



# 2025 South Dakota Grasslands Planner

Thank you for your passion for healthy grasslands.

“And, the really interesting thing about ranchers on working ranches is they’re constantly looking to improve things and looking to learn. And, it’s like this lifetime of learning thing that you see from our producers...I mean, it’s for our economy, it’s wildlife habitat, it’s water quality, it’s bio-diversity, it’s pollinators, it’s all these things that these folks who are managing it, these working ranches, are providing behind the scenes with very little fanfare. That is something that has struck me as being important and profound.”

- Mitch Faulkner, NRCS Range Specialist

To some, pulling a plant – a weed, let’s say – is a mundane task. Give it a short but effective tug, and hopefully that plant will come out root still attached. Gone! Have you ever examined the roots as you pull those “weeds”? What type of structure do the roots boast? Perhaps a long taproot that’s mangled from compaction or a fibrous system with tiny soil aggregates still attached? How was that plant holding the soil together? What impact did that plant’s roots play on the ecosystem below ground?

Now, think of the perennial grasses, flowers, and shrubs of the grasslands. What happens when you attempt to pull a stem of big bluestem or western wheatgrass? If you’re lucky—you might get a smidgen of root, but typically you only get the top end of the plant. Why? Because perennial grasses of the prairie have DEEP roots, and a lot of them. And they are ALIVE!

These living roots are the lifeline of the prairie. In healthy, well-managed grasslands, roots hold the soil in place, increase infiltration, reduce runoff, increase water holding capacity, etc. It’s not only the above ground portion of the plant that is important for grasslands managers, but the below ground portion as well!

The above ground production of the grasslands does not compare to the amazing below ground production of roots that keeps the prairie alive. One would think that the height of the above ground portion of the plant would equal that of the below ground portion. For grasses, the roots can outweigh the leaves by up to four times! No wonder it’s so difficult to pull these plants from the ground!

These roots interact with each other for resources, but also with the microbial ecosystem below ground. The plant produces sugars through photosynthesis above, while below the roots “leak” sugars to share with different microbes – fungi, bacteria. These microbes “trade” the sugar for needed plant resources – water molecules and nutrients. As the plants used those “traded”

resources, the plants continue to grow above and below. As the roots continue to grow and trade, they eventually die. So specific microbes reprocess those dead roots into useable nutrients that can be used by the plants in the future. It’s quite a cooperative system they have going!

Some species of grasses have specific microbes by which they rely on. So, a diverse plant community above ground leads to a diverse plant community below ground as well! This ecosystem has evolved over thousands of years resulting in complex relationships among plants, animals, microbes, and soils.

Because specific plant species have specific microbial associations, keeping the grasslands greenside up is very important. Once a prairie has been tilled, those associations are lost. A soil teeming with microbial life is killed – we can’t ever get that back. We might be able to restore some semblance of the plant community, but if it took thousands of years for the prairie to evolve to where it is today, it’s going to take a long time for a tilled landscape to recover as well.

The grassland loving (root-loving) producers – farmers, ranchers, grassland managers – showcased in this planner recognize the importance of keeping the grasslands in grass, and how important it is to manage them properly not only for the above ground production, but the below ground production as well. These folks have learned through trial and error, mentors, and Mother Nature how to best manage their grasslands and keep their roots running deep. We hope you enjoy their stories and insights.

*Tony Sunseri*  
State Conservationist  
USDA Natural Resources  
Conservation Service

*Board of Directors  
and Members*  
South Dakota  
Grassland Coalition



The Nature Conservancy  
Partnering values. Preserving life.



Audubon DAKOTA



SOUTH DAKOTA  
STATE UNIVERSITY

THE CATTLE BUSINESS  
WEEKLY



United States  
Department of  
Agriculture  
Natural Resources Conservation Service

TRI-STATE  
LIVESTOCK NEWS





They were tilling up so much land. The winds started, and the drought came, and it created its own dust bowl. It's important to remember that this was created as a result of agricultural practices that just weren't sustainable. If you think about dust storms – large enough from the Dakotas that they reached all the way to Washington, DC – it gives you a sense of the amount of soil loss that happens if the land isn't taken care of.

- Barry H. Dunn, President, South Dakota State University

# JANUARY

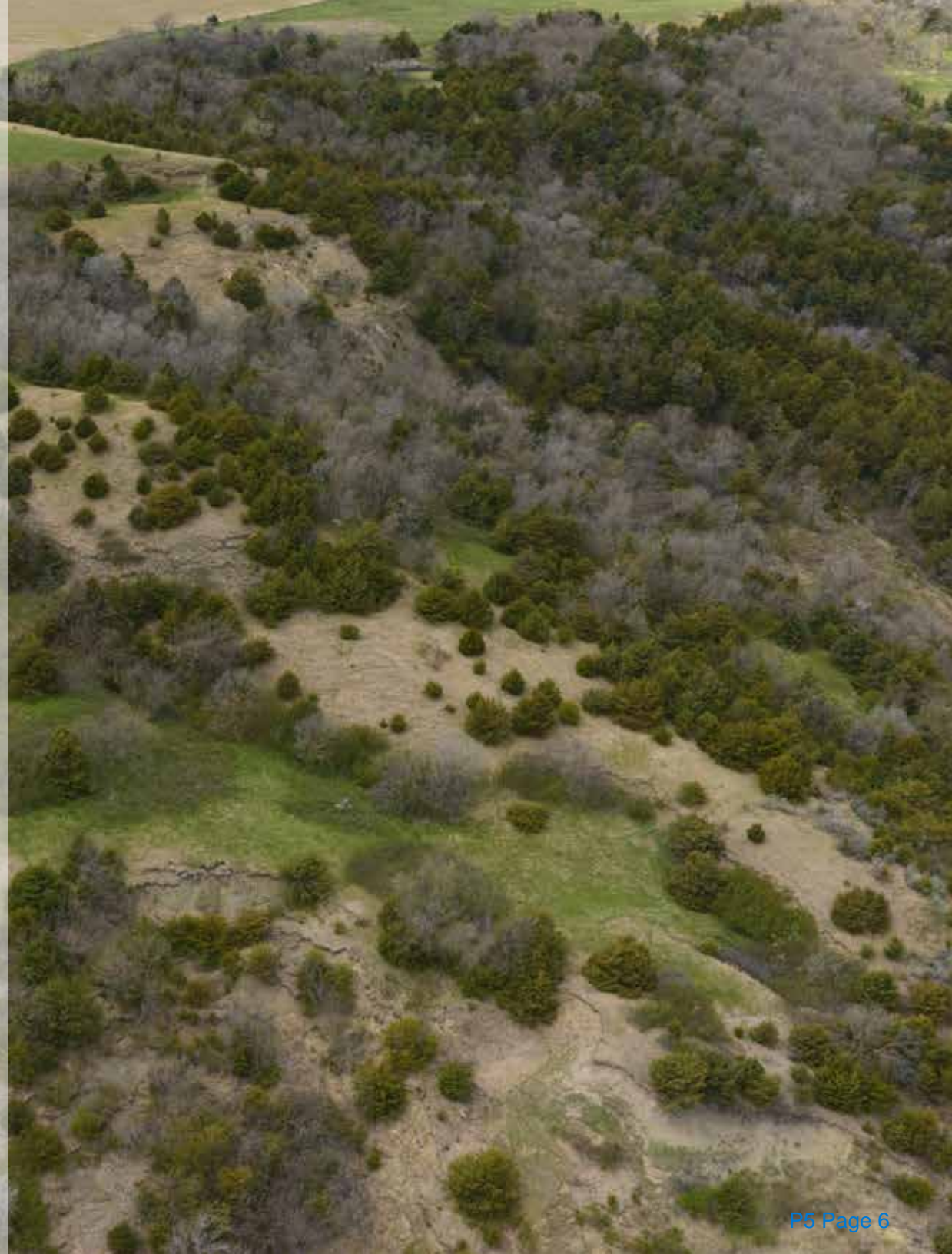
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<b>December 2024</b> S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	<b>February</b> S M T W T F S 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	 	<b>1</b> New Year's Day	<b>2</b>	<b>3</b>	<b>4</b>
<b>5</b>	 <b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>
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<b>26</b>	<b>27</b>	<b>28</b>	 <b>29</b>	<b>30</b>	<b>31</b>	
New Year means new conservation plan! Get started with NRCS.						
If your operation needs improvements on your grazing lands, consider applying for EQIP or CSP. Sign-up is continuous.						
Conservation easements can keep working lands in production while protecting the grassland resource. Please contact NRCS or U.S. Fish and Wildlife Service for options and payment rates.						





In the past ten years, we've lost over 2 million acres of grassland in the United States. We're really at a pivotal point here; where, if we don't stop, slow the green glacier, slow urban encroachment, and slow down the tilling of the fields, we're in big trouble.

I love the grasslands, it's like an ocean, except its grass. To the point where if you're on a hillside on a windy day, it's like you can see the waves.

- Liz Larson,  
South Dakota State Senator



# FEBRUARY

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<b>January</b> S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	<b>March</b> S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	 				<b>1</b>
<b>2</b>  Groundhog Day World Wetlands Day	<b>3</b>	<b>4</b> 	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
<b>9</b>	<b>10</b>	<b>11</b> 	<b>12</b>  Lincoln's Birthday	<b>13</b>	<b>14</b>  Valentine's Day	<b>15</b>  Great Horned Owl begins nesting
<b>16</b>	<b>17</b>  Presidents' Day Washington's Birthday	<b>18</b>	<b>19</b>	<b>20</b> 	<b>21</b>	<b>22</b>
<b>23</b>	<b>24</b>	<b>25</b>	<b>26</b>	<b>27</b> 	<b>28</b>	



I think there are enough people that realize that we're doing things wrong and that we need to fix them. And if enough of those people actually start doing proper practices, I think we can turn it around. We just have to catch it before it's too late. I do think there are a lot of young people out there that do care and will help try to make a difference.

- Johnathon Neuharth





# MARCH

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<b>February</b> S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	<b>April</b> S M T W T F S 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	 				<b>1</b>  Male Sage Grouse begin attending leks to perform courtship and strutting displays.
<b>2</b>	<b>3</b>	<b>4</b>  Mardi Gras	<b>5</b>	<b>6</b> ☾	<b>7</b>	<b>8</b>
Based on rainfall amounts received last fall and precipitation forecast for this spring, determine if grass production will be close to normal or reduced this spring. Develop and/or revise action items within your drought contingency plan as needed. Find the NRCS SD Drought Tool at <a href="http://www.sd.nrcs.usda.gov">www.sd.nrcs.usda.gov</a>						
<b>9</b>  Daylight Savings Begins	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b> ☽	<b>15</b>
	<b>17</b>  St. Patrick's Day	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b> ☾  Chorus frogs emerge and begin calling from small wetlands
<b>23</b>	<b>24</b>	<b>25</b>	<b>26</b>	<b>27</b>	<b>28</b>	<b>29</b> ●
<b>30</b>	<b>31</b>	Make sure your pollinator plot planning and site preparation are on schedule. Add a smaller butterfly or native pollinator garden including milkweeds near your home to attract monarchs.				



The Leopold Award is a prestigious recognition for ranchers who demonstrate exceptional efforts in land management and environmental stewardship. The Blioux River Ranch near Castlewood won the 2024 Leopold Award, which signifies its commitment to sustainable ranching practices and dedication to maintaining and improving the land for current and future generations.

# APRIL

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		Watch for migrating Sandhill and Whooping cranes. Report Whooping Crane sightings to SD Department of Game, Fish and Parks or the U.S. Fish and Wildlife Service.																																																																																																																					
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		Warblers migrate through the state, passing through or staying to rest. The Yellow Warbler is a common nesting warbler nearly statewide.																																																																																																																					
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		Tax Day	Mallard and Pintail ducks begin nesting.		Good Friday	Average nest initiation for prairie grouse in central SD.																																																																																																																	
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Easter	Be proud of the difference volunteers make in your community - National Volunteer Week, April 20-26																																																																																																																						
		Earth Day																																																																																																																					
 <b>27</b>	<b>28</b>	<b>29</b>	<b>30</b>	<table border="1"> <thead> <tr> <th colspan="7">March</th> <th colspan="7">May</th> </tr> <tr> <th>S</th><th>M</th><th>T</th><th>W</th><th>T</th><th>F</th><th>S</th> <th>S</th><th>M</th><th>T</th><th>W</th><th>T</th><th>F</th><th>S</th> </tr> </thead> <tbody> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td>1</td> <td></td><td></td><td></td><td></td><td></td><td>1</td><td>2</td><td>3</td> </tr> <tr> <td><b>2</b></td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td> <td><b>4</b></td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td> </tr> <tr> <td><b>9</b></td><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td> <td><b>11</b></td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td><td>17</td> </tr> <tr> <td><b>16</b></td><td>17</td><td>18</td><td>19</td><td>20</td><td>21</td><td>22</td> <td><b>18</b></td><td>19</td><td>20</td><td>21</td><td>22</td><td>23</td><td>24</td> </tr> <tr> <td><b>23</b></td><td>24</td><td>25</td><td>26</td><td>27</td><td>28</td><td>29</td> <td><b>25</b></td><td>26</td><td>27</td><td>28</td><td>29</td><td>30</td><td>31</td> </tr> <tr> <td><b>30</b></td><td></td><td></td><td></td><td></td><td></td><td>31</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </tbody> </table>		March							May							S	M	T	W	T	F	S	S	M	T	W	T	F	S							1						1	2	3	<b>2</b>	3	4	5	6	7	8	<b>4</b>	5	6	7	8	9	10	<b>9</b>	10	11	12	13	14	15	<b>11</b>	12	13	14	15	16	17	<b>16</b>	17	18	19	20	21	22	<b>18</b>	19	20	21	22	23	24	<b>23</b>	24	25	26	27	28	29	<b>25</b>	26	27	28	29	30	31	<b>30</b>						31								
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	Grass is greening up. Do you need to adjust your mineral program?					 																																																																																																																	

When you ask people about the most endangered ecosystem in the world, oftentimes they'll come up with the rainforest. And actually, native grasslands in North America are way more threatened than the rainforests. If grassland producers aren't profitable, they're probably going to change their practices, often with conversion to crops. So, we're all about making producers more profitable with grasslands and educating people about the importance of it.

- Jim Faulstich,  
South Dakota Grassland Coalition



# MAY





Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<p><b>April</b></p> <p>S M T W T F S</p> <p>1 2 3 4 5</p> <p>6 7 8 9 10 11 12</p> <p>13 14 15 16 17 18 19</p> <p>20 21 22 23 24 25 26</p> <p>27 28 29 30</p>	<p><b>June</b></p> <p>S M T W T F S</p> <p>1 2 3 4 5 6 7</p> <p>8 9 10 11 12 13 14</p> <p>15 16 17 18 19 20 21</p> <p>22 23 24 25 26 27 28</p> <p>29 30</p>	 <p> YouTube</p>		<b>1</b>	<b>2</b>	<b>3</b>
 <p><b>4</b></p>	<p><b>5</b></p> <p>Watch for Monarch butterflies.</p>	<p><b>6</b></p>	<p><b>7</b></p>	<p><b>8</b></p>	<p><b>9</b></p>	<p><b>10</b></p> <p>Peak nest initiation for pheasants in Eastern SD.</p>
<p><b>11</b></p> <p>Mother's Day</p>	 <p><b>12</b></p>	<p><b>13</b></p>	<p><b>14</b></p>	<p><b>15</b></p>	<p><b>16</b></p>	<p><b>17</b></p>
<p><b>18</b></p>	<p><b>19</b></p>	 <p><b>20</b></p>	<p><b>21</b></p>	<p><b>22</b></p>	<p><b>23</b></p>	<p><b>24</b></p> <p>Peak of White-tailed deer fawn births in Eastern SD.</p>
<p><b>25</b></p>	 <p><b>26</b></p> <p>Memorial Day</p>	<p><b>27</b></p>	<p><b>28</b></p>	<p><b>29</b></p>	<p><b>30</b></p>	<p><b>31</b></p> <p>Remember to enter information in your Record of Livestock Grazing.</p>

Pre-European settlement, we would have seen a lot of native forbs and native grasses. We kind of abused the ground by overgrazing or undergrazing, and then we introduced grasses that took over many of our native grasslands. Smooth brome helped a lot with erosion control, but it didn't do anything for soil health. It's very aggressive in nature as far as taking over an area, and it lends itself really to kind of crowd out our native species. So now we're trying to get back to a more diverse mix of species on the ground, a better water cycling system, and a better nutrient cycling system in the area.

- Jay Hermann, NRCS Rangeland Management Specialist



# JUNE

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday																																																																																																		
<b>1</b>	 <b>2</b>	<b>3</b>	<b>4</b>	<b>5</b> World Environment Day	<b>6</b>	<b>7</b> Begin to seed summer annual forages.																																																																																																		
<b>8</b> Pentecost	<b>9</b>	<b>10</b>	 <b>11</b> Practice sustainable harvesting when gathering timsila (prairie turnip) on the prairie.	<b>12</b>	<b>13</b>	<b>14</b> Flag Day																																																																																																		
<b>15</b> Father's Day	<b>16</b>	<b>17</b>	 <b>18</b>	<b>19</b> Juneteenth	<b>20</b> First Day of Summer	<b>21</b>																																																																																																		
<b>22</b>	<b>23</b>	<b>24</b>	 <b>25</b> Move animals based on plant height NOT calendar dates.	<b>26</b>	<b>27</b>	<b>28</b> Watch grazing heights and rest periods carefully.																																																																																																		
<b>29</b>	<b>30</b>	<ul style="list-style-type: none"> <li>• Graze annual forages at 18-24" height.</li> <li>• Watch pasture for weeds and invasive species.</li> <li>• Remember to enter information in your Record of Livestock Grazing.</li> <li>• Evaluate shade/water needs and plan for next year.</li> </ul>		<table border="1"> <thead> <tr> <th colspan="7">May</th> <th colspan="7">July</th> </tr> <tr> <th>S</th><th>M</th><th>T</th><th>W</th><th>T</th><th>F</th><th>S</th> <th>S</th><th>M</th><th>T</th><th>W</th><th>T</th><th>F</th><th>S</th> </tr> </thead> <tbody> <tr> <td></td><td></td><td></td><td></td><td>1</td><td>2</td><td>3</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td> <td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td> </tr> <tr> <td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td><td>17</td> <td>13</td><td>14</td><td>15</td><td>16</td><td>17</td><td>18</td><td>19</td> </tr> <tr> <td>18</td><td>19</td><td>20</td><td>21</td><td>22</td><td>23</td><td>24</td> <td>20</td><td>21</td><td>22</td><td>23</td><td>24</td><td>25</td><td>26</td> </tr> <tr> <td>25</td><td>26</td><td>27</td><td>28</td><td>29</td><td>30</td><td>31</td> <td>27</td><td>28</td><td>29</td><td>30</td><td>31</td><td></td><td></td> </tr> </tbody> </table>		May							July							S	M	T	W	T	F	S	S	M	T	W	T	F	S					1	2	3								4	5	6	7	8	9	10	6	7	8	9	10	11	12	11	12	13	14	15	16	17	13	14	15	16	17	18	19	18	19	20	21	22	23	24	20	21	22	23	24	25	26	25	26	27	28	29	30	31	27	28	29	30	31			 
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We're doing what we can to restore grasslands. And we are doing what we can to enhance existing grasslands even if they're not fully restored. We've got organizations like NRCS, Game Fish and Parks here in South Dakota, all of our NGOs, and SDSU Extension. We all play a part in that, either active participation in the restoration process, or the education process that makes a producer aware that there are options and opportunities.

- Pete Bauman





# JULY


Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<p>June</p> <p>S M T W T F S</p> <p>1 2 3 4 5 6 7</p> <p>8 9 10 11 12 13 14</p> <p>15 16 17 18 19 20 21</p> <p>22 23 24 25 26 27 28</p> <p>29 30</p>	<p>August</p> <p>S M T W T F S</p> <p>3 4 5 6 7 8 9</p> <p>10 11 12 13 14 15 16</p> <p>17 18 19 20 21 22 23</p> <p>24 25 26 27 28 29 30</p> <p>31</p>	<p>1 ☾</p>	<p>2</p>	<p>3</p>	<p>4</p> <p>Independence Day</p>	<p>5</p>
<p>6</p>	<p>7</p>	<p>8</p>	<p>9 ☽</p>	<p>10</p>	<p>11</p> <p>World Population Day</p>	<p>12</p>
<p>13</p>	<p>14</p> <p>Thistles are best controlled at boot stage.</p>	<p>15</p>	<p>16 ☽</p>	<p>17</p>	<p>18</p> <p>Check water sources frequently for condition, i.e., sediment or algae can reduce an animal's water intake.</p>	<p>19</p>
<p>20</p>	<p>21</p>	<p>22</p>	<p>23 ●</p>	<p>24</p>	<p>25</p>	<p>26</p> <p>National Day of the Cowboy</p>
<p>27</p>	<p>28</p>	<p>29</p>	<p>30</p> <p>Collect flower seeds from annuals for next year's butterfly garden.</p>	<p>31</p>	<p>31</p>	 <p>YouTube</p>



It is simply amazing how quickly grassland birds find and occupy a grassland restoration project. I truly feel it is Mother Nature's way of showing her gratitude in restoring some sort of balance to the landscape.

- Owen McElroy

# AUGUST

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<p><b>July</b></p> <p>S M T W T F S</p> <p>1 2 3 4 5</p> <p>6 7 8 9 10 11 12</p> <p>13 14 15 16 17 18 19</p> <p>20 21 22 23 24 25 26</p> <p>27 28 29 30 31</p>	<p><b>September</b></p> <p>S M T W T F S</p> <p>1 2 3 4 5 6</p> <p>7 8 9 10 11 12 13</p> <p>14 15 16 17 18 19 20</p> <p>21 22 23 24 25 26 27</p> <p>28 29 30</p>	 <p> YouTube</p>			 <p><b>1</b></p>	<p><b>2</b></p>
<p><b>3</b></p>	<p><b>4</b></p>	<p><b>5</b></p>	<p><b>6</b></p>	<p><b>7</b></p>	<p><b>8</b></p>	<p><b>9</b></p> 
<p><b>10</b></p>	<p><b>11</b></p> <p>Start planing for native seed harvest.</p>	<p><b>12</b></p>	<p><b>13</b></p>	<p><b>14</b></p>	<p><b>15</b></p>	<p><b>16</b></p> 
<p><b>17</b></p>	<p><b>18</b></p>	<p><b>19</b></p>	<p><b>20</b></p>	<p><b>21</b></p>	<p><b>22</b></p>	<p><b>23</b></p> 
<p>Consider cover crops as alternative forage; plant into small grain stubble.</p>	<p><b>25</b></p>	<p><b>26</b></p>	<p><b>27</b></p>	<p><b>28</b></p>	<p><b>29</b></p>	<p><b>30</b></p>
<p><b>24</b></p> <p> <b>31</b></p>						

As chokecherries begin to ripen, their fruit color will darken. Fruits are small and edible, but they have a hard pit inside that can not be ingested without proper preparation.

Remember to enter details in your Record of Livestock Grazing.

Contact the SD Grassland Coalition about the South Dakota Grazing School

Continue to implement Drought Contingency Plan action items as needed.

Plan winter feed supply.



You know, you can't do something for 30 years and not have it affect you. It affects you in a good way. We moved out to the Black Hills because of our grandchildren, and we're not ready to stop farming at this point. We can take what we've learned over the years and really make a difference just with our own little yard. You spend your life learning and educating. You can't change that overnight. That's not going to happen. You're going to continue to do that. Whether that's talking to somebody on the street or in a formal presentation, you're going to do that, whether you like it or not.

– Jeffrey Hemenway, Retired Soil Quality Specialist, USDA-NRCS



# SEPTEMBER

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday																																																																																																														
	<b>1</b> Labor Day	<b>2</b>	<b>3</b>	<b>4</b> Remember to enter details in your Record of Livestock Grazing.	<b>5</b>	<b>6</b>																																																																																																														
 <b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>																																																																																																														
			Continue to implement Drought Contingency Plan action items as needed.																																																																																																																	
 <b>14</b>	<b>15</b> Watch for migrating Monarch butterflies	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>																																																																																																														
			Target pastures dominated by cool-season species if green-up occurs in order to reduce pressure on native grasses.																																																																																																																	
 <b>21</b>	<b>22</b> First Day of Autumn	<b>23</b>	<b>24</b>	<b>25</b>	<b>26</b>	<b>27</b>																																																																																																														
		Warblers migrate through the state on their way south. Many are neotropical migrants that winter in Central and South America, making migration stops in the Dakotas critical to their survival.			National Native American Day																																																																																																															
<b>28</b>	 <b>29</b>	<b>30</b>		<table border="1"> <thead> <tr> <th colspan="7">August</th> <th colspan="7">October</th> </tr> <tr> <th>S</th><th>M</th><th>T</th><th>W</th><th>T</th><th>F</th><th>S</th> <th>S</th><th>M</th><th>T</th><th>W</th><th>T</th><th>F</th><th>S</th> </tr> </thead> <tbody> <tr> <td></td><td></td><td></td><td></td><td></td><td>1</td><td>2</td> <td></td><td></td><td></td><td>1</td><td>2</td><td>3</td><td>4</td> </tr> <tr> <td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td> <td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td> </tr> <tr> <td>10</td><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td> <td>12</td><td>13</td><td>14</td><td>15</td><td>16</td><td>17</td><td>18</td> </tr> <tr> <td>17</td><td>18</td><td>19</td><td>20</td><td>21</td><td>22</td><td>23</td> <td>19</td><td>20</td><td>21</td><td>22</td><td>23</td><td>24</td><td>25</td> </tr> <tr> <td>24</td><td>25</td><td>26</td><td>27</td><td>28</td><td>29</td><td>30</td> <td>26</td><td>27</td><td>28</td><td>29</td><td>30</td><td>31</td> </tr> <tr> <td>31</td><td></td><td></td><td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td><td></td><td></td> </tr> </tbody> </table>		August							October							S	M	T	W	T	F	S	S	M	T	W	T	F	S						1	2				1	2	3	4	3	4	5	6	7	8	9	5	6	7	8	9	10	11	10	11	12	13	14	15	16	12	13	14	15	16	17	18	17	18	19	20	21	22	23	19	20	21	22	23	24	25	24	25	26	27	28	29	30	26	27	28	29	30	31	31													
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According to the Central Grasslands Roadmap Initiative, more than 50 million acres of grassland have been lost in a 10-year period, 2009-2019. Emmy Award-winning videographers Joe and Charlie Dickie, along with two-time Pulitzer Prize-nominated photographer Mitch Kezar have been capturing conservation stories across the state of South Dakota since Joe's initial work on the 2014 South Dakota Leopold Conservation Award. Through their lenses, we are able to see hope for the future of "Our Amazing Grasslands". Thank you Big World Films!



# OCTOBER

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<b>September</b> <b>S M T W T F S</b> 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	<b>November</b> <b>S M T W T F S</b> 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	 	<b>1</b>  Enjoy the results of your management! Plan an outing with a child for pheasant, grouse, deer, or duck hunting and introduce them to what conservation looks like.	<b>2</b>	<b>3</b>	<b>4</b>  Conduct annual soil tests on fertilized pasture.
<b>5</b>	 <b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>
	If you would like improvements on your grazing lands, get free one-on-one advice from the USDA Natural Resources Conservation Service. Application for financial assistance for a Conservation Plan through Farm Bill programs is continuous.					
<b>12</b>	 <b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>
National Farmer's Day	Native American Day (SD) Columbus Day			Reminder! Tribal Lease Payments are often due around November 1. Contact your local office to ensure you're prepared for a timely payment.		
<b>19</b>	<b>20</b>	 <b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>25</b>
	Continue to implement Drought Contingency Plan action items as needed.					
<b>26</b>	<b>27</b>	<b>28</b>	 <b>29</b>	<b>30</b>	<b>31</b>	
					Halloween	



The collaboration between our conservation partners is phenomenal. You know, when any one of us succeeds, we all succeed. We're all out there with the same things in mind. Providing clean water, clean air, quality habitat, and all of the things that benefit our society as a whole.

- Matt Gottlob,  
Pheasants Forever South Dakota State Coordinator



# NOVEMBER







Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<b>October</b> <b>S</b> <b>M</b> <b>T</b> <b>W</b> <b>T</b> <b>F</b> <b>S</b> 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	<b>December</b> <b>S</b> <b>M</b> <b>T</b> <b>W</b> <b>T</b> <b>F</b> <b>S</b> 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	 				<b>1</b>  Try strip grazing corn stalks to reduce trampling.
<b>2</b>  Daylight Savings Ends	<b>3</b>  Prepare water systems and equipment for freezing temperatures.	<b>4</b> ☀️  Election Day	<b>5</b>  Watch for Snowy Owls as they move south into South Dakota during years when food may be scarce farther north.	<b>6</b>	<b>7</b>	<b>8</b>
<b>9</b>	<b>10</b>	<b>11</b> 🌙  Veterans' Day	<b>12</b>  Evaluate end of year pasture use.	<b>13</b>	<b>14</b>  Prepare your financial statements for your lender and yourself.	<b>15</b>
<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b> 🌑	<b>21</b>	<b>22</b>
<b>23</b>	<b>24</b>  Start the tax planning process.	<b>25</b>	<b>26</b>	<b>27</b> 🌑	<b>28</b>	<b>29</b>
<b>30</b>				Thanksgiving		



I am hopeful for the grasslands, and I'm hopeful, I think out of my own blind desire, to see that there is hope. But I also stand in rooms like this here in South Dakota, of people filled to the brim with hope who are working really hard. And if that isn't the future that I want to be a part of, I don't know what is. You know, whether or not we can move the needle in the way we need to, I can't say for sure, but I do know that there are a lot of people who care deeply and who are going to do hard work.

- Maggie Hanna,  
Director of Central Grasslands  
Roadmap Initiative

# DECEMBER

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday																																																																																																																
	<b>1</b>	<b>2</b>	<b>3</b>	 <b>4</b>	<b>5</b>	<b>6</b>																																																																																																																
	Check pastures and the SD Drought Tool for 2026 forage production forecast.				World Soil Day																																																																																																																	
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Pearl Harbor Remembrance Day	National Audubon Society's Christmas Bird Counts completed throughout the state. These counts have been performed since 1901, making this the longest running Citizen Science Bird Project in the U.S.																																																																																																																					
<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	 <b>19</b>	<b>20</b>																																																																																																																
	Monitor body condition score trends of your herd.																																																																																																																					
<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>25</b>	<b>26</b>	 <b>27</b>																																																																																																																
First Day of Winter			Christmas Eve	Christmas Day	Did you remember to take a vacation this year? Plan for next year.																																																																																																																	
<b>28</b>	<b>29</b>	<b>30</b>	<b>31</b>	<table border="1"> <thead> <tr> <th colspan="7">November</th> <th colspan="7">January 2026</th> </tr> <tr> <th>S</th><th>M</th><th>T</th><th>W</th><th>T</th><th>F</th><th>S</th> <th>S</th><th>M</th><th>T</th><th>W</th><th>T</th><th>F</th><th>S</th> </tr> </thead> <tbody> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td>1</td> <td>1</td><td>2</td><td>3</td><td></td><td></td><td></td><td></td> </tr> <tr> <td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td> <td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td> </tr> <tr> <td>9</td><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td> <td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td><td>17</td> </tr> <tr> <td>16</td><td>17</td><td>18</td><td>19</td><td>20</td><td>21</td><td>22</td> <td>18</td><td>19</td><td>20</td><td>21</td><td>22</td><td>23</td><td>24</td> </tr> <tr> <td>23</td><td>24</td><td>25</td><td>26</td><td>27</td><td>28</td><td>29</td> <td>25</td><td>26</td><td>27</td><td>28</td><td>29</td><td>30</td><td>31</td> </tr> <tr> <td>30</td><td></td><td></td><td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </tbody> </table>		November							January 2026							S	M	T	W	T	F	S	S	M	T	W	T	F	S							1	1	2	3					2	3	4	5	6	7	8	4	5	6	7	8	9	10	9	10	11	12	13	14	15	11	12	13	14	15	16	17	16	17	18	19	20	21	22	18	19	20	21	22	23	24	23	24	25	26	27	28	29	25	26	27	28	29	30	31	30														 
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			New Year's Eve																																																																																																																			

# HOLISTIC MANAGEMENT

## SAVORY FRAMEWORK FOR HOLISTIC MANAGEMENT

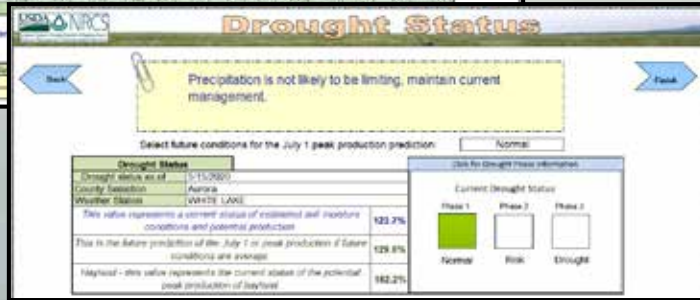
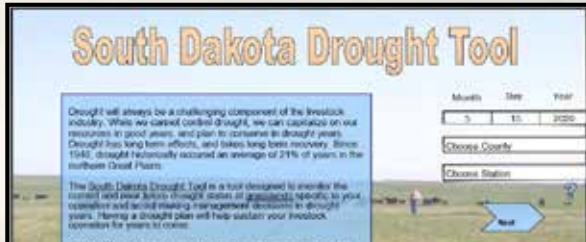
WHOLE UNDER MANAGEMENT	DECISION MAKERS	RESOURCE BASE	MONEY
Holistic Context	Statement of Purpose Quality of Life Forms of Production Future Resource Base		
Eco system Processes			
Conventional Decision Making	Objectives	Goals	Vision Mission
Tools	Human Creativity	Technology	Fire   Rest   Grazing   Animal Impact   Living Organisms   Money & Labor
One or More Factors	Past Experience	Expert Opinion	Research Results   Expediency   Compromise   Cultural Norms   Cost, Etc.
Testing Questions <small>Objectives and Actions</small>	Cause & Effect	Weak Link • Social • Biological • Financial	Marginal Reaction   Gross Profit Analysis   Energy/Money Source Pattern Of Use   Sustainability   Gut Check
Management Guidelines	Learning & Practice	Organization & Leadership	Marketing   Time   Stock Density & Herd Effect   Cropping   Burning   Population management
Processes Unique to Holistic Management	Holistic Financial Planning	Holistic Planned Grazing	Holistic Land Planning   Holistic Ecological Monitoring
Feedback Loop			

“Agriculture is not crop production as popular belief holds - it’s the production of food and fiber from the world’s land and waters. Without agriculture it is not possible to have a city, stock market, banks, university, church, or army. Agriculture is the foundation of civilization and any stable economy.” - Allan Savory

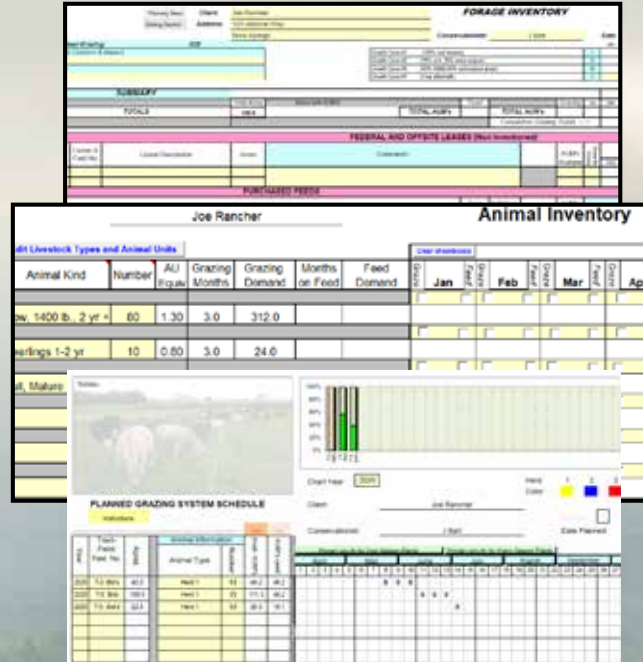
# Grassland Planning Tools Available from SD NRCS

SD NRCS has developed Excel-based tools that can be useful to managers when planning management for their grasslands.

The **South Dakota Drought Tool** utilizes weather station data, historical averages, and state-wide clipping data to determine a percent of normal calculation for grassland managers to use for determining the production status of their grasslands. The tool is simple to use, and provides a Drought Planning template for managers that wish to create a written drought plan.



The **SD Grazing Tool** includes instructions on how to build a forage inventory based on Web Soil Survey soils data, create an animal inventory, and match the forage resources to the animal resources in order to build a balanced grazing plan. The tool also provides multiple grazing plan formats depending on the grazer's experience.



These tools are available on the SD NRCS website. Search "SD NRCS". Click on "Range & Drought Information" on the right hand side of webpage under "Popular Topics" to find the SD Drought Tool, SD Grazing Tool, and other useful planning documents.

Grassland Planning Tools and other useful information are taught at the SD Grassland Management School, the SD Grazing School and the SD Soil Health School. These schools provide producers the opportunity to network and learn new ways to increase efficiency and improve their operations.

Visit [www.sdgrass.org](http://www.sdgrass.org) or the [www.sdsoilhealth.org](http://www.sdsoilhealth.org) web sites for event updates.

The contents of the South Dakota Grassland Planner calendar pages are now available online as a Google Calendar. Find the new calendar with the latest updates and events on Google Calendar at <https://bit.ly/SDGrasslandCalendar>.



# Grassland Planning

**Through this Grassland Planner**, the U.S. Department of Agriculture NRCS is working with the South Dakota Grassland Coalition (SDGC) and other partners to improve the health of grassland resources. The NRCS, SDGC, and South Dakota State University Extension Service and other entities can assist you to determine and formulate resource protection and enhancement options that fit your operation. Depending upon the area of expertise and need for financial assistance, staff are available through NRCS and SD Conservation Districts, and other partners such as the SD Grassland Coalition and SDSU Extension specialists, the U.S. Fish and Wildlife Service, the South Dakota Departments of Agriculture and Game, Fish and Parks, and private organizations, such as Pheasants Forever, Ltd.

Many resources are available to help you determine and formulate resource protection and enhancement options that fit your operation. Technical help is available for:

- Soil health
- Water quality and quantity
- Fencing
- Monitoring techniques
- Drought management
- Grasses for forage production
- and more!



Depending upon the area of expertise and/or need of financial assistance, staff are available through the following conservation partners.

**USDA Natural Resources Conservation Service**  
www.sd.nrcs.usda.gov  
South Dakota State Office  
(605) 352-1200

**SD Department of Agriculture and Natural Resources**  
www.danr.sd.gov  
(605) 773-3375

**Ducks Unlimited**  
www.ducks.org/southdakota

**South Dakota Grassland Coalition**  
www.sdgrass.org

**South Dakota Department of Game, Fish and Parks Wildlife Division**  
www.gfp.sd.gov  
(605) 223-7700

**Pheasants Forever**  
www.peasantsforever.org  
(605) 692-6006

**South Dakota Conservation Districts**  
www.sdconservation.org  
(605) 895-4099

**U.S. Fish and Wildlife Service - SD Partners for Fish and Wildlife**  
www.fws.gov/partners  
(605) 697-2500

**South Dakota Soil Health Coalition**  
www.sdsoilhealthcoalition.org  
sdsoilhealth@gmail.com

**South Dakota State University (SDSU) Extension Service**  
extension.sdstate.edu  
(605) 688-4792

**Special distribution provided by**  
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Tri-State Livestock News

**Photography**  
Joe Dickie

**Design**  
Beth Bird

*The USDA is an equal opportunity provider, employer, and lender.*

# South Dakota Grasslands eCalendar

An eCalendar that can help you  
take your ranch management  
to the next level by providing  
helpful tips and reminders right  
at your fingertips!



## How to integrate within an existing platform:

### Google Calendar

1. On your computer, open your Google Calendar.
2. On the left, next to Other Calendars, Click Add+ From URL.
3. Visit [www.indianag.org/ncalendar](http://www.indianag.org/ncalendar) and copy the Google Calendar URL.
4. Enter the Calendar URL in the field provided.
5. Click Add Calendar. The calendar will appear on the left side under Other Calendars.

### Outlook Calendar

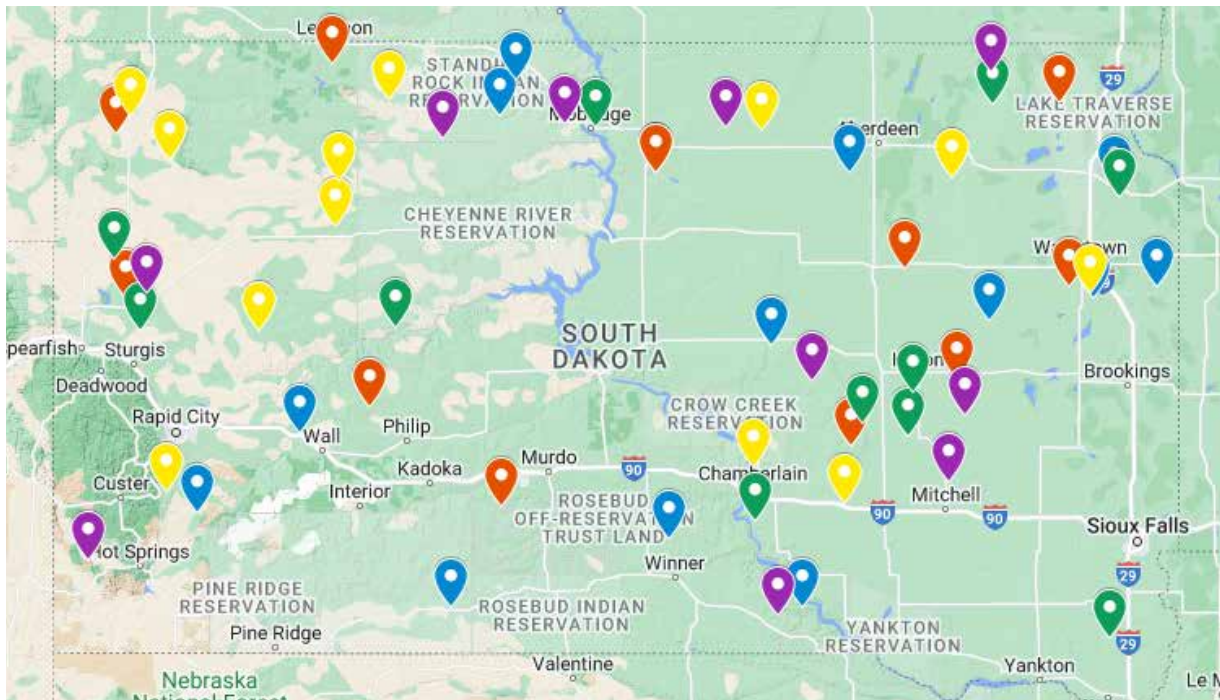
1. Go to [www.indianag.org/21calendar](http://www.indianag.org/21calendar) and copy the iCal URL for the Outlook Calendar.
2. Go to your personal Outlook Calendar and right-click *Shared Calendars > Add Calendar > From Internet*
3. Paste the iCal URL.
4. Choose Yes when asked to subscribe to updates.
5. The SD Grasslands eCalendar will now be integrated within your personal outlook calendar.

### iPhone Calendar

1. On your iPhone, go to [www.indianag.org/ncalendar](http://www.indianag.org/ncalendar) and copy the iCal URL for your iPhone Calendar.
2. Go to *Settings > Mail > Accounts > Add Account > Other > Add Subscribed Calendar*.
3. Paste the iCal URL.
4. The SD Grasslands eCalendar will now be integrated within your personal iPhone Calendar.

For questions, please contact Sha'Teal Pearman, IAC Natural Resources Program Assistant, at [shateal@indianag.org](mailto:shateal@indianag.org).

# South Dakota Grassland Planner Featured Operators



The video stories of the “Our Amazing Grasslands” families and operations that have been featured in the 2018-2025 South Dakota Grassland Planners can be viewed on the USDA NRCS South Dakota YouTube channel at [www.youtube.com/NRCSouthDakota](http://www.youtube.com/NRCSouthDakota).

Search “Amazing Grasslands” to see all of the stories or search for the last name for a particular story.



## 2018

Schell Ranch, Wasta  
 Steve & Paula Livermont, Martin  
 Sara & Rich Grim, Bonesteel  
 Darin & Jessica Michalski, Willow Lake  
 Ron & Carol Brownotter, Bullhead  
 Tracy Rosenberg, Marvin  
 Sharon & Dan Anderson, Meadow  
 Candice & Dean Lockner, Ree Heights  
 Chad & Heidi Schooley, Castlewood  
 Mimi Hillenbrand & Moritz Espy, Rapid City  
 Jorgenson Land & Cattle, Ideal  
 Hamann Family, Clear Lake

## 2019

Jody & JoAnn Brown, Faith  
 Bart & Shannon Carmichael, Faith  
 Dan & Cindi Conner, Belle Fourche  
 Stuart & Lisa Schmidt, Keldron  
 Sandy & Jacki Limpert, Buffalo  
 Gary & Amy Cammack, Union Center  
 Ausland Family, Webster  
 Rittberger Family, Hermosa  
 Charlie & Tanya Totton, Chamberlain  
 Suelflow Family, White Lake  
 Rohrbach Family, Roscoe  
 Little Family, Castlewood

## 2020

Chuck & Koreen Anderson, Lemmon  
 Jeannie Franceus, Wessington Springs  
 George & Suzanne England, Midland  
 Jeff & Marci Dell, Nisland  
 Lance Vilhauer, Mina  
 Johnson Family, Frankfort  
 Hove Family, Sisseton  
 Fran Fritz, Iroquois  
 Rick & Karen Smith, Hayti  
 Slovek Ranch, Philip  
 Gilbert Family, Buffalo  
 Perman Family, Lowry

## 2021

Erickson Family Ranch, Langford  
 Bendigo Family Ranch, Howes  
 Turtle Peak Ranch, Wessington Springs  
 Summit Lake Partnership, Summit  
 Shubeck Family, Centerville  
 Blair Bros. Angus Ranch, Vale and Belle Fourche  
 Mizera Family, McLaughlin  
 Grandview Angus Ranch, Chamberlain  
 Davis Family Ranch, Forestburg  
 Bohlander Family, Mobridge  
 The Wind Ranch, Newell  
 Cain Creek, Beadle Co. Conservation Dist., Huron

## 2022

Smikle Family, Herrick  
 Bad Warrior Family, Dupree  
 Moore Family, Artesian  
 Hanson Family, Letcher  
 Boyland Family, Newell  
 Neuharth Family, Ft. Pierre  
 Thompson Family, McLaughlin  
 Effling Family, Britton  
 Hollenbeck Family, Edgemont  
 Haerter Family, Hosmer  
 Magness Family, Miller  
 Lower Brule Tribal Ranch, Ft. Pierre

## 2023

Ollila Family, Newell  
 Breyer and Wollschlager Families, Strandburg  
 Sander Family, Custer  
 Jean & Dennis Fagerland, Langford  
 Dutton Family, Faith  
 Bien Family, Veblen  
 Holt Family, Wecota  
 Rasmussen-Lehman 33 Ranch, Belvidere  
 Mary & Dave Walkes, Avon  
 Kammerer Family, Piedmont  
 Balaalid Family, Mitchell  
 Anderson



# South Dakota Grazing Exchange

[sdgrazingexchange.com](http://sdgrazingexchange.com)

Connecting Crop and Livestock Producers  
to Improve Soil Health

**Do you have pasture, native grass, crop residue or cover crops available to be grazed?**

**Do you need extra grazing land or forage for your livestock?**

The South Dakota Grazing Exchange website, created by the South Dakota Soil Health Coalition, is a free, publicly accessible map that offers a platform for producers to connect throughout the state and region, with information categorized based on forage and livestock grazing opportunities.

Integrating livestock onto cropland and proper management of grasslands are a key part of increasing overall soil health, so we created an online portal to help livestock producers find the right land for their herd, or landowners and operators find the right herd to graze their land.



South Dakota

Soil Health Coalition



**When the landowner and tenant are on the same page, soil health advances come more quickly and are longer lasting.**



“

*My sons weren't interested in farming so when the opportunity came to rent out I picked Mike. I could see the job he was doing and how beneficial it was to the ground.*

”

Learn how non-operator landowner (NOLO) Barry Ploog and tenant Mike Beer's pathway to soil health is working out. Their story, and stories of 6 more NOLO/tenant partnerships, are being told in their own words through video and short stories online. Check them out, as well as thoughts on soil health from women landowners, at [www.nolosd.org](http://www.nolosd.org).  
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# South Dakota Grasslands valuable in so many ways

## Food, Water, Wildlife to Way of Life



Privately owned range and pasture lands makes up over 27% (528 million acres) of the total acreage of the contiguous 48 states, and these lands constitute the largest private lands use category, exceeding both forest land (21%) and crop land (18%). South Dakota's working rangelands help provide food and fiber for the entire country, and also have recreation opportunities like hunting, bird viewing, hiking, riding, and exploring historical landmarks. The grasses and forbs are also home to a wide variety of wildlife species.

"It's the plants that feed the livestock and offer food and nesting for wildlife, and the soil that supports and feeds those plants, that are the foundation for profitable agriculture and a sustainable environment," says NRCS State Conservationist Tony Sunseri. "If you think about it, everything from storing water and carbon in the ground to supporting everything above ground depends on the health of our soil and grasslands. Really, making a decent living, sustaining surroundings with a diversity of both plants and animals, clean water, the very way of life comes back to healthy grasslands. And that starts with healthy soil."



Agriculture is the life blood of South Dakota. Part of the reason: the state's grasslands support nearly 4 million head of cattle and calves and hundreds of producers.



About 40 species of birds are considered grassland specialists, and more than 300 species either live permanently in grasslands or migrate through them.



A broad diversity of wildlife inhabits the Great Plains region! You'll find badger, prairie chicken, burrowing owl, pronghorn, scaled quail, dung beetle, ornate box turtle, and scissor-tailed flycatcher in this grasslands region.



Rangelands store 12% of global terrestrial carbon stocks. Healthy native plants in rangelands send their roots deep into the soil to help store carbon. There is growing evidence that soils on agricultural lands, especially grasslands like those in South Dakota, can store a considerable amount of carbon dioxide.



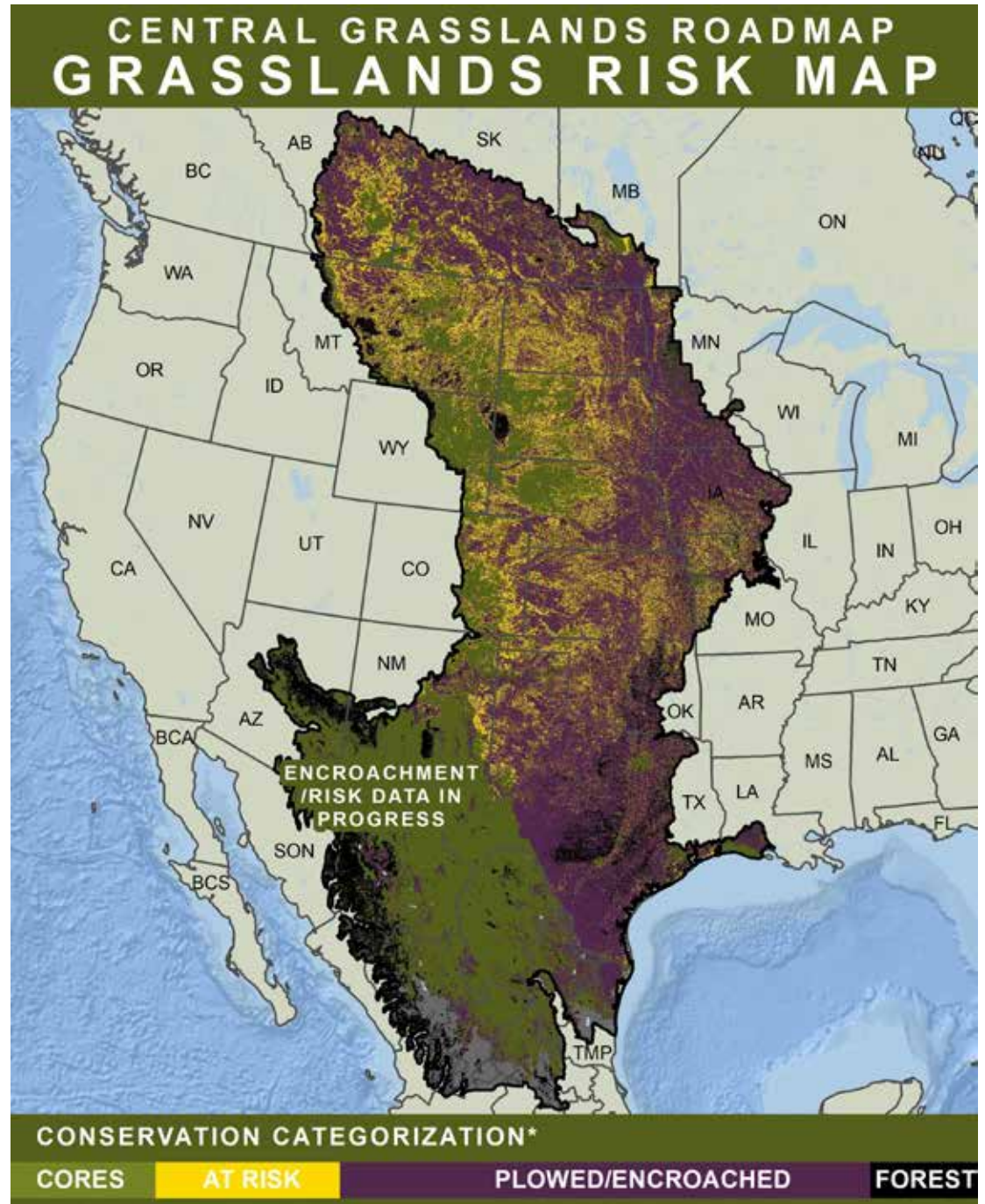
Healthy grasslands favorably impact both water quality and quantity. They build healthy soils to infiltrate rainfall, reduce susceptibility to drought and flooding, and fill underground reservoirs. It's been said that well-protected soil is the greatest storage of fresh water--more than all the lakes and rivers in the world.

## From Canada to Mexico

### Grasslands, habitat are being lost at an alarming rate

Fewer than 40 percent of the 550 million acres of historical grasslands that once stretched from Alberta to Mexico remain today. Most of these grassland acres were converted to cropland, others to energy development or other uses. As these tallgrass, mixed grass, shortgrass prairies, and desert grasslands are lost, so are the wildlife that depend on them.

Not surprisingly, grassland species are among the most imperiled group of birds in the United States: Total populations have declined more than 40 percent since 1966, and some species, like the Lesser Prairie-Chicken, hover at the brink of extinction. Bison, antelope, and monarch butterflies are only a few examples of the other wildlife that face a diminished future if we allow remaining grasslands to disappear or degrade. Human health and livelihoods are also entwined with the fate of grasslands. Pollinating insects thrive in fields of wildflowers and native grasses, while the deep roots of native plants trapped nutrients and water—and keep prairies resilient through natural cycles of drought, fire, grazing, and storms.



# Central Grasslands Roadmap

## Working Together Towards Resilient, Connected Grasslands and Communities

If you're concerned about South Dakota's grasslands, you're not alone. As a matter of fact, you're invited to join in a grassland and community improvement collaborative effort that involves dozens of organizations and agencies across 3 countries.

The Central Grasslands span across more than 500 million acres of North America, from Mexico through Canada, where the health of grasslands continues to decline.

### Roadmap Launch in 2020

The Central Grasslands Roadmap was launched in 2020 with a virtual summit. Its focus was to define a vision and set high level priorities to guide innovative conservation for the benefit of grassland birds, pollinators and mammals, and to ensure viable human communities across North America's grassland landscape. For two years, Roadmap working groups have been collaborating on policy, communications, and tools needed to help save and sustain our grassland landscapes and connected communities for generations to come. In May of 2022, a second summit was held in Ft. Collins. Representatives from South Dakota organizations and agencies with an interest in grasslands were among the more than 200 organizations from Mexico, Canada, the U.S., and Indigenous Nations, that came together for two days.

### The Grassland Roadmap Vision

The vision over the next 10 years for the Central Grasslands Roadmap is to witness thriving Indigenous and rural communities and economies, with flourishing ecosystems of soil, plants, and wildlife on millions of acres of working lands that have healthy grazing populations, with resilient and connected habitat. That will come about in part through dynamic and multi-faceted approaches to sustainable grasslands management, supported by public policies and investments. The vision includes a sustainable agriculture, energy development, and rivers and wetlands that support habitat, aquifers, production and people.



### Scorecard Goals

"The Central Grasslands Roadmap is all about bringing together all the stakeholders who have an interest in grasslands, to boost conservation of North America's Central Grasslands through more collaboration," says Tony Sunseri, state conservationist for the USDA Natural Resources Conservation Service in South Dakota. NRCS is one of the two dozen planning partners for the effort.

The Roadmap's participating organizations have agreed on 7 broad goals:

- 1. Community Support:** Each year, Indigenous/First Nation, ejido, and rancher communities across the biome will report on their ability to sustain their working operations and access sufficient financial and technical assistance resources to support their land stewardship decisions.
- 2. Landscape Conservation:** By 2032, hundreds of millions of acres of grass will be improved, restored, or kept intact across the biome.
- 3. Species:** By 2032, wildlife populations will remain stable if common, become stabilized if declining, and have population trends reversed and recovering if in steep decline, understood through a chosen suite of insects, birds, herpetofauna, and mammals.
- 4. Water:** By 2032, extractions from groundwater and surface water sources will be reduced as necessary to sustain dynamically stable groundwater levels, baseflows, and lake levels.
- 5. Soil:** By 2032, comprehensive soil health will be improved to increase drought resilience, availability of livestock forage and wildlife habitat, and net carbon sequestration.
- 6. Food Supply:** Food companies, agribusinesses, and supply chain actors, immediately work to increase the positive impacts of agricultural production and stop grassland conversion.
- 7. Low-Impact Production:** Transportation and energy industry companies immediately work to ensure intentional siting of energy, transportation, and other commercial or industry developments for all projects including wind, solar, oil, gas, coal, and transmission.

For much more detailed information on the Central Grasslands Roadmap activities, including how you can become involved, visit [www.grasslandsroadmap.org/](http://www.grasslandsroadmap.org/).

# Central Grasslands Roadmap

Educational materials available

You can help inform and inspire people of all backgrounds about the many benefits that grasslands provide for human and wildlife communities.

Join the Roadmap's Grasslands and You Campaign. Visit the campaign resources page for downloadable images, posters and information that can be shared with friends, family and supporters.

Download materials, including the poster shown at right, at [www.grasslandsroadmap.org/grasslandsandyou](http://www.grasslandsroadmap.org/grasslandsandyou).

## GRASSLANDS AND YOU

Grasslands contribute to the air you breathe, the water you drink, the food you enjoy, and the landscapes you explore. They offer natural beauty and rich cultural heritage. They help feed millions and support livelihoods and rural economies.

**Outdoor Recreation**  
Grasslands are places to explore with birdwatching, hunting, fishing, hiking, and many other recreational activities.

**Food Security**  
Grasslands and rural agrarian communities are the backbone of North America's food supply.

**Good for the Herd—and Birds**  
Grasslands need grazers to thrive. Sustainable cattle ranching improves grassland health, provides jobs, food, and ensures habitat for wildlife.

**Water for Many**  
Grasslands support watersheds, playas, rivers and streams—and recharge aquifers—ensuring clean, safe water for drinking, wildlife, agriculture and industry.

**Traditional Knowledge**  
Indigenous peoples are finding connection by restoring traditions that provide benefits for grasslands and indigenous communities.

**Super Soil**  
Soil holds water, improving drought resilience and plant growth. Roots, organic material and microbes capture carbon to help fight climate change.

**Immense Biodiversity**  
Flocks of birds, herds of elk and pronghorn, and butterflies amid flowers are vibrant examples of the many plants and animals found on grasslands.

Central Grasslands Roadmap [www.grasslandsroadmap.org](http://www.grasslandsroadmap.org)

# Woody encroachment: Major Threat to Grasslands

Best advice: Burn before they get big



A burn of invasive red cedars in 2011 near Chamberlain (above) resulted in reclaiming some grassland for grazing (below). Thousands of Eastern red cedar trees continue to impair grazing on private grasslands along the Missouri River corridor in southern and central South Dakota.

South Dakota grasslands—vital to cattle, birds and ranch resiliency—are losing out to an eastern red cedar invasion from the South. In fact, ranchers are losing 30 to 75 percent of their rangeland in areas along the Missouri River. “Absolutely nothing will grow under those thick canopied cedar trees,” says Brule County rancher Doug Feltman. “We’ve lost over half of our cattle grazing.” Eastern red cedar encroachment is often overlooked because the pasture takeover is slow. But once established it can reduce forage for livestock and wildlife by 75 percent or more. Some ranchers, including Feltman, are turning to prescribed burning to reclaim pasture for their cattle and their economic livelihood.



Doug Feltman

“It will take less work, less equipment, and there’s less danger if you burn small trees,” Feltman says. “You have to respect fire, but you don’t have to be afraid of it. If you write a prescribed burn plan and then follow that plan, you’re going to reduce your risk.”

“If you have a pasture that is full of just little cedar trees that are just starting to come, then, fire will take care of that and it’d be much more cost-effective with a fire then versus trying to go out and clip all the little cedar trees that are one, two, three foot,” says Sean Kelly, SDSU Extension Range Management Field Specialist at Winner.



Fire is an ecological process and recognized control method, but many ranchers are hesitant to use it because of the fear of a runaway fire.

Good planning with professional help can substantially reduce risks of runaway fires. A burn plan that carefully details what will be done, when, and under what conditions, is essential to a safe burn. NRCS and SDSU Extension can help.

# From Mexico to Canada:

## Grasslands are increasingly at risk

“The data is really clear on this. The two biggest threats to grasslands biome in the Great Plains are land use conversion and woody species invasion,” says Dr. Dirac Twidwell, Associate Professor at the University of Nebraska.

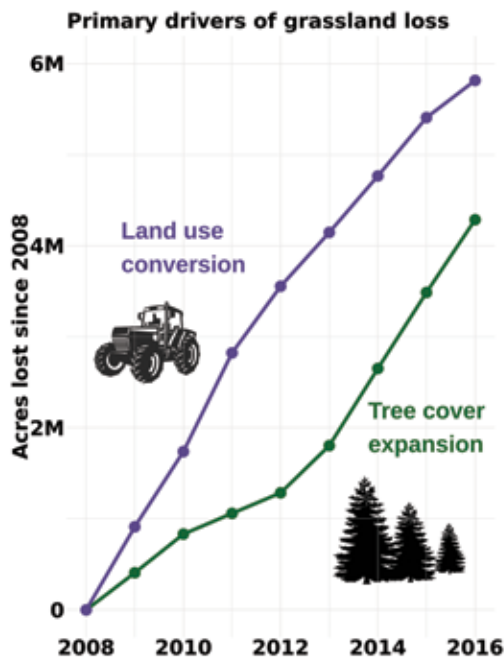
“They are now occurring at the same rate. We’re talking 130 million acres of grassland at risk from conversion with tractors or expansion of tree cover. We’re suffering from biodiversity loss from these—and we’re likely to really struggle with this. There’s no doubt about it, no group of rangeland professionals have had to deal with this scale of conversion and woody species pressure.”

### Prevent Woody Encroachment

Twidwell says it’s very important to prevent woody encroachment rather than let it become a problem to address after spread. “Instead of really expensive treatments after we have a major concern, we need to get out in front of it, and anchor in intact grasslands, rather than constantly trying to manage re-invasion,” he says.

“We’re starting to better understand that the approach of trying to restore grasslands that have been overrun with woody species is doomed to fail,” Twidwell says. “The number one predictability factor for woody encroachment

is proximity to the seed source. If you clear even small Cedar trees from grasslands mechanically, there are seeds left all over that rangeland. So that’s going to grow new trees, which will have to be cut again. Instead of restoring areas that have been lost to woody encroachment, it’s been proven it’s better to reduce that risk in the first place. We have to manage to disrupt seeds, rather than waiting to remove trees.”

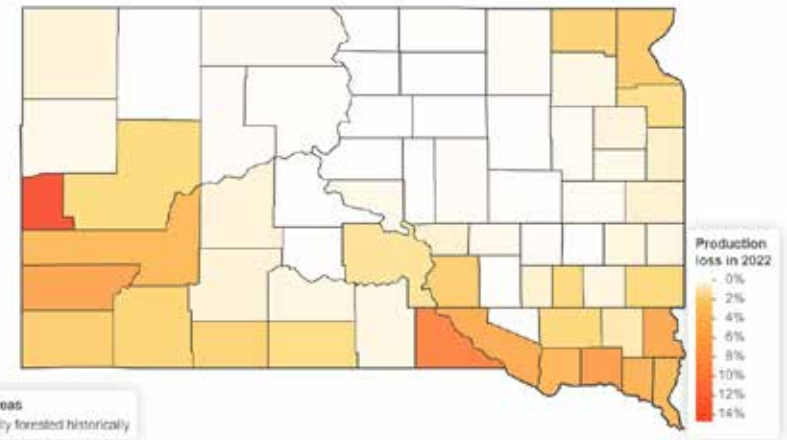


## South Dakota

### Rangeland Production Lost to Tree Encroachment

#### Rangeland Production Losses Map

Click any county on the map below to access its report.



The map above depicts percent production loss in 2022 relative to what would have been achievable had tree cover not changed since 1990.

Tree encroachment is a dominant change agent in western U.S. rangelands; tree cover has increased by 50% (77,323 km<sup>2</sup>) over 30 years, with more than 25% of U.S. rangelands experiencing sustained tree cover expansion. Since 1990, roughly 300 Tg of herbaceous biomass has been lost, totaling \$5 billion in foregone revenue to small agricultural producers.

#### Rangeland Production and Tree Cover Summary, South Dakota

Rangeland production in 2022	19,159,117 tons
Rangeland production losses in 2022	209,671 tons (1.08%)
Cumulative rangeland production losses since 1990	5,604,349 tons
Tree cover in 2022	736,354 acres
Tree cover change since 1990	+191,925 acres
Tree cover percent in 2022	2.90%

Report generated on 2023-12-21 from the Working Lands for Wildlife (WLFW) science team. The team maintains a woodland expansion database to track annual tree encroachment and resulting losses of herbaceous production in rangelands. Visit [wlfw.org/yieldgap](http://wlfw.org/yieldgap) to learn more.

# Land Use Conversion: Major Threat to Grasslands

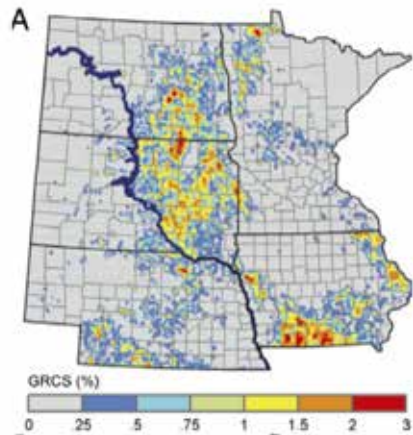
Grasslands are the most endangered ecosystem in the world

The loss of Amazon forestland has been widely publicized, and many people recognize that imposing loss of an important resource. Yet, the 20 percent of Amazon forests that have been lost pale in comparison to the loss of temperate grasslands worldwide. Roughly half the world's grasslands have been lost! Conversion to cropland or other uses is one of the primary reasons; in 2019 alone, 2.6 million acres of North American grasslands were plowed under, according to a World Wildlife Fund report. According to the World Wildlife Fund, only 53 percent of the Great Plains area's grassland remains intact – about 42 percent of the grasslands have been converted to crops or other uses.

That loss has been felt within South Dakota. A 2015 study based on manually-interpreted digital aerial photography found a net grassland loss of 4.6 million acres resulting from cropland expansion in the state of South Dakota over the six years from 2006 to 2012.

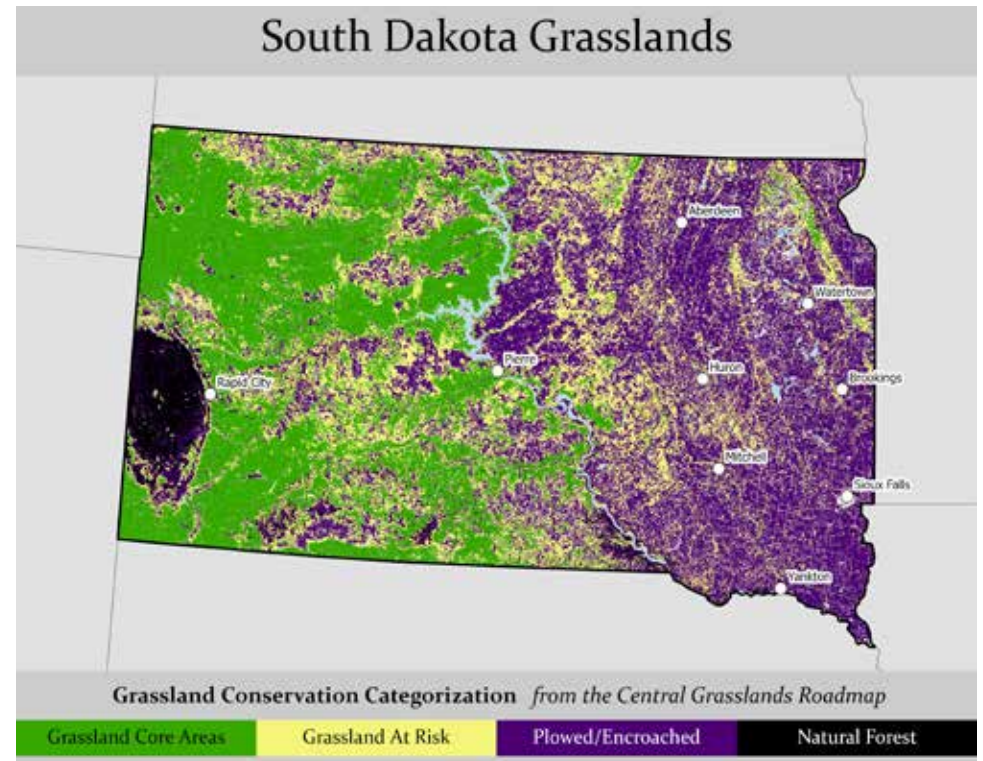
Tyler Lark, a scientist at the University of Wisconsin's Center for Sustainability and the Global Environment, estimates more than a million acres of grasslands in the United States are continuing to be converted to cropland each year.

Figure 2.2.1: Map Showing Absolute Change Rate from Grassland in 2006 to Corn or Soybean in 2011.



Source: (Wright & Wimberly, 2013).

Between 2008 and 2016, as corn prices spiked, U.S. farmers responded by converting more than 10 million acres to crops. Eastern South Dakota has been among the leading areas for rate of conversion from grassland to corn and soybeans, as shown by the rate of change from grassland to corn or soybeans from 2006 to 2011 (graphic on left).



Much of the grassland in eastern South Dakota has been converted to cropland or another use, or encroached upon with invasive woody species (purple). Most of the remaining grassland is at risk. In the west, much of the native grassland is still intact (green), but many acres are at risk (yellow).



# The Opposite Approach to Converting Grass into Croplands:

## Return Marginal Croplands to more suitable Grasslands land use

Highmore, South Dakota rancher Jim Faulstich believes all that conversion to crops is a big mistake. For more than 30 years, he's been taking the opposite approach, seeding more than 700 acres of what was marginal cropland on his Daybreak Ranch back to native grasses. It now grows lush grass for his cow herd as well as habitat for wildlife.

He says profitability on his ranch turned around when he began focusing on his land as a natural resource with the best use being growing grassland. "Converting the land back to grassland made our operation more drought resistant," Faulstich says.

His priority has been to manage the grassland resource so it can bounce back after a drought. He's liquidated cow herds to the point necessary to protect his grasslands. Faulstich uses grazing practices that include keeping good ground cover, and rotationally grazing or management intensive grazing versus season-long grazing, and timing and rest.

"All those things are so key to managing your grass to where you have a strong and diverse mix out there," Faulstich says. "One of the things we've emphasized is increasing our warm season grasses. They're a lot deeper rooted than cool



Jim Faulstich

season grasses, and they can really shine in a dry year. So, if you have a diverse mix out there, warm and cool seasons, and a lot of forbs and legumes, it just makes your operation a lot more resilient."



Returning cropland to grassland at Daybreak Ranch and managing to optimize the grassland resource has returned dividends to Jim Faulstich in the form of productive pastures for both cattle and hunting operations.

# RECORD FOR LIVESTOCK GRAZING

Name: \_\_\_\_\_

Year: \_\_\_\_\_ Farm No: \_\_\_\_\_ Tract No: \_\_\_\_\_

Field/ Pasture	Acres	Livestock Species/ Class	Livestock Wt. *	Livestock No.	Key Forage Species	Date Livestock In	Begin Graze Ht. *	Date Livestock Out	End Graze Ht. *	Days Grazed	Days Rest	Precip. Type/ Inches	Remarks/Observation Weed Pressure Wildlife Use etc.

Note: Livestock weight estimated; Beginning Graze Ht. estimated (for accuracy measure at least 10 plant locations); Ending Graze Ht. estimated (For accuracy Measure at least 10 plant locations); Be sure to measure same species for grazed and un-grazed pastures. These notes may be suitable as documentation for conservation programs including the Environmental Quality Incentives Program (EQIP) or the Conservation Stewardship Program (CSP).

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“The grassland is a big life, but it’s thinner than people’s eyelids. If you rupture its grassy surface, you blind it, and dust storms are more lethal than the white-hair blizzards. If the grassland dies, so will the cows and sheep and horses, as well as the wolves and the people, all the little lives.”

- Jiang Rong, Author of Wolf Totem