Lost Rivers Grazing Academy:
Management Education for Sustainable Livestock Production

K. Scott Jensen
Associate Professor & Extension Educator
Owyhee County
Marsing, Idaho
scottj@uidaho.edu

Charles Cheyney
Professor & Extension Educator
Butte County
Arco, Idaho
ccheyney@uidaho.edu

James Hawkins
Professor
Professor & Extension Educator
Custer County
Challis, Idaho
jhawkins@uidaho.edu

C. Wilson Gray
Professor, Extension Ag Economist
Agricultural Economics & Rural Sociology Department
Twin Falls, Idaho
wgray@uidaho.edu

Glenn Shewmaker
Associate Professor, Extension Forage Specialist
Plant, Soils, Entomological Sciences Department
Twin Falls, Idaho
gshew@uidaho.edu

Shannon Williams
Associate Professor, Extension Educator
Lemhi County
Salmon, Idaho
shannonw@uidaho.edu

University of Idaho

Thomas Griggs
(Formerly, Assistant Professor, Extension Agronomy Specialist)

Utah State University, Logan Utah

James R. Gerrish
American Grazing Lands Services, LLC
May, Idaho
(Formerly, University of Missouri, Forage Systems Research Center)
jrgerrish@custertel.net

Abstract

The Lost Rivers Grazing Academy (LRGA) was developed to improve the sustainability of livestock grazing operations. A mixture of classroom and hands-on instruction provides participants with training in Management-intensive Grazing, a goal driven, flexible method of managing grazing for improved sustainability. Increased efficiency has also helped these producers to reduce winter feed costs, leading to greater economic stability. The LRGA utilizes a variety of teaching techniques to facilitate learning. These techniques include traditional classroom instruction, experiential learning, games, and simulations.

Introduction

Feed is the greatest expense in raising livestock. Feed often accounts for more than 50% of the total cost of production on a cow-calf operation (Lawrence and Strohbehn, 1999). In 2005, it was reported (Cattle-Fax, 2005) that total annual cow costs in the northwest region of the United States were $379 per head. These costs have increased each of the past several years due largely to rising feed prices. As a result, livestock operators are leaving the industry and their rural communities. Exploiting more economically and ecologically efficient methods for harvesting and utilizing forages underpins the long-term success of this industry and the families it supports. The Lost Rivers Grazing Academy (LRGA) was developed to provide training in Management-intensive Grazing (MiG) and improve the sustainability of livestock operations.

Grazing standing forage during both the growing and non-growing seasons is the least expensive livestock feed option. This option is often limited by pasture forage production and management. Poorly managed pastures have reduced productivity, greater erosion, off-site movement of nutrients, poor nutrient cycling, poor carbon sequestration, and poor-harvesting efficiency. Pasture operators lack motivation to improve management because: 1) conventional management is viewed as adequate; 2) irrigated pastures are undervalued; 3) pastures appear to be resilient; 4) domestic pasture land is perceived as having limited financial and ecological value.

Cattle typically graze pastures during the growing season. Mechanically harvested and fed, hay and silage are used for feed during the non-growing season. The paradigm of grazing animals when pastures are green and feeding harvested feeds during the non-growing season is securely ingrained in many livestock producers.

The Lost Rivers Grazing Academy (LRGA) was developed to provide training in Management-intensive Grazing (MiG) and improve the sustainability of livestock operations. It employs the use of classroom teaching combined with experiential learning activities that enhance the learning process (Richardson, 1994).

Purpose and Educational Objectives

The LRGA is an intensive four-day workshop providing participants with a unique combination of classroom and “hands on” instruction. It is a collaborative effort between University of Idaho Extension, Utah State University Extension and American Grazing Lands Services. The objectives of the educational program are:

1) Introduce livestock operators to an alternative paradigm for livestock production focused on understanding a production system capturing solar energy

and cycling nutrients using MiG, rather than on purchasing inputs and operating machinery.
2) Provide operators with an opportunity to practice MiG in a supervised and synergistic environment, and obtain support from other operators in transition from traditional production systems.
3) Improve the quality of life for operators by improving profitability, reducing costs, reducing labor input, and by changing the quality of work to make it less stressful and more family friendly.

Program Methods:

The four day workshop includes topics such as nutrient cycling, irrigation, succession, power fencing, low-stress livestock handling, estimating and allocating forage, designing grazing systems, extending the grazing season, grazing economics, and animal health topics.

It begins with a discussion about paradigms. Students learn how paradigms restrict our thought process and why MiG requires a different paradigm. Later, participants are divided into teams that work together on all assignments. The assignments include fencing related competitions, grazing assignments, and ranch planning exercises. DeBord, 1989, reported that games and simulations designed to compliment and reinforce the principles taught enhance the learning process. This technique is utilized in the LRGA.

The games include Mystery Theatre which is a modified version of charades using grazing topics and Lost Rivers Grazing Academy Jeopardy. The Jeopardy™ game involves the use of a modified PowerPoint™ presentation that represents a Jeopardy game board with questions related to LRGA topics. This has proven to be a valuable teaching tool to review the topics covered over the previous three days.

Throughout the LRGA participants are given an assignment or activity followed by the actual lesson and discussion. Learning takes place as participants utilize critical thinking skills to solve the problem at hand. This format takes advantage of each producer's experience and channels thought processes in new directions. The synergy of team work and "real-world" practice is the most valuable learning experience of the LRGA.

Program Evaluation and Findings

Pre- and post-testing at each LRGA indicates increased understanding of the concepts presented. In 2005, past participants were contacted by mail and asked to complete a survey. Of the 103 mailed surveys, 48 were returned for 47% response rate. Producers were questioned about changes implemented since attending the LRGA. Responses indicated an increase in the number of animals grazed as well as the number of acres now under a managed grazing system. The

number of days grazed increased on average by 29 days. Table 1 shows the actual number comparisons between pre- and post- LRGA management. Respondents also reported 1) decreased weed pressure, 2) stable or declining fertilizer costs, 3) decreased animal health costs and 4) decreased winter feeding costs.

Table 1. *LRGA Participants' Survey Responses*

	Pre LRGA	**Post LRGA**	**Difference**
Animal Numbers (head)	12,002	13,891	+1,889
Hectares under Managed Grazing	9,173	9,343	+170
Average Grazing Days/producer	182	211	+29

Salmon, Idaho area rancher Joe Miller described the impact of the LRGA to his operation. "After years of declining equity, I was forced to change how I managed my operation. I have implemented many of the principles I learned at the LRGA and have cut my hay needs for the ranch by over 65% while maintaining the productivity of my cattle". He has reduced his debt by $300,000 in five years and is now profitable.

Other examples of improved operation sustainability by LRGA graduates include:

A grazier with 219 hectares of irrigated pasture leases this pasture for $15/ cow-calf pair per month. Pastures were in poor condition, and supported only 240 pairs for 6 months. By implementing MiG principles, the stocking rate increased to 580 pairs, increasing gross revenue by $30,600. Pastures continue to improve. Potential exists to increase by another 200 pairs. Weaning weights of pastured calves are 34 kg. greater than their herd mates grazing open range, resulting in $43,500 more gross revenue for the cow/calf owner.

A ranch in central Idaho generated 61-65 cow-days/hectare (CDH) on 61 hectares of irrigated pasture. After implementing MiG principles learned at the LRGA, in 2005, the pasture produced 76 CDH. In 2006 it produced 89 CDH. Valuing the forage, conservatively, at $1.48 per cow-day, the additional 28 CDH of grazing are worth an additional $104 per hectare or $6300 per year.

The most significant challenges for producers include: 1) willingness to commit to the time away (4-6 straight days) from their individual operations, and 2) the courage to try something different. In our opinion, pressure from neighboring producers often causes new MiG graziers to abandon efforts to change management.

Regarding the first challenge, considerable effort has been expended in marketing the potential financial value of the course. Reduced winter feeding costs are one of the financial benefits of adopting a MiG system.

Overcoming the second challenge was accomplished by the addition of closing remarks from a local rancher who attended the LRGA multiple times (8 to date) and by creating a network of LRGA participants. This rancher shares his experiences and the rewards of changing management to a more intensively managed grazing system. A more recent addition to the LRGA effort includes conducting local pasture walks. This provides producers with the opportunity to see the actual implementation of MiG systems.

Conclusions

Producers from 12 states, Canada, and Mexico have participated in the LRGA. These include representatives from all sizes of farming and ranching operations in the Western US. The opportunities for experiential learning combined with the use of games and simulations greatly enhance the learning process for participants. Most participants report reduced expenses and improved revenue resulting in greater economic sustainability by implementing MiG principles. As participants implement MiG principles, many return to take the LRGA again to review the concepts and experience the new learning environment that occurs with every class. This contributes to an increase in the economic and ecological sustainability of their businesses.

References

DeBord, K. (1989). Creative Teaching, Simulations, Games, and Role Playing. *Journal of Extension* [Online], 27(2). Available at http://www.joe.org/joe/1989summer/tt1.html

Kalous, T. (2005). Cow costs vary significantly. Cattle-Fax Update, 37(27):4.

Lawrence, John and Daryl Strohbehn. "Understanding and Managing Costs in Beef Cow-Calf Herds."White Paper prepared for the Integrated Resource Management Committee, National Cattlemen's Beef Association Convention, February 12-13, 1999, Charlotte North Carolina

Richardson, J.G. (1994). Learning Best Through Experience. *Journal of Extension* [Online], 32(2). Available at http://www.joe.org/joe/1994august/a6.html

Title: Lost Rivers Grazing Academy: Management Education for Sustainable Livestock Production

Topic area: Education and training

Word count: 1814

The authors of this paper are the instructors for the Lost Rivers Grazing Academy. This paper presents original work by them in developing a training course for livestock producers to gain the basics of Management intensive Grazing techniques. This course has been continuously offered since 1998. This paper has not been published elsewhere.

Author/Presenter bios:
K. Scott Jensen is Associate Professor & Extension Educator in Owyhee County. Mr. Jensen received his BS and MS degrees at Brigham Young University and has been on the faculty of the University of Idaho's College of Agriculture and Life Sciences since 1998.

Charles Cheyney is Professor & Extension Educator in Butte County. Mr. Cheyney received his BS and MS degrees at UC-Davis. He has been on the faculty of the University of Idaho's College of Agriculture and Life Sciences since 1986.

C. Wilson Gray is Extension Professor and Agricultural Economist in the Department of Agricultural Economics and Rural Sociology. Mr. Gray received his BS and MS degrees at UC-Davis. He has been on the faculty of the University of Idaho's College of Agriculture and Life Sciences since 1980.