FY2008 EQIP EXAMPLE

COMPLETED
CROPPING SYSTEM SPEC SHEETS
and
EQIP 328/329/595 WORKSHEETS

GRAIN SCENARIO
CHARLES CITY COUNTY

Before: 2 year rotation, corn NT + soybeans NT
After: 2 year rotation, corn NT + soybeans NT w/ diverse mixed grass/legume cover crops every winter

On 3% Emporia fine sandy loam

EQIP PAYMENT RATES:

Crop Rotation (328) = $40/ac/yr
Pest Management (595) = $30/ac/yr
Total = $70/ac/yr

125 acre commitment = $26,250 over 3 years

VA RUSLE2 Worksheet Printout Summary

Summary printout of RUSLE2 calculation for one field comparing multiple management alternatives

Client/Owner name: Chris Lawrence
Field name: Charles City Emporia fsl 3% 200 ft
Tract #: SCI Grain Case Study
Location: Virginia\City of Charles

Printout date: October 1, 2007
Prepared by (name):
USDA Service Center/Location:

Summary of RUSLE2 output for each management alternative:

Description	*Cons. plan. soil loss, t/ac/yr*	*Soil conditioning index (SCI)*	*STIR value*
Corn, FS Soy - all NT (JD drill)	**1**	**0.41**	**3**
Corn + gr/leg cover, FS Soy - all NT (JD drill)	**1**	**0.55**	**4**
Corn + gr/leg cover, FS Soy + gr/leg cover crop - all NT (JD drill)	**1**	**0.63**	**5**
Corn, Wheat+straw, DC SOY - all NT (JD drill)	**1**	**0.58**	**4**
Corn, Wheat, DC Soy - all NT (JD drill)	**0**	**0.75**	**4**
Corn, Wheat, DC Soy, Rye cover - all NT (JD drill)	**0**	**0.78**	**5**
T value: 5 t/ac/yr (all alternatives)			

Recommendations / Comments:

Cropping System Description & Evaluation (D&E) Spec Sheet

A. General Info

Cropping system / rotation name or ID: **Before: CNT Corn & Beans, no cover crop**

Client: **I.B. Grainman** *Conservation Planner & contact info:* **D.C. Gonewild, Jr.** *Date:* **10/27/06**

B. Field / CMU Description

Tract(s) / field(s) / acres: **See Implementation Schedule**

RUSLE2 Inputs: *County:* **Charles City** *Soil type:* **Emporia fsl** *Slope %:* **3%** *Slope length (ft):* **200 ft**

C. Management Description

Erosion control support practices (contouring, etc.): **None**

Duration of planned rotation(years): **2 years**

Year	*Season*	*Plant date*	*Crop*	*Tillage*	*Minimum % cover after planting*	*Manure or applied residue*	*Notes*	*# of fallow periods >60 days*	*new species count*	
									all	*leg*
1	**Summer**		**Corn grain**	**NT**	**45%**		**130 bu/ac**		**1**	
1	**Winter**		**FALLOW**					**1**		
2	**Summer**		**Soybeans, full season**	**NT**	**60%**		**40 bu/ac, single disk drill**		**1**	**1**
2	**Winter**		**FALLOW**					**1**		

Key: NT = No-till; ST = Strip-till; MT = Mulch-till; CT = Clean-till

D. Cropping System Evaluation

The levels of conservation performance described below will be achieved if the planned crop rotation and other management practices described in Section C are applied on the fields described in Section B. It may be possible to achieve the same level of conservation performance with a different combination of management practices.

Part 1: Evaluation Based on Soil Erosion & Soil Quality Factors

Factor	***Data***				***Interpretation***
Soil erosion (sheet & rill)	*Predicted soil loss (t/ac/yr):*	**1**	*T value (t/ac/yr):*	**5**	**SOIL LOSS TO T – SUSTAINABLE**
Soil organic matter (SOM) trend	*Soil loss to T?*	**YES**	*SCI Score:*	**+0.41**	**SOM BUILDING – MINIMUM**
Crop continuity	*Rotation duration (yrs):*	**2**	*# of fallow periods >60 days:*	**2**	**NOT CONTINUOUS NO FALLOW**
Crop diversity	*# total species:*	**2**	*# legume species:*	**1**	**NOT HIGH DIVERSITY**
Soil disturbance	*Tillage system:*	**Continuous No-till**	*Overall average annual STIR:*	**3**	**TILLAGE SYSTEM: OPTIMUM; STIR VALUE: OPTIMUM**

Source of RUSLE2 Data: See attached

Part 2: Evaluation Based on Other Factors

E. Additional Comments & Recommendations

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Cropping System Description & Evaluation (D&E) Spec Sheet

A. General Info

Cropping system / rotation name or ID: **After: CNT Corn & Beans, w grass/legume cover crop**

Client: **I.B. Grainman** *Conservation Planner & contact info:* **D.C. Gonewild, Jr.** *Date:* **10/27/06**

B. Field / CMU Description

Tract(s) / field(s) / acres: **See Implementation Schedule**

RUSLE2 Inputs: *County:* **Charles City** *Soil type:* **Emporia fsl** *Slope %:* **3%** *Slope length (ft):* **200 ft**

C. Management Description

Erosion control support practices (contouring, etc.): **None**

Duration of planned rotation(years): **2 years**

Year	*Season*	*Plant date*	*Crop*	*Tillage*	*Minimum % cover after planting*	*Manure or applied residue*	*Notes*	*# of fallow periods >60 days*	*new species count*	
									all	*leg*
1	**Summer**		**Corn grain**	**NT**	**60%**		**130 bu/ac**		**1**	
1	**Winter**		**Barley & Clover cover crop**	**NT**	**60%**				**2**	**1**
2	**Summer**		**Soybeans, full season**	**NT**	**60%**		**40 bu/ac, single disk drill**		**1**	**1**
2	**Winter**		**Rye & Vetch cover crop**	**NT**	**60%**				**2**	**1**

Key: NT = No-till; ST = Strip-till; MT = Mulch-till; CT = Clean-till

D. Cropping System Evaluation

The levels of conservation performance described below will be achieved if the planned crop rotation and other management practices described in Section C are applied on the fields described in Section B. It may be possible to achieve the same level of conservation performance with a different combination of management practices.

Part 1: Evaluation Based on Soil Erosion & Soil Quality Factors

Factor	***Data***				***Interpretation***
Soil erosion (sheet & rill)	*Predicted soil loss (t/ac/yr):*	**1**	*T value (t/ac/yr):*	**5**	**SOIL LOSS TO T – SUSTAINABLE**
Soil organic matter (SOM) trend	*Soil loss to T?*	**YES**	*SCI Score:*	**+0.63**	**SOM BUILDING – INTERMEDIATE**
Crop continuity	*Rotation duration (yrs):*	**2**	*# of fallow periods >60 days:*	**0**	**CONTINUOUS NO FALLOW – OPTIMUM**
Crop diversity	*# total species:*	**6**	*# legume species:*	**3**	**HIGH DIVERSITY CROPPING SYSTEM – INTERMEDIATE**
Soil disturbance	*Tillage system:*	**Continuous No-till**	*Overall average annual STIR:*	**5**	**TILLAGE SYSTEM: OPTIMUM; STIR VALUE: OPTIMUM**

Source of RUSLE2 Data: See attached

Part 2: Evaluation Based on Other Factors

E. Additional Comments & Recommendations

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Cropping System Implementation Schedule Spec Sheet

Client: **I.B. Grainman** *Conservation Planner & contact info:* **D.C. Gonewild, Jr., 804 555 1212** *Date:* **10/27/06**

Tract(s)	*Field(s) & acres*	*Cropping System / Rotation ID (see D&E Sheets)*	*Year: 2008* *Season: Summer*	*Year: 08/09* *Season: Winter*	*Year: 2009* *Season: Summer*	*Year: 09/10* *Season: Winter*	*Year: 2010* *Season: Summer*	*Year: 10/11* *Season: Winter*
Tract 3	**Fields 3 & 5 (75 ac)**	**Continuous NT Corn / Beans w mixed grass/legume cover crops**	**NT Corn NT**	**NT barley & clover cover**	**NT Soybeans**	**NT rye & vetch cover crop**	**NT Corn**	**NT barley & clover cover**
Tract 3	**Field 5 (50 ac)**		**NT Soybeans**	**NT rye & vetch cover crop**	**NT Corn**	**NT barley & clover cover**	**NT Soybeans**	**NT rye & vetch cover crop**

Key: NT = No-till; ST = Strip-till; MT = Mulch-till; CT = Clean-till

Comments & Recommendations:

Implementation of the above rotation is required under EQIP contract.
Different cover crop species may be used, as long as the required degree of diversity is achieved (at least 5 total species, 2 legume species).

EXHIBIT 2: EQIP 328/329/595 ANNUAL CROPPING SYSTEMS WORKSHEET

Part I: Client and Field Info

Prepared by: **D.C. Gonewild, Jr.** Service Center: **Quinton** Date: **10/27/07**

Client: **I.B. Grainman** EQIP Contract #: **1-800-CASH**

Tract(s) and Field(s) covered under this worksheet:	Acres:
Tract 3, Field 3	**25**
Tract 3, Field 5	**50**
Tract 3, Field 7	**50**
Total implementation acres:	**125**

Part II: Cropping System Info

"Before" cropping system name: **CNT Corn & Beans, no cover crop** "Before" rotation duration (yrs): **2**

"After" cropping system name: **CNT Corn & Beans w gr/leg cover** "After" rotation duration (yrs): **2**

Are D&E Spec Sheets for both the "before" and "after" cropping systems attached to this EQIP Worksheet? **YES**

Part III: Payment Rates and Totals – For This Worksheet ***ONLY***

Data		*How to get data*
a. Implementation period:	**3 years**	
b. 328 pay rate ($/ac/yr):	**$40**	*Complete the EQIP 328/329/595 Payment Calculator (Exhibit 3) to determine this value. Range: $0 to $70.*
c. 329 pay rate ($/ac/yr):	**$0**	*See Exhibit 3. Rate is either $0 or $25.*
d. 595 crop diversity pay rate ($/ac/yr)	**$30**	*See Exhibit 3. Range: $0 to $45.*
e. 328+329+595 pay rate ($/ac/yr):	**$70**	*Add III.b. + III.c. + III.d.*
f. Total implementation acres:	**125**	*From Part I, above.*
g. Total value of 328+329+595 EQIP payments for all acres in this worksheet:	**$26,250**	*Multiply III.a. x III.e. x III.f.*

NOTE: Total value of 328+329+595 crop diversity payments per FY2008 EQIP contract recipient must not exceed $20,000 per year / $60,000 per contract.

Part IV: Narratives & Cost List Component Codes for Entry in Toolkit & Protracts

a. Go to Exhibit 4, select one narrative per practice code, then fill in the blanks below using info from Exhibit 4:

Practice Code	Narrative Code	Payment Rate ($/ac/yr)
328 (Crop Rotation)	**E011**	**$ 40**
329 (No-Till/Strip-Till)	**-**	
595 (Pest Management)	**E002**	**$ 30**
	Combined rate (328+329+595):	***$ 70***

b. Verify that the pay rates based on narratives selected in Exhibit 4 match the rates in III.a. thru e. above.

EXHIBIT 3: EQIP 328/329/595 PAYMENT CALCULATOR

Instructions:

1. Enter RUSLE2 output for "before" and "after" cropping systems. Does the "after" cropping system meet minimum eligibility test?
2. Evaluate the "before" system. Which practice elements are already being implemented? Enter an "X" in Row 1 for each practice element already being implemented. The information you need is on the Cropping System D&E Spec Sheet.
3. Evaluate the "after" or EQIP-funded system. Which practice elements will be implemented? Enter an "X" in Row 2 for each practice element that will be implemented. The information you need is on the Cropping System D&E Spec Sheet.
4. Complete Rows 3 through 7 following instructions in table.
5. Note: multiple payments can be made for multi-level improvements in SOM building and crop diversity. For example, changing from a "before" cropping system with 0.00 SCI to an "after" system with +0.75 SCI is eligible for three payments – one for each level of SOM performance achieved (minimum, intermediate, and optimum).

	Cropping System	RUSLE2 Output		Eligibility test (yes for both to proceed)		Conservation Practice "Elements" Eligible for EQIP Incentive Payments							
						Conservation Crop Rotation Elements (328)				No-Till Elements (329)	Pest Management Elements (595)		
						Soil Organic Matter (SOM) Building Cropping System			Continuous No-Fallow Crop Rotation	Continuous No-Till / Strip-Till System	High Diversity Crop Rotation		
		Soil Loss	SCI	Soil loss to T?	SCI at least +0.25?	Minimum (+0.25 SCI)	Intermediate (+0.50 SCI)	Optimum (+0.75 SCI)			Minimum (3 & 1)	Intermediate (5 & 2)	Optimum (7 & 3)
1	Before	**1**	**+0.41**			**X**				**X**			
2	After	**1**	**+0.63**	**YES**	**YES**	**X**	**X**		**X**	**X**	**X**	**X**	
3	*For each practice element, has the change from "before" to "after" produced improvement? If yes, enter an "X" in this row.*						**X**		**X**		**X**	**X**	
4	*Payment rates for practice elements ($/ac/yr):*					$15	$15	$15	$25	$25	$15	$15	$15
5	*Is there an "X" in Row 3? If yes, enter payment rate for each practice element ($/ac/yr):*						**$15**		**$25**		**$15**	**$15**	
6	*Total payment rate for each practice ($/ac/yr):*					**$40**					**$30**		

EXHIBIT 4: EQIP-SPECIFIC TOOLKIT NARRATIVES & PROTRACTS COST LIST COMPONENT CODES FOR USE WITH ALL FY08 328, 329 & 595 CROP DIVERSITY PAYMENTS

SELECT ONLY ONE NARRATIVE PER PRACTICE CODE!

Practice Code	Narrative Code	Narrative Text	Payment Rate ($/ac/yr)
328	E001	Adopt a new cropping system that eliminates all fallow periods and qualifies as **CONTINUOUS NO-FALLOW**. New system must also qualify as Soil Organic Matter (SOM) Building (soil loss to T and SCI +0.25 or greater).	$25
	E010	Adopt a new cropping system that (1) qualifies as Soil Organic Matter (SOM) Building (T and SCI +0.25 or greater); and (2) results in a **ONE-LEVEL** improvement in SCI-based SOM performance level compared to the "before" condition.	$15
	E011	Adopt a new cropping system that (1) eliminates all fallow periods and qualifies as **CONTINUOUS NO-FALLOW**; and (2) results in a **ONE-LEVEL** improvement in SCI-based SOM performance level compared to the "before" condition.	$40
	E020	Adopt a new cropping system that (1) qualifies as Soil Organic Matter (SOM) Building (T and SCI +0.25 or greater); and (2) results in a **TWO-LEVEL** improvement in SCI-based SOM performance level compared to the "before" condition. The new system SOM performance level may be Intermediate (+0.50 or more) or Optimum (+0.75 or more).	$30
	E021	Adopt a new cropping system that (1) eliminates all fallow periods and qualifies as **CONTINUOUS NO-FALLOW**; and (2) results in a **TWO-LEVEL** improvement in SCI-based SOM performance level compared to the "before" condition. The new system SOM performance level may be Intermediate (+0.50 or more) or Optimum (+0.75 or more).	$55
	E030	Adopt a new cropping system that (1) qualifies as Soil Organic Matter (SOM) Building (T and SCI +0.25 or greater); and (2) results in a **THREE-LEVEL** improvement in SCI-based SOM performance level compared to the "before" condition. The new system SOM performance level must be Optimum (+0.75 or more).	$45
	E031	Adopt a new cropping system that (1) eliminates all fallow periods and qualifies as **CONTINUOUS NO-FALLOW**; and (2) results in a **THREE-LEVEL** improvement in SCI-based SOM performance level compared to the "before" condition. The new system SOM performance level must be Optimum (+0.75 or more).	$70
	E040	Adopt a new crop rotation by establishing a **PERENNIAL** crop in a field that has been in annual crops for five years or more. Perennial must be maintained for at least three summers and must achieve 90% cover within one year after establishment. Not intended for permanent cropland conversion.	$100
329	E001	Adopt a new cropping system that eliminates all full-width tillage and qualifies as **CONTINUOUS NO-TILL**. New system must also qualify as Soil Organic Matter (SOM) Building (soil loss to T and SCI +0.25 or greater).	$25
595	E001	Adopt a cropping system with increased crop diversity. The change must result in a **ONE-LEVEL** improvement in diversity performance level compared to the "before" condition, with levels defined as: Minimum (at least 3 species, at least 1 legume); Intermediate (at least 5 species, at least 2 legumes); Optimum (at least 7 species, at least 3 legumes). Practice must complement a cropping system that qualifies as Soil Organic Matter (SOM) Building (soil loss to T and SCI +0.25 or greater).	$15
	E002	Adopt a cropping system with increased crop diversity. The change must result in a **TWO-LEVEL** improvement in crop diversity performance level compared to the "before" condition, with levels defined as: Minimum (at least 3 species, at least 1 legume); Intermediate (at least 5 species, at least 2 legumes); Optimum (at least 7 species, at least 3 legumes). The new system diversity level may be Intermediate or Optimum. Practice must complement a cropping system that qualifies as Soil Organic Matter (SOM) Building (soil loss to T and SCI +0.25 or greater).	$30
	E003	Adopt a cropping system with increased crop diversity to assist in controlling weeds, soil-borne pathogens, and other pests. The change must result in a **THREE-LEVEL** improvement in crop diversity performance level compared to the "before" condition, with levels defined as: Minimum (at least 3 species, at least 1 legume); Intermediate (at least 5 species, at least 2 legumes); Optimum (at least 7 species, at least 3 legumes). The new system diversity level must be Optimum. Practice must complement a cropping system that qualifies as Soil Organic Matter Building (soil loss to T and SCI +0.25 or greater).	$45