

Scenario Worksheet

Practice and Scenario Description:

| | |
|---------------------------|---|
| Information Type | Data |
| Region | Delta States |
| State | Louisiana |
| Discipline Group | Agronomy |
| Practice Code/Name | 340 - Cover Crop |
| Scenario ID | 5 |
| Scenario Name | Organic Cover Crop |
| Scenario Description | Typically a small grain or small grain-legume mix (may also use forage sorghum, radishes, turnips, buckwheat, etc) will be planted as a cover crop immediately after harvest of an organically grown crop, and will be followed by an organically grown crop that will utilize the residue as a mulch. This scenario assumes that seed will be planted with a no-till drill. The cover crop should be allowed to generate as much biomass as possible, without delaying planting of the following crop. The cover crop will be terminated using a mechanical kill method (mowing, rolling, undercutting, etc.), a minimum of 3 weeks prior to planting the subsequent crop. This scenario REQUIRES use of Certified Organic Seed . |
| Before Practice Situation | Organically grown crops such as various vegetable and fruit crops (along with organically produced row crops) are grown and harvested in mid-late fall. Fields are disked immediately following harvest. Residue amounts after harvest average 30% or less, resulting in bare soil being exposed to wind erosion and/or intense rainfall during the fall, winter, and early spring. Over the winter residue degrades and sediment/nutrient runoff from fields increases. Sheet and rill erosion occurs with visible rills by spring. Runoff from the fields flows into streams, water courses or other water bodies causing degradation to the receiving waters. Soil health (soil organic matter) declines over time as a result of tillage practices, low residue crops, and long periods of bare soil. |
| After Practice Situation | Typically, within 30 days after harvest of row crop, fields are planted with a small grain-legume mix cover crop, typically rye and clover. The average field size is 40 acres. Typically, the cover crop is seeded with a no-till drill. No additional fertilizer is applied with the cover crop. The cover crop provides soil cover by late fall, throughout the winter, and into the early spring. Runoff and erosion are reduced and no rills are visible on the soil surface in the spring. Wind erosion is reduced by standing residues. The cover crop is terminated with an approved herbicide prior to spring planting as late as feasible to maximize plant biomass production. Over time, soil health is improved due to the additional biomass, ground cover, soil infiltration, and plant diversity introduced to the cropping system. Cover crop residues left on the surface may maximize weed control by increasing allelopathic and mulching effect. |
| Scenario Feature Measure | Area planted |
| Scenario Unit | Acre |
| Scenario Typical Size | 25 |

Cost Summary:

| Cost Category | Scenario Cost | Scenario Cost/Unit |
|------------------------------------|-------------------|--------------------|
| Materials | \$2,608.75 | \$104.35 |
| Equipment/Installation | \$769.75 | \$30.79 |
| Labor | \$0.00 | \$0.00 |
| Mobilization | \$0.00 | \$0.00 |
| Acquisition of Technical Knowledge | \$0.00 | \$0.00 |
| Foregone Income | \$0.00 | \$0.00 |
| Total | \$3,378.50 | \$135.14 |

Cost Details:

| Cost Category | Component ID | Component Name | Component Description | Unit | Price (\$/unit) | Quantity | Cost |
|------------------------|--------------|--|--|-------|-----------------|----------|------------|
| Materials | 192 | Certified Organic, Crimson Clover (Trifolium incarnatum) | Legumes, Cover Crops and shipping. | Pound | \$5.35 | 325 | \$1,738.75 |
| Materials | 203 | Certified Organic, Rye, Cereal (Secale cereale L.) | Small Grains, Cover Crops. Shipping not included. | Pound | \$0.58 | 1500 | \$870.00 |
| Equipment/Installation | 957 | Mechanical weed control, Vegetation termination | Mechanical operations, Includes: Roller/crimper, mower, shredder, etc. Includes equipment, power unit and labor costs. | Acre | \$17.89 | 25 | \$447.25 |
| Equipment/Installation | 960 | Seeding Operation, No Till/Grass Drill | No Till drill or grass drill for seeding. Includes equipment, power unit and labor costs. | Acre | \$12.90 | 25 | \$322.50 |