

7/25/96

Dear Gus:

Attached is a proposal for a grazing system in eastern Montana that is giving me a lot of heartburn. It was proposed by one of our biologists *Ray Mule*. Ray has indicated to people in my Department that, at some time, he has discussed this approach to a grazing system with you and that you approve of it as a good rest-rotation grazing formula. Is he correct ?

I would appreciate it if, as a personal favor to me, you could review this proposal and give me your thoughts and recommendations. It is my job to review grazing proposals for my agency and determine if they are proper rest-rotation systems. Ray Mule has devised this scheme in an effort to provide the maximum residual cover for ground nesting birds, but I think he may have compromised some important rest-rotation principles in his effort. Either that or I am worrying to much about the following aspects of his formula:

1. Each year the grazing season starts out in the spring in a pasture that was grazed from July 1 to November 1 the previous year. I have found it very important to begin the grazing season in a pasture that was rested the previous year. I learned this from you and have found it to be very important from my own experience. It is important for the livestock operator and the vegetation. Is this true ? Under this 4-pasture formula is it still important to start the grazing season in a pasture rested the previous year ? If so I would appreciate your opinions as to why it is important. My viewpoint isn't being accepted very well. Does starting out the grazing season in a pasture that was grazed the previous year mean a stockman will have less grazing capacity that year compared to starting the season in a rest pasture ?

2. The grazing sequence for each pasture is as follows, if a pasture is grazed from *July 1 to Nov. 1* in year one, in year 2 it is grazed from *May 1 to August 1*, then in year 3 it is grazed from *August 1 to November 1*, in year four it is *rested*. My concern is with this rotation a pasture is grazed two growing seasons back to back. Flowering time would be about July 1 and seed ripe about August 1. I remember you telling me that between flowering and seed ripe is an important time for the bunchgrasses as they are topping off their root reserves. I think you told me about 10 % of the root food storage takes place between flowering and seed ripe. Is this correct or am I wrong ? I have been trying to make sure that a pasture is only grazed 1 out of three growing seasons in our systems. This one allows growing season grazing two out of four years. Does Ray Mule's formula provide enough rest for the vegetation ?

My concern isn't with the number of pastures or the cover for birds as much as it is making sure my agency's grazing systems meet the needs of the soils and vegetation. Also when we are working with ranchers we need to provide them with a formula that gives them the opportunity to maintain the maximum number of livestock.

I would also appreciate any other comments you might have regarding the attached.

I know you are very busy working on the rest-rotation book, but I would appreciate your comments as soon as possible because this is something we really need to get resolved.

Best Regards,

Nike [FRISINA]

Guss: I know we should use seed ripe time instead of a date, but our lawyers insist on an approximate date. In this situation seed ripe is about August 1, only one plants are flowering.

Montana Department of Fish, Wildlife & Parks

UPLAND GAME BIRD HABITAT ENHANCEMENT PROGRAM

GRAZING MANAGEMENT AGREEMENT

This MANAGEMENT AGREEMENT is between the Montana Department of Fish, Wildlife and Parks, called the Department,
and Harold E. Carda & Beverly K. Carda, HC 87, Box 2163, Richey, MT 59259, MT 59259
Cooperator Mailing Address Zip Code

called the Cooperator. Cooperator's phone number is 774-3470.

1. The purpose of this Management Agreement is to develop wildlife cover on approximately 2,077 acres of land, 4,917 acres of which are owned by the cooperator and legally described as follows:

T26N, R53E - S $\frac{1}{2}$ NE $\frac{1}{4}$ Sec 17 (80ac), SE $\frac{1}{4}$ Sec 17 (160ac), SE $\frac{1}{4}$ Sec 19 (160ac), S $\frac{1}{2}$ SW $\frac{1}{4}$ Sec 19 (79ac),
NE $\frac{1}{4}$ SW $\frac{1}{4}$ Sec 19 (40ac), NE $\frac{1}{4}$ Sec 19 (160ac), SE $\frac{1}{4}$ NW $\frac{1}{4}$ Sec 19 (40ac), NE $\frac{1}{4}$ Sec 20 (160ac),
S $\frac{1}{2}$ Sec 20 (320ac), S $\frac{1}{2}$ NW $\frac{1}{4}$ Sec 20 (80ac), W $\frac{1}{2}$ E $\frac{1}{2}$ Sec 29 (160ac), SW $\frac{1}{4}$ Sec 29 (160ac), N $\frac{1}{2}$ Sec 30 (318ac)
All above land located in Richland County, MT.

[See attached map(s)]. Cooperator represents that Cooperator is the owner of all of the land described above, and has under its control, through leases or otherwise, the remaining land covered by this agreement. This agreement may also cover public lands owned by the state of Montana or the United States. The Cooperator represents that the Cooperator is in good standing under any agreement with the state of Montana or the United States, including any allotment management plan that may be in effect. Cooperator further represents there is presently no action or threatened action, or other facts and circumstances known to Cooperator, which would impair the Cooperator's ability to abide by the terms of agreement for the term contemplated by the parties.

2. The project is located 23 mi N, 8 mi E of Richey.
(miles) (direction) (nearest town)

3. The project objectives and species of concern are:

Complete the range improvements as described in Attachments A and D; follow the grazing schedule in Attachment B and the instructions in Attachment C. Purpose is to improve year-long habitat for sharptailed grouse, pheasants, and gray partridge and nesting habitat for lark-huntings, bobolinks, meadowlarks, and dickcissels.

4. The Department and Cooperator agree to share the costs of the project according to the attached Grazing Plan which also describes the physical improvements to be made to the property.

5. All payments from the Department will be made to the Cooperator according to the attached Payment Schedule.

6. Physical improvements to the project area, including watering developments and fencing, must be completed according to the attached Construction Outline. The Construction Outline may be incorporated into the Grazing Plan.

7. All Department payments owed as a result of this Management Agreement shall be made directly to the Cooperator. The department will not be responsible for making such payments to any other party unless directed to do in writing by the Cooperator. Receipts must be provide for reimbursement of materials used in range improvements.

8. Grazing must follow the attached Grazing Plan. Any deviation from the Grazing Plan must be approved in writing by a Department representative.

9. This Management Agreement is to remain in force for that period specified in the attached Grazing Plan. In the event that the ownership of part or all of the above-described land changes before the Agreement is completed, the subsequent landowner shall be bound by this Management Agreement.

10. The Cooperator agrees that reasonable free public hunting of upland game birds, wildlife viewing, and other nonconsumptive wildlife use will be allowed for the life of the contract with Cooperator permission. The landowner will retain the right to limit the number of hunters and nonconsumptive users. The Cooperator further agrees to permit Department representatives access for inspection, monitoring, evaluation, and study.

11. If the Cooperator wishes to be released from the obligations of this Management Agreement, release will be granted only in writing by the Department. If this Management Agreement is terminated under this paragraph, Cooperator shall owe the Department a sum equal to the amounts expended under this Management Agreement by the Department for improvements to the Cooperator's lands, multiplied by the ratio of the time period remaining on

the Management Agreement to the original time period specified in the attached Grazing Plan. Such sum shall be due and payable within 30 days after this Management Agreement is canceled.

12. Drought, water shortages, fire, insect infestations, and other emergencies will not be cause for changes in this Agreement except by mutual agreement between the Department and the Cooperator.

13. This contract constitutes the entire agreement between the parties. All attachments are incorporated into this agreement by reference. No modification of this Agreement will be allowed unless put in writing and signed by both the Cooperator and the Department.

14. If Upland Game Bird Habitat Enhancement Program funds are discontinued, this Agreement may be canceled and terminated.

15. If the Cooperator fails to comply with the terms of this Agreement, the Department may give written notice to the Cooperator of its intent to cancel and terminate this Agreement if conditions which constitute the noncompliance is not cured. Cooperator shall be given at least 30 days to correct the noncompliance. If Cooperator fails to do so, the Department may then cancel and terminate this Agreement without further notice. If this Agreement is canceled under this paragraph, Cooperator shall owe the Department a sum equal to the amounts expended under this Agreement by the Department for improvements to the Cooperator's lands, multiplied by the ratio of the time period remaining on the Agreement to the original time period specified in the attached Grazing Plan. Such sum shall be due and payable within 30 days after this Agreement is canceled.

16. This Agreement shall be binding upon and shall insure to the benefit of the heirs, representatives, successors and assignees of the parties of this Agreement. The Department may cause this Agreement to be recorded in the official records of the county or counties in which the land described in paragraph one is located.

In Witness Whereof, the parties have executed this agreement on the day and year set forth below.

Department of Fish, Wildlife & Parks

By: _____	_____	<i>Beverly Kay Cardo</i> <i>Harold E. Cardo</i>	<i>5-25-96</i>
Director or Designated Representative	Date	Cooperator	Date
		<i>X 81-0358926</i>	
		Cooperator's SSN/Tax ID No.	

STATE OF MONTANA)

County of Richland

: ss.

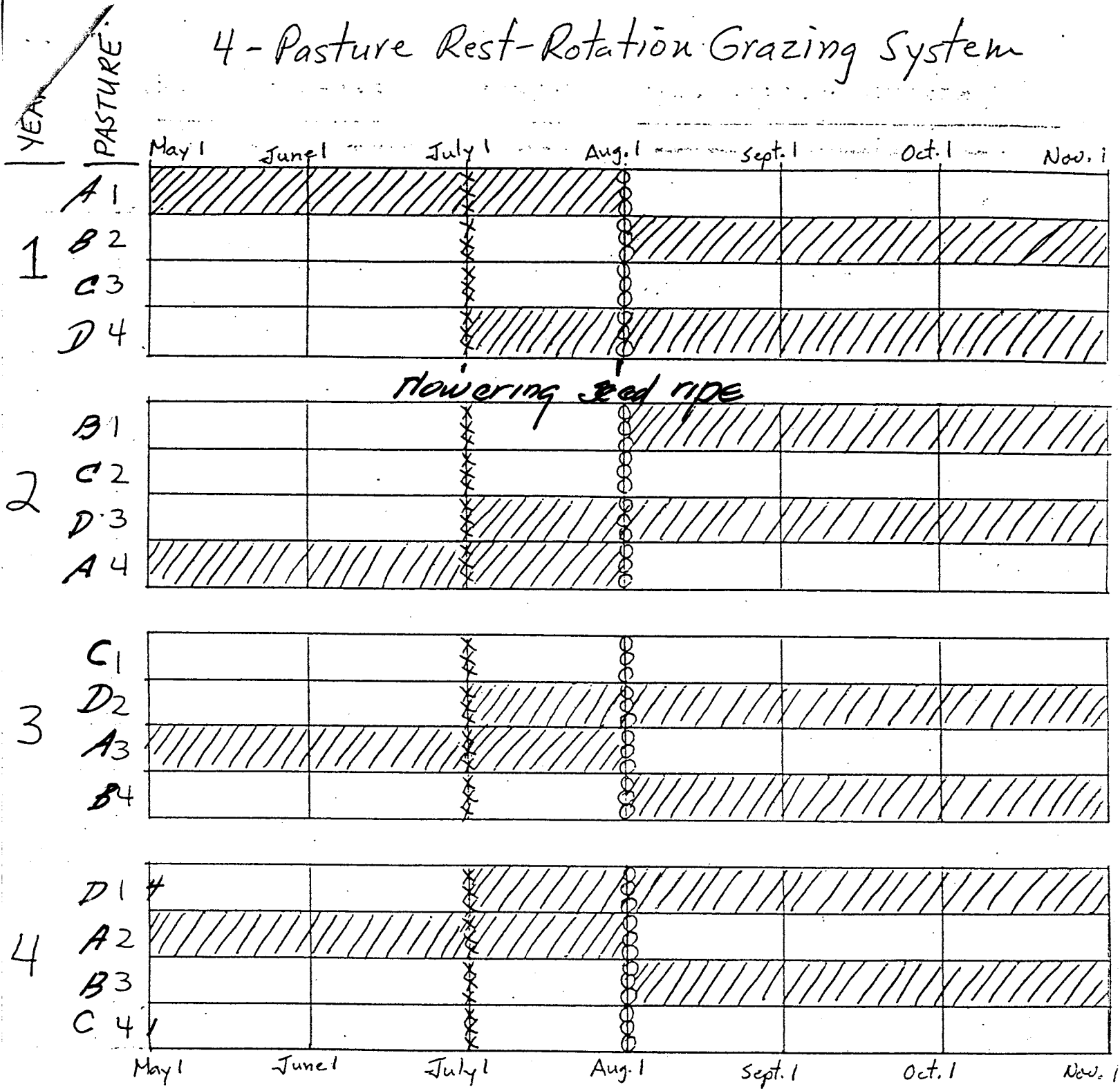
On this 25th day of May, in the year 1996, before me, Janet L. Sergeant Notary Public for the State of Montana, personally appeared Beverly Kay Cardo Harold E. Cardo, known to me to be the person (s) whose name (s) subscribed to the within instrument, and acknowledged to me that (he, she or they) executed the same.


IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year hereinabove first written.

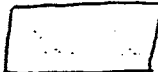
Janet L. Sergeant - May 1, 1999
Notary Public for the State of Montana
Residing at Sidney, Montana


(NOTARIAL SEAL)


4 - Pasture Rest-Rotation Grazing System



 = Graze

 = Rest (No Graze)

 = Flower Maturity

 = Seed Ripe

Attachment A. Harold Carda range management construction plan.

LOCATION ¹	PRACTICE	CONTRACT TERM	TIMING	ACRES	RATE	MT FWP COST
Pasture 1	Fence	6/1996-12/2014	"	412	6,660ft @ \$0.30ft - 75%	\$1,499
"	Pipeline	"	"		3,000ft @ \$1.25/ft - 75%	\$2,812
"	Stocktank	"	"		1, 2ftx12ft @ \$969 + float @ \$250 - 75%	\$914
Pasture 2	Pipeline	"	"	480	2,640ft @ \$1.25/ft - 75%	\$2,475
"	Stocktank	"	"	"	1, 2ftx12ft @ \$969 + float @ \$250 - 75%	\$914
Pasture 3	Well	"	"	417	60ft @ \$21/ft - 75%	\$945
"	Stocktank	"	"	"	1, 2ftx12ft @ \$969 + float @ \$250 - 75%	\$914
"	Grass Seeding	10/1996-12/2014	10/1996	44 ²	\$20/acre - 0%	\$0
"	Fence	6/1996-12/2014	6/1996	417	8,976ft @ \$0.30/ft - 75%	\$2,020
Pasture 4	Pipeline	"	"	322	2,640ft @ \$1.25/ft - 75%	\$2,475
"	Stocktanks	"	"	"	2, 2ftX12ft @ \$969ea +2 floats @ \$250ea - 75%	\$1,828
"	Pit	"	"	"	1 @ \$1,500 - 75%	\$1,125
Pasture 5	Well	"	"	446	100ft @ \$21/ft - 75%	\$1,575
"	Pit	"	"	"	1 @ \$1,900 - 75%	\$1,425
"	Pipeline	"	"	"	5,280ft @ \$1.25/ft - 75%	\$4,950
ALL	---	7/1996-12/2014	---	2,077	---	\$25,684

(17.03/ac) *Significant amount: 35,375.80*
25% cost share is by landowner
9,691.80 (27%)

¹See map (Attachment D) for location.

²This acreage figure included in the 417 total acres in Pasture 3.

Attachment B. Harold Carda 4-pasture rest-rotation grazing system schedule.

YEAR	PASTURE ¹ 1	PASTURE 2	PASTURE 3	PASTURE 4	PASTURE 5 ²
1997	May 1 - Aug. 1 ³	Aug. 1 - Nov. 1	REST ⁴	July 1 - Nov. 1	Graze as crop rotation allows
1998	Aug. - Nov. 1	REST	July 1 - Nov. 1	May 1 - Aug. 1	"
1999	REST	July 1 - Nov. 1	May 1 - Aug. 1	Aug. 1 - Nov. 1	"
2000	July 1 - Nov. 1	May 1 - Aug. 1	Aug. 1 - Nov. 1	REST	"
2001	May 1 - Aug. 1	Aug. 1 - Nov. 1	REST	July 1 - Nov. 1	growing "Season"
2002	Aug. 1 - Nov. 1	REST	July 1 - Nov. 1	May 1 - Aug. 1	growing "Season"
2003	REST	July 1 - Nov. 1	May 1 - Aug. 1	Aug. 1 - Nov. 1	seed wipe
2004	July 1 - Nov. 1	May 1 - Aug. 1	Aug. 1 - Nov. 1	REST	"
2005	May 1 - Aug. 1	Aug. - Nov. 1	REST	July 1 - Nov. 1	"
2006	Aug. 1 - Nov. 1	REST	July 1 - Nov. 1	May 1 - Aug. 1	"
2007	REST	July 1 - Nov. 1	May 1 - Aug. 1	Aug. 1 - Nov. 1	"
2008	July 1 - Nov. 1	May 1 - Aug. 1	Aug. 1 - Nov. 1	REST	"
2009	May 1 - Aug. 1	Aug. 1 - Nov. 1	REST	July 1 - Nov. 1	"
2010	Aug. 1 - Nov. 1	REST	July 1 - Nov. 1	May 1 - Aug. 1	"
2011	REST	July 1 - Nov. 1	May 1 - Aug. 1	Aug. 1 - Nov. 1	"
2012	July 1 - Nov. 1	May 1 - Aug. 1	Aug. 1 - Nov. 1	REST	"
2013	May 1 - Aug. 1	Aug. 1 - Nov. 1	REST	July 1 - Nov. 1	"
2014	Aug. 1 - Nov. 1	REST	July 1 - Nov. 1	May 1 - Aug. 1	"

¹See map (Attachment D) for pasture numbers (circled on map) and locations.

²Pasture 5 is mostly cropland and will be grazed as the crop rotation allows.

³Dates listed in schedule are those within which vegetation may be removed from pastures by livestock grazing, haying, mowing, etc.

⁴REST = NO removal of vegetation from pastures by livestock grazing, haying, mowing, etc.

Attachment C. Harold Carda 4-pasture rest-rotation grazing system instructions.

1. The dates and pasture rotations are designed to provide for the needs of the desirable plants, livestock, and wildlife (with emphasis on ground-nesting birds). August 1 should be seed-ripe for the grass plant species that ripens seed latest in the season (western wheatgrass). Adjustments may be made in the future (with Dept. approval) if it is apparent that plant growth differs significantly from that indicated by these dates.
2. The overall stocking rate is determined by the operator. The rest-rotation grazing system, not the stocking rate, will insure that the plants do not get over-used. Over-stocking will probably show up as poor livestock performance.
3. A pasture may be grazed at any time during the period shown for grazing on the attached schedule. Overlap in the grazing periods among pastures allows the operator to use his own judgement as to how much a particular pasture gets utilized each year.
4. Pastures do not have to be grazed during all periods listed in the schedule - more rest may be provided if so desired. However, to achieve the beneficial effects of seed trampling, at seed ripe time (near August 1) there should always be some livestock in the pasture scheduled for this treatment.
5. Livestock may not be allowed into a pasture scheduled for grazing more than seven (7) days before the date listed, except for the May 1 date which is simply a guideline. Livestock must be out of a grazed pasture within seven (7) days following the date listed, except for the November 1 date which is simply a guideline.
6. It is suggested that the pasture scheduled for grazing on July 1 be only lightly grazed (or not grazed at all) to leave some standing forage available for the next year when it is to be grazed early. This will provide a "buffer" of extra grass in case there isn't much green-up in the next year.
7. At least two winter pastures are desirable, with each used in alternating years; this will help maintain the winter pastures in good condition.
8. It will take a while for the operator to get a "feel" for how best to utilize the system. Rest-rotation grazing rightfully allows the operator considerable flexibility, so that he can "fine-tune" the system for his particular needs.
9. Remember that a livestock producer is actually a grass manager. Livestock are simply by-products of the range. Ultimately, the success of a livestock operation is directly dependent on how well the grass is managed. Rest-rotation grazing will insure that the range is managed properly for long-term benefits by providing the periodic rest needed to maintain the health and vigor of the desirable plant species through all conditions, including drought.



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 Richland County

Attachment D. Harold Carda
 range management project map.

- EXISTING FENCE
- PLANNED FENCE
- PLANNED WELL
- PLANNED FIRELINE
- PLANNED TAOR
- PLANNED CATTLE GUARD
- PIT
- MT FWP cost-share item

