Nutrient Management (590) **OKLAHOMA**

Cost Data

Typical Implementation Scenario

Fertilizer for Grass Establishment 590.1

This practice consists of applying fertilizer for establishing vegetation planted in accordance with the Oklahoma NRCS Pasture and Hay Planting (512) and Range Planting (550) standards. Fertilizer will only be applied during the first year of establishment. Fertilizer application rates will be based on results from current soil test analysis.

This practice includes the costs of fertilizer, application equipment and labor to apply the nutrients. The typical/average scenario is a 60 acre field. This is the extent that has been used in the following calculations when arriving at per acre costs.

Data Source: 2006-2007 actual cost data

Geographic Area: Statewide

Unit for Cost Estimate: Acre
Practice Life (Years): 1
Discount Rate (%/Year): 5%

			Cost/Unit
Materials			$20.00
Fertilizer			
Equipment/Installation/Labor			$8.17
Application/Labor		$8.00	
Soil Test = $10/eac	$10 on 60 acres	$0.17	
In general for fairly uniform field conditions only one field test would be required in a 60 acre field.			
Labor			$0.00
Included in Materials Cost			
Mobilization			$0.00
Included in installation cost			
Operation & Maintenance			$0.00
0% O&M factor			
Acquisition of Technical Knowledge			$0.00
Knowledge to calibrate applicator			
Forgone Income			$0.00
No land taken out of production, no lost opportunity costs			
Risk			$0.00
Reduced risk, crop yield increase, reduced water quality damages			
Administration & Permit Costs			$0.00
None			
Total Cost Estimate:			**$28.17**

Nutrient Management (590) **OKLAHOMA**

Cost Data

Typical Implementation Scenario

Fertilizer for Critical Area Plantings 590.2

This practice consists of applying fertilizer for establishing vegetation planted in accordance with the Oklahoma NRCS Critical Area Planting (342) standard. Fertilizer will only be applied during the first year of establishment. Fertilizer application rates may be based on results from a soil test analysis or in lieu of a soil test, a blend of 40 lbs/ac N, 40 lbs/ac P2O5, and 40 lbs/ac K2O may be applied.

This practice includes the costs of fertilizer, application equipment and labor to apply the nutrients. The typical scenario involves a small acrage generally just over an average of 2 acres. Two acres will be used to establish per acre costs for this scenario.

Data Source: 2006-2007 actual cost data

Geographic Area: Statewide

Unit for Cost Estimate: Acre
Practice Life (Years): 1
Discount Rate (%/Year): 5%

			Cost/Unit
Materials			$59.00
Fertilizer/Application/Labor (costs used include all associated costs)			
Equipment/Installation/Labor			$5.00
Soil Test = $10/ea	$10 on 2 acres	$5.00	
Labor			$0.00
Included in Equipment/Installation Cost			
Mobilization			$0.00
Included in Equipment/Installation Cost			
Operation & Maintenance			$0.00
0% O&M factor			
Acquisition of Technical Knowledge			$0.00
Knowledge to calibrate applicator			
Forgone Income			$0.00
No land taken out of production, no lost opportunity costs			
Risk			$0.00
Reduced risk, crop yield increase, reduced water quality damages			
Administration & Permit Costs			$0.00
None			
Total Cost Estimate:			**$64.00**

Nutrient Management (590) **OKLAHOMA**

Cost Data

Typical Implementation Scenario

Lime for Grass Establishment 590.3

This practice consists of applying lime for establishing vegetation. Lime will only be applied during the first year of establishment. Lime application rates will be based on results from a soil test analysis.

This practice includes the costs of (ECCE) lime, application equipment and labor to apply the nutrients.

Data Source: 2006-2007 actual cost data

Geographic Area:	Statewide		
Unit for Cost Estimate:	Ton ECCE		
Practice Life (Years):	1		
Discount Rate (%/Year):	5%		
			Cost/Unit
Materials			$20.00
Lime			
Equipment/Installation/Labor			$8.17
Application/Labor		$8.00	
Soil Test = $10/ea	$10/ 60 ton	$0.17	
In general for fairly uniform field conditions only one soil test would be required in a 60 acre field with average lime application of 1 ton/ac.			
Labor			$0.00
Included in Equipment/Installation Cost			
Mobilization			$0.00
Included in Equipment/Installation Cost			
Operation & Maintenance			$0.00
0% O&M factor			
Acquisition of Technical Knowledge			$0.00
Knowledge to calibrate applicator			
Forgone Income			$0.00
No land taken out of production, no lost opportunity costs			
Risk			$0.00
Reduced risk, crop yield increase, reduced water quality damages			
Administration & Permit Costs			$0.00
None			
Total Cost Estimate:			**$28.17**

Nutrient Management (590) **OKLAHOMA**

Cost Data

Typical Implementation Scenario

590.4 Calibration Strips

This practice consists of applying fertilizer in a manner than minimizes the risk of leaving the field. This practice will be used to utilize nitrogen rich or ramped calibration strips to determine split application rates for nitrogen. It includes the use of hand held sensor tools (ex. Greenseeker) to determine nitrogen needs as well as equipment to establish nitrogen rich or ramped calibration strips. Soil testing will be performed to determine overall fertility needs of the plants.

This practice includes the costs for hand held sensors, soils testing, nitrogen strip application, and labor associated with installing this practice. Typical scenario is a 320 ac. field.

Data Source: OSU Cooperative Extension data and Commerical Suppliers

Geographic Area:	Statewide		
Unit for Cost Estimate:	Acre		
Practice Life (Years):	1		
Discount Rate (%/Year):	5%		
			Cost/Unit
Materials			$0.00
Equipment/Installation/Labor			$6.46
Private or Custom Application of Strips		$8/320ac = 0.03	
Hand Held Sensor		$2000/320ac = 6.26	
Soil Test		$0.17	
Labor			$0.00
Included in Equipment			
Mobilization			$0.00
None			
Operation & Maintenance			$0.00
0% O&M factor			
Acquisition of Technical Knowledge			$0.00
Knowledge to operate application tool and calibrate sensor			
Forgone Income			$0.00
No land taken out of production, no lost opportunity costs			
Risk			$0.00
Reduced risk, crop yield increase, reduced water quality damages			
Administration & Permit Costs			$0.00
None			
Total Cost Estimate:			**$6.46**

Nutrient Management (590) **OKLAHOMA**

Cost Data

Typical Implementation Scenario

590.5 Precision Application

This practice consists of applying fertilizer in a manner than minimizes the risk of leaving the field. This practice will be used to utilize advanced technology in the application of nutrients by applying nitrogen rich or ramped calibration strips and using nutrient applicators equiped with precision sensors to deliver fertilizer through a spray system at variable rates across the field. Soil testing will be performed to determine overall fertility needs of the plants.

This practice includes the costs for application equipment with sensors, soils testing, nitrogen strip application, and labor associated with installing this practice.

Data Source: 2006-2007 actual cost data, OSU Cooperative Extension data

Geographic Area: Statewide

Unit for Cost Estimate: Acre
Practice Life (Years): 1
Discount Rate (%/Year): 5%

		Cost/Unit
Materials		$0.00
Equipment/Installation/Labor		$11.17
Nutrient applicator with sensors	$10.00	
Computer data entry for analysis and records	$1.00	
Soil Test	$0.17	
Labor		$0.00
Included in Equipment/Installation Cost		
Mobilization		$0.00
None		
Operation & Maintenance		$0.00
0% O&M factor		
Acquisition of Technical Knowledge		$0.00
Knowledge to calibrate and operate applicator		
Forgone Income		$0.00
No land taken out of production, no lost opportunity costs		
Risk		$0.00
Reduced risk, crop yield increase, reduced water quality damages		
Administration & Permit Costs		$0.00
None		
Total Cost Estimate:		**$11.17**

Nutrient Management (590) **OKLAHOMA**

Cost Data

Typical Implementation Scenario

590.6 Chemigation

This practice consists of applying fertilizer in a manner than minimizes the risk of leaving the field. This practice is an incentive to apply nutrients through irrigation systems using chemigation values and components. Nutrient management plans and soil testing will be used to determine application rates and timing.

This practice includes the costs to adapt the irrigation system for chemigation.

Data Source: 2006-2007 actual cost data

Geographic Area: Statewide

Unit for Cost Estimate: Acre
Practice Life (Years): 1
Discount Rate (%/Year): 5%

		Cost/Unit
Equipment/Installation/Labor		$8.17
Equipment to Adapt Irrigation System to Chemigation	$8.00	
Soil Test	$0.17	
Labor		$0.00
Included in Equipment/Installation Costs		
Mobilization		$0.00
None		
Operation & Maintenance		$0.00
0% O&M factor		
Acquisition of Technical Knowledge		$0.00
Knowledge to operate irrigation system		
Forgone Income		$0.00
No land taken out of production, no lost opportunity costs		
Risk		$0.00
Reduced risk, crop yield increase, reduced water quality damages		
Administration & Permit Costs		$0.00
None		
Total Cost Estimate:		**$8.17**

Nutrient Management (590) **OKLAHOMA**

Cost Data

Typical Implementation Scenario

590.7 High Soil P Index

This practice consists of applying fertilizer in a manner than minimizes the risk of leaving the field. This practice will be used to discontinue application of animal manure or waste on soils which exceed a current soil test phosphorus index of 120. Additional nutrients required by the plant will be supplied with fertilizers that do not contain phosphorus. Soil testing will be performed to determine overall fertility needs of the plants.

This practice includes the costs to transport manure to offsite locations. Cost of this practice will be calculated using the following formula: $0.13 x mile x ton = cost/mile/ton

Data Source: OSU Cooperative Custom Rates

Geographic Area: Statewide

Unit for Cost Estimate: $0.13/mile/ton
Practice Life (Years): 1
Discount Rate (%/Year): 5%

		Cost/Unit
Equipment/Installation/Labor		$0.13
Transport Manure	$0.13/mile/ton	
Labor		$0.00
Included in Equipment/Installation Cost		
Mobilization		$0.00
None		
Operation & Maintenance		$0.00
0% O&M factor		
Acquisition of Technical Knowledge		$0.00
N/A		
Forgone Income		$0.00
No land taken out of production, no lost opportunity costs		
Risk		$0.00
Reduced risk, improved water quality		
Administration & Permit Costs		$0.00
None		
Total Cost Estimate:		**$0.13**