

**Practice: 380 - Windbreak/Shelterbelt Est.**

**Scenario # 1 Windbreak, shrubs, hand planted**

**Louisiana**

**Scenario Description:**

Use the shrub, conifer, and hardwood scenarios of this practice to design windbreak as needed. Usually, a multi-row windbreak of low growing shrubs (outside row), tall growing hardwoods (inside row), and conifers (middle row) can provide multiple benefits. For multiple rows, planting should be staggered in adjacent rows. Consider using evergreen conifers when planting around confined animal operations for odor control. Windbreaks in and around pastures provide shade to livestock. Windbreaks can be as wide as needed but common sizes can be as wide as 5 rows or as narrow as 1 row. Can be mix of shrub, hardwood, or conifer as well as a mix of species. Spacing of trees within the rows should be kept relatively wide to promote low branching and wide crown development (4 to 6 ft for shrubs and 10 to 12 ft for trees). A larger windbreak provides more opportunity for species diversity. An example would be mast trees and shrubs for food, and dense growing conifers, deciduous trees and shrubs for shelter and cover. Space trees from 10 to 15 feet apart and shrubs 3 to 13 feet apart depending on the species and its growth habits. The minimum spacing between rows for multiple row plantings is 12 feet, and the maximum spacing is 20 feet. Rows should be 4 ft wider than equipment used for maintenance. This practice is typically applied to crop, pasture or confined animal operations. Resource Concerns to be addressed may include: Soil Erosion (wind); Excess/Insufficient Water (inefficient moisture management); Water Quality Degradation (excess nutrients in surface waters, excessive sediment in surface waters,); Degraded Plant Condition (undesirable plant productivity and health); Inadequate habitat for Fish and Wildlife (food, cover/shelter, continuity); Inefficient Energy Use (facilities, farming/ranching practices and field operations); Inadequate shelter for Livestock (cover/shelter); or Objectionable Odors (air quality).

**Before Practice Situation:**

Agricultural field, livestock paddock, feedlot or farmstead needing protection from wind, additional wildlife food and cover, livestock shelter or management of objectionsble odors.

**After Practice Situation:**

Wind velocity suitably reduced to reduce soil erosion, or to manage objectionable odors. Additional livestock shelter, or wildlife food and cover.

**Scenario Feature Measure:**

length of windbreak row(s)

<b>Scenario Typical Size:</b>	500	Feet	Unit Cost	\$1.30
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Cost Category	Component Name	Quantity	Unit	Unit Cost	Cost
Materials	Wire flags	20	Each	\$0.08	\$1.60
Materials	Shrub, seedling or transplant, potted, 1 qt.	125	Each	\$3.80	\$475.00
Equip./Install.	Truck, Pickup	2	Hour	\$23.48	\$46.96
Equip./Install.	Hand tools, tree planting	2	Hour	\$9.44	\$18.88
Labor	Supervisor or Manager	2	Hour	\$36.21	\$72.42
Labor	General Labor	2	Hour	\$18.57	\$37.14
				<b>Total Cost:</b>	<b>\$652.00</b>

**Practice: 380 - Windbreak/Shelterbelt Est.**

**Scenario # 2 windbreak, conifer trees, hand planted**

Louisiana

**Scenario Description:**

Use the shrub, conifer, and hardwood scenarios of this practice to design windbreak as needed. Usually, a multi-row windbreak of low growing shrubs (outside row), tall growing hardwoods (inside row), and conifers (middle row) can provide multiple benefits. For multiple rows, planting should be staggered in adjacent rows. Consider using evergreen conifers when planting around confined animal operations for odor control. Windbreaks in and around pastures provide shade to livestock. Windbreaks can be as wide as needed but common sizes can be as wide as 5 rows or as narrow as 1 row. Can be mix of shrub, hardwood, or conifer as well as a mix of species. Spacing of trees within the rows should be kept relatively wide to promote low branching and wide crown development (4 to 6 ft for shrubs and 10 to 12 ft for trees). A larger windbreak provides more opportunity for species diversity. An example would be mast trees and shrubs for food, and dense growing conifers, deciduous trees and shrubs for shelter and cover. Space trees from 10 to 15 feet apart and shrubs 3 to 13 feet apart depending on the species and its growth habits. The minimum spacing between rows for multiple row plantings is 12 feet, and the maximum spacing is 20 feet. Rows should be 4 ft wider than equipment used for maintenance. This practice is typically applied to crop, pasture or confined animal operations. Resource Concerns to be addressed may include: Soil Erosion (wind); Excess/Insufficient Water (inefficient moisture management); Water Quality Degradation (excess nutrients in surface waters, excessive sediment in surface waters,); Degraded Plant Condition (undesirable plant productivity and health); Inadequate habitat for Fish and Wildlife (food, cover/shelter, continuity); Inefficient Energy Use (facilities, farming/ranching practices and field operations); Inadequate shelter for Livestock (cover/shelter); or Objectionable Odors (air quality).

**Before Practice Situation:**

Agricultural field, livestock paddock, feedlot or farmstead needing protection from wind, additional wildlife food and cover, livestock shelter or management of objectionsble odors.

**After Practice Situation:**

Wind velocity suitably reduced to reduce soil erosion, or to manage objectionable odors. Additional livestock shelter, or wildlife food and cover.

**Scenario Feature Measure:**

length of windbreak row(s)

<b>Scenario Typical Size:</b>	500	Feet	Unit Cost	\$0.75
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Cost Category	Component Name	Quantity	Unit	Unit Cost	Cost
Materials	Wire flags	20	Each	\$0.08	\$1.60
Materials	Tree, conifer, seedling or transplant, potted, 1 gal.	50	Each	\$5.70	\$285.00
Equip./Install.	Truck, Pickup	1	Hour	\$23.48	\$23.48
Equip./Install.	Hand tools, tree planting	1	Hour	\$9.44	\$9.44
Labor	Supervisor or Manager	1	Hour	\$36.21	\$36.21
Labor	General Labor	1	Hour	\$18.57	\$18.57
				Total Cost:	\$374.30

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**Scenario # 3 windbreak, hardwood trees, hand planted**

Louisiana

**Scenario Description:**

Use the shrub, conifer, and hardwood scenarios of this practice to design windbreak as needed. Usually, a multi-row windbreak of low growing shrubs (outside row), tall growing hardwoods (inside row), and conifers (middle row) can provide multiple benefits. For multiple rows, planting should be staggered in adjacent rows. Consider using evergreen conifers when planting around confined animal operations for odor control. Windbreaks in and around pastures provide shade to livestock. Windbreaks can be as wide as needed but common sizes can be as wide as 5 rows or as narrow as 1 row. Can be mix of shrub, hardwood, or conifer as well as a mix of species. Spacing of trees within the rows should be kept relatively wide to promote low branching and wide crown development (4 to 6 ft for shrubs and 10 to 12 ft for trees). A larger windbreak provides more opportunity for species diversity. An example would be mast trees and shrubs for food, and dense growing conifers, deciduous trees and shrubs for shelter and cover. Space trees from 10 to 15 feet apart and shrubs 3 to 13 feet apart depending on the species and its growth habits. The minimum spacing between rows for multiple row plantings is 12 feet, and the maximum spacing is 20 feet. Rows should be 4 ft wider than equipment used for maintenance. This practice is typically applied to crop, pasture or confined animal operations. Resource Concerns to be addressed may include: Soil Erosion (wind); Excess/Insufficient Water (inefficient moisture management); Water Quality Degradation (excess nutrients in surface waters, excessive sediment in surface waters,); Degraded Plant Condition (undesirable plant productivity and health); Inadequate habitat for Fish and Wildlife (food, cover/shelter, continuity); Inefficient Energy Use (facilities, farming/ranching practices and field operations); Inadequate shelter for Livestock (cover/shelter); or Objectionable Odors (air quality).

**Before Practice Situation:**

Agricultural field, livestock paddock, feedlot or farmstead needing protection from wind, additional wildlife food and cover, livestock shelter or management of objectionsble odors.

**After Practice Situation:**

Wind velocity suitably reduced to reduce soil erosion, or to manage objectionable odors. Additional livestock shelter, or wildlife food and cover.

**Scenario Feature Measure:**

length of windbreak row(s)

<b>Scenario Typical Size:</b>	500	Foot	Unit Cost	\$1.55
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Cost Category	Component Name	Quantity	Unit	Unit Cost	Cost
Materials	Tree shelter, solid tube type, 4" x 48"	50	Each	\$3.85	\$192.50
Materials	Wire flags	20	Each	\$0.08	\$1.60
Materials	Tree, hardwood, seedling or transplant, potted, 1 qt.	50	Each	\$5.02	\$251.00
Equip./Install.	Truck, Pickup	5	Hour	\$23.48	\$117.40
Equip./Install.	Hand tools, tree planting	5	Hour	\$9.44	\$47.20
Labor	Supervisor or Manager	1	Hour	\$36.21	\$36.21
Labor	General Labor	5	Hour	\$18.57	\$92.85
Mobilization	Mobilization, Supervisor or Manager	1	Hour	\$35.87	\$35.87
				<b>Total Cost:</b>	<b>\$774.63</b>