

Practice: 511 - Forage Harvest Management

Scenario: #1 - Perennial Crops - Delayed Mowing

Scenario Description:

In perennial forage crops, the delaying the harvest of the first cutting to promote the reproduction of ground nesting birds. Delaying the harvest of the first cutting will benefit ground nesting birds; research at the University of Vermont showed that breeding success for declining grassland songbirds went from 0 on a regularly harvested hay field to 2.8 fledglings per female per year when the the first harvest on a hayfield was delayed until August 1st. Eastern Meadowlarks, and Savannah Sparrows require a nesting period to fledge young that lasts through the end of July in most parts of the eastern US. The delayed harvest results in a decrease in overall forage quality. Farmers could see as much as a 50% reduction in market value due to declines in protein (~50%) and digestibility (~20%), making the forage crop less palatable and lower in relative feed value. The selected fields should be large enough to promote ground nesting birds. After young have fledged the field will be harvested for dry forages.

Before Situation:

Perennial forage crops are produced and harvested; ground nesting birds are disturbed and/or fledgling birds are killed in the process.

After Situation:

Annual crops are harvested with a delayed mowing; forage quality is compromised, however, the survival of ground nesting birds is promoted.

Scenario Feature Measure: Increased grassland bird populations.

Scenario Unit: Acre

Scenario Typical Size: 30

Scenario Cost: \$560.17

Scenario Cost/Unit: \$18.67

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
	297				100	
	296				1	
Acquisition of Technical Knowledge						
Training, Workshops	294	Educational seminar or series of meetings emphasizing interaction and exchange of information among a usually small number of participants.	Each	\$44.18	1	\$44.18
Foregone Income						
FI, Grazing AUMs	2079	Grazing is the Primary Land Use	AUM	\$15.43	30	\$462.90
Labor						
Skilled Labor	230	Labor requiring a high level skill set: Includes carpenters, welders, electricians, conservation professionals involved with data collection, monitoring, and or record keeping, etc.	Hour	\$26.95	1	\$26.95
Materials						
Test, Plant Tissue Test	301	Tissue analysis for crops. Includes materials and shipping only.	Each	\$26.14	1	\$26.14

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Scenario: #2 - Phosphorus Mining

Scenario Description:

Harvesting forages to remove excess phosphorus from hay fields (30-acre fields harvested three times a year). Forage must be removed through hay or green chop. Fields cannot be grazed or hay fed on the acreage. Fields that have a phosphorus loading in excess of 500 lbs of P/acre qualify for funding. Litter cannot be applied, commercial nutrients will be used to supply other forage needs. Resource concerns that will be addressed include soil quality and water quality.

Before Situation:

Forage harvest is normally by grazing. Excess Phosphorus build up (greater than 500 lbs.) in soil due to manure application. Phosphorus remains in the field through the continued cycle of adding additional phosphorus through manure application. Phosphorus that is taken up by plants is re-deposited on the land through the digestion of animals grazing.

After Situation:

Phosphorus is removed from the field through the harvesting and removal of forage, no grazing allowed. Forage is utilized off the farm or on areas with out a Phosphorus build up. The end result is needed nutrients are supplied for forage growth (N and K) based on Soil Test recommendations with out adding additional phosphorus to the soil. Existing soil phosphorus content is reduced by removing forage from the field. Grazing oppertunities are reduced and water quality is improved as well as forage quality.

Scenario Feature Measure: Reduced Phosphorus in Soil

Scenario Unit: Acre

Scenario Typical Size: 30

Scenario Cost: \$687.67

Scenario Cost/Unit: \$22.92

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
	297				100	
	296				1	
	295				1	
Acquisition of Technical Knowledge						
Training, Workshops	294	Educational seminar or series of meetings emphasizing interaction and exchange of information among a usually small number of participants.	Each	\$44.18	1	\$44.18
Foregone Income						
FI, Grazing AUMs	2079	Grazing is the Primary Land Use	AUM	\$15.43	30	\$462.90
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Skilled Labor	230	Labor requiring a high level skill set: Includes carpenters, welders, electricians, conservation professionals involved with data collection, monitoring, and or record keeping, etc.	Hour	\$26.95	1	\$26.95
Materials						
Test, Plant Tissue Test	301	Tissue analysis for crops. Includes materials and shipping only.	Each	\$26.14	1	\$26.14
Potassium, K2O	74	K2O supplied by Muriate Of Potash. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.55	60	\$33.00
Nitrogen (N), Urea	71	Price per pound of N supplied by Urea. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.63	150	\$94.50