Minnesota Wildlifers,

Welcome to the January 2021 edition of the Prairie/Farmland Newsletter. Enjoy!

Remember - we'd love for you to share any relevant content with us for inclusion in the next edition. Please send those items to either Jake (jcnelson8487@gmail.com) or Nicole (ndavros@gmail.com). And if you have any issues you'd like to investigate further with the committee, let Jake know.

Grassland/Farmland Wildlife, Habitat, Farming, Soil Health, & Federal Conservation Programs

- AgWeek - Walz sets 1 million acre goal for water quality program - The Minnesota Agricultural Water Quality Certification Program (MAWQCP), which began in 2014, has certified 977 farms over 685,000 acres in the state. The governor announced the goal to be reached by the end of 2022 in a video message. Walz said through the program, landowners have the opportunity to "ensure our lakes, rivers and drinking water are protected for future generations."
- AgriPulse - Peterson calls for mandating 50-million-acre CRP to address climate change - Peterson described his bill as "a marker we can put out there and people can rally behind." The measure would give USDA five years to get CRP enrollment to 50 million acres, he said. Expanding CRP "is probably the biggest impact we can have in agriculture in terms of doing something for climate and sequestration," he told reporters. As of September, 21.9 million acres were enrolled in CRP.
- DLOnline - In a land of many lakes, a rare and unique resource now protected - Calcareous fens are a unique type of wetland, according to the University of Minnesota-Duluth Natural Resources Research Institute. One of the best now will be protected thanks to landowners who realized its value to our natural heritage
- Pheasants Forever - Second Round Of Applications Wraps Up For Soil Health And Habitat Program In Prairie Pothole Region - Funded by pet care leader Purina, Pheasants Forever will work with producers and growers to analyze data using Truterra™ Insights Engine from 30,000 acres of private lands in the Prairie Pothole Region to help enhance soil health, protect water quality and implement conservation planning for 7,200 acres.
    - Click here to watch the video
- Responses to land cover and grassland management vary across life-history stages for a grassland specialist - This study investigated the effects of land use and grassland management practices on habitat selection and survival rates of greater prairie chickens in central WI. They found that prairie chicken responses to different land cover classes and management practices were highly variable among life-history stages, suggesting that a variety of management practices (e.g., brush and tree removal, grazing, hay cultivation, and prescribed fire) may be needed to accommodate prairie chickens throughout their annual cycle. However, trade-offs among life-history stages and the timing of management should be considered carefully.
- North American farmers profit as consumers pressure food business to go green (Reuters) - A study conducted by agriculture technology company Indigo Ag estimated that if U.S. corn, soy and wheat farmers employed no-till and cover crops on 15% of fields, they would generate an additional $600 million by reducing costs, bolstering soil productivity or selling carbon credits.

- The Prairie Ecologist - A beginner's guide to conservation grazing, Part 2 - "While there are numerous potential objectives you might have for the management of your prairie, I'm focusing on three examples here: Diversifying Habitat Structure, Reducing Dominant Grasses, and Suppressing Aggressive or Invasive Plants."
- Habitat-scale heterogeneity maintains fungal endophyte diversity in two native prairie legumes - In this study, the researchers sampled foliar fungal endophytes from two native prairie legumes, purple and white prairie clovers in 17 remnant prairie sites across Minnesota in order to evaluate the relative contributions of abiotic factors, host species, and dispersal limitation to the diversity and structure of these communities. Their results illustrate the capacity of many of these endophyte taxa to disperse over large distances and across heterogeneous biotic and abiotic environments and suggest that the interplay of biotic and abiotic factors maintains high diversity observed in endophyte communities.
- 1% of farms operate 70% of world's farmland (The Guardian) - Researchers warn land inequality is rising with farmland increasingly dominated by a few major companies.

Pollinators

- West Central Tribune - Kandiyohi County to offer the monarch butterfly a safe haven - Kandiyohi County will be applying to join the Nationwide Candidate Conservation Agreement for Monarch Butterfly on Energy and Transportation Lang conservation program. The program requires the county to set aside 5 percent of its road right-of-ways for Monarch Butterfly habitat preservation. Doing so will allow the county the ability to continue maintaining and improving the remaining 95 percent of road ways without having to worry about additional conservation requirements.
- More flowers and pollinator diversity could help protect bees from parasites (Phys.Org) - Though parasites contribute to bee declines, scientists are unsure how they spread between bee species. This new study, published in Nature Ecology and Evolution, suggests having more flowers and a more diverse bee community could help dilute the load of parasites. This may be particularly important in areas with high densities of social bees, such as honeybees and bumblebees.
- In fire-prone West, plants need their pollinators - and vice versa (Science Daily) - Montana State University led the field inventories of plants and pollinators at 152 plots in Montana representing a wildfire gradient including plots with no recent wildfire (unburned), mixed-severity wildfire and high-severity wildfire. At the sites they compared, the scientists found that the number of individual bees, flies and butterflies -- and the flowering plants they frequent -- were higher in parts of the landscape that had burned, as opposed to those that hadn't burned. However, increases were greater in areas that had experienced mixed-severity wildfire, which leaves some vegetation intact in a mosaic of habitat types, as opposed to high-severity wildfire, which largely removes all vegetation and can damage the soil and seed bank.
- Pollinator Conservation in Agricultural Landscapes (YouTube, ~90 minutes) - The Xerces Society recently held this webinar that focuses on concepts around protecting and enhancing populations of pollinators, especially bees, in agricultural landscapes.

- How you can help count and conserve native bees (New York Times) - Scientists have started an effort to collect better data on native bee populations, as well as efforts to conserve them, as part of the U.S. National Native Bee Monitoring Research Coordination Network. The bee monitoring network welcomes citizen scientists to participate, and partners them with experts who will identify photos and data the contributors collect. For more info, check out the US National Native Bee Monitoring Network.

Pesticides and Invasive Species

- DLOnline - Invasive Reed Threatens To Take Root In Lakes Area - The nonnative *Phragmites australis* was added to the Becker County restrictive noxious weed list in 2013, and the state's control list in 2020. It threatens shoreline habitats and can be problematic to remove once it gets a foothold in the water, according to the Becker County agriculture inspector.
- Researchers find insecticides widespread in Minnesota lakes and rivers - New research from the University of Minnesota found low levels of neonicotinoids (neonics) were ubiquitous in lakes and streams across Minnesota, with higher levels in certain environments such as urban areas and wastewater treatment effluents.
- On a related note, the Commissioner of the Minnesota Department of Agriculture (MDA) recently determined that the neonicotinoid insecticides clothianidin and imidacloprid are "surface water pesticides of concern" in accordance with the state Pesticide Management Plan (PMP). The full announcement of the notice can be viewed online - look for Volume 45, Number 23 in the State Register Archives on this webpage.
- MDA also recently announced a June 30 cutoff date for dicamba herbicide for the 2021 growing season, following federal registration and usage guidelines. During the 2018 through 2020 seasons, the MDA's annual cutoff date was 10 days earlier, based on research and pesticide misuse complaints. However, the U.S. Environmental Protection Agency has now limited states' abilities to impose further application restrictions.

Webinars, Podcasts, Videos, Social Media, & Other Events

- Minnesota NRCS - Sharp-tailed Grouse Habitat Improvement Using Prescribed Burning in Minnesota (Youtube 13:36) - Tom Gervais from the Natural Resources Conservation Service (NRCS) and Jake Granfors from Pheasants Forever show how they work together with landowners to improve habitat for sharp-tailed grouse using prescribed burning in NE Minnesota. They discuss how landowners can apply through the NRCS for Environmental Quality Incentives Program (EQIP) and Conservation Stewardship Program (CSP) funding and receive technical assistance from wildlife experts and prescribed burning specialist in Minnesota.
- NRCS - Thrive edition of the Minnesota Message - The newsletter includes highlights stories that include Minnesota's Conservation Delivery Partnership (NRCS, SWCD, and BWSR) not to mention beautiful photos of Minnesota.
- Minnesota Organic Conference goes virtual - Spread out across Thursday afternoons throughout January, this conference will give farmers and others interested in organic agriculture the opportunity to learn more about organic farming, soil health, and other topics.
- Soil health practices build soil and the bottom line - In times like these, it's what cattle and crop producers don't spend that makes the biggest difference to their bottom line. In this article, two

farmers in South Dakota explain how they've cut costs, raised profits, and benefited the soil and wildlife on their land. Interestingly, one of the farmers, at age 29, has never operated tillage equipment. Links to YouTube videos showcasing their soil health journeys are provided within the article but highlighted below, too.
    - Economics: Jorgensen Land and Cattle Case Study Part 1, Part 2, Part 3, Part 4, Part 5 (~17 minutes total)
    - South Dakota Soil Story "Learning Soil Health" Dennis Hoyle (~6 minutes) - Really enjoyable, easy-to-watch video about Dennis' journey with regenerative ag practices and his goals for learning from and teaching others.
- Dormant Seeding Prairie Field Day (YouTube, 90 minutes) - Join experts from the Tallgrass Prairie Center and ISU STRIPS for practical advice and suggestions for a successful dormant seeding.
- Monarch Joint Venture 2021 Webinar Series - see list of webinars being offered in 2021. Registration is open.

Communicating Science

The COVID-19 pandemic has thrust science, science communication, and the importance of integrating science into political decision-making into our lives in a very real and very different way this year.

- This Nature article, Five rules for Evidence Communication, discusses how to communicate uncertainty, how audiences decide what evidence to trust, how narratives affect people's decision-making, and how to "pre-bunk" misinformation or disinformation campaigns.
- While you're at it, you might check out this older Nature article, Policy: Twenty Tips for Interpreting Scientific Claims, which provides tips on how non-scientists can better question policy advisers and grasp the limitations of evidence.

Other Topics (including those outside of our prairie region)

- Pheasants Forever - After 34 Years Of Partnership And Habitat Successes, Rick Young Announces Retirement - Pheasants Forever and Quail Forever has announced the retirement of Rick Young, longtime Vice President of Field Operations, at the end of the calendar year. A mainstay of the organization since 1987, Young's 34-year career highlights include building the foundation of Pheasants Forever chapters east of the Mississippi River, creation of the organization's Farm Bill Biologist Partnership, and the birth of Pheasants Forever and Quail Forever's national seed program.
- AgWeek - John Deere acquires North Dakota-based Harvest Profit - Harvest Profit, a Fargo based farm profitability software, was created to help farmers and producers with the numbers side of things, an aspect of farming that some farmers and producers tend to put on the backburner due to the many other tasks that must be completed to run a successful farm.
- Aberdeen News - Co-op sparks interest in fire to improve North Dakota grasslands for cattle, wildlife - The North Dakota Prescribed Fire Cooperative - a coalition led by Audubon Dakota that provides landowners with prescribed burns to improve grasslands for cattle and wildlife and demonstrate the value of fire as a grassland management tool. NDPFC conducts fires for members and provides landowners, land managers, natural resource professionals and rural fire departments with prescribed fire education workshops.

- The problem with making nature pay for itself - This article by R. David Simpson in Anthropocene magazine discusses some of the history behind trying to make nature an income producer and why it has mostly failed to date. He argues that the problem is that things in short supply bring higher prices whereas things that aren't, don't. In short, it's not ecosystem services that are underappreciated but rather basic economics. One way forward is to unite conservation and development goals. "The challenge we face now is not so much to find ways for the rural poor to live in harmony with nature. It is, rather, to manage the transition from a world of small farms to one of big cities in a way that realizes the conservation potential of that trend." He adds that with this transition well under way, it will be easier if we try to swim with, rather than against, demographic and/or technological currents.