**Conservation Practice Effects**

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| **Hedgerow Planting (Ac) 422****Definition: Establishment of dense vegetation in a linear design to achieve a natural resource conservation purpose.****Major Resource Concerns Addressed: Wildlife habitat, cover and shelter.****Benchmark Condition: Cropland without trees or shrubs.****Date: October, 2016 Developer/Location: Hal Gordon, OR** |
| **Positive Effects** | **Negative Effects** |
| **Soil*** **Reduced wind erosion with dense vegetation trapping saltating particles.**
* **Permanent vegetation increases soil organic matter.**
* **Root development will improve soil structure and porosity and reduce compaction.**

**Water*** **Tall vegetation will trap snow upwind of structures and animal concentration areas, and increase soil moisture.**
* **Reduced pesticide drift and improve water quality.**
* **Borders may attract beneficial insects or trap insect pests which reduce the need for pesticide applications.**
* **Nutrients kept in place with reduced overland flow and wind erosion.**
* **Borders along small streams increases shade and moderates stream temperatures.**

**Air*** **Permanent rows of trees or shrubs can reduce wind erosion and intercept and trap airborne particles.**
* **Vegetation removes CO2 from the air and stores it in the form of carbon in the plants and soil.**
* **Reduced objectionable odors are intercepted.**

**Plants*** **Vegetation is installed and managed to control undesired species.**

**Animals*** **Selected plants improve food supply, cover, shelter and habitat for fish and wildlife.**
* **Hedgerows can provide some shade and protection from wind for livestock.**

**Energy*** **No change.**

**Human*** **Increase yields/reduce costs as land becomes more productive.**
* **Create sustainability of natural resources that support your business.**
* **Increase the property value (real estate) of your property.**
* **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.**
* **Increased profitability in the long run.**
 | **Land*** **Cultural resources may be impacted during planting.**
* **Change in land use as crop or grazed land is converted to shrub/tree and wildlife use.**
* **Minor amount of land taken out of agricultural production.**

**Capital*** **Some brush management equipment may be required.**
* **Materials & planting costs.**
* **Annual operation and maintenance costs to maintain vegetation and manage pests.**

**Labor*** **Additional labor maintaining hedgerow, reduced time with some land out of crop production.**

**Management*** **Increase in crop production planning and scouting.**

**Risk*** **Reduced agricultural operation flexibility and timing with land taken out of production.**
* **Forgone income as crop land is taken out of production.**
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| **Net Effect: Improves soil productivity and wildlife habitat at a moderate cost.** |

**Commonly Associated Practices:** Stripcropping, Tree/Shrub Establishment, Upland Wildlife Habitat Management, Windbreak/Shelterbelt Establishment.

**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, 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, put all units in the same time frame, using amortization ($/Acres/Year) or net present value ($/Acre), so 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.