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RH: Grassbank: Bartering for Conservation • Gripne

GRASSBANKS: BARTERING FOR CONSERVATION

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INTRODUCTION

Over the next ten years the Shoshone National Forest in Wyoming will implement fuel-reduction burns on approximately ten cattle grazing allotments, directly affecting at least 13 local ranchers. As is the case for many other national forests, a significant obstacle facing federal land managers implementing restoration treatments is the lack of alternative forage for permittees who must remove their livestock from allotments for extended time periods while restoration work occurs. Such temporary displacement could force some of the ranchers out of business. The sale of large ranches could have significant impacts on wildlife habitat and degradation of forest and grassland ecosystem processes given the likelihood of permanent conversion to subdivisions^{1,2}. To help minimize this risk of subdivision and contribute to the sustainability of local ranching economies, the Wyoming Chapter of the Nature Conservancy (TNC) has used an irrigated pasture of its Heart Mountain Ranch near Cody, as a grassbank to provide forage for permittees whose grazing allotments are temporarily unavailable due to the restoration activities on the Shoshone National Forest.

Grassbanking is a partnership that leverages conservation practices across multiple ownerships. It is based on exchange of forage for conservation benefits. In the example of Heart Mountain Ranch, TNC trades forage for a suite of restoration activities. Fuel loads have been reduced, thus decreasing the potential for catastrophic fire, forage quality and quantity have been enhanced and increased for both cattle and wildlife, and the likelihood of habitat fragmentation has been reduced because ranches remain economically viable and intact.

HISTORY OF GRASSBANKING

The term “grassbankTM” was coined and registered as a trademark by the Malpai Borderlands Group, a nonprofit organization located in Arizona devoted to restoring and maintaining “the natural processes that create and protect a healthy, unfragmented landscape to support a diverse, flourishing community of human, plant, and animal life in our Borderlands Region”. The Malpai Borderlands Group, working on the 321,000 acre Gray Ranch, which is located in New Mexico and owned by the Animas Foundation, has developed several conservation tools, and grassbanking is among their most innovative. The term grassbank was used to describe the practice where a rancher in need of alternative forage because of drought, or the desire to conduct restoration activities that require temporary cessation of grazing, moved the displaced cattle to the Gray Ranch. In exchange for forage, equal in value to the conservation benefit, the rancher placed a permanent conservation easement on their property, which generally restricts development, and therefore, subdivision. The easement is held by the Malpai Borderlands Group and its value is equal to the forage value the rancher used on Gray Ranch. As a result of this exchange of forage for conservation easements, over 25,000 of acres have been restricted from subdivision. Many people associate grassbanking with conservation easements, but The Malpai Borderlands Group has been the only grassbank that has traded forage for conservation easements. All other grassbanks have traded forage for other types of conservation benefits such as prescribed fire, rest, or wildlife habitat improvements, etc.

While the term grassbank is relatively new, the practice of using a forage reserve, custom grazing, or other tools to incorporate rest rotation into a grazing management plan is centuries old, with examples found across the world, from Canada, to Africa, and New Zealand³. In the

United States, the historical precursor to grassbanks was “swing allotments”, which were informally implemented by the USDA Forest Service in the first half of the twentieth century. More recently, the Bureau of Land Management (BLM) and USDA Forest Service have informally supported similar tools, such as “reserve common allotments” and “forage reserves”. Neither “swing allotments” nor “forage reserves” have been formally defined by the USDA Forest Service, but are understood to be vacant allotments that can be used by operators in situations when their home allotment is unavailable for grazing for reasons such as rest, natural disasters, or management activities. The BLM has formally defined “reserve common allotments” as areas that allow permittees to engage in rangeland restoration by temporarily shifting their livestock to forage reserve areas. However, in 2004, the BLM chose not to formally adopt this tool. Regardless of the name, all of these tools are an attempt to provide land managers flexibility supporting a type of “third-party rest rotation” for managing their grazing operations in a way that produces both agricultural products and ecosystem goods and services over the long term.

EXISTING GRASSBANKS

Because of the perceived potential of grassbanks to help address numerous ecological problems in the western U.S., significant amounts of time and money have been invested by organizations and individuals to develop grassbanks (Figure 1). The six longest running and most publicized include Malpai Borderlands-Gray Ranch Grassbank– Arizona; Valle Grande Grassbank – New Mexico; Vina Plains Lassen Foothills Grassbank – California; Rocky Mountain Front Grassbank – Montana; Heart Mountain Grassbank – Wyoming; and Matador Ranch - Montana. The Malpai Borderlands-Gray Ranch Grassbank was described previously;

these five other most well-known grassbanks are described below. Over 17 additional potential grassbank initiatives have been documented as of 2001⁴, and additional grassbanks are emerging in Oregon, Nevada, South Dakota, Arizona, and New Mexico. These six examples are discussed below.

Valle Grande Grassbank – Conservation Fund

In 1998, the Valle Grande Grassbank in New Mexico was formed and includes 240 acres of base property and a 36,000-acre USDA Forest Service grazing allotment. The purpose of the grassbank has been the exchange of forage for restoration commitments (e.g. riparian restoration, upland fire restoration, removal of small diameter timber, etc.) by the USDA Forest Service on grazing allotments⁵. This grassbank is primarily a public land grazing allotment that supports restoration work that occurs on national forest land.

Vina Plains Lassen Foothills Grassbank – The Nature Conservancy

The Vina Plains Grassbank is owned and operated by a non-profit organization that supports restoration work on private land. In 1997, the California Chapter of TNC converted their 4,600-acre Vina Plains Preserve into a grassbank to support some local landowner's interest in using prescribed burning to control invasive weeds on private land. The grassbank enabled local ranchers to undertake management practices that reduced the abundance of invasive species in exchange for reduced grazing fees at the Preserve⁶.

Rocky Mountain Front Grassbank– The Nature Conservancy

The Rocky Mountain Front Grassbank in Montana is a 320-acre parcel of private land. The local advisory group was enthusiastic about the Malpai Borderlands/Gray Ranch grassbank model, but obtaining a large acreage private ranch for the purpose of a grassbank was not monetarily feasible. Hence, the Rocky Mountain Front Grassbank started a small pilot grassbank

on private land and intends to create a network of private grassbanks from ranches whose owners are willing to donate or lease forage, thereby forming a collective grassbank for use by local ranchers⁷. In this case, both the grassbank and the restoration work take place on private land.

Heart Mountain Grassbank– The Nature Conservancy

The Heart Mountain Grassbank, located near Cody, Wyoming is owned by Wyoming Chapter of TNC. This 15,000-acre property includes 1,700 acres of low-elevation irrigated pasture, which is utilized for the grassbank. Ranchers have used the grassbank because their federal grazing allotments are unavailable to them due to local USDA Forest Service and BLM restoration activities (e.g., rest from grazing, prescribed burning)⁸. Heart Mountain grassbank is the only grassbank that is utilizing irrigated pasture, which is owned by a non-profit organization and currently supports management activities on public land.

Matador Ranch – The Nature Conservancy

The Montana Chapter of TNC owns and operates the Matador Ranch in eastern Montana as a grassbank. They use the forage on the 60,000-acre ranch to leverage a variety of benefits such as the conservation of prairie dogs, sage grouse, sod busting, weed prevention, and sustainable stewardship practices on both private and public land⁹.

GRASSBANK ASSOCIATED RESEARCH

A decade ago the term grassbank was virtually unknown. In recent years, the grassbank concept has gained momentum and has received increasing attention through numerous popular articles and unpublished scientific literature^{10,11,12,13,14,15}. However, no peer-reviewed literature exists describing or evaluating the effectiveness of grassbanks. The three primary descriptive sources of information about grassbanks are a conference proceedings from a symposium held in

New Mexico in 2001, titled “Grassbanks in the West: Challenges and Opportunities” and two Master’s projects^{16,17}. The conference held in New Mexico included a diverse group of panelists addressing issues associated with grassbanks. The symposium was sponsored by the Quivira Coalition, the Conservation Fund, the Malpai Borderlands Group, the Northern New Mexico Stockman’s Association, the USDA Forest Service, and New Mexico State University’s Cooperative Extension Service. The conference provided clarification, assessment, and input about grassbanks and covered a variety of topics, including definitions, policy barriers, funding, and limitations of the concept.

While the conference provided the first public forum to clarify and assess grassbank initiatives, Claire Harper completed the first study of a grassbank, focusing on the Valle Grande Grassbank as a model for nonprofit organizations working in the arena of grazing on federal lands¹⁶. She documented grassbank challenges, which included: 1) completing timely and high quality NEPA-like environmental assessments by the USDA Forest Service, 2) the USDA Forest Service’s development of restoration treatments to ensure long-term stable flow of participants, 3) obtaining long-term funding, 4) completing restoration treatments in a timely manner and, 5) increasing the role of rancher responsibility. Presently, the USDA Forest Service and The Conservation Fund are the lead organizations for the Valle Grande Grassbank, and the USDA Forest Service is responsible for restoration treatments and cattle management, leaving little responsibility for the involved ranchers¹⁶.

Edwards reviewed innovations related to conservation, and focused specifically on grassbanks. She cautioned against the widespread endorsement of untested conservation strategies, including grassbanks, because such an endorsement could lead to the premature adoption of a conservation strategy that may not be sustainable. Edwards also noted that

grassbanks will likely fail without support from public land management agencies and other pertinent institutions with authority to implement policies that enhance probabilities of grassbank success¹⁷.

Additional research is underway by this author and a team of ecologists, economists, and social scientists representing University of Montana, University of Idaho, Colorado State University, The Nature Conservancy, and the National Grassbank Network, to address the effectiveness of grassbanking as a conservation tool (Gripne unpubl. data). This research will address questions such as: 1) Which grassbank institutional arrangements or models are associated with the least cost and greatest conservation benefits? 2) How can individuals involved with grassbanks economically value conservation benefits in order to ensure an even trade of forage for conservation benefit, while avoiding private inurnment issues? 3) What are the biggest practical and policy challenges associated with grassbanking? and, 4) How do the different place-based grassbank initiatives (i.e., Heart Mountain Grassbank in Cody, Wyoming) interact with the larger communities of interest (i.e., citizens throughout the U.S. and world with a vested interest in the Greater Yellowstone Ecosystem)? This research focuses on similarities and differences among currently operating grassbanks and opportunities to learn from those experiences.

CHALLENGES

As with any conservation strategy, there are numerous ecological, economic, social, and policy challenges associated with grassbanks, chief among these is measuring and defining conservation benefits. Grassbanks are philosophically based on the concept of “quid pro quo” (i.e., an equal value of forage is traded for an equal value of conservation benefits). Hence,

grassbank participants must provide a measure of conservation benefit associated with restoration activities such as rest from grazing, reintroduction of historic fire regimes, and other specific activities. Grassbank participants must also calculate economic costs associated with achieving benefits. Once costs and benefits associated with grassbanking are known, stakeholders can address the critical question of whether the conservation benefits could be achieved at lower costs using alternative conservation strategies.

Valuing the conservation benefits associated with grassbanking in economic terms is essential to addressing the *quid pro quo* exchange requirement associated with grassbank operations. However, conservation valuation methods such as contingent valuation, hedonic, and substitution costs, etc., are often time intensive, costly and controversial. While the notion of *quid pro quo* is philosophically tied to all grassbanks, this concept is a legal requirement of grassbanks operated by organizations with tax-exempt charitable status under the United States tax laws (e.g., 501(c)(3) organizations). In other words, such grassbanks must comply with operating rules established to ensure that tax-exempt organizations are operated for the charitable and public purposes for which they are established. Specifically, a charitable organization's assets cannot be used to benefit private individuals (i.e., private inurement).

Since a grassbank transaction is based on the concept of an exchange of forage for valuable and specific conservation benefits, the grassbank operator must ensure that the value of the conservation benefits are at least equal to the value of the forage exchanged. For example, if the nonprofit grassbank organization leases forage at a discounted rate to a rancher, it must demonstrate that the economic value of the conservation benefit achieved by the rancher equals or exceeds the value of discounted forage. The nonprofit grassbank organization would need to perform a market and/or non-market valuation of conservation benefits (i.e., prescribed fire,

reduced threat of habitat fragmentation from forfeited development rights) to demonstrate that the values of trade are equal. This task is further complicated when rights that obtained from the landowner during the transaction also provide an economic benefit to the landowner (i.e., if, by resting the landowner's pasture from grazing or by implementing fire program, certain invasive or exotic species are removed and result in an overall increase in the quality of the landowner's forage); adjustments must be made to account for those benefits.

A policy dilemma that may arise in grassbank transactions relates to the inability of the landowner to claim a charitable contribution deduction for the value of the standing grass. Under current tax law, an individual can donate cut grass in the form of baled hay to a non-profit organization and deduct the value of the hay as a charitable donation. However, until the tax law is changed, a donation cannot be claimed for the same grass if it is standing. In addition, there are other policy issues specific to grassbanks that operate on public land. For example, restoration projects on public land require appropriate environmental assessments of the consequences of management activities under the National Environmental Policy Act, which has proven to be expensive and difficult to implement in a timely manner.

Finally, perhaps the greatest challenge associated with grassbanking is obtaining adequate funding and resources. Preliminary examination of existing grassbanks indicates that capital land investment ranges from \$0 to \$8,000,000 and the annual operating costs associated with grassbanks range from \$5,000 to \$260,000. People who want to start a grassbank are logically seeking operational and financial resources which are currently unavailable to them in a central clearinghouse or network (Gripne unpublished data). In response to these concerns, efforts are being made to establish initiatives such as a National Grassbank Network or Grassbank, Inc. to provide resources and representation for individual grassbanks.

CONCLUSION

Grassbanking is a tool that provides land managers with incentives and flexibility to pursue restoration activities that require temporary displacement of grazing activities that otherwise may not be feasible. Several grassbank initiatives have begun and more are contemplated throughout the western U.S. While there is a high level of enthusiasm among some land managers and conservation organizations for grassbanks, there are challenges associated with successfully developing grassbanks that remain to be solved. My preliminary research suggests that, in general, grassbanks require substantial financial and administrative resources to be committed over the duration of the project; these costs have, in several cases, proven to be greater than the stakeholders originally anticipated. Measuring conservation benefits and demonstrating associated economic values of those conservation benefits has proven technically difficult. The long-term success of grassbanking depends on how well managers and researchers address the practical and policy issues articulated herein related to grassbanks.

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Additional Reading Section - For a complete source of grassbank reading information please visit The Stephanie Gripne's Grassbank Research Website Literature Section at compatibleventures.us/grassbank_lit.html

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