**Conservation Practice Effects**

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| **Herbaceous Wind Barriers (Ac) 603**  **Definition: Herbaceous vegetation established in rows or narrow strips in the field across the prevailing wind direction.**  **Major Resource Concerns Addressed: Wind erosion.**  **Benchmark Condition: Cropland in wind erosion area.**  **Date: October, 2016 Developer/Location: Hal Gordon, OR** | |
| **Positive Effects** | **Negative Effects** |
| **Soil**   * **Wind Erosion is reduced by stiff stemmed herbaceous vegetation established across the prevailing wind erosion direction by trapping saltating soil particles and sheltering an area down wind.** * **Soil organic matter increased as wind erosion is reduced.**   **Water**   * **Trapped snow can provide additional plant available moisture.** * **Barriers may attract beneficial insects or trap insect pests which reduce the need for pesticide applications improving water quality.** * **Reduced wind erosion keeps soil-adsorbed nutrients and sediment in place improving water quality.**   **Air**   * **Barriers can reduce wind erosion and particulate emissions.** * **Vegetation removes CO2 from the air and stores it in the form of carbon in the plants and soil and reduced soil loss/organic matter**   **Plants**   * **Increased crop yield with reduced wind erosion.** * **Vegetation is installed and managed to control undesired species.**   **Animals**   * **Increased quality and quantity of vegetation provides more food, cover, shelter and habitat for wildlife.**   **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**   * **Vegetative covers may protect near surface or subsurface historic properties.** * **Minor change in land use as crop is converted to grass/forb production.** * **Minor amount of land taken out of agricultural production.**   **Capital**   * **No additional field equipment required.** * **Materials & planting costs.** * **Annual operation and maintenance costs to maintain vegetation and manage pests.**   **Labor**   * **Additional labor maintaining wind barriers.**   **Management**   * **Increase in crop production planning and field scouting.**   **Risk**   * **Reduced agricultural operation flexibility and timing with land taken out of production.** * **Forgone income with some land taken out of crop production.** |
| **Net Effect: Improved soil productivity and reduced wind erosion at a moderate cost.** | |

**Commonly Associated Practices:** Cover Crop, Residue and Tillage Management, Mulch Till, Residue and Tillage Management, No Till/Strip Till/Direct Seed, Residue and Tillage Management, Ridge Till, Residue Management, Seasonal, 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, 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.