

Practice: 328 - Conservation Crop Rotation

Scenario #1 - Standard Rotation

Scenario Description:

This practice may be part of a conservation management system to: 1) Reduce sheet and rill erosion 2) Reduce soil erosion from wind 3) Maintain or improve soil organic matter 4) Manage the balance of plant nutrient 5) Improve water use efficiency 6) Manage plant pests (weeds, insects, and diseases). 7) Provide food for domestic livestock and 8) Provide food and cover for wildlife. For crop system diversity, the planned crop sequence will contain different crop types (warm season grass/broadleaf, cool season grass/broadleaf). This practice payment is provided to acquire the technical knowledge and skills necessary to effectively implement a conservation crop rotation on a typical 200 acre cropland farm. Foregone income is not included, as the newly added crop will not reduce net crop return in the rotation. Cost represents typical situations for conventional (non-organic) producers. A minimum of one additional crop type will be added to an existing crop rotation.

Before Situation:

The rotation primarily consists of a two crop rotation, small grain and row crop or fallow. Erosion, soil quality, and pest management are the primary concerns.

After Situation:

A minimum 3 crop type rotation is established increasing cropping system diversity that requires a minimum of at least one additional high residue or functional group crop (Summer Grass/Broadleaf, Winter Grass/Broadleaf) and/or perennial crops that reduces erosion, improves soil quality, and break pest cycles.

Feature Measure: Area planted

Scenario Unit:: Acre

Scenario Typical Size: 200

Total Scenario Cost: \$3,244.00

Scenario Cost/Unit: \$16.22

Cost Details:

Component Name	ID	Description	Unit	Cost	QTY	Total
Labor						
Supervisor or Manager	234	Labor involving supervision or management activities. Includes crew supervisors, foremen and farm/ranch managers time required for adopting new technology, etc.	Hour	\$40.55	80	\$3,244.00

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Scenario #2 - Irrigated to Dryland Rotation

Scenario Description:

This practice may be part of a conservation management system to primarily convert from an irrigated cropping system to dryland farming. In addition to improving water use efficiency the rotation may 1) Reduce sheet and rill erosion 2) Reduce soil erosion from wind 3) Maintain or improve soil organic matter 4) Manage the balance of plant nutrients 5) Manage plant pests (weeds, insects, and diseases). 6) Provide food for domestic livestock and 7) Provide food and cover for wildlife. This practice payment is provided to acquire the technical knowledge and skills necessary to effectively implement a conservation crop rotation on a typical 200 acre cropland farm. There is foregone income involved with this conversion from irrigated to dryland farming due to lower yields and net return. Cost represents typical situations for conventional (non-organic) producers converting from irrigated cropping to dryland farming.

Before Situation:

This rotation consisted of growing row crop grains that received a significant (more than half) of the required water via irrigation. The water demands are impacting the area's water availability. Erosion, soil condition, and future water availability are the major concerns.

After Situation:

The dryland rotation, using the same crops or a rotation that grows crops over different periods, is part of a management system capable of utilizing available rainfall and soil moisture more efficiently and controlling wind and water erosion. Corn yields will be expected to be reduced from 150 to 80 bu/acre.

Feature Measure: Acres of area planted

Scenario Unit:: Acre

Scenario Typical Size: 400

Total Scenario Cost: \$82,484.50

Scenario Cost/Unit: \$206.21

Cost Details:

Component Name	ID	Description	Unit	Cost	QTY	Total
Foregone Income						
FI, Corn Dryland	1959	Dryland Corn is Primary Crop	Acre	\$149.65	-200	(\$29,930.00)
FI, Corn Irrigated	1960	Irrigated Corn is Primary Crop	Acre	\$555.99	200	\$111,198.00
Labor						
Supervisor or Manager	234	Labor involving supervision or management activities. Includes crew supervisors, foremen and farm/ranch managers time required for adopting new technology, etc.	Hour	\$40.55	30	\$1,216.50

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Scenario #3 - Organic Rotation

Scenario Description:

This practice may be part of a conservation management system to: 1) Reduce sheet and rill erosion 2) Reduce soil erosion from wind 3) Maintain or improve soil organic matter 4) Manage the balance of plant nutrients 5) Improve water use efficiency 6) Manage plant pests (weeds, insects, and diseases). 7) Provide food for domestic livestock and 8) Provide food and cover for wildlife. This practice payment is provided to acquire the technical knowledge and skills necessary to effectively implement a conservation crop rotation on a typical 100 cropland farm. No foregone income. Cost represents typical situations for conventional organic producers.

Before Situation:

The rotation consists primarily of low residue and conventionally produced row crops. Fields range from nearly flat to C and D slopes. Erosion, soil quality, and pest management are the primary concerns.

After Situation:

The rotation is established to provide additional high residue and/or perennial crops in an organic system. The rotation will compliment erosion control, nutrient cycling, soil organic matter, and pest management via crop rotation.

Feature Measure: Area planted

Scenario Unit:: Acre

Scenario Typical Size: 100

Total Scenario Cost: \$3,244.00

Scenario Cost/Unit: \$32.44

Cost Details:

Component Name	ID	Description	Unit	Cost	QTY	Total
Labor						
Supervisor or Manager	234	Labor involving supervision or management activities. Includes crew supervisors, foremen and farm/ranch managers time required for adopting new technology, etc.	Hour	\$40.55	80	\$3,244.00

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Scenario #4 - Specialty Crops

Scenario Description:

A rotation of specialty crops (fruits, nuts, herbs, vegetable, etc.) are produced as part of a conservation management system to: 1) Reduce sheet and rill erosion 2) Reduce soil erosion from wind 3) Maintain or improve soil organic matter 4) Manage the balance of plant nutrients 5) Improve water use efficiency, and 6) Manage plant pests (weeds, insects, and diseases). This practice payment is provided to acquire the technical knowledge and skills necessary to effectively implement a conservation crop rotation on a typical 50 acre specialty crop farm. No foregone income. Cost represents typical situations for conventional (non-organic) producers.

Before Situation:

This rotation consisted of growing low residue producing specialty crops. Fields range from nearly flat to B and C slopes. Erosion, soil quality, and pest management are the primary concerns.

After Situation:

The rotation established adds higher residue specialty crop(s) to the rotation that reduce erosion, improve soil quality, and break pest cycles.

Feature Measure: Area planted

Scenario Unit:: Acre

Scenario Typical Size: 50

Total Scenario Cost: \$1,216.50

Scenario Cost/Unit: \$24.33

Cost Details:

Component Name	ID	Description	Unit	Cost	QTY	Total
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Labor

Supervisor or Manager	234	Labor involving supervision or management activities. Includes crew supervisors, foremen and farm/ranch managers time required for adopting new technology, etc.	Hour	\$40.55	30	\$1,216.50
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Scenario #5 - Organic Specialty Crops

Scenario Description:

A rotation of specialty crops (fruits, nuts, herbs, vegetables, etc.) are produced as part of a conservation management system to: 1) Reduce sheet and rill erosion 2) Reduce soil erosion from wind 3) Maintain or improve soil organic matter 4) Manage the balance of plant nutrient 5) Improve water use efficiency, and 6) Manage plant pests (weeds, insects, and diseases). This practice payment is provided to acquire the technical knowledge and skills necessary to effectively implement a conservation crop rotation on a typical 50 acre specialty crop farm. No foregone income. Cost represents typical situations for conventional organic producers.

Before Situation:

This rotation consisted of growing low residue producing organic specialty crops. Fields range from nearly flat to B and C slopes. Erosion, soil quality, and pest management are the primary concerns.

After Situation:

The rotation has added higher residue producing organic specialty crop(s) to the organic producers rotation that reduce erosion, improve soil quality, and break pest cycles.

Feature Measure: Area planted

Scenario Unit:: Acre

Scenario Typical Size: 50

Total Scenario Cost: \$1,622.00

Scenario Cost/Unit: \$32.44

Cost Details:

Component Name	ID	Description	Unit	Cost	QTY	Total
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Labor

Supervisor or Manager	234	Labor involving supervision or management activities. Includes crew supervisors, foremen and farm/ranch managers time required for adopting new technology, etc.	Hour	\$40.55	40	\$1,622.00
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