



Living Snowfences in Kansas

Blowing and drifting snow closes many state, county, and private roads during winter in Kansas. A lot of time and money is spent annually on snow removal to provide access.

The use of slatted or plastic fences to protect roads from drifting snow are popular methods but, they have some disadvantages. These fences must be put up and taken down each year, requiring equipment and labor. The fencing material is costly and relatively short-lived compared with the life span of a living snowfence. During severe blizzards, these fences may not trap enough snow to prevent road closures. Tree plantings can protect roads from drifting snow and reduce snow removal costs.

The concept of using tree plantings to protect roads from drifting snow is not new. There are many examples of these living snowfences throughout the state.

Trees and Shrubs: A Good Alternative

Living snowfences of trees and shrubs provide a desirable alternative to slatted or plastic fences. Experience shows that properly designed and maintained tree plantings trap more snow than slatted or plastic fences while providing several additional benefits. One major benefit of living snowfences is the habitat they provide for a variety of wildlife including pheasants, quail, rabbits, songbirds, and deer. They also can be designed to provide a suitable calving area and offer protection for livestock during severe winter weather. In addition, living snowfences greatly enhance the appearance of the landscape and in some instances can improve crop production by providing additional moisture and wind protection.

There are also some disadvantages with living snowfences. They take up more space than slatted or plastic fences and require 3 to 5 years after planting before becoming effective.

Cost Effectiveness

Compared with traditional slatted fences, living snowfences are cost effective. An analysis in Nebraska showed a savings of \$1,383 per mile per year during a 50-year life span.

Design and Maintenance

Proper design and maintenance are important. If living snowfences are not in the proper location, they may actually compound the problem by causing snow to drift on the road. Living snowfences usually are planted on the north side of east-west roads, or on the west side of

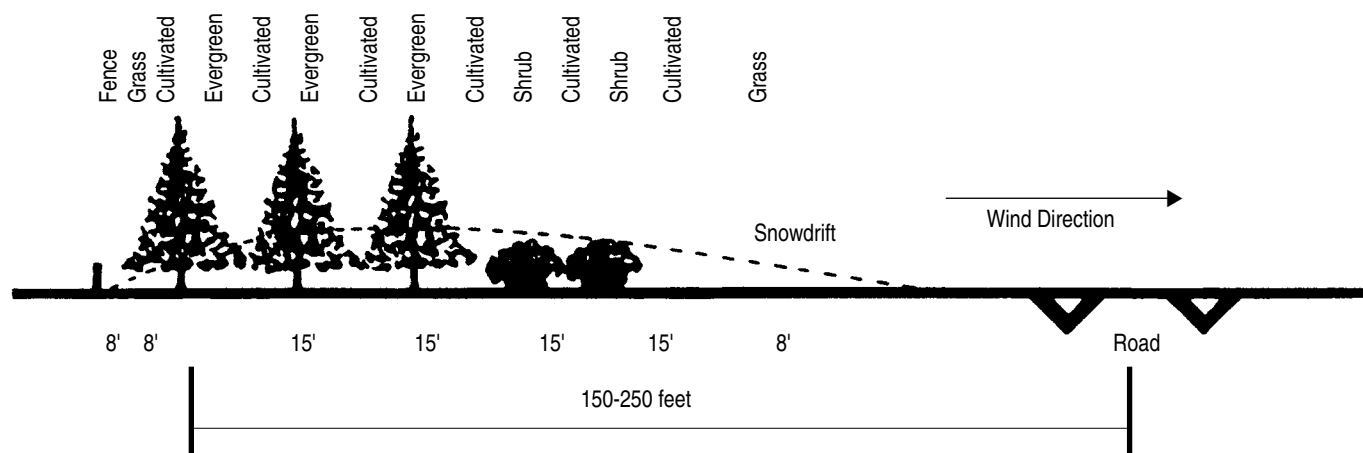


Figure 1. Living snowfence.

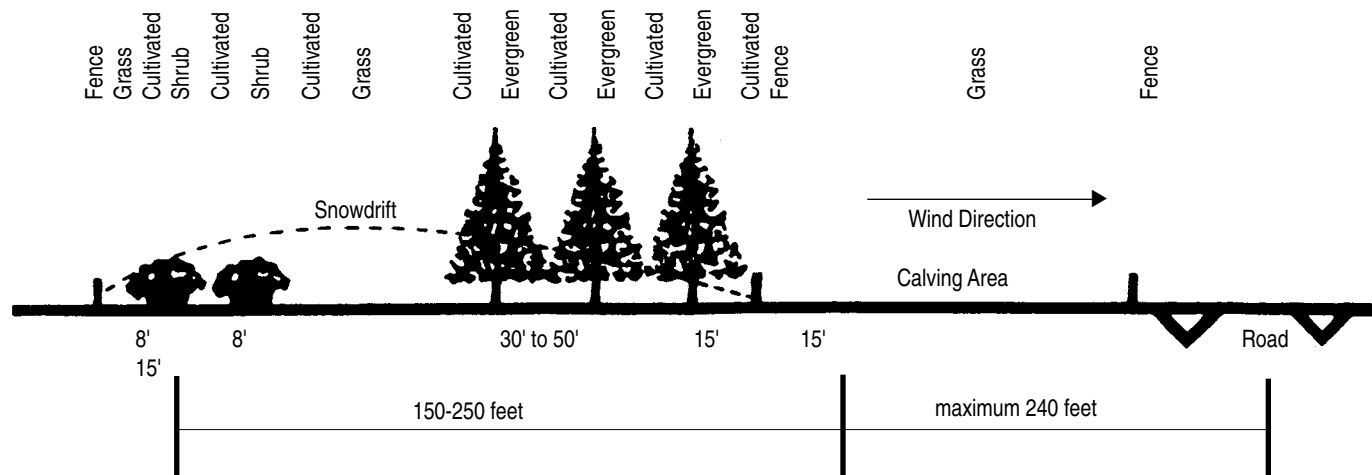


Figure 2. Living snowfence with calving area.

north-south roads. The distance from the planting to the road depends on the type of ground cover and the terrain on the windward side. In flat open terrain, the windward row should be 150 to 250 feet from the center of the road (Figure 1). Do not create a “blind corner” by planting living snowfences too close to an intersection.

Living snowfences should contain at least two rows of dense evergreen trees. Eastern redcedar or Rocky Mountain juniper are especially well suited. An additional row or two of shrubs will improve the snow-trapping ability while greatly enhancing wildlife habitat. Spacing within the row should be 6 to 8 feet between trees and 3 to 4 feet between shrubs. Between-row spacing ranges from 8 to 20 feet.

The planting should be long enough to provide adequate protection for the problem area. Both ends of the planting should extend at least 100 feet beyond the area prone to drifting. This eliminates snow sweeping around the ends

of the planting and accumulating in the protected area.

Figure 2 illustrates a living snowfence designed to protect both a calving area and a road. Two rows of tall shrubs or evergreen trees on the windward side trap the snow. The snow storage area south of the shrubs may be seeded to native grass. Two rows of coniferous trees on the leeward side provide wind protection for the calving area. The combination of trees, shrubs and native grass provides excellent habitat for most species of wildlife.

Assistance

Technical assistance in designing living snowfences is available from Kansas Forest Service, your local K-State Research and Extension offices, Natural Resource Conservation Service offices, and Kansas Department of Wildlife and Parks. Cost-share assistance may be available in some counties through a variety of tree planting programs.

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Related Kansas Forest Service Publications

- *Windbreaks for Wildlife*, MF-805
- *Tree Planting Guide*, L-596
- *Weed Control Options in Tree Plantings*, L-848
- *Windbreak Management*, MF-815
- *Weed Barrier Fabric Mulch*, MF-2216
- *Windbreaks for Kansas*, MF-2120

To request services of a forester, contact your local K-State Research and Extension office, county conservation district office, Natural Resources Conservation Service office or:

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