

MICHIGAN MANURE APPLICATION RISK INDEX WORKSHEET						Fill in shaded areas only!		ctrl "c" to c		
Farm Number:	Sample Dairy					Date:	4/21/2003			
Township:						Tract No:	with setbacks			
Farm or Producer Name:										
Field No:	F S	F N	HM 1	HM 2	HM 3	HO 1	HO 2	CO N		
Acres:	35	37.2	39.1	39.1	20	57	51.8	36.4		
<b>FIELD FEATURES "INPUT"</b>										
<b>I. SOIL MAP UNIT</b>										
If drained, enter Y										
Insert Soil Series										
	Fox	fox	fox	fox	fox	fox	fox	oshtemo		
1. Soil Hydrologic Group	B	B	B	B	B	B	B	B		
2. Soil Management Group	3/5a	3/5a	3/5a	3/5a	3/5a	3/5a	3/5a	4a		
3. Percent Slope	1	1	1	1	1.9	1	1	1		
<b>II. WATER QUALITY</b>										
4. Soil Test Phosphorus Value	160	104	142	138	104	322	468	138		
5. Conc. Water/Surface Inlet	p	p	p	p	f	p	s	m		
6. Nitrogen leaching Index	m	m	m	m	m	m	m	m		
	prompt for cell above									
	m	m	m	m	m	m	m	m		
<b>III. SURFACE COVER</b>										
7. Residue/Cover Crops/Per. Cover	40	40	40	40	40	40	40	40		
8. Surface Water Setback	1	1	1	1	2	1	2	2		
9. Vegetative Buffer Width	na	na	na	na	15	na	25	na		
<b>IV. MANURE</b>										
10. Manure Phosphorus Application	90	90	90	90	90	45	45	90		
11. Manure Nitrogen Application	130	150	140	150	125	125	125	150		
12. Manure Application Method	s>3	s>3	s>3	s>3	s>3	s>3	s>3	s>3		
<b>FIELD FEATURES "OUTPUT"</b>										
<b>I. SOIL SMG</b>										
1. Soil Hydrologic Group	3/5a	3/5a	3/5a	3/5a	3/5a	3/5a	3/5a	4a		
2. Soil Management Group	2	2	2	2	2	2	2	2		
3. Percent Slope	1	1	1	1	1	1	1	1		
<b>II. WATER QUALITY</b>										
4. Soil Test Phosphorus Value	6	3	3	3	3	12	12	3		
5. Concentrated Water Flow or Surface Inlet Discharge	1.5	1.5	1.5	1.5	3	1.5	6	12		
6. Nitrogen Leaching Index for Soil Hydrologic Group	6	6	6	6	6	6	6	6		
<b>III. SURFACE COVER</b>										
7. Residue/Cover Crop/Per. Cover	1	1	1	1	1	1	1	1		
8. Surface Water Setback	1	1	1	1	2	1	2	2		
9. Vegetative Buffer Width	1.5	1.5	1.5	1.5	12	1.5	6	1.5		
<b>IV. MANURE</b>										
10. Manure "P" Application	4	4	4	4	4	2	2	4		
11. Manure "N" Application	2	4	4	4	2	2	2	4		
12. Manure Application Method	8	8	8	8	8	8	8	8		
<b>FIELD FEATURES INDEX TOTALS</b>										
	36	35	35	35	46	40	50	46.5		
	LOW	LOW	LOW	LOW	MEDIUM	HIGH	HIGH	HIGH		
<b>TOTAL ACRES BY "MARI" RISK CATEGORY:</b>										
	0	860.2	223.9	493.7	1577.8					
	V. LOW	LOW	MEDIUM	HIGH	TOTAL		860.2	Total Low		

## RUSLE2 Erosion Calculation Record

Info: Field SH5

profiles\Sample Dairy SH5 Corn 2002

**Inputs:**

Location: USA\Michigan\Branch County

Soil: Sand Co., MI\7B HATMAKER LOAM, 1 TO 4 PERCENT SLOPES\Hatmaker loam 95%

Slope length (horiz): 150 ft

Avg. slope steepness: 3.0 %

Contouring: a. rows up-and-down hill

Strips/barriers: (none)

Diversion/terrace, sediment basin: (none)

Base management: corn grain, Sfc; soy, Sdisk, fc; corn grain, Sfc

<i>Date</i>	<i>Operation</i>	<i>Vegetation</i>	<i>Surf. res. cov. after op, %</i>
5/10/0	Cultivator, field 6-12 in sweeps		66
5/10/0	planter, double disk opnr	Corn, grain	66
10/20/0	Harvest, killing crop 50pct standing stubble		91
5/5/1	Disk, tandem secondary op.		55
5/15/1	Cultivator, field 6-12 in sweeps		42
5/15/1	Drill or airseeder, double disk	Soybean, mw 7in rows	42
10/10/1	Harvest, killing crop 50pct standing stubble		80
5/10/2	Cultivator, field 6-12 in sweeps		36
5/10/2	planter, double disk opnr	Corn, grain	36
10/20/2	Harvest, killing crop 50pct standing stubble		89

**Outputs:**

T value: 5.0 t/ac/yr

Soil loss for cons. plan: 1.9 t/ac/yr

Wind Erosion Worksheet -

Client: <i>SAMPLE DAIRY</i>		Field # <i>SH-123E</i>	Date: <i>3/2003</i>	County: <i>SAND</i>		
Step #1	Determine the Soil "I" Value - Refer to Section II of the FOTG					
	Soil Type #1	"I" Value #1	Soil Type #2	"I" Value #2		
	<i>BRANCH LS (25B)</i>	<i>134</i>	<i>LOCKE FSL (15B)</i>	<i>86</i>		
Step #2	Determine the Soil Roughness (Ridge) Value (Krd) - Refer to Tables 5*					
		Tillage Type used for Krd	Krd Value			
	Present	<i>NO-TILL</i>	<i>1.0</i>			
Planned						
Step #3	Determine the Climatic Factor (See Table 2)					
Climatic Factor = <i>7</i>						
Step #4	Determine the "L" - Length of the Unsheltered Distance					
		Measured "L"	Or Calculated "L" (Table 4)			
			Angle of Deviation	Adj. Factor	Field Width	"L"
	Present	<i>1320'</i>	<i>22.5</i>	<i>1.1</i>	<i>660'</i>	<i>1452</i>
Planned						
Step #5	Determine the "V" Vegetative Factor (SGE) for each crop in the rotation					
	#	Present Crop(s)	Type of Residue	% Residue Cover	Lbs. Of Residue Table 1	SGe Figures a-1 through b-6 Table 1
	1	<i>SOY</i>	<i>CORN STUBBLE</i>	<i>45</i>	<i>1600</i>	<i>800</i>
	2	<i>CORN</i>	<i>SOY. STUBBLE</i>	<i>45</i>	<i>1025</i>	<i>600</i>
	3					
	4					
	#	Planned Crop(s)	Type of Residue	% Residue Cover	Lbs. Of Residue Table 1	SGe Figures a1 through b6 Table 1
	1					
	2					
	3					
4						
Step #6	Determine "E" Estimated Annual Soil Loss by Wind Refer to the appropriate Tables "E" Tables					
	#	Present Crop(s)	Present (E) Soil Loss	Planned Crop(s)	Planned (E) Soil Loss	
	1	<i>SOY.</i>	<i>2.0</i>	<i>AVG = 2.95</i>		
	2	<i>CORN</i>	<i>3.9</i>			
	3					
4						
Comments	<i>SOIL LOSS IS WELL BELOW T OF 4</i>					

*(1320 x 1.1)*