



Gimme a (wind) break! Part 1

by Marilyn Loser

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Recently, I attended an excellent Conservation Seedling Workshop hosted by the Alamosa district office of the Colorado State Forest Service (CSFS). The workshop was in conjunction with the CSFS program that annually offers trees and shrub seedlings for sale.

Windbreaks were one of the topics covered. While I generally associate windbreaks with Eastern Colorado or Nebraskan farms, our recent heavy winds got me thinking about urban windbreaks.

Generally, a windbreak is considered any plant or physical barrier that can slow down or divert the wind. If properly located, trees, fencing, and buildings can all serve as windbreaks.

Foresters Adam Moore and Sam Scavo ably led us through goals and objectives of seedling planting and then drilled down into the specifics of what to plant where and proper planting and maintenance. You might want to have a windbreak just to reduce the amount of wind in your yard. You also might want to provide wildlife habitat, reduce utility bills, create a living snow fence, and/or protect garden plants.

You might think a full wall or solid fence would reduce the effect of the wind. According to Larry Hodgson of the laidbackgardener.blog website, you'd be wrong. He says, "A solid fence doesn't absorb the wind: the wind passes over or around it, causing it to swirl, then quickly resumes blowing as strongly as ever."

As wind flows through a properly constructed living windbreak, the trunk, branches and leaves absorb some of the momentum of the wind and wind speed is reduced. Also, as wind flows over the plant surfaces, it is deflected upwards and wind speed is further reduced. Together, these two processes help reduce the force of the wind.

So how much protection does a good windbreak afford? The most important factors in windbreak design for wind protection are height, density, orientation, and length.

The general rule of thumb promoted by the CSFS and many other resources says that a windbreak height of, say 30 ft., will reduce wind speeds along the ground for up to 10 times the height of the break -- in this case 300 ft. However, Adam explained that the most ground protection is between 1 and 5 times the height of the trees.

Been on a mountain pass and observed the snow fences? Adam said density refers to the solid area of material facing the wind. He pointed out that snow fences have a 50% density -- they aren't solid, there are spaces between the boards. This configuration stores the most snow.

If snow isn't a problem and you'd like better wildlife habitat, a denser windbreak is a better solution. In our area, typical wind direction is from the southwest year around.

The length of the windbreak is of concern. The longer the windbreak, the less likely the wind will eddy around the ends. There are a couple of places in my yard where the wind eddies around the house, hits a fence and deposits lots of leaves, weeds, and any other blowing trash. It would be nice to avoid this!

In days of yore, the preferred idea was to plant several rows of vegetation. The outer rows consisted of less tall plants, while the inner rows had taller trees. Current belief, according to Adam, is that two rows of dense planting are just as effective.

So what does all this mean to the urban resident? Most of us don't have room for even two rows of plantings. And other factors are important to consider. Careful planning is important. A living windbreak isn't something you stick in the ground one year and reap the benefits thereafter. Trees and shrubs can take a long time to become established and mature.

You might think that planning is the obvious first step. Sadly, it often doesn't happen. Just look around Alamosa at all the hacked elm trees (a tree that is tall at maturity and grows relatively fast in town) under powerlines in Alamosa!

Part 2 of this article will look closely at planning wind reduction on urban property and selecting appropriate plants. Meanwhile, don't get blown away!

CSFS Conservation Seedling Program: When I first became aware of the program, folks needed to have three or more acres to participate. Now, there is no minimum acreage requirement and they have also have perennials. Only one of the 30 plants I purchased last year wasn't doing well in late September. Order forms are due at the Gunnison Field Office by April 5 and the seedlings arrive April 20 for pickup in Alamosa. For more information, visit the district website csfs.colostate.edu/districts/Alamosa-district or call 719.587.0915.

"Tree planting is always a utopian enterprise, it seems to me, a wager on a future the planter doesn't necessarily expect to witness." Michael Pollan in "Second Nature: A Gardener's Education"