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Initiative for Future Agricultural Food Systems (IFAFS)

Holistic Approach to Land Management Benefits Society and the Environment

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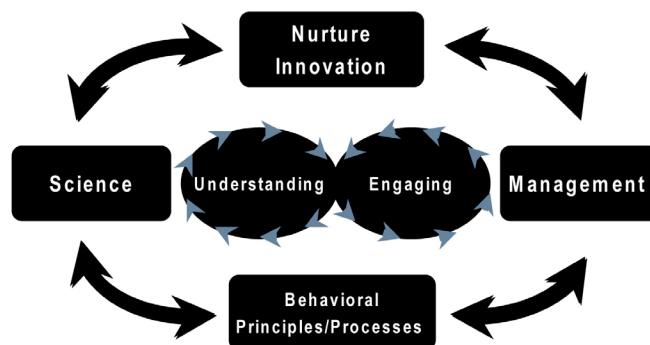
Nature is dynamic and complex, and the intrusion of human society makes this complex web of interactions even more difficult to understand and manage. The BEHAVE program (Behavioral Education for Human, Animal, Vegetation and Ecosystem Management) breaks down the walls between society and the environment and, in the process, allows land managers to develop more effective management plans to benefit human society and the environment. >>

The goal of BEHAVE is to develop environmentally-friendly solutions based on consensus when developing solutions to the challenges of managing landscapes. This program is improving the ability of people to adapt within and manage complex adaptive social, ecological and economic systems.

With funding from the USDA's Cooperative State Research, Education, and Extension Service (CSREES) Initiative for Future Agricultural and Food Systems program, Fred Provenza and his team at Utah State University are providing insight into how animal behavior and landscape ecology are linked. This research shows the relationship

between the health of people in a community and that of the ecosystems we inhabit, from soil and water through plants, herbivores and people. Their efforts are improving the economic viability and ecological integrity of pasture and range-based enterprises on privately and federally managed landscapes. The research team engages local small and mid-sized producers, land managers, extension, technical assistance personnel and even school teachers and children in various education and outreach activities in order to inspire and enable people to develop environmentally-friendly

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BEHAVE is dedicated to integrating understanding of behavioral principles and processes with indigenous knowledge to enhance social, economic and environmental values of communities and landscapes.

Right: BEHAVE integrates the behavioral principles and processes with environmental processes to enhance social, economic, and environmental values to improve communities and landscapes.

Credit: Fred Provenza



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Above: Dr. Fred Provenza received funding through CSREES IFAFS program to develop the BEHAVE program.

Credit: Fred Provenza

IFAFS was authorized to establish a research, extension and education competitive grants program to address agricultural genomics, food safety, value-added products, biotechnology, rural resource management and farm efficiency and profitability.

solutions to land management issues. In addition, the program works to reconcile differences of opinion over land management.

The BEHAVE Web site (www.behave.net) integrates the outcomes from their studies so visitors can easily understand the interrelationship between humans and the environment.

One aspect of their work aims to enhance and maintain the biodiversity of landscapes. They use natural plant communities as models to develop bio-diverse grazing lands that provide the full range of benefits to society and the environment by avoiding expensive, single crop agriculture that is often associated with fertilizers, herbicides, insecticides and antibiotics.

The program optimizes wildlife benefits to land owners, managers and users. The team's work reveals how animals satisfy their hunger through the dynamic interactions among primary (nutrient) and secondary (pharmaceutical) compounds found in a variety of plants. This information can help ensure that herbivores, whether confined in feedlots or foraging on pastures and rangelands, obtain

the diverse food requirements they need so humans can meet their nutritional and health requirements.

By exposing people to nature, the program also encourages the development of healthy lifestyles in middle-school aged children and their parents, as well as people with eating disorders.

Finally, the program brings together innovative researchers and managers from around the world every-other-year to share their growing understanding of how behavioral principles and processes can be integrated with local knowledge and practices.

The USDA's Cooperative State Research, Education, and Extension Service (CSREES) funded this research project through the Initiative for Future Agricultural and Food Systems (IFAFS) program. CSREES advances knowledge for agriculture, the environment, human health and well-being, and communities by supporting research, education and extension programs in the Land-Grant University System and other partner organizations. For more information, visit www.csrees.usda.gov. ■

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