fencing. To guide these efforts you need a comprehensive forage and grazing plan that includes existing and needed infrastructure, that determines an animal/forage balance, and that will project infrastructure development to guide your financial planning and application for cost-share funds. There are many opportunities for both infrastructure development contracts, and also management-based contracts for practices such as Prescribed Grazing. This comprehensive plan will need to be facilitated by a trained planner that can help make sure the plan is acceptable to all agencies involved, and also will be a key for you to keep on a long-term plan for your system.

Step 10. Implement additional upgrades to infrastructure. As highlighted in your comprehensive plan, start to improve your watering system, upgrade perimeter fencing and add cross-fencing. This infrastructure improvement usually needs to be prioritized and done in stages so that you make major improvements in system function with each project, and so you have time to continue your good management while completing the projects in a timely manner. Full implementation of the comprehensive plan will take many years or even decades, and the plan must be revisited and updated as you go through time.

Step 11. Continue to refine your skills, be persistent and tenacious. It takes 5 to 10 years to really see the benefits of Adaptive Grazing Management. The road to "Amazing Grazing" is challenging because you are dealing with a very dynamic system that is upset by many environmental factors. With time your system will become more resilient to drought and flood, as a result of improved soil health, but that happens gradually and you have to be patient. When the first drought hits, realize that the most critical principle in Adaptive Grazing Management is to avoid overgrazing at all costs. When pastures are all down to the stop grazing height, pull cattle into a sacrifice area and feed hay. Don't get discouraged and abandon what you have started! As soon as the rain comes you will be amazed at what you see compared to your neighbors that continued to graze all pastures through the drought.

Also, understand that it is not uncommon for temporary fence to be torn down when you are early in the game. Don't get frustrated and quit....observe, learn and adapt. Was it low power, lack of training, or a physical failure (corner failed?) that led to the malfunction? As your skills develop your system failures in the temporary fence will become rare events, but they can still happen even in the best of systems.

Step 12. Observe your system and continually improve your management skills. One thing we love about Adaptive Grazing Management is that we continue to be challenged to learn at a more rapid pace even after all these years. We realize that there is knowledge in every mistake and from every curve ball that nature throws our way. But, no problem or failure is without opportunity. The road to Amazing Grazing is a journey without an end. Once you have been practicing Adaptive Grazing Management for several years you will realize that you really don't get to Amazing Grazing, but you can get close to it if you are tenacious.

Continue to attend educational events and as you mature in your understanding of your management, and share that with other producers. Adaptive graziers with a positive collaborative attitude are a very positive role model in our industry. Share your grazing excitement with young people, either your immediate family, or through other youth programs. Teach Adaptive Grazing Management skills to the next generation when they are young so that it is not a new concept to them when they start making the management decisions.

We welcome you to join the journey to Amazing Grazing! There are many producers that have started using Adaptive Grazing Management and are on the journey. It works out to be an exciting and mindful life trying to figure out where we fit into this complex ecosystem. No matter where you are on the twelve step plan, review the steps and make sure you are on track. Whether you are at the steps where you are just trying to gain awareness, needing to improve your electric fence skills, learning how to take and interpret soil samples, or needing to develop a comprehensive grazing plan there will be educational opportunities coming up that will serve you well.

“The Power of One Wire”

Johnny Rogers and Matt Poore

The tools to improve productivity that farmers and ranchers have at their disposal are quite astonishing. Computers that allow us to analyze our operations, equipment used to plant/harvest crops to produce feed, and the genetic predictions used to select better livestock are just a few examples of tools that have changed livestock production. As managers we must determine which tools to incorporate into our farms and some will prove to be useful while others will be discarded.

In grassland agriculture it is difficult to ignore the value of temporary electric fence. Reels, poly-wire and tread-in posts coupled with a good energizer allow graziers to more actively manage their pastures. However, like with most technology getting started can be a challenge. Even the most advanced graziers started with a single strand (or 2-3 strands for small ruminants) subdividing a permanent pasture at the water source, and all additional improvements in your grazing management journey depend on **"the power of one wire"**.

So, what benefits does adaptive grazing management using smaller paddocks and more frequent movement have on the system? We know that when we only graze for a few days and then rest the grass for a long period the grass stand is healthier and will produce more total forage. Furthermore, this approach alters the grazing behavior of the livestock making them less selective and improve the amount of grass consumed rather than wasted. These and other benefits are well documented, and it is all because of the effective use of temporary electric fence. However, many producers do not fully realize the numerous advantages of using this technology.

So, what are some of the benefits you can expect if you adopt temporary fencing? First, using temporary electric fence gives you the opportunity to observe your livestock as they move to new grass. Cattle producers can use this time to check body condition, udder, feet and leg soundness and fly populations. What about that cow that is moving slowly? You can clearly observe how she walks and determine if she needs treatment for foot rot or needs to be added to the cull list due to age or some other unsoundness. Most all of these items fall into the NC Beef Quality Assurance program and will allow producers to effectively monitor their herd and provide for their welfare in a timely manner. Furthermore, moving cattle more frequently will improve their disposition and make them easier to handle. Just moving them one to two times weekly can make a big impact as they will learn you most often are there to give them better grass, and they become accustomed to being near you and walking by you without being afraid.

As cattle become familiar with this new management style they are also learning to respect poly-wire and it becomes a powerful psychological barrier. They are content to graze their forage allowance knowing you will return to give them new grass soon. The respect for temporary electric fence also allows it to be used to construct short-term lanes for cattle movement. On many occasions producers must move cattle across pastures without grazing them and a poly-wire lane will keep the cattle going the right direction.

Cattle that are well trained can also be pressured and moved by the use of poly-wire. If you are alone and need to get up a group or an individual animal, you can hook the end of the poly-wire to the gate, and use the poly-wire to direct cattle where you want them to go. You can literally "reel them in"! If you have help, two people holding a long section of poly-wire between them can easily move cattle where you want them to go. This can be helpful when moving cattle from large pastures into lanes or holding pens. In some cases with larger herds, three or more people can spread out and carry the same poly-wire to gently apply pressure to move cattle in the desired direction like a moving fence. It is truly amazing to watch the cattle avoid the poly-wire and flinch when it touches them even though it has no power on it!

In addition, this technique can be used to sort off cattle without gathering the whole herd. Imagine sorting off a group of late calving bred cows from a herd of cow-calf pairs. Moving the entire herd through the corral could risk calf injury. With cows that respect poly-wire and low stress handling you can move them to a different pasture for closer observation while the pairs remain relaxed. Furthermore, those later born calves could have significant scour risk if they stay with the older calves. Also, if you have a cow with pinkeye or foot rot, you can use the poly-wire herding technique to cut them out and get them to the pen without having to gather the whole herd. These are more examples of how “the power of one wire” can impact Beef Quality Assurance.

Temporary electric fence can also be used to exclude cattle from heavily impacted areas that need rest or protection. Many pastures have limited shade to aid in cattle comfort during the summer’s heat. Even in very large wooded areas cattle will find a preferred location and use it repeatedly. They may continue to use these sites during the winter. These areas will become degraded with excess nutrients, excessive mud, soil compaction/erosion and over time the trees may die. Some progressive graziers use temporary electric fence to subdivide their wooded tracts to prevent this occurrence by rotating/resting their shade. The fence is easy to construct and relocate as management opportunities change. A ruptured waterline or an overturned water tank can cause quiet a mess and cattle would love use this area to cool themselves. A section of poly-wire can offer protection while this area stabilizes.

Frequently, severe thunderstorms, tornados or tropical storm systems can knock down trees and damage perimeter fences, requiring a quick response from the farmer when they may have much larger problems to deal with. If your animals are trained to temporary electric fence, you can use those supplies to quickly reestablish the perimeter until permanent repairs can be made.

We certainly use a variety of tools in livestock production. Some are very complex while others are quiet simple. On the quest for continual improvement we must adopt technologies (tools) that move us forward. On our home farms it is difficult for us to imagine raising livestock without temporary electric fence. It is a tool that delivered a “breakthrough moment” and fundamentally changed our program. But it all started with “one wire” dividing a pasture in half and that’s why it is called ***“The Power of One Wire”.*** However, like all technology there is a learning curve and points of frustration. Don’t give up! Stay the course and learn how to use this valuable tool. It changed everything we do and made our farms more productive and pleasurable. Are you ready to give it a try and take the “One Wire Challenge”? Join us at an Amazing Grazing Workshop soon to learn more about how to get started reaping the benefits of ***"The Power of One Wire"!***

Note: The concepts discussed in this article will work for all types of grazing livestock but beef cattle were used in the examples to simplify the discussion.

MSU EXTENSION 2020 BEGINNING FARMER WEBINAR SERIES

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Join us for any or all of these interactive 60 minute webinars. $5 registration fee for each webinar, 1/2 price for 'full series'. Participate from your home or office computer (hi-speed internet required). Question & answer session with each presentation. All paid registrants receive a URL to recorded webinars following 'live' program.

"Getting started with…"

All times "eastern time"

New Farm Start-up

Wednesday, Jan 15, 2020, 7pm, Jonathan Parsons, Uprooted Farm

Jonathan and Allison Parsons operate a new, certified organic farm selling vegetables locally. Jonathan will share practical insights into the planning, development and first-year operation of their farm in 2019.

Wash-pack Facilites

Wednesday, Jan 22, 2020, 7pm, Landen Tetil, Produce Safety Technician, Marquette Conservation District

Landen will outline good post-harvest handling practices for vegetable and fruit crops on small farms. Sytstem components, pitfalls to avoid and expected costs will be covered, emphasizing food safety.

Michigan Cottage Food

Wednesday, Jan 29, 2020, 7pm, Beth Waitrovich, MSU Extension Educator

Content will include: information about the Michigan Cottage Food Law, food safety aspects of preparing cottage foods for sale, including preparing, packaging, labeling, storing and transporting cottage foods.

Growing Hemp in Michigan

Wednesday, Feb 5, 2020, 7pm, James DeDecker, MSU Upper Peninsula Research and Extension Center

James will provide an overview of the emerging hemp industry in Michigan and nation-wide. Regulation, production and marketing topics will be presented.

CSA's in Michigan

Wednesday, Feb 12, 2020, 7pm, Garret Ziegler, MSU Extension Educator

Results of the state-wide Consumer Supported Agriculture survey, conducted by MSU Extension in 2019, will be presented: What works well, what doesn't, and many highlights and tips for success included.

Each webinar will begin at 7:00pm eastern time, log-on early to test connection.

Download the ZOOM webinar application for your device at zoom.us/download

PC or Mac users: click "Zoom client for meetings", iOS users: under "Zoom mobile apps", click "Download in App Store"

For Android users: under "Zoom mobile apps", click "Download in Google Play"

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"Getting started with…"

Safe Use of Animal-based Soil Amendments

Wednesday, February 19, 2020, 7pm, Charles Gould, MSU Extension Educator

Charles will cover current food safety regulations and best management practices for utilizing animal-based soil amendments, including manures and compost.

Agroforestry: Silvo-pasture Options

Wednesday, February 26, 2020, 7pm, Julie Crick and Kable Thurlow, MSU Extension Educators

The concept of agroforestry includes 'silvo-pasture', a blending of quality timber, forage and livestock production. Julie and Kable will provide an overview of agroforestry, and more detail on silvo-pasture.

Selling to Food Hubs

Wednesday, March 4, 2020, 7pm, Mariel Borgman, MSU Extension Educator

Including sales to a local food hub can provide a good marketing option for small farms. Mariel will present background on food hubs and how they may fit into your business operation.

Farm Labor

Wednesday, March 11, 2020, 7pm, Katie Brandt, MSU Student Organic Farm and Stan Moore, MSU Extension Educator

Recruiting, training and retaining good labor for small, diversified farms is a challenge. Katie will share her experiences with farm labor beginning as a farmworker, then as a farm owner and educator. Stan works extensively with labor issues on Michigan farms and will address regulatory issues and employee development.

No-till Vegetable Production on Small Scale

Wednesday, March 18, 2020, 7pm, Jonathan Parsons, Uprooted Farm

Limiting soil cultivation can improve soil health. Learn from farmers why they choose no-till technique and how it can be implemented successfully on diversified vegetable rotations grown on 30" beds.

Pricing Products for Different Markets

Wednesday, March 25, 2020, 7pm, Will Jaquinde, MSUE Sustainable Ag Educator, MSU Tollgate Farm

Explore pricing your farm products for diverse markets, including farmers markets, restaurants, wholesale and CSA. Determining a price that is both profitable and competitive is a difficult task that is at the center of farm viability and this discussion will shed light on that process.

"Getting started with…"

Hosting On-farm Educational Events for Your Community

Wednesday, April 1, 2020, 7pm , Abbey Palmer, MSU Upper Peninsula Research and Extension Center

Hosting educational events at your farm is a fun way to involve the community in your business and increase knowledge of local food systems—but where do you start? This webinar will offer ideas for hosting on-farm learning opportunities for other farmers, schools, and the general public.

Measuring Soil Health

Wednesday, April 8, 2020, 7pm, Sieglinde Snapp, MSU Professor—Soils and Cropping Systems Ecology

Dr. Snapp will introduce how to measure soil health, from soil sampling strategies for soil health, to interepreting results to determine if soil health is improving.

MSU EXTENSION 2020 BEGINNING FARMER WEBINAR SERIES

REGISTRATION FORM

Select the webinars you wish to attend: ($5 each)

- ☐ FULL WEBINAR SERIES (Half price: 13 webinars—$32.50)
- ☐ Jan 15, New Farm Start-up
- ☐ Jan 22, Wash-pack Facilities
- ☐ Jan 29, Michigan Cottage Food
- ☐ Feb 5, Growing Hemp in Michigan
- ☐ Feb 12, CSA's in Michigan
- ☐ Feb 19, Safe Use of Animal-based Soil Amendments
- ☐ Feb 26, Agroforestry: Silvo-pasture Options
- ☐ Mar 4, Selling to Food Hubs
- ☐ Mar 11, Farm Labor
- ☐ Mar 18, No-till Vegetable Production on Small Scale
- ☐ Mar 25, Pricing Products for Different Markets
- ☐ Apr 1, Hosting On-farm Educational Events
- ☐ Apr 8, Measuring Soil Health

Register and pay ON-LINE at
https://events.anr.msu.edu/begfrmr2020/ OR
Complete and return this form with $5 payment per selected webinar in the form of check or money order, made payable to 'MSU Extension'

And mail to: 2020 Beginning Farmer Webinar
Alger Co MSU Extension
E9526 Prospect St., Suite 1
Munising, MI 49862

Name: _____

Company/Organization: _____

Address:

_____

Phone: _____

Email: _____

Amount enclosed: _____

PLEASE PRINT ALL INFORMATION CLEARLY

Questions? Contact Jim Isleib at isleibj@msu.edu or 906-387-2530

All webinars will begin at 7pm eastern time, log-on early to test connection. You will receive a URL to connect prior to each webinar.

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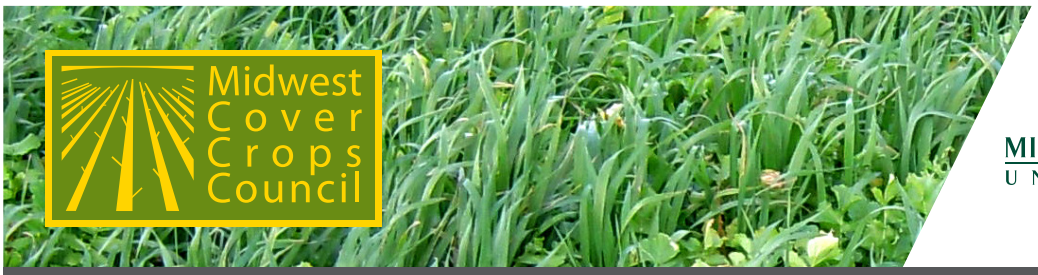

Midwest Cover Crops Council

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MICHIGAN COVER CROP RECIPE

MCCC-111
CC-05

Post Wheat, Going to Soybean or Corn: Use Oats and Radish Mix

This publication is intended to provide a starting point for farmers who are new to growing cover crops. With experience, farmers may fine-tune the use of cover crops for their systems.

Introduction

The following recipe provides an introductory approach to integrating a cover crop into a wheat rotation with soybean or corn. Planting oat and radish cover crops after wheat (*see Figure 1*) and ahead of a soybean or corn cash crop is an easy way to introduce cover crops into your rotation because these cover crops both winterkill and add important diversity to agricultural fields.

Figure 1. A growing oats and radish mix (Paul Gross)

Planning and Preparation

- *Planning*—Educate yourself. Start small. Be timely. Prioritize management based on your purpose and objectives.
- *Wheat variety and planting*—No modifications to wheat variety and planting are required for the successful use of cover crops after wheat harvest.
- *Residual wheat herbicides*—Oats and radish are tolerant of most wheat residual herbicides, and few restrictions apply unless grazing is being considered. Oats and radish may be sensitive to Osprey® and PowerFlex®, and while data is limited, possible injury may result. See *Weed Control Guide for Field Crops* (in Resources section) for more details.
- *Seed purchase*—Order cover crop seed early. Named varieties generally perform more predictably and can produce substantially more growth than variety not stated (VNS) seed but are more expensive. VNS seed may be a good option when purchased from a reputable dealer if it has been cleaned, tested for germination, and has a seed tag. For cover crop radishes (daikon type), be sure to purchase a single variety from a reputable seed dealer since mixed varieties may have unpredictable emergence or immediately flower and produce seed rather than producing the desired large amounts of biomass and roots.

Summer/Fall Work

- *Wheat harvest*—Harvest wheat at the normal time in fields where a mix of oats and radish will be planted. If residue levels are high, consider removing straw or using light tillage to improve seed-to-soil contact.
- *Timing of planting*—Plant oats and radish any time in August after wheat harvest. Planting a cool-season annual, such as radish, prior to August is not recommended as it may result in flowering and seed production instead of quick coverage and biomass accumulation, which is the desired goal for this cover crop. Use the Cover Crop Selector Tool (in Resources section) for precise seeding dates for your county because both proximity to the Great Lakes and latitude influence planting dates.
- *Planting method*—Drill to a depth of 0.50–0.75 inch or broadcast with light incorporation. Note that disturbance of soil, if any, should be light since excessive disturbance of wheat stubble may negate any benefit of the cover crop. See *Recommended Cover Crop Seeding Methods and Tools* (in Resources section) for more details.

- *Seeding rate in oats/radish mix*—Mix seeds prior to planting at the following rates. Drilled: oats, 30–60 lbs./acre; radish, 2–3 lbs./acre. Broadcast: oats, 35–65 lbs./acre; radish, 3–4 lbs./acre. See *Cover Crop Choices Following Winter Wheat* (in Resources section) for more information.
- *Tillage or no-tillage*—To allow for adequate cover crop growth, it is best if no full-width tillage takes place until oats and radish have been killed by freezing temperatures. If tillage is used, it is usually better to wait until spring in order to maintain surface cover to prevent erosion.
- *Fertility or liming*—If applying P, K, lime, or manure, complete the application and incorporation prior to seeding or apply to the growing oats and radish before the ground freezes. If injecting manure, low-disturbance injectors are available that will minimize damage to oats and radish. Surface application of liquid manure on top of the cover crop is not recommended. Surface broadcast of dry manure or litter should be done prior to seeding, but 4 tons or less can be applied to growing oats and radish with minimal damage provided it is evenly distributed. See the manure management publication (in Resources section) for more information on generally accepted practices for manure management and utilization.

Spring Work

- *Starter fertilizer*—No modifications to your typical fertilization program are required for planting soybean or corn after oats and radish use.
- *Termination*—Oats and radish should both terminate by winterkill. However, mild winters and good snow cover sometimes allow overwintering of radish. If this occurs, radish is easily terminated with typical pre-plant herbicide applications.
- *Soybean or corn planting*—It is usually best to no-till plant cash crops into the dead/dry or standing cover crop. Almost all modern planters and drills are fully capable of planting soybean or corn into an oat and radish cover crop. Check planting depth and seed furrow closure shortly after beginning to plant into the cover crop residue (*see Figure 2*) as usually some adjustments are needed.
- *Scouting*—After soybean or corn planting, scout for crop emergence and population. Additionally, scout for weeds since cover crop residue can often delay emergence of annual weeds, which may delay the application of post-emergence herbicides.

Figure 2. Residue of oats and radish mix in early March (Eileen Kladivko)

Resources

Cover Crop Selector Tool, http://mccc.msu.edu/selector-tool/—available from Midwest Cover Crops Council, www.mccc.msu.edu

Cover Crop Choices Following Winter Wheat (Michigan State University Extension), https://www.canr.msu.edu/news/cover_crop_choices_following_winter_wheat

Weed Control Guide for Field Crops (Michigan State University Extension Bulletin E0434), https://www.canr.msu.edu/weeds/extension/2019-weed-control-guide

Cover Crop Termination (Michigan State University Extension publication CC-01), https://www.canr.msu.edu/resources/cover-crop-termination-2019

Recommended Cover Crop Seeding Methods and Tools (Agronomy Technical Note)— available from USDA–Natural Resources Conservation Service, https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs144p2_030986.pdf

Generally Accepted Agricultural and Management Practices for Manure Management and Utilization—available from the Michigan Department of Agriculture and Rural Development, https://www.michigan.gov/documents/mdard/2019_MANURE_MANAGEMENT_AND_UTILIZATION_GAAMP_651944_7.pdf

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(Note: This publication was adapted with consent from MCCC under a joint project to produce customized introductory guidance about cover crops for all member states/provinces.)

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The Midwest Cover Crops Council (www.mccc.msu.edu) aims to facilitate widespread adoption of cover crops throughout the Midwest by providing educational/outreach resources and programs, conducting new research, and communicating about cover crops to the public.

Funding for this project was provided by McKnight Foundation.

MCKNIGHT FOUNDATION

August 2019

Join forage producers, graziers, custom forage harvesters, agribusinesses, MSU Extension Specialists and Educators for this annual conference and trade show.

Sponsored by the Michigan Forage Council, NC SARE and Michigan State University Extension.

NORTH CENTRAL SARE
Sustainable Agriculture Research & Education

To register go online to:
MSU Events Management
https://events.anr.msu.edu/2020GLFGC/
Pre-registration deadline is
Sunday, March 1, 2019
All late registrations can register at the door.

In 2020, ***for first time attending non-members***, the Michigan Forage Council will include, *with paid registration*, a 1-year membership into the Michigan Forage Council.

MFC benefits include magazines, newsletters, and educational discounts.

If you do not have internet call:

Lapeer MSU Extension
1800 Imlay City Rd.
Lapeer, MI 48446
Phone: 810-667-0341
Fax: 810-667-0355
Attention: Tina House
Email: houset@msu.edu

Uncertainty in Producing Forages for 2020

Great Lakes Forage & Grazing Conference

March 5, 2020

Thursday

AgroLiquid
3055 W. M-21
St. Johns, MI 48879
(1.5 miles W. of Old 127)
9:00 A.M. -- 4:00 P.M.

MICHIGAN STATE UNIVERSITY | Extension

Michigan Forage Council

Keynote Speaker:

Mike Rankin, Editor

Hay&Forage Grower

Originally from northeast Ohio, in 1988, he was Crops and Soils Extension Agent in Fond du Lac County, Wis., the second largest dairy county in the state, and remained in that position for nearly 27 years. During that time, he chaired the University of Wisconsin Extension Forage Team for 15 years, authored numerous fact sheets, and gave many presentations, including ones in Mexico and Canada. He also initiated and coordinated Wisconsin's Alfalfa Yield and Persistence Project. As an extension agent, he wrote for many local, state, and national print media publications and did over 4,000 radio programs. In 2015, he retired from the University of Wisconsin and took the position as managing editor for Hay & Forage Grower magazine at the W.D. Hoard & Sons Company in Fort Atkinson, Wis., He is responsible for all of the magazine's content and also for information that appears in eHay Weekly, an email newsletter. During the last five years, he has traveled across the U.S., visiting forage farmers and ranchers of all types. He currently lives in Fort Atkinson with his wife, Nancy, and their Jack Russell Terrier, Henry. They have three grown and married children.

Conference Agenda:

9:00 - 9:45 Registration & Trade Show Open

10:00 Keynote Speaker: Mike Rankin
"Old dirt roads and new forage friends"
There are a multitude of ways to produce, utilize, and market forage crops for livestock systems. We'll take a road trip and look at unique individuals who have carved out a successful forage utilization path.

11:00 Forage Research Update
Dr. Kim Cassida, MSU

11:30 How Forage Diversity Affects Grass-fed Beef
Logan Thompson, Lake City Research

Noon - Lunch

12:30 Michigan Forage Council Annual Meeting

1:00 Keynote Speaker: Mike Rankin
"The state of the alfalfa address"
What is its future? I'll look at some trends, attributes, and warts that currently exist with the "Queen of Forages" and what's ahead.

1:45 Recent weather trends and outlooks
Dr. Jeff Andresen, MSU Weather

2:15 Tradeshow Break

2:45 Dealing with Rough Field Conditions
Panel discussion to discuss mitigation of fields with soil compaction and drainage issues.

3:15 Forage Spokesperson Contest
A showcase of Michigan forage producers vying for the opportunity to represent Michigan at the 2021 AFGC Conference in Savannah, GA.

4:00 Adjourn

Registration:

Registration Information:

Michigan Forage Council members: $45.00

Non-members: $60.00

Students: $20.00

At the door registration **ADD $10.00.**

(Lunch not guaranteed with late registration)

Pre-registration deadline March 1, 2020

(covers all sessions, lunch, and breaks)

To register go to:
MSU ANR Events Management
https://events.anr.msu.edu/2020GLFGC/

Early registration deadline:
Friday, March 1, 2020
(Those without Internet call Lapeer MSU Extension)
After March 1 all registrations will be at the door.

Accommodations for persons with disabilities or special diet restrictions may be requested by contacting the event contact two weeks prior to the start of the event. Requests received after this date will be honored whenever possible.

For questions about registration call:
Lapeer County MSU Extension
Attention: Tina House
Phone: 810-667-0341

Mini Grants Offered to Forage Council Members to Conduct On-Farm Trials

The Michigan Forage Council (MFC) is again offering mini grants to farmers to conduct demonstrations and mini research trials in the areas of forage production, storage and utilization in Michigan which does include grazing. The MFC recognizes the valuable information that can be obtained from small scale on-farm trials and will consider funding up to $250 per request, with as many as ten requests granted per year.

Applicants must be members in good standing of the MFC and must submit their requests by February 18, 2020. Applications must include a description and justification for the trial, the methods to be used to evaluate the results, as well as an itemized budget for the expenses of the trial. MSU Extension Specialists and/or Extension Educators may be contacted to help develop the trials prior to submission as well as for evaluation of the trial for final reporting. Maximum application length is limited to two pages that includes all budget information.

Successful recipients will receive funds for the 2020 growing season and must submit a final brief report of trial results by December 15, 2020 to the MFC Secretary.

Proposals are to be sent to MFC Secretary, Jerry Lindquist, at 15680 190th Ave., LeRoy, MI. 49655 or to lindquis@msu.edu by February 18, 2020.

Michigan Forage Council Mini Grant Request

Name: _____

Address: _____

Phone: _____ Email: _____

Member of Michigan Forage Council? ____ yes ____ no

Title of Trial: _____

_____

Description of Trial: _____

_____

_____

_____

_____

MSU Specialist, Extension Educator or others that will assist with trial: _____

_____

_____

Attach an Itemized Budget including the total amount requested from the Michigan Forage Council ($250 max) and other funds or in-kind support that will be brought into this project from other sources.

MICHIGAN STATE UNIVERSITY | Extension

Mid Michigan Livestock Network

Connecting with Information, Experience, Ideas and Opportunities.

The Network typically gathers on the 3rd Thursday of every month. You are welcome to join us anytime. Programs are presented in an informal, relaxed, Q/A discussion format.

Summer Programs are held "In the Field" in the Mid Michigan Region

Connect with other livestock producers for this continuing series of informative programs, tours and round table discussions.

CONTACT:
Kable Thurlow
call: 989-426-7741 or
Email: thurlowk@msu.edu

February 20, 2020

7:30pm

Magnus Center
3200 South Clare Ave Clare MI 48617

Dr. Dan Buskirk
Assoc. Professor/Beef Extension Specialist MSU.

Topic is: Beef Cow Nutrition. seasonal and stage of life requirements; old vs young, dry vs. pregnant; plus, information on why cows need what they need –why is protein important, why is digestibility important and what does it mean?