

# Windbreak/Shelterbelt for Air Quality

## A CSP On-Farm Pilot Project

What is a windbreak or shelterbelt?– It is an array of trees and shrubs planted to accomplish one or multiple environmental benefits. This conservation practice for example can help protect farm enterprises from wind related damage, serve as visual screen, and serve as a filter to trap farm emissions.

In this pilot project the intent is to use trees and vegetation to capture particulate matter and other air pollutants coming from agricultural production buildings.

### **This Pilot Project**

is a Conservation Security Program (CSP) enhancement and consists of the planting, monitoring and publicizing of the results obtained.

The project will last three years and requires the grow of suitable vegetation to buffer one production building. The producer will conduct three events to publicize the project results.

### **Start Date**

The pilot project needs to be scheduled to start within the first three years of the CSP contract.

### **Participant Share**

The participant is responsible for all aspects of implementation of the project.

**Shelterbelt around agricultural production buildings have multiple benefits.**



## Basic Guidance

For installation follow the USDA-NRCS Windbreak/Shelterbelt Establishment practice standard.

- ◆ The location, layout and density of the planting will accomplish the purpose and function intended within a 20-year period.
- ◆ The maximum design height (H) for the windbreak or shelterbelt shall be the expected height of the tallest row of trees or shrubs at age 20 for the given site.
- ◆ Species must be adapted to the soils, climate and site conditions.
- ◆ Species shall be suited for the planned practice purpose(s).
- ◆ Site preparation shall be sufficient for establishment and growth of selected species, not contribute to erosion, and be appropriate for the site.
- ◆ Only viable, high quality, and adapted planting stock or seed will be used.
- ◆ The planting shall be done at a time and manner to insure survival and growth of selected species.
- ◆ Spacing between individual plants shall be based on the needed growing space for plant type and species, the accommodation of maintenance equipment, and the desired characteristics of the stem(s), branches and canopy as required for a specific purpose.
- ◆ For optimal carbon storage, select plants that are adapted to the site to assure strong health and vigor and plant the full stocking rate for the site.
- ◆ Avoid planting trees or shrubs where they will interfere with structures and above or below ground utilities.

### OPERATION AND MAINTENANCE

The following actions shall be carried out to insure that this practice functions as intended throughout its expected life. These actions include normal repetitive activities in the application and use of the practice (operation), and repair and upkeep of the practice (maintenance):

- ◆ Replacement of dead trees or shrubs will be continued until the barrier is functional.
- ◆ Supplemental water will be provided as needed.
- ◆ Thin or prune the barrier to maintain its function.
- ◆ Inspect trees and shrubs periodically and protect from adverse impacts including insects, diseases
- ◆ or competing vegetation. The trees or shrubs will also be protected from fire and damage from
- ◆ livestock and wildlife.
- ◆ Periodic applications of nutrients may be needed to maintain plant vigor.

If you have questions regarding the Conservation Stewardship Program (CSP) please call the county USDA–Natural Resources Conservation Service office .