

# Cropping Systems Calculator:

## Continuous Living Cover



## LAND STEWARDSHIP PROJECT

**Created as part of the Chippewa 10% Project**

Contact [CSC@landstewardshipproject.org](mailto:CSC@landstewardshipproject.org) with questions

***Version 1.2 (11/2016)***

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Instructions



Documentation

### **Reminder:**

The defaults are from the  
FINBIN database for a 10  
county region in the Chippewa  
River Watershed.



# Cropping Systems Calculator: Continuous Living Cover

Number of Acres of Whole Farm	500
Number of Acres to Change	40

Years in	Original	2
Rotation	New	6

	Original Crop Plan			New Crop Plan			
	Crop 1	Crop 2	Crop 3		Crop 1	Crop 2	Crop 3
Year 1	Corn			Year 1	Corn	LateSeasonCoverCrop	
Year 2	Soybeans			Year 2	Soybeans		
				Year 3	SpringWheat	AlfalfaHay	
				Year 4	AlfalfaHay		
				Year 5	AlfalfaHay		
				Year 6	AlfalfaHay	Grazing	

Update Viewable Sheets

Clear Entire Workbook

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<u>Average Yearly Costs and Returns from the Two Rotations</u>					
Returns are seen as wages for the farm owner in this tool and aren't factored into labor costs.					
Total Overhead Expenses	Per Acre	Whole Farm			
	\$ 148.59	\$74,294.62			
	Original Crop		New Crop		Percent Difference
	Per Acre	Total	Per Acre	Total	
Total Crop Expenses	\$387.77	\$15,510.80	\$546.58	\$21,863.14	41%
Total Crop Income	\$524.08	\$20,963.03	\$694.93	\$27,797.10	33%
Other Income	\$53.07	\$2,122.77	\$42.30	\$1,692.04	-20%
<b>Returns to Management</b>	<b>\$40.79</b>	<b>\$1,631.43</b>	<b>\$42.06</b>	<b>\$1,682.43</b>	<b>3%</b>
<i>-Percent difference shows the percent increase in the new crop when compared to the old crop</i>					



<b>Year by Year Financial Details (Per Acre)</b>							
<b>Overhead Expenses</b>			<b>\$ 148.59</b>				
	<b>Original Crop Plan</b>				<b>New Crop Plan</b>		
	<b>Crop Expenses</b>	<b>Income</b>	<b>Returns</b>		<b>Crop Expenses</b>	<b>Income</b>	<b>Returns</b>
<b>Year 1</b>	\$487.69	\$690.02	\$53.74	<b>Year 1</b>	\$524.15	\$690.02	\$17.28
<b>Year 2</b>	\$287.85	\$464.27	\$27.83	<b>Year 2</b>	\$269.54	\$464.27	\$46.14
<b>Year 3</b>				<b>Year 3</b>	\$500.26	\$371.24	-\$277.61
<b>Year 4</b>				<b>Year 4</b>	\$245.94	\$478.89	\$84.36
<b>Year 5</b>				<b>Year 5</b>	\$245.94	\$478.89	\$84.36
<b>Year 6</b>				<b>Year 6</b>	\$1,493.64	\$1,940.06	\$297.83
<b>Yearly Average</b>	\$387.77	\$577.14	\$40.79	<b>Yearly Average</b>	\$546.58	\$737.23	\$42.06

## Cropping Systems Calculator: Continuous Living Cover

Number of Acres of Whole Farm	500
Number of Acres to Change	40

Original First Year Crop Plan	New First Year Crop Plan
Corn	Corn
	LateSeasonCoverCrop

Per Acre Crop Systems Calculator	
Cost	
Acres	
Cost/Acre	0

Grazing Calculator

Whole Farm Figures		
	Whole Farm	Per Acre
<b>Expenses</b>		
Hired Labor	7623.85	15.25
Property Taxes	2972.31	5.94
Machinery & Building Leases	6122.69	12.25
Repairs	19245.77	38.49
Farm Insurance	3793.85	7.59
Utilities	2671.15	5.34
Depreciation	22327.31	44.65
Interest	9537.69	19.08
<b>Income</b>		
CSP Payments	15594.62	31.19
Custom Hire Income	0.00	

Original First Year Crop Plan	Per Acre
	Corn
<b>Expenses</b>	
Seed	111.18
Fertilizer (Chemical & Manure)	149.72
Crop Chemicals	34.33
Drying Expense	11.08
Storage	1.35
Fuel & Oil	26.32
Hauling & Trucking	0.00
Custom Hire	10.98
Crop Insurance	21.33
Land Rent	121.40
<b>Income</b>	
Ecosystem Services Payments	0.00
Crop Insurance Payments	18.19
Crop Conservation Payments	5.43
Yield/Acre	184.12
Price	3.45

Clear All
Fill All Defaults

Grazing Calculator

New First Year Crop Plan	Per Acre	
	Corn	LateSeasonCoverCrop
<b>Expenses</b>		
Seed	111.18	25.00
Fertilizer (Chemical & Manure)	149.72	
Crop Chemicals	34.33	0.00
Drying Expense	11.08	0.00
Storage	1.35	
Fuel & Oil	26.32	10.00
Hauling & Trucking	0.00	0.00
Custom Hire	10.98	1.46
Crop Insurance	21.33	
Land Rent	121.40	
<b>Income</b>		
Ecosystem Services Payments	0.00	0.00
Crop Insurance Payments	18.19	0.00
Crop Conservation Payments	5.43	0.00
Yield/Acre	184.12	2.86
Price	3.45	

Costs and Returns from the Two Systems					
Returns are seen as wages for the farm owner in this tool and aren't factored into labor costs.					
Total Overhead Expenses	Per Acre	Whole Farm			
	148.59	74443.20			
	Original Crop		New Crop		Percent Difference
	Per Acre	Total	Per Acre	Total	
Total Crop Expenses	\$487.69	\$19,507.60	\$524.15	\$20,966.00	7%
Total Crop Income	\$635.21	\$25,408.56	\$635.21	\$25,408.56	
Other Income	\$54.81	\$2,192.37	\$54.81	\$2,192.37	
<b>Returns to Management</b>	<b>\$53.74</b>	<b>\$2,149.76</b>	<b>\$17.28</b>	<b>\$691.36</b>	<b>-68%</b>
<i>-Percent difference shows the percent increase in the new crop when compared to the old crop</i>					

## Cropping Systems Calculator: Continuous Living Cover

Number of Acres of Whole Farm	500
Number of Acres to Change	40

Original Second Year Crop Plan	New Second Year Crop Plan
Soybeans	Soybeans

Per Acre Crop Systems Calculator	
Cost	
Acres	
Cost/Acre	0

Grazing Calculator

Whole Farm Figures		
	Whole Farm	Per Acre
<b>Expenses</b>		
Hired Labor	7623.85	15.25
Property Taxes	2972.31	5.94
Machinery & Building Leases	6122.69	12.25
Repairs	19245.77	38.49
Farm Insurance	3793.85	7.59
Utilities	2671.15	5.34
Depreciation	22327.31	44.65
Interest	9537.69	19.08
<b>Income</b>		
CSP Payments	15594.62	31.19
Custom Hire Income		

Original Second Year Crop Plan	Per Acre
	Soybeans
<b>Expenses</b>	
Seed	60.34
Fertilizer (Chemical & Manure)	21.04
Crop Chemicals	43.31
Drying Expense	0.00
Storage	0.00
Fuel & Oil	14.31
Hauling & Trucking	0.00
Custom Hire	9.54
Crop Insurance	17.91
Land Rent	121.40
<b>Income</b>	
Ecosystem Services Payments	0.00
Crop Insurance Payments	13.58
Crop Conservation Payments	6.56
Yield/Acre	48.41
Price	8.53

Grazing Calculator

Clear All
Fill All Defaults

Grazing Calculator

New Second Year Crop Plan	Per Acre
	Soybeans
<b>Expenses</b>	
Seed	60.34
Fertilizer (Chemical & Manure)	21.04
Crop Chemicals	25.00
Drying Expense	0.00
Storage	0.00
Fuel & Oil	14.31
Hauling & Trucking	0.00
Custom Hire	9.54
Crop Insurance	17.91
Land Rent	121.40
<b>Income</b>	
Ecosystem Services Payments	0.00
Crop Insurance Payments	13.58
Crop Conservation Payments	6.56
Yield/Acre	48.41
Price	8.53

Costs and Returns from the Two Systems					
Returns are seen as wages for the farm owner in this tool and aren't factored into labor costs.					
Total Overhead Expenses	Per Acre	Whole Farm			
	148.59	74443.20			
	<b>Original Crop</b>		<b>New Crop</b>		<b>Percent Difference</b>
	<i>Per Acre</i>	<i>Total</i>	<i>Per Acre</i>	<i>Total</i>	
Total Crop Expenses	\$287.85	\$11,514.00	\$269.54	\$10,781.60	-6%
Total Crop Income	\$412.94	\$16,517.49	\$412.94	\$16,517.49	
Other Income	\$51.33	\$2,053.17	\$51.33	\$2,053.17	
<b>Returns to Management</b>	<b>\$27.83</b>	<b>\$1,113.09</b>	<b>\$46.14</b>	<b>\$1,845.49</b>	<b>66%</b>
<i>-Percent difference shows the percent increase in the new crop when compared to the old crop</i>					

## Cropping Systems Calculator: Continuous Living Cover

Number of Acres of Whole Farm	500
Number of Acres to Change	40

Original Third Year Crop Plan	New Third Year Crop Plan
	SpringWheat
	AlfalfaHay

Per Acre Crop Systems Calculator	
Cost	
Acres	
Cost/Acre	0

Grazing Calculator

Whole Farm Figures	Whole Farm	Per Acre
<b>Expenses</b>		
Hired Labor	7623.85	15.25
Property Taxes	2972.31	5.94
Machinery & Building Leases	6122.69	12.25
Repairs	19245.77	38.49
Farm Insurance	3793.85	7.59
Utilities	2671.15	5.34
Depreciation	22327.31	44.65
Interest	9537.69	19.08
<b>Income</b>		
CSP Payments	15594.62	31.19
Custom Hire Income		

Original Third Year Crop Plan	Per Acre
<b>Expenses</b>	
Seed	
Fertilizer (Chemical & Manure)	
Crop Chemicals	
Drying Expense	
Storage	
Fuel & Oil	
Hauling & Trucking	
Custom Hire	
Crop Insurance	
Land Rent	
<b>Income</b>	
Ecosystem Services Payments	
Crop Insurance Payments	
Crop Conservation Payments	
Yield/Acre	
Price	

Clear All
Fill All Defaults

Grazing Calculator

New Third Year Crop Plan	Per Acre	
	SpringWheat	AlfalfaHay
<b>Expenses</b>		
Seed	28.94	75.00
Fertilizer (Chemical & Manure)	95.27	64.65
Crop Chemicals	23.50	6.77
Drying Expense	0.00	0.00
Storage	0.00	0.72
Fuel & Oil	15.41	10.00
Hauling & Trucking	0.00	0.00
Custom Hire	11.09	37.40
Crop Insurance	10.11	
Land Rent	121.40	
<b>Income</b>		
Ecosystem Services Payments	0.00	0.00
Crop Insurance Payments	2.34	
Crop Conservation Payments	20.57	0.00
Yield/Acre	64.46	4.07
Price	4.92	

### Costs and Returns from the Two Systems

Returns are seen as wages for the farm owner in this tool and aren't factored into labor costs.

Total Overhead Expenses	Per Acre	Whole Farm			
	148.59	74443.20			
	Original Crop		New Crop		Percent Difference
	Per Acre	Total	Per Acre	Total	
Total Crop Expenses			\$500.26	\$20,010.40	
Total Crop Income			\$317.14	\$12,685.73	
Other Income			\$54.10	\$2,163.97	
<b>Returns to Management</b>			-\$277.61	-\$11,104.27	

-Percent difference shows the percent increase in the new crop when compared to the old crop



## Cropping Systems Calculator: Continuous Living Cover

Number of Acres of Whole Farm	500
Number of Acres to Change	40

Original Fourth Year Crop Plan	New Fourth Year Crop Plan
	AlfalfaHay

Per Acre Crop Systems Calculator	
Cost	
Acres	
Cost/Acre	0

Grazing Calculator

Whole Farm Figures	Whole Farm	Per Acre
<b>Expenses</b>		
Hired Labor	7623.85	15.25
Property Taxes	2972.31	5.94
Machinery & Building Leases	6122.69	12.25
Repairs	19245.77	38.49
Farm Insurance	3793.85	7.59
Utilities	2671.15	5.34
Depreciation	22327.31	44.65
Interest	9537.69	19.08
<b>Income</b>		
CSP Payments	15594.62	31.19
Custom Hire Income		

Original Fourth Year Crop Plan	Per Acre
<b>Expenses</b>	
Seed	
Fertilizer (Chemical & Manure)	
Crop Chemicals	
Drying Expense	
Storage	
Fuel & Oil	
Hauling & Trucking	
Custom Hire	
Crop Insurance	
Land Rent	
<b>Income</b>	
Ecosystem Services Payments	
Crop Insurance Payments	
Crop Conservation Payments	
Yield/Acre	
Price	

Grazing Calculator

New Fourth Year Crop Plan	Per Acre
<b>AlfalfaHay</b>	
<b>Expenses</b>	
Seed	
Fertilizer (Chemical & Manure)	64.65
Crop Chemicals	6.77
Drying Expense	0.00
Storage	0.72
Fuel & Oil	15.00
Hauling & Trucking	0.00
Custom Hire	37.40
Crop Insurance	
Land Rent	121.40
<b>Income</b>	
Ecosystem Services Payments	0.00
Crop Insurance Payments	
Crop Conservation Payments	0.00
Yield/Acre	4.07
Price	110.00

Clear All      Fill All Defaults

### Costs and Returns from the Two Systems

Returns are seen as wages for the farm owner in this tool and aren't factored into labor costs.

Total Overhead Expenses	Per Acre	Whole Farm			
	148.59	74443.20			
	Original Crop		New Crop		Percent Difference
	Per Acre	Total	Per Acre	Total	
Total Crop Expenses			\$245.94	\$9,837.60	
Total Crop Income			\$447.70	\$17,908.00	
Other Income			\$31.19	\$1,247.57	
<b>Returns to Management</b>			<b>\$84.36</b>	<b>\$3,374.40</b>	

-Percent difference shows the percent increase in decrease in the new crop when compared to the old crop



## Cropping Systems Calculator: Continuous Living Cover

Number of Acres of Whole Farm	500
Number of Acres to Change	40

Original Fifth Year Crop Plan	New Fifth Year Crop Plan
	AlfalfaHay

Per Acre Crop Systems Calculator	
Cost	
Acres	
Cost/Acre	0

Grazing Calculator

Clear All
Fill All Defaults

Whole Farm Figures	Whole Farm	Per Acre
<b>Expenses</b>		
Hired Labor	7623.85	15.25
Property Taxes	2972.31	5.94
Machinery & Building Leases	6122.69	12.25
Repairs	19245.77	38.49
Farm Insurance	3793.85	7.59
Utilities	2671.15	5.34
Depreciation	22327.31	44.65
Interest	9537.69	19.08
<b>Income</b>		
CSP Payments	15594.62	31.19
Custom Hire Income		

Original Fifth Year Crop Plan	Per Acre
<b>Expenses</b>	
Seed	
Fertilizer (Chemical & Manure)	
Crop Chemicals	
Drying Expense	
Storage	
Fuel & Oil	
Hauling & Trucking	
Custom Hire	
Crop Insurance	
Land Rent	
<b>Income</b>	
Ecosystem Services Payments	
Crop Insurance Payments	
Crop Conservation Payments	
Yield/Acre	
Price	

Grazing Calculator

New Fifth Year Crop Plan	Per Acre
<b>AlfalfaHay</b>	
<b>Expenses</b>	
Seed	
Fertilizer (Chemical & Manure)	64.65
Crop Chemicals	6.77
Drying Expense	0.00
Storage	0.72
Fuel & Oil	15.00
Hauling & Trucking	0.00
Custom Hire	37.40
Crop Insurance	
Land Rent	121.40
<b>Income</b>	
Ecosystem Services Payments	0.00
Crop Insurance Payments	
Crop Conservation Payments	0.00
Yield/Acre	4.07
Price	110.00

Grazing Calculator

Costs and Returns from the Two Systems					
Returns are seen as wages for the farm owner in this tool and aren't factored into labor costs.					
Total Overhead Expenses	Per Acre	Whole Farm			
	148.59	74443.20			
	Original Crop		New Crop		Percent Difference
	Per Acre	Total	Per Acre	Total	
Total Crop Expenses			\$245.94	\$9,837.60	
Total Crop Income			\$447.70	\$17,908.00	
Other Income			\$31.19	\$1,247.57	
<b>Returns to Management</b>			<b>\$84.36</b>	<b>\$3,374.40</b>	
<i>-Percent difference shows the percent increase in decrease in the new crop when compared to the old crop</i>					





## Cropping Systems Calculator: Continuous Living Cover

Number of Acres of Whole Farm	500
Number of Acres to Change	40

Original Sixth Year Crop Plan	New Sixth Year Crop Plan
	AlfalfaHay
	Grazing

Per Acre Crop Systems Calculator	
Cost	
Acres	
Cost/Acre	0

Grazing Calculator

Whole Farm Figures	Whole Farm	Per Acre
<b>Expenses</b>		
Hired Labor	7623.85	15.25
Property Taxes	2972.31	5.94
Machinery & Building Leases	6122.69	12.25
Repairs	19245.77	38.49
Farm Insurance	3793.85	7.59
Utilities	2671.15	5.34
Depreciation	22327.31	44.65
Interest	9537.69	19.08
<b>Income</b>		
CSP Payments	15594.62	31.19
Custom Hire Income		

Original Sixth Year Crop Plan	Per Acre
<b>Expenses</b>	
Seed	
Fertilizer (Chemical & Manure)	
Crop Chemicals	
Drying Expense	
Storage	
Fuel & Oil	
Hauling & Trucking	
Custom Hire	
Crop Insurance	
Land Rent	
<b>Income</b>	
Ecosystem Services Payments	
Crop Insurance Payments	
Crop Conservation Payments	
Yield/Acre	
Price	

Grazing Calculator

New Sixth Year Crop Plan	Per Acre	
	AlfalfaHay	Grazing
<b>Expenses</b>		
Seed		1262.70
Fertilizer (Chemical & Manure)	64.65	
Crop Chemicals	6.77	
Drying Expense	0.00	
Storage	0.72	
Fuel & Oil		
Hauling & Trucking	0.00	
Custom Hire	37.40	
Crop Insurance		
Land Rent	121.40	
<b>Income</b>		
Ecosystem Services Payments	0.00	
Crop Insurance Payments		
Crop Conservation Payments	0.00	
Yield/Acre	4.07	1.89
Price		1012.00

### Costs and Returns from the Two Systems

Returns are seen as wages for the farm owner in this tool and aren't factored into labor costs.

Total Overhead Expenses	Per Acre	Whole Farm			Percent Difference
	148.59	74443.20			
	Original Crop		New Crop		
	Per Acre	Total	Per Acre	Total	
Total Expenses			\$1,493.64	\$59,745.64	
Total Crop Income			\$1,908.87	\$76,354.85	
Other Income			\$31.19	\$1,247.57	
<b>Returns to Management</b>			<b>\$297.83</b>	<b>\$11,913.21</b>	

-Percent difference shows the percent increase in decrease in the new crop when compared to the old crop



## Detailed Grazing Budget

### **Original**

#### Fencing Cost

This total is included in the non feed costs.

#### Whole Budget

### **New**

#### Fencing Cost

This total is included in the non feed costs.

Number of Paddocks	28.00
Length of Paddock	571.43
Width of Paddock	1250.00
Total Length of Fence Perimeter	7285.71
Constant Costs for Fence	89.50
Number of Posts Needed	182.14
Cost of Posts and Clips	373.99
Energizer Cost	110.00
Polywire Cost	218.57
Total Costs of Equipemnt for Two Paddocks	1474.13
Cost per Year (over 5 years)	7.37

#### Whole Budget

##### **Cow/Calf**

Calf Weaning Rate	0.90
Cow Replacement Rate	0.20
Average Weight of Cow	1200.00
Price per Lbs for Culled Cows	0.90
Selling Price/Lbs	1.84
Finished Weight	550.00

Total Days on Farm	365.00
Daily Dry Matter Intake	0.03
Total Dry Matter Needed	5.69

Days Grazing	180.00
Percent Dry Matter from Feed	0.51
Price per Ton Feed	90.00
Tons of Feed Needed	3.32
Feed Cost	298.70

Pasture Dry Matter Yield/acre	5.60
Number of Acres Pasture Needed per Animal	0.53

Non Feed Costs	263.37
Feed Supplements	120.00

Total Cost	682.07
Animal Sale Price	1012.00
Number of Animals per Acre	1.89
Costs per Acre	1262.70
Animal Income per Acre	1908.87
Returns to Management	646.17