

## Texas Windbreaks

*The only thing blocking the wind between Canada and Texas is a four-wire fence...*

Farmers and ranchers in West Texas have made that statement, which refers to the persistent winds that blow in the late winter and spring.

During the 1930s and 1940s, the old Soil Conservation Service (SCS), which is now the Natural Resources Conservation Service (NRCS), recognizing a need to help lessen soil erosion by blowing winds, started working with landowners to establish large multi-row field windbreaks. During those early years landowners planted whatever they could get, and if it was thought to be adapted to the area, it was planted.

It's a different story today...

Through cooperative work between the NRCS, the Texas Forest Service, and various Soil and Water Conservation Districts (SWCD), the selection and availability of trees suitable for windbreaks has become a science. Presently, when a land manager seeks information on how to establish windbreaks, what to plant, and how to manage and care for their investment, they're able to visit their local SWCD office and gain the information they desire.

Morris J. Houck, PMC Manager of the Knox City, Texas NRCS Plant Materials Center (PMC) said, "A windbreak will not only lessen the force of the wind around an open field helping to protect crops, but when planted around a home or farmstead, a windbreak can assist in heating and cooling costs, plus provide a habitat for wildlife."

The Knox City, PMC has been working since 1983 to identify and select suitable trees and shrubs for use in windbreaks in Texas.

"Although a lot of traditional windbreak trees like eastern red cedar and Arizona cypress were looked at, several selections that had not been previously evaluated, like Afghanistan pine, bur oak, little walnut and Nanking cherry, were considered," said Houck.



**Afghanistan pine windbreak protecting farmstead from blowing soil off cotton field**

source: Knox City, TX Plant Materials Center

Overall, the PMC looked at 35 evergreen collections, 186 hardwood tree collections, and 50 shrub collections over a 20-year period. All the different plants were evaluated for their hardiness, shape, growth rate, and general adaptability toward local conditions. The PMC used sites at Pampa, Levelland, Texline, and Knox City, Texas, to test the different collections.

Today, many new and improved windbreak management procedures have been adopted, including the use of single-row windbreaks instead of large multi-row plantings. Fact sheets about the selection of plants, windbreak design, and care and maintenance have also been developed and are available from NRCS field offices.



**Modern three-row field windbreak using eastern red cedar, Ponderosa pine, and 'Cling Red' honeysuckle**

source: Knox City, TX Plant Materials Center

At present, landowners don't have to worry about where to buy tree seedlings. Through efforts of the Texas Forest Service's West Texas Tree Nursery, which is located in Lubbock, Texas, many of the most adapted windbreak trees and shrubs are available. Landowners can purchase seedlings directly from the Texas Forest Service or from their local SWCD office.

If you, as a landowner, homeowner, or someone who just wants trees around their place, are interested in learning more about windbreaks, please contact your local SWCD office, an NRCS Field Office, or the Texas Forest Service's West Texas Tree Nursery in Lubbock.

**For more info:** Knox City Plant Materials Center,  
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## ***Did You Know?***

### **Vegetative Environmental Buffers (VEBs) Offer Benefits for Poultry Production Facilities**

The poultry industry is in the process of shifting to more tunnel ventilation (windowless) facilities. With this change there is mounting evidence that by planting trees and shrubs, also known as vegetative environmental buffers (VEBs), around these production facilities, it will benefit producers in a multitude of ways. One benefit is the ability of trees and shrubs to lower heating and cooling costs. In the Mid-Atlantic area there is preliminary evidence that VEBs maintain cooler summer temperatures by shading poultry facilities.

Conversely the VEBs will maintain warmer winter temperatures by shielding these facilities from winter winds. Evergreen plants should be utilized along the North and West aspects of the facility to maximize this benefit.

Another benefit of VEBs is plants' ability to absorb gaseous ammonia that is exhaled via the ventilation tunnel; ammonia is the gas of greatest concern to the poultry industry. Yet another benefit to a VEB is that trees planted near the noise source can reduce noise by 50% and are much more aesthetically pleasing.

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