**Conservation Practice Effects**

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| **Cross Wind Ridges (Ac) 588****Definition: Ridges formed by tillage, planting or other operations and aligned across the direction of erosive wind****Major Resource Concerns Addressed: Wind erosion.****Benchmark Condition: Level row-cropland in wind prone area.****Date: October, 2016 Developer/Location: Hal Gordon, OR** |
| **Positive Effects** | **Negative Effects** |
| **Soil*** **Wind Erosion is reduced by adding roughness to the soil.**
* **Reduced wind erosion decreases organic matter loss.**

**Water*** **Reduced wind erosion transport of soil-adsorbed nutrients, pesticides and salts to surface water.**
* **Reduced offsite sediment transport.**

**Air*** **Emissions of Particulate Matter (and precursors) will - Surface roughness oriented perpendicular to the erosive wind direction will reduce wind erosion.**

**Plants*** **Decreased physical plant damage.**
* **Improved crop yields.**

**Animals*** **None.**

**Energy*** **None.**

**Human*** **Reduced time managing sediment.**
* **Improved agricultural operation flexibility and timing with protected agricultural land.**
* **Reduced labor repairing critical erosion areas and removing sediment.**
* **Create sustainability of natural resources that support your business.**
* **Increase the property value (real estate) of your property.**
* **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 protected from erosion.**
* **No change in land use.**
* **Minor amount of land taken out of agricultural production.**

**Capital*** **No additional field equipment required.**
* **Materials & installation cost.**
* **Annual operation and maintenance costs to maintain vegetation and manage pests.**
* **Foregone Income.**

**Labor*** **Increase in tillage operations.**

**Management*** **Increased time managing crop production.**

**Risk*** **Decreased agricultural operation flexibility and timing by taking land out of agricultural production.**
* **Equipment weight during ridge establishment may increase soil compaction is under certain soil moisture conditions.**
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| **Net Effect: Reduced wind erosion, improved plant productivity, at a low cost.** |

**Commonly Associated Practices:** Cross Wind Trap Strips, Herbaceous Wind Barriers, 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, 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.