



Blue Mounds Area Project

Conservation and Community. Together.

Winter 2020/2021

Volume 23 Number 3



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Cover Cropping as Prep for a Prairie Restoration

Denise Thornton

Conventional agriculture and establishing prairie seem like land use practices that are at odds with each other, but at SARE (Sustainable Agriculture Research & Education) and the Xerces Society for Invertebrate Conservation, cover crops are where these two efforts come together. Farmers and prairie restorers can both use cover crops to prevent erosion, manage weeds, and improve soil health. And bonus! An interim cover crop can help support our invaluable but vulnerable pollinators.

"We like meeting farmers where they are," says Karin Jokela, the Minnesota-based Xerces Farm Bill Pollinator Conservation Planner. "Cover cropping is a tool they are familiar with, and because cover cropping doesn't rely on herbicides or pesticides, it is an organic site prep."

"Cover cropping ... is an organic site prep."

Xerces has experimented with different cover crops and rotations to provide the most benefit during an agricultural growing season. Jokela tweaked her experience to focus on prepping for prairie restoration.

KNOW YOUR LAND

"Though there can be collateral damage, herbicides can be quick and effective. Using cover crops to fight weeds can take 12 to 36 months," Jokela says. "It's a longer-term game that requires working the soil many times, and each disturbance brings up new weed seeds."

Context is everything for choosing cover crop species. Each site requires a

cont. page 4, see COVER CROP



Photo by Denise Thornton

www.bluemounds.org

The view of Blue Mounds from the historic Hauge Log Church restored prairie.

President's Message

Amy Alstad, BMAP President

Shorter days. Longer nights. Perhaps an evening in front of the fire. This time of year is ripe with opportunities for reflection - and what a year it has been!

In retrospect, it seems that 2020 threw just about every best-laid plan right out the window. For my family, this meant the much-anticipated start of kindergarten for my son was entirely reimagined. He now logs into Zoom every morning, armed with nearly a dozen different usernames, logins and passwords, plus his very best 5-year-old attention span.

For BMAP, a similar sense of being off-script in an unfamiliar reality was underscored by the fact that BMAP had put finishing touches on a new strategic plan just as COVID forced the world to a halt.

Shortly after that, I encountered this quote by Sonya Renee Taylor that resonated so deeply and truly that it took my breath away.

"We will not go back to normal. Normal never was. Our pre-corona



Photo by Eric Udelhofen

Amy Alstad, President

existence was not normal other than we normalized greed, inequity, exhaustion, depletion, extraction, disconnection, confusion, rage, hoarding, hate, and lack. We should not long to return, my friends. We are being given the opportunity to stitch a new garment. One that fits all of humanity and nature."

While our new strategic plan did not anticipate the pandemic, it nevertheless serves as a useful roadmap. Since March, BMAP has been deeply immersed in the optimistic, solution-oriented work of stitching a new garment, as Taylor so eloquently puts it. You'll find glimpses of this stitching throughout the pages of this newsletter.

For instance, *WE HAVE REBUILT OUR WEBSITE TO BETTER SERVE THE BMAP COMMUNITY.* And via the enclosed survey, we are inviting you to share your thoughts on BMAP's strengths and priorities to guide future work. We've undertaken these new initiatives in the hopes of enriching our ongoing commitment to inform and facilitate the BMAP community's efforts to enhance the Driftless landscape.

Please join us in our efforts! Your support, whether it be volunteer time, an extra financial contribution, or sending a neighbor our way, is vital.

As we look ahead to 2021, we hope you'll join us in stitching a better garment. In Southwest Wisconsin, where more than nine out of every 10 acres is privately owned, BMAP is committed to a future where everybody has the support they need to protect and restore their properties. Doing so will have lasting benefits for our community and for conservation.

Ecologist's Report

Micah Kloppenburg, BMAP Ecologist



Micah Kloppenburg

In grassland restorations, we often think first of the flora and fauna that arise from our prairie plantings. The plants, birds, and invertebrates; and occasionally mammals, reptiles, and amphibians are open to every-day observation.

Yet, invisible to our biped view of the world are the subterranean soils and the ways our work re-

storing prairie habitat affects this incredible biome beneath our feet.

In prairie plantings the chief priority during site preparation is to minimize soil disturbance and thus prevent weedy germination, growth, and establishment. Depending on the current vegetation cover of the site, the most common method relies on multiple applications of an herbicide (usually glyphosate) through one or more growing seasons. We justify the human health and ecological cost of herbicide use with the resulting long-term benefits that originate from planted prairie (the ethics of consequentialism). The simplicity in herbicide application, and its reliable results in eliminating

weedy competition and securing space for expensive prairie seed has made this a tried-and-true practice for new prairie plantings.

Herbicide use, particularly glyphosate, is a consistent and effective tool in creating and maintaining diverse native habitats. However, the chronic and improper application of herbicides irreversibly poisons our world, resulting in sustained damage to non-target plant, animal, and fungal life. Importantly, glyphosate applications have been traced to reductions in diversity and shifts in composition of mycorrhizal soil fungi; mutualistic symbionts that

cont. page 3, see ECOLOGIST

■ BMAP ON LINE ■

Our *NEW* website: bluemounds.org

BMAP's monthly eBulletin for announcements, habitat restoration tips, and more:

bluemounds.org/ebulletin.html

BMAP's Facebook page for events and environmental news:

facebook.com/BMAPcommunity

BMAP's Facebook group for sharing photos, ideas, and activities:

facebook.com/groups/BMAPcommunity

ECOLOGIST *from page 2*

enhance nutrient access for many different plants and also contribute to a wealth of other soil processes like deep soil carbon sequestration. The question then arises: Is our use of herbicides for site preparation also deterring the development of mycorrhizal fungi that may best support a thriving prairie and soil community?

Some studies and anecdotal experiences report that highly diverse prairie establishes well following herbicide site-preparation treatments, even with the markedly diminished presence of native mycorrhizal fungi. Conversely, research also demonstrates that the growth, survival, and cover of native prairie plants, as well as the total species richness of planted prairie are improved with a diverse and native mycorrhizae soil community. Diversity of life in our soils yields a diversity of life on land and in the air. Thus, taking a page from our organic ag cousins, cover crop regimes may present an alternative and successful means of site preparation that preserves soil life by minimizing, or even eliminating herbicide use, among other benefits.

A few key questions then follow:

Will cover crop practices speed the rejuvenation of a soil's native mycorrhizal fungi, fungi that are assumed to be the partners to our planted prairie species? Do the presumed ecological benefits of cover crop site preparation outweigh the cost and associated complexity in resources, equipment, and time that this approach may require? As we look to cover cropping as a way to expand our site prep toolbox, we create opportunities to further our adaptive understanding of prairie establishment and maintenance. Cover crop regimes may provide an effective alternative to our reliance on herbicide for prairie plantings and may support a rapid renewal of the soil biome.

Regardless of how we establish a planted prairie, our efforts to create a beautiful above-ground community of plants and animals also 're-wild' the world beneath our feet, and the benefits are clear:

soil conservation, reduced nutrient loss, long-term carbon sequestration, and enhanced diversity across all phyla. The work of BMAP members in preserving and protecting native habitat sustains and enhances healthy biological processes from top to bottom, and this is critical to the health of our entire community, including human animals, non-human animals, plants and, yes, the community beneath our feet.

One additional note: From research I've reviewed, commercial (read: exotic) mycorrhizae inoculants provide no benefit to prairie plant growth or prairie diversity. However, positive effects of mycorrhizal fungi colonization in prairies and of prairie plants were correlated to inoculants cultured from local prairie soils.

In other words, it seems best to source both seed mixes and mycorrhizae inoculants locally.

Understanding the Land Connection

Cindy Becker, Southern Driftless Grasslands Coordinator

The Southwest Wisconsin Savanna ecoregion encompasses roughly 1.5 million acres, with a diversity of rural land owners ranging from Chicago folks enjoying recreation and restoration opportunities to 5th generation dairy farmers whose roots run deep into the fabric of their farmland. Local communities range from unincorporated eye-blinks of 29 people to full-fledged towns with 12,000 residents. 70% of the land cover is in some form of agriculture. 96% of the land is privately owned.

Land owners juggle many issues in their daily, monthly, and long-term decision making: financial security, family needs, planning for the present vs for retirement, integrating employment - and their way of life. Conservation is yet another issue to juggle, or better yet, to integrate into every aspect.

To learn why some land owners are already doing this, and why others aren't, the Southern Driftless Grasslands alliance conducted a survey.

Conservation practices come in many forms.

Conservation practices come in many forms: There are cost-share programs that allow land to rest under cover of grass for a period of time, compensating landowners for taking land out of production. There are improvements to farm practices that reduce sedimentation and prevent waste sludge from contaminating our rivers and water supply. There are permanent land easements that protect land from future development.

cont. page 6, see LAND CONNECTION

tailored approach, so before prescribing for a particular site, Jokela considers:

- What is the vision for the parcel?
- What is the timeline for establishment?
- What are the soils?
- How long has it been conventionally cropped?
- Will herbicide carryover affect seedling establishment and require a series of cover crops before prairie seeding?

If the land has been fallow, inventory what weeds are present, both in the site and in the surrounding land that might become a problem. If it has been fallow four or more years, you could be dealing with tougher challenges such as leafy spurge, smooth brome, Canada thistle, or red clover.

SHORT & LONG TERM SOLUTIONS

If the site is not colonized by perennial weeds, you can consider starting a cover crop in the spring and then plant native prairie that same late fall or winter. Jokela suggests cover cropping with grasses in this case.

“Certainly no legumes,” she says. “Farmers use legumes to add fertility, but from a prairie establishment or restoration perspective, if the land has been in a crop cycle you’ll probably need to pull nutrients out. A lot of our crop lands have excessive nutrients, and that favors weeds. Grasses remove nutrients while also smothering weeds throughout the growing season.”

Jokela suggests planting a strong stand of oats as soon as the soil is workable and letting that go to seed. Then, if possible, no-till in a warm-season, high biomass grass like hybrid sorghum-sudangrass to create a solid stand through the summer.

“At the end of the season, you

will have a lot of biomass,” Jokela warns. “Cut and rake it or burn it off to get rid of the residue. Then you can do your dormant seeding.” Depending on the weeds, you may need to repeat cover cropping for several years.

One vital purpose of cover cropping is smothering weeds.

If you start this process in the fall, Jokela suggests a heavy seeding of oilseed radish. It will establish readily, add biomass, smother weeds, and be winter killed. It breaks down easily, so in spring before seeding your oats, you may not need tilling. “Ideally, cover crops are planted without tilling,” she notes, “But that’s not possible if you don’t have the equipment, also some cover crop seeds are big and need burying.”

SMOTHER CROPPING

One vital purpose of cover cropping is smothering weeds - aka, smother cropping. For the Midwest, Jokela recommends buck-

wheat, which is quick-growing, and valuable to many vertebrates and pollinators. “Buckwheat also brings in a plethora of invertebrates that are so fun to watch,” she says. The downside is that buckwheat has a short life cycle and may need to be replanted.

Jokela does not worry about cover crops leaving seeds behind. Though a small threat to prairie seedlings in the first years, mowing will take care of any leftover cover crop seedings.

AN EXPERIMENTAL APPROACH FOR TOUGHER INVASIVES

Subduing tough, perennial weeds with cover crops can take two to three years, and working the soil this many times means soil disturbance and bringing up new weed seeds as well.

For such resilient, perennial invasives, Jokela has a long-term plan she has not yet tested. “If you are battling persistent weeds, consider alfalfa, which isn’t typically considered a cover crop. Because it’s perennial, you would need to harvest it off regularly.”

GUIDE TO THE MEMBERSHIP SURVEY

The Blue Mounds Area Project (BMAP) Board of Directors and Staff Ecologist want to hear from you!

Please take some time to fill out the enclosed BMAP membership survey! *ALL RESPONDENTS WILL BE ENTERED IN A RAFFLE FOR A \$100 GIFT CARD FROM AGRECOL NATIVE NURSERY.* Please provide your name on the return address to ensure you are entered into the drawing!

Surveys and envelopes will be separated upon receipt to ensure that your responses remain confidential. Nothing you tell us will be attributed to you personally unless you elect to provide your name on the survey.

You can send your completed survey back in the envelope provided, or you can fill the survey out on line at www.bluemounds.org.

It’s been 17 years since BMAP members were last comprehensively surveyed about how well our program elements are working. Our goal is to ensure a future that is relevant and useful to the BMAP community, and with the help of your responses, we will fine-tune BMAP’s outreach, activities, and communications.

We look forward to your response, and thanks in advance for taking the time to contribute your opinions!

A high seeding rate of alfalfa that is hayed frequently for several growing seasons could be effective, she speculates, because the alfalfa is competing with weeds underground, and it responds better than weeds to mowing and haying. So it would compete above ground as well, smothering out any other weeds at the same time. This plan requires that you have both the equipment and the time.

SEED/SOIL CONTACT

Cover crops can be hayed or burned to maximize prairie seed/soil contact. "Burning can offer windows to the soil," says Jokela. "But it's not just about that initial contact when seeding. It's also about the next growing seasons, and making sure light gets down to those prairie seedlings with annual mowing. Mow earlier in the season so you don't create a smothering layer of plant matter on top of your prairie seedlings."

"Burning can offer windows to the soil."

An alternative to cover cropping, simply repeated tilling to release a weed seed bank, is another organic option for prairie site preparation. "If you have a level site and annual weeds that aren't going to get angrier when you till them, then a year of frequent, shallow tillage can work," says Jokela. "You will have a short-term loss of surface soil health, but in the end you'll get a diverse prairie."

"At Xerces we explore every organic approach because we prefer less pesticide and herbicide use. However, if you have a long-term goal of a diverse plant community but you also have a very aggressive weed species, there are times when specific kinds of herbicides are worth it. It is context dependent, and we want to offer multiple options so you can choose the best one for your site," says Jokela.

She added, "The Blue Mounds area is part of my region. If you want more prescribed recommendations, I can help with that." You can contact Jokela at karin.jokela@xerces.org.

"We want to offer multiple options so you can choose the best one for your site."

Explore the resources at both the SARE and Xerces websites! Jokela recommends two references that

can be downloaded as PDFs:

Managing Cover Crops Profitably, Third Edition (This is oriented toward farmers, but Jokela likes how it spells out the benefits of different cover crops, what can be gained with each species, seeding rates, and approximate costs.)

- at www.sare.org.

Cover Cropping for Pollinators and Beneficial Insects (A database of crop species, their life cycles, and seeding rates.)

- at www.xerces.org.

BMAP EVENTS

- 2021 Conservation Conversations Winter Lecture Series -

The BMAP winter lecture series will move online this year. The talks will be held as webinars with live Q&A and then made available on our website. Login information will be provided at www.bluemounds.org.

Converting Cool Season Fields and Pastures to Prairie

Rich Henderson

7:00 pm Thursday, January 21, 2021

Strategies for transitioning landscapes from non-native cool-season grasses to prairie.

Over the past 40-plus years, Rich has developed an extensive knowledge of both assessment and management of prairie plants and invertebrates. He has held active land management roles with the Wisconsin Chapter of The Nature Conservancy and The Prairie Enthusiasts.

Landscapes Filled with Life

Susan Carpenter

7:00 pm Thursday, February 11, 2021

Ecological advantages of choosing native plants instead of non-native ornamentals for your home garden.

Susan has worked at the UW Arboretum for the past 17 years where she serves as the native plant gardener, focusing on sustainable gardening practices, pollinator conservation, and ecological relationships.

Pollinators

Karin Jokela

7:00 pm Thursday, February 25, 2021

Identification and basic biology of bees and butterflies native to Southwest Wisconsin, and recommendations for creating and managing high-quality pollinator habitat.

Karin is the Farm Bill Pollinator Conservation Planner for the Xerces Society. She provides technical support for pollinator conservation to both private landowners and conservation professionals.

LAND CONNECTION *from page 3*

There are stream easements that pay for stream bank work on private property in exchange for public access to the restored section of stream. There is funding to assist landowners with improving habitat in exchange for a commitment to maintaining the improved habitat condition for 10 years. All of these are win-win solutions to land management challenges facing us in the Driftless Area.

We know these solutions work. How do we engage landowners and farmers who are unaware or hesitant to commit to one?

The Southern Driftless Grasslands alliance (formerly, the Southwest Wisconsin Grasslands Network) is a public-private partnership promoting grasslands – pasture, remnant prairie and savanna, idle grasslands, and CRP plantings. Partners range from local watershed groups to federal agencies. We work together from a shared

belief that grass is good. Good for the bird species that depend on landscape-scale grasslands found in our area. Good for those pollinators that thrive in native prairie and savanna habitat. Good for agriculture that supports the rural economy. And good for streams kept clean because perennial cover acts as a sponge for runoff.

Our Landowner Matters survey focused on farming practices, participation in conservation programs, and what drives those decisions. We also gathered information about our audience to put these answers into perspective.

... providing habitat for non-game wildlife was at the top of their land management practices.

And what did we find out? Whether our interviewee was a rancher, a dairy farmer, or a residential landowner, providing habitat for non-game wildlife was at the top of their land management practices. This includes grassland birds, monarchs and other butterflies, and both native and honey bees. Deer and turkey? Not so much. Additionally, improving soil health, reducing soil erosion, and protecting water were all reasons cited for enrolling in conservation programs such as CRP and CREP.

Organizations like BMAP, which has been an active Southern Driftless Grasslands partner since its origin, provide general education, technical assistance, and can direct interested landowners to potential sources of financial assistance for improving habitat for grassland birds and pollinators, and restoring native oak savanna and prairies.

Land management practices that keep soil in place and improve water quality benefit all of us. So, thank your farmer neighbor for the prairie strips, streamside ease-

ments, and CRP fields. And lean across the fence and talk about bobolinks and their R2D2-like call.

... time to save the world, one landowner at a time.

These survey results make me proud to live and work in Southwest Wisconsin. Together we can all have an impact. It's time to save the world, one landowner at a time.

To learn more, visit www.driftless-grasslands.org and www.driftless-landconservancy.org/southwest-wisconsin-grasslands. Information specific to this study can also be found at www.driftlessgrasslands.org/focus.

The survey project was funded in part by the Cornell Lab of Ornithology and the local Food Faith and Farming Network.

Winter Tree/Shrub ID Field Workshop

In spite of the ongoing pandemic, BMAP was able to safely reprise its Winter Tree and Shrub ID Field Workshop on a balmy November 7th afternoon.

Two small groups of participants were capably led by Micah Kloppenburg and Cindy Becker, with assistance from Jennifer Thieme and Doug Hansmann.

For some handy references and more detailed ID info, check out the *NEW AND IMPROVED BMAP WEBSITE* for the Fall 2019 article on last year's field workshop.



Photo by Denise Thornton

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Our Mission:

The Blue Mounds Area Project is a community-based organization that seeks to inspire, inform, and empower private landowners in the southwestern Wisconsin region to enjoy, protect, and restore native biodiversity and ecosystem health.

Our Objectives:

- 1) Promote understanding, appreciation and conservation of native woodlands, prairies, wetlands and savannas and their special species in an economically viable manner, through community outreach programs and private contacts.
- 2) Act as a clearing house for information from people and organizations involved in preserving native biodiversity including information about plant, animal and habitat identification, management, restoration, seed sources, native plant nurseries and invasive, nonnative species.
- 3) Encourage cooperative, volunteer restoration and management activities.
- 4) Identify public and private land use changes that may affect ecosystem health and promote community-based stewardship of the unique natural heritage of the Blue Mounds and the southwestern region of Wisconsin.

The Blue Mounds Area Project Newsletter is published three times yearly. We welcome your comments, submissions, and advertisements.

Deadlines for submissions:

Spring Newsletter — February 15, 2021

Fall Newsletter — August 15, 2021

Winter Newsletter — November 1, 2021

Newsletter co-editors: Denise Thornton & Doug Hansmann
contact us at: ddhansmann@gmail.com

BMAP Board of Directors

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Micah Kloppenburg, Ecologist
ecologist@bluemounds.org

If you are interested in assisting or volunteering with the Blue Mounds Area Project, please contact us at:

info@bluemounds.org

608-561-2627

(608-561-BMAP)

Blue Mounds Area Project Membership Form

Name(s): _____

Address: _____

City: _____ State: _____ Zip: _____

E-mail address: _____

Membership Status:

☐ Renewal ☐ New Member ☐ Gift Membership for

Membership Level:

☐ Student \$15 ☐ Basic \$30 ☐ Contributor \$50 ☐ Supporter \$100 ☐ Sponsor \$500 ☐ Patron \$1000

☐ Other contribution to further the BMAP mission _____

TOTAL _____

Make check payable and return to: Blue Mounds Area Project, PO Box 332, Mount Horeb, WI 53572

☐ Yes, I would like to receive information about site visits.

Thank you! Your contribution is tax deductible to the extent allowed by law.



Blue Mounds Area Project

P.O.Box 332

Mt. Horeb, WI 53572

Blue Mounds Area Project Winter 2020/2021 Newsletter

>> Check out our new, improved website!

>> Membership Survey Enclosed

*To make a prairie it takes a clover and one bee,
One clover, and a bee.
And revery.
The revery alone will do,
If bees are few.*

— Emily Dickinson



www.bluemounds.org

IS YOUR MEMBERSHIP UP TO DATE?

Please check the address label to view your membership expiration date.
If you are receiving a complimentary copy, please consider joining.