

Windbreaks for Better Pastures

Deborah R. Lester

CSU 4-H Youth Development/Livestock Agent, Southeast Area

719-523-6971

Blowing dirt can be annoying, hazardous to be in, hard on livestock and wildlife, and just plain costly to your operation, so in the windy plains of Colorado, in the southwestern parts of Kansas and through the panhandles of Oklahoma and Texas, controlling soil erosion and enhancing your pastures is beneficial to you and your operation.

There are several ways to prevent soil erosion of your pastures and fields, with ground cover being number one. T.A. James, R.L. Croissant and G. Peterson wrote a “Fact Sheet – no.5018, that CSU has available on our website www.ext.colostate.edu that will give you details as to how ridges, cover crops and crop residues can all improve your lands and reducing the harmful effects of our damaging winds.

There is one opportunity available to you that you can act on this winter—go into your local Extension Office and order seedling trees for windbreaks/conservation/wildlife/soil erosion prevention and to have a better pasture this spring. What they say is true---the best time to plant a tree is 20 years ago or today.

This article will focus on utilizing windbreaks for enhancing your pastures by retaining moisture and catching that snow that often blows on by, provide shelter for livestock and helping to distribute moisture across your pastures.

Do your homework first and look at: location, elevation, slope, soil type, prevailing winds, weed control methods, irrigation needs, snow drifting, power lines, underground utility locations, past land uses and then the type, size and species of tree to be used. Don't get overwhelmed by this list, ask for help from your local Extension Office, NRCS (Natural Resource Conservation Service) office or any of the Colorado State Forest district offices.

Here are some key items:

- Windbreaks don't have to be placed straight east-west or north-south, but they do need to be placed perpendicular to prevailing winds. What direction do your hardest and coldest winds come from?

- Plant windbreaks at least 100 feet from roads, driveways, buildings or other protected areas, as snow can drift 3 times the height of your windbreak.
- Excellent protection is 6-8 times the tree height. So if your mature tree will be 15 feet tall, “excellent protection is” provided for 90-120 feet.
- Fair protection is 10 times the tree height. In our 15 foot tall tree example, you would get 150 feet of “fair protection” from the wind.
- Use suitable trees and shrubs (Don’t forget the shrubs! Shrubs can often be faster growing and give you some initial protection while your trees are maturing.)
- Consider using a variety of suitable trees and shrubs, but do use the same tree or shrub in each row. This increases disease and insect resistance and enhances wildlife habitat.
- Make evergreens the foundation of your windbreak and be in one inside row.
- Plan to plant at least double rows of trees and shrubs and three is even better.
- Look for drought tolerant, high alkaline tolerance and trees/shrubs that accomplish your desired protection or enhancement. Many trees and shrubs are good for attracting wildlife, if that is one of your goals.
- Also check out programs that can help pay for your windbreak. NRCS offers cost sharing programs for windbreaks and can also be a source for wildlife enhancements.
- Space your shrubs 3-6 feet apart, juniper and cedar trees 6-12 feet apart, and short deciduous trees (like the Native Plum or the Nanking cherry) need 8-12 feet, while pine

and spruce trees need 8-14 feet and your tall deciduous trees like the Honeylocust, or Bur Oak need to be 8-18 feet apart.

- Remember that tree and shrub rows with 40-60% density will distribute snow moisture evenly across your pasture with the difference noticeable in spring.
- Three rows of trees can provide good shelter for your livestock, but remember to fence immediately around your trees and shrubs, because trampling will increase your trees susceptibility to insect damage and disease.
- Figure in a drip irrigation system for your trees. Seedling trees will need consistent moisture to grow and thrive. Also consider the large potted trees available through your Extension office in replacing holes in your current windbreaks.

But get your pencil sharpened, start your preparations and put your orders in by March 1, 2012. Because if you didn't do this 20 years ago, today is the day!

Contact your local Extension Office:

Baca County 719-523-6971

Bent County 719-456-0764

Cheyenne County 719-767-5716

Crowley County 719-267-5243

Kiowa County 719-438-5321

Otero County 719-254-7608

Prowers County 719-336-7734

We can also be found on the web at: <http://www.extension.colostate.edu/SEA>. CSU Extension offers up-to-date, unbiased, research based information to families in Southeast Colorado. CSU Extension programs are available to all without discrimination.

References: "Trees for Conservation, planning * planting* care", Colorado State Forest Service, Sept 2001.