

Perception of Grazing to Promote Ecological Services in Recreational and Government Contracted Grasslands

A.S. Leaflet R2984

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Summary and Implications

Managed grazing in grasslands not currently grazed such as those enrolled in the Conservation Reserve Program or used for recreational activities has the potential to improve plant community diversity and soil quality thus enhancing many grassland ecological services including wildlife habitat, carbon sequestration, and preserving water quality. Grazing in grasslands not currently grazed increases the available forage for grazing cattle to reduce the pressure on current pasturelands. However, introducing managed grazing into grasslands not currently grazed poses unique challenges including repairing or installing infrastructure, movement of cattle to new grazing areas, and developing agreements to ensure grazing management meets the goals of both the land owner and cattle producer. To determine the potential for integration of managed grazing into perennial grassland landscapes, a survey was made available to cattle producers and grassland owners throughout the Midwest. Results from 65 respondents throughout the Midwest indicate grassland owners and cattle producers recognize that grazing has potential to enhance the ecological value of grasslands; however, a majority of cattle producers (53%) feel grassland owners don't want to allow grazing on their land. Of the grassland owners surveyed, 63% wanted to attract wildlife for hunting and 87% would allow short duration grazing to enhance wildlife habitat. If grazing was allowed on government contracted grasslands, 79% of cattle producers were willing to move cattle up to 10 miles for less than 45 days of grazing. Both grassland owners and cattle producers in the survey were most likely to install infrastructure when grazing contracts lasted at least 5 years. The results of this survey indicate both cattle producers and grassland owners are willing to graze grasslands not currently grazed; however, payments would be required by more than 70% of grassland owners to compensate for lost government payments or at a rate equal to current pasture rent.

Introduction

Throughout the Midwest, cattle production is limited by the availability of pasture for grazing; over 20% of grazing lands were lost from 2002 through 2012. Although use of crop residues and harvested forage can reduce the pressure on pastured grasslands, in 2012 there were approximately 6 million acres of grasslands in government contracts

managed without grazing in the Midwest. In addition to grasslands in government contracts, many landowners often remove grazing livestock from grasslands used for recreational activities like hunting. However, managed grazing in grasslands can improve plant community diversity and wildlife habitat without negatively impacting other grassland ecological services. As a result, government-contracted grasslands and grasslands used for recreational purposes represent a potential source for additional grazing by cattle producers.

Grazing grasslands owned by recreational land owners and in government contracts pose unique challenges. In grasslands without a recent history of grazing, fencing and water sources may need to be installed. Additionally, grazing management must meet the goals of both the land owner and cattle producer. Owners of government-contracted grasslands may have to take a reduction in their annual payment if they allow grazing or require payment from graziers to compensate for the loss. Also, grazing government-contracted grasslands must be managed within the rules of the contract which may include cessation of grazing during the nesting season of grassland birds, usually from May 15th through August 15th. The objective of this study was to determine the views of grassland owners and cattle producers in regards to utilizing grazing on government-contracted and recreational grasslands to increase the forage available to cattle producers and enhance the ecological services provided by grassland landscapes.

Materials and Methods

In order to determine views of grassland owners and cow/calf producers in regards to managed grazing on grasslands managed for recreation and grasslands in government contracts, a survey was developed and made available at the 2013 annual IFGC meeting, and through SurveyMonkey (www.surveymonkey.com) on the websites of organizations including the Leopold Center for Sustainable Agriculture, Practical Farmers of Iowa, and the Iowa Beef Center. Sections within the survey included general knowledge questions on grazing and grassland landscapes, and questions designed for both land owners with recreational or government-contracted grasslands not currently grazed and cattle producers to determine their views on allowing grazing in grasslands not currently grazed. The survey was submitted to, and approved by the Iowa State University Institutional Review Board prior to distribution.

Results and Discussion

A total of 65 responses were received from 8 states throughout the United States Midwest and northeast. Within

the respondent pool, 46% owned grasslands not currently grazed, 60% owned grazing cattle, and 25% neither owned grasslands not currently grazed nor grazing cattle. All of the respondents felt biodiversity in grasslands was desirable and 97% felt grazing could be managed to enhance biodiversity without negative impacts on grassland ecosystem services. According to survey responses recent research, outreach, and media had convinced 87% of respondents that strategic grazing would preserve or improve ecological services from grassland landscapes. Similarly, 85% of respondents felt grassland landscapes could be best managed to preserve soil and water quality and wildlife habitat by short-duration mob-grazing. However, respondents also felt periodic mowing (23%) and burning (33%) were effective tools to preserve soil and water quality and wildlife habitat. Periodic mowing and burning were more likely to be selected as grassland management practices by grassland owners (32%, 39%; respectively) than cattle producers (20%, 29%; respectively). Many respondents commented that grassland landscapes were best managed through an integration of practices dependent on the grassland condition and the land owner's goals. Although there were not strong feelings on whether land owners would allow grazing on recreational grasslands, of all the respondents, 43% felt recreational grassland owners do not want to allow grazing to occur on their grasslands.

Within the pool of respondents who owned grasslands not currently grazed, 42% owned 1-10 acres, 25% owned 11-50 acres, and 31% owned 51-500 acres. The grasslands not currently grazed were used to attract wildlife for hunting (63%), preserving a natural ecosystem (49%), and to subsidize their income (51%); only 3% of respondents kept their grasslands as a wildlife preserve. Most grassland owners in this survey manage their grasslands by periodically mowing (63%) or burning (43%). However, of the respondents who own grasslands not currently grazed 88% would allow short duration grazing as midterm management on government-contracted grasslands to establish legumes and improve the provision of other grassland ecological services. These results suggest that, contrary to respondent's belief that recreational grassland owners don't want to allow grazing on their grasslands, grasslands not currently grazed could be a significant source of feed for cattle. If grazing occurred on grasslands not currently grazed, the goals of grassland owners would be focused on improving plant and insect community diversity, and enhancing wildlife populations, as well as increasing the sustainability of beef production.

The number of cattle owned or managed by survey respondents was distributed relatively evenly (1-10, 20%; 11-40, 30%; 41-100, 22.5%; more than 100, 27.5%). Within the pool of respondents, the majority of cattle producers maintained their herds on 101-500 acres of pastureland (38%) and move cattle more than once every 14 days (74%). Producers that owned either 11-40 or more than 100 cattle were more likely to move cattle more than once every 5

days than other groups (Table 1). If producers move cattle more frequently in their own pastures, they may be more likely to use management intensive grazing practices to enhance grassland ecological services on grasslands not currently grazed. Of the surveyed cattle producers, 71% felt the amount of available grazing land had been reduced over the past 10 years with pastureland conversion to row crops ranked as the largest contributor. Pastureland bought for recreational use and land enrolled in government contracts were evenly ranked as the second largest contributor to the loss of grazing lands. Likely as a result of grassland enrollment in government programs and bought for recreation use, 83% of respondents who owned cattle had grasslands not currently grazed near them that they would like to have access to. If the surveyed cattle producers had access to extra pasture for grazing, they were most likely to utilize it in the summer (69%). With extra grazing land only 5% of cattle producers would expand their herd; the remaining respondents would better manage their existing pastureland without expanding their herd (41%) or slowly expand their herd as forage production on their own pastureland increased as a result of improved management (54%). If grazing occurred on grasslands not currently grazed, the goals of cattle producers were focused mainly on increasing the sustainability of their own cattle production, in addition to enhancing the quality of the grassland landscape.

There are many challenges associated with grazing cattle in grasslands which don't have a recent history of grazing. Within the pool of obstacles listed, cattle producers ranked the installation of fences and water sources as the major obstacles. Obtaining the permission of land owners and working with the local Farm Service Agency were both ranked nearly even as second obstacles and the lowest ranked obstacle was moving cattle to and from potential pastureland. Respondents who owned cattle (49%) or owned grasslands not currently grazed (66%) were willing to install a boundary fence and water source for contracts lasting 5-10 years; but only 3% and 7% of cattle producers and grassland owners, respectively, were willing to install a boundary fence and water sources for contracts lasting one year. In government-contracted grasslands, grazing would likely be restricted to periods prior to May 15th and following August 15th to preserve the nests of grassland birds. As a result, grazing government-contracted grasslands would likely be limited to approximately 45 days in the spring and fall. With a limited time period to utilize available forage, 79% percent of the respondents who owned cattle indicated they would be willing to move cattle up to 10 miles, with another 13% willing to move cattle up to 25 miles. The distribution of cattle producers willing to move cattle did not favor larger or smaller producers. However, cattle producers with 1-10 cattle would like to utilize forage during more periods throughout the year; in comparison, larger producers would like to graze grasslands during the summer, which is the nesting season of many grassland birds (Table 2). Grazing

grasslands during nesting season would likely reduce the nesting success of grassland birds. However, the risk to nesting success may be reduced through long rest periods or restricting grazing from a proportion of grasslands to allow undisturbed nesting areas.

In this study, a majority of the respondents recognize the potential benefits from using grazing to manage grassland landscapes. However, 53% of cattle producers believed recreational land owners did not want grazing to occur on their grasslands. This belief represents a potential barrier to developing partnerships between grassland owners and cattle producers that might be overcome through involvement by intermediary groups. Another barrier would likely be installation and maintenance of basic infrastructure. Interestingly, both grassland owners and cattle producers were in agreement that contracts lasting 5-10 years would be sufficient for either party to install the

necessary fences and watering sites to allow grazing. In order to gain access to grasslands not currently grazed, 74% of grassland owners would require payment at current rental rates; the remaining land owners would require no monetary compensation if the grazing improved wildlife habitat or grassland quality. Instead of monetary payment, some owners commented payment could be made in the form of beef. If grassland was in a government contract, 69% of owners would require compensation for the reduction in payment due to grazing.

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Table 1.

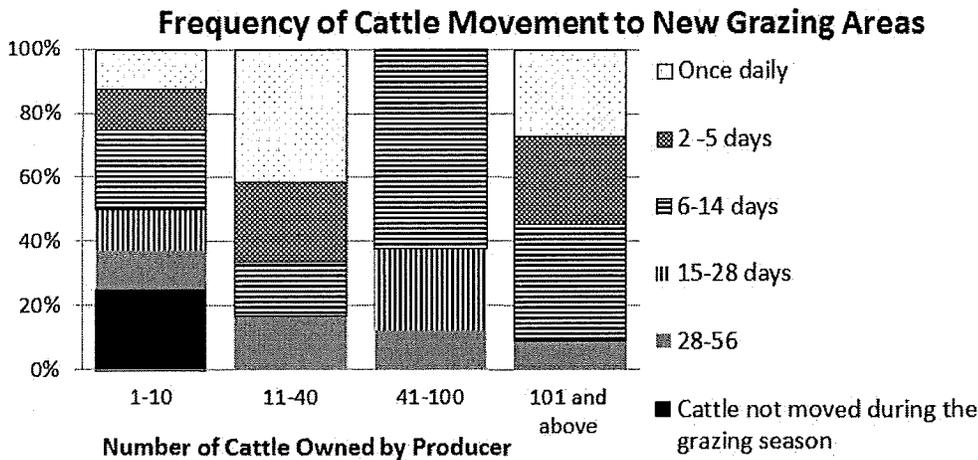


Table 2.

