

Indiana FIELD OFFICE TECHNICAL GUIDE

Section III Conservation Management Systems

Conservation Effects For Decision Maker Worksheet

After the RMS options have been developed the Conservation Effects for Decisionmaking (CED) process may be followed if the land user needs additional information to reach a decision. This technical tool can provide a powerful technique to plan, evaluate and select RMSs. The effects concept can be used to develop RMS options for specific fields, conservation management units (CMU's) or other planning areas. It can also be used to explain resource problems and potential solutions to the decisionmaker and to others. It is simply a tool to assist the planning process.

The following CED is for example only. When actually preparing a CED is maybe advantageous to show dollar saving or hours of time saved by alternatives. Actual CED's must be based on RMS Options Worksheets and tailored to the client's needs and desires.

Conservation Effects For Decision Maker Worksheet

Client: Any Client Landuse: Cropland Date: Any/Time

Existing System: A corn-soybean rotation utilizing a fall chisel system with 4" twisted shanks. Surface residue after planting is less than 20 percent. Ephemeral gullies are present in all crop fields. Nutrients are applied in excess of current crop needs.

Resource Concerns: Sheet & rill erosion is exceeding sustainable levels. Ephemeral gullies are doing crop damage and require time to fill in. Excessive nutrients and pesticides are being applied.

Alternative RMS 1: A corn-soybean rotation utilizing a complete no-till system which leaves at least 60% residue cover on the soil surface after planting.. A combination of both nutrient management and pest management will significantly reduce the potential for surface water contamination. Filter strips will act to further reduce surface water contamination.

Alternative RMS 2: A corn-soybean-wheat-hay rotation with mulch tillage system which leaves at least 30 % residue cover on the soil surface after planting. A field

strip cropping system will be utilized. Nutrient and pest management systems will be applied.

Existing Condition	RMS 1	RMS 1 Impact	RMS 2	RMS 2 Impact
C-Sb Rotation	C-Sb Rotation	Same rotation as is currently used	C-Sb-W-H Rotation	Additional crops help break pest cycles. Reduces need to buy hay. May increase equipment costs
Fall Tillage 4" twisted Shanks	No-Till System	Less tillage, less time, equipment purchase costs, increased management skills, less fuel costs	Mulch Till System	Less tillage, less time required, some equipment costs, less fuel costs

<p>Amount & costs of nutrients and pesticides</p>	<p>Nutrient and Pest Management System</p>	<p>More accurate utilization of nutrients and pesticides. Nutrients targeted more toward yields. Costs are reduced, management skills may increase, possible increase in equipment costs.</p>	<p>Nutrient and Pest Management System</p>	<p>More accurate utilization of nutrients and pesticides. Nutrients targeted more toward yields. Costs are reduced, management skills may increase, possible increase in equipment costs.</p>
<p>Small gullies in all crop fields</p>	<p>No-Till System</p>	<p>Small gullies controlled by high residue levels on the soil surface at all times. Gullies may reappear after very heavy storms.</p>	<p>Combination of Mulch Tillage System and Field Strip Cropping.</p>	<p>Small gullies controlled through the use of alternating strips of crops and the increased crop residues on the soil surface after planting.</p>
<p>Potential for excessive amounts of nutrients and pesticides leaving crop fields in surface water flows</p>	<p>Combination of No-Till System, nutrient and pest management systems and Filter Strips</p>	<p>Properly maintained filter strips can reduce nutrient and pesticide losses from 30 to over 90 percent.</p>	<p>Combination of Field Strip Cropping, cropping system, and nutrient and pest management Systems.</p>	<p>Increased crop diversity plus the use of strips of diverse crops helps to reduce both disease and insect damages. Alternating strips, including a hay helps trap adsorbed nutrients and pesticides.</p>