

# TECHNICAL NOTES

U.S. DEPARTMENT OF AGRICULTURE STATE OF COLORADO NATURAL RESOURCES CONSERVATION SERVICE

Economics Technical Note No. 2

May 23, 2013

**To:** All Offices

**From:** Aaron Waller – State Economist

**Subject:** What is the value of your Windbreak?

Windbreaks and shelterbelts are important assets to farms and ranches in Great Plains and Rocky Mountains. They protect farmsteads and have significant aesthetic and wildlife benefits. Windbreaks damaged by drought or fire can produce a significant long term loss to the landowner. Several methods can be used to calculate a functional windbreak value. Here are some examples:

**Value of Farmstead Method** – An intact functional windbreak can be 10% of the whole farmstead appraised value. If the shelterbelt and farmstead are valued at \$300,000, then the windbreak has a value of \$30,000. If ½ of the windbreak is lost, then that is a \$15,000 loss in value.



**Income Method** – A good windbreak can save up to 15% on winter heating costs. So if the ranch uses \$2000 in propane for heating, then the windbreak saves \$300 annually. If the windbreak is gone, the ranch enterprise would essentially be losing \$300 of income annually. Over the 30-year life of a windbreak, the present value of this income (discounted to current \$) is about \$5,200.

**Replacement Cost** – In the end, an asset is often valued at its replacement cost. If you lost a 300-tree windbreak to fire and these are to be replaced with 4' tall trees valued at \$80/ea, then you lost at least \$24,000. There would be additional reclamation costs to remove dead trees and prepare the site for replanting. Smaller “conservation grade“ trees and shrubs may be an option to reduce cost if these are available.

Landowners can use their own figures to produce an estimate for their situation. Appraisers rely on judgment and expertise to determine value and may use only one of the above methods. Replacement costs may not appraise to a full aesthetic and functional windbreak value for some time after planting.