

Conservation Practice Effects

Conservation Cover (Ac) 327

Definition: Establishing and maintaining permanent vegetative cover

Major Resource Concerns Addressed: Soil Erosion and Water Quality.

Benchmark Condition: Annually tilled highly erodible low productivity cropland.

Date: October, 2016 **Developer/Location:** Hal Gordon, OR

Positive Effects	Negative Effects
<p>Soil</p> <ul style="list-style-type: none"> • Increased vegetation and cover will improve infiltration and decrease sheet and rill, wind, and gully erosion. • Streambank, shoreline, and channel erosion is reduced. • Organic matter will increase with residue and root establishment. • Compaction and subsidence is will decrease with fewer field operations. • Concentration of salts or other chemicals is reduced with permanent cover. <p>Water</p> <ul style="list-style-type: none"> • Runoff, flooding, ponding, seeps or seasonal high water table may be reduced with increased water use. • Permanent vegetation can trap snow. • Soil moisture will increase. • Reduced nutrient and pesticide use, less transport to surface and ground water. • Less runoff and infiltration of salts, pathogens and chemicals from manure. • Less sediment in surface water. <p>Air</p> <ul style="list-style-type: none"> • Fewer emissions of particulate matter, permanent vegetation reduces wind erosion and generation of fugitive dust. • Emissions of ozone precursors and CO2 will be reduced with less machinery use. <p>Plants</p>	<p>Land</p> <ul style="list-style-type: none"> • Land use will be changed or land taken out of production if cropland is converted to permanent cover. <p>Capital</p> <ul style="list-style-type: none"> • No additional field equipment required. • Materials, seedbed and planting costs. • Annual operation and maintenance costs to maintain vegetation and reduce pests. • Reduced farm income (forgone income). <p>Labor</p> <ul style="list-style-type: none"> • None. <p>Management</p> <ul style="list-style-type: none"> • None. <p>Risk</p> <ul style="list-style-type: none"> • Reduced whole farm flexibility and timing by taking land out of agricultural production. • Reduced or lost crop production. • Reduced cash flow. • Seeps may increase with deeper and more numerous roots and higher soil infiltration rates.

<ul style="list-style-type: none"> • Plant community productivity and health will increase. • Permanent vegetation may slow the spread of noxious weeds. <p>Animals</p> <ul style="list-style-type: none"> • Fish and wildlife habitat, food, cover and shelter will improve. • Fish and wildlife habitat continuity (space) will increase and may be used to connect other cover areas. <p>Energy</p> <ul style="list-style-type: none"> • Less fuel and oil will be used with reduced machinery use. <p>Human</p> <ul style="list-style-type: none"> • Cultural resources may be protected from erosion. • Labor, management and capital will decrease as land is taken out of production. • Reduced time cultivating previous crop. • Create sustainability of natural resources that support farm business. • Increase the property value (real estate). • Create open space and improve habitat for wildlife. • Conserve soil and water for periods of drought and future use. • Prevent off-site negative impacts. • Comply with environmental regulations. • Save time, money and labor. • Promote family health and safety. • Make land more attractive and promote good stewardship. • May be eligible for cost share. 	
<ul style="list-style-type: none"> • Net Effect: Soil health will improve, erosion will be reduced and water quality improved at a significant cost. Profitability will decrease as land is taken out of production. 	

Commonly Associated Practices: Brush Management, Critical Area Planting, Fence, Tree/Shrub Establishment, Upland Wildlife Habitat Management

Note: This worksheet contains general talking points for the conservation planner to discuss with the land user. It is the first step towards an economic or financial analysis. The second step would include identifying a specific site for analysis at the farm or field level, editing the template for local conditions, and adding units and quantities of farm inputs and outputs. The third step in the economic analysis is to place a dollar value on as many variables as possible, and put all units in the same time frame using amortization (\$/Acres/Year) or net present value (\$/Acre), so that benefits and costs can be compared. The fourth and final step would be to combine several conservation practices into a conservation system, which is how most conservation practices are applied at the field level. Data for the worksheet comes from the land user, conservation planner, technical specialist, and local agricultural supply vendors and contractors. See Economics Technical Note: TN 200-ECN-1, Basic Economic Analysis Using T-Charts (August 2013) for more information.