

# Development of Comprehensive Grazing Policy Guidelines: A Case for Adaptive Collaboration within the Rangeland Profession

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# Symposium Objectives

- Explore means to strengthen science – management interactions in SRM.
- Evaluate grazed ecosystems as social-ecological systems to emphasize these critical linkages.
- Develop a perspective of adaptive collaboration to promote meaningful dialogue regarding grazing systems.



# Speakers and Titles

- **D. Briske** – Context and perspectives on the grazing debate.
- **N. Sayre** – Roles of science and management within the profession.
- **J. Derner** – What does the experimental evidence tell us?
- **F. Provenza** – Limits of the experimental evidence.
- **B. Budd** – Management perspective of prescribed grazing.
- **L. Huntsinger** – Grazing management within the context of social-ecological systems.
- **M. Fernandez-Gimenez** – Strengthening science-management linkages by collaborative adaptive management.

# Two Valuable Knowledge Sources



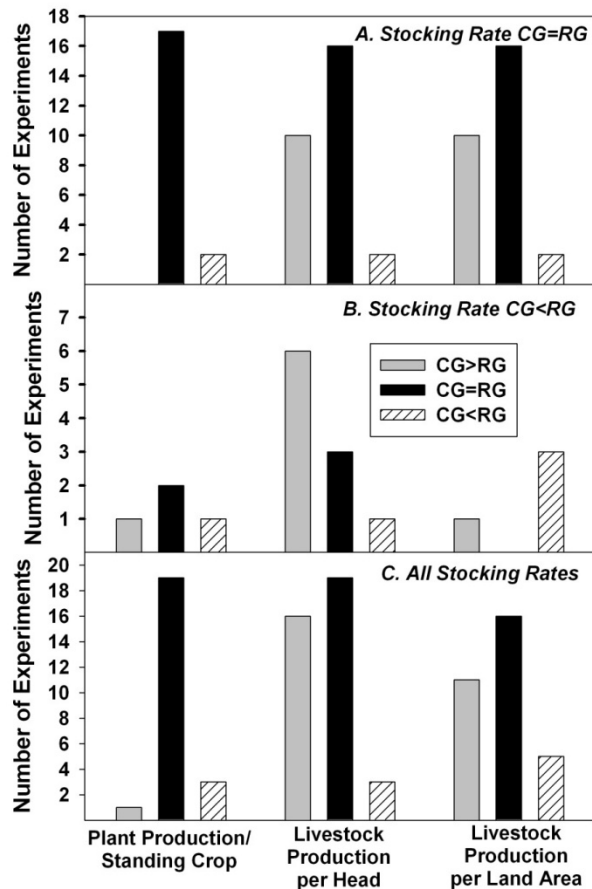
- Experiential knowledge associated with management of grazing systems.
- Experimental data derived from grazing experiments by researchers.



# Experimental Data



Majority (84-92%) of experiments show no advantage of rotational grazing for plant and animal production.



Suggests ecological processes are minimally effected by grazing systems.



Briske et al. 2008



# Managerial Documentation

- Strong support for rotational grazing.
- Minimal documentation of potential benefits.
- Source of potential benefits uncertain, but ecological processes often emphasized.





# “A Failure to Communicate”



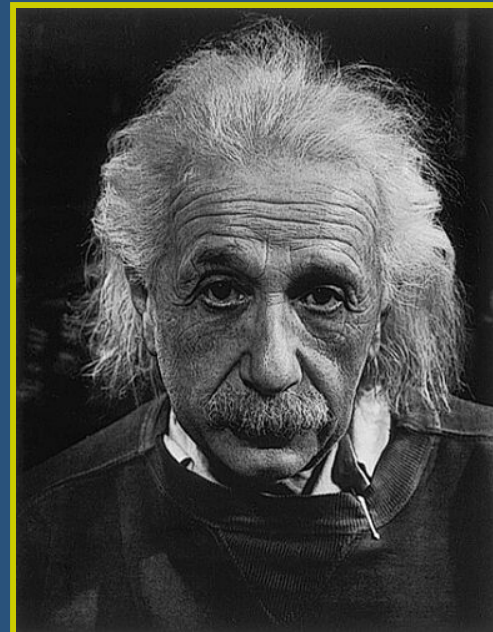
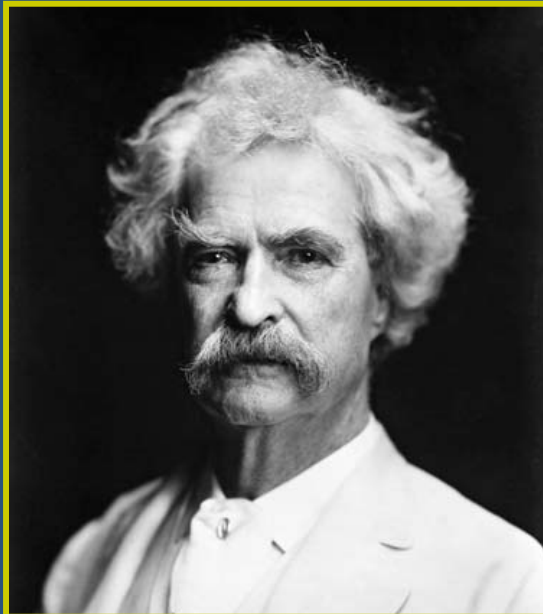
- Two knowledge sources may not be mutually exclusive.
- Ecological process may be marginally affected.
- Management benefits may be realized.



# Roles of Science and Management



- Science can help deal with subjectivity by using methods to minimize human influences and frailties (Stern 2005 BioScience 55:976).
- “It’s what we know that ain’t so that get us in trouble” - Mark Twain







# Misconception: Researchers

- Science provides the complete and final solution to all issues.
- Experimental data invalidates rotational grazing systems and adaptive management.
- Experiential information is not a valid source of knowledge.





# Misconceptions: RG Advocates

- Short-term rest consistently benefits vegetation and ecosystems.
- Multiple grazing events with a cycle are eliminated by rotational grazing.
- Experimental data have no relevance to managed ecosystems.
- Continuous grazing does not involve adaptive management.

# Components of Grazed Ecosystems



- Weather
- Stocking rate
- Human dimensions
  - i) adaptive management i.e., forage inventory, drought management, animal care
  - ii) agribusiness/economics i.e., labor cost, cost/animal
  - iii) goals, capabilities, and values
- Grazing systems
  - i) short successive rest
  - ii) improved animal distribution & harvest efficiency
  - iii) moderate SR required to maintain animal production

# RANGESTOCK



# More Relevant Questions



- Can adaptive management be more effective in rotational systems?
- What management component is most responsive?
- What management skills are most important?
- What percentage of managers possess these skills?
- How can these skills best be shared?

# Professional Implications Beyond Grazing Systems



- Expand professional culture to more effectively address conflict resolution.
  - Increase communication and trust.
  - Promote management – science interactions.
- Establish a research agenda that emphasizes adaptive management.
  - Central to the profession, but little addressed.
  - Why is this the case? Viewed as unnecessary?



# Option One: Retain Status Quo



Retain two independent interpretations of grazing systems.

1. Maintain and potentially increase divisiveness.
2. Reduce effectiveness in addressing grazing issues.
  - Advocacy without documentation and in direct opposition to experimental data.
  - Human inability to visually assess ecosystem responses over the long-term.
3. Potential for less effective management and policy recommendations.

*Conclusion: Unacceptable and indefensible position.*

# Option Two: Resolve Controversy



Link experimental data and management perceptions.

- Science does not provide the final answer, but it provides important benchmarks.
- Document purported benefits with monitoring data and records of management decisions and activities.
- Strengthen profession by providing unified and effective management and policy recommendations.
- *Conclusion: Only viable professional option.*

# What's at Stake?



- Internal disputes question our professionalism, and marginalizes our effectiveness.
- Our profession faces multiple challenges; our collective inputs are required to address them.
- We can not let controversies languish for decades and divert us from this responsibility.

