



2018
SOUTH DAKOTA
GRASSLANDS PLANNER

Thank you for your passion for grassland management!



Photos shows comparison depth of moisture penetration on approximately 4% slope after a rain. August 13, 1970, Walworth County, SD.

**HEALTHY, WELL MANAGED GRASSLANDS = HEALTHIER SOILS =
BETTER RAINFALL INFILTRATION & RETENTION = HIGHER PRODUCTION**

Grassland Managers,

It is doubtful that anyone would argue the importance of rainfall and water to every South Dakotan. Across the state, discussions are being held on what we can do to make our fields, pastures, and soil ready to receive precipitation. How we manage our lands determines how well that land is able to absorb and hold onto that water.

We are learning so much as new information and research is gathered daily. Some knowledge has been around for a while as the historical photo shows. What does better rainfall infiltration mean on a landscape scale? -It means increased production on our grasslands.

Most years, NRCS helps South Dakota ranchers apply over 80,000 acres of improved grazing management through the facilitating practices of the Environmental Quality Incentives Program (EQIP). It is very reasonable to assume that land is able to infiltrate 1 additional inch of rainfall with that improved management and the improved soil health that results.

That extra inch amount of water, over 80,000 acres, would fill 264,000 tanker trucks. They would stretch 3,500 miles. It is only 2,800 miles from Los Angeles to New York City.

What does it mean for production? Normally, grasslands can produce 150 to 200 pounds of forage with every additional inch of soil moisture. Over 80,000 acres that is 12 million pounds of forage.

Let us assume we only harvest 25% of that with grazing livestock.... that is an additional 3,300 Animal Unit Months (AUMs) of production.

Here is a quick calculation for a 10,000 acre ranch.

10,000 acres x 150 lbs. forage produced per acre =
1,500,000 lbs. of forage

If the rancher utilizes 25%...

1,500,000 lbs. x .25% = 375,000 lbs.

375,000 lbs. divided by 900 lbs. per Animal Unit Month (AUM) =
416.67 AUMs

So, if we could get more water to infiltrate the soil on that 10,000 acre ranch, that value would be additional forage for over 400 additional AUMs.

Ranchers who develop and implement comprehensive grazing management systems increase the health of their soil. That healthier soil will better handle rain, or lack of rain, throughout the year. We have come a long way in understanding and managing our natural resources. At the start of 2017, many of us are evaluating where we've been, celebrating accomplishments, and looking ahead. As a land manager, you develop goals for your operation that include economics, environment and community. The partners involved with this grassland planner want to help you achieve those goals.

Thank you for your part in keeping healthy the environment we all share. Enjoy the Grassland Conservation Planner.

Jeff Zimprich, State Conservationist
USDA Natural Resources Conservation Service
South Dakota

Board of Directors and Members of the South Dakota
Grassland Coalition



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Cody Jorgensen



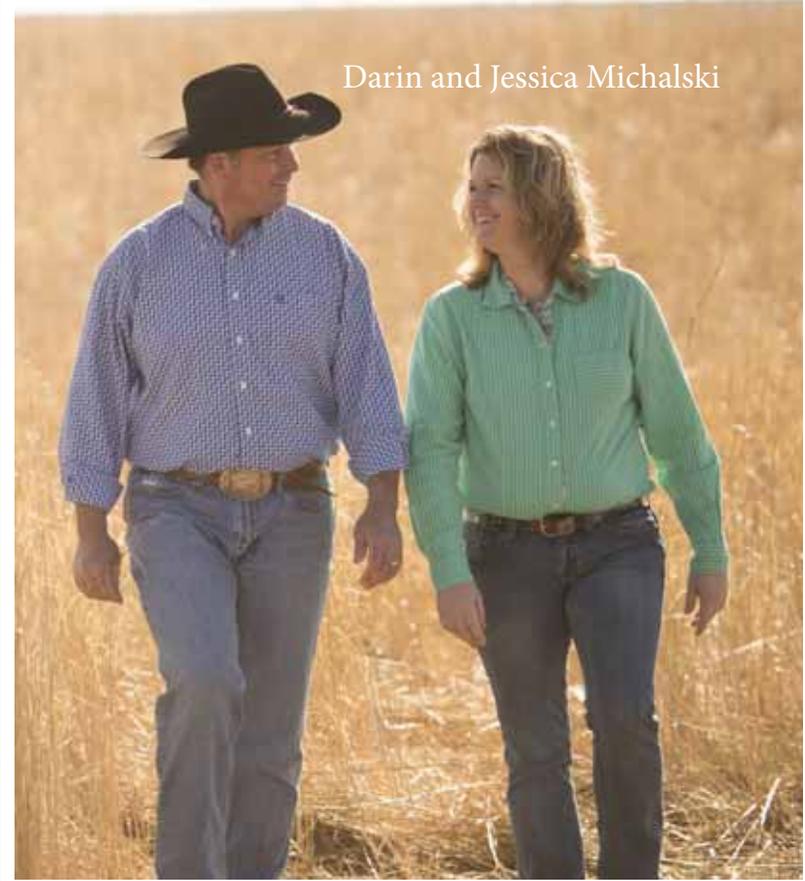
Planting cover crops not only give benefits to the soil but can extend your grazing season.

We were saving \$1.53 a day per bull by our bulls grazing cover crops versus feeding them in our lots. Take that times 800 bulls and that is a huge economic savings.

JANUARY 2018

Cody Jorgensen, Jorgensen Land and Cattle, Ideal, SD

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	○ 1	2	3	4	5	6
	New Year's Day			Contact your local NRCS for help in developing your conservation plan - the first step to address your resource goals.		
7	● 8	9	10	11	12	13
	If your operation needs improvements on your grazing lands, consider applying for the Environmental Quality Incentives Program (EQIP) or the Conservation Stewardship Program (CSP). Sign-up is continuous.					
14	15	● 16	17	18	19	20
	Marin Luther King Jr.'s Birthday					
21	22	23	● 24	25	26	27
28	29	30	☾ 31			
					DECEMBER 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	FEBRUARY 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
Conservation easements can keep working lands in production while protecting the grassland resource. Contact NRCS or USFWS for options and payment rates.						



Darin and Jessica Michalski



Planting grass on marginal cropland will enhance diversity and sustainability to the operation.

“Dad always cussed some of the land we farmed and said that we should sow this down to grass. With help from a lot of good landlords, we made that happen.”

Darin and Jessica Michalski, Michalski Ranch, Willow Lake, SD

FEBRUARY 2018

SUNDAY							MONDAY							TUESDAY							WEDNESDAY							THURSDAY							FRIDAY							SATURDAY						
JANUARY 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							MARCH 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																					1							2							3						
4							5							6							7							8							9							10						
11							12							13							14							15							16							17						
							Lincoln's Birthday							Mardi Gras							Great Horned Owl begins nesting. Valentine's Day																											
18							19							20							21							22							23							24						
							President's Day																					Washington's Birthday																				
25							26							27							28																											

Mark your calendar for SDSU Extention, NRCS and other conservation partner workshops throughout the year.
Ground Hog Day



Chad Schooley



Planning trees in the right area of your operation can enhance wildlife habitat and provide protection for livestock.

“We planted trees around the riparian area to reduce erosion, keep the water clean and provide habitat for wildlife.”

Chad Schooley, Cabin Still Cattle Company, Castlewood, SD

MARCH 2018

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
FEBRUARY 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	APRIL 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			1	2	3
4	5	6	7	8	9	10
		Male sage grouse begin attending leks to perform courtship strutting displays.	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 www.sd.nrcs.usda.gov .			
11	12	13	14	15	16	17
Daylight Savings Begins @ 2am		Western Meadowlarks migrate through the state. Nesting in medium height grassland habitat begins in mid-May.				
18	19	20	21	22	23	24
		First Day of Spring				
25	26	27	28	29	30	31
Make sure your pollinator plot planning and site preparation are on schedule. Add a smaller butterfly or native pollinator garden near your home, including milkweeds to attract monarchs.				Chorus frogs emerge and begin calling from small wetlands.	Good Friday	



Rich and Sara Grim



**Many of the native plants on the prairie respond favorably to fire.
Fire can also reduce the amount of invasive plants such as cedar.**

APRIL 2018

“Prescribed fire does a lot of really good things.” Rich and Sara Grim, Grim Ranch, Bonesteel, SD

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY																																																																																																		
1	2	3	4	5	6	7																																																																																																		
Watch for migrating Sandhill and Whooping cranes. Report Whooping Crane sightings to SD Game, Fish and Parks or the U.S. Fish and Wildlife Service. Easter April Fool's Day				Finalize grazing plans for this growing season.																																																																																																				
● 8	9	10	11	12	13	14																																																																																																		
Assess growth of introduced cool-season pasture. Continue to use hay, grains or silage forages if spring pasture growth is less than 3-leaf stage.				Look for flowering pasqueflower in native rangelands.																																																																																																				
● 15	16	17	18	19	20	21																																																																																																		
● 15			Mallard and pintail ducks begin nesting Do you have a drought plan? Tax Day		Average nest initiation for prairie grouse in central S.D.																																																																																																			
● 22	23	24	25	26	27	28																																																																																																		
Take advantage of early-growing species (e.g., bluegrass) in order to manage species composition. Plan and complete spring weed control. Spot spraying may be necessary.			Administrative Professionals Day		Warblers migrate through the state, passing through or staying to rest. The Yellow Warbler is a common nesting warbler nearly statewide.																																																																																																			
☾ 29	30				<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>1</td><td>2</td><td>3</td> <td></td><td></td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</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>		MARCH							MAY							S	M	T	W	T	F	S	S	M	T	W	T	F	S					1	2	3			1	2	3	4	5	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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Grass is greening up, do you need to adjust your mineral program?																																																																																																								



Kyle, Carrie, Jake, Haley, Terry, Billie and Remy Schell



Develop a drought plan before a drought occurs.

“Under drought conditions, it is such a fast changing thing. If you don’t make the adjustments, it’s easy to damage your operation.”

MAY 2018

Terry Schell, Schell Ranch, Wall, SD

SUNDAY							MONDAY							TUESDAY							WEDNESDAY							THURSDAY							FRIDAY							SATURDAY						
APRIL 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							JUNE 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							1							2							3							4							5						
6							● 7							8							9							10							11							12						
Watch for details of the SD Grassland Coalition's Annual Bird Tour.														Is there a delay in green-up of native grasses? Make adjustments to turn-out dates accordingly.														International Migratory Bird Day.																				
13							14							● 15							16							17							18							19						
Mother's Day							Watch for monarch butterflies.							Peak nest initiation for pheasants in eastern SD							Watch for grass tetany.							Lark Buntings arrive to nest in grasslands. The black-and-white male's courtship display includes a flight 20-30 feet aboveground. He then flutters to the ground while singing. The Bobolink is similar to appearance. The male does low display flights, singing while fluttering his wings.																				
20							● 21							22							23							24							25							26						
																												Place salt and mineral away from water resources to provide for better range utilization.																				
27							28							☉ 29							30							31																				
							Peak of white-tailed deer fawn births in Eastern SD. Memorial Day							Remember to enter information in your Record of Livestock Grazing.																																		



Todd Mortenson, Jay Poindexter, Jim Faulstich, Arla Poindexter, Breck Hamann, Herb and Bev Hamann, and Jeff Zimprich.

The Hamann Family/Blue Bell Ranch
2017 Leopold Conservation Award®

Maintaining adequate residual stubble heights is an investment in soil health and future production.

“I think the main thing is not to over graze because in this county, some think if you have grassland left over it seems like you’re wasting all that grass. I just never looked at it that way.”

Herb Hamann, Blue Bell Ranch, Clear Lake, SD

JUNE 2018

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p>MAY</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>JULY</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 31</p>				1	2
3	4	5	● 6	7	8	9
	Peak of mule deer fawn births in Western SD.	Start looking for native forbs/flowers and shrubs that indicate healthy rangelands (e.g. purple coneflower, prairie coneflower, purple prairie clover, prairie smoke, leadplant, etc.)			Begin to seed summer annual forages.	
10	11	12	● 13	14	15	16
	Check water sources frequently.			Flag Day	Peak of pheasant and duck hatch.	
17	18	19	● 20	21	22	23
Father's Day			THE GRASSFED EXCHANGE- Rapid City, SD			
			Watch grazing heights and rest periods carefully. First Day of Summer			
24	25	26	○ 27	28	29	30
		<ul style="list-style-type: none"> • Graze annual forages at 18-24" height. • Watch pasture for weeds & invasives. • Remember to enter information in your Record of Livestock Grazing. Move animals based on plant height NOT calendar dates!			<ul style="list-style-type: none"> • Evaluate shade/water needs and plan for next year. • Slow rotation and lengthen recovery periods. 	



Dan and Sharon Anderson





Dean and Candice Lockner



Properly managed grazing lands can provide wildlife opportunities.

“In the first fields that I planted back to grass, I was shocked when I saw a Lek of sharp-tail grouse doing a dance. Taking care of the grass and the soil beneath the grass; then those other things tend to take care of themselves.”

Dean and Candice Lockner, Thousand Hills Ranch, Ree Heights, SD

AUGUST 2018

SUNDAY							MONDAY							TUESDAY							WEDNESDAY							THURSDAY							FRIDAY							SATURDAY						
JULY 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							SEPTEMBER 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														1							2							3							• 4						
5							6							7							8							9							10							• 11						
							Contact the SD Grassland Coalition about the South Dakota Grazing School.																																									
12							13							14							15							16							17							• 18						
Start planning for native seed harvest.							Consider cover crops as alternative forage; plant into small grain stable.																					Continue to implement Drought Contingency Plan action items as needed.																				
19							20							21							22							23							24							25						
																					Plan winter feed supply.																											
○ 26							27							28							29							30							31													



Tee Tatrault

Steve and Paula Livermont





Mimi Hillenbrand, Owner and Moritz Espy, Foreman

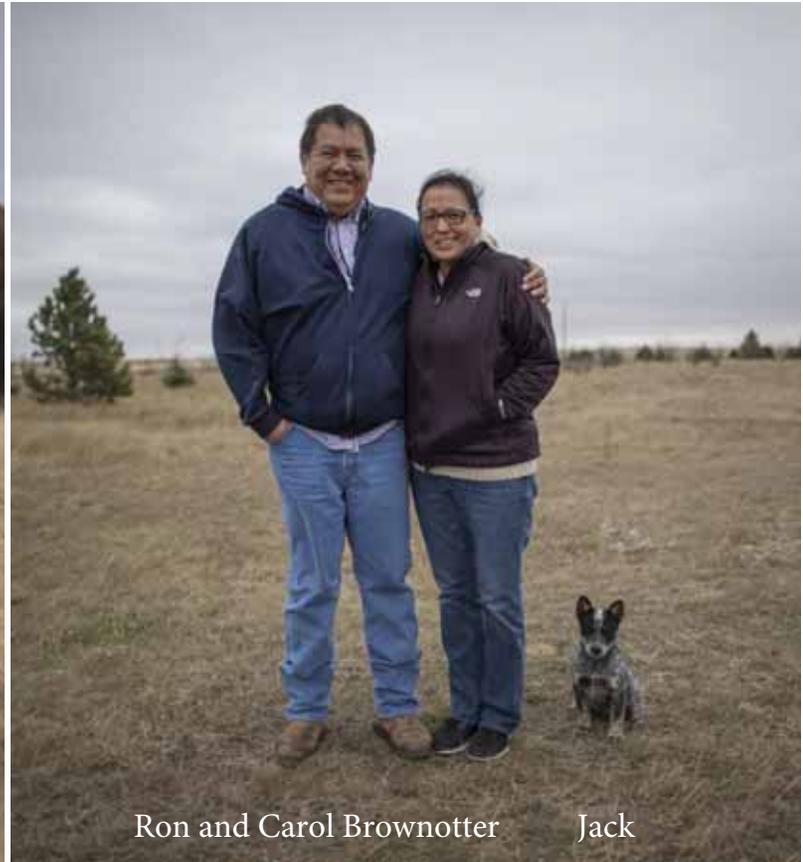


“By planning our grazing, we are trying to mimic how the herds would work through an area. Holistic Management is based on the herds of Africa. Big herds, concentrated, moving through and then allowing the plants time to recover.”

Mimi Hillenbrand, 777 Bison Ranch, Hermosa, SD

OCTOBER 2018

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1	• 2	3	4	5	6
		Conduct annual soil tests on fertilized pasture.			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.	
7	• 8	9	10	11	12	13
	Columbus Day Native American Day					
14	15	• 16	17	18	19	20
		If your operation needs improvements on your grazing lands, consider applying for the Environmental Quality Incentives Program (EQIP) or the Conservation Stewardship Program (CSP). Technical assistance is free and financial assistance sign-up is continuous.				
21	22	23	☾ 24	25	26	27
		Continue to implement Drought Contingency Plan action items as needed.				
28	29	30	• 31			
	Remember to enter details in your Record of Livestock Grazing.		Halloween		SEPTEMBER 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	NOVEMBER 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



Ron and Carol Brownotter Jack



Restoring native plant and animal communities restores cultural heritage.

"Our goals are protecting the soil from erosion and managing the resources for future generations to come." Ron and Carol Brownotter, Brownotter Buffalo Ranch, Timber Lake, SD

NOVEMBER 2018

SUNDAY							MONDAY							TUESDAY							WEDNESDAY							THURSDAY							FRIDAY							SATURDAY																											
OCTOBER							DECEMBER																					1							2							3																											
S	M	T	W	T	F	S	S	M	T	W	T	F	S																																																								
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28	29	30	31				23	24	25	26	27	28	29																																																								
						4						5						6						7							8							9							10																								
Daylight Savings Time Ends														Watch for Snowy Owls as they move south into South Dakota during years when food may be scarce farther north.																																																							
						11						12						13						14							15							16							17																								
Veteran's Day														Evaluate end of year pasture use.														Prepare your financial statements for your lender and you!																																									
						18						19						20						21							22							23							24																								
																												Thanksgiving Day																																									
						25						26						27						28							29							30																															
Test forages and hay before feeding; results can improve winter feeding efficiency. Separate animals by nutritional needs; lactating or gestating stock need your best forages. Start the tax planning process.																																			69th Annual SDCA Convention and Trade show November 28th - 30th in Pierre. Do you have your 2018 pasture figured out?																																		



Tracy Rosenberg



"I love the symbolism of terms..while the Midwest is often referred to as a breadbasket, South Dakota's pothole region is sometimes called an ark. But, lately I've adopted a better word..the potholes of South Dakota is a womb. It creates life—native flora, soil microbes, pollinators, waterfowl, songbirds, and wildlife. It gives birth through diversity. Saving the pothole prairie is saving life."

Tracy Rosenberg, Abbey Grasslands of the Prairie Coteau, Marvin, SD

DECEMBER 2018

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
NOVEMBER 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	JANUARY 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					1
2	3	4	5	6	● 7	8
		Check pastures and the SD Drought Tool for 2018 forage production forecast.			Pearl Harbor Remembrance Day	
9	10	11	12	13	14	● 15
National Audubon Society's Christmas Bird Counts completed throughout the state. These counts have been done since 1901, making this the longest-running citizen science bird project in the U.S.					Monitor body condition score trends of your herds.	
16	17	18	19	20	21	☾ 22
					First Day of Winter	
23	24	25	26	27	28	● 29
	Christmas Eve	Christmas	Did you remember to take a vacation this year? Plan for next year!			
30	31					
	New Year's Eve					

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 & SDSU 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/or need for financial assistance, staff are available through NRCS and SD Conservation Districts, and other partners such as the SD Grassland Coalition & 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., who may have additional avenues of assistance.

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
- Grazing systems
- Fencing
- Monitoring techniques
- Drought management
- Grasses for forage production

Depending upon the area of expertise and/or need for 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
sdda.sd.gov
(605) 773-3375

Ducks Unlimited
www.ducks.org/south-
dakota
(605) 881-3379

South Dakota
Grassland Coalition
www.sdgrass.org

South Dakota Game, Fish
and Parks
gfp.sd.gov
(605) 773-3658

World Wildlife Fund
(WWF)
13 S. Willson, Suite 1
Bozeman, MT 59715
(406) 582-0236

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

U.S. Fish and Wildlife
Service, Brookings
www.fws.gov/
mountainprairie/pfw/sd
(605) 697-2500

South Dakota Soil Health
Coalition
www.sdssoilhealth.org
sdssoilhealth@gmail.com

South Dakota State
University (SDSU)
Extension Service
igrow.org
(605) 394-2236

Pheasants Forever
pheasantsforever.org
(605) 651-2716

Additional distribution of this planner courtesy of the Tri-State Livestock News and Cattle Business Weekly.



Photos by:
Joe Dickie, Mitch Kezar,
Pete Bauman, and
Colette Kessler.

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 (dashed oval)	Money & Labor
One or More Factors	Past Experience	Expert Opinion	Research Results	Expediency	Compromise	Cultural Norms	Cost, Etc.	
Testing Questions Objectives and Actions	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								

*"We do not inherit the earth from our ancestors;
we borrow it from our children."*

-Native American Proverb

