

Case Study – Conservation Treatment Information

Location: Western Ohio

Resource Setting: Corwin, Miami, and Celina soils; moderately sloping (3-6 percent)

Resource Problems Before Treatment: Moderate sheet and rill erosion, gully erosion, nutrient and chemical runoff. See comments *

Conservation Treatment: Conservation Crop Rotation (Corn & Soybean); No tillage; Nutrient and Pest Management; Grassed Waterway.

<u>Actions</u> (Kinds, amounts, and timing)	<u>Effects</u> (Effects of conservation treatment)
<p><u>No-till Corn in Soybean Residue</u></p> <p>Spray herbicides following planting Use 28% as carrier with herbicides Apply P₂O₅ through planter, broadcast K₂O in spring, apply 10# N through planter Sidedress remaining N needs Spot spray escaped broadleaves with w, 2,4-D and Banvel Soil test late fall at least once every three years after soybeans</p> <p><u>No-till Soybeans in Corn Residue</u></p> <p>Drill soybeans Spray a burn-down following planting Spray early post emergence Broadcast apply 60# K₂O prior to planting</p> <p><u>Grassed Waterway</u> Construct approximately 30' wide, seed to tall fescue.</p> <p><u>Pest Management</u> Weed identification and scouting required Use pesticides per label Implement mitigation strategies</p> <p><u>Nutrient Management</u> Apply fertilizer according to soil test, timing, rates, and methods of application</p>	<p><u>RMS Installed</u></p> <ul style="list-style-type: none"> • 7 tons/ac/yr of soil saved • Gully erosion eliminated with waterway • More post emergent herbicides used - more weed specific, less residual, less mobile, less risk to water quality • Risk of sediment, chemical, nutrient runoff reduced • Trips across field reduced • Less compaction potential • Better/improved sprayer required • Busy season pressure shifted from April-May planting (till & plant) to April-June (plant & spray). Timeframe expanded pressure reduced. • Time better coordinated with off-farm job. • 1.25 ac. loss of cropland to waterway • Machinery requirement reduced. • Fertilizer applied per soil test needs and yields

Comments: A private lake resort is located only ¼ mile downstream from this field. Producer is quite concerned with liability issue which might arise from excessive sediment, nutrient, or chemical runoff from the field into the lake. Producer wants to maintain good public relations with residents in the resort.