

Scenario Worksheet

Practice and Scenario Description:

Information Type	Data
Region	New England
State	Connecticut
Discipline Group	Range/Pasture Grazing
Practice Code/Name	512 - Forage and Biomass Planting
Scenario ID	1
Scenario Name	Cool Season, Establish or Reseed
Scenario Description	Establish/reseed adapted perennial introduced cool season grasses and legumes to improve or maintain livestock 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 or hayland. Assumes fertilizer, seed, equipment and labor for seed bed prep, tillage, seeding, and spreading. Does not include foregone income for conversion of cropland.
Before Practice Situation	Typically installed on an a poor or nonexistent stand of grass species. Resource concerns include: sheet and rill erosion, ephemeral gully erosion, decreased water quality from runoff of sediment, low soil quality (including organic matter depletion) and low species diversity.
After Practice Situation	Field is prepared for seeding, and lime and nutrients are spread according to soil test results. Cool season grasses and legumes are established on pasture or hayland. Erosion is minimized and there is reduced sedimentation and nutrient runoff. Water and soil quality is improved (including an increase in organic matter).
Scenario Feature Measure	Acre of Forage and Biomass Planting
Scenario Unit	Acre
Scenario Typical Size	10

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	\$3,743.33	\$374.33
Equipment/Installation	\$650.90	\$65.09
Labor	\$0.00	\$0.00
Mobilization	\$187.23	\$18.72
Acquisition of Technical Knowledge	\$0.00	\$0.00
Foregone Income	\$0.00	\$0.00
Total	\$4,581.46	\$458.15

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Materials	92	Orchard Grass (Dactylis glomerata)	Introduced Perennial Grasses and shipping.	Pound	\$2.04	100	\$204.00
Materials	299	Test, Soil Test, Standard	Includes materials, labor, and equipment costs.	Each	\$9.53	1	\$9.53
Materials	74	Potassium, K2O	K2O supplied by Muriate Of Potash. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.53	1000	\$530.00
Materials	109	Ladino Clover (Trifolium repens)	Introduced Legumes and shipping.	Pound	\$3.74	80	\$299.20
Materials	75	Lime, ENM	Fertilizer: Limestone Spread on field.	Ton	\$93.78	20	\$1,875.60
Materials	71	Nitrogen (N), Urea	Price per pound of N supplied by Urea. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.69	500	\$345.00
Materials	73	Phosphorus, P2O5	Price per pound of P2O5 supplied by Superphosphate. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.96	500	\$480.00
Equipment/Installation	1100	Cultipacking	Includes equipment, power unit and labor costs.	Acre	\$7.67	10	\$76.70
Equipment/Installation	945	Tillage, Light	Includes light disking (tandem) or field cultivator. Includes equipment, power unit and labor costs.	Acre	\$9.63	10	\$96.30
Equipment/Installation	946	Tillage, Primary	Includes heavy disking (offset) or chisel plow. Includes equipment, power unit and labor costs.	Acre	\$14.46	10	\$144.60
Equipment/Installation	950	Fertilizer, ground application, dry bulk	Dry bulk fertilizer application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$5.89	10	\$58.90
Equipment/Installation	953	Lime application	Lime application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$8.36	10	\$83.60
Equipment/Installation	960	Seeding Operation, No Till/Grass Drill	No Till drill or grass drill for seeding. Includes equipment, power unit and labor costs.	Acre	\$19.08	10	\$190.80
Mobilization	1138	Mobilization, small equipment	Equipment <70 HP but can't be transported by a pick-up truck or with typical weights between 3,500 to 14,000 pounds.	Each	\$187.23	1	\$187.23

Scenario Worksheet

Practice and Scenario Description:

Information Type	Data
Region	New England
State	Connecticut
Discipline Group	Range/Pasture Grazing
Practice Code/Name	512 - Forage and Biomass Planting
Scenario ID	2
Scenario Name	Cool Season, Establish, Foregone Income
Scenario Description	Establish adapted perennial introduced cool season grasses and legumes to improve or maintain livestock 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 or hayland. Assumes fertilizer, seed, equipment and labor for seed bed prep, tillage, seeding, and spreading. Includes foregone income for conversion of cropland, typically silage corn, to pasture or hay.
Before Practice Situation	Typically installed on a 10 acre corn field that being converted to long-term grazing or hay. Resource concerns include: sheet and rill erosion, ephemeral gully erosion, decreased water quality from runoff of sediment and/or manure from the field, and low soil quality (including organic matter depletion) from continuous cropping of silage corn.
After Practice Situation	Field is prepared for seeding, and lime and nutrients are spread according to soil test results. Cool season grasses and legumes are established on pasture or hayland. Erosion is minimized and there is reduced sedimentation and nutrient runoff. Water and soil quality is improved (including an increase in organic matter).
Scenario Feature Measure	Acres of Forage and Biomass Planting
Scenario Unit	Acre
Scenario Typical Size	10

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	\$3,743.33	\$374.33
Equipment/Installation	\$650.90	\$65.09
Labor	\$0.00	\$0.00
Mobilization	\$187.23	\$18.72
Acquisition of Technical Knowledge	\$0.00	\$0.00
Foregone Income	\$2,026.70	\$202.67
Total	\$6,608.16	\$660.82

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Materials	92	Orchard Grass (Dactylis glomerata)	Introduced Perennial Grasses and shipping.	Pound	\$2.04	100	\$204.00
Materials	299	Test, Soil Test, Standard	Includes materials, labor, and equipment costs.	Each	\$9.53	1	\$9.53
Materials	74	Potassium, K2O	K2O supplied by Muriate Of Potash. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.53	1000	\$530.00
Materials	109	Ladino Clover (Trifolium repens)	Introduced Legumes and shipping.	Pound	\$3.74	80	\$299.20
Materials	75	Lime, ENM	Fertilizer: Limestone Spread on field.	Ton	\$93.78	20	\$1,875.60
Materials	71	Nitrogen (N), Urea	Price per pound of N supplied by Urea. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.69	500	\$345.00
Materials	73	Phosphorus, P2O5	Price per pound of P2O5 supplied by Superphosphate. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.96	500	\$480.00
Equipment/Installation	1100	Cultipacking	Includes equipment, power unit and labor costs.	Acre	\$7.67	10	\$76.70
Equipment/Installation	945	Tillage, Light	Includes light disking (tandem) or field cultivator. Includes equipment, power unit and labor costs.	Acre	\$9.63	10	\$96.30
Equipment/Installation	946	Tillage, Primary	Includes heavy disking (offset) or chisel plow. Includes equipment, power unit and labor costs.	Acre	\$14.46	10	\$144.60
Equipment/Installation	950	Fertilizer, ground application, dry bulk	Dry bulk fertilizer application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$5.89	10	\$58.90
Equipment/Installation	953	Lime application	Lime application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$8.36	10	\$83.60
Equipment/Installation	960	Seeding Operation, No Till/Grass Drill	No Till drill or grass drill for seeding. Includes equipment, power unit and labor costs.	Acre	\$19.08	10	\$190.80
Mobilization	1138	Mobilization, small equipment	Equipment <70 HP but can't be transported by a pick-up truck or with typical weights between 3,500 to 14,000 pounds.	Each	\$187.23	1	\$187.23
Foregone Income	1959	Fi, Corn Dryland	Dryland Corn is Primary Crop	Acre	\$202.67	10	\$2,026.70

Scenario Worksheet

Practice and Scenario Description:

Information Type	Data
Region	New England
State	Connecticut
Discipline Group	Range/Pasture Grazing
Practice Code/Name	512 - Forage and Biomass Planting
Scenario ID	3
Scenario Name	Cool Season, Establish or Reseed, Organic
Scenario Description	Establish/reseed adapted organic perennial introduced cool season grasses and legumes to improve or maintain livestock 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 or hayland. Assumes nutrients, seed, equipment and labor for seed bed prep, tillage, seeding, and spreading.
Before Practice Situation	Typically installed on an a poor or nonexistent stand of grass species that is certified organic or transitioning to organic. Resource concerns include: sheet and rill erosion, ephemeral gully erosion, decreased water quality from runoff of sediment, low soil quality (including organic matter depletion) and low species diversity.
After Practice Situation	Field is prepared for seeding, and lime and nutrients are spread according to soil test results. Organic cool season grasses and legumes are established on pasture or hayland. Erosion is minimized and there is reduced sedimentation and nutrient runoff. Water and soil quality is improved (including an increase in organic matter).
Scenario Feature Measure	Acres of Forage and Biomass Planting
Scenario Unit	Acre
Scenario Typical Size	10

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	\$4,715.03	\$471.50
Equipment/Installation	\$1,015.02	\$101.50
Labor	\$0.00	\$0.00
Mobilization	\$187.23	\$18.72
Acquisition of Technical Knowledge	\$0.00	\$0.00
Foregone Income	\$0.00	\$0.00
Total	\$5,917.28	\$591.73

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Materials	268	Potassium, Organic	ORGANIC Potassium	Pound	\$1.34	500	\$670.00
Materials	299	Test, Soil Test, Standard	Includes materials, labor, and equipment costs.	Each	\$9.53	1	\$9.53
Materials	264	Manure	Organic matter can be used as organic fertilizer in agriculture	Ton	\$27.43	50	\$1,371.50
Materials	100	Certified Organic, Orchard Grass (Dactylis glomerata)	Introduced Perennial Grasses and shipping.	Pound	\$5.02	100	\$502.00
Materials	116	Certified Organic, Ladino Clover (Trifolium repens)	Introduced Legumes and shipping.	Pound	\$3.58	80	\$286.40
Materials	75	Lime, ENM	Fertilizer: Limestone Spread on field.	Ton	\$93.78	20	\$1,875.60
Equipment/Installation	1100	Cultipacking	Includes equipment, power unit and labor costs.	Acre	\$7.67	10	\$76.70
Equipment/Installation	945	Tillage, Light	Includes light disking (tandem) or field cultivator. Includes equipment, power unit and labor costs.	Acre	\$9.63	10	\$96.30
Equipment/Installation	946	Tillage, Primary	Includes heavy disking (offset) or chisel plow. Includes equipment, power unit and labor costs.	Acre	\$14.46	10	\$144.60
Equipment/Installation	950	Fertilizer, ground application, dry bulk	Dry bulk fertilizer application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$5.89	10	\$58.90
Equipment/Installation	953	Lime application	Lime application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$8.36	10	\$83.60
Equipment/Installation	960	Seeding Operation, No Till/Grass Drill	No Till drill or grass drill for seeding. Includes equipment, power unit and labor costs.	Acre	\$19.08	10	\$190.80
Equipment/Installation	955	Manure, compost, application	Loading, hauling and spreading manure/compost by ground equipment. Includes equipment, power unit and labor costs.	Hour	\$91.03	4	\$364.12
Mobilization	1138	Mobilization, small equipment	Equipment <70 HP but can't be transported by a pick-up truck or with typical weights between 3,500 to 14,000 pounds.	Each	\$187.23	1	\$187.23

Scenario Worksheet

Practice and Scenario Description:

Information Type	Data
Region	New England
State	Connecticut
Discipline Group	Range/Pasture Grazing
Practice Code/Name	512 - Forage and Biomass Planting
Scenario ID	4
Scenario Name	Cool Season, Establish, Organic, Foregone Income
Scenario Description	Establish/reseed adapted organic perennial introduced cool season grasses and legumes to improve or maintain livestock 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 or hayland. Assumes nutrients, seed, equipment and labor for seed bed prep, tillage, seeding, and spreading. Includes foregone income for conversion of certified organic cropland, typically silage corn, to pasture or hay.
Before Practice Situation	Typically installed on an a poor or nonexistent stand of grass species that is certified organic or transitioning to organic. Resource concerns include: sheet and rill erosion, ephemeral gully erosion, decreased water quality from runoff of sediment, low soil quality (including organic matter depletion) and low species diversity.
After Practice Situation	Field is prepared for seeding, and lime and nutrients are spread according to soil test results. Organic cool season grasses and legumes are established on pasture or hayland. Erosion is minimized and there is reduced sedimentation and nutrient runoff. Water and soil quality is improved (including an increase in organic matter).
Scenario Feature Measure	Acre of Forage and Biomass Planting
Scenario Unit	Acre
Scenario Typical Size	10

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	\$4,715.03	\$471.50
Equipment/Installation	\$1,015.02	\$101.50
Labor	\$0.00	\$0.00
Mobilization	\$187.23	\$18.72
Acquisition of Technical Knowledge	\$0.00	\$0.00
Foregone Income	\$2,330.70	\$233.07
Total	\$8,247.98	\$824.80

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Materials	268	Potassium, Organic	ORGANIC Potassium	Pound	\$1.34	500	\$670.00
Materials	299	Test, Soil Test, Standard	Includes materials, labor, and equipment costs.	Each	\$9.53	1	\$9.53
Materials	264	Manure	Organic matter can be used as organic fertilizer in agriculture	Ton	\$27.43	50	\$1,371.50
Materials	100	Certified Organic, Orchard Grass (Dactylis glomerata)	Introduced Perennial Grasses and shipping.	Pound	\$5.02	100	\$502.00
Materials	116	Certified Organic, Ladino Clover (Trifolium repens)	Introduced Legumes and shipping.	Pound	\$3.58	80	\$286.40
Materials	75	Lime, ENM	Fertilizer: Limestone Spread on field.	Ton	\$93.78	20	\$1,875.60
Equipment/Installation	1100	Cultipacking	Includes equipment, power unit and labor costs.	Acre	\$7.67	10	\$76.70
Equipment/Installation	945	Tillage, Light	Includes light disking (tandem) or field cultivator. Includes equipment, power unit and labor costs.	Acre	\$9.63	10	\$96.30
Equipment/Installation	946	Tillage, Primary	Includes heavy disking (offset) or chisel plow. Includes equipment, power unit and labor costs.	Acre	\$14.46	10	\$144.60
Equipment/Installation	950	Fertilizer, ground application, dry bulk	Dry bulk fertilizer application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$5.89	10	\$58.90
Equipment/Installation	953	Lime application	Lime application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$8.36	10	\$83.60
Equipment/Installation	960	Seeding Operation, No Till/Grass Drill	No Till drill or grass drill for seeding. Includes equipment, power unit and labor costs.	Acre	\$19.08	10	\$190.80
Equipment/Installation	955	Manure, compost, application	Loading, hauling and spreading manure/compost by ground equipment. Includes equipment, power unit and labor costs.	Hour	\$91.03	4	\$364.12
Mobilization	1138	Mobilization, small equipment	Equipment <70 HP but can't be transported by a pick-up truck or with typical weights between 3,500 to 14,000 pounds.	Each	\$187.23	1	\$187.23
Foregone Income	2232	Fi, Organic, Corn Dryland	Organic Dryland Corn is Primary Crop	Acre	\$233.07	10	\$2,330.70

Scenario Worksheet

Practice and Scenario Description:

Information Type	Data
Region	New England
State	Connecticut
Discipline Group	Range/Pasture Grazing
Practice Code/Name	S12 - Forage and Biomass Planting
Scenario ID	9
Scenario Name	Overseed
Scenario Description	Broadcast approved cool-season forage seeds (typically red and ladino clover) into existing pasture or hayland with low legume composition and low species diversity. Typically used for frost-seeding (early spring just after snowmelt), dormant seeding (late winter just before snowfall), or when soil is prepared using an aerator. Assumes seeding costs only, and should be used when pH and soil test nutrients are within an acceptable range .
Before Practice Situation	5 acres of pasture/hayland that was previously established as a grass/legume mix now has less than 5-10% legume composition. Forage and plant quality is poor due to low biological N fixation and species diversity. Small areas have bare soil resulting in erosion and establishment of weeds.
After Practice Situation	Legume seed is broadcast in late winter or early spring. Legume composition is increased above 20% and forage and plant quality is improved due to an increase in species diversity and biological N fixation. Small bare areas of soil are covered with legumes and erosion and weed potential is reduced. Energy is saved through the use of legume nitrogen versus Haber-Bosch nitrogen.
Scenario Feature Measure	Acres of Forage and Biomass Planting
Scenario Unit	Acre
Scenario Typical Size	5

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	\$113.53	\$22.71
Equipment/Installation	\$48.10	\$9.62
Labor	\$0.00	\$0.00
Mobilization	\$187.23	\$37.45
Acquisition of Technical Knowledge	\$0.00	\$0.00
Foregone Income	\$0.00	\$0.00
Total	\$348.86	\$69.77

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Materials	299	Test, Soil Test, Standard	Includes materials, labor, and equipment costs.	Each	\$9.53	1	\$9.53
Materials	112	Red Clover (Trifolium pratense)	Introduced Legumes and shipping.	Pound	\$2.60	40	\$104.00
Equipment/Installation	959	Seeding Operation, Broadcast, Ground	Broadcast seed via ground operation. May require post tillage operation to incorporate seed. Includes equipment, power unit and labor costs.	Acre	\$9.62	5	\$48.10
Mobilization	1138	Mobilization, small equipment	Equipment <70 HP but can't be transported by a pick-up truck or with typical weights between 3,500 to 14,000 pounds.	Each	\$187.23	1	\$187.23

Scenario Worksheet

Practice and Scenario Description:

Information Type	Data
Region	New England
State	Connecticut
Discipline Group	Range/Pasture Grazing
Practice Code/Name	512 - Forage and Biomass Planting
Scenario ID	10
Scenario Name	Overseed, Organic
Scenario Description	Broadcast approved, certified organic cool-season forage seeds (typically red and ladino clover) into existing organic or transitioning to organic pasture or hayland with low legume composition and low species diversity. Typically used for frost-seeding (early spring just after snowmelt), dormant seeding (late winter just before snowfall), or when soil is prepared using an aerator. Assumes seeding costs only, and should be used when pH and soil test nutrients are within an acceptable range.
Before Practice Situation	5 acres of organic or transitioning to organic pasture/hayland that was previously established as a grass/legume mix now has less than 5-10% legume composition. Forage and plant quality is poor due to low biological N fixation and species diversity. Small areas have bare soil resulting in erosion and establishment of weeds.
After Practice Situation	Certified organic legume seed is broadcast in late winter or early spring. Legume composition is increased above 20% and forage and plant quality is improved due to an increase in species diversity and biological N fixation. Small bare areas of soil are covered with legumes and erosion and weed potential is reduced.
Scenario Feature Measure	Acres of Forage and Biomass Planting
Scenario Unit	Acre
Scenario Typical Size	5

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	\$347.93	\$69.59
Equipment/Installation	\$48.10	\$9.62
Labor	\$0.00	\$0.00
Mobilization	\$187.23	\$37.45
Acquisition of Technical Knowledge	\$0.00	\$0.00
Foregone Income	\$0.00	\$0.00
Total	\$583.26	\$116.65

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Materials	299	Test, Soil Test, Standard	Includes materials, labor, and equipment costs.	Each	\$9.53	1	\$9.53
Materials	117	Certified Organic, Red Clover (Trifolium pratense)	Introduced Legumes and shipping.	Pound	\$8.46	40	\$338.40
Equipment/Installation	959	Seeding Operation, Broadcast, Ground	Broadcast seed via ground operation. May require post tillage operation to incorporate seed. Includes equipment, power unit and labor costs.	Acre	\$9.62	5	\$48.10
Mobilization	1138	Mobilization, small equipment	Equipment <70 HP but can't be transported by a pick-up truck or with typical weights between 3,500 to 14,000 pounds.	Each	\$187.23	1	\$187.23

Scenario Worksheet

Practice and Scenario Description:

Information Type	Data
Region	New England
State	Connecticut
Discipline Group	Range/Pasture Grazing
Practice Code/Name	512 - Forage and Biomass Planting
Scenario ID	7
Scenario Name	Rejuvenate ²⁰¹²
Scenario Description	Used to rejuvenate rundown pasture or hayland by applying nutrients and overseeding/sooseeding (frost, dormant, no-till, after aerator etc) adapted legumes or grass/legume mixes. Assumes lime, potassium and seeding costs.
Before Practice Situation	Typical situation is a 10 acre pasture/hayfield with invasive weeds and poor legume composition. Existing stand of perennial grasses is in poor condition and percent ground cover is low. Overall plant diversity is low and is contributing to a decrease in soil quality. Biological nitrogen fixation is low and the reliance on nitrogen fertilizer is increasing.
After Practice Situation	Approved legumes or grass/legume mixed are established and lime and potassium is spread to soil test recommendations. Ground cover and plant diversity improves and results in lower weed pressure. Plant productivity and soil quality improves from the increase in biological nitrogen fixation. Energy is saved through the use of legume nitrogen versus Haber-Bosch nitrogen
Scenario Feature Measure	Acres of Forage and Biomass Planting
Scenario Unit	Acre
Scenario Typical Size	10

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	\$2,623.13	\$262.31
Equipment/Installation	\$333.30	\$33.33
Labor	\$0.00	\$0.00
Mobilization	\$187.23	\$18.72
Acquisition of Technical Knowledge	\$0.00	\$0.00
Foregone Income	\$0.00	\$0.00
Total	\$3,143.66	\$314.37

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Materials	299	Test, Soil Test, Standard	Includes materials, labor, and equipment costs.	Each	\$9.53	1	\$9.53
Materials	74	Potassium, K2O	K2O supplied by Muriate Of Potash. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.53	1000	\$530.00
Materials	112	Red Clover (Trifolium pratense)	Introduced Legumes and shipping.	Pound	\$2.60	80	\$208.00
Materials	75	Lime, ENM	Fertilizer: Limestone Spread on field.	Ton	\$93.78	20	\$1,875.60
Equipment/Installation	950	Fertilizer, ground application, dry bulk	Dry bulk fertilizer application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$5.89	10	\$58.90
Equipment/Installation	953	Lime application	Lime application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$8.36	10	\$83.60
Equipment/Installation	960	Seeding Operation, No Till/Grass Drill	No Till drill or grass drill for seeding. Includes equipment, power unit and labor costs.	Acre	\$19.08	10	\$190.80
Mobilization	1138	Mobilization, small equipment	Equipment <70 HP but can't be transported by a pick-up truck or with typical weights between 3,500 to 14,000 pounds.	Each	\$187.23	1	\$187.23

Scenario Worksheet

Practice and Scenario Description:

Information Type	Data
Region	New England
State	Connecticut
Discipline Group	Range/Pasture Grazing
Practice Code/Name	512 - Forage and Biomass Planting
Scenario ID	8
Scenario Name	Rejuvenate, Organic
Scenario Description	Used to rejuvenate rundown pasture or hayland on organic or transitioning to organic land by applying nutrients and overseeding/souseeding (frost, dormant, no-till, after aerator etc) adapted legumes or grass/legume mixes. Assumes lime, potassium and seeding costs.
Before Practice Situation	Typical situation is a 10 acre organic or transitioning to organic pasture/hayfield with invasive weeds and poor legume composition. Existing stand of perennial grasses is in poor condition and percent ground cover is low. Overall plant diversity is low and is contributing to a decrease in soil quality. Biological nitrogen fixation is low.
After Practice Situation	Approved organic legumes or grass/legume mixed are established and lime and potassium is spread to soil test recommendations. Ground cover and plant diversity improves and results in lower weed pressure. Plant productivity and soil quality improves from the increase in biological nitrogen fixation.
Scenario Feature Measure	Acre of Forage and Biomass Planting
Scenario Unit	Acre
Scenario Typical Size	10

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	\$3,091.93	\$309.19
Equipment/Installation	\$333.30	\$33.33
Labor	\$0.00	\$0.00
Mobilization	\$187.23	\$18.72
Acquisition of Technical Knowledge	\$0.00	\$0.00
Foregone Income	\$0.00	\$0.00
Total	\$3,612.46	\$361.25

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Materials	299	Test, Soil Test, Standard	Includes materials, labor, and equipment costs.	Each	\$9.53	1	\$9.53
Materials	74	Potassium, K2O	K2O supplied by Muriate Of Potash. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.53	1000	\$530.00
Materials	117	Certified Organic, Red Clover (Trifolium pratense)	Introduced Legumes and shipping.	Pound	\$8.46	80	\$676.80
Materials	75	Lime, ENM	Fertilizer: Limestone Spread on field.	Ton	\$93.78	20	\$1,875.60
Equipment/Installation	950	Fertilizer, ground application, dry bulk	Dry bulk fertilizer application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$5.89	10	\$58.90
Equipment/Installation	953	Lime application	Lime application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$8.36	10	\$83.60
Equipment/Installation	960	Seeding Operation, No Till/Grass Drill	No Till drill or grass drill for seeding. Includes equipment, power unit and labor costs.	Acre	\$19.08	10	\$190.80
Mobilization	1138	Mobilization, small equipment	Equipment <70 HP but can't be transported by a pick-up truck or with typical weights between 3,500 to 14,000 pounds.	Each	\$187.23	1	\$187.23

Scenario Worksheet

Practice and Scenario Description:

Information Type	Data
Region	New England
State	Connecticut
Discipline Group	Range/Pasture Grazing
Practice Code/Name	512 - Forage and Biomass Planting
Scenario ID	5
Scenario Name	Warm Season, Native, Establish or Reseed
Scenario Description	Establish or reseed adapted perennial native warm season grasses to improve or maintain livestock nutrition and health, provide or increase forage supply during periods of low forage production and provide soil cover to reduce erosion. Used for either conventional or organic perennial native warm season grasses for pasture, hayland, or biomass crops. Assumes nutrients, seed, equipment and labor for seed bed prep, tillage, seeding, and spreading.
Before Practice Situation	Typically installed on an overgrazed, 10 acre pasture that is a weedy mix of cool season grasses. Plant productivity is poor, weed species dominate, and low water quantity and high temperatures during the summer months suppress the growth of the cool season forages. Resource concerns include: decreased water quality from runoff of sediment and/or manure from the field, low organic matter and soil fertility, poor plant health and vigor, and invasive or noxious weeds.
After Practice Situation	Field is prepared for seeding, lime and nutrients are spread according to soil test results, and warm season grasses are established. Weeds are managed during establishment through mowing and chemical control. Pasture is managed for long-term grazing. Erosion is minimized and there is reduced sedimentation and nutrient runoff, and improved water and soil quality (including an increase in organic matter and fertility). Plant productivity during the "summer slump" increases and weed composition decreases. Livestock nutrition is improved and energy is saved by producing on-farm forage crops and reducing amount of imported feed.
Scenario Feature Measure	Acres of Forage and Biomass Planting
Scenario Unit	Acre
Scenario Typical Size	10

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	\$4,746.63	\$474.66
Equipment/Installation	\$715.90	\$71.59
Labor	\$0.00	\$0.00
Mobilization	\$187.23	\$18.72
Acquisition of Technical Knowledge	\$0.00	\$0.00
Foregone Income	\$0.00	\$0.00
Total	\$5,649.76	\$564.98

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Materials	299	Test, Soil Test, Standard	Includes materials, labor, and equipment costs.	Each	\$9.53	1	\$9.53
Materials	330	Herbicide, 2,4-D	Product is typically used in these practices 595, 512 and 314. Refer to WIN-PST for product names and active ingredients. Materials only.	Acre	\$6.00	10	\$60.00
Materials	197	Oats (Avena sativa)	Small Grains, Cover Crops. Shipping not included.	Pound	\$0.46	700	\$322.00
Materials	74	Potassium, K2O	K2O supplied by Muriate Of Potash. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.53	1000	\$530.00
Materials	78	Indian Grass, Tomahawk (Sorghastrum nutans)	Native Grasses and shipping.	Pound	\$12.63	20	\$252.60
Materials	77	Eastern Gamagrass (Tripsacum dactyloides)	Native Grasses and shipping.	Pound	\$17.45	30	\$523.50
Materials	82	Switchgrass, Blackwell (Panicum virgatum)	Native Grasses and shipping.	Pound	\$9.62	40	\$384.80
Materials	79	Little Blue Stem (Schizachyrium scoparium)	Native Grasses and shipping.	Pound	\$15.43	20	\$308.60
Materials	75	Lime, ENM	Fertilizer: Limestone Spread on field.	Ton	\$93.78	20	\$1,875.60
Materials	73	Phosphorus, P2O5	Price per pound of P2O5 supplied by Superphosphate. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.96	500	\$480.00
Equipment/Installation	1100	Cultipacking	Includes equipment, power unit and labor costs.	Acre	\$7.67	10	\$76.70
Equipment/Installation	945	Tillage, Light	Includes light disking (tandem) or field cultivator. Includes equipment, power unit and labor costs.	Acre	\$9.63	10	\$96.30
Equipment/Installation	946	Tillage, Primary	Includes heavy disking (offset) or chisel plow. Includes equipment, power unit and labor costs.	Acre	\$14.46	10	\$144.60
Equipment/Installation	948	Chemical, ground application	Chemical application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$6.50	10	\$65.00
Equipment/Installation	950	Fertilizer, ground application, dry bulk	Dry bulk fertilizer application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$5.89	10	\$58.90
Equipment/Installation	953	Lime application	Lime application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$8.36	10	\$83.60
Equipment/Installation	960	Seeding Operation, No Till/Grass Drill	No Till drill or grass drill for seeding. Includes equipment, power unit and labor costs.	Acre	\$19.08	10	\$190.80

Mobilization	1138	Mobilization, small equipment	Equipment <70 HP but can't be transported by a pick-up truck or with typical weights between 3,500 to 14,000 pounds.	Each	\$187.23	1	\$187.23
--------------	------	-------------------------------	--	------	----------	---	----------

Scenario Worksheet

Practice and Scenario Description:

Information Type	Data
Region	New England
State	Connecticut
Discipline Group	Range/Pasture Grazing
Practice Code/Name	512 - Forage and Biomass Planting
Scenario ID	6
Scenario Name	Warm Season, Native, Establish or Reseed, Foregone Income
Scenario Description	Establish or reseed adapted perennial native warm season grasses to improve or maintain livestock nutrition and health, provide or increase forage supply during periods of low forage production and provide soil cover to reduce erosion. Used for either conventional or organic perennial native warm season grasses for pasture, hayland, or biomass crops. Assumes nutrients, seed, equipment and labor for seed bed prep, tillage, seeding, and spreading. Includes foregone income for conversion of cropland, typically silage corn, to native/warm season pasture or hay.
Before Practice Situation	Typically installed on an overgrazed, 10 acre pasture that is a weedy mix of cool season grasses. Plant productivity is poor, weed species dominate, and low water quantity and high temperatures during the summer months suppress the growth of the cool season forages. Resource concerns include: decreased water quality from runoff of sediment and/or manure from the field, low organic matter and soil fertility, poor plant health and vigor, and invasive or noxious weeds.
After Practice Situation	Field is prepared for seeding, lime and nutrients are spread according to soil test results, and warm season grasses are established. Weeds are managed during establishment through mowing and chemical control. Pasture is managed for long-term grazing. Erosion is minimized and there is reduced sedimentation and nutrient runoff, and improved water and soil quality (including an increase in organic matter and fertility). Plant productivity during the "summer slump" increases and weed composition decreases. Livestock nutrition is improved and energy is saved by producing on-farm forage crops and reducing amount of imported feed.
Scenario Feature Measure	Acre of Forage and Biomass Planting
Scenario Unit	Acre
Scenario Typical Size	10

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	\$4,746.63	\$474.66
Equipment/Installation	\$715.90	\$71.59
Labor	\$0.00	\$0.00
Mobilization	\$187.23	\$18.72
Acquisition of Technical Knowledge	\$0.00	\$0.00
Foregone Income	\$2,026.70	\$202.67
Total	\$7,676.46	\$767.65

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Materials	299	Test, Soil Test, Standard	Includes materials, labor, and equipment costs.	Each	\$9.53	1	\$9.53
Materials	330	Herbicide, 2,4-D	Product is typically used in these practices 595, 512 and 314. Refer to WIN-PST for product names and active ingredients. Materials only.	Acre	\$6.00	10	\$60.00
Materials	197	Oats (Avena sativa)	Small Grains, Cover Crops. Shipping not included.	Pound	\$0.46	700	\$322.00
Materials	74	Potassium, K2O	K2O supplied by Muriate Of Potash. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.53	1000	\$530.00
Materials	78	Indian Grass, Tomahawk (Sorghastrum nutans)	Native Grasses and shipping.	Pound	\$12.63	20	\$252.60
Materials	77	Eastern Gamagrass (Tripsacum dactyloides)	Native Grasses and shipping.	Pound	\$17.45	30	\$523.50
Materials	82	Switchgrass, Blackwell (Panicum virgatum)	Native Grasses and shipping.	Pound	\$9.62	40	\$384.80
Materials	79	Little Blue Stem (Schizachyrium scoparium)	Native Grasses and shipping.	Pound	\$15.43	20	\$308.60
Materials	75	Lime, ENM	Fertilizer: Limestone Spread on field.	Ton	\$93.78	20	\$1,875.60
Materials	73	Phosphorus, P2O5	Price per pound of P2O5 supplied by Superphosphate. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.96	500	\$480.00
Equipment/Installation	1100	Cultipacking	Includes equipment, power unit and labor costs.	Acre	\$7.67	10	\$76.70
Equipment/Installation	945	Tillage, Light	Includes light disking (tandem) or field cultivator. Includes equipment, power unit and labor costs.	Acre	\$9.63	10	\$96.30
Equipment/Installation	946	Tillage, Primary	Includes heavy disking (offset) or chisel plow. Includes equipment, power unit and labor costs.	Acre	\$14.46	10	\$144.60
Equipment/Installation	948	Chemical, ground application	Chemical application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$6.50	10	\$65.00
Equipment/Installation	950	Fertilizer, ground application, dry bulk	Dry bulk fertilizer application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$5.89	10	\$58.90
Equipment/Installation	953	Lime application	Lime application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$8.36	10	\$83.60
Equipment/Installation	960	Seeding Operation, No Till/Grass Drill	No Till drill or grass drill for seeding. Includes equipment, power unit and labor costs.	Acre	\$19.08	10	\$190.80

			Equipment <70 HP but can't be transported by a pick-up truck or with typical weights between 3,500 to 14,000 pounds.				
Mobilization	1138	Mobilization, small equipment		Each	\$187.23	1	\$187.23
Foregone Income	1959	Fi, Corn Dryland	Dryland Corn is Primary Crop	Acre	\$202.67	10	\$2,026.70