

## THE ROLE OF TEXAS COOPERATIVE EXTENSION IN PRESCRIBED BURNING

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**Abstract:** Texas Cooperative Extension is the outreach agency for the Texas A&M University System. The Agency's role is to provide relevant, research-based educational programming to the people of Texas. Prescribed burning is part of that programming and several workshops are conducted annually, along with demonstration burns. However, demand is greater than the capacity to deliver programs. Suggestions are made to improve educational programming in prescribed burning.

### Introduction

"Extension" means "reaching out," and - along with teaching and research - land-grant institutions "extend" their resources, solving public needs with college or university resources through non-formal, non-credit programs. These programs are largely administered through county and regional Extension offices, which bring land-grant expertise to the most local of levels. And both the universities and their local offices are supported by Cooperative State Research, Education, and Extension Service (CSREES), the U.S. Department of Agriculture federal partner.

The Morrill Act of 1862 established land-grant universities to educate citizens in agriculture, home economics, mechanical arts, and other practical professions. Texas A&M University was established in 1876. Extension was formalized in 1914, with the Smith-Lever Act and it established the partnership between the agricultural colleges and the U.S. Department of Agriculture. Extension work, according to the Act, was:

- \* Developing practical applications of research knowledge.

- \* Giving instruction and practical demonstrations of existing or improved practices or technologies in agriculture.

The name may be new, but Texas Cooperative Extension (TCE) has provided informal education to Texans for 87 years. Formerly known as the Texas Agricultural Extension Service, the agency's name was changed in July 2001 to better reflect Extension's broad responsibilities in environment and natural resources, family and consumer sciences, youth development, and community development, as well as production agriculture. Texas Cooperative Extension is part of the nationwide Cooperative Extension System and operates, like every state Extension agency, as a partnership between each county government, the land-grant university and the U.S. Department of Agriculture. Texas Cooperative Extension also collaborates with public and private organizations and with Prairie View A&M University's Cooperative Extension Program.

Texas Cooperative Extension offers education that transfers new knowledge and technologies from research, enhances communities and the environ

ment, and enables individuals to improve the quality of their lives through better decision-making. The TCE mission is "Providing quality, relevant outreach and continuing education programs and services to the people of Texas". These programs focus on issues determined by local citizens through an established needs assessment process, called the Texas Community Futures Forum. This ongoing process ensures the responsive development of programs that: 1) are relevant to the people in each county and 2) support State of Texas goals to improve health, safety, productivity and well-being; improve stewardship of the environment and natural resources; contribute to economic security and prosperity and develop responsible, productive, and self-motivated youth and adults.

Extension serves all 254 Texas counties through 12 district centers and 250 county offices, employing more than 950 professional educators located across the state. County Extension agents serve as community educators and are supported by Extension specialists who provide research and educational resources.

### **Programming in prescribed burning**

It is apparent from the preceding information that TCE is an educational/outreach agency. Accordingly, prescribed burning programs are conducted in an educational context. Actual prescribed burns are undertaken as part of the larger program to demonstrate fire behavior, proper safety procedures, firing techniques, etc. Fires may also be conducted as part of an applied research project or to demonstrate to interested persons the effects of fire on the landscape. In other words - this is not a ser-

vice; we do not burn rangeland as a service to clientele.

Another point that should be made is that Extension transfers science-based technologies from research to the end user. As such, there are no problems with tried and proven prescriptions for rangeland fire (e.g. cool-season burns). However, if research has not studied and/or developed prescriptions under some circumstances (e.g. summer burning) then there could be some problems of acceptance, certainly of advocacy. It is also Extension's responsibility to take research results, modify as appropriate, and adapt to changing environments and include in management systems.

Prescribed burn training for rangeland managers and associated professionals has been conducted by the Extension Service since the early 1980's. Four symposia plus regional workshops first were used to help establish this practice in four respective areas of the State. Early on, TCE cooperated with other agencies/organizations (TPWD, NRCS, Nature Conservancy, etc.) in developing training programs in prescribed burning and for in-service training of their employees. Rangeland Ecology and Management (RLEM) specialists have conducted 5 - 10 burning workshops annually since the early 1980's. Most of these workshops included lectures and actual hands-on burning experience (weather dependent). Two major publications have been published by TCE and are widely used in educational programs (Landers 1994; White and Hanselka 1989).

Most prescribed burning programming is conducted by the RLEM Exten

sion Program Unit. However, Specialists in both the Soil and Crops (Forages) and Animal Sciences Program Units may conduct small amounts of programming. There are presently 7 RLEM Extension Specialists in Texas - in College Station, Vernon, Ft. Stockton, San Angelo, Uvalde, Alice, and Corpus Christi.

The objectives of training to date have been to train practitioners how to safely and effectively utilize prescribed burning for management of range and forest ecosystems in Texas. This encompasses both the science and art of prescribed burning with due consideration of risks, liability, and potential benefits and negative impacts on and off-site. This includes:

- a) Safe use of fire encompassing proper timing and application of fire following adequate preparation that reduces chances of escape and potential harm. It includes training on effective fire fighting and planning to minimize escape impacts, worker safety, equipment and facility protection, weather and fire behavior forecasting, liability issues, and prescribe burn regulations.
- b) Effective use of fire encompassing realistic goals, different fires different responses for different vegetation and weather (pre, time of burn, and post) conditions, proper conditions and procedures for achieving desired responses and reducing negative effects, pre and post management requirements, and monitoring for improved application and management.

- c) Provide hands-on field experience with all phases of prescribed burning to increase the art of applying fire to specific situations. This phase is essential if people are to begin to apply fire with minimal assistance from professionals. The practitioners must become comfortable but cautious so that they can and will plan, implement, control and monitor their prescribed burning program on their own place. This may include the development of burn cooperatives, shared resources and expertise, and refresher training or volunteerism for neighboring burns.
- d) Develop support from the general public, insurance companies, regulatory agencies, etc. for the continued use of prescribed fire by citizens of Texas.

### **Programming issues**

In the early 1990's, the RLEM Extension Unit in association with NRCS surveyed producers across the state and asked them "Do you use fire, do you plan on using fire and if so why or why not"? Many of the answers reflected liability and environmental concerns, but the main thing was the lack of experience. The basic situation is that many more would like to use fire than are using it now. But, they do not, or cannot; many can use fire and want to use fire, but don't for many reasons, and there are many more that can't and really don't want to. The demand is much greater than the ability of Texas Cooperative Extension to train them.

RLEM prescribed burning programs continue to be conducted as related to County Extension Agent and clientele requests in local areas. Requests are exceeding the ability of Specialists and CEA's to provide timely training and conduct of demonstration burns. In service training needs to be expanded for more effective assistance to clientele and "continuity" between groups including volunteer fire departments, fire marshals, county officials, air population control specialists, and agency personnel. The formation of Prescribed Burning Coops is an excellent vehicle for "Training the Trainer" and "People Helping People" efforts. Since County Extension Agents will rarely be "Fire Bosses" and carry the driptorch, perhaps their role would best be on how to develop and implement burning COOPs.

A coordinated effort to provide regularly scheduled training in key locations for clientele and professionals have been discussed and proposed for several years with various groups. An example of this that has been successful are the prescribed burning workshops conducted by

the Academy for Range Management on the Sonora Experiment Station. Permanent training locations and scheduled sessions will allow Specialists and other resource people to more effectively meet the increasing needs for clientele to effectively and safely apply and understand prescribed burning for a variety of land resources areas and objectives.

Continuing research and experience with prescribed fire is promoting greater application for a wide variety of land resource objectives. Possible conflicts with air quality regulations, public concern, and liability issues require adequate training of clientele.

#### **Literature cited**

- Landers, R. Q. 1994. Planning a prescribed burn. Texas Agricultural Extension Service L-2461.
- White, L. D. and C. W. Hanselka. 1989. Prescribed range burning in Texas. Texas Agricultural Extension Service. B-1310.