

# COMPARISON OF LIVE FUEL MOISTURE SAMPLING METHODS FOR BIG SAGEBRUSH IN UTAH

Annie Brown

Colorado State University, College of Natural Resources, Department of Forest Sciences, Fort Collins, CO 80523, and Bureau of Land Management, Utah State Office, P.O. Box 45155, Salt Lake City, UT 84145, USA

Philip N. Omi

Colorado State University, College of Natural Resources, Department of Forest Sciences, Fort Collins, CO 80523, USA

Jolie Pollet

Bureau of Land Management, Utah State Office, P.O. Box 45155, Salt Lake City, UT 84145, USA

## ABSTRACT

Live fuel moisture (LFM) has been identified by managers as well as the scientific literature as a key driver of fire behavior in fuel types dominated by live vegetation (i.e., shrublands). Recognizing this, fire managers in Utah use LFM values as a factor in making both tactical and strategic decisions in fire suppression and prescribed burning. Current methods to quantify LFM through field sampling have been based on publications developed for fuel types that are very different from those found in the Great Basin. No research has been conducted regarding the most appropriate procedures to follow to obtain accurate and comparable LFM results for sagebrush fuel types. This proposed research aims to improve local knowledge by determining the most appropriate sampling procedures for assessing LFM in Utah's big sagebrush (*Artemisia tridentata*). This will involve analyzing how variability in data collection affects LFM values and recommending a methodology. Sampling methods suggested in the literature as well as those most commonly utilized by field technicians will be compared and statistically analyzed to detect significant differences in resultant LFM values. In addition, final values from each method will be run through the National Fire Danger Rating System to determine if there are differences in fire danger indices and staffing levels using various collection methods. By developing scientifically sound, standardized methods, fire managers will benefit from improved accuracy and comparability of LFM values.

*Citation:* Brown, A., P.N. Omi, and J. Pollet. 2007. Comparison of live fuel moisture sampling methods for big sagebrush in Utah [abstract]. Page 221 in R.E. Masters and K.E.M. Galley (eds.). Proceedings of the 23<sup>rd</sup> Tall Timbers Fire Ecology Conference: Fire in Grassland and Shrubland Ecosystems. Tall Timbers Research Station, Tallahassee, Florida, USA.