

Practice: 511 - Forage Harvest Management

Scenario: #1 - Improved Forage Quality

Scenario Description: Improved cultural practices and recordkeeping result in better forage quality and better livestock performance.

Before Situation: Forage cutting heights are as close to the ground as equipment will allow resulting in very low stubble height. Plant regrowth is very slow. Forage quality tests are not regularly done. Records of forage quality components, cutting heights, moisture content, and harvest schedule are not regularly kept.

After Situation: Forage cutting heights are raised to leave at least 3-4" stubble height for cool season grasses and 6" for warm season grasses. Increased residual forage results in much faster plant regrowth. Forage quality tests are submitted to an accredited lab for analysis. Records of forage quality components, cutting heights, moisture content, and harvest schedule are regularly kept to track increased forage quality and improved livestock performance.

Scenario Feature Measure: Improved Relative Feed Value

Scenario Unit: Acre

Scenario Typical Size: 30

Total Scenario Cost: \$134.49

Scenario Cost/Unit: \$4.48

Cost Details

Component Name	Id	Description	Unit	Cost	Qty	Total
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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	\$34.50	1	\$34.50
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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	\$45.80	1	\$45.80
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Materials

Test, Plant Tissue Test	301	Tissue analysis for crops. Includes materials and shipping only.	Each	\$27.10	2	\$54.19
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Scenario: #2 - Organic Preemptive Harvest

Scenario Description: Preemptive harvest of forage crops to prevent damage from insects (such as leafhopper on alfalfa) or other pests results in better forage quality and better livestock performance.

Before Situation: Forage pests are usually controlled with pesticides.

After Situation: In organic or transitioning to organic systems, forage pests are controlled by executing a preemptive harvest before pests can damage forage quality. Forage yields are reduced because of immature stage of forage growth. Forage tests are submitted to an accredited lab for analysis. Records of forage quality components are used to adjust feeding rations.

Scenario Feature Measure: Relative Feed Value Maintained

Scenario Unit: Acre

Scenario Typical Size: 30

Total Scenario Cost: \$134.49

Scenario Cost/Unit: \$4.48

Cost Details

Component Name	Id	Description	Unit	Cost	Qty	Total
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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	\$34.50	1	\$34.50
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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	\$45.80	1	\$45.80
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Materials

Test, Plant Tissue Test	301	Tissue analysis for crops. Includes materials and shipping only.	Each	\$27.10	2	\$54.19
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Scenario: #3 - 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 (e.g. Bobolink) 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. Bobolinks, 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

Total Scenario Cost: \$173.73

Scenario Cost/Unit: \$5.79

Cost Details

Component Name	Id	Description	Unit	Cost	Qty	Total
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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	\$34.50	1	\$34.50
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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	\$45.80	1	\$45.80
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Materials

Test, Plant Tissue Test	301	Tissue analysis for crops. Includes materials and shipping only.	Each	\$27.10	2	\$54.19
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Foregone Income

FI, Grazing AUMs	2079	Grazing is the Primary Land Use	Animal Unit Month	\$13.08	3	\$39.24
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Scenario: #4 - Doublecropping - Delayed harvest and subsequent planting

Scenario Description: In doublecropped annual forages, delaying the harvest of the first crop will provide feed and shelter for ground nesting birds. Delaying the 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 the young have fledged the second crop will be planted, approximately one month later than normal. Subsequently, the harvest of the second crop will cause an approximately 20% yield decline. The selected area should be large enough to buffer adults and nestlings from silage chopping in adjacent areas or fields. After young have fledged the field will be chopped and used as grain or silage. This practice is best planned cooperatively with the farmer and appropriate wildlife agencies far enough in advance to reduce disturbance to ground nesting birds. For example, Tricolored Blackbirds need a 35-day window from the time of nest building to fledge young and the silage needs to remain uncut until then.

Before Situation: Double cropped annual forage crops are produced and harvested; ground nesting birds are disturbed and/or fledgling birds are killed in the process.

After Situation: Double cropped annual crops are harvested with a delayed mowing and a subsequent later planting of the second crop; forage quality is compromised somewhat, however, the survival of ground nesting birds is promoted.

Scenario Feature Measure: Increased grassland bird populations.

Scenario Unit: Acre

Scenario Typical Size: 30

Total Scenario Cost: \$212.97

Scenario Cost/Unit: \$7.10

Cost Details

Component Name	Id	Description	Unit	Cost	Qty	Total
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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	\$34.50	1	\$34.50
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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	\$45.80	1	\$45.80
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Materials

Test, Plant Tissue Test	301	Tissue analysis for crops. Includes materials and shipping only.	Each	\$27.10	2	\$54.19
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Foregone Income

FI, Grazing AUMs	2079	Grazing is the Primary Land Use	Animal Unit Month	\$13.08	6	\$78.47
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