

# Hopi Rangeland Management Series

## *Dennis Becenti (Arizona: Professional + Producer Grant Program)*

Project Number: FW07-310

Title: Hopi Rangeland Management Series

Ag Professional:

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Participants learn about rangelands.

Cooperators:

Robert Adams, Producer Kykotsmovi, AZ 86039	Audrey Navasie Keams Canyon, AZ	Arnold Masawistewa Kykotsmovi, AZ
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Hopi Tribe Office of Range Management  
Natural Resources Conservation Service  
University of Arizona Cooperative Extension

SARE Grant: \$14,513

### 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.



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 demonstration sites that will be monitored for two years, one to demonstrate improved productivity on higher elevation areas dominated by sagebrush and another to demonstrate 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 professional, 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 United, 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.



Rangeland overlook



Hopi rainbow.



Cattle graze rangelands.

### 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 community, 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



A key component of the workshop was plant identification.



Youth assisted with planting willows.

### Potential Benefits:

While the impacts and benefits of this project are likely to be determined in the future, evaluations conducted after each workshop showed that participants found the information to be useful and easy to understand.

Comments included:

- Continue presenting this type of course. The presenter was excellent.
- Find a way to get more ranchers involved.
- 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.