

**Annual Results**

SW00-042

## Exploration and Implementation of Sustainable Ag Practices and Outreach on the Fort Hall Indian Reservation for the Protection of Groundwater

**Location:**  
Fort Hall, Idaho

**Funding Period:**  
Aug. 15, 2000-Dec. 31, 2003

**Grant Award:**  
\$103,913

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**Major Participant:**  
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**Cooperators:**

For a list of cooperators,  
please scroll to the bottom of  
this report.

**OBJECTIVES**

Project participants plan to develop and demonstrate sustainable potato production practices that can be used to manage Shoshone-Bannock Tribe agricultural lands. They will then communicate sustainable practices to tribal members, leaseholders, other farmers and community members.

The project has six objectives:

1. Begin to assess economic issues and impacts of management changes made by tribal members and leaseholders
2. Assess whether the World Wildlife Fund and Wisconsin Potato and Vegetable Growers Association IPM program applies to the management of tribal lands
3. Reach out to every tribal member and leaseholder as well as the broader community with information about the demonstration project and sustainable agriculture
4. Manage, monitor and assess progress on the Shoshone-Bannock Tribes' sustainable agriculture demonstration project
5. Continue to identify, support and highlight farmers on and off the reservation who are using sustainable practices
6. Secure continued funding for the Shoshone-Bannock Tribes sustainable agriculture demonstration project

**ABSTRACT**

The Fort Hall Indian Reservation, home of the Shoshone-Bannock Tribes, stretches along the fertile Snake River Plain in eastern Idaho. The reservation includes 140,000 acres of prime potato-growing land. However, the Tribes' success growing potatoes has come at an expense to the environment. Nitrogen and pesticides have been detected at levels above acceptable risk in the aquifer, the main source of rural domestic water for the reservation. In response, the Tribes have initiated steps to reduce the contamination, including designating in March 1999 land on the tribal farm as a long-term sustainable agriculture demonstration site.

This SARE-funded project will work on the 80-acre demonstration site to evaluate cropping systems with a goal of reducing fertilizer and pesticide use in potato production systems, improve the resource base, reduce groundwater contamination and provide economic sustainability for the Tribes. The site, irrigated by a wheel line, is split in half with two different three-year rotations on each half with a control plot against which to compare both.

The project team hopes to reduce fumigation by extending the current rotation to three years and incorporating different green manures that may suppress verticillium and nematodes. The team will also monitor nitrate leaching and groundwater to assess the impact of the rotation on reducing nitrogen and pesticide contamination.

**SPECIFIC RESULTS**

Because this project had yet to undertake any of its fieldwork, there are no specific results to report.

**POTENTIAL BENEFITS**

The benefits of this project, the researchers hope, will be improved groundwater and sustainable, economical potato production. In the process, they will reduce or eliminate fumigation, reduce fertilizer inputs, bind nutrients in sandy soils, reduce diseases and insect populations, build healthy soils and reduce soil erosion.

### **DISSEMINATION OF FINDINGS**

The SARE team plans to conduct annual farm tours of the demonstration site for tribal leaders and leaseholders and to distribute news releases to the media throughout the Pacific Northwest.

### **COOPERATORS**

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