

Practice: 603 - Herbaceous Wind Barriers

Scenario: #1 - Annual Species

Scenario Description:

This scenario describes the implementation of herbaceous barriers to reduce wind velocities and wind-borne particulate matter. In this scenario barriers are composed of annual vegetation, living or dead. Plant materials shall be selected for local adaptation and climatic conditions and are resistant to lodging and are non-spreading in their habit. Barriers will be designed as close to perpendicular to prevailing winds as practical. Barrier direction, spacing, and composition needed to achieve the desired purpose shall be designed using the currently approved wind erosion technology. One barrier is planned to be 16 feet wide and 1,320 feet long for 0.5 acre per barrier. Includes foregone income.

Before Situation:

Typically cropland has excessive soil disturbance and unsheltered distance that results in excessive wind erosion that affect soil resources. Seedling development and wildlife habitat are negatively affected by wind-borne sediment and sediment-borne contaminants travelling offsite.

After Situation:

Implementation of herbaceous wind barriers will modify the flow and velocity of air dependant upon barrier height, porosity, spacing and wind speed. Orientation is generally placed across an entire field perpendicular to applicable prevailing wind direction. Implementation will reduce soil loss; protect growing plants from damage by wind blown soil particles, provide food and cover for wildlife. Payment is for the design and implementation of annual barriers and required reestablishment.

Scenario Feature Measure: linear feet of barrier planted

Scenario Unit: Linear Feet

Scenario Typical Size: 1,320

Scenario Cost: \$155.16

Scenario Cost/Unit: \$0.12

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation						
Seeding Operation, No Till/Grass Drill	960	No Till drill or grass drill for seeding. Includes equipment, power unit and labor costs.	Acre	\$21.04	0.5	\$10.52
Foregone Income						
FI, Soybeans Dryland	1961	Dryland Soybeans is Primary Crop	Acre	\$271.04	0.16	\$43.37
FI, Corn Dryland	1959	Dryland Corn is Primary Crop	Acre	\$144.36	0.17	\$24.54
FI, Wheat Dryland	1963	Dryland Wheat is Primary Crop	Acre	\$115.67	0.17	\$19.66
Labor						
General Labor	231	Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	\$18.71	2	\$37.42
Materials						
One Species, Cool Season, Annual Grass or Legume	2311	Cool season annual grass or legume. Includes material and shipping only.	Acre	\$39.29	0.5	\$19.65

Practice: 603 - Herbaceous Wind Barriers

Scenario: #2 - Perennial species

Scenario Description:

This scenario describes the implementation of herbaceous barriers to reduce wind velocities and wind-borne particulate matter. In this scenario barriers are composed of perennial living vegetation. Plant materials shall be selected for local adaptation and climatic conditions and are resistant to lodging and are non-spreading in their habit. Barriers will be designed as close to perpendicular to prevailing winds as practical. Barrier direction, spacing, and composition needed to achieve the desired purpose shall be designed using the currently approved wind erosion technology. One barrier is planned to be 16 feet wide and 1,320 feet long for 0.5 acre per barrier. Includes foregone income.

Before Situation:

Typically cropland has excessive soil disturbance and unsheltered distance that results in excessive wind erosion that affect soil resources. Seedling development and wildlife habitat are negatively affected by wind-borne sediment and sediment-borne contaminants travelling offsite.

After Situation:

Implementation of perennial herbaceous wind barriers will modify the flow and velocity of air dependant upon barrier height, porosity, spacing and wind speed. Orientation is generally placed across an entire field perpendicular to applicable prevailing wind direction. Implementation will reduce soil loss; protect growing plants from damage by wind blown soil particles, provide food and cover for wildlife. Payment is for the design and implementation of perennial barriers and required reestablishment.

Scenario Feature Measure: linear feet of barrier planted

Scenario Unit: Linear Feet

Scenario Typical Size: 1,320

Scenario Cost: \$170.98

Scenario Cost/Unit: \$0.13

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation						
Seeding Operation, No Till/Grass Drill	960	No Till drill or grass drill for seeding. Includes equipment, power unit and labor costs.	Acre	\$21.04	0.5	\$10.52
Foregone Income						
FI, Corn Dryland	1959	Dryland Corn is Primary Crop	Acre	\$144.36	0.17	\$24.54
FI, Soybeans Dryland	1961	Dryland Soybeans is Primary Crop	Acre	\$271.04	0.16	\$43.37
FI, Wheat Dryland	1963	Dryland Wheat is Primary Crop	Acre	\$115.67	0.17	\$19.66
Labor						
General Labor	231	Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	\$18.71	2	\$37.42
Materials						
One Species, Warm Season, Native Perennial Grass	2322	Native, warm season perennial grass. Includes material and shipping only.	Acre	\$70.93	0.5	\$35.47