

**Practice:** 512 - Forage and Biomass Planting

**Scenario:** #1 - Native Perennial Grass (1 sp)

**Scenario Description:** Establish or reseed adapted perennial native grasses to improve or maintain livestock/wildlife nutrition and health, extend the length of the grazing season, and provide soil cover to reduce erosion. Used for either conventional or no-till seeding of native grasses for pasture, hayland, and wildlife openings. This practice may be utilized for organic or regular production. This scenario assumes fertilizer, seed, equipment and labor for seed bed prep, tillage, seeding ,and spreading.

**Before Situation:** Poorly managed/degraded pasture land or cropland being converted to pasture and/or hay.

**After Situation:** Suitable species are established to improve forage quality and quantity and reduce soil erosion on cropland ,hayland, pasture, and/or biomass production.

**Scenario Feature Measure:** Acres of Forage and Biomass Planting

**Scenario Unit:** Acre

**Scenario Typical Size:** 30

**Total Scenario Cost:** \$8,794.76

**Scenario Cost/Unit:** \$293.16

**Cost Details**

Component Name	Id	Description	Unit	Cost	Qty	Total
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**Materials**

Herbicide, Glyphosate	334	A broad-spectrum, non-selective systemic herbicide. Refer to WIN-PST for product names and active ingredients. Includes materials and shipping only.	Acre	\$15.93	30	\$477.79
Herbicide, Glyphosate	334	A broad-spectrum, non-selective systemic herbicide. Refer to WIN-PST for product names and active ingredients. Includes materials and shipping only.	Acre	\$15.93	30	\$477.79
Lime, ENM	75	Fertilizer: Limestone Spread on field.	Ton	\$41.56	60	\$2,493.62
One Species, Warm Season, Native Perennial Grass	2322	Native, warm season perennial grass. Includes material and shipping only.	Acre	\$70.93	30	\$2,127.79
Phosphorus, P2O5	73	Price per pound of P2O5 supplied by Superphosphate. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.61	1500	\$914.85
Potassium, K2O	74	K2O supplied by Muriate Of Potash. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.46	1500	\$692.67
Test, Soil Test, Standard	299	Includes materials, shiping, labor, and equipment costs.	Each	\$10.13	1	\$10.13

**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	\$22.04	8	\$176.35
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**Equipment Installation**

Chemical, ground application	948	Chemical application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$5.46	30	\$163.76
Fertilizer, ground application, dry bulk	950	Dry bulk fertilizer application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$6.11	30	\$183.44
Lime application	953	Lime application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$9.29	30	\$278.80
Seeding Operation, No Till/Grass Drill	960	No Till drill or grass drill for seeding. Includes equipment, power unit and labor costs.	Acre	\$19.00	30	\$570.12

**Mobilization**

Mobilization, medium equipment	1139	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	\$227.64	1	\$227.64
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**Practice:** 512 - Forage and Biomass Planting

**Scenario:** #2 - Native Perennial 1 species Low Input

**Scenario Description:** Establish or reseed adapted perennial native grasses to improve or maintain livestock/wildlife nutrition and health, extend the length of the grazing season, and provide soil cover to reduce erosion. Used for either conventional or no-till seeding of native grasses for pasture, hayland, and wildlife openings. This practice may be utilized for organic or regular production. This scenario assumes fertility and pH are not needed. Seed, equipment and labor for seed bed prep, tillage, seeding ,and spreading are included.

**Before Situation:** Poorly managed/degraded pasture land or cropland being converted to pasture and/or hay.

**After Situation:** Suitable species are established to improve forage quality and quantity and reduce soil erosion on cropland ,hayland, pasture, and/or biomass production.

**Scenario Feature Measure:** Acres of Forage and Biomass Planting

**Scenario Unit:** Acre

**Scenario Typical Size:** 30

**Total Scenario Cost:** \$3,753.58

**Scenario Cost/Unit:** \$125.12

**Cost Details**

Component Name	Id	Description	Unit	Cost	Qty	Total
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**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	\$22.04	8	\$176.35
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**Materials**

Herbicide, Glyphosate	334	A broad-spectrum, non-selective systemic herbicide. Refer to WIN-PST for product names and active ingredients. Includes materials and shipping only.	Acre	\$15.93	30	\$477.79
One Species, Warm Season, Native Perennial Grass	2322	Native, warm season perennial grass. Includes material and shipping only.	Acre	\$70.93	30	\$2,127.79
Test, Soil Test, Standard	299	Includes materials, shipping, labor, and equipment costs.	Each	\$10.13	1	\$10.13

**Equipment Installation**

Chemical, ground application	948	Chemical application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$5.46	30	\$163.76
Seeding Operation, No Till/Grass Drill	960	No Till drill or grass drill for seeding. Includes equipment, power unit and labor costs.	Acre	\$19.00	30	\$570.12

**Mobilization**

Mobilization, medium equipment	1139	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	\$227.64	1	\$227.64
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**Practice:** 512 - Forage and Biomass Planting

**Scenario:** #3 - Native Perennial 2 or more species

**Scenario Description:** Establish or reseed with 2 or more adapted perennial native warm season grasses to improve or maintain livestock/wildlife nutrition and health, extend the length of the grazing season, and provide soil cover to reduce erosion. Used for either conventional or no-till seeding of perennial native warm season grasses for pasture, hayland, and wildlife openings. This practice may be utilized for organic or regular production. This scenario assumes fertilizer, seed, equipment and labor for seed bed prep, tillage, seeding, and spreading.

**Before Situation:** Existing stand of perennial grasses or monoculture or no grasses present. Resource concerns may include undesirable plant productivity and health, inadequate feed and forage for livestock, soil erosion and soil quality.

**After Situation:** Suitable NWSG species are established to improve forage quality and quantity and reduce soil erosion on cropland, hayland, pasture and/or biomass production.

**Scenario Feature Measure:** Acres of Forage and Biomass Planting

**Scenario Unit:** Acre

**Scenario Typical Size:** 30

**Total Scenario Cost:** \$13,410.24

**Scenario Cost/Unit:** \$447.01

**Cost Details**

Component Name	Id	Description	Unit	Cost	Qty	Total
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**Materials**

Herbicide, Glyphosate	334	A broad-spectrum, non-selective systemic herbicide. Refer to WIN-PST for product names and active ingredients. Includes materials and shipping only.	Acre	\$15.93	30	\$477.79
Herbicide, Glyphosate	334	A broad-spectrum, non-selective systemic herbicide. Refer to WIN-PST for product names and active ingredients. Includes materials and shipping only.	Acre	\$15.93	30	\$477.79
Lime, ENM	75	Fertilizer: Limestone Spread on field.	Ton	\$41.56	60	\$2,493.62
Phosphorus, P2O5	73	Price per pound of P2O5 supplied by Superphosphate. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.61	1500	\$914.85
Potassium, K2O	74	K2O supplied by Muriate Of Potash. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.46	1500	\$692.67
Test, Soil Test, Standard	299	Includes materials, shipping, labor, and equipment costs.	Each	\$10.13	1	\$10.13
Three plus Species Mix, Warm Season, Native Perennial	2327	Native, warm season perennial grass. Includes material and shipping only.	Acre	\$220.98	30	\$6,629.25

**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	\$22.04	8	\$176.35
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**Equipment Installation**

Chemical, ground application	948	Chemical application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$5.46	30	\$163.76
Lime application	953	Lime application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$9.29	30	\$278.80
Seeding Operation, No Till/Grass Drill	960	No Till drill or grass drill for seeding. Includes equipment, power unit and labor costs.	Acre	\$19.00	30	\$570.12
Tillage, Light	945	Includes light disking (tandem) or field cultivator. Includes equipment, power unit and labor costs.	Acre	\$9.92	30	\$297.46

**Mobilization**

Mobilization, medium equipment	1139	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	\$227.64	1	\$227.64
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**Practice:** 512 - Forage and Biomass Planting

**Scenario:** #4 - Native Perennial 2 or more species with Low Input

**Scenario Description:** Establish or reseed with two or more adapted perennial native warm season grasses to improve or maintain livestock/wildlife nutrition and health, extend the length of the grazing season, and provide soil cover to reduce erosion. Used for either conventional or no-till seeding of perennial native warm season grasses for pasture, hayland, and wildlife openings. This practice may be utilized for organic or regular production. This scenario assumes fertility and pH are not needed. Seed, equipment and labor for seed bed prep, tillage, seeding, and spreading are included.

**Before Situation:** Existing stand of perennial grasses or monoculture or no grasses present. Resource concerns may include undesirable plant productivity and health, inadequate feed and forage for livestock, soil erosion and soil quality.

**After Situation:** Suitable NWSG species are established to improve forage quality and quantity and reduce soil erosion on cropland, hayland, pasture and/or biomass production.

**Scenario Feature Measure:** Acres of Forage and Biomass Planting

**Scenario Unit:** Acre

**Scenario Typical Size:** 30

**Total Scenario Cost:** \$8,552.50

**Scenario Cost/Unit:** \$285.08

**Cost Details**

Component Name	Id	Description	Unit	Cost	Qty	Total
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**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	\$22.04	8	\$176.35
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**Materials**

Herbicide, Glyphosate	334	A broad-spectrum, non-selective systemic herbicide. Refer to WIN-PST for product names and active ingredients. Includes materials and shipping only.	Acre	\$15.93	30	\$477.79
Test, Soil Test, Standard	299	Includes materials, shipping, labor, and equipment costs.	Each	\$10.13	1	\$10.13
Three plus Species Mix, Warm Season, Native Perennial	2327	Native, warm season perennial grass. Includes material and shipping only.	Acre	\$220.98	30	\$6,629.25

**Equipment Installation**

Chemical, ground application	948	Chemical application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$5.46	30	\$163.76
Seeding Operation, No Till/Grass Drill	960	No Till drill or grass drill for seeding. Includes equipment, power unit and labor costs.	Acre	\$19.00	30	\$570.12
Tillage, Light	945	Includes light disking (tandem) or field cultivator. Includes equipment, power unit and labor costs.	Acre	\$9.92	30	\$297.46

**Mobilization**

Mobilization, medium equipment	1139	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	\$227.64	1	\$227.64
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**Practice:** 512 - Forage and Biomass Planting

**Scenario:** #5 - Introduced Cool Season Grasses

**Scenario Description:** Establish or reseed adapted perennial introduced cool season grasses and legumes to improve or maintain livestock/wildlife nutrition and health, extend the length of the grazing season, and provide soil cover to reduce erosion. Used for either conventional or no-till seeding of perennial introduced cool season grasses for pasture, hayland, and wildlife openings. This practice may be utilized for organic or regular production. This scenario assumes fertilizer, seed, equipment and labor for seed bed prep, tillage, seeding, and spreading.

**Before Situation:** Poor or nonexistent stand of grass species. Resource concerns may include undesirable plant productivity and health, inadequate feed and forage for livestock, soil erosion and soil quality.

**After Situation:** Suitable species are established to improve forage quality and quantity and reduce soil erosion on cropland, hayland, pasture, and/or biomass production.

**Scenario Feature Measure:** Acres of Forage and Biomass Planting

**Scenario Unit:** Acre

**Scenario Typical Size:** 30

**Total Scenario Cost:** \$7,717.93

**Scenario Cost/Unit:** \$257.26

**Cost Details**

Component Name	Id	Description	Unit	Cost	Qty	Total
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**Materials**

Four Species Mix, Cool Season, Introduced Perennial (2 grasses, 2 legumes)	2319	Cool season, introduced grass and legume mix. Includes material and shipping only.	Acre	\$21.41	30	\$642.41
Herbicide, Glyphosate	334	A broad-spectrum, non-selective systemic herbicide. Refer to WIN-PST for product names and active ingredients. Includes materials and shipping only.	Acre	\$15.93	30	\$477.79
Lime, ENM	75	Fertilizer: Limestone Spread on field.	Ton	\$41.56	60	\$2,493.62
Nitrogen (N), Ammonium Nitrate	69	Price per pound of N supplied by Ammonium Nitrate. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.72	1200	\$867.70
Phosphorus, P2O5	73	Price per pound of P2O5 supplied by Superphosphate. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.61	1500	\$914.85
Potassium, K2O	74	K2O supplied by Muriate Of Potash. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.46	1500	\$692.67
Test, Soil Test, Standard	299	Includes materials, shipping, labor, and equipment costs.	Each	\$10.13	1	\$10.13

**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	\$22.04	8	\$176.35
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**Equipment Installation**

Chemical, ground application	948	Chemical application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$5.46	30	\$163.76
Fertilizer, ground application, dry bulk	950	Dry bulk fertilizer application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$6.11	30	\$183.44
Seeding Operation, No Till/Grass Drill	960	No Till drill or grass drill for seeding. Includes equipment, power unit and labor costs.	Acre	\$19.00	30	\$570.12
Tillage, Light	945	Includes light disking (tandem) or field cultivator. Includes equipment, power unit and labor costs.	Acre	\$9.92	30	\$297.46

**Mobilization**

Mobilization, medium	1139	Equipment with 70-150 HP or typical weights between 14,000 and	Each	\$227.64	1	\$227.64
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equipment		30,000 pounds.				
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**Practice:** 512 - Forage and Biomass Planting

**Scenario:** #6 - Introduced Cool Season Grasses with Legumes with Low Input

**Scenario Description:** Establish or reseed adapted perennial introduced cool season grasses and legumes to improve or maintain livestock/wildlife nutrition and health, extend the length of the grazing season, and provide soil cover to reduce erosion. Used for either conventional or no-till seeding of perennial introduced cool season grasses for pasture, hayland, and wildlife openings. This practice may be utilized for organic or regular production. This scenario assumes fertility and pH are not needed. Seed, equipment and labor for seed bed prep, tillage, seeding ,and spreading are included.

**Before Situation:** Poor or nonexistent stand of grass species. Resource concerns may include undesirable plant productivity and health, inadequate feed and forage for livestock, soil erosion and soil quality.

**After Situation:** Suitable species are established to improve forage quality and quantity and reduce soil erosion on cropland ,hayland, pasture, and/or biomass production.

**Scenario Feature Measure:** Acres of Forage and Biomass Planting

**Scenario Unit:** Acre

**Scenario Typical Size:** 30

**Total Scenario Cost:** \$2,565.65

**Scenario Cost/Unit:** \$85.52

**Cost Details**

Component Name	Id	Description	Unit	Cost	Qty	Total
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**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	\$22.04	8	\$176.35
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**Materials**

Four Species Mix, Cool Season, Introduced Perennial (2 grasses, 2 legumes)	2319	Cool season, introduced grass and legume mix. Includes material and shipping only.	Acre	\$21.41	30	\$642.41
Herbicide, Glyphosate	334	A broad-spectrum, non-selective systemic herbicide. Refer to WIN-PST for product names and active ingredients. Includes materials and shipping only.	Acre	\$15.93	30	\$477.79
Test, Soil Test, Standard	299	Includes materials, shipping, labor, and equipment costs.	Each	\$10.13	1	\$10.13

**Equipment Installation**

Chemical, ground application	948	Chemical application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$5.46	30	\$163.76
Seeding Operation, No Till/Grass Drill	960	No Till drill or grass drill for seeding. Includes equipment, power unit and labor costs.	Acre	\$19.00	30	\$570.12
Tillage, Light	945	Includes light disking (tandem) or field cultivator. Includes equipment, power unit and labor costs.	Acre	\$9.92	30	\$297.46

**Mobilization**

Mobilization, medium equipment	1139	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	\$227.64	1	\$227.64
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**Practice:** 512 - Forage and Biomass Planting

**Scenario:** #7 - Introduced Warm Season Grasses

**Scenario Description:** Establish or reseed adapted introduced warm season grasses to improve or maintain livestock/wildlife nutrition and health, extend the length of the grazing season, and provide soil cover to reduce erosion. Used for either conventional or no-till seeding of perennial introduced warm season grasses for pasture, hayland, and wildlife openings. This practice may be utilized for organic or regular production. This scenario assumes fertilizer, seed, equipment and labor for seed bed prep, tillage, seeding ,and spreading.

**Before Situation:** Existing stand of perennial grasses or monoculture or no grasses present. Resource concerns may include undesirable plant productivity and health, inadequate feed and forage for livestock, soil erosion and soil quality.

**After Situation:** Suitable species are established to improve forage quality and quantity and reduce soil erosion on cropland ,hayland, pasture, and/or biomass production.

**Scenario Feature Measure:** Acres of Forage and Biomass Planting

**Scenario Unit:** Acre

**Scenario Typical Size:** 30

**Total Scenario Cost:** \$8,998.12

**Scenario Cost/Unit:** \$299.94

**Cost Details**

Component Name	Id	Description	Unit	Cost	Qty	Total
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**Materials**

Herbicide, Glyphosate	334	A broad-spectrum, non-selective systemic herbicide. Refer to WIN-PST for product names and active ingredients. Includes materials and shipping only.	Acre	\$15.93	30	\$477.79
Lime, ENM	75	Fertilizer: Limestone Spread on field.	Ton	\$41.56	60	\$2,493.62
Nitrogen (N), Ammonium Nitrate	69	Price per pound of N supplied by Ammonium Nitrate. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.72	1200	\$867.70
One Species, Warm Season, Introduced Perennial Grass (seed or sprigs)	2323	Introduced, warm season perennial grass seed or sprig. Includes material and shipping only.	Acre	\$64.09	30	\$1,922.59
Phosphorus, P2O5	73	Price per pound of P2O5 supplied by Superphosphate. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.61	1500	\$914.85
Potassium, K2O	74	K2O supplied by Muriate Of Potash. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.46	1500	\$692.67
Test, Soil Test, Standard	299	Includes materials, shipping, labor, and equipment costs.	Each	\$10.13	1	\$10.13

**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	\$22.04	8	\$176.35
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**Equipment Installation**

Chemical, ground application	948	Chemical application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$5.46	30	\$163.76
Fertilizer, ground application, dry bulk	950	Dry bulk fertilizer application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$6.11	30	\$183.44
Seeding Operation, No Till/Grass Drill	960	No Till drill or grass drill for seeding. Includes equipment, power unit and labor costs.	Acre	\$19.00	30	\$570.12
Tillage, Light	945	Includes light disking (tandem) or field cultivator. Includes equipment, power unit and labor costs.	Acre	\$9.92	30	\$297.46

**Mobilization**

Mobilization, medium	1139	Equipment with 70-150 HP or typical weights between 14,000 and	Each	\$227.64	1	\$227.64
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equipment		30,000 pounds.				
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**Practice:** 512 - Forage and Biomass Planting

**Scenario:** #8 - Introduced Warm Season Grasses with Low Input

**Scenario Description:** Establish or reseed adapted introduced warm season grasses to improve or maintain livestock/wildlife nutrition and health, extend the length of the grazing season, and provide soil cover to reduce erosion. Used for either conventional or no-till seeding of perennial introduced warm season grasses for pasture, hayland, and wildlife openings. This practice may be utilized for organic or regular production. This scenario assumes fertility and pH are not needed. Seed, equipment and labor for seed bed prep, tillage, seeding, and spreading are included.

**Before Situation:** Existing stand of perennial grasses or monoculture or no grasses present. Resource concerns may include undesirable plant productivity and health, inadequate feed and forage for livestock, soil erosion and soil quality.

**After Situation:** Suitable species are established to improve forage quality and quantity and reduce soil erosion on cropland, hayland, pasture, and/or biomass production.

**Scenario Feature Measure:** Acres of Forage and Biomass Planting

**Scenario Unit:** Acre

**Scenario Typical Size:** 30

**Total Scenario Cost:** \$3,845.84

**Scenario Cost/Unit:** \$128.19

**Cost Details**

Component Name	Id	Description	Unit	Cost	Qty	Total
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**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	\$22.04	8	\$176.35
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**Materials**

Herbicide, Glyphosate	334	A broad-spectrum, non-selective systemic herbicide. Refer to WIN-PST for product names and active ingredients. Includes materials and shipping only.	Acre	\$15.93	30	\$477.79
One Species, Warm Season, Introduced Perennial Grass (seed or sprigs)	2323	Introduced, warm season perennial grass seed or sprig. Includes material and shipping only.	Acre	\$64.09	30	\$1,922.59
Test, Soil Test, Standard	299	Includes materials, shipping, labor, and equipment costs.	Each	\$10.13	1	\$10.13

**Equipment Installation**

Chemical, ground application	948	Chemical application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$5.46	30	\$163.76
Seeding Operation, No Till/Grass Drill	960	No Till drill or grass drill for seeding. Includes equipment, power unit and labor costs.	Acre	\$19.00	30	\$570.12
Tillage, Light	945	Includes light disking (tandem) or field cultivator. Includes equipment, power unit and labor costs.	Acre	\$9.92	30	\$297.46

**Mobilization**

Mobilization, medium equipment	1139	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	\$227.64	1	\$227.64
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**Practice:** 512 - Forage and Biomass Planting

**Scenario:** #9 - Sprigging

**Scenario Description:** Sprigging new grasses with sprigging application for the purpose of providing forage, increasing plant diversity, soil quality and fertility, and plant health. This practice may be utilized for organic or regular production. This scenario assumes fertilizer, sprigs, equipment and labor for seed bed prep, tillage, sprigging ,and spreading.

**Before Situation:** Poor or nonexistent stand of grass species. Resource concerns may include undesirable plant productivity and health, inadequate feed and forage for livestock, soil erosion and soil quality.

**After Situation:** Suitable species are established to improve forage quality and quantity and reduce soil erosion on cropland ,hayland, pasture, and/or biomass production.

**Scenario Feature Measure:** Acres of Forage and Biomass Planting

**Scenario Unit:** Acre

**Scenario Typical Size:** 30

**Total Scenario Cost:** \$10,388.50

**Scenario Cost/Unit:** \$346.28

**Cost Details**

Component Name	Id	Description	Unit	Cost	Qty	Total
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**Materials**

Herbicide, Glyphosate	334	A broad-spectrum, non-selective systemic herbicide. Refer to WIN-PST for product names and active ingredients. Includes materials and shipping only.	Acre	\$15.93	30	\$477.79
Lime, ENM	75	Fertilizer: Limestone Spread on field.	Ton	\$41.56	60	\$2,493.62
Nitrogen (N), Ammonium Nitrate	69	Price per pound of N supplied by Ammonium Nitrate. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.72	1200	\$867.70
One Species, Warm Season, Introduced Perennial Grass (seed or sprigs)	2323	Introduced, warm season perennial grass seed or sprig. Includes material and shipping only.	Acre	\$64.09	30	\$1,922.59
Phosphorus, P2O5	73	Price per pound of P2O5 supplied by Superphosphate. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.61	1500	\$914.85
Potassium, K2O	74	K2O supplied by Muriate Of Potash. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.46	1500	\$692.67
Test, Soil Test, Standard	299	Includes materials, shiping, labor, and equipment costs.	Each	\$10.13	1	\$10.13

**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	\$22.04	8	\$176.35
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**Equipment Installation**

Chemical, ground application	948	Chemical application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$5.46	30	\$163.76
Fertilizer, ground application, dry bulk	950	Dry bulk fertilizer application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$6.11	30	\$183.44
Ground sprigging	1101	Includes costs for equipment, power unit and labor.	Acre	\$65.35	30	\$1,960.51
Tillage, Light	945	Includes light disking (tandem) or field cultivator. Includes equipment, power unit and labor costs.	Acre	\$9.92	30	\$297.46

**Mobilization**

Mobilization, medium equipment	1139	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	\$227.64	1	\$227.64
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**Practice:** 512 - Forage and Biomass Planting

**Scenario:** #10 - Overseeding Legumes with low input

**Scenario Description:** Establishment of legumes for the purpose of increasing plant diversity, soil quality and fertility, and plant health and enhancing the quality of forage. This practice may be utilized for organic or regular production. This scenario assumes fertilizer, seed, equipment and labor for seed bed prep, tillage, seeding ,and spreading.

**Before Situation:** Existing stand of perennial grasses or monoculture with no legumes present .

**After Situation:** Legumes will be maintained through proper grazing management and improve plant diversity and soil quality.

**Scenario Feature Measure:** Acres of Forage and Biomass Planting

**Scenario Unit:** Acre

**Scenario Typical Size:** 30

**Total Scenario Cost:** \$3,236.42

**Scenario Cost/Unit:** \$107.88

**Cost Details**

Component Name	Id	Description	Unit	Cost	Qty	Total
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**Materials**

Phosphorus, P2O5	73	Price per pound of P2O5 supplied by Superphosphate. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.61	1500	\$914.85
Potassium, K2O	74	K2O supplied by Muriate Of Potash. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.46	1500	\$692.67
Test, Soil Test, Standard	299	Includes materials, shiping, labor, and equipment costs.	Each	\$10.13	1	\$10.13

**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	\$22.04	8	\$176.35
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**Equipment Installation**

Chemical, ground application	948	Chemical application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$5.46	30	\$163.76
Fertilizer, ground application, dry bulk	950	Dry bulk fertilizer application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$6.11	30	\$183.44
Seeding Operation, No Till/Grass Drill	960	No Till drill or grass drill for seeding. Includes equipment, power unit and labor costs.	Acre	\$19.00	30	\$570.12
Tillage, Light	945	Includes light disking (tandem) or field cultivator. Includes equipment, power unit and labor costs.	Acre	\$9.92	30	\$297.46

**Mobilization**

Mobilization, medium equipment	1139	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	\$227.64	1	\$227.64
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**Practice:** 512 - Forage and Biomass Planting

**Scenario:** #43 - Overseeding Legumes

**Scenario Description:** Establishment of legumes for the purpose of increasing plant diversity, soil quality and fertility, and plant health and enhancing the quality of forage. This practice may be utilized for organic or regular production. This scenario assumes fertilizer, seed, equipment and labor for seed bed prep, tillage, seeding ,and spreading.

**Before Situation:** Existing stand of perennial grasses or monoculture with no legumes present .

**After Situation:** Legumes will be maintained through proper grazing management and improve plant diversity and soil quality.

**Scenario Feature Measure:** Acres of Forage and Biomass Planting

**Scenario Unit:** Acre

**Scenario Typical Size:** 30

**Total Scenario Cost:** \$5,730.04

**Scenario Cost/Unit:** \$191.00

**Cost Details**

Component Name	Id	Description	Unit	Cost	Qty	Total
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**Materials**

Lime, ENM	75	Fertilizer: Limestone Spread on field.	Ton	\$41.56	60	\$2,493.62
Phosphorus, P2O5	73	Price per pound of P2O5 supplied by Superphosphate. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.61	1500	\$914.85
Potassium, K2O	74	K2O supplied by Muriate Of Potash. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.46	1500	\$692.67
Test, Soil Test, Standard	299	Includes materials, shiping, labor, and equipment costs.	Each	\$10.13	1	\$10.13

**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	\$22.04	8	\$176.35
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**Equipment Installation**

Chemical, ground application	948	Chemical application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$5.46	30	\$163.76
Fertilizer, ground application, dry bulk	950	Dry bulk fertilizer application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$6.11	30	\$183.44
Seeding Operation, No Till/Grass Drill	960	No Till drill or grass drill for seeding. Includes equipment, power unit and labor costs.	Acre	\$19.00	30	\$570.12
Tillage, Light	945	Includes light disking (tandem) or field cultivator. Includes equipment, power unit and labor costs.	Acre	\$9.92	30	\$297.46

**Mobilization**

Mobilization, medium equipment	1139	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	\$227.64	1	\$227.64
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