



Western SARE Program

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COLLABORATION ON THE RANGE

Situation

The Tohono O’odham Nation spans 2.8 million acres of Sonoran Desert habitat, ranging from grasslands in higher-rainfall areas on the east to desert scrub that dominates the drier central, northern and western regions. For the last three centuries, cattle-raising has provided a source of cash, food for community feasts and ceremonies, social status and political clout.

However, cattle raised on communal lands leads to difficulties in grazing and genetic management, which results in lower prices for livestock sold off the reservation. In the 1930s, without consulting local producers, the Nation was fenced into nine grazing districts, fragmenting grazing territories and keeping some users from customary use areas. The result was resentment toward government officials and ani-



Youth and other Tohono O’odham community members learn about watershed function at a Rangeland Ecology Workshop.

mosity among neighbors.

Perhaps these obstacles could be overcome, and rangeland stewardship and livestock production enhanced, if producers, tribal leaders and rangeland professionals participated in planning and education that recognizes the distinctive cultural and environmental context of the Tohono O’odham Nation.

Objectives

1. Develop and implement a Tohono O’odham range management curriculum that incorporates both science and traditional knowledge and reflects the social, cultural, political, economic and environmental contexts of livestock husbandry and range management on the Tohono O’odham Nation. Use a collaborative approach involving

Tohono O’odham livestock owners, natural resource professionals, educators and community members.

2. Empower livestock producers and other community members to develop and implement range management plans for their communities by expanding the existing participatory rangeland planning pilot project to additional districts.

Actions

The project team operated under this guiding principle:

“We believe that resource management is most effective when local resource users are directly involved in management planning and implementation.”

R&E Grant

Project Number: SW02-051

Title: A Range Management Curriculum and Participatory Planning Project for the Tohono O’odham Nation

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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

COLLABORATION ON THE RANGE

Under Objective 1, developing a rangeland curriculum, the team:

- Convened a curriculum advisory committee, planned the curriculum and conducted interviews
- Implemented and evaluated the curriculum using participant observations and focus groups
- Evaluated the curriculum after its implementation through interviews and discussions with the advisory committee

They documented all project activities and participant involvement and discussion.

Under Objective 2, engaging the participatory planning process, they sought to determine:

- The relationship between historic grazing intensity and the density of perennial forage grasses on sandy loam upland ecological sites in the Sif Oidak District (an ecological field study)
- The past and current uses of livestock, livestock management practices and social institutions related to livestock management (an ethnographic study)
- How community members could develop a range management plan for the Sif Oidak District

Results

The project team piloted the Tohono O'odham Rangeland Curriculum with eight one-day workshops, attended by more than 130 participants, including livestock owners, elders, political leaders, natural resource managers and youth:

1. History of O'odham Rangelands
2. Rangeland Ecology in the Desert



The Sif Oidak landscape encompasses Sonoran Desert upland vegetation, including saguaro cactus and many other shrubs and succulents.

3. Animal Health and Management
4. Grazing Management & Erosion Control
5. Vegetation Monitoring
6. Rangeland Planning
7. Business Management & Economics
8. Drought Management & Economics

The ecological and ethnographic studies, upon which a management plan was based, found that typical stocking rates have less influence on perennial plants than the variability of rainfall. The ethnographic study emphasized building upon community cooperation rather than dividing open range into allotments.

Potential Benefits

A multitude of benefits resulted from the project, including:

- Tohono O'odham Community College has developed its Agricultural and Natural Resources Program owing, in part, to the momentum and interest created by the project.
- Interaction among livestock owners, natural

resource agency personnel, educators and political leaders has increased.

- Findings of M.S. student Jennifer Arnold emphasize the importance of building social capital and forming relationships as part of an educational program rather than just handing out education materials.
 - Ecological and ethnographic research by M.S. student John Hays concluded that future rangeland management should focus on maintaining palatable shrubs rather than rotational grazing and that existing livestock management strategies are well suited to the future.
 - Five of nine Sif Oidak villages applied for and received EQIP funding during the project period, and other communities subsequently initiated projects.
 - Four years after the end of the project, Sif Oidak community members are working together to monitor the ecological conditions on their rangelands to assess the effectiveness of their management practices.
 - Tohono O'odham project participants have joined the project's researchers to share their experiences with others at regional and national meetings concerned with participatory research and natural resource management.
- The participatory approach engendered far greater enthusiasm and engagement than past "one-size-fits-all" resource education and development interventions.