March 23, 1979

TECHNICAL NOTE - ECS - FORESTRY ND-2

Re: How Much is a Farmstead Windbreak Worth?

Fuel Savings

Studies indicate that windbreaks can reduce winter fuel consumption up to 40 percent - depending on the climate of the area, location of the home, and what the house is built of. References: (1) page 65 of "Tree Windbreaks for the Central Great Plains," Agricultural Handbook No. 250 USDA-Forest Service; and (2) Fact Sheet 2-3-5 USDA, "Energy Conservation in the Rural Home," July 1978. (Copies attached)

Livestock Protection

Feed energy can also be conserved when windbreaks are used to protect livestock. At a Montana Experiment Station, two herds of cattle were wintered on the open range, and were fed the same ration. One herd had the benefit of tree and shrub protection while the other herd had an open lot with some protection from a shed. The cattle having protection from trees gained 34.9 pounds per head more during a mild winter, and lost 10.6 pounds less during a severe winter as did those in the exposed pasture.

From Alberta, Canada, comes information showing that unsheltered steers required 2.5 to 6 times as much food energy to maintain body heat as did sheltered steers. By reducing energy requirements in your animals, you reduce feed requirements, - hence - a savings of energy feed and dollars.

Studies in North Dakota show that ranches located in open, unprotected level areas required an average of 50 percent more winter feed for stock than those located in areas having natural protection of topography, trees, or brush. Refer to Agricultural Handbook #250, USDA-FS.

/s/

Elmer R. Umland
Forester

/s/

James W. Carr
State Resource Conservationist