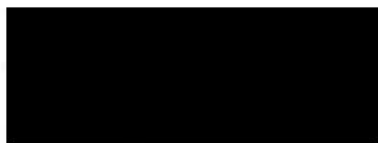


October 25, 2016



Dear [REDACTED],

I want to share with you several recent advances that show how our work is accelerating and converging with new science results and reports from several recent meetings.

Science

Remote Sensing: On the research front, I am excited to share additional evidence emerging from our remote sensing work for the power of Holistic Planned Grazing to advance outcomes on the land. The two figures below illustrate trends in productivity and growing season length on the Fox Ranch and a group of neighboring control ranches in northeast Colorado between 2001 and 2014.

Figure 1. Comparison of NDVI for “greenness” values between the Fox Ranch and a group of neighboring control ranches across three different grazing strategies on the Fox Ranch: continuous 2001-05, rest-rotation 2006-11, and Holistic Planned 2012-14.

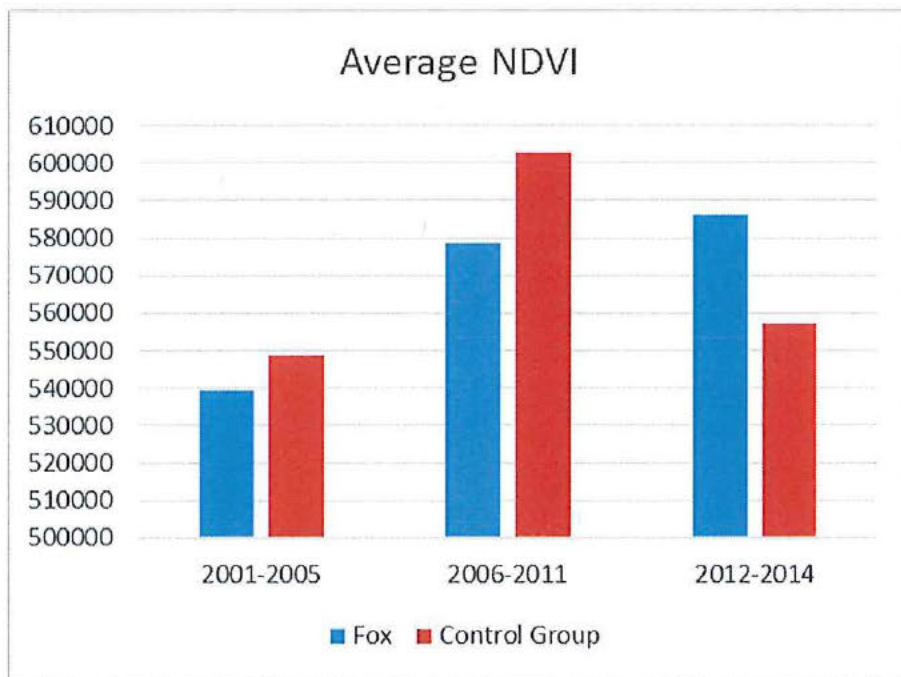
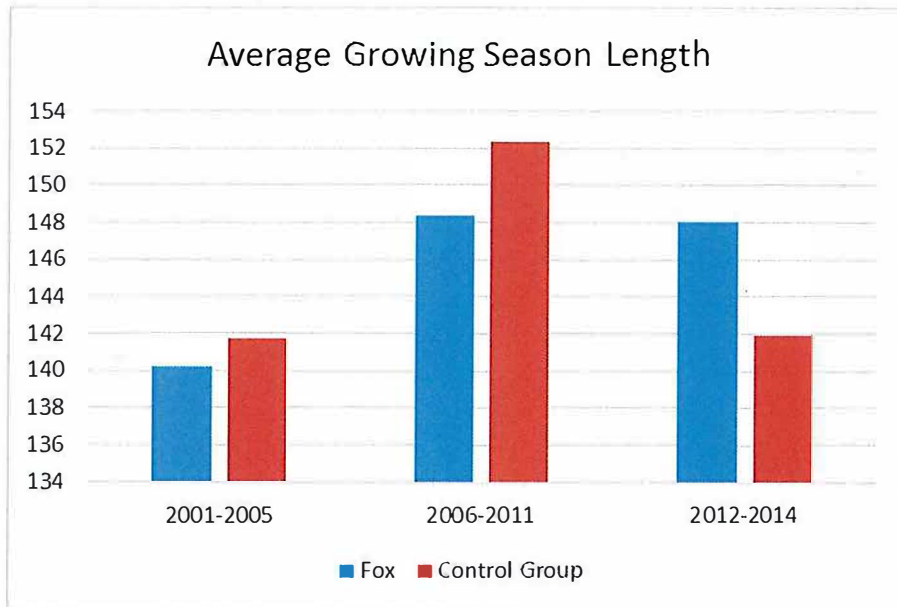


Figure 2. Comparison of growing season lengths on the Fox Ranch and a group of neighboring control ranches across three different grazing strategies on the Fox Ranch: continuous 2001-05, rest-rotation 2006-11, and Holistic Planned 2012-14.



The NDVI results are the net values for all elements of vegetation (e.g., grass, forb, shrub) and represent *trend* only at this time. The length of growing season results reflect the period of time between NDVI value detection begins and ends in a given year and roughly corresponds to spring “green-up” and fall “brown-down.” The management strategies in the control group are assumed to be “not” Holistic Planned Grazing based on the best available information. Extreme drought events occurred in 2002 and 2012-2013.

The fact that greenness/NDVI (a) trended upward on the Fox through the period assessed and across all three strategies and (b) exceeded that on the control group average between 2012-2014 suggests that Holistic Planned Grazing is supporting productivity and drought resilience. The increase in growing season length, the stability of the growing season length through the 2012-2014 period of drought, and the greater length of growing season length in 2012-2014 compared to the control group average also suggests greater drought resilience. The results in both cases are preliminary but provocative. Further assessments of the NDVI data including 2015 and 2016 values will be conducted during the winter and spring of 2017 to further refine our understanding and increase confidence in the trends observed.

Collecting the Best Available Science: The second element of our science work that I am pleased to report is on The Nature Conservancy’s recently completed comprehensive scientific review of peer-reviewed literature conducted to better understand how the beef supply chain intersects with the environment. Beef production requires a significant amount of energy, water and land, while producing waste and greenhouse gases, but understanding the specific impacts of each phase of the beef production process is critical to identify opportunities for improvement and find sustainable solutions.

Surprisingly, there was little research summarizing the impacts of beef production in a comprehensive way, so our scientists surveyed and compiled the best available science on key production phases of the

chain: ranch and farm grazing; feed production; feedlots; and harvest facilities. They also examined three types of environmental impacts: freshwater supply and quality, wildlife habitat, and greenhouse gases.

You can follow this link to read the, **U.S. Beef Supply Chain: Opportunities in Fresh Water, Wildlife Habitat, and Greenhouse Gas Reduction**. The key findings and recommendations of the paper include:

- While current sustainability efforts are focused primarily on the feed production and feedlot phases, to make substantial progress on sustainability, increased attention is needed on how to drive improvements in the ranch and farm-grazing phase.
- Adaptive management grazing plans and water quality best management practices on pasture and rangeland offer multiple benefits.
- There are several opportunities to improve manure management at feedlots to reduce water quality and address greenhouse gas issues.
- In addition to well-established best management practices for row crops, changes to how hay is harvested offers benefits to wildlife.

While the paper outlines vital information to identify opportunities for improving the sustainability of the beef supply chain, more research is needed. Looking at other factors, including social and economic issues, and assessing the financial costs of the recommendations will also help strengthen our knowledge about the beef supply chain and influence options for a way forward.

This type of research will help many stakeholders, including the U.S. Roundtable for Sustainable Beef, take more informed positions, and improve supply chain engagement programs. Walmart, a partner and Roundtable member, provided funding to the Conservancy for this project.

Community Engagement & Capacity

In addition to the science developments reported above, I'm also pleased to report on the following developments and activities undertaken to engage more partners and support the practice of Holistic Management.

North American Agriculture Program: The Nature Conservancy began the process of hiring for two positions to support its North American Sustainable Grazing Lands Program earlier this month. Larry Clemens, who leads our agriculture work in North America hopes to have the roles filled and staff up and running before the end of this calendar year to run with the strategy that is now in place.

Adaptive Multi-paddock (AMP) Grazing Research Project: I was pleased to attend a meeting in September that McDonald's convened at the Noble Foundation in Oklahoma to review the AMP Research Project that Peter Byck, Richard Teague, and others are currently seeking to fund and launch. In addition to the pleasure of making the acquaintance of your colleague, Josh Tosteson, I was gratified to be able to offer both strong support for the proposed project as well as substantial input on how it might be adjusted to make it as impactful as possible. In particular, I am in strong support of how the project is seeking to assess the social, economic, and environmental influences of AMP. I am optimistic for the project's launch and for its results. I hope that I may also be of further assistance as the project advances. Please know that I was prepared to support the aims and methods of the project in large part because of the years of experience with Holistic Management made possible by your support.

HMI Gathering: Earlier this month I was pleased to attend this meeting in California and to benefit from the community of leaders, learning, and sharing. The opportunity to re-engage with Sally Calhoun and Wendy Millet, learn about their current work and thinking, share our own, and to discuss how we might work more closely in the future was as inspiring as it was tangible.

Savory Global Conference: I am now looking forward to participating in the Savory meeting coming up this Friday here in Boulder, where I hope I can again connect with you and your staff and explore how we can continue to advance Holistic Management in service to the Earth's amazing grazing lands and peoples.

In conclusion, I am highly optimistic that the trends described in this report will be borne out with more analysis and that the organizational changes underway are really beginning to gather steam. Your support, as ever, is absolutely key to making these changes happen.

I am available at your convenience or your staffs to answer questions or discuss how we might build on what we've accomplished to date to make more impact even faster.


Thank you.

Best Regards,



William S. Burnidge
Sustainable Grazing Lands Program Director
The Nature Conservancy in Colorado

Cc:


Caroline King, TNC