Dubois County Soil & Water Conservation District

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812-482-1171 x3 • www.duboisswcd.org

Spring, 2022

The Conservation Conversation

Johnson Grass *by Emily Finch*

Johnson Grass (Sorghum halepense) was once a common forage plant, but is now considered a noxious weed due to its aggressive spread via seeds and underground rhizomes. Landowners are responsible for controlling noxious weeds on their property. Johnson Grass grows up to eight feet tall, has long leaves with a distinctive white midrib, and produces large pyramid-shaped flower panicles that are loosely formed and often purplish in color. Young plants can resemble young corn plants, and it can also hybridize with commercial sorghum cultivars.

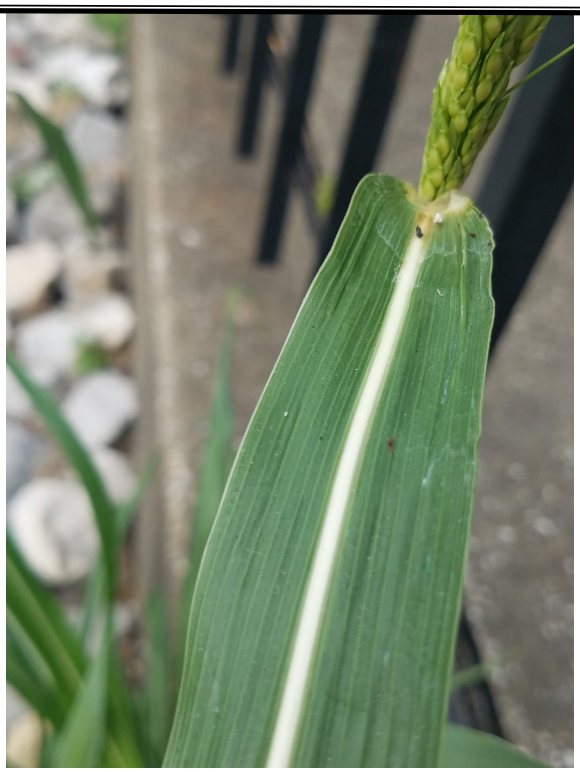

Photo By Emily Finch

While healthy Johnson Grass plants can provide good forage, when stressed by frost, drought, or other factors, Johnson Grass can produce toxic amounts of hydrocyanic acid, as well as toxic nitrates. Both mowing and intense grazing can suppress Johnson Grass and decrease seed production, but are unlikely to fully control established plants. Herbicide is generally the most effective control option, but as with other weeds timing is important. Johnson Grass is best controlled when plants are young up to the early flowering stage which typically occurs in late June. Herbicide applied once plants have produced seed is not effective in controlling seeds, although it may reduce vegetative growth.

Photo By CharlesTBryson-USDAAgriculturalResearchService

For more information on Johnson Grass identification and control, including handouts on Johnson Grass, visit the Dubois SWCD website. You can also contact Ken Eck (Purdue Extension Dubois County) at 812-482-1782, or Emily Finch (SWCD Invasive Species Specialist) at 812-482-1171 x3, Emiiy.Finch@in.nacdnet.net for assistance.

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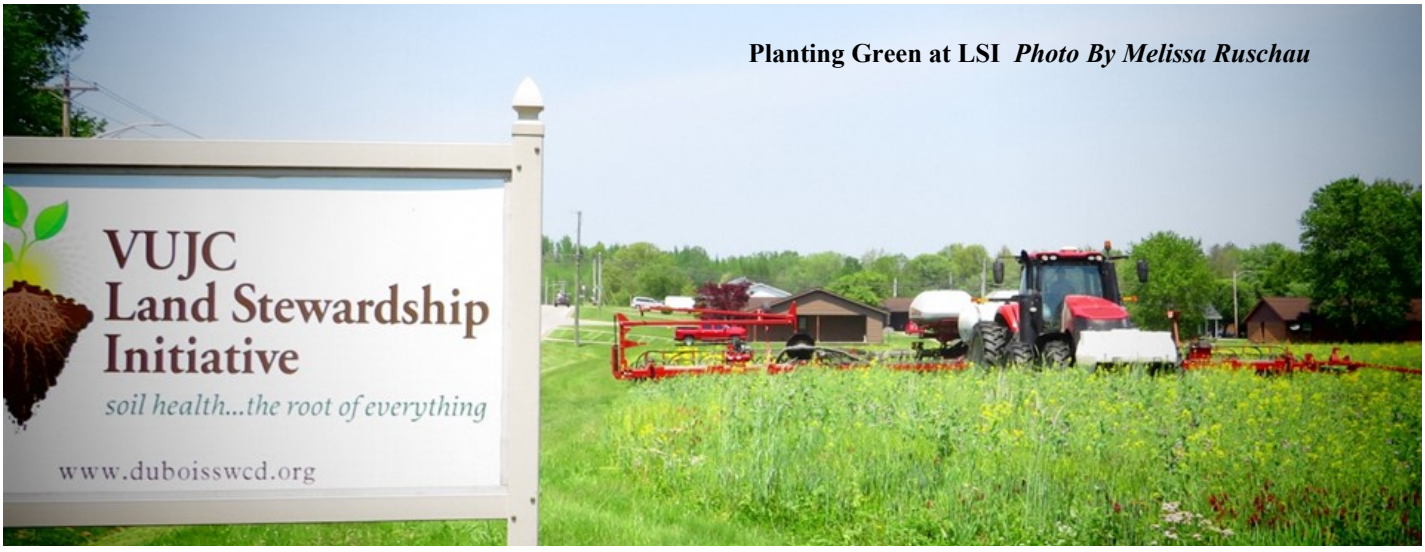
If you drove by the Land Stewardship Initiative (LSI) on Vincennes University Campus in the month of May you may not have understood what you were seeing in the farm fields. You may have been confused or concerned by what you could see from Meridian Road. It appears as though one field is planted in corn and the other two fields that were skipped. You may have wondered if the planter broke down in the fields, or if the weather changed on planting day causing a delay, or perhaps the plan is to sow those fields with a late soybean crop. All of these are good guesses, but none of them are accurate. Several fields were left fallow at planting. This was done on purpose and here is the reason why.

Crimson Clover & Canola (Rape) *Photo By Melissa Ruschau*

This "different direction" in farm management can be summarized with two explanations: the recent rise of input costs and the desire to build better soil organic matter. Let's go back in time to a meeting earlier this year where the ag advisory committee discussed planting and management plans for the 2022 crop season. Due to global demand and lack of supply, fertilizer prices had doubled since 2021 and herbicide had almost quadrupled in price for 2022. "When a $4 decision becomes a $14 decision, farmers take note". The team felt that it was time to look at the farm fields and what acres produce high yielding crops due to better soil and what acres struggle to even meet the county average. The plan was to focus on planting corn in high yielding acres where success had been seen in past years crops and amend the lower yielding acres.

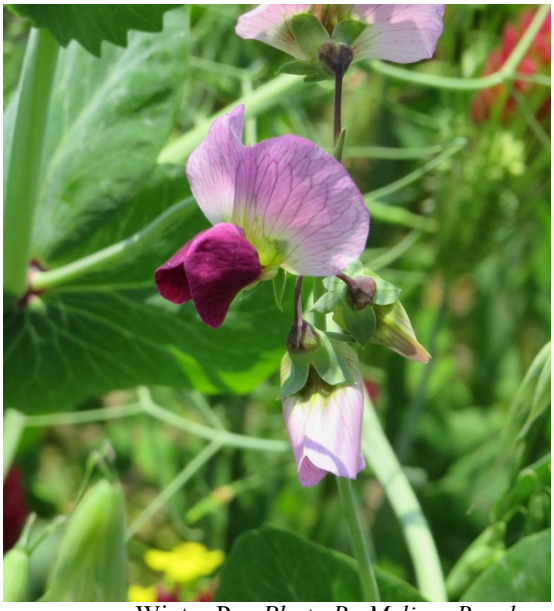
With a "fix it or fail it" mentality several fields were removed temporarily from the cash crop rotation for the 2022 season. These acres are the average to low yielding fields. The fall cover crops were allowed to flourish and go to seed naturally. The plan was to go back to the field in the summer and plant a mixture of plants that would increase the organic matter and the water holding capacity of the soil, especially since we knew that this was possible on our farm and in Dubois County soils.



Planting Green at LSI ***Photo By Melissa Ruschau***

LSI Continued: Wild & Weedy! Why did we wait to plant and what's going on?

Back in 2019 an experiment was done in field 6, the 3.5 acre field south of College Avenue and west of the CTIM Building. In an attempt to build organic matter the field was taken out of the usual crop rotation, wheat was planted as a fall cover crop and a 13 way mix of summer cover crops was planted on it. Soil tests in 2020 did not reveal much, however the 2021 fall soil tests revealed a bump of 0.3 of a percent in organic matter. Soil under a no till cover crop system gains 0.1 a year under normal circumstances.



Winter Pea *Photo By Melissa Ruschau*

THIS WAS HUGE!!! And something the committee was excited about and would like to see replicated on a larger scale in more fields this year.

If you drove by the fields in late May and early June you could see the seed heads of barley and oats, the red flowers of Crimson Clover in the understory, the tall yellow flowers of Canola, and the vines and purple and white flowers of Winter Peas. In mid-June a mixture of Sourgum Sudan grass, Sunhemp, Peredovid Sunflowers, Buckwheat and Pearl Millet was drilled into 2 fields. A different field added Cowpeas and Korean Lespedesa into the mixture and replaced the tall Sudan grass with oats.

Fall Cover Crops *Photo By Melissa Ruschau*

This summer and early fall we will be on the look out for Sasquatch territory. These plants should grow very tall and produce quite a bit of bio-mass. Their varied roots will mine and hold nutrients from deep within the soil. As the roots break down they will create pores for increased water infiltration and increased organic matter. We will report back in the fall of 2024 (giving the roots time to break down) to see how the organic matter changed.

If you would like to learn more about the LSI contact Melissa Ruschau at 812-482-1171 ext 3 melissa.ruschau@in.nacdnet.net

Oats & Barley *Photo By Melissa Ruschau*

Upcoming Events

Parklands Prairie Walk

Wednesday July 27th 7pm-8pm

Learn more about the native prairie plants growing at the Jasper Parklands, and the history of how a former golf course was turned into a rich ecological landscape. Attendees will meet at the Parklands Pavilion and then take a guided nature walk through portions of the park's low stature prairie.

For more info contact: Emily Finch
Emily.Finch@in.nacdnet.net, 812-482-1171 x3

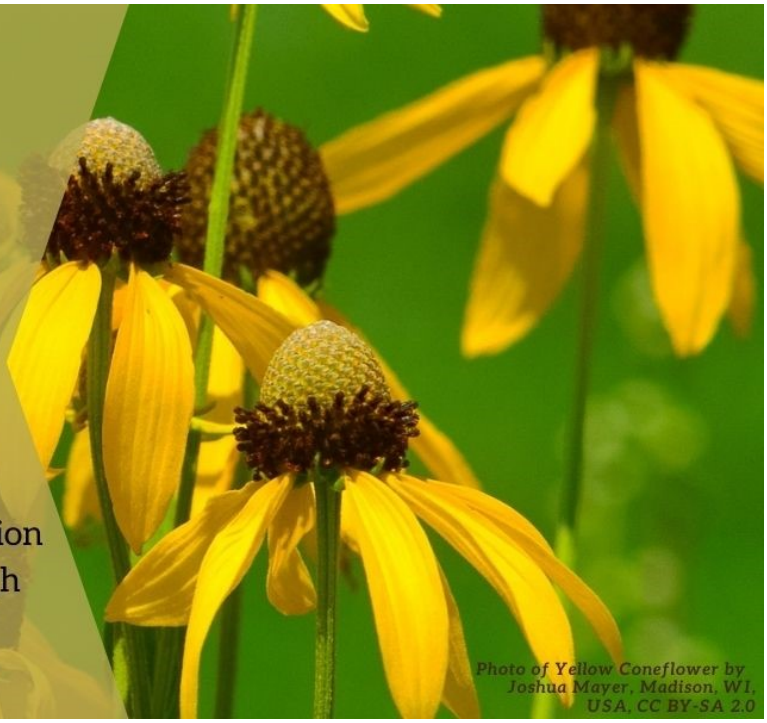


Photo of Yellow Coneflower by Joshua Mayer, Madison, WI, USA, CC BY-SA 2.0

09.24.22

PATOKA LAKE CLEANUP DAY

VOLUNTEERS NEEDED!

Dress to pick up trash in the weeds along the highways and shorelines.
Gloves, trash bags and bug spray will be available.

Registration

- 8am EST
- US Army Corps of Engineers Office
  4512 N Cuzco Rd S
  Next to the dam/spillway
- Coordinators will point you to a general area to clean up.

Lunch & Door Prizes

- 11am EST
- US Army Corps of Engineers Office
- Fish Fry
- Each volunteer will receive a goody bag.
- Please bring a chair.

For more information contact the Patoka Lake Nature Center at 812-685-2447.

16 August 2022
9am-2pm CT
Check-In at 8am

SOIL HEALTH EXPO

TOYOTA EVENTS CENTER
GIBSON COUNTY FAIRGROUNDS
709 N EMBREE ST
PRINCETON, IN

An eight-county SWCD planning committee has brought in high profile soil health advocates to give producers a new look at soil health. This event is FREE for attendees. After a catered lunch there will be a trade show and panel discussion featuring our speakers.

- Russell Hedrick, a first generations farmer from Hickory, North Carolina.
- Cameron mills, a no till farmer from Walton, Indiana who operates 3,800 acres
- Megan Hollis from purdue extension

Catered Lunch Included, Parp credit available
RSVP eventbrite.com/e/soil-health-expo-2022-tickets

PRESENTED BY: DAVIESS, DUBOIS, GIBSON, KNOX, PIKE, POSEY, VANDENBURGH& WARRICK SOIL & WATER CONSERVATION DISTRICTS IN PARTNERSHIP WITH PURDUE EXTENSION AND CCSI

Unlock the Secrets of the Soil, Basics & Benefits

SOIL HEALTH

Soil is made up of air, water, decayed plant residue, organic matter from living and dead organisms, and minerals, such as sand, silt and clay. Increasing soil organic matter typically improves soil health since organic matter affects several critical soil functions. Healthy soils are also porous, which allows air and water to move freely through them. This balance ensures a suitable habitat for the myriad of soil organisms that support growing plants.

It's not difficult to improve soil health. Here's how: till the soil as little as possible; grow as many different species of plants as possible through rotations and a diverse mixture of cover crops; keep living plants in the soil as long as possible with crops and cover crops; and keep the soil surface covered with residue year round.

SOIL HEALTH BENEFITS

Farmers who manage their land in ways that improve and sustain soil health benefit from optimized inputs, sustainable outputs and increased resiliency. Healthy soils benefit all producers – managers of large, row crop operations to people with small, organic vegetable gardens. Healthy soils provide financial benefits for farmers, ranchers and gardeners, and environmental benefits that affect everyone.

Healthy Soil Leads To:

- **Increased Production** – Healthy soils typically have more organic matter and soil organisms which improve soil structure, aeration, water retention, drainage and nutrient availability. Organic matter holds more nutrients in the soil until the plants need them
- **Increased Profits** – Healthy soils may require fewer passes over fields because they are only minimally tilled and they aren't over-reliant upon excessive nutrient inputs to grow crops. Healthy soils can increase farmers' profit margins by reducing labor and expenses for fuel, and optimizing inputs.
- **Natural Resource Protection** – Healthy soils hold more available water. The soil's water-holding capacity reduces runoff that can cause flooding, and increases the availability of water to plants during droughts. Good infiltration and less need for fertilizers and pesticides keep nutrients and sediment from loading into lakes, rivers, and streams. Groundwater is also protected because there is less leaching from healthy soils. Additionally, fewer trips across fields with farm machinery mean fewer emissions and better air quality.

SOIL HEALTH MANAGEMENT SYSTEM

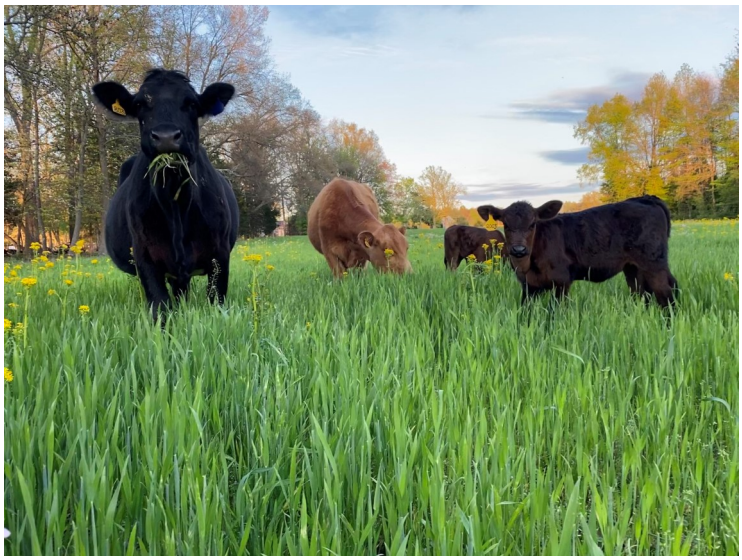
Implementing Soil Health Management Systems can lead to increased organic matter, more soil organisms, reduced soil compaction and improved nutrient storage and cycling. As an added bonus, fully functioning, healthy soils absorb and retain more water, making them less susceptible to runoff and erosion. This means more water will be available for crops when they need it. Soil Health Management Systems allow farmers to improve profitability because they spend less on fuel and energy while benefiting from the higher crop yields resulting from improved soil conditions. Contact your local NRCS office to learn more about Soil Health Management Systems and the technical and financial assistance available to help "Unlock the Secrets in the

Healthy, fully functioning soil is balanced to provide an environment that sustains and nourishes plants, soil microbes and beneficial insects.

Unlock the Secrets of the Soil,, Basics & Benefits was created by the USDA NRCS. Click here to download their flyer basics and benefits.pdf

USDA United States Department of Agriculture

Victor Shelton Grazing Bites



I remember hearing my mother say more than once, 'If you can't say something nice, don't say anything at all.' Lately, that has been easier said than done. I try to find a little good in everything, that can be challenging. Mark Twain once stated, "It's better to be an optimist who is sometimes wrong than a pessimist who is always right."

This year, so far, has been marked with some major challenges. At times, I felt like I was procrastinating on work that needed to be done, but in fact, I wasn't procrastinating. I was instead twiddling my thumbs trying to patiently wait for opportunities to do what needed to be done. The weather, for the most part, hasn't been on our side so far except for very brief intervals that only teased us.

It would be nice some year to have an average spring. The trouble is, I'm not sure what that is anymore. I would gladly share some of our excess rain with the droughty areas. On the other side of it, I'm afraid to say too much and it just completely turn off.

I've seen a little hay cut and put up in the extremely short windows that have been available. Excess soil moisture is still a problem even if the sun is shining for a couple days. Avoid mowing hay when the soil in the top two inches is wet. That excess moisture slows drying and can make putting up dry hay more difficult. Mow higher to allow for more air flow. Ideally, at least 2-3 inches high.

Dry hay, in order to store and keep well and maintain quality, must be baled with no more than 18% moisture. For small square bales, 16% should be the limit. Higher amounts of moisture content usually mean soured or moldy hay.

Baleage might be the most ideal way to go under present conditions if you have or can get the equipment needed to do so. Baleage it is simply hay that is too moist to store safely as dry hay, so it is wrapped or otherwise sealed in plastic at about 50% moisture. Baleage can be fermented as individual bales or in a tube. You must make sure the wrap is tight enough and sufficient to be airtight in order to exclude oxygen and mold formation. Baleage is usually baled and wrapped with at least six layers of thin plastic. Baleage can create high quality forage if done properly.

I think every producer stresses over making hay, at least part of the time. I'd absolutely rather leave the forage standing than have poor quality hay. If it is put up wet, quality is quickly reduced and that can be a very costly decision this year. Not only will the livestock not appreciate or do well on the poor-quality hay, but you also removed and relocated some very expensive nutrients that will eventually have to be replaced.

I'm surprised that I talked this much about hay already. Hay usually is cheap insurance, but not this year. Some may still think it is not costing them that much, but one must consider fuel and value of nutrients removed even if you want to consider your time being free. I think everyone, no matter how efficient their type of grazing system, should have some hay on hand. It is your insurance plan and one of your contingency plans. Feeding less hay is a good thing though, at least it should be – meaning you are hopefully grazing more. Smaller operations, especially ones with less than 15 cows or equivalents, would have difficult time justifying owning hay equipment. That depreciating investment would probably be best spent on improving the grazing efficiency of the farm or on fertility.

Victor Shelton Grazing Bites

If you are in what I will refer to as a "building" stage of soil fertility — in other words it still needs some — then you would be better off bringing in fertility, in the form of hay than to remove it. If fields are in that building stage, it is counterproductive to cut hay off it — no question. You are just removing and moving needed nutrients, especially phosphorus. Certainly, spend a few dollars on some soil fertility tests so you have a better understanding of nutrient levels. Focus forage harvesting, dry hay or baleage, on fields with the most nutrient availability and only cut what you know you will need and protect that investment by harvesting it correctly and storing it properly.

Most years there is usually hay around to be bought. Plan ahead if you are going to be buying and if possible, visit the hayfield from which your hay will come ahead of time, so you have a better idea of the quality. If you are purchasing hay that is already baled or sight unseen, request a hay analysis to make sure it is the quality needed to meet your livestock's nutritional needs and to make sure it really will beat "snowballs."

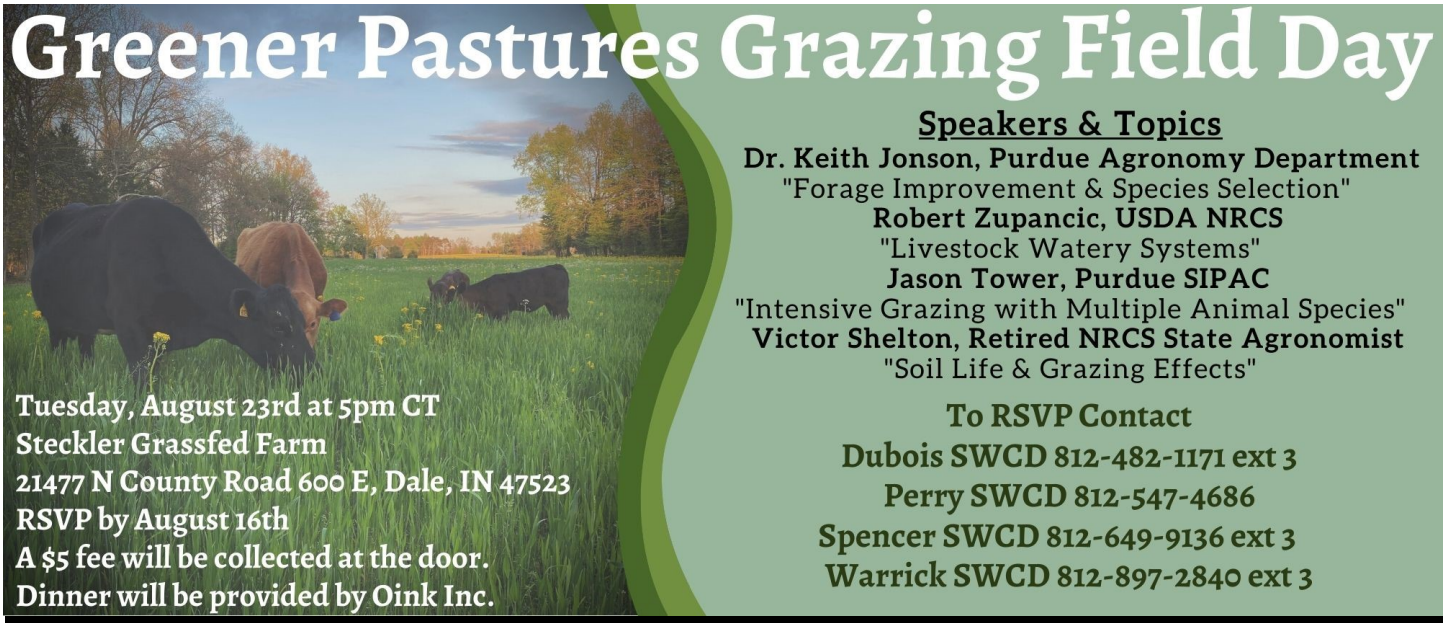
I've been asked the question of what to do with runaway forage. Keep grazing. Allocate in smaller allotments and keep moving. This will return more nutrients back to the same area and keep forage under more control. Then allow sufficient time for the forage to recover before grazing it again. Normally that will be a while unless you are over stocked. It is the first of June. You should not be short on forages.
Clipping can be beneficial in helping to maintain quality but will be a more costly endeavor this time around. If you do clip, only remove seed heads and stay above the leaves. If you can't do that, then go back to plan A, graze.

I have to ask the question though, what is the reason for your mowing? If it is to improve or maintain quality — have at it — just don't mow any shorter than necessary. If it is purely for aesthetics, you might be better off leaving it alone. Taller forages produce more live roots providing some drought insurance, can help to shade out some weeds, can provide for slightly cooler soils and maintain moisture which can promote more growth from cool season forages instead of less desirable plants and then the added benefit of some wildlife habitat.

Remember, it's not about maximizing a grazing event, but maximizing a grazing season! Don't get carried away with the hay, just manage advantageous grazing avenues — yep, keep on grazing!

Reminders & Opportunities More pasture information and past issues of Grazing Bites are available at https://www.nrcs.usda.gov/wps/portal/nrcs/in/technical/landuse/pasture/

Please send comments or questions to grazingbites@gmail.com.



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Rental Equipment Available
Dubois County SWCD

No-Till Drill—*$10 Per Acre, $100 Minimum*
Great Plains No-Till drill has a seeding width of 7 feet, and can be used to plant soybeans, wheat, legumes, grasses, etc. It can also be used to plant native or warm season grasses.

No-Till Seeder—*$10 Per Acre, $100 Minimum*
Great Plains 9' No-Till Seeder

Stapler/Staples—*$10/Rental fee, $50/box of 1,000 staples.*
This stapler is for erosion control blankets The plunger simply pushes the staples into the ground. Buy staples and the stapler rental fee is waived.

Spinning Jenny—*No Rental Fees.*
Use to install high-tensile wire fences. Load with wire and set on the ground. Walk away pulling the end of the wire and it will spin, preventing your wire from tangling. Slow down gradually before stopping to prevent over-spinning and tangling. Can also be used to rewind wire in the field.

Tile Flags—*$7.00/bundle of 100.*
Flags on 36" wire staff can be used to mark underground power lines or surveying jobs.