



## Cover Crop Decision Tool

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Cover crops are widely promoted as one of the promising alternatives to soil health improvement. Research and extension is being conducted within the LSU AgCenter, which is focused around cover crop use and associated parameters such as water quality improvement, soil microbiology and fertility, weed management, soil moisture management, and economics. Similarly, at the state and the national level, various programs promoting the use of management practices, specifically cover crops and tillage practices, are promoted as a means to reduce soil erosion and nutrient use. These programs come as cost-share assistance to farmers to voluntarily participate in practicing cover crops and tillage practices.

In efforts to assist farmers interested to adopt cover crop and tillage practices, a Microsoft® Excel-based decision tool, *Cover Crop Costs Calculator*, was developed. The calculator has two parts, Cover Crop Production Costs Estimator, which provides an estimate of production costs associated with cover crop planting and management, and Cover Crop and Tillage Decision Tool, which provides various Natural Resources Conservation Service (NRCS) cost-share alternatives to adopt cover crops and conservation tillage practices. A snapshot of the *Cover Crop Costs Calculator* is shown in Figure 1.

Producers can estimate the costs of planting and managing either a single cover crop species or a cover crop mixture. All **PURPLE** cells have a drop-down list to make a selection. Users can input information into **YELLOW** cells. Default values are provided in **GREEN** cells. Detailed instructions are provided in the Notes tab within the excel file. Step-by-Step instructions are also explained below.

In the Cover Crop Production Costs Estimator, producers are required to select cover crop under CC1 from the drop-down menu (can select other species under CC2, CC3, and CC4, for mixture). Default values of cover crop seed prices are included but users can enter their local dealer prices. Users then select a planting method from the drop-down menu. Planting costs can be entered if default values are not preferred. The next step is to select whether the farmer plans to apply any fertilizer. Again, the user can input their preferred values for fertilizations costs if default values are not preferred. The next step is to select the method of termination. Selection of Chemical/Burn-down option of termination will allow users to select appropriate chemical for termination. Preferred application amounts can be entered if desired. LSU AgCenter strongly recommends farmers to follow label recommendations. Finally, labor cost and approximate labor hours can be entered to account for those costs. The tool then presents the total production costs per acre (**Orange Cell**).

Figure 1. Screenshot of the Cover Crop Costs Calculator

COVER CROP COSTS CALCULATOR				
Select dropdown values from PURPLE cells	Enter your input values in YELLOW cells;		Default values in GREEN cells can be used	
Cover Crop Production Cost Estimator				
	CC1	CC2	CC3	CC4
What cover crop do you like to use	Berseem Clover	Black Oats	None	None
Farmer preferred seeding rate, lbs/acre	20	15	0	0
Price/lb (For Research ONLY)	3.40	0.40	0.00	0.00
Price/lb; YOUR LOCAL DEALER	0.00	0.00	0.00	0.00
Planting Method (Select One)	Drill			
Planting Machinery Costs, \$/acre	\$ 19.77	0		
Would you like to fertilize cover crops	Fertilize			
Fertilization costs, \$/acre	\$ 24.63	0		
How would you terminate the cover crops	Chemical/Burn-Down			
Select a Herbicide you plan to apply	Boundary	None	None	
Recommended Amounts, OZ ( For Research ONLY)	29	0.0	0.0	
Preferred Amounts, OZ	0.0	0.0	0.0	
Herbicide cost, \$/acre	\$ 21.46	\$ -	\$ -	
Labor costs, \$/hr	\$ 10.00			
Labor Hrs	0.0			
				Total Costs, \$/acre
				<b>\$143.62</b>
NRCS Cover Crop and Tillage Decision Tool				
Do you plan to grow single species or multiple species of cover crops (Select one)	Multiple			NRCS Incentive Payment; \$/acre/year
Is the Cover Crop practice you selected above an <i>existing practice</i> or a <i>new practice</i> on those fields	New			<b>\$84.00</b>
Type of Tillage you want to adopt on the fields with cover crops (select one)	Reduced Till			
Is the tillage practice you selected above an <i>existing practice</i> or a <i>new practice</i> on those fields	New			
Net cost to farmer if NRCS incentives are used				\$/acre
				<b>\$59.62</b>

Note: Click **Enable-Content** on the top of the excel file if prompted. This enables appropriate calculations within the tool.

Producers then have the option to make a selection in the Cover Crop and Tillage Decision Tool, the second part of the tool, to estimate cost-share assistance based on NRCS eligibility criteria for cover crops and tillage practices. Producers select from the drop-down menu whether they plan to grow single or multiple species of cover crops. This choice is then followed by selecting whether the practice of cover crops is a NEW or EXISTING practice on the fields the farmer has selected to grow cover crops. Farmers have the option to either participate or not participate in the adoption of conservation tillage. This can be done by making the appropriate selection from the drop-down list under Type of Tillage. Selecting conventional tillage provides NRCS cost-share estimates for cover crops adoption only; however, the farmer can choose conservation tillage option from the menu. The type of conservation tillage selection should be followed by identifying whether the conservation tillage practice selected is a NEW or EXISTING practice on the fields. Based on the selections, NRCS cost-share payments, \$/acre, will be estimated (**Orange Cell**).

Based on the above selections within the two-calculators, the net cost to the farmer, \$/acre, is estimated. The purpose of this exercise is to provide an *ex-ante* estimation of costs of cover crop implementation and NRCS incentives available to farmers, which allows informed decision-making. The costs are calculated based on the most recent available information. Any new information will be appropriately updated within the tool. Only the latest version of the tool will be available on the LSU AgCenter website. Extension agents will be notified about the changes.

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