



### Western SARE Program

Phil Rasmussen, Coordinator  
Utah State University  
Agricultural Science Building  
Room 305  
4865 Old Main Hill  
Logan, Utah 84322-4865  
phone: (435) 797-2257  
fax: (435) 797-3344

### Western SARE PDP

Rick Gibson  
Arizona PDP Coordinator  
University of Arizona Extension  
820 E Cottonwood Lane, Bldg. C  
Casa Grande, Arizona 85222  
(520) 836-5221 ext. 227  
gibsonrd@arizona.edu

### Western SARE Grant Categories

- Research & Education
- Professional Development
- Farmer/Rancher
- Professional + Producer
- Graduate Student
- Sustainable Farm Tours

Go to <http://wsare.usu.edu>  
Click on: Apply for a Grant

## HOPI RANGELAND SHORT COURSES

### Situation

On the Hopi Reservation, located on the Colorado Plateau of northern Arizona, geographic isolation contributes to a 50% unemployment rate, forcing many to look off the reservation for work.

The livestock produced on Hopi rangelands is the only agricultural product sold off the reservation, providing many families with supplemental funds.

Continued livestock production from these lands, combining best management practices with traditional Hopi knowledge, will enhance the quality of life for producers and their families.



Rainbow over Hopi rangeland.

### Objectives

1. Increase awareness and understanding of management of the rangeland ecosystems on the Hopi Reservation
2. Use the knowledge of livestock owners and professional staff to conduct a series of workshops that incorporate current practices, science and traditional knowledge
3. Develop two monitored demonstration sites, one on improved productivity on higher elevation areas dominated by sagebrush and another on riparian grazing management to improve water quality and wildlife habitat
4. Engage workshop participants in becoming sources of information for their peers in disseminating best management practices
5. Share materials and training capabilities developed with all interested parties on and off the Hopi Reservation

### Actions

From July 2007 through March 2008, agricultural professionals and producers conducted seven Hopi stockman education short courses on various aspects of rangeland management.

Dennis Becenti, project coordinator and Range Conservationist for the Hopi Tribe, served as the lead profes-



Plant identification was a key component of the training.

### P+P Grant

**Project Number:** FW0-310

**Title:** Hopi Rangeland Management Series

### Ag Professional:

Dennis Becenti  
Range Conservationist  
Office of Range Management/  
Land Operations  
P.O. Box 123  
Kykotsmovi, AZ 86039  
(928) 738-0018

### Cooperators:

Robert Adams, Kykotsmovi  
Audrey Navasie, Keams Canyon  
Arnold Masawistewa  
Kykotsmovi  
Hopi Tribe Office of Range Management  
NRCS  
University of Arizona Cooperative Extension

**Amount Funded:** \$14,513



*Western SARE, a USDA organization, funds grants for research and education that develop or promote some aspect of agricultural sustainability, which embraces*

- *profitable farms and ranches*
- *a healthy environment*
- *strong families and communities.*

*The Western Region, one of four SARE regions nationwide, is administered through Utah State University.*

**Western SARE:**  
<http://wsare.usu.edu>

**National SARE:**  
[www.sare.org](http://www.sare.org)

## HOPI RANGELAND SHORT COURSES



Hopi rangeland overlook.

sional, with this support:

- Priscilla Pavatea, Director, Office of Rangeland Management, provided administrative and technical support.
- Robert Adams, a Hopi livestock producer in the Upper Polacca Range Unit, cooperated on range improvement practices.
- Audrey Navasie, a livestock producer in the Spider Mound area, cooperated on range improvement and management practices.
- Arnold Masawistewa, a Hopi livestock producer on the Shonto Range Unit, cooperated on range improvement and management practices.

The ranches participating in the demonstration sites raise Angus and Hereford in upland juniper/pinon and sagebrush zones with cross fencing, water improvements and pastures grazed rotationally.

### Results

These seven short courses were conducted:

- July 26, 2007, Hopi Wellness Center Conference Room, Kykotsmovi, AZ
- August 23, 2007, Second Mesa Sales Corrals,

Second Mesa, AZ

- September 20, 2007, Five Houses Campground, Polacca, AZ
- October 18, 2007, Five Houses Campground, Polacca, AZ
- November 15, 2007, Hopi Veterans Memorial Center, Kykotsmovi, AZ
- January 24, 2008, Koot-Ka Hall, Polacca, AZ
- March 20, 2008, Community Center, Kykotsmovi, AZ

Topics included:

- Hopi traditional review on tribal natural resources and history of Hopi livestock industry
- Rangeland vegetation: plant communities, vegetation classification, ecological sites, plant identification, basic ecology relative to plant changes
- Basic plant physiology: plant photosynthesis, grass growth and development, morphology and growth, defoliation effects, grazing tolerance, shrub growth and development, basic ecology relative to plant change
- Soil and plant interaction: soil description, plant and soil interaction, plant growth and development, plant commu-

nity, impacts of grazing

- Grazing management: carrying capacity, stocking rate and calculation methods, management on stock rate, forage utilization, grazing systems
- Rangeland assessment: rangeland health, assessment and inventory, rangeland condition and trend, soil and range inventory interpretation
- Range and herd/ranch management: drought planning management, ranch economics, replacement heifers and sires, market analysis, behavior concepts, nutritional value of selected range plants, body condition, animal health

### Potential Benefits

There was a general increase in knowledge of rangeland management practices and issues among attendees. Those attending all courses found the holistic view helped tie together the various parts of knowledge for good stewardship. This knowledge will help them better manage grazing lands as well as wetlands, wildlife and woodlands. And it will help them communicate with other ranchers and the public on rangeland issues.

Comments included:

- Continue presenting this type of course. The presenter was excellent.
- We need a website for all of this information.
- I enjoyed it. I never in my life learned about plant names.
- I can't wait until the next class.
- Everything was great; leave it as it is.
- Keep 'em going.