

COST OF PRODUCTION SYSTEM BUDGETS

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COST OF PRODUCTION SYSTEM BUDGETS

The Resource and Environmental Policy (REP) Division of the Center for Agricultural and Rural Development (CARD) at Iowa State University needed accurate cost of production system (COPS) budgets to integrate into its existing environmental modeling system. These budgets would enhance the modeling capability by allowing simultaneous analysis of the environmental and economic impacts of environmental and agricultural policies. Consistent budgets were required for the 12-state study region encompassing the Corn Belt, Lake States, and Northern Plains (see Figure 1). To achieve the same level of detail as the environmental modeling system, these budgets also had to account for several crop rotations, various tillage systems, and the use of irrigation.

Cost and Returns Estimator (CARE) crop budgets serve as the primary source for these COPS budgets. These CARE budgets were created by Natural Resource Conservation Service (NRCS) staff in cooperation with Texas Agricultural Experiment Station personnel at the Blackland Research Center (USDA-NRCS 1996). Fertilizer application rates used in the CARE crop budgets were replaced with rotation-specific rates and the total costs recalculated, yielding the required rotation-specific cost of production budgets. What follows is a brief description of CARE and the development of its crop budgets, then an explanation of how the CARE input files were used to generate the CARD-REP rotation-specific COPS budgets. This paper includes several large tables with data that document these cost of production system budgets.

CARE Crop Budgets

CARE 2.2 is a DOS program designed to evaluate the costs and returns for growing various crops. It is intended for use by NRCS field office staff and other agencies working with farmers to provide financial and planning assistance, loan analysis, and program assistance (USDA-NRCS 1994). Users can enter their own production and

machinery data, or use the default data provided by NRCS crop budgets. These default crop budgets are the fundamental source for our rotation-specific cost of production budgets.

The NRCS developed the CARE crop budgets for each Agricultural Sector Model (ASM) region as part of the 1997 Resource Conservation Assessment (RCA). ASM regions generally coincide with states, except for Illinois, Indiana, Iowa, and Ohio, which are further subdivided along county lines (see Figure 1). The budgets were designed to be consistent across regions and across crops within regions to facilitate interregional analyses. The budgets are based on data from the United States Department of Agriculture (USDA) Cropping Practices Survey and the USDA Costs of Production,¹ as well as other National Agricultural Statistics Society (NASS) databases and the Census of Agriculture. The most frequent tillage and pesticide systems for each region were identified from these data. Tractor and equipment sizes were subjectively chosen for each ASM region using data on farm size from the Census of Agriculture. Fertilizer application rates were derived from the Cropping Practices Survey and nitrogen application rates were based on a function fit to crop yield and nitrogen application data (Benson, 1995). The final result is a unique budget for each crop, tillage system, and dryland-irrigation combination in every ASM region.

CARE Cost of Production Budgets

The input files for the CARE crop budgets were used to develop a cost of production budget for each state, region, crop, tillage, and irrigation combination in our study region. Each cost of production budget is separated into fixed and variable costs, and variable costs are further separated into machinery variable costs, machinery capital costs, input variable costs, and input capital costs. Fuel costs are included as part of machinery variable costs, but have been separated for energy use analysis. Labor costs are included as part of both machinery variable costs and input variable costs, but have been separated for labor demand analysis. Land rent, or mortgage costs, and management costs are not

¹ These annual data sets are available at www.mannlib.cornell.edu/data-sets/inputs/93018/ and www.mannlib.cornell.edu/data-sets/farm/94010/.

included in these budgets. Returns above these costs of production are returns to land and farmer management.

Table 1 presents the ASM regions in the study region and the abbreviations used to designate them. For locations of these ASM regions, see Figure 1. Table 2 presents the crop and rotation combinations required for the cost of production budgets and the abbreviations used to designate them. CARE budgets define three tillage systems: conventional tillage, conservation tillage, and no-till. Any tillage system that maintains less than 30 percent crop residue cover is defined as a conventional tillage system. Any system that maintains more than 30 percent crop residue cover is defined as a conservation tillage system. No till systems do not use any tillage implements other than no till planters or drills. Lastly, irrigation costs in CARE crop budgets assume center pivot irrigation systems using purchased water for all ASM regions.

For each ASM region, there is a group of unique CARE crop budgets consisting of a set of operations for a crop year. As an example, Table 3 presents the data used from the CARE input file containing the operations for irrigated corn in Nebraska under conventional tillage. For each specified date, data are given for the rate of machinery operation, the various pieces of machinery used, and any inputs used for that operation.

Machinery data in the operations file are linked to a unique machinery file for each ASM region. This machinery file provides region-specific per hour cost information for each piece of machinery used for an operation. Table 4 is a portion of the machinery file showing CARE machinery costs for all conventional tillage systems in Nebraska. These per hour machinery costs are converted to per acre machinery costs by Equation (1), using the indicated CARE rate of operation data as in Table 3.

$$\frac{\$}{ac} = \frac{\$}{hr} \left(\frac{8.25}{Speed * Width * Field Efficiency} \right) , \quad (1)$$

where speed is in miles per hour, operation width in feet, and field efficiency is the implement-specific efficiency factor. The 8.25 factor converts miles per hour to feet per hour and square feet to acres.

The input use data in the operations file are similarly linked to an input file that provides price information for all inputs used in that ASM region. Table 5 is a portion of

the input file showing the 1993 prices of inputs used by the Nebraska crop budgets for conventional tillage systems.

Aggregation of Costs of Production

Total cost is the sum of fixed and variable costs. No land rental or mortgage costs are included in CARE budgets, so the only fixed costs are costs associated with machinery ownership. Specifically, machinery fixed costs are the sum of storage costs, insurance, taxes, amortization, and interest costs due to ownership (see Table 4). CARE budgets do not include machinery insurance and tax costs, so these costs are missing from our budgets as well. Interest costs for financing machinery purchases use a long-term interest rate of 7 percent. Amortization and storage costs are included in the CARE cost analysis, using typical machinery types, sizes, ages, maintenance schedules, etc. for each region.

Variable costs are the sum of machinery variable costs and input variable costs, as well as machinery capital costs and input capital costs. Machinery variable costs are the sum of repair, fuel, lubrication, and labor costs associated with operating equipment (see Table 4). A wage rate of \$6 is used for all regions. Input variable costs are simply the sum of the product of input prices and quantities of each input used (see Table 5). For each operation, capital costs ($C_{CAPITAL}$) are calculated for both machinery and input variable costs using:

$$C_{CAPITAL} = C_{VARIABLE} \left[\exp\left(\frac{365-JDAY}{365} * 0.10\right) - 1 \right] \quad , \quad (2)$$

where JDAY is the Julian day on which the variable cost ($C_{VARIABLE}$) is incurred. Beginning on the day each operation occurs, when the variable cost is incurred, continuous compounding at the short-term interest rate of 10 percent is used. Summing machinery capital costs and input capital costs across all operations yields the machinery capital costs and input capital costs for each budget.

Fuel costs are included as part of machinery variable costs, but have been extracted separately for energy use analysis. However, fuel consumption for crop drying, and the resulting costs, are not included in CARE budgets, and thus not in our budgets. Labor costs are included as part of both machinery variable costs and input variable costs, but

also have been extracted separately for labor demand analysis. Again, the assumed wage rate is \$6.

Development of Rotation-Specific Fertilizer Application Rates

CARE crop budgets do not take into account management differences due to crop rotations. However, our modeling system required cost of production budgets for the rotations listed in Table 2. To create these rotation budgets, CARE crop-specific fertilizer rates were replaced with rotation-specific rates developed for use with CARD's environmental modeling systems. These rotation-specific fertilizer rates were developed using the following procedure.

Preliminary estimates of fertilizer application rates for crops in each state were obtained from the Firm Enterprise Data System (FEDS) budgets. These preliminary estimates were distributed among soil fertility experts from the appropriate states at the Soil Fertility Workshop held in St. Louis on October 27, 1994. These experts were asked to review the preliminary estimates and make suggested corrections. In addition, they were asked to estimate how irrigation and crop rotations affected these rates. From these survey results, fertilizer application rates were developed for each rotation in each state of the study region. These rates were then further revised according to published results of the 1994 Cropping Practices Survey (USDA-ERS 1995). The final rotation-specific fertilizer application rates for each state are presented in Table 6.

CARE budgets include nitrogen applications as either anhydrous ammonia or mineral nitrogen. Each form of fertilizer has a different cost and requires different implements to apply. The proportions of total nitrogen fertilizer applied as anhydrous ammonia and mineral nitrogen in the CARE budgets were maintained in the new rotation-specific fertilizer application rates. In other words, if the CARE budget for dryland corn in Northern Indiana under conservation tillage applied 80 percent of the total nitrogen as anhydrous ammonia, this same proportion was used in the CARD rotation-specific budgets for all nitrogen applications on dryland corn in Northern Indiana under conservation tillage in any rotation, despite the different amounts of fertilizer applied.

These rotation-specific fertilizer application rates were integrated into the cost of production budgets by adjusting input variable costs. First the cost of purchasing all fertilizers was subtracted from the input variable cost of each CARE crop budget. A cost of production budget for each rotation was created by adding the cost of purchasing the fertilizer amounts specified for each rotation to the non-fertilizer costs of each crop. It was assumed that the application machinery operated at the same rate, but applied a different amount of fertilizer. Therefore, machinery variable costs were not changed for these different application rates. Furthermore, input capital costs were not changed to account for the new fertilizer costs since the changes would be slight. The final results are the rotation-specific cost of production budgets in Appendix.

Currently, pesticide use is not adjusted to account for the rotation of crops. CARE budgets include the cost information for several weed and insect control strategies; however, CARE budgets assume one strategy per crop budget. In the future, alternative pest control strategies will be identified for each rotation using the latest version of the Weather Impact Simulation on Herbicides (WISH II) developed by researchers in CARD-REP. The costs of these strategies will then be estimated using the information provided in the CARE input files.

Summary

To create rotation-specific cost of production budgets for the CARD-REP environmental modeling system, CARE crop budgets were reorganized and slightly modified. The final result, presented in Appendix A, is a unique cost of production budget for each rotation, tillage, and irrigation combination in every ASM region in the 12-state region encompassing the Corn Belt, Lake States, and Northern Plains. These consistent budgets allow comparisons across the study region and provide cost of production data for environmental and agricultural policy analysis.

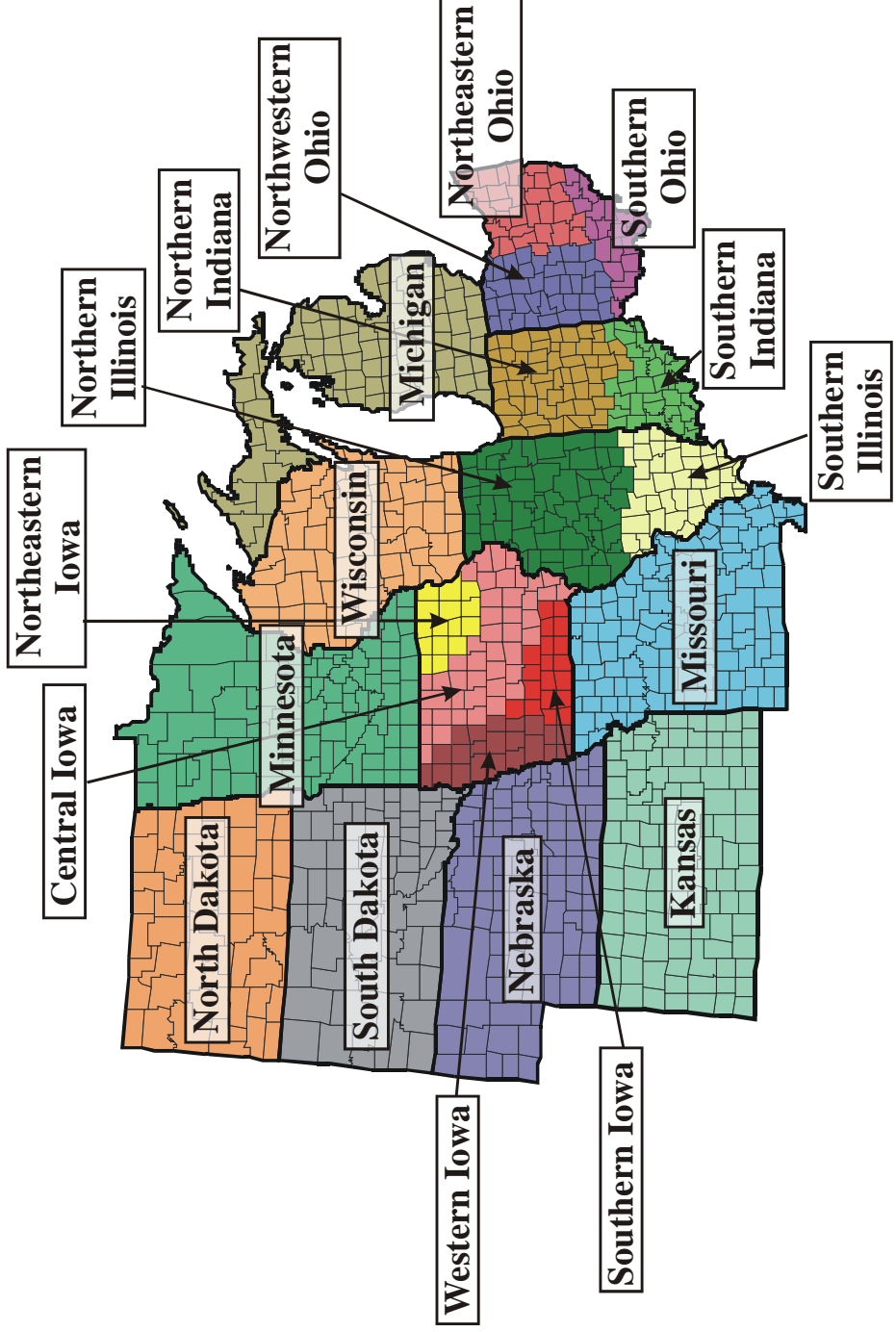


Figure 1: Agricultural Sector Model Regions for 12-State Study Area

Table 1. Agricultural Sector Model Regions and Abbreviations

Region Name	Abbreviation
Northern Illinois	NIL
Southern Illinois	SIL
Northern Indiana	NIN
Southern Indiana	SIN
Central Iowa	CIA
Northeastern Iowa	NEIA
Southern Iowa	SIA
Western Iowa	WIA
Kansas	KS
Michigan	MI
Minnesota	MN
Missouri	MO
North Dakota	ND
Northeastern Ohio	NEOH
Northwestern Ohio	NWOH
Southern Ohio	SOH
Nebraska	NE
South Dakota	SD
Wisconsin	WI

Table 2. Crop Rotation Names and Abbreviations

Rotation Name	Abbreviation
Corn following corn	cfc
Corn following soybeans	cfs
Corn following wheat	cfw
Corn following alfalfa	cfa
Corn following other	cfo
Soybeans following corn	sfc
Soybeans following soybeans	sfs
Soybeans following wheat	sfw
Soybeans following other	sfo
Wheat following corn	wfc
Wheat following soybeans	wfs
Wheat following wheat	wfw
Wheat following sorghum	wfg
Wheat following fallow	wff
Wheat following other	wfo
Sorghum following wheat	gfw
Sorghum following sorghum	gfg
Sorghum following fallow	gff
Sorghum following other	gfo
Alfalfa following corn	afc
Alfalfa following alfalfa	afa
Alfalfa following other	afo

Table 4. Disaggregated Machinery Costs, in Dollars per Hour for Conventional Tillage Systems in Nebraska

Machinery Name	Total		Disaggregated Fixed Costs				Disaggregated Variable Costs				Total Variable	
	Cost	Storage	Insurance	Taxes	Amortization	Interest	Fixed	Repairs	Fuel	Lubrication		Labor
Anhydrous Applicator, Trailer Mounted	35.34	1.98	0	0	20.42	0.65	23.05	11.89	0	0	0.4	\$12.29
Bale Wagon, PTO	1.93	0.03	0	0	1.12	0.02	1.17	0.36	0	0	0.4	0.76
Baler, Small, PTO	17.62	0.03	0	0	11.52	0.53	12.09	5.13	0	0	0.4	5.53
Chemical Applicator, Implement Attached	9.47	0.66	0	0	5.21	0.16	6.04	3.03	0	0	0.4	3.43
Chemical Applicator, Tractor Mounted, 30 ft	7.6	1.24	0	0	4.07	0.23	5.54	1.67	0	0	0.4	2.07
Chemical Applicator, Trailer Mounted, 30 ft	12.68	1.24	0	0	7.53	0.43	9.19	3.09	0	0	0.4	3.49
Chisel Plow, 15 ft	9.75	0.59	0	0	5.44	0.27	6.3	3.04	0	0	0.4	3.44
Culti-mulch Roller, 18 ft	13.92	0.59	0	0	10.16	0.5	11.25	2.27	0	0	0.4	2.67
Drill: Press, Disc, or Hoe	27.5	0.94	0	0	16.68	1.12	18.75	8.35	0	0	0.4	8.75
Dry Fertilizer Spreader, Trailer Mounted	6.43	1.98	0	0	2.51	0.08	4.57	1.46	0	0	0.4	1.86
Duckfoot Cultivator	5.72	0.36	0	0	3.31	0.16	3.84	1.48	0	0	0.4	1.88
Fertilizer Applicator, Implement Attached	6.81	0.66	0	0	3.56	0.11	4.34	2.07	0	0	0.4	2.47
Field Cultivator, 15 ft	10.25	0.59	0	0	6.18	0.31	7.08	2.76	0	0	0.4	3.16
Offset Disk, Heavy Duty, 14-18 ft	25.18	0.53	0	0	17.51	0.87	18.91	5.87	0	0	0.4	6.27
Offset Disk, Light Duty, 14-18 ft	16.14	0.53	0	0	10.99	0.54	12.06	3.68	0	0	0.4	4.08
Planter, 6 Row	25.27	0.41	0	0	14.96	1.26	16.63	8.24	0	0	0.4	8.64
Rotary Hoe	9.84	1.15	0	0	7.17	0.01	8.33	1.11	0	0	0.4	1.51
Row Cultivator, 15 ft	8.83	0.5	0	0	4.94	0.24	5.67	2.76	0	0	0.4	3.16
Silage Harvester	26.62	0.17	0	0	18.59	0.49	19.24	6.98	0	0	0.4	7.38
Subsoil Chisel Plow	12.76	0.59	0	0	7.31	0.36	8.27	4.09	0	0	0.4	4.49
Tandem Disk, 14-18 ft	15.22	0.53	0	0	10.32	0.51	11.36	3.46	0	0	0.4	3.86
Tractor: 2WD, 160 HP, Diesel	28.69	0	0	0	8.62	1.33	9.95	6.91	5.75	0.58	5.5	18.74

Table 5. Input Prices and Units for Nebraska Conventional Tillage systems

Input Name	Units	Price
2,4-D	Pints	\$1.37
Anhydrous	Pounds	0.094
Atrazine	Pounds	14.11
Baler Twine	Bales	0.03
Custom Combine	Acres	12.50
Custom Fertilizer Application	Acres	53.04
Custom Hauling	Bushels	0.30
Custom Hauling	Tons	2.50
Custom Herbicide Application	Acres	3.00
Custom Insecticide Application	Acres	3.00
Custom Labor	Hours	6.00
Custom Pesticide Application	Acres	15.83
Dithane	Pounds	2.82
Dual	Gallons	54.00
Furadan	Pounds	1.58
Gramoxone Extra	Pints	3.82
Guthion	Pounds	4.92
Irrigation Labor	Hours	6.00
Lasso	Gallons	25.40
Mocap	Pounds	1.16
Monitor	Gallons	69.69
Nitrogen	Pounds	0.09
Phosphorous	Pounds	0.10
Potassium	Pounds	0.08
Seed Corn	Bag	69.86
Seed Sorghum	Pounds	0.68
Seed Soybeans	Pounds	0.23
Seed Wheat	Bushels	7.25
Sencor	Pounds	20.50
Straw Mulch	Tons	30.00
Sulphur	Pounds	0.61
Telone	Gallons	55.00
Thiodan	Gallons	28.57
Tissue Testing	Acres	1.00
Treflan	Pints	4.01
Water	Acre Inch	2.35

Table 6. Rotation-Specific Fertilizer Application Rates, (pounds per acre), by State

State	Rotation	Dryland		Irrigated	
		N	P	N	P
Illinois	cfc	150	75	190	90
Illinois	cfs	110	75	135	90
Illinois	cfw	120	75	150	90
Illinois	cfa	130	75	160	90
Illinois	cfo	120	75	150	90
Illinois	sfc	0	50	0	60
Illinois	sfs	30	50	40	60
Illinois	sfw	0	50	0	60
Illinois	sfo	0	50	0	60
Illinois	wfc	30	40	40	50
Illinois	wfs	30	40	40	50
Illinois	afc	30	40	40	50
Illinois	afa	30	40	40	50
Illinois	afo	30	40	40	50
Indiana	cfc	150	75	190	90
Indiana	cfs	110	75	135	90
Indiana	cfw	120	75	150	90
Indiana	cfa	130	75	160	90
Indiana	cfo	120	75	150	90
Indiana	sfc	0	50	0	60
Indiana	sfs	20	50	40	60
Indiana	sfw	0	50	0	60
Indiana	sfo	0	50	0	60
Indiana	wfc	30	40	40	50
Indiana	wfs	30	40	40	50
Indiana	afc	30	40	40	50
Indiana	afa	30	40	40	50
Indiana	afo	30	40	40	50
Iowa	cfc	125	60	160	75
Iowa	cfs	105	60	130	75
Iowa	cfw	120	60	150	75
Iowa	cfa	130	60	165	75
Iowa	cfo	120	60	150	75
Iowa	sfc	0	50	0	60
Iowa	sfs	25	50	30	60
Iowa	sfw	0	50	0	60
Iowa	sfo	0	50	0	60
Iowa	wfc	30	40	40	50
Iowa	wfs	30	40	40	50
Iowa	afc	30	50	40	60
Iowa	afa	30	50	40	60
Iowa	afo	30	50	40	60

Table 6. (Continued) Rotation-Specific Fertilizer Application Rates, (pounds per acre), by State

State	Rotation	Dryland		Irrigated	
		N	P	N	P
Kansas	cfc	120	20	175	30
Kansas	cfs	100	20	155	30
Kansas	cfw	120	20	175	30
Kansas	cfa	100	20	155	30
Kansas	cfo	120	20	175	30
Kansas	sfc	5	20	10	30
Kansas	sfs	5	20	10	30
Kansas	sfw	5	20	10	30
Kansas	sfo	5	20	10	30
Kansas	wfc	55	20	80	30
Kansas	wfs	55	20	80	30
Kansas	wfg	55	20	80	30
Kansas	wff	55	20	80	30
Kansas	wfo	55	20	80	30
Kansas	gfw	100	10	140	25
Kansas	gfg	100	10	140	25
Kansas	gff	100	10	140	25
Kansas	gfo	100	10	140	25
Kansas	afc	0	70	0	70
Kansas	afa	0	70	0	70
Kansas	afo	0	70	0	70
Michigan	cfc	120	50	150	60
Michigan	cfs	95	50	120	60
Michigan	cfw	120	50	150	60
Michigan	cfa	105	50	130	60
Michigan	cfo	120	50	150	60
Michigan	sfc	10	30	15	40
Michigan	sfs	10	30	15	40
Michigan	sfw	10	30	15	40
Michigan	sfo	10	30	15	40
Michigan	wfc	70	35	90	45
Michigan	wfs	70	35	90	45
Michigan	wfw	70	35	90	45
Michigan	afc	20	40	25	50
Michigan	afa	35	40	45	50
Michigan	afo	20	40	25	50

Table 6. (Continued) Rotation-Specific Fertilizer Application Rates, (pounds per acre), by State

State	Rotation	Dryland		Irrigated	
		N	P	N	P
Minnesota	cfc	110	50	145	60
Minnesota	cfs	100	50	135	60
Minnesota	cfw	110	50	145	60
Minnesota	cfa	100	50	135	60
Minnesota	cfo	110	50	145	60
Minnesota	sfc	0	80	0	100
Minnesota	sfs	20	80	25	100
Minnesota	sfw	0	80	0	100
Minnesota	sfo	0	80	0	100
Minnesota	wfc	60	80	75	100
Minnesota	wfs	60	80	75	100
Minnesota	wfw	60	80	75	100
Minnesota	afc	20	40	25	50
Minnesota	afa	35	40	45	50
Minnesota	afo	20	40	25	50
Missouri	cfc	140	55	175	70
Missouri	cfs	120	55	150	70
Missouri	cfw	140	55	175	70
Missouri	cfa	120	75	150	90
Missouri	cfo	140	55	175	70
Missouri	sfc	0	40	0	50
Missouri	sfs	30	40	40	50
Missouri	sfw	0	40	0	50
Missouri	sfo	0	40	0	50
Missouri	wfc	70	65	90	80
Missouri	wfs	70	65	90	80
Missouri	afc	30	50	40	60
Missouri	afa	60	50	75	60
Missouri	afo	30	50	40	60

Table 6. (Continued) Rotation-Specific Fertilizer Application Rates, (pounds per acre), by State

State	Rotation	Dryland		Irrigated	
		N	P	N	P
Nebraska	cfc	110	30	160	40
Nebraska	cfs	100	30	155	40
Nebraska	cfw	110	30	160	40
Nebraska	cfa	100	30	155	40
Nebraska	cfo	110	30	160	40
Nebraska	sfc	0	30	0	50
Nebraska	sfs	20	30	20	50
Nebraska	sfw	0	30	0	50
Nebraska	sfo	0	30	0	50
Nebraska	wfc	30	40	40	25
Nebraska	wfs	30	40	40	25
Nebraska	wfg	30	40	40	25
Nebraska	wff	30	40	40	25
Nebraska	wfo	30	40	40	25
Nebraska	gfw	80	45	120	25
Nebraska	gfg	80	45	120	25
Nebraska	gff	80	45	120	25
Nebraska	gfo	80	45	120	25
Nebraska	afc	0	30	0	30
Nebraska	afa	0	30	0	30
Nebraska	afo	0	30	0	30
North Dakota	cfc	120	60	180	60
North Dakota	cfs	60	60	90	60
North Dakota	cfw	120	60	180	60
North Dakota	cfa	60	60	90	60
North Dakota	cfo	120	60	180	60
North Dakota	sfc	20	40	25	40
North Dakota	sfs	20	40	25	40
North Dakota	sfw	20	40	25	40
North Dakota	sfo	20	40	25	40
North Dakota	wfc	60	60	75	60
North Dakota	wfs	60	60	75	60
North Dakota	wfg	60	60	75	60
North Dakota	wff	60	60	75	60
North Dakota	wfo	60	60	75	60
North Dakota	gfw	80	40	100	60
North Dakota	gfg	80	40	100	60
North Dakota	gff	80	40	100	60
North Dakota	gfo	80	40	100	60
North Dakota	afc	0	0	0	0
North Dakota	afa	0	0	0	0
North Dakota	afo	0	0	0	0

Table 6. (Continued) Rotation-Specific Fertilizer Application Rates, (pounds per acre), by State

State	Rotation	Dryland		Irrigated	
		N	P	N	P
Ohio	cfc	150	70	190	90
Ohio	cfs	105	70	130	90
Ohio	cfw	120	70	150	90
Ohio	cfa	130	70	165	90
Ohio	cfo	120	70	150	90
Ohio	sfc	0	50	0	60
Ohio	sfs	15	50	20	60
Ohio	sfw	0	50	0	60
Ohio	sfo	0	50	0	60
Ohio	wfc	30	40	40	50
Ohio	wfs	30	40	40	50
Ohio	afc	0	70	0	85
Ohio	afa	5	70	10	85
Ohio	afo	0	70	0	85
South Dakota	cfc	90	60	180	60
South Dakota	cfs	60	60	90	60
South Dakota	cfw	80	60	180	60
South Dakota	cfa	60	60	90	60
South Dakota	cfo	80	60	180	60
South Dakota	sfc	20	40	25	40
South Dakota	sfs	20	40	25	40
South Dakota	sfw	20	40	25	40
South Dakota	sfo	20	40	25	40
South Dakota	wfc	60	60	75	60
South Dakota	wfs	60	60	75	60
South Dakota	wfg	60	60	75	60
South Dakota	wff	60	60	75	60
South Dakota	wfo	60	60	75	60
South Dakota	gfw	80	40	100	40
South Dakota	gfg	80	40	100	40
South Dakota	gff	80	40	100	40
South Dakota	gfo	80	40	100	40
South Dakota	afc	0	0	0	0
South Dakota	afa	0	0	0	0
South Dakota	afo	0	0	0	0

Table 6. (Continued) Rotation-Specific Fertilizer Application Rates, (pounds per acre), by State

State	Rotation	Dryland		Irrigated	
		N	P	N	P
Wisconsin	cfc	90	70	125	90
Wisconsin	cfs	80	70	110	90
Wisconsin	cfw	90	70	125	90
Wisconsin	cfa	80	70	110	90
Wisconsin	cfo	90	70	125	90
Wisconsin	sfc	10	65	15	80
Wisconsin	sfs	10	65	15	80
Wisconsin	sfw	10	65	15	80
Wisconsin	sfo	10	65	15	80
Wisconsin	wfc	60	40	75	50
Wisconsin	wfs	60	40	75	50
Wisconsin	wfw	60	40	75	50
Wisconsin	afc	20	40	25	50
Wisconsin	afa	35	40	45	50
Wisconsin	afo	20	40	25	50

APPENDIX A

Appendix A. Cost of Production Budgets for ASM Regions by Rotation, Tillage, and Irrigation

ASM Region	Rotation	Tillage	Irrigation	Total Cost	Total Variable	Total Fixed	Machinery Costs				Input Costs		
							Fixed	Variable	Labor	Fuel	Capital	Variable	Capital
U.S. dollars													
NIL	cfs	Conventional	Dryland	207.98	168.80	39.18	39.18	49.85	12.33	11.77	2.23	110.15	6.56
NIL	cfs	Conventional	Irrigated	253.22	205.30	47.92	47.92	49.71	11.29	10.92	2.18	145.94	7.46
NIL	cfs	Conservation	Dryland	202.90	166.24	36.66	36.66	47.47	11.59	11.19	2.05	110.15	6.56
NIL	cfs	Conservation	Irrigated	246.54	201.47	45.08	45.08	46.01	10.12	9.90	1.90	145.51	8.04
NIL	cfs	No Till	Dryland	178.08	151.92	26.15	26.15	33.95	6.96	7.14	1.26	110.15	6.56
NIL	cfs	No Till	Irrigated	230.57	192.83	37.75	37.75	37.87	7.22	7.38	1.40	145.51	8.04
NIL	cfc	Conventional	Dryland	211.79	172.61	39.18	39.18	49.85	12.33	11.77	2.23	113.96	6.56
NIL	cfc	Conventional	Irrigated	258.61	210.69	47.92	47.92	49.71	11.29	10.92	2.18	151.33	7.46
NIL	cfc	Conservation	Dryland	206.71	170.05	36.66	36.66	47.47	11.59	11.19	2.05	113.96	6.56
NIL	cfc	Conservation	Irrigated	251.76	206.68	45.08	45.08	46.01	10.12	9.90	1.90	150.72	8.04
NIL	cfc	No Till	Dryland	181.89	155.73	26.15	26.15	33.95	6.96	7.14	1.26	113.96	6.56
NIL	cfc	No Till	Irrigated	235.79	198.04	37.75	37.75	37.87	7.22	7.38	1.40	150.72	8.04
NIL	cfw	Conventional	Dryland	208.93	169.75	39.18	39.18	49.85	12.33	11.77	2.23	111.10	6.56
NIL	cfw	Conventional	Irrigated	254.69	206.77	47.92	47.92	49.71	11.29	10.92	2.18	147.41	7.46
NIL	cfw	Conservation	Dryland	203.85	167.19	36.66	36.66	47.47	11.59	11.19	2.05	111.10	6.56
NIL	cfw	Conservation	Irrigated	247.96	202.89	45.08	45.08	46.01	10.12	9.90	1.90	146.93	8.04
NIL	cfw	No Till	Dryland	179.03	152.88	26.15	26.15	33.95	6.96	7.14	1.26	111.10	6.56
NIL	cfw	No Till	Irrigated	232.00	194.25	37.75	37.75	37.87	7.22	7.38	1.40	146.93	8.04
NIL	cfa	Conventional	Dryland	209.88	170.71	39.18	39.18	49.85	12.33	11.77	2.23	112.06	6.56
NIL	cfa	Conventional	Irrigated	255.67	207.75	47.92	47.92	49.71	11.29	10.92	2.18	148.39	7.46
NIL	cfa	Conservation	Dryland	204.80	168.14	36.66	36.66	47.47	11.59	11.19	2.05	112.06	6.56
NIL	cfa	Conservation	Irrigated	248.91	203.84	45.08	45.08	46.01	10.12	9.90	1.90	147.88	8.04
NIL	cfa	No Till	Dryland	179.98	153.83	26.15	26.15	33.95	6.96	7.14	1.26	112.06	6.56
NIL	cfa	No Till	Irrigated	232.94	195.20	37.75	37.75	37.87	7.22	7.38	1.40	147.88	8.04
NIL	cfo	Conventional	Dryland	208.93	169.75	39.18	39.18	49.85	12.33	11.77	2.23	111.10	6.56
NIL	cfo	Conventional	Irrigated	254.69	206.77	47.92	47.92	49.71	11.29	10.92	2.18	147.41	7.46
NIL	cfo	Conservation	Dryland	203.85	167.19	36.66	36.66	47.47	11.59	11.19	2.05	111.10	6.56
NIL	cfo	Conservation	Irrigated	247.96	202.89	45.08	45.08	46.01	10.12	9.90	1.90	146.93	8.04
NIL	cfo	No Till	Dryland	179.03	152.88	26.15	26.15	33.95	6.96	7.14	1.26	111.10	6.56
NIL	cfo	No Till	Irrigated	232.00	194.25	37.75	37.75	37.87	7.22	7.38	1.40	146.93	8.04
NIL	afc	Conventional	Dryland	260.18	148.88	111.30	111.30	133.07	41.11	36.20	6.23	9.25	0.32
NIL	afa	Conventional	Dryland	260.18	148.88	111.30	111.30	133.07	41.11	36.20	6.23	9.25	0.32
NIL	afo	Conventional	Dryland	260.18	148.88	111.30	111.30	133.07	41.11	36.20	6.23	9.25	0.32
NIL	sfs	Conventional	Dryland	134.01	87.83	46.18	46.18	45.19	12.25	12.96	2.25	38.29	2.11
NIL	sfs	Conservation	Dryland	109.12	75.80	33.32	33.32	33.97	8.68	9.90	1.43	38.29	2.11
NIL	sfs	No Till	Dryland	102.35	71.88	30.47	30.47	30.27	7.51	8.88	1.21	38.29	2.11
NIL	sfc	Conventional	Dryland	131.22	85.04	46.18	46.18	45.19	12.25	12.96	2.25	35.50	2.11
NIL	sfc	Conservation	Dryland	106.33	73.01	33.32	33.32	33.97	8.68	9.90	1.43	35.50	2.11
NIL	sfc	No Till	Dryland	99.56	69.09	30.47	30.47	30.27	7.51	8.88	1.21	35.50	2.11
NIL	sfw	Conventional	Dryland	131.22	85.04	46.18	46.18	45.19	12.25	12.96	2.25	35.50	2.11
NIL	sfw	Conservation	Dryland	106.33	73.01	33.32	33.32	33.97	8.68	9.90	1.43	35.50	2.11
NIL	sfw	No Till	Dryland	99.56	69.09	30.47	30.47	30.27	7.51	8.88	1.21	35.50	2.11
NIL	sfo	Conventional	Dryland	131.22	85.04	46.18	46.18	45.19	12.25	12.96	2.25	35.50	2.11
NIL	sfo	Conservation	Dryland	106.33	73.01	33.32	33.32	33.97	8.68	9.90	1.43	35.50	2.11
NIL	sfo	No Till	Dryland	99.56	69.09	30.47	30.47	30.27	7.51	8.88	1.21	35.50	2.11
NIL	wfs	Conventional	Dryland	121.28	76.72	44.56	44.56	33.98	8.89	10.06	1.61	39.47	1.66
NIL	wfs	Conservation	Dryland	121.11	75.09	46.02	46.02	32.38	8.50	9.72	1.58	39.47	1.66
NIL	wfs	No Till	Dryland	116.03	74.48	41.55	41.55	31.79	8.07	9.41	1.56	39.47	1.66
NIL	wfc	Conventional	Dryland	121.28	76.72	44.56	44.56	33.98	8.89	10.06	1.61	39.47	1.66

ASM Region	Rotation	Tillage	Irrigation	Total	Total	Total	Machinery Costs				Input Costs		
				Cost	Variable	Fixed	Fixed	Variable	Labor	Fuel	Capital	Variable	Capital
U.S. dollars													
NIL	wfc	Conservation	Dryland	121.11	75.09	46.02	46.02	32.38	8.50	9.72	1.58	39.47	1.66
NIL	wfc	No Till	Dryland	116.03	74.48	41.55	41.55	31.79	8.07	9.41	1.56	39.47	1.66
SIL	cfs	Conventional	Dryland	189.71	142.77	46.94	46.94	43.34	11.15	10.82	1.94	92.61	4.88
SIL	cfs	Conventional	Irrigated	270.00	222.08	47.92	47.92	49.71	11.29	10.92	2.25	161.21	8.91
SIL	cfs	Conservation	Dryland	170.67	126.58	44.09	44.09	39.64	9.98	9.79	1.69	80.75	4.50
SIL	cfs	Conservation	Irrigated	246.97	201.90	45.08	45.08	46.01	10.12	9.90	2.00	145.55	8.34
SIL	cfs	No Till	Dryland	154.72	117.96	36.76	36.76	31.49	7.08	7.27	1.21	80.75	4.50
SIL	cfs	No Till	Irrigated	231.01	193.26	37.75	37.75	37.87	7.22	7.38	1.51	145.55	8.34
SIL	cfc	Conventional	Dryland	193.53	146.59	46.94	46.94	43.34	11.15	10.82	1.94	96.43	4.88
SIL	cfc	Conventional	Irrigated	275.23	227.30	47.92	47.92	49.71	11.29	10.92	2.25	166.43	8.91
SIL	cfc	Conservation	Dryland	174.49	130.40	44.09	44.09	39.64	9.98	9.79	1.69	84.56	4.50
SIL	cfc	Conservation	Irrigated	252.20	207.13	45.08	45.08	46.01	10.12	9.90	2.00	150.77	8.34
SIL	cfc	No Till	Dryland	158.54	121.77	36.76	36.76	31.49	7.08	7.27	1.21	84.56	4.50
SIL	cfc	No Till	Irrigated	236.24	198.49	37.75	37.75	37.87	7.22	7.38	1.51	150.77	8.34
SIL	cfw	Conventional	Dryland	190.67	143.73	46.94	46.94	43.34	11.15	10.82	1.94	93.57	4.88
SIL	cfw	Conventional	Irrigated	271.42	223.50	47.92	47.92	49.71	11.29	10.92	2.25	162.63	8.91
SIL	cfw	Conservation	Dryland	171.62	127.54	44.09	44.09	39.64	9.98	9.79	1.69	81.70	4.50
SIL	cfw	Conservation	Irrigated	248.40	203.32	45.08	45.08	46.01	10.12	9.90	2.00	146.97	8.34
SIL	cfw	No Till	Dryland	155.67	118.91	36.76	36.76	31.49	7.08	7.27	1.21	81.70	4.50
SIL	cfw	No Till	Irrigated	232.43	194.68	37.75	37.75	37.87	7.22	7.38	1.51	146.97	8.34
SIL	cfa	Conventional	Dryland	191.62	144.68	46.94	46.94	43.34	11.15	10.82	1.94	94.52	4.88
SIL	cfa	Conventional	Irrigated	272.38	224.45	47.92	47.92	49.71	11.29	10.92	2.25	163.58	8.91
SIL	cfa	Conservation	Dryland	172.58	128.49	44.09	44.09	39.64	9.98	9.79	1.69	82.66	4.50
SIL	cfa	Conservation	Irrigated	249.35	204.28	45.08	45.08	46.01	10.12	9.90	2.00	147.92	8.34
SIL	cfa	No Till	Dryland	156.63	119.87	36.76	36.76	31.49	7.08	7.27	1.21	82.66	4.50
SIL	cfa	No Till	Irrigated	233.38	195.64	37.75	37.75	37.87	7.22	7.38	1.51	147.92	8.34
SIL	cfo	Conventional	Dryland	190.67	143.73	46.94	46.94	43.34	11.15	10.82	1.94	93.57	4.88
SIL	cfo	Conventional	Irrigated	271.42	223.50	47.92	47.92	49.71	11.29	10.92	2.25	162.63	8.91
SIL	cfo	Conservation	Dryland	171.62	127.54	44.09	44.09	39.64	9.98	9.79	1.69	81.70	4.50
SIL	cfo	Conservation	Irrigated	248.40	203.32	45.08	45.08	46.01	10.12	9.90	2.00	146.97	8.34
SIL	cfo	No Till	Dryland	155.67	118.91	36.76	36.76	31.49	7.08	7.27	1.21	81.70	4.50
SIL	cfo	No Till	Irrigated	232.43	194.68	37.75	37.75	37.87	7.22	7.38	1.51	146.97	8.34
SIL	afc	Conventional	Dryland	264.17	152.87	111.30	111.30	133.07	41.11	36.20	6.32	12.98	0.50
SIL	afa	Conventional	Dryland	264.17	152.87	111.30	111.30	133.07	41.11	36.20	6.32	12.98	0.50
SIL	afo	Conventional	Dryland	264.17	152.87	111.30	111.30	133.07	41.11	36.20	6.32	12.98	0.50
SIL	sfs	Conventional	Dryland	149.77	103.59	46.18	46.18	45.19	12.25	12.96	2.36	53.17	2.88
SIL	sfs	Conservation	Dryland	109.30	75.97	33.32	33.32	33.97	8.68	9.90	1.53	38.29	2.19
SIL	sfs	No Till	Dryland	102.51	72.04	30.47	30.47	30.27	7.51	8.88	1.29	38.29	2.19
SIL	sfc	Conventional	Dryland	146.98	100.80	46.18	46.18	45.19	12.25	12.96	2.36	50.38	2.88
SIL	sfc	Conservation	Dryland	106.51	73.18	33.32	33.32	33.97	8.68	9.90	1.53	35.50	2.19
SIL	sfc	No Till	Dryland	99.72	69.25	30.47	30.47	30.27	7.51	8.88	1.29	35.50	2.19
SIL	sfw	Conventional	Dryland	146.98	100.80	46.18	46.18	45.19	12.25	12.96	2.36	50.38	2.88
SIL	sfw	Conservation	Dryland	106.51	73.18	33.32	33.32	33.97	8.68	9.90	1.53	35.50	2.19
SIL	sfw	No Till	Dryland	99.72	69.25	30.47	30.47	30.27	7.51	8.88	1.29	35.50	2.19
SIL	sfo	Conventional	Dryland	146.98	100.80	46.18	46.18	45.19	12.25	12.96	2.36	50.38	2.88
SIL	sfo	Conservation	Dryland	106.51	73.18	33.32	33.32	33.97	8.68	9.90	1.53	35.50	2.19
SIL	sfo	No Till	Dryland	99.72	69.25	30.47	30.47	30.27	7.51	8.88	1.29	35.50	2.19
SIL	wfs	Conventional	Dryland	127.16	82.60	44.56	44.56	33.98	8.89	10.06	1.70	45.28	1.64
SIL	wfs	Conservation	Dryland	111.55	65.53	46.02	46.02	32.38	8.50	9.72	1.66	30.15	1.35
SIL	wfs	No Till	Dryland	106.48	64.93	41.55	41.55	31.79	8.07	9.41	1.64	30.15	1.35
SIL	wfc	Conventional	Dryland	127.16	82.60	44.56	44.56	33.98	8.89	10.06	1.70	45.28	1.64

ASM Region	Rotation	Tillage	Irrigation	Total Cost	Total Variable	Total Fixed	Machinery Costs					Input Costs	
							Fixed	Variable	Labor	Fuel	Capital	Variable	Capital
U.S. dollars													
SIL	wfc	Conservation	Dryland	111.55	65.53	46.02	46.02	32.38	8.50	9.72	1.66	30.15	1.35
SIL	wfc	No Till	Dryland	106.48	64.93	41.55	41.55	31.79	8.07	9.41	1.64	30.15	1.35
NIN	cfs	Conventional	Dryland	206.35	155.05	51.30	51.30	49.69	12.65	12.14	2.39	96.86	6.11
NIN	cfs	Conventional	Irrigated	220.86	167.65	53.21	53.21	56.44	12.87	12.24	2.71	102.74	5.76
NIN	cfs	Conservation	Dryland	192.45	146.55	45.90	45.90	41.77	10.63	10.37	1.81	96.86	6.11
NIN	cfs	Conservation	Irrigated	207.11	159.31	47.81	47.81	48.67	10.85	10.47	2.14	102.74	5.76
NIN	cfs	No Till	Dryland	169.68	133.95	35.73	35.73	29.92	6.57	6.82	1.05	96.86	6.11
NIN	cfs	No Till	Irrigated	186.16	148.01	38.15	38.15	38.03	7.26	7.38	1.48	102.74	5.76
NIN	cfc	Conventional	Dryland	210.27	158.96	51.30	51.30	49.69	12.65	12.14	2.39	100.77	6.11
NIN	cfc	Conventional	Irrigated	226.19	172.98	53.21	53.21	56.44	12.87	12.24	2.71	108.07	5.76
NIN	cfc	Conservation	Dryland	196.36	150.46	45.90	45.90	41.77	10.63	10.37	1.81	100.77	6.11
NIN	cfc	Conservation	Irrigated	212.44	164.63	47.81	47.81	48.67	10.85	10.47	2.14	108.07	5.76
NIN	cfc	No Till	Dryland	173.59	137.86	35.73	35.73	29.92	6.57	6.82	1.05	100.77	6.11
NIN	cfc	No Till	Irrigated	191.49	153.34	38.15	38.15	38.03	7.26	7.38	1.48	108.07	5.76
NIN	cfw	Conventional	Dryland	207.33	156.03	51.30	51.30	49.69	12.65	12.14	2.39	97.84	6.11
NIN	cfw	Conventional	Irrigated	222.31	169.10	53.21	53.21	56.44	12.87	12.24	2.71	104.19	5.76
NIN	cfw	Conservation	Dryland	193.43	147.52	45.90	45.90	41.77	10.63	10.37	1.81	97.84	6.11
NIN	cfw	Conservation	Irrigated	208.57	160.76	47.81	47.81	48.67	10.85	10.47	2.14	104.19	5.76
NIN	cfw	No Till	Dryland	170.65	134.93	35.73	35.73	29.92	6.57	6.82	1.05	97.84	6.11
NIN	cfw	No Till	Irrigated	187.62	149.46	38.15	38.15	38.03	7.26	7.38	1.48	104.19	5.76
NIN	cfa	Conventional	Dryland	208.31	157.01	51.30	51.30	49.69	12.65	12.14	2.39	98.82	6.11
NIN	cfa	Conventional	Irrigated	223.28	170.07	53.21	53.21	56.44	12.87	12.24	2.71	105.16	5.76
NIN	cfa	Conservation	Dryland	194.40	148.50	45.90	45.90	41.77	10.63	10.37	1.81	98.82	6.11
NIN	cfa	Conservation	Irrigated	209.54	161.73	47.81	47.81	48.67	10.85	10.47	2.14	105.16	5.76
NIN	cfa	No Till	Dryland	171.63	135.90	35.73	35.73	29.92	6.57	6.82	1.05	98.82	6.11
NIN	cfa	No Till	Irrigated	188.58	150.43	38.15	38.15	38.03	7.26	7.38	1.48	105.16	5.76
NIN	cfo	Conventional	Dryland	207.33	156.03	51.30	51.30	49.69	12.65	12.14	2.39	97.84	6.11
NIN	cfo	Conventional	Irrigated	222.31	169.10	53.21	53.21	56.44	12.87	12.24	2.71	104.19	5.76
NIN	cfo	Conservation	Dryland	193.43	147.52	45.90	45.90	41.77	10.63	10.37	1.81	97.84	6.11
NIN	cfo	Conservation	Irrigated	208.57	160.76	47.81	47.81	48.67	10.85	10.47	2.14	104.19	5.76
NIN	cfo	No Till	Dryland	170.65	134.93	35.73	35.73	29.92	6.57	6.82	1.05	97.84	6.11
NIN	cfo	No Till	Irrigated	187.62	149.46	38.15	38.15	38.03	7.26	7.38	1.48	104.19	5.76
NIN	afc	Conventional	Dryland	333.91	209.96	123.96	123.96	152.84	45.64	41.14	7.19	46.73	3.19
NIN	afa	Conventional	Dryland	333.91	209.96	123.96	123.96	152.84	45.64	41.14	7.19	46.73	3.19
NIN	afo	Conventional	Dryland	333.91	209.96	123.96	123.96	152.84	45.64	41.14	7.19	46.73	3.19
NIN	sfs	Conventional	Dryland	145.46	98.95	46.51	46.51	46.50	12.69	13.42	2.11	47.75	2.59
NIN	sfs	Conventional	Irrigated	186.14	138.37	47.78	47.78	54.70	12.87	13.55	2.46	77.42	3.79
NIN	sfs	Conservation	Dryland	119.03	85.71	33.32	33.32	33.97	8.68	9.90	1.41	47.75	2.59
NIN	sfs	Conservation	Irrigated	159.71	125.13	34.59	34.59	42.17	8.86	10.04	1.75	77.42	3.79
NIN	sfs	No Till	Dryland	118.06	83.87	34.18	34.18	32.24	7.61	8.88	1.30	47.75	2.59
NIN	sfs	No Till	Irrigated	158.74	123.29	35.45	35.45	40.43	7.79	9.01	1.65	77.42	3.79
NIN	sfc	Conventional	Dryland	143.60	97.09	46.51	46.51	46.50	12.69	13.42	2.11	45.89	2.59
NIN	sfc	Conventional	Irrigated	182.42	134.65	47.78	47.78	54.70	12.87	13.55	2.46	73.70	3.79
NIN	sfc	Conservation	Dryland	117.17	83.85	33.32	33.32	33.97	8.68	9.90	1.41	45.89	2.59
NIN	sfc	Conservation	Irrigated	155.99	121.41	34.59	34.59	42.17	8.86	10.04	1.75	73.70	3.79
NIN	sfc	No Till	Dryland	116.20	82.01	34.18	34.18	32.24	7.61	8.88	1.30	45.89	2.59
NIN	sfc	No Till	Irrigated	155.02	119.57	35.45	35.45	40.43	7.79	9.01	1.65	73.70	3.79
NIN	sfw	Conventional	Dryland	143.60	97.09	46.51	46.51	46.50	12.69	13.42	2.11	45.89	2.59
NIN	sfw	Conventional	Irrigated	182.42	134.65	47.78	47.78	54.70	12.87	13.55	2.46	73.70	3.79
NIN	sfw	Conservation	Dryland	117.17	83.85	33.32	33.32	33.97	8.68	9.90	1.41	45.89	2.59
NIN	sfw	Conservation	Irrigated	155.99	121.41	34.59	34.59	42.17	8.86	10.04	1.75	73.70	3.79

ASM Region	Rotation	Tillage	Irrigation	Total	Total	Total	Machinery Costs				Input Costs		
				Cost	Variable	Fixed	Fixed	Variable	Labor	Fuel	Capital	Variable	Capital
NIN	sfw	No Till	Dryland	116.20	82.01	34.18	34.18	32.24	7.61	8.88	1.30	45.89	2.59
NIN	sfw	No Till	Irrigated	155.02	119.57	35.45	35.45	40.43	7.79	9.01	1.65	73.70	3.79
NIN	sfo	Conventional	Dryland	143.60	97.09	46.51	46.51	46.50	12.69	13.42	2.11	45.89	2.59
NIN	sfo	Conventional	Irrigated	182.42	134.65	47.78	47.78	54.70	12.87	13.55	2.46	73.70	3.79
NIN	sfo	Conservation	Dryland	117.17	83.85	33.32	33.32	33.97	8.68	9.90	1.41	45.89	2.59
NIN	sfo	Conservation	Irrigated	155.99	121.41	34.59	34.59	42.17	8.86	10.04	1.75	73.70	3.79
NIN	sfo	No Till	Dryland	116.20	82.01	34.18	34.18	32.24	7.61	8.88	1.30	45.89	2.59
NIN	sfo	No Till	Irrigated	155.02	119.57	35.45	35.45	40.43	7.79	9.01	1.65	73.70	3.79
NIN	wfs	Conventional	Dryland	111.77	76.12	35.66	35.66	34.22	8.57	9.74	1.59	39.47	0.84
NIN	wfs	Conservation	Dryland	112.56	75.44	37.12	37.12	32.61	8.18	9.39	1.56	39.47	1.79
NIN	wfs	No Till	Dryland	113.18	76.82	36.35	36.35	33.99	7.85	9.09	1.58	39.47	1.79
NIN	wfc	Conventional	Dryland	111.77	76.12	35.66	35.66	34.22	8.57	9.74	1.59	39.47	0.84
NIN	wfc	Conservation	Dryland	112.56	75.44	37.12	37.12	32.61	8.18	9.39	1.56	39.47	1.79
NIN	wfc	No Till	Dryland	113.18	76.82	36.35	36.35	33.99	7.85	9.09	1.58	39.47	1.79
SIN	cfs	Conventional	Dryland	191.44	144.40	47.04	47.04	43.04	10.53	10.28	2.13	93.23	6.00
SIN	cfs	Conventional	Irrigated	201.81	153.09	48.73	48.73	49.67	10.75	10.38	2.44	95.52	5.46
SIN	cfs	Conservation	Dryland	170.71	131.92	38.79	38.79	31.42	7.34	7.48	1.27	93.23	6.00
SIN	cfs	Conservation	Irrigated	182.83	142.02	40.81	40.81	39.36	8.00	8.04	1.67	95.52	5.46
SIN	cfs	No Till	Dryland	163.60	128.95	34.65	34.65	28.64	6.18	6.48	1.07	93.23	6.00
SIN	cfs	No Till	Irrigated	175.72	139.05	36.67	36.67	36.59	6.84	7.04	1.48	95.52	5.46
SIN	cfc	Conventional	Dryland	195.35	148.31	47.04	47.04	43.04	10.53	10.28	2.13	97.15	6.00
SIN	cfc	Conventional	Irrigated	207.15	158.42	48.73	48.73	49.67	10.75	10.38	2.44	100.85	5.46
SIN	cfc	Conservation	Dryland	174.62	135.83	38.79	38.79	31.42	7.34	7.48	1.27	97.15	6.00
SIN	cfc	Conservation	Irrigated	188.16	147.35	40.81	40.81	39.36	8.00	8.04	1.67	100.85	5.46
SIN	cfc	No Till	Dryland	167.51	132.86	34.65	34.65	28.64	6.18	6.48	1.07	97.15	6.00
SIN	cfc	No Till	Irrigated	181.05	144.38	36.67	36.67	36.59	6.84	7.04	1.48	100.85	5.46
SIN	cfw	Conventional	Dryland	192.42	145.38	47.04	47.04	43.04	10.53	10.28	2.13	94.21	6.00
SIN	cfw	Conventional	Irrigated	203.27	154.54	48.73	48.73	49.67	10.75	10.38	2.44	96.97	5.46
SIN	cfw	Conservation	Dryland	171.68	132.89	38.79	38.79	31.42	7.34	7.48	1.27	94.21	6.00
SIN	cfw	Conservation	Irrigated	184.28	143.47	40.81	40.81	39.36	8.00	8.04	1.67	96.97	5.46
SIN	cfw	No Till	Dryland	164.57	129.93	34.65	34.65	28.64	6.18	6.48	1.07	94.21	6.00
SIN	cfw	No Till	Irrigated	177.17	140.50	36.67	36.67	36.59	6.84	7.04	1.48	96.97	5.46
SIN	cfa	Conventional	Dryland	193.40	146.36	47.04	47.04	43.04	10.53	10.28	2.13	95.19	6.00
SIN	cfa	Conventional	Irrigated	204.24	155.51	48.73	48.73	49.67	10.75	10.38	2.44	97.94	5.46
SIN	cfa	Conservation	Dryland	172.66	133.87	38.79	38.79	31.42	7.34	7.48	1.27	95.19	6.00
SIN	cfa	Conservation	Irrigated	185.25	144.44	40.81	40.81	39.36	8.00	8.04	1.67	97.94	5.46
SIN	cfa	No Till	Dryland	165.55	130.91	34.65	34.65	28.64	6.18	6.48	1.07	95.19	6.00
SIN	cfa	No Till	Irrigated	178.14	141.47	36.67	36.67	36.59	6.84	7.04	1.48	97.94	5.46
SIN	cfo	Conventional	Dryland	192.42	145.38	47.04	47.04	43.04	10.53	10.28	2.13	94.21	6.00
SIN	cfo	Conventional	Irrigated	203.27	154.54	48.73	48.73	49.67	10.75	10.38	2.44	96.97	5.46
SIN	cfo	Conservation	Dryland	171.68	132.89	38.79	38.79	31.42	7.34	7.48	1.27	94.21	6.00
SIN	cfo	Conservation	Irrigated	184.28	143.47	40.81	40.81	39.36	8.00	8.04	1.67	96.97	5.46
SIN	cfo	No Till	Dryland	164.57	129.93	34.65	34.65	28.64	6.18	6.48	1.07	94.21	6.00
SIN	cfo	No Till	Irrigated	177.17	140.50	36.67	36.67	36.59	6.84	7.04	1.48	96.97	5.46
SIN	afc	Conventional	Dryland	318.76	203.42	115.34	115.34	146.45	44.12	39.80	6.81	46.96	3.20
SIN	afa	Conventional	Dryland	318.76	203.42	115.34	115.34	146.45	44.12	39.80	6.81	46.96	3.20
SIN	afo	Conventional	Dryland	318.76	203.42	115.34	115.34	146.45	44.12	39.80	6.81	46.96	3.20
SIN	sfs	Conventional	Dryland	168.51	122.00	46.51	46.51	46.50	12.69	13.42	2.24	69.21	4.04
SIN	sfs	Conservation	Dryland	119.27	85.95	33.32	33.32	33.97	8.68	9.90	1.51	47.75	2.72
SIN	sfs	No Till	Dryland	112.49	82.02	30.47	30.47	30.27	7.51	8.88	1.27	47.75	2.72
SIN	sfc	Conventional	Dryland	166.65	120.14	46.51	46.51	46.50	12.69	13.42	2.24	67.35	4.04

ASM Region	Rotation	Tillage	Irrigation	Total	Total	Total	Machinery Costs				Input Costs		
				Cost	Variable	Fixed	Fixed	Variable	Labor	Fuel	Capital	Variable	Capital
CIA	sfs	No Till	Dryland	116.86	83.96	32.90	32.90	39.95	11.14	11.07	1.47	40.44	2.09
CIA	sfs	No Till	Irrigated	159.91	125.60	34.31	34.31	49.05	11.34	11.22	2.06	71.03	3.46
CIA	sfc	Conventional	Dryland	156.18	115.66	40.52	40.52	47.68	13.48	13.12	1.87	62.58	3.53
CIA	sfc	Conventional	Irrigated	198.80	156.88	41.93	41.93	56.79	13.68	13.27	2.47	92.70	4.92
CIA	sfc	Conservation	Dryland	124.64	86.92	37.73	37.73	44.89	12.68	12.42	1.81	38.12	2.09
CIA	sfc	Conservation	Irrigated	155.91	118.72	37.19	37.19	44.89	9.42	10.53	2.14	68.24	3.46
CIA	sfc	No Till	Dryland	114.53	81.63	32.90	32.90	39.95	11.14	11.07	1.47	38.12	2.09
CIA	sfc	No Till	Irrigated	157.12	122.81	34.31	34.31	49.05	11.34	11.22	2.06	68.24	3.46
CIA	sfw	Conventional	Dryland	156.18	115.66	40.52	40.52	47.68	13.48	13.12	1.87	62.58	3.53
CIA	sfw	Conventional	Irrigated	198.80	156.88	41.93	41.93	56.79	13.68	13.27	2.47	92.70	4.92
CIA	sfw	Conservation	Dryland	124.64	86.92	37.73	37.73	44.89	12.68	12.42	1.81	38.12	2.09
CIA	sfw	Conservation	Irrigated	155.91	118.72	37.19	37.19	44.89	9.42	10.53	2.14	68.24	3.46
CIA	sfw	No Till	Dryland	114.53	81.63	32.90	32.90	39.95	11.14	11.07	1.47	38.12	2.09
CIA	sfw	No Till	Irrigated	157.12	122.81	34.31	34.31	49.05	11.34	11.22	2.06	68.24	3.46
CIA	sfo	Conventional	Dryland	156.18	115.66	40.52	40.52	47.68	13.48	13.12	1.87	62.58	3.53
CIA	sfo	Conventional	Irrigated	198.80	156.88	41.93	41.93	56.79	13.68	13.27	2.47	92.70	4.92
CIA	sfo	Conservation	Dryland	124.64	86.92	37.73	37.73	44.89	12.68	12.42	1.81	38.12	2.09
CIA	sfo	Conservation	Irrigated	155.91	118.72	37.19	37.19	44.89	9.42	10.53	2.14	68.24	3.46
CIA	sfo	No Till	Dryland	114.53	81.63	32.90	32.90	39.95	11.14	11.07	1.47	38.12	2.09
CIA	sfo	No Till	Irrigated	157.12	122.81	34.31	34.31	49.05	11.34	11.22	2.06	68.24	3.46
CIA	wfs	Conventional	Dryland	149.16	102.94	46.22	46.22	42.10	11.96	11.78	2.01	56.71	2.12
CIA	wfs	Conservation	Dryland	148.98	101.29	47.69	47.69	40.49	11.57	11.44	1.97	56.71	2.12
CIA	wfs	No Till	Dryland	127.54	84.04	43.49	43.49	40.90	11.53	11.46	1.98	39.47	1.70
CIA	wfc	Conventional	Dryland	149.16	102.94	46.22	46.22	42.10	11.96	11.78	2.01	56.71	2.12
CIA	wfc	Conservation	Dryland	148.98	101.29	47.69	47.69	40.49	11.57	11.44	1.97	56.71	2.12
CIA	wfc	No Till	Dryland	127.54	84.04	43.49	43.49	40.90	11.53	11.46	1.98	39.47	1.70
NEIA	cfs	Conventional	Dryland	194.16	151.33	42.83	42.83	40.89	10.27	10.03	1.83	102.26	6.35
NEIA	cfs	Conservation	Dryland	201.64	159.10	42.54	42.54	48.61	13.39	11.83	1.88	102.26	6.35
NEIA	cfs	No Till	Dryland	172.17	145.05	27.11	27.11	35.09	7.30	7.44	1.35	102.26	6.35
NEIA	cfc	Conventional	Dryland	196.08	153.25	42.83	42.83	40.89	10.27	10.03	1.83	104.18	6.35
NEIA	cfc	Conservation	Dryland	203.56	161.02	42.54	42.54	48.61	13.39	11.83	1.88	104.18	6.35
NEIA	cfc	No Till	Dryland	174.08	146.97	27.11	27.11	35.09	7.30	7.44	1.35	104.18	6.35
NEIA	cfw	Conventional	Dryland	195.60	152.77	42.83	42.83	40.89	10.27	10.03	1.83	103.70	6.35
NEIA	cfw	Conservation	Dryland	203.08	160.54	42.54	42.54	48.61	13.39	11.83	1.88	103.70	6.35
NEIA	cfw	No Till	Dryland	173.60	146.49	27.11	27.11	35.09	7.30	7.44	1.35	103.70	6.35
NEIA	cfa	Conventional	Dryland	196.55	153.73	42.83	42.83	40.89	10.27	10.03	1.83	104.66	6.35
NEIA	cfa	Conservation	Dryland	204.04	161.50	42.54	42.54	48.61	13.39	11.83	1.88	104.66	6.35
NEIA	cfa	No Till	Dryland	174.56	147.45	27.11	27.11	35.09	7.30	7.44	1.35	104.66	6.35
NEIA	cfo	Conventional	Dryland	195.60	152.77	42.83	42.83	40.89	10.27	10.03	1.83	103.70	6.35
NEIA	cfo	Conservation	Dryland	203.08	160.54	42.54	42.54	48.61	13.39	11.83	1.88	103.70	6.35
NEIA	cfo	No Till	Dryland	173.60	146.49	27.11	27.11	35.09	7.30	7.44	1.35	103.70	6.35
NEIA	afc	Conventional	Dryland	261.08	149.78	111.30	111.30	133.07	41.11	36.20	6.17	10.22	0.32
NEIA	afa	Conventional	Dryland	261.08	149.78	111.30	111.30	133.07	41.11	36.20	6.17	10.22	0.32
NEIA	afo	Conventional	Dryland	261.08	149.78	111.30	111.30	133.07	41.11	36.20	6.17	10.22	0.32
NEIA	sfs	Conventional	Dryland	144.15	103.63	40.52	40.52	47.68	13.48	13.12	1.88	51.21	2.86
NEIA	sfs	Conservation	Dryland	127.26	91.48	35.78	35.78	35.78	9.22	10.37	1.62	51.21	2.86
NEIA	sfs	No Till	Dryland	128.39	95.49	32.90	32.90	39.95	11.14	11.07	1.48	51.21	2.86
NEIA	sfc	Conventional	Dryland	141.82	101.31	40.52	40.52	47.68	13.48	13.12	1.88	48.89	2.86
NEIA	sfc	Conservation	Dryland	124.93	89.15	35.78	35.78	35.78	9.22	10.37	1.62	48.89	2.86
NEIA	sfc	No Till	Dryland	126.07	93.17	32.90	32.90	39.95	11.14	11.07	1.48	48.89	2.86
NEIA	sfw	Conventional	Dryland	141.82	101.31	40.52	40.52	47.68	13.48	13.12	1.88	48.89	2.86

ASM Region	Rotation	Tillage	Irrigation	Total	Total	Total	Machinery Costs					Input Costs	
				Cost	Variable	Fixed	Fixed	Variable	Labor	Fuel	Capital	Variable	Capital
NEIA	sfw	Conservation	Dryland	124.93	89.15	35.78	35.78	35.78	9.22	10.37	1.62	48.89	2.86
NEIA	sfw	No Till	Dryland	126.07	93.17	32.90	32.90	39.95	11.14	11.07	1.48	48.89	2.86
NEIA	sfo	Conventional	Dryland	141.82	101.31	40.52	40.52	47.68	13.48	13.12	1.88	48.89	2.86
NEIA	sfo	Conservation	Dryland	124.93	89.15	35.78	35.78	35.78	9.22	10.37	1.62	48.89	2.86
NEIA	sfo	No Till	Dryland	126.07	93.17	32.90	32.90	39.95	11.14	11.07	1.48	48.89	2.86
NEIA	wfs	Conventional	Dryland	131.28	85.06	46.22	46.22	42.10	11.96	11.78	2.01	39.47	1.48
NEIA	wfs	Conservation	Dryland	137.28	91.54	45.74	45.74	31.39	8.10	9.40	1.55	56.71	1.90
NEIA	wfs	No Till	Dryland	159.70	92.80	66.89	66.89	49.47	12.95	12.91	2.38	39.47	1.48
NEIA	wfc	Conventional	Dryland	131.28	85.06	46.22	46.22	42.10	11.96	11.78	2.01	39.47	1.48
NEIA	wfc	Conservation	Dryland	137.28	91.54	45.74	45.74	31.39	8.10	9.40	1.55	56.71	1.90
NEIA	wfc	No Till	Dryland	159.70	92.80	66.89	66.89	49.47	12.95	12.91	2.38	39.47	1.48
SIA	cfs	Conventional	Dryland	182.06	139.23	42.83	42.83	40.89	10.27	10.03	1.83	90.65	5.86
SIA	cfs	Conservation	Dryland	178.32	137.73	40.59	40.59	39.50	9.93	9.78	1.73	90.65	5.86
SIA	cfs	No Till	Dryland	168.17	130.45	37.72	37.72	32.63	7.43	7.57	1.31	90.65	5.86
SIA	cfc	Conventional	Dryland	183.96	141.13	42.83	42.83	40.89	10.27	10.03	1.83	92.55	5.86
SIA	cfc	Conservation	Dryland	180.22	139.63	40.59	40.59	39.50	9.93	9.78	1.73	92.55	5.86
SIA	cfc	No Till	Dryland	170.07	132.35	37.72	37.72	32.63	7.43	7.57	1.31	92.55	5.86
SIA	cfw	Conventional	Dryland	183.48	140.65	42.83	42.83	40.89	10.27	10.03	1.83	92.07	5.86
SIA	cfw	Conservation	Dryland	179.75	139.16	40.59	40.59	39.50	9.93	9.78	1.73	92.07	5.86
SIA	cfw	No Till	Dryland	169.59	131.87	37.72	37.72	32.63	7.43	7.57	1.31	92.07	5.86
SIA	cfa	Conventional	Dryland	184.43	141.60	42.83	42.83	40.89	10.27	10.03	1.83	93.02	5.86
SIA	cfa	Conservation	Dryland	180.70	140.11	40.59	40.59	39.50	9.93	9.78	1.73	93.02	5.86
SIA	cfa	No Till	Dryland	170.54	132.82	37.72	37.72	32.63	7.43	7.57	1.31	93.02	5.86
SIA	cfo	Conventional	Dryland	183.48	140.65	42.83	42.83	40.89	10.27	10.03	1.83	92.07	5.86
SIA	cfo	Conservation	Dryland	179.75	139.16	40.59	40.59	39.50	9.93	9.78	1.73	92.07	5.86
SIA	cfo	No Till	Dryland	169.59	131.87	37.72	37.72	32.63	7.43	7.57	1.31	92.07	5.86
SIA	afc	Conventional	Dryland	260.62	149.32	111.30	111.30	133.07	41.11	36.20	6.23	9.69	0.32
SIA	afa	Conventional	Dryland	260.62	149.32	111.30	111.30	133.07	41.11	36.20	6.23	9.69	0.32
SIA	afo	Conventional	Dryland	260.62	149.32	111.30	111.30	133.07	41.11	36.20	6.23	9.69	0.32
SIA	sfs	Conventional	Dryland	140.88	100.36	40.52	40.52	47.68	13.48	13.12	1.88	48.21	2.59
SIA	sfs	Conservation	Dryland	135.24	97.51	37.73	37.73	44.89	12.68	12.42	1.82	48.21	2.59
SIA	sfs	No Till	Dryland	125.13	92.23	32.90	32.90	39.95	11.14	11.07	1.48	48.21	2.59
SIA	sfc	Conventional	Dryland	138.56	98.04	40.52	40.52	47.68	13.48	13.12	1.88	45.89	2.59
SIA	sfc	Conservation	Dryland	132.92	95.19	37.73	37.73	44.89	12.68	12.42	1.82	45.89	2.59
SIA	sfc	No Till	Dryland	122.80	89.90	32.90	32.90	39.95	11.14	11.07	1.48	45.89	2.59
SIA	sfw	Conventional	Dryland	138.56	98.04	40.52	40.52	47.68	13.48	13.12	1.88	45.89	2.59
SIA	sfw	Conservation	Dryland	132.92	95.19	37.73	37.73	44.89	12.68	12.42	1.82	45.89	2.59
SIA	sfw	No Till	Dryland	122.80	89.90	32.90	32.90	39.95	11.14	11.07	1.48	45.89	2.59
SIA	sfo	Conventional	Dryland	138.56	98.04	40.52	40.52	47.68	13.48	13.12	1.88	45.89	2.59
SIA	sfo	Conservation	Dryland	132.92	95.19	37.73	37.73	44.89	12.68	12.42	1.82	45.89	2.59
SIA	sfo	No Till	Dryland	122.80	89.90	32.90	32.90	39.95	11.14	11.07	1.48	45.89	2.59
SIA	wfs	Conventional	Dryland	148.12	101.90	46.22	46.22	42.10	11.96	11.78	2.01	55.66	2.12
SIA	wfs	Conservation	Dryland	182.21	134.52	47.69	47.69	40.49	11.57	11.44	1.97	89.09	2.96
SIA	wfs	No Till	Dryland	144.15	100.66	43.49	43.49	40.90	11.53	11.46	1.98	55.66	2.12
SIA	wfc	Conventional	Dryland	148.12	101.90	46.22	46.22	42.10	11.96	11.78	2.01	55.66	2.12
SIA	wfc	Conservation	Dryland	182.21	134.52	47.69	47.69	40.49	11.57	11.44	1.97	89.09	2.96
SIA	wfc	No Till	Dryland	144.15	100.66	43.49	43.49	40.90	11.53	11.46	1.98	55.66	2.12
WIA	cfs	Conventional	Dryland	188.06	144.85	43.21	43.21	48.15	13.17	11.59	1.88	89.59	5.23
WIA	cfs	Conventional	Irrigated	187.65	145.62	42.04	42.04	50.94	12.16	10.68	1.94	88.21	4.53
WIA	cfs	Conservation	Dryland	184.33	143.35	40.98	40.98	46.76	12.83	11.34	1.77	89.59	5.23
WIA	cfs	Conservation	Irrigated	183.69	144.03	39.66	39.66	49.47	11.82	10.43	1.83	88.21	4.53

ASM Region	Rotation	Tillage	Irrigation	Total	Total	Total	Machinery Costs					Input Costs	
				Cost	Variable	Fixed	Fixed	Variable	Labor	Fuel	Capital	Variable	Capital
WIA	cfs	No Till	Dryland	174.17	136.06	38.11	38.11	39.89	10.33	9.12	1.36	89.59	5.23
WIA	cfs	No Till	Irrigated	179.74	140.65	39.10	39.10	46.27	10.47	9.23	1.65	88.21	4.53
WIA	cfc	Conventional	Dryland	190.05	146.83	43.21	43.21	48.15	13.17	11.59	1.88	91.57	5.23
WIA	cfc	Conventional	Irrigated	190.64	148.60	42.04	42.04	50.94	12.16	10.68	1.94	91.19	4.53
WIA	cfc	Conservation	Dryland	186.31	145.33	40.98	40.98	46.76	12.83	11.34	1.77	91.57	5.23
WIA	cfc	Conservation	Irrigated	186.67	147.01	39.66	39.66	49.47	11.82	10.43	1.83	91.19	4.53
WIA	cfc	No Till	Dryland	176.16	138.05	38.11	38.11	39.89	10.33	9.12	1.36	91.57	5.23
WIA	cfc	No Till	Irrigated	182.73	143.63	39.10	39.10	46.27	10.47	9.23	1.65	91.19	4.53
WIA	cfw	Conventional	Dryland	189.55	146.34	43.21	43.21	48.15	13.17	11.59	1.88	91.07	5.23
WIA	cfw	Conventional	Irrigated	189.64	147.61	42.04	42.04	50.94	12.16	10.68	1.94	90.20	4.53
WIA	cfw	Conservation	Dryland	185.82	144.84	40.98	40.98	46.76	12.83	11.34	1.77	91.07	5.23
WIA	cfw	Conservation	Irrigated	185.68	146.02	39.66	39.66	49.47	11.82	10.43	1.83	90.20	4.53
WIA	cfw	No Till	Dryland	175.66	137.55	38.11	38.11	39.89	10.33	9.12	1.36	91.07	5.23
WIA	cfw	No Till	Irrigated	181.73	142.64	39.10	39.10	46.27	10.47	9.23	1.65	90.20	4.53
WIA	cfa	Conventional	Dryland	190.54	147.33	43.21	43.21	48.15	13.17	11.59	1.88	92.07	5.23
WIA	cfa	Conventional	Irrigated	191.13	149.10	42.04	42.04	50.94	12.16	10.68	1.94	91.69	4.53
WIA	cfa	Conservation	Dryland	186.81	145.83	40.98	40.98	46.76	12.83	11.34	1.77	92.07	5.23
WIA	cfa	Conservation	Irrigated	187.17	147.51	39.66	39.66	49.47	11.82	10.43	1.83	91.69	4.53
WIA	cfa	No Till	Dryland	176.66	138.55	38.11	38.11	39.89	10.33	9.12	1.36	92.07	5.23
WIA	cfa	No Till	Irrigated	183.22	144.13	39.10	39.10	46.27	10.47	9.23	1.65	91.69	4.53
WIA	cfo	Conventional	Dryland	189.55	146.34	43.21	43.21	48.15	13.17	11.59	1.88	91.07	5.23
WIA	cfo	Conventional	Irrigated	189.64	147.61	42.04	42.04	50.94	12.16	10.68	1.94	90.20	4.53
WIA	cfo	Conservation	Dryland	185.82	144.84	40.98	40.98	46.76	12.83	11.34	1.77	91.07	5.23
WIA	cfo	Conservation	Irrigated	185.68	146.02	39.66	39.66	49.47	11.82	10.43	1.83	90.20	4.53
WIA	cfo	No Till	Dryland	175.66	137.55	38.11	38.11	39.89	10.33	9.12	1.36	91.07	5.23
WIA	cfo	No Till	Irrigated	181.73	142.64	39.10	39.10	46.27	10.47	9.23	1.65	90.20	4.53
WIA	afc	Conventional	Dryland	261.22	149.92	111.30	111.30	133.07	41.11	36.20	6.21	10.29	0.35
WIA	afa	Conventional	Dryland	261.22	149.92	111.30	111.30	133.07	41.11	36.20	6.21	10.29	0.35
WIA	afo	Conventional	Dryland	261.22	149.92	111.30	111.30	133.07	41.11	36.20	6.21	10.29	0.35
WIA	sfs	Conventional	Dryland	144.06	103.55	40.52	40.52	47.68	13.48	13.12	1.88	51.21	2.77
WIA	sfs	Conventional	Irrigated	187.08	145.15	41.93	41.93	56.79	13.68	13.27	2.47	81.80	4.10
WIA	sfs	Conservation	Dryland	138.42	100.69	37.73	37.73	44.89	12.68	12.42	1.82	51.21	2.77
WIA	sfs	Conservation	Irrigated	181.43	142.30	39.14	39.14	54.00	12.88	12.57	2.40	81.80	4.10
WIA	sfs	No Till	Dryland	128.31	95.41	32.90	32.90	39.95	11.14	11.07	1.48	51.21	2.77
WIA	sfs	No Till	Irrigated	171.32	137.01	34.31	34.31	49.05	11.34	11.22	2.06	81.80	4.10
WIA	sfc	Conventional	Dryland	141.74	101.22	40.52	40.52	47.68	13.48	13.12	1.88	48.89	2.77
WIA	sfc	Conventional	Irrigated	184.29	142.36	41.93	41.93	56.79	13.68	13.27	2.47	79.01	4.10
WIA	sfc	Conservation	Dryland	136.10	98.37	37.73	37.73	44.89	12.68	12.42	1.82	48.89	2.77
WIA	sfc	Conservation	Irrigated	178.64	139.51	39.14	39.14	54.00	12.88	12.57	2.40	79.01	4.10
WIA	sfc	No Till	Dryland	125.98	93.08	32.90	32.90	39.95	11.14	11.07	1.48	48.89	2.77
WIA	sfc	No Till	Irrigated	168.53	134.22	34.31	34.31	49.05	11.34	11.22	2.06	79.01	4.10
WIA	sfw	Conventional	Dryland	141.74	101.22	40.52	40.52	47.68	13.48	13.12	1.88	48.89	2.77
WIA	sfw	Conventional	Irrigated	184.29	142.36	41.93	41.93	56.79	13.68	13.27	2.47	79.01	4.10
WIA	sfw	Conservation	Dryland	136.10	98.37	37.73	37.73	44.89	12.68	12.42	1.82	48.89	2.77
WIA	sfw	Conservation	Irrigated	178.64	139.51	39.14	39.14	54.00	12.88	12.57	2.40	79.01	4.10
WIA	sfw	No Till	Dryland	125.98	93.08	32.90	32.90	39.95	11.14	11.07	1.48	48.89	2.77
WIA	sfw	No Till	Irrigated	168.53	134.22	34.31	34.31	49.05	11.34	11.22	2.06	79.01	4.10
WIA	sfo	Conventional	Dryland	141.74	101.22	40.52	40.52	47.68	13.48	13.12	1.88	48.89	2.77
WIA	sfo	Conventional	Irrigated	184.29	142.36	41.93	41.93	56.79	13.68	13.27	2.47	79.01	4.10
WIA	sfo	Conservation	Dryland	136.10	98.37	37.73	37.73	44.89	12.68	12.42	1.82	48.89	2.77
WIA	sfo	Conservation	Irrigated	178.64	139.51	39.14	39.14	54.00	12.88	12.57	2.40	79.01	4.10

ASM Region	Rotation	Tillage	Irrigation	Total	Total	Total	Machinery Costs				Input Costs		
				Cost	Variable	Fixed	Fixed	Variable	Labor	Fuel	Capital	Variable	Capital
WIA	sfo	No Till	Dryland	125.98	93.08	32.90	32.90	39.95	11.14	11.07	1.48	48.89	2.77
WIA	sfo	No Till	Irrigated	168.53	134.22	34.31	34.31	49.05	11.34	11.22	2.06	79.01	4.10
WIA	wfs	Conventional	Dryland	131.50	85.28	46.22	46.22	42.10	11.96	11.78	2.01	39.47	1.70
WIA	wfs	Conservation	Dryland	148.98	101.29	47.69	47.69	40.49	11.57	11.44	1.97	56.71	2.12
WIA	wfs	No Till	Dryland	127.54	84.04	43.49	43.49	40.90	11.53	11.46	1.98	39.47	1.70
WIA	wfc	Conventional	Dryland	131.50	85.28	46.22	46.22	42.10	11.96	11.78	2.01	39.47	1.70
WIA	wfc	Conservation	Dryland	148.98	101.29	47.69	47.69	40.49	11.57	11.44	1.97	56.71	2.12
WIA	wfc	No Till	Dryland	127.54	84.04	43.49	43.49	40.90	11.53	11.46	1.98	39.47	1.70
KS	cfs	Conventional	Dryland	130.02	84.41	45.61	45.61	39.71	8.13	9.22	1.92	40.25	2.54
KS	cfs	Conventional	Irrigated	272.23	174.70	97.53	97.53	53.82	8.43	9.90	2.53	112.11	6.24
KS	cfs	Conservation	Dryland	149.46	92.33	57.13	57.13	47.54	9.19	10.22	2.00	40.25	2.54
KS	cfs	Conservation	Irrigated	291.67	182.62	109.05	109.05	61.65	9.49	10.90	2.62	112.11	6.24
KS	cfs	No Till	Dryland	110.87	75.39	35.48	35.48	31.31	6.25	7.15	1.29	40.25	2.54
KS	cfs	No Till	Irrigated	218.93	145.38	73.55	73.55	41.66	6.48	7.65	1.76	96.33	5.63
KS	cfc	Conventional	Dryland	131.90	86.29	45.61	45.61	39.71	8.13	9.22	1.92	42.13	2.54
KS	cfc	Conventional	Irrigated	274.05	176.52	97.53	97.53	53.82	8.43	9.90	2.53	113.93	6.24
KS	cfc	Conservation	Dryland	151.34	94.21	57.13	57.13	47.54	9.19	10.22	2.00	42.13	2.54
KS	cfc	Conservation	Irrigated	293.49	184.44	109.05	109.05	61.65	9.49	10.90	2.62	113.93	6.24
KS	cfc	No Till	Dryland	112.75	77.27	35.48	35.48	31.31	6.25	7.15	1.29	42.13	2.54
KS	cfc	No Till	Irrigated	220.75	147.20	73.55	73.55	41.66	6.48	7.65	1.76	98.15	5.63
KS	cfw	Conventional	Dryland	131.90	86.29	45.61	45.61	39.71	8.13	9.22	1.92	42.13	2.54
KS	cfw	Conventional	Irrigated	274.05	176.52	97.53	97.53	53.82	8.43	9.90	2.53	113.93	6.24
KS	cfw	Conservation	Dryland	151.34	94.21	57.13	57.13	47.54	9.19	10.22	2.00	42.13	2.54
KS	cfw	Conservation	Irrigated	293.49	184.44	109.05	109.05	61.65	9.49	10.90	2.62	113.93	6.24
KS	cfw	No Till	Dryland	112.75	77.27	35.48	35.48	31.31	6.25	7.15	1.29	42.13	2.54
KS	cfw	No Till	Irrigated	220.75	147.20	73.55	73.55	41.66	6.48	7.65	1.76	98.15	5.63
KS	cfa	Conventional	Dryland	130.02	84.41	45.61	45.61	39.71	8.13	9.22	1.92	40.25	2.54
KS	cfa	Conventional	Irrigated	272.23	174.70	97.53	97.53	53.82	8.43	9.90	2.53	112.11	6.24
KS	cfa	Conservation	Dryland	149.46	92.33	57.13	57.13	47.54	9.19	10.22	2.00	40.25	2.54
KS	cfa	Conservation	Irrigated	291.67	182.62	109.05	109.05	61.65	9.49	10.90	2.62	112.11	6.24
KS	cfa	No Till	Dryland	110.87	75.39	35.48	35.48	31.31	6.25	7.15	1.29	40.25	2.54
KS	cfa	No Till	Irrigated	218.93	145.38	73.55	73.55	41.66	6.48	7.65	1.76	96.33	5.63
KS	cfo	Conventional	Dryland	131.90	86.29	45.61	45.61	39.71	8.13	9.22	1.92	42.13	2.54
KS	cfo	Conventional	Irrigated	274.05	176.52	97.53	97.53	53.82	8.43	9.90	2.53	113.93	6.24
KS	cfo	Conservation	Dryland	151.34	94.21	57.13	57.13	47.54	9.19	10.22	2.00	42.13	2.54
KS	cfo	Conservation	Irrigated	293.49	184.44	109.05	109.05	61.65	9.49	10.90	2.62	113.93	6.24
KS	cfo	No Till	Dryland	112.75	77.27	35.48	35.48	31.31	6.25	7.15	1.29	42.13	2.54
KS	cfo	No Till	Irrigated	220.75	147.20	73.55	73.55	41.66	6.48	7.65	1.76	98.15	5.63
KS	afc	Conventional	Dryland	356.65	198.86	157.80	157.80	179.61	41.11	46.21	9.28	9.63	0.34
KS	afc	Conventional	Irrigated	553.86	310.24	243.63	243.63	246.17	54.15	60.90	11.40	50.13	2.53
KS	afa	Conventional	Dryland	356.65	198.86	157.80	157.80	179.61	41.11	46.21	9.28	9.63	0.34
KS	afa	Conventional	Irrigated	553.86	310.24	243.63	243.63	246.17	54.15	60.90	11.40	50.13	2.53
KS	afo	Conventional	Dryland	356.65	198.86	157.80	157.80	179.61	41.11	46.21	9.28	9.63	0.34
KS	afo	Conventional	Irrigated	553.86	310.24	243.63	243.63	246.17	54.15	60.90	11.40	50.13	2.53
KS	gfw	Conventional	Dryland	141.68	91.83	49.85	49.85	46.93	9.97	11.38	1.79	40.90	2.21
KS	gfw	Conventional	Irrigated	259.80	164.96	94.84	94.84	59.16	10.23	11.96	2.30	99.08	4.41
KS	gfw	Conservation	Dryland	151.60	93.84	57.76	57.76	48.87	9.65	10.66	1.86	40.90	2.21
KS	gfw	Conservation	Irrigated	214.85	136.33	78.52	78.52	54.52	9.77	10.93	2.11	76.17	3.54
KS	gfw	No Till	Dryland	114.56	77.69	36.87	36.87	33.24	6.77	7.70	1.34	40.90	2.21
KS	gfw	No Till	Irrigated	232.49	150.63	81.86	81.86	45.47	7.03	8.29	1.85	99.08	4.23
KS	gfg	Conventional	Dryland	141.68	91.83	49.85	49.85	46.93	9.97	11.38	1.79	40.90	2.21

ASM Region	Rotation	Tillage	Irrigation	Total	Total	Total	Machinery Costs					Input Costs	
				Cost	Variable	Fixed	Fixed	Variable	Labor	Fuel	Capital	Variable	Capital
KS	gfg	Conventional	Irrigated	259.80	164.96	94.84	94.84	59.16	10.23	11.96	2.30	99.08	4.41
KS	gfg	Conservation	Dryland	151.60	93.84	57.76	57.76	48.87	9.65	10.66	1.86	40.90	2.21
KS	gfg	Conservation	Irrigated	214.85	136.33	78.52	78.52	54.52	9.77	10.93	2.11	76.17	3.54
KS	gfg	No Till	Dryland	114.56	77.69	36.87	36.87	33.24	6.77	7.70	1.34	40.90	2.21
KS	gfg	No Till	Irrigated	232.49	150.63	81.86	81.86	45.47	7.03	8.29	1.85	99.08	4.23
KS	gff	Conventional	Dryland	141.68	91.83	49.85	49.85	46.93	9.97	11.38	1.79	40.90	2.21
KS	gff	Conventional	Irrigated	259.80	164.96	94.84	94.84	59.16	10.23	11.96	2.30	99.08	4.41
KS	gff	Conservation	Dryland	151.60	93.84	57.76	57.76	48.87	9.65	10.66	1.86	40.90	2.21
KS	gff	Conservation	Irrigated	214.85	136.33	78.52	78.52	54.52	9.77	10.93	2.11	76.17	3.54
KS	gff	No Till	Dryland	114.56	77.69	36.87	36.87	33.24	6.77	7.70	1.34	40.90	2.21
KS	gff	No Till	Irrigated	232.49	150.63	81.86	81.86	45.47	7.03	8.29	1.85	99.08	4.23
KS	gfo	Conventional	Dryland	141.68	91.83	49.85	49.85	46.93	9.97	11.38	1.79	40.90	2.21
KS	gfo	Conventional	Irrigated	259.80	164.96	94.84	94.84	59.16	10.23	11.96	2.30	99.08	4.41
KS	gfo	Conservation	Dryland	151.60	93.84	57.76	57.76	48.87	9.65	10.66	1.86	40.90	2.21
KS	gfo	Conservation	Irrigated	214.85	136.33	78.52	78.52	54.52	9.77	10.93	2.11	76.17	3.54
KS	gfo	No Till	Dryland	114.56	77.69	36.87	36.87	33.24	6.77	7.70	1.34	40.90	2.21
KS	gfo	No Till	Irrigated	232.49	150.63	81.86	81.86	45.47	7.03	8.29	1.85	99.08	4.23
KS	sfs	Conventional	Dryland	126.15	83.78	42.37	42.37	41.97	9.68	11.65	2.03	37.65	2.13
KS	sfs	Conventional	Irrigated	199.60	122.62	76.98	76.98	51.38	9.88	12.10	2.42	65.57	3.25
KS	sfs	Conservation	Dryland	143.10	89.03	54.08	54.08	47.34	9.98	11.71	1.91	37.65	2.13
KS	sfs	Conservation	Irrigated	212.02	133.72	78.30	78.30	53.92	10.12	12.02	2.17	74.07	3.55
KS	sfs	No Till	Dryland	108.97	74.28	34.69	34.69	33.13	7.68	9.32	1.37	37.65	2.13
KS	sfs	No Till	Irrigated	182.42	113.12	69.30	69.30	42.54	7.88	9.77	1.76	65.57	3.25
KS	sfc	Conventional	Dryland	126.15	83.78	42.37	42.37	41.97	9.68	11.65	2.03	37.65	2.13
KS	sfc	Conventional	Irrigated	199.60	122.62	76.98	76.98	51.38	9.88	12.10	2.42	65.57	3.25
KS	sfc	Conservation	Dryland	143.10	89.03	54.08	54.08	47.34	9.98	11.71	1.91	37.65	2.13
KS	sfc	Conservation	Irrigated	212.02	133.72	78.30	78.30	53.92	10.12	12.02	2.17	74.07	3.55
KS	sfc	No Till	Dryland	108.97	74.28	34.69	34.69	33.13	7.68	9.32	1.37	37.65	2.13
KS	sfc	No Till	Irrigated	182.42	113.12	69.30	69.30	42.54	7.88	9.77	1.76	65.57	3.25
KS	sfw	Conventional	Dryland	126.15	83.78	42.37	42.37	41.97	9.68	11.65	2.03	37.65	2.13
KS	sfw	Conventional	Irrigated	199.60	122.62	76.98	76.98	51.38	9.88	12.10	2.42	65.57	3.25
KS	sfw	Conservation	Dryland	143.10	89.03	54.08	54.08	47.34	9.98	11.71	1.91	37.65	2.13
KS	sfw	Conservation	Irrigated	212.02	133.72	78.30	78.30	53.92	10.12	12.02	2.17	74.07	3.55
KS	sfw	No Till	Dryland	108.97	74.28	34.69	34.69	33.13	7.68	9.32	1.37	37.65	2.13
KS	sfw	No Till	Irrigated	182.42	113.12	69.30	69.30	42.54	7.88	9.77	1.76	65.57	3.25
KS	sfo	Conventional	Dryland	126.15	83.78	42.37	42.37	41.97	9.68	11.65	2.03	37.65	2.13
KS	sfo	Conventional	Irrigated	199.60	122.62	76.98	76.98	51.38	9.88	12.10	2.42	65.57	3.25
KS	sfo	Conservation	Dryland	143.10	89.03	54.08	54.08	47.34	9.98	11.71	1.91	37.65	2.13
KS	sfo	Conservation	Irrigated	212.02	133.72	78.30	78.30	53.92	10.12	12.02	2.17	74.07	3.55
KS	sfo	No Till	Dryland	108.97	74.28	34.69	34.69	33.13	7.68	9.32	1.37	37.65	2.13
KS	sfo	No Till	Irrigated	182.42	113.12	69.30	69.30	42.54	7.88	9.77	1.76	65.57	3.25
KS	wfs	Conventional	Dryland	138.67	85.20	53.48	53.48	39.75	8.83	10.07	1.70	42.53	1.22
KS	wfs	Conventional	Irrigated	166.59	102.73	63.86	63.86	42.58	8.89	10.21	1.88	56.26	2.02
KS	wfs	Conservation	Dryland	164.00	114.26	49.75	49.75	35.97	8.03	9.07	1.53	74.76	1.99
KS	wfs	Conservation	Irrigated	190.44	130.31	60.13	60.13	38.79	8.09	9.21	1.71	87.04	2.77
KS	wfs	No Till	Dryland	120.16	75.10	45.05	45.05	30.02	6.56	7.34	1.33	42.53	1.22
KS	wfs	No Till	Irrigated	148.08	92.64	55.43	55.43	32.85	6.62	7.48	1.51	56.26	2.02
KS	wfc	Conventional	Dryland	138.67	85.20	53.48	53.48	39.75	8.83	10.07	1.70	42.53	1.22
KS	wfc	Conventional	Irrigated	166.59	102.73	63.86	63.86	42.58	8.89	10.21	1.88	56.26	2.02
KS	wfc	Conservation	Dryland	164.00	114.26	49.75	49.75	35.97	8.03	9.07	1.53	74.76	1.99
KS	wfc	Conservation	Irrigated	190.44	130.31	60.13	60.13	38.79	8.09	9.21	1.71	87.04	2.77

ASM Region	Rotation	Tillage	Irrigation	Total	Total	Total	Machinery Costs					Input Costs	
				Cost	Variable	Fixed	Fixed	Variable	Labor	Fuel	Capital	Variable	Capital
KS	wfc	No Till	Dryland	120.16	75.10	45.05	45.05	30.02	6.56	7.34	1.33	42.53	1.22
KS	wfc	No Till	Irrigated	148.08	92.64	55.43	55.43	32.85	6.62	7.48	1.51	56.26	2.02
KS	wfg	Conventional	Dryland	138.67	85.20	53.48	53.48	39.75	8.83	10.07	1.70	42.53	1.22
KS	wfg	Conventional	Irrigated	166.59	102.73	63.86	63.86	42.58	8.89	10.21	1.88	56.26	2.02
KS	wfg	Conservation	Dryland	164.00	114.26	49.75	49.75	35.97	8.03	9.07	1.53	74.76	1.99
KS	wfg	Conservation	Irrigated	190.44	130.31	60.13	60.13	38.79	8.09	9.21	1.71	87.04	2.77
KS	wfg	No Till	Dryland	120.16	75.10	45.05	45.05	30.02	6.56	7.34	1.33	42.53	1.22
KS	wfg	No Till	Irrigated	148.08	92.64	55.43	55.43	32.85	6.62	7.48	1.51	56.26	2.02
KS	wff	Conventional	Dryland	138.67	85.20	53.48	53.48	39.75	8.83	10.07	1.70	42.53	1.22
KS	wff	Conventional	Irrigated	166.59	102.73	63.86	63.86	42.58	8.89	10.21	1.88	56.26	2.02
KS	wff	Conservation	Dryland	164.00	114.26	49.75	49.75	35.97	8.03	9.07	1.53	74.76	1.99
KS	wff	Conservation	Irrigated	190.44	130.31	60.13	60.13	38.79	8.09	9.21	1.71	87.04	2.77
KS	wff	No Till	Dryland	120.16	75.10	45.05	45.05	30.02	6.56	7.34	1.33	42.53	1.22
KS	wff	No Till	Irrigated	148.08	92.64	55.43	55.43	32.85	6.62	7.48	1.51	56.26	2.02
KS	wfo	Conventional	Dryland	138.67	85.20	53.48	53.48	39.75	8.83	10.07	1.70	42.53	1.22
KS	wfo	Conventional	Irrigated	166.59	102.73	63.86	63.86	42.58	8.89	10.21	1.88	56.26	2.02
KS	wfo	Conservation	Dryland	164.00	114.26	49.75	49.75	35.97	8.03	9.07	1.53	74.76	1.99
KS	wfo	Conservation	Irrigated	190.44	130.31	60.13	60.13	38.79	8.09	9.21	1.71	87.04	2.77
KS	wfo	No Till	Dryland	120.16	75.10	45.05	45.05	30.02	6.56	7.34	1.33	42.53	1.22
KS	wfo	No Till	Irrigated	148.08	92.64	55.43	55.43	32.85	6.62	7.48	1.51	56.26	2.02
MI	cfs	Conventional	Dryland	152.94	116.35	36.59	36.59	33.40	7.91	8.32	1.32	76.93	4.70
MI	cfs	Conventional	Irrigated	240.04	168.84	71.20	71.20	42.81	8.11	8.78	1.73	117.58	6.72
MI	cfs	Conservation	Dryland	148.76	115.12	33.64	33.64	29.58	6.74	7.26	1.06	79.60	4.87
MI	cfs	Conservation	Irrigated	235.88	167.63	68.25	68.25	38.99	6.94	7.71	1.48	120.26	6.90
MI	cfs	No Till	Dryland	153.50	119.91	33.60	33.60	28.23	6.08	6.73	0.97	85.47	5.23
MI	cfs	No Till	Irrigated	270.85	202.65	68.21	68.21	37.63	6.28	7.19	1.41	154.52	9.09
MI	cfc	Conventional	Dryland	155.56	118.97	36.59	36.59	33.40	7.91	8.32	1.32	79.55	4.70
MI	cfc	Conventional	Irrigated	243.19	172.00	71.20	71.20	42.81	8.11	8.78	1.73	120.74	6.72
MI	cfc	Conservation	Dryland	151.38	117.74	33.64	33.64	29.58	6.74	7.26	1.06	82.23	4.87
MI	cfc	Conservation	Irrigated	239.04	170.79	68.25	68.25	38.99	6.94	7.71	1.48	123.41	6.90
MI	cfc	No Till	Dryland	156.13	122.53	33.60	33.60	28.23	6.08	6.73	0.97	88.10	5.23
MI	cfc	No Till	Irrigated	274.01	205.80	68.21	68.21	37.63	6.28	7.19	1.41	157.67	9.09
MI	cfw	Conventional	Dryland	155.56	118.97	36.59	36.59	33.40	7.91	8.32	1.32	79.55	4.70
MI	cfw	Conventional	Irrigated	243.19	172.00	71.20	71.20	42.81	8.11	8.78	1.73	120.74	6.72
MI	cfw	Conservation	Dryland	151.38	117.74	33.64	33.64	29.58	6.74	7.26	1.06	82.23	4.87
MI	cfw	Conservation	Irrigated	239.04	170.79	68.25	68.25	38.99	6.94	7.71	1.48	123.41	6.90
MI	cfw	No Till	Dryland	156.13	122.53	33.60	33.60	28.23	6.08	6.73	0.97	88.10	5.23
MI	cfw	No Till	Irrigated	274.01	205.80	68.21	68.21	37.63	6.28	7.19	1.41	157.67	9.09
MI	cfa	Conventional	Dryland	153.98	117.39	36.59	36.59	33.40	7.91	8.32	1.32	77.98	4.70
MI	cfa	Conventional	Irrigated	241.09	169.89	71.20	71.20	42.81	8.11	8.78	1.73	118.63	6.72
MI	cfa	Conservation	Dryland	149.80	116.17	33.64	33.64	29.58	6.74	7.26	1.06	80.65	4.87
MI	cfa	Conservation	Irrigated	236.93	168.68	68.25	68.25	38.99	6.94	7.71	1.48	121.31	6.90
MI	cfa	No Till	Dryland	154.55	120.96	33.60	33.60	28.23	6.08	6.73	0.97	86.52	5.23
MI	cfa	No Till	Irrigated	271.90	203.70	68.21	68.21	37.63	6.28	7.19	1.41	155.57	9.09
MI	cfo	Conventional	Dryland	155.56	118.97	36.59	36.59	33.40	7.91	8.32	1.32	79.55	4.70
MI	cfo	Conventional	Irrigated	243.19	172.00	71.20	71.20	42.81	8.11	8.78	1.73	120.74	6.72
MI	cfo	Conservation	Dryland	151.38	117.74	33.64	33.64	29.58	6.74	7.26	1.06	82.23	4.87
MI	cfo	Conservation	Irrigated	239.04	170.79	68.25	68.25	38.99	6.94	7.71	1.48	123.41	6.90
MI	cfo	No Till	Dryland	156.13	122.53	33.60	33.60	28.23	6.08	6.73	0.97	88.10	5.23
MI	cfo	No Till	Irrigated	274.01	205.80	68.21	68.21	37.63	6.28	7.19	1.41	157.67	9.09
MI	afc	Conventional	Dryland	274.47	154.07	120.40	120.40	138.57	41.11	37.40	6.20	8.82	0.48

ASM Region	Rotation	Tillage	Irrigation	Total	Total	Total	Machinery Costs					Input Costs	
				Cost	Variable	Fixed	Fixed	Variable	Labor	Fuel	Capital	Variable	Capital
MI	afa	Conventional	Dryland	275.89	155.49	120.40	120.40	138.57	41.11	37.40	6.20	10.25	0.48
MI	afo	Conventional	Dryland	274.47	154.07	120.40	120.40	138.57	41.11	37.40	6.20	8.82	0.48
MI	sfs	Conventional	Dryland	112.36	81.04	31.32	31.32	44.27	10.45	10.62	1.64	33.08	2.05
MI	sfs	Conventional	Irrigated	193.51	127.58	65.93	65.93	53.68	10.65	11.08	2.05	68.35	3.50
MI	sfs	Conservation	Dryland	112.40	84.07	28.33	28.33	39.74	8.96	9.21	1.51	40.58	2.24
MI	sfs	Conservation	Irrigated	186.68	123.05	63.62	63.62	49.20	9.22	9.66	1.94	68.53	3.38
MI	sfs	No Till	Dryland	125.35	106.31	19.04	19.04	27.50	5.19	5.90	0.76	73.66	4.39
MI	sfs	No Till	Irrigated	205.86	152.21	53.65	53.65	36.91	5.39	6.36	1.16	108.22	5.93
MI	sfc	Conventional	Dryland	112.36	81.04	31.32	31.32	44.27	10.45	10.62	1.64	33.08	2.05
MI	sfc	Conventional	Irrigated	193.51	127.58	65.93	65.93	53.68	10.65	11.08	2.05	68.35	3.50
MI	sfc	Conservation	Dryland	112.40	84.07	28.33	28.33	39.74	8.96	9.21	1.51	40.58	2.24
MI	sfc	Conservation	Irrigated	186.68	123.05	63.62	63.62	49.20	9.22	9.66	1.94	68.53	3.38
MI	sfc	No Till	Dryland	125.35	106.31	19.04	19.04	27.50	5.19	5.90	0.76	73.66	4.39
MI	sfc	No Till	Irrigated	205.86	152.21	53.65	53.65	36.91	5.39	6.36	1.16	108.22	5.93
MI	sfw	Conventional	Dryland	112.36	81.04	31.32	31.32	44.27	10.45	10.62	1.64	33.08	2.05
MI	sfw	Conventional	Irrigated	193.51	127.58	65.93	65.93	53.68	10.65	11.08	2.05	68.35	3.50
MI	sfw	Conservation	Dryland	112.40	84.07	28.33	28.33	39.74	8.96	9.21	1.51	40.58	2.24
MI	sfw	Conservation	Irrigated	186.68	123.05	63.62	63.62	49.20	9.22	9.66	1.94	68.53	3.38
MI	sfw	No Till	Dryland	125.35	106.31	19.04	19.04	27.50	5.19	5.90	0.76	73.66	4.39
MI	sfw	No Till	Irrigated	205.86	152.21	53.65	53.65	36.91	5.39	6.36	1.16	108.22	5.93
MI	sfo	Conventional	Dryland	112.36	81.04	31.32	31.32	44.27	10.45	10.62	1.64	33.08	2.05
MI	sfo	Conventional	Irrigated	193.51	127.58	65.93	65.93	53.68	10.65	11.08	2.05	68.35	3.50
MI	sfo	Conservation	Dryland	112.40	84.07	28.33	28.33	39.74	8.96	9.21	1.51	40.58	2.24
MI	sfo	Conservation	Irrigated	186.68	123.05	63.62	63.62	49.20	9.22	9.66	1.94	68.53	3.38
MI	sfo	No Till	Dryland	125.35	106.31	19.04	19.04	27.50	5.19	5.90	0.76	73.66	4.39
MI	sfo	No Till	Irrigated	205.86	152.21	53.65	53.65	36.91	5.39	6.36	1.16	108.22	5.93
MI	wfs	Conventional	Dryland	89.09	56.69	32.40	32.40	28.68	6.67	7.27	1.16	26.08	0.77
MI	wfs	Conservation	Dryland	96.58	67.45	29.13	29.13	26.26	6.15	6.79	1.09	38.97	1.13
MI	wfs	No Till	Dryland	87.22	59.28	27.94	27.94	23.31	4.93	5.68	0.99	33.99	0.99
MI	wfc	Conventional	Dryland	89.09	56.69	32.40	32.40	28.68	6.67	7.27	1.16	26.08	0.77
MI	wfc	Conservation	Dryland	96.58	67.45	29.13	29.13	26.26	6.15	6.79	1.09	38.97	1.13
MI	wfc	No Till	Dryland	87.22	59.28	27.94	27.94	23.31	4.93	5.68	0.99	33.99	0.99
MI	wfw	Conventional	Dryland	89.09	56.69	32.40	32.40	28.68	6.67	7.27	1.16	26.08	0.77
MI	wfw	Conservation	Dryland	96.58	67.45	29.13	29.13	26.26	6.15	6.79	1.09	38.97	1.13
MI	wfw	No Till	Dryland	87.22	59.28	27.94	27.94	23.31	4.93	5.68	0.99	33.99	0.99
MN	cfs	Conventional	Dryland	165.02	122.60	42.43	42.43	41.92	9.84	10.08	1.50	73.95	5.23
MN	cfs	Conventional	Irrigated	324.25	209.36	114.88	114.88	66.22	11.98	12.57	2.61	132.92	7.62
MN	cfs	Conservation	Dryland	159.08	119.50	39.58	39.58	38.79	9.57	9.83	1.53	73.95	5.23
MN	cfs	Conservation	Irrigated	309.29	200.49	108.80	108.80	57.60	9.97	10.74	2.36	132.92	7.62
MN	cfs	No Till	Dryland	152.89	118.40	34.49	34.49	29.46	6.47	7.08	1.07	81.90	5.98
MN	cfs	No Till	Irrigated	303.10	199.39	103.70	103.70	48.27	6.87	7.99	1.89	140.87	8.36
MN	cfc	Conventional	Dryland	166.04	123.62	42.43	42.43	41.92	9.84	10.08	1.50	74.97	5.23
MN	cfc	Conventional	Irrigated	325.27	210.38	114.88	114.88	66.22	11.98	12.57	2.61	133.94	7.62
MN	cfc	Conservation	Dryland	160.10	120.52	39.58	39.58	38.79	9.57	9.83	1.53	74.97	5.23
MN	cfc	Conservation	Irrigated	310.31	201.51	108.80	108.80	57.60	9.97	10.74	2.36	133.94	7.62
MN	cfc	No Till	Dryland	153.91	119.42	34.49	34.49	29.46	6.47	7.08	1.07	82.92	5.98
MN	cfc	No Till	Irrigated	304.12	200.41	103.70	103.70	48.27	6.87	7.99	1.89	141.89	8.36
MN	cfw	Conventional	Dryland	166.04	123.62	42.43	42.43	41.92	9.84	10.08	1.50	74.97	5.23
MN	cfw	Conventional	Irrigated	325.27	210.38	114.88	114.88	66.22	11.98	12.57	2.61	133.94	7.62
MN	cfw	Conservation	Dryland	160.10	120.52	39.58	39.58	38.79	9.57	9.83	1.53	74.97	5.23
MN	cfw	Conservation	Irrigated	310.31	201.51	108.80	108.80	57.60	9.97	10.74	2.36	133.94	7.62

ASM Region	Rotation	Tillage	Irrigation	Total	Total	Total	Machinery Costs				Input Costs		
				Cost	Variable	Fixed	Fixed	Variable	Labor	Fuel	Capital	Variable	Capital
MN	cfw	No Till	Dryland	153.91	119.42	34.49	34.49	29.46	6.47	7.08	1.07	82.92	5.98
MN	cfw	No Till	Irrigated	304.12	200.41	103.70	103.70	48.27	6.87	7.99	1.89	141.89	8.36
MN	cfa	Conventional	Dryland	165.02	122.60	42.43	42.43	41.92	9.84	10.08	1.50	73.95	5.23
MN	cfa	Conventional	Irrigated	324.25	209.36	114.88	114.88	66.22	11.98	12.57	2.61	132.92	7.62
MN	cfa	Conservation	Dryland	159.08	119.50	39.58	39.58	38.79	9.57	9.83	1.53	73.95	5.23
MN	cfa	Conservation	Irrigated	309.29	200.49	108.80	108.80	57.60	9.97	10.74	2.36	132.92	7.62
MN	cfa	No Till	Dryland	152.89	118.40	34.49	34.49	29.46	6.47	7.08	1.07	81.90	5.98
MN	cfa	No Till	Irrigated	303.10	199.39	103.70	103.70	48.27	6.87	7.99	1.89	140.87	8.36
MN	cfo	Conventional	Dryland	166.04	123.62	42.43	42.43	41.92	9.84	10.08	1.50	74.97	5.23
MN	cfo	Conventional	Irrigated	325.27	210.38	114.88	114.88	66.22	11.98	12.57	2.61	133.94	7.62
MN	cfo	Conservation	Dryland	160.10	120.52	39.58	39.58	38.79	9.57	9.83	1.53	74.97	5.23
MN	cfo	Conservation	Irrigated	310.31	201.51	108.80	108.80	57.60	9.97	10.74	2.36	133.94	7.62
MN	cfo	No Till	Dryland	153.91	119.42	34.49	34.49	29.46	6.47	7.08	1.07	82.92	5.98
MN	cfo	No Till	Irrigated	304.12	200.41	103.70	103.70	48.27	6.87	7.99	1.89	141.89	8.36
MN	afc	Conventional	Dryland	330.24	189.55	140.69	140.69	161.43	46.79	42.57	6.99	19.98	1.15
MN	afa	Conventional	Dryland	331.66	190.97	140.69	140.69	161.43	46.79	42.57	6.99	21.40	1.15
MN	afo	Conventional	Dryland	330.24	189.55	140.69	140.69	161.43	46.79	42.57	6.99	19.98	1.15
MN	sfs	Conventional	Dryland	108.39	78.51	29.88	29.88	42.17	9.09	9.39	1.45	33.43	1.45
MN	sfs	Conventional	Irrigated	259.91	163.18	96.73	96.73	61.35	9.86	10.60	2.28	95.27	4.27
MN	sfs	Conservation	Dryland	106.05	78.82	27.23	27.23	39.12	8.82	9.14	1.47	36.63	1.60
MN	sfs	Conservation	Irrigated	245.33	152.53	92.79	92.79	56.92	9.20	10.00	2.23	89.41	3.97
MN	sfs	No Till	Dryland	110.68	90.76	19.93	19.93	28.73	5.57	6.25	0.98	57.93	3.11
MN	sfs	No Till	Irrigated	268.28	181.71	86.57	86.57	47.84	6.34	7.46	1.81	125.64	6.43
MN	sfc	Conventional	Dryland	106.49	76.61	29.88	29.88	42.17	9.09	9.39	1.45	31.53	1.45
MN	sfc	Conventional	Irrigated	257.53	160.80	96.73	96.73	61.35	9.86	10.60	2.28	92.90	4.27
MN	sfc	Conservation	Dryland	104.15	76.92	27.23	27.23	39.12	8.82	9.14	1.47	34.73	1.60
MN	sfc	Conservation	Irrigated	242.95	150.16	92.79	92.79	56.92	9.20	10.00	2.23	87.03	3.97
MN	sfc	No Till	Dryland	108.78	88.86	19.93	19.93	28.73	5.57	6.25	0.98	56.03	3.11
MN	sfc	No Till	Irrigated	265.91	179.34	86.57	86.57	47.84	6.34	7.46	1.81	123.27	6.43
MN	sfw	Conventional	Dryland	106.49	76.61	29.88	29.88	42.17	9.09	9.39	1.45	31.53	1.45
MN	sfw	Conventional	Irrigated	257.53	160.80	96.73	96.73	61.35	9.86	10.60	2.28	92.90	4.27
MN	sfw	Conservation	Dryland	104.15	76.92	27.23	27.23	39.12	8.82	9.14	1.47	34.73	1.60
MN	sfw	Conservation	Irrigated	242.95	150.16	92.79	92.79	56.92	9.20	10.00	2.23	87.03	3.97
MN	sfw	No Till	Dryland	108.78	88.86	19.93	19.93	28.73	5.57	6.25	0.98	56.03	3.11
MN	sfw	No Till	Irrigated	265.91	179.34	86.57	86.57	47.84	6.34	7.46	1.81	123.27	6.43
MN	sfo	Conventional	Dryland	106.49	76.61	29.88	29.88	42.17	9.09	9.39	1.45	31.53	1.45
MN	sfo	Conventional	Irrigated	257.53	160.80	96.73	96.73	61.35	9.86	10.60	2.28	92.90	4.27
MN	sfo	Conservation	Dryland	104.15	76.92	27.23	27.23	39.12	8.82	9.14	1.47	34.73	1.60
MN	sfo	Conservation	Irrigated	242.95	150.16	92.79	92.79	56.92	9.20	10.00	2.23	87.03	3.97
MN	sfo	No Till	Dryland	108.78	88.86	19.93	19.93	28.73	5.57	6.25	0.98	56.03	3.11
MN	sfo	No Till	Irrigated	265.91	179.34	86.57	86.57	47.84	6.34	7.46	1.81	123.27	6.43
MN	wfs	Conventional	Dryland	136.80	97.89	38.91	38.91	37.02	8.51	8.94	1.56	56.53	2.77
MN	wfs	Conservation	Dryland	118.47	88.28	30.19	30.19	27.76	6.56	7.17	1.22	56.53	2.77
MN	wfs	No Till	Dryland	121.88	92.85	29.03	29.03	24.61	5.31	6.03	1.09	63.83	3.32
MN	wfc	Conventional	Dryland	136.80	97.89	38.91	38.91	37.02	8.51	8.94	1.56	56.53	2.77
MN	wfc	Conservation	Dryland	118.47	88.28	30.19	30.19	27.76	6.56	7.17	1.22	56.53	2.77
MN	wfc	No Till	Dryland	121.88	92.85	29.03	29.03	24.61	5.31	6.03	1.09	63.83	3.32
MN	wfw	Conventional	Dryland	136.80	97.89	38.91	38.91	37.02	8.51	8.94	1.56	56.53	2.77
MN	wfw	Conservation	Dryland	118.47	88.28	30.19	30.19	27.76	6.56	7.17	1.22	56.53	2.77
MN	wfw	No Till	Dryland	121.88	92.85	29.03	29.03	24.61	5.31	6.03	1.09	63.83	3.32
MO	cfs	Conventional	Dryland	161.44	116.69	44.75	44.75	37.81	10.71	8.12	1.77	72.42	4.69

ASM Region	Rotation	Tillage	Irrigation	Total	Total	Total	Machinery Costs					Input Costs	
				Cost	Variable	Fixed	Fixed	Variable	Labor	Fuel	Capital	Variable	Capital
MO	cfs	Conventional	Irrigated	193.30	147.57	45.74	45.74	44.19	10.85	8.23	2.06	95.54	5.77
MO	cfs	Conservation	Dryland	156.64	114.42	42.22	42.22	35.72	9.98	7.76	1.59	72.42	4.69
MO	cfs	Conservation	Irrigated	188.50	145.29	43.20	43.20	42.10	10.12	7.87	1.89	95.54	5.77
MO	cfs	No Till	Dryland	143.43	107.68	35.75	35.75	29.37	7.08	6.17	1.21	72.42	4.69
MO	cfs	No Till	Irrigated	175.29	138.56	36.73	36.73	35.75	7.22	6.27	1.50	95.54	5.77
MO	cfc	Conventional	Dryland	163.43	118.68	44.75	44.75	37.81	10.71	8.12	1.77	74.40	4.69
MO	cfc	Conventional	Irrigated	195.75	150.01	45.74	45.74	44.19	10.85	8.23	2.06	97.99	5.77
MO	cfc	Conservation	Dryland	158.62	116.41	42.22	42.22	35.72	9.98	7.76	1.59	74.40	4.69
MO	cfc	Conservation	Irrigated	190.94	147.74	43.20	43.20	42.10	10.12	7.87	1.89	97.99	5.77
MO	cfc	No Till	Dryland	145.42	109.67	35.75	35.75	29.37	7.08	6.17	1.21	74.40	4.69
MO	cfc	No Till	Irrigated	177.74	141.00	36.73	36.73	35.75	7.22	6.27	1.50	97.99	5.77
MO	cfw	Conventional	Dryland	163.43	118.68	44.75	44.75	37.81	10.71	8.12	1.77	74.40	4.69
MO	cfw	Conventional	Irrigated	195.75	150.01	45.74	45.74	44.19	10.85	8.23	2.06	97.99	5.77
MO	cfw	Conservation	Dryland	158.62	116.41	42.22	42.22	35.72	9.98	7.76	1.59	74.40	4.69
MO	cfw	Conservation	Irrigated	190.94	147.74	43.20	43.20	42.10	10.12	7.87	1.89	97.99	5.77
MO	cfw	No Till	Dryland	145.42	109.67	35.75	35.75	29.37	7.08	6.17	1.21	74.40	4.69
MO	cfw	No Till	Irrigated	177.74	141.00	36.73	36.73	35.75	7.22	6.27	1.50	97.99	5.77
MO	cfa	Conventional	Dryland	163.36	118.61	44.75	44.75	37.81	10.71	8.12	1.77	74.34	4.69
MO	cfa	Conventional	Irrigated	195.22	149.49	45.74	45.74	44.19	10.85	8.23	2.06	97.46	5.77
MO	cfa	Conservation	Dryland	158.56	116.34	42.22	42.22	35.72	9.98	7.76	1.59	74.34	4.69
MO	cfa	Conservation	Irrigated	190.42	147.21	43.20	43.20	42.10	10.12	7.87	1.89	97.46	5.77
MO	cfa	No Till	Dryland	145.35	109.60	35.75	35.75	29.37	7.08	6.17	1.21	74.34	4.69
MO	cfa	No Till	Irrigated	177.21	140.48	36.73	36.73	35.75	7.22	6.27	1.50	97.46	5.77
MO	cfo	Conventional	Dryland	163.43	118.68	44.75	44.75	37.81	10.71	8.12	1.77	74.40	4.69
MO	cfo	Conventional	Irrigated	195.75	150.01	45.74	45.74	44.19	10.85	8.23	2.06	97.99	5.77
MO	cfo	Conservation	Dryland	158.62	116.41	42.22	42.22	35.72	9.98	7.76	1.59	74.40	4.69
MO	cfo	Conservation	Irrigated	190.94	147.74	43.20	43.20	42.10	10.12	7.87	1.89	97.99	5.77
MO	cfo	No Till	Dryland	145.42	109.67	35.75	35.75	29.37	7.08	6.17	1.21	74.40	4.69
MO	cfo	No Till	Irrigated	177.74	141.00	36.73	36.73	35.75	7.22	6.27	1.50	97.99	5.77
MO	afc	Conventional	Dryland	225.84	125.32	100.52	100.52	110.54	41.11	24.50	4.76	9.24	0.78
MO	afa	Conventional	Dryland	228.63	128.11	100.52	100.52	110.54	41.11	24.50	4.76	12.03	0.78
MO	afo	Conventional	Dryland	225.84	125.32	100.52	100.52	110.54	41.11	24.50	4.76	9.24	0.78
MO	sfs	Conventional	Dryland	142.47	96.56	45.90	45.90	44.18	13.37	11.45	1.94	47.34	3.10
MO	sfs	Conventional	Irrigated	186.50	139.19	47.31	47.31	53.29	13.57	11.60	2.36	79.11	4.42
MO	sfs	Conservation	Dryland	172.94	129.53	43.40	43.40	41.22	12.20	10.80	1.88	81.11	5.33
MO	sfs	Conservation	Irrigated	220.15	175.33	44.81	44.81	50.32	12.40	10.95	2.30	115.88	6.83
MO	sfs	No Till	Dryland	110.62	80.71	29.92	29.92	29.11	7.51	8.27	1.16	47.34	3.10
MO	sfs	No Till	Irrigated	154.61	123.29	31.33	31.33	38.21	7.71	8.42	1.54	79.11	4.42
MO	sfc	Conventional	Dryland	139.68	93.77	45.90	45.90	44.18	13.37	11.45	1.94	44.55	3.10
MO	sfc	Conventional	Irrigated	182.78	135.47	47.31	47.31	53.29	13.57	11.60	2.36	75.39	4.42
MO	sfc	Conservation	Dryland	170.15	126.74	43.40	43.40	41.22	12.20	10.80	1.88	78.32	5.33
MO	sfc	Conservation	Irrigated	216.43	171.61	44.81	44.81	50.32	12.40	10.95	2.30	112.16	6.83
MO	sfc	No Till	Dryland	107.83	77.92	29.92	29.92	29.11	7.51	8.27	1.16	44.55	3.10
MO	sfc	No Till	Irrigated	150.89	119.57	31.33	31.33	38.21	7.71	8.42	1.54	75.39	4.42
MO	sfw	Conventional	Dryland	139.68	93.77	45.90	45.90	44.18	13.37	11.45	1.94	44.55	3.10
MO	sfw	Conventional	Irrigated	182.78	135.47	47.31	47.31	53.29	13.57	11.60	2.36	75.39	4.42
MO	sfw	Conservation	Dryland	170.15	126.74	43.40	43.40	41.22	12.20	10.80	1.88	78.32	5.33
MO	sfw	Conservation	Irrigated	216.43	171.61	44.81	44.81	50.32	12.40	10.95	2.30	112.16	6.83
MO	sfw	No Till	Dryland	107.83	77.92	29.92	29.92	29.11	7.51	8.27	1.16	44.55	3.10
MO	sfw	No Till	Irrigated	150.89	119.57	31.33	31.33	38.21	7.71	8.42	1.54	75.39	4.42
MO	sfo	Conventional	Dryland	139.68	93.77	45.90	45.90	44.18	13.37	11.45	1.94	44.55	3.10

ASM Region	Rotation	Tillage	Irrigation	Total	Total	Total	Machinery Costs				Input Costs		
				Cost	Variable	Fixed	Fixed	Variable	Labor	Fuel	Capital	Variable	Capital
MO	sfo	Conventional	Irrigated	182.78	135.47	47.31	47.31	53.29	13.57	11.60	2.36	75.39	4.42
MO	sfo	Conservation	Dryland	170.15	126.74	43.40	43.40	41.22	12.20	10.80	1.88	78.32	5.33
MO	sfo	Conservation	Irrigated	216.43	171.61	44.81	44.81	50.32	12.40	10.95	2.30	112.16	6.83
MO	sfo	No Till	Dryland	107.83	77.92	29.92	29.92	29.11	7.51	8.27	1.16	44.55	3.10
MO	sfo	No Till	Irrigated	150.89	119.57	31.33	31.33	38.21	7.71	8.42	1.54	75.39	4.42
MO	wfs	Conventional	Dryland	113.06	78.25	34.81	34.81	32.44	8.57	8.81	1.62	42.66	1.53
MO	wfs	Conventional	Irrigated	132.03	96.66	35.37	35.37	36.09	8.65	8.88	1.84	56.32	2.41
MO	wfs	Conservation	Dryland	134.85	92.82	42.03	42.03	31.91	8.22	8.60	1.61	57.45	1.85
MO	wfs	Conservation	Irrigated	153.82	111.23	42.59	42.59	35.55	8.30	8.66	1.83	71.11	2.74
MO	wfs	No Till	Dryland	108.50	76.48	32.02	32.02	30.71	7.75	8.40	1.58	42.66	1.53
MO	wfs	No Till	Irrigated	127.47	94.89	32.58	32.58	34.35	7.83	8.46	1.80	56.32	2.41
MO	wfc	Conventional	Dryland	113.06	78.25	34.81	34.81	32.44	8.57	8.81	1.62	42.66	1.53
MO	wfc	Conventional	Irrigated	132.03	96.66	35.37	35.37	36.09	8.65	8.88	1.84	56.32	2.41
MO	wfc	Conservation	Dryland	134.85	92.82	42.03	42.03	31.91	8.22	8.60	1.61	57.45	1.85
MO	wfc	Conservation	Irrigated	153.82	111.23	42.59	42.59	35.55	8.30	8.66	1.83	71.11	2.74
MO	wfc	No Till	Dryland	108.50	76.48	32.02	32.02	30.71	7.75	8.40	1.58	42.66	1.53
MO	wfc	No Till	Irrigated	127.47	94.89	32.58	32.58	34.35	7.83	8.46	1.80	56.32	2.41
NE	cfs	Conventional	Dryland	137.52	91.96	45.56	45.56	40.78	9.19	9.42	1.95	46.30	2.93
NE	cfs	Conventional	Irrigated	287.12	189.65	97.47	97.47	54.89	9.50	10.10	2.56	125.19	7.01
NE	cfs	Conservation	Dryland	134.45	91.27	43.18	43.18	40.14	9.20	9.43	1.90	46.30	2.93
NE	cfs	Conservation	Irrigated	284.05	188.96	95.10	95.10	54.25	9.51	10.11	2.51	125.19	7.01
NE	cfs	No Till	Dryland	114.54	80.25	34.29	34.29	29.85	6.25	6.63	1.17	46.30	2.93
NE	cfs	No Till	Irrigated	264.15	177.94	86.21	86.21	43.96	6.56	7.31	1.78	125.19	7.01
NE	cfc	Conventional	Dryland	138.46	92.90	45.56	45.56	40.78	9.19	9.42	1.95	47.24	2.93
NE	cfc	Conventional	Irrigated	287.58	190.11	97.47	97.47	54.89	9.50	10.10	2.56	125.64	7.01
NE	cfc	Conservation	Dryland	135.39	92.21	43.18	43.18	40.14	9.20	9.43	1.90	47.24	2.93
NE	cfc	Conservation	Irrigated	284.51	189.41	95.10	95.10	54.25	9.51	10.11	2.51	125.64	7.01
NE	cfc	No Till	Dryland	115.48	81.19	34.29	34.29	29.85	6.25	6.63	1.17	47.24	2.93
NE	cfc	No Till	Irrigated	264.60	178.40	86.21	86.21	43.96	6.56	7.31	1.78	125.64	7.01
NE	cfw	Conventional	Dryland	138.46	92.90	45.56	45.56	40.78	9.19	9.42	1.95	47.24	2.93
NE	cfw	Conventional	Irrigated	287.58	190.11	97.47	97.47	54.89	9.50	10.10	2.56	125.64	7.01
NE	cfw	Conservation	Dryland	135.39	92.21	43.18	43.18	40.14	9.20	9.43	1.90	47.24	2.93
NE	cfw	Conservation	Irrigated	284.51	189.41	95.10	95.10	54.25	9.51	10.11	2.51	125.64	7.01
NE	cfw	No Till	Dryland	115.48	81.19	34.29	34.29	29.85	6.25	6.63	1.17	47.24	2.93
NE	cfw	No Till	Irrigated	264.60	178.40	86.21	86.21	43.96	6.56	7.31	1.78	125.64	7.01
NE	cfa	Conventional	Dryland	137.52	91.96	45.56	45.56	40.78	9.19	9.42	1.95	46.30	2.93
NE	cfa	Conventional	Irrigated	287.12	189.65	97.47	97.47	54.89	9.50	10.10	2.56	125.19	7.01
NE	cfa	Conservation	Dryland	134.45	91.27	43.18	43.18	40.14	9.20	9.43	1.90	46.30	2.93
NE	cfa	Conservation	Irrigated	284.05	188.96	95.10	95.10	54.25	9.51	10.11	2.51	125.19	7.01
NE	cfa	No Till	Dryland	114.54	80.25	34.29	34.29	29.85	6.25	6.63	1.17	46.30	2.93
NE	cfa	No Till	Irrigated	264.15	177.94	86.21	86.21	43.96	6.56	7.31	1.78	125.19	7.01
NE	cfo	Conventional	Dryland	138.46	92.90	45.56	45.56	40.78	9.19	9.42	1.95	47.24	2.93
NE	cfo	Conventional	Irrigated	287.58	190.11	97.47	97.47	54.89	9.50	10.10	2.56	125.64	7.01
NE	cfo	Conservation	Dryland	135.39	92.21	43.18	43.18	40.14	9.20	9.43	1.90	47.24	2.93
NE	cfo	Conservation	Irrigated	284.51	189.41	95.10	95.10	54.25	9.51	10.11	2.51	125.64	7.01
NE	cfo	No Till	Dryland	115.48	81.19	34.29	34.29	29.85	6.25	6.63	1.17	47.24	2.93
NE	cfo	No Till	Irrigated	264.60	178.40	86.21	86.21	43.96	6.56	7.31	1.78	125.64	7.01
NE	afc	Conventional	Dryland	310.62	172.02	138.60	138.60	159.28	41.11	39.64	7.41	5.07	0.26
NE	afc	Conventional	Irrigated	494.88	276.81	218.07	218.07	219.11	54.15	52.16	9.60	45.72	2.38
NE	afa	Conventional	Dryland	310.62	172.02	138.60	138.60	159.28	41.11	39.64	7.41	5.07	0.26
NE	afa	Conventional	Irrigated	494.88	276.81	218.07	218.07	219.11	54.15	52.16	9.60	45.72	2.38

ASM Region	Rotation	Tillage	Irrigation	Total	Total	Total	Machinery Costs				Input Costs		
				Cost	Variable	Fixed	Fixed	Variable	Labor	Fuel	Capital	Variable	Capital
NE	afo	Conventional	Dryland	310.62	172.02	138.60	138.60	159.28	41.11	39.64	7.41	5.07	0.26
NE	afo	Conventional	Irrigated	494.88	276.81	218.07	218.07	219.11	54.15	52.16	9.60	45.72	2.38
NE	gfw	Conventional	Dryland	132.02	88.65	43.37	43.37	39.76	9.08	9.38	1.56	44.74	2.59
NE	gfw	Conventional	Irrigated	234.86	152.35	82.51	82.51	55.03	10.84	11.36	2.45	89.78	5.10
NE	gfw	Conservation	Dryland	121.33	84.48	36.85	36.85	32.20	7.09	7.37	1.37	48.14	2.77
NE	gfw	Conservation	Irrigated	229.68	153.25	76.43	76.43	48.79	9.29	9.85	2.36	96.58	5.52
NE	gfw	No Till	Dryland	112.64	78.35	34.29	34.29	29.85	6.25	6.63	1.20	44.74	2.56
NE	gfw	No Till	Irrigated	208.00	137.83	70.17	70.17	41.06	6.97	7.59	1.89	89.78	5.10
NE	gfg	Conventional	Dryland	132.02	88.65	43.37	43.37	39.76	9.08	9.38	1.56	44.74	2.59
NE	gfg	Conventional	Irrigated	234.86	152.35	82.51	82.51	55.03	10.84	11.36	2.45	89.78	5.10
NE	gfg	Conservation	Dryland	121.33	84.48	36.85	36.85	32.20	7.09	7.37	1.37	48.14	2.77
NE	gfg	Conservation	Irrigated	229.68	153.25	76.43	76.43	48.79	9.29	9.85	2.36	96.58	5.52
NE	gfg	No Till	Dryland	112.64	78.35	34.29	34.29	29.85	6.25	6.63	1.20	44.74	2.56
NE	gfg	No Till	Irrigated	208.00	137.83	70.17	70.17	41.06	6.97	7.59	1.89	89.78	5.10
NE	gff	Conventional	Dryland	132.02	88.65	43.37	43.37	39.76	9.08	9.38	1.56	44.74	2.59
NE	gff	Conventional	Irrigated	234.86	152.35	82.51	82.51	55.03	10.84	11.36	2.45	89.78	5.10
NE	gff	Conservation	Dryland	121.33	84.48	36.85	36.85	32.20	7.09	7.37	1.37	48.14	2.77
NE	gff	Conservation	Irrigated	229.68	153.25	76.43	76.43	48.79	9.29	9.85	2.36	96.58	5.52
NE	gff	No Till	Dryland	112.64	78.35	34.29	34.29	29.85	6.25	6.63	1.20	44.74	2.56
NE	gff	No Till	Irrigated	208.00	137.83	70.17	70.17	41.06	6.97	7.59	1.89	89.78	5.10
NE	gfo	Conventional	Dryland	132.02	88.65	43.37	43.37	39.76	9.08	9.38	1.56	44.74	2.59
NE	gfo	Conventional	Irrigated	234.86	152.35	82.51	82.51	55.03	10.84	11.36	2.45	89.78	5.10
NE	gfo	Conservation	Dryland	121.33	84.48	36.85	36.85	32.20	7.09	7.37	1.37	48.14	2.77
NE	gfo	Conservation	Irrigated	229.68	153.25	76.43	76.43	48.79	9.29	9.85	2.36	96.58	5.52
NE	gfo	No Till	Dryland	112.64	78.35	34.29	34.29	29.85	6.25	6.63	1.20	44.74	2.56
NE	gfo	No Till	Irrigated	208.00	137.83	70.17	70.17	41.06	6.97	7.59	1.89	89.78	5.10
NE	sfs	Conventional	Dryland	123.94	82.20	41.73	41.73	41.54	10.25	11.38	2.08	36.49	2.09
NE	sfs	Conventional	Irrigated	202.74	125.86	76.89	76.89	51.53	10.60	11.98	2.52	68.42	3.39
NE	sfs	Conservation	Dryland	135.26	98.23	37.03	37.03	36.10	8.78	9.95	1.67	57.09	3.37
NE	sfs	Conservation	Irrigated	217.72	145.53	72.18	72.18	46.09	9.13	10.55	2.10	92.47	4.88
NE	sfs	No Till	Dryland	112.12	76.78	35.34	35.34	36.52	9.23	11.40	1.69	36.49	2.08
NE	sfs	No Till	Irrigated	192.97	121.76	71.21	71.21	47.73	9.94	12.35	2.22	68.42	3.39
NE	sfc	Conventional	Dryland	122.20	80.46	41.73	41.73	41.54	10.25	11.38	2.08	34.75	2.09
NE	sfc	Conventional	Irrigated	201.00	124.12	76.89	76.89	51.53	10.60	11.98	2.52	66.68	3.39
NE	sfc	Conservation	Dryland	133.52	96.49	37.03	37.03	36.10	8.78	9.95	1.67	55.35	3.37
NE	sfc	Conservation	Irrigated	215.98	143.79	72.18	72.18	46.09	9.13	10.55	2.10	90.73	4.88
NE	sfc	No Till	Dryland	110.38	75.04	35.34	35.34	36.52	9.23	11.40	1.69	34.75	2.08
NE	sfc	No Till	Irrigated	191.23	120.02	71.21	71.21	47.73	9.94	12.35	2.22	66.68	3.39
NE	sfw	Conventional	Dryland	122.20	80.46	41.73	41.73	41.54	10.25	11.38	2.08	34.75	2.09
NE	sfw	Conventional	Irrigated	201.00	124.12	76.89	76.89	51.53	10.60	11.98	2.52	66.68	3.39
NE	sfw	Conservation	Dryland	133.52	96.49	37.03	37.03	36.10	8.78	9.95	1.67	55.35	3.37
NE	sfw	Conservation	Irrigated	215.98	143.79	72.18	72.18	46.09	9.13	10.55	2.10	90.73	4.88
NE	sfw	No Till	Dryland	110.38	75.04	35.34	35.34	36.52	9.23	11.40	1.69	34.75	2.08
NE	sfw	No Till	Irrigated	191.23	120.02	71.21	71.21	47.73	9.94	12.35	2.22	66.68	3.39
NE	sfo	Conventional	Dryland	122.20	80.46	41.73	41.73	41.54	10.25	11.38	2.08	34.75	2.09
NE	sfo	Conventional	Irrigated	201.00	124.12	76.89	76.89	51.53	10.60	11.98	2.52	66.68	3.39
NE	sfo	Conservation	Dryland	133.52	96.49	37.03	37.03	36.10	8.78	9.95	1.67	55.35	3.37
NE	sfo	Conservation	Irrigated	215.98	143.79	72.18	72.18	46.09	9.13	10.55	2.10	90.73	4.88
NE	sfo	No Till	Dryland	110.38	75.04	35.34	35.34	36.52	9.23	11.40	1.69	34.75	2.08
NE	sfo	No Till	Irrigated	191.23	120.02	71.21	71.21	47.73	9.94	12.35	2.22	66.68	3.39
NE	wfs	Conventional	Dryland	107.99	55.92	52.07	52.07	40.71	10.19	11.32	2.00	12.60	0.61

ASM Region	Rotation	Tillage	Irrigation	Total	Total	Total	Machinery Costs					Input Costs	
				Cost	Variable	Fixed	Fixed	Variable	Labor	Fuel	Capital	Variable	Capital
NE	wfs	Conventional	Irrigated	129.65	73.07	56.58	56.58	44.82	9.95	11.20	2.25	24.47	1.54
NE	wfs	Conservation	Dryland	105.32	57.36	47.96	47.96	36.74	9.17	10.40	1.81	18.04	0.77
NE	wfs	Conservation	Irrigated	128.70	76.37	52.33	52.33	40.84	8.93	10.28	2.06	31.72	1.75
NE	wfs	No Till	Dryland	99.04	52.54	46.50	46.50	37.37	9.62	11.77	1.96	12.60	0.61
NE	wfs	No Till	Irrigated	120.56	69.69	50.87	50.87	41.48	9.38	11.65	2.20	24.47	1.54
NE	wfc	Conventional	Dryland	107.99	55.92	52.07	52.07	40.71	10.19	11.32	2.00	12.60	0.61
NE	wfc	Conventional	Irrigated	129.65	73.07	56.58	56.58	44.82	9.95	11.20	2.25	24.47	1.54
NE	wfc	Conservation	Dryland	105.32	57.36	47.96	47.96	36.74	9.17	10.40	1.81	18.04	0.77
NE	wfc	Conservation	Irrigated	128.70	76.37	52.33	52.33	40.84	8.93	10.28	2.06	31.72	1.75
NE	wfc	No Till	Dryland	99.04	52.54	46.50	46.50	37.37	9.62	11.77	1.96	12.60	0.61
NE	wfc	No Till	Irrigated	120.56	69.69	50.87	50.87	41.48	9.38	11.65	2.20	24.47	1.54
NE	wfg	Conventional	Dryland	107.99	55.92	52.07	52.07	40.71	10.19	11.32	2.00	12.60	0.61
NE	wfg	Conventional	Irrigated	129.65	73.07	56.58	56.58	44.82	9.95	11.20	2.25	24.47	1.54
NE	wfg	Conservation	Dryland	105.32	57.36	47.96	47.96	36.74	9.17	10.40	1.81	18.04	0.77
NE	wfg	Conservation	Irrigated	128.70	76.37	52.33	52.33	40.84	8.93	10.28	2.06	31.72	1.75
NE	wfg	No Till	Dryland	99.04	52.54	46.50	46.50	37.37	9.62	11.77	1.96	12.60	0.61
NE	wfg	No Till	Irrigated	120.56	69.69	50.87	50.87	41.48	9.38	11.65	2.20	24.47	1.54
NE	wff	Conventional	Dryland	107.99	55.92	52.07	52.07	40.71	10.19	11.32	2.00	12.60	0.61
NE	wff	Conventional	Irrigated	129.65	73.07	56.58	56.58	44.82	9.95	11.20	2.25	24.47	1.54
NE	wff	Conservation	Dryland	105.32	57.36	47.96	47.96	36.74	9.17	10.40	1.81	18.04	0.77
NE	wff	Conservation	Irrigated	128.70	76.37	52.33	52.33	40.84	8.93	10.28	2.06	31.72	1.75
NE	wff	No Till	Dryland	99.04	52.54	46.50	46.50	37.37	9.62	11.77	1.96	12.60	0.61
NE	wff	No Till	Irrigated	120.56	69.69	50.87	50.87	41.48	9.38	11.65	2.20	24.47	1.54
NE	wfo	Conventional	Dryland	107.99	55.92	52.07	52.07	40.71	10.19	11.32	2.00	12.60	0.61
NE	wfo	Conventional	Irrigated	129.65	73.07	56.58	56.58	44.82	9.95	11.20	2.25	24.47	1.54
NE	wfo	Conservation	Dryland	105.32	57.36	47.96	47.96	36.74	9.17	10.40	1.81	18.04	0.77
NE	wfo	Conservation	Irrigated	128.70	76.37	52.33	52.33	40.84	8.93	10.28	2.06	31.72	1.75
NE	wfo	No Till	Dryland	99.04	52.54	46.50	46.50	37.37	9.62	11.77	1.96	12.60	0.61
NE	wfo	No Till	Irrigated	120.56	69.69	50.87	50.87	41.48	9.38	11.65	2.20	24.47	1.54
ND	cfs	Conventional	Dryland	208.49	161.03	47.46	47.46	44.99	9.69	10.83	2.19	107.57	6.28
ND	cfs	Conventional	Irrigated	304.53	228.49	76.04	76.04	53.47	10.03	11.38	2.55	163.27	9.20
ND	cfs	Conservation	Dryland	205.31	159.91	45.39	45.39	44.00	9.65	10.78	2.10	107.57	6.24
ND	cfs	Conservation	Irrigated	301.43	227.46	73.97	73.97	52.48	9.98	11.33	2.51	163.27	9.20
ND	cfs	No Till	Dryland	177.87	145.12	32.75	32.75	30.27	7.20	6.88	1.25	107.57	6.03
ND	cfs	No Till	Irrigated	273.27	212.17	61.10	61.10	38.34	7.53	7.33	1.63	163.27	8.92
ND	cfc	Conventional	Dryland	214.13	166.67	47.46	47.46	44.99	9.69	10.83	2.19	113.21	6.28
ND	cfc	Conventional	Irrigated	312.99	236.95	76.04	76.04	53.47	10.03	11.38	2.55	171.73	9.20
ND	cfc	Conservation	Dryland	210.95	165.55	45.39	45.39	44.00	9.65	10.78	2.10	113.21	6.24
ND	cfc	Conservation	Irrigated	309.89	235.92	73.97	73.97	52.48	9.98	11.33	2.51	171.73	9.20
ND	cfc	No Till	Dryland	183.51	150.76	32.75	32.75	30.27	7.20	6.88	1.25	113.21	6.03
ND	cfc	No Till	Irrigated	281.73	220.63	61.10	61.10	38.34	7.53	7.33	1.63	171.73	8.92
ND	cfw	Conventional	Dryland	214.13	166.67	47.46	47.46	44.99	9.69	10.83	2.19	113.21	6.28
ND	cfw	Conventional	Irrigated	312.99	236.95	76.04	76.04	53.47	10.03	11.38	2.55	171.73	9.20
ND	cfw	Conservation	Dryland	210.95	165.55	45.39	45.39	44.00	9.65	10.78	2.10	113.21	6.24
ND	cfw	Conservation	Irrigated	309.89	235.92	73.97	73.97	52.48	9.98	11.33	2.51	171.73	9.20
ND	cfw	No Till	Dryland	183.51	150.76	32.75	32.75	30.27	7.20	6.88	1.25	113.21	6.03
ND	cfw	No Till	Irrigated	281.73	220.63	61.10	61.10	38.34	7.53	7.33	1.63	171.73	8.92
ND	cfa	Conventional	Dryland	208.49	161.03	47.46	47.46	44.99	9.69	10.83	2.19	107.57	6.28
ND	cfa	Conventional	Irrigated	304.53	228.49	76.04	76.04	53.47	10.03	11.38	2.55	163.27	9.20
ND	cfa	Conservation	Dryland	205.31	159.91	45.39	45.39	44.00	9.65	10.78	2.10	107.57	6.24
ND	cfa	Conservation	Irrigated	301.43	227.46	73.97	73.97	52.48	9.98	11.33	2.51	163.27	9.20

ASM Region	Rotation	Tillage	Irrigation	Total	Total	Total	Machinery Costs				Input Costs		
				Cost	Variable	Fixed	Fixed	Variable	Labor	Fuel	Capital	Variable	Capital
ND	cfa	No Till	Dryland	177.87	145.12	32.75	32.75	30.27	7.20	6.88	1.25	107.57	6.03
ND	cfa	No Till	Irrigated	273.27	212.17	61.10	61.10	38.34	7.53	7.33	1.63	163.27	8.92
ND	cfo	Conventional	Dryland	214.13	166.67	47.46	47.46	44.99	9.69	10.83	2.19	113.21	6.28
ND	cfo	Conventional	Irrigated	312.99	236.95	76.04	76.04	53.47	10.03	11.38	2.55	171.73	9.20
ND	cfo	Conservation	Dryland	210.95	165.55	45.39	45.39	44.00	9.65	10.78	2.10	113.21	6.24
ND	cfo	Conservation	Irrigated	309.89	235.92	73.97	73.97	52.48	9.98	11.33	2.51	171.73	9.20
ND	cfo	No Till	Dryland	183.51	150.76	32.75	32.75	30.27	7.20	6.88	1.25	113.21	6.03
ND	cfo	No Till	Irrigated	281.73	220.63	61.10	61.10	38.34	7.53	7.33	1.63	171.73	8.92
ND	afc	Conventional	Dryland	237.06	130.48	106.58	106.58	122.45	28.26	31.97	5.52	2.25	0.26
ND	afc	Conventional	Irrigated	432.17	249.43	182.73	182.73	180.92	39.21	43.63	7.82	57.57	3.12
ND	afa	Conventional	Dryland	237.06	130.48	106.58	106.58	122.45	28.26	31.97	5.52	2.25	0.26
ND	afa	Conventional	Irrigated	432.17	249.43	182.73	182.73	180.92	39.21	43.63	7.82	57.57	3.12
ND	afo	Conventional	Dryland	237.06	130.48	106.58	106.58	122.45	28.26	31.97	5.52	2.25	0.26
ND	afo	Conventional	Irrigated	432.17	249.43	182.73	182.73	180.92	39.21	43.63	7.82	57.57	3.12
ND	sfs	Conventional	Dryland	127.90	85.08	42.82	42.82	43.40	10.14	11.95	2.08	37.48	2.12
ND	sfs	Conventional	Irrigated	204.03	126.59	77.43	77.43	52.81	10.34	12.40	2.47	67.87	3.45
ND	sfs	Conservation	Dryland	114.38	77.12	37.26	37.26	36.25	8.36	10.10	1.67	37.10	2.11
ND	sfs	Conservation	Irrigated	191.63	119.34	72.29	72.29	45.90	8.60	10.55	2.07	67.87	3.50
ND	sfs	No Till	Dryland	105.34	72.17	33.18	33.18	31.25	7.68	8.64	1.34	37.48	2.09
ND	sfs	No Till	Irrigated	181.46	113.67	67.79	67.79	40.66	7.88	9.10	1.73	67.87	3.42
ND	sfc	Conventional	Dryland	127.90	85.08	42.82	42.82	43.40	10.14	11.95	2.08	37.48	2.12
ND	sfc	Conventional	Irrigated	204.03	126.59	77.43	77.43	52.81	10.34	12.40	2.47	67.87	3.45
ND	sfc	Conservation	Dryland	114.38	77.12	37.26	37.26	36.25	8.36	10.10	1.67	37.10	2.11
ND	sfc	Conservation	Irrigated	191.63	119.34	72.29	72.29	45.90	8.60	10.55	2.07	67.87	3.50
ND	sfc	No Till	Dryland	105.34	72.17	33.18	33.18	31.25	7.68	8.64	1.34	37.48	2.09
ND	sfc	No Till	Irrigated	181.46	113.67	67.79	67.79	40.66	7.88	9.10	1.73	67.87	3.42
ND	sfw	Conventional	Dryland	127.90	85.08	42.82	42.82	43.40	10.14	11.95	2.08	37.48	2.12
ND	sfw	Conventional	Irrigated	204.03	126.59	77.43	77.43	52.81	10.34	12.40	2.47	67.87	3.45
ND	sfw	Conservation	Dryland	114.38	77.12	37.26	37.26	36.25	8.36	10.10	1.67	37.10	2.11
ND	sfw	Conservation	Irrigated	191.63	119.34	72.29	72.29	45.90	8.60	10.55	2.07	67.87	3.50
ND	sfw	No Till	Dryland	105.34	72.17	33.18	33.18	31.25	7.68	8.64	1.34	37.48	2.09
ND	sfw	No Till	Irrigated	181.46	113.67	67.79	67.79	40.66	7.88	9.10	1.73	67.87	3.42
ND	sfo	Conventional	Dryland	127.90	85.08	42.82	42.82	43.40	10.14	11.95	2.08	37.48	2.12
ND	sfo	Conventional	Irrigated	204.03	126.59	77.43	77.43	52.81	10.34	12.40	2.47	67.87	3.45
ND	sfo	Conservation	Dryland	114.38	77.12	37.26	37.26	36.25	8.36	10.10	1.67	37.10	2.11
ND	sfo	Conservation	Irrigated	191.63	119.34	72.29	72.29	45.90	8.60	10.55	2.07	67.87	3.50
ND	sfo	No Till	Dryland	105.34	72.17	33.18	33.18	31.25	7.68	8.64	1.34	37.48	2.09
ND	sfo	No Till	Irrigated	181.46	113.67	67.79	67.79	40.66	7.88	9.10	1.73	67.87	3.42
ND	wfs	Conventional	Dryland	105.99	66.91	39.07	39.07	34.91	7.27	8.32	1.54	29.14	1.33
ND	wfs	Conventional	Irrigated	182.86	109.18	73.68	73.68	44.31	7.47	8.77	2.01	59.92	2.94
ND	wfs	Conservation	Dryland	132.01	73.81	58.20	58.20	39.30	7.99	8.96	2.18	30.66	1.67
ND	wfs	Conservation	Irrigated	184.27	102.73	81.55	81.55	44.98	7.96	9.09	2.45	52.35	2.96
ND	wfs	No Till	Dryland	80.27	51.35	28.93	28.93	24.42	5.71	5.66	1.14	24.58	1.21
ND	wfs	No Till	Irrigated	135.60	82.44	53.16	53.16	31.00	5.85	5.97	1.46	47.41	2.57
ND	wfc	Conventional	Dryland	105.99	66.91	39.07	39.07	34.91	7.27	8.32	1.54	29.14	1.33
ND	wfc	Conventional	Irrigated	182.86	109.18	73.68	73.68	44.31	7.47	8.77	2.01	59.92	2.94
ND	wfc	Conservation	Dryland	132.01	73.81	58.20	58.20	39.30	7.99	8.96	2.18	30.66	1.67
ND	wfc	Conservation	Irrigated	184.27	102.73	81.55	81.55	44.98	7.96	9.09	2.45	52.35	2.96
ND	wfc	No Till	Dryland	80.27	51.35	28.93	28.93	24.42	5.71	5.66	1.14	24.58	1.21
ND	wfc	No Till	Irrigated	135.60	82.44	53.16	53.16	31.00	5.85	5.97	1.46	47.41	2.57
ND	wfg	Conventional	Dryland	105.99	66.91	39.07	39.07	34.91	7.27	8.32	1.54	29.14	1.33

ASM Region	Rotation	Tillage	Irrigation	Total	Total	Total	Machinery Costs					Input Costs	
				Cost	Variable	Fixed	Fixed	Variable	Labor	Fuel	Capital	Variable	Capital
ND	wfg	Conventional	Irrigated	182.86	109.18	73.68	73.68	44.31	7.47	8.77	2.01	59.92	2.94
ND	wfg	Conservation	Dryland	132.01	73.81	58.20	58.20	39.30	7.99	8.96	2.18	30.66	1.67
ND	wfg	Conservation	Irrigated	184.27	102.73	81.55	81.55	44.98	7.96	9.09	2.45	52.35	2.96
ND	wfg	No Till	Dryland	80.27	51.35	28.93	28.93	24.42	5.71	5.66	1.14	24.58	1.21
ND	wfg	No Till	Irrigated	135.60	82.44	53.16	53.16	31.00	5.85	5.97	1.46	47.41	2.57
ND	wff	Conventional	Dryland	105.99	66.91	39.07	39.07	34.91	7.27	8.32	1.54	29.14	1.33
ND	wff	Conventional	Irrigated	182.86	109.18	73.68	73.68	44.31	7.47	8.77	2.01	59.92	2.94
ND	wff	Conservation	Dryland	132.01	73.81	58.20	58.20	39.30	7.99	8.96	2.18	30.66	1.67
ND	wff	Conservation	Irrigated	184.27	102.73	81.55	81.55	44.98	7.96	9.09	2.45	52.35	2.96
ND	wff	No Till	Dryland	80.27	51.35	28.93	28.93	24.42	5.71	5.66	1.14	24.58	1.21
ND	wff	No Till	Irrigated	135.60	82.44	53.16	53.16	31.00	5.85	5.97	1.46	47.41	2.57
ND	wfo	Conventional	Dryland	105.99	66.91	39.07	39.07	34.91	7.27	8.32	1.54	29.14	1.33
ND	wfo	Conventional	Irrigated	182.86	109.18	73.68	73.68	44.31	7.47	8.77	2.01	59.92	2.94
ND	wfo	Conservation	Dryland	132.01	73.81	58.20	58.20	39.30	7.99	8.96	2.18	30.66	1.67
ND	wfo	Conservation	Irrigated	184.27	102.73	81.55	81.55	44.98	7.96	9.09	2.45	52.35	2.96
ND	wfo	No Till	Dryland	80.27	51.35	28.93	28.93	24.42	5.71	5.66	1.14	24.58	1.21
ND	wfo	No Till	Irrigated	135.60	82.44	53.16	53.16	31.00	5.85	5.97	1.46	47.41	2.57
NEOH	cfs	Conventional	Dryland	165.53	125.27	40.26	40.26	39.79	10.16	9.99	1.69	79.52	4.27
NEOH	cfs	Conservation	Dryland	180.51	136.42	44.09	44.09	39.64	9.98	9.79	1.66	89.88	5.24
NEOH	cfs	No Till	Dryland	164.54	127.78	36.76	36.76	31.49	7.08	7.27	1.16	89.88	5.24
NEOH	cfc	Conventional	Dryland	169.93	129.66	40.26	40.26	39.79	10.16	9.99	1.69	83.91	4.27
NEOH	cfc	Conservation	Dryland	184.93	140.84	44.09	44.09	39.64	9.98	9.79	1.66	94.30	5.24
NEOH	cfc	No Till	Dryland	168.96	132.20	36.76	36.76	31.49	7.08	7.27	1.16	94.30	5.24
NEOH	cfw	Conventional	Dryland	167.00	126.73	40.26	40.26	39.79	10.16	9.99	1.69	80.98	4.27
NEOH	cfw	Conservation	Dryland	181.99	137.90	44.09	44.09	39.64	9.98	9.79	1.66	91.35	5.24
NEOH	cfw	No Till	Dryland	166.01	129.25	36.76	36.76	31.49	7.08	7.27	1.16	91.35	5.24
NEOH	cfa	Conventional	Dryland	167.97	127.71	40.26	40.26	39.79	10.16	9.99	1.69	81.96	4.27
NEOH	cfa	Conservation	Dryland	182.97	138.88	44.09	44.09	39.64	9.98	9.79	1.66	92.33	5.24
NEOH	cfa	No Till	Dryland	167.00	130.23	36.76	36.76	31.49	7.08	7.27	1.16	92.33	5.24
NEOH	cfo	Conventional	Dryland	167.00	126.73	40.26	40.26	39.79	10.16	9.99	1.69	80.98	4.27
NEOH	cfo	Conservation	Dryland	181.99	137.90	44.09	44.09	39.64	9.98	9.79	1.66	91.35	5.24
NEOH	cfo	No Till	Dryland	166.01	129.25	36.76	36.76	31.49	7.08	7.27	1.16	91.35	5.24
NEOH	afc	Conventional	Dryland	260.24	148.94	111.30	111.30	133.07	41.11	36.20	6.21	9.34	0.32
NEOH	afc	Conventional	Irrigated	372.98	279.86	93.12	93.12	116.64	56.22	17.38	6.16	150.59	6.47
NEOH	afa	Conventional	Dryland	260.71	149.41	111.30	111.30	133.07	41.11	36.20	6.21	9.81	0.32
NEOH	afa	Conventional	Irrigated	373.91	280.79	93.12	93.12	116.64	56.22	17.38	6.16	151.52	6.47
NEOH	afo	Conventional	Dryland	260.24	148.94	111.30	111.30	133.07	41.11	36.20	6.21	9.34	0.32
NEOH	afo	Conventional	Irrigated	372.98	279.86	93.12	93.12	116.64	56.22	17.38	6.16	150.59	6.47
NEOH	sfs	Conventional	Dryland	126.41	89.15	37.27	37.27	39.05	10.42	11.43	1.62	46.10	2.38
NEOH	sfs	Conservation	Dryland	151.50	110.09	41.42	41.42	40.67	10.83	11.79	1.74	63.93	3.75
NEOH	sfs	No Till	Dryland	116.42	85.95	30.47	30.47	30.27	7.51	8.88	1.23	51.46	2.98
NEOH	sfc	Conventional	Dryland	125.02	87.75	37.27	37.27	39.05	10.42	11.43	1.62	44.70	2.38
NEOH	sfc	Conservation	Dryland	150.11	108.69	41.42	41.42	40.67	10.83	11.79	1.74	62.53	3.75
NEOH	sfc	No Till	Dryland	115.03	84.56	30.47	30.47	30.27	7.51	8.88	1.23	50.07	2.98
NEOH	sfw	Conventional	Dryland	125.02	87.75	37.27	37.27	39.05	10.42	11.43	1.62	44.70	2.38
NEOH	sfw	Conservation	Dryland	150.11	108.69	41.42	41.42	40.67	10.83	11.79	1.74	62.53	3.75
NEOH	sfw	No Till	Dryland	115.03	84.56	30.47	30.47	30.27	7.51	8.88	1.23	50.07	2.98
NEOH	sfo	Conventional	Dryland	125.02	87.75	37.27	37.27	39.05	10.42	11.43	1.62	44.70	2.38
NEOH	sfo	Conservation	Dryland	150.11	108.69	41.42	41.42	40.67	10.83	11.79	1.74	62.53	3.75
NEOH	sfo	No Till	Dryland	115.03	84.56	30.47	30.47	30.27	7.51	8.88	1.23	50.07	2.98
NEOH	wfs	Conventional	Dryland	221.22	135.31	85.91	85.91	89.70	36.29	18.26	4.29	39.38	1.95

ASM Region	Rotation	Tillage	Irrigation	Total	Total	Total	Machinery Costs					Input Costs	
				Cost	Variable	Fixed	Fixed	Variable	Labor	Fuel	Capital	Variable	Capital
NEOH	wfs	Conservation	Dryland	246.33	158.25	88.08	88.08	88.35	35.98	17.92	4.30	62.87	2.74
NEOH	wfs	No Till	Dryland	222.46	139.56	82.90	82.90	87.50	35.47	17.61	4.30	45.55	2.21
NEOH	wfc	Conventional	Dryland	221.22	135.31	85.91	85.91	89.70	36.29	18.26	4.29	39.38	1.95
NEOH	wfc	Conservation	Dryland	246.33	158.25	88.08	88.08	88.35	35.98	17.92	4.30	62.87	2.74
NEOH	wfc	No Till	Dryland	222.46	139.56	82.90	82.90	87.50	35.47	17.61	4.30	45.55	2.21
NWOH	cfs	Conventional	Dryland	166.59	124.58	42.01	42.01	42.20	10.87	10.61	1.72	76.43	4.24
NWOH	cfs	Conservation	Dryland	154.84	120.61	34.23	34.23	30.72	7.25	7.44	1.12	83.51	5.25
NWOH	cfs	No Till	Dryland	140.75	107.28	33.47	33.47	27.97	6.08	6.48	1.02	73.53	4.76
NWOH	cfc	Conventional	Dryland	170.99	128.98	42.01	42.01	42.20	10.87	10.61	1.72	80.82	4.24
NWOH	cfc	Conservation	Dryland	159.32	125.08	34.23	34.23	30.72	7.25	7.44	1.12	87.99	5.25
NWOH	cfc	No Till	Dryland	145.23	111.76	33.47	33.47	27.97	6.08	6.48	1.02	78.01	4.76
NWOH	cfw	Conventional	Dryland	168.06	126.05	42.01	42.01	42.20	10.87	10.61	1.72	77.89	4.24
NWOH	cfw	Conservation	Dryland	156.33	122.10	34.23	34.23	30.72	7.25	7.44	1.12	85.00	5.25
NWOH	cfw	No Till	Dryland	142.24	108.77	33.47	33.47	27.97	6.08	6.48	1.02	75.02	4.76
NWOH	cfa	Conventional	Dryland	169.03	127.02	42.01	42.01	42.20	10.87	10.61	1.72	78.87	4.24
NWOH	cfa	Conservation	Dryland	157.33	123.09	34.23	34.23	30.72	7.25	7.44	1.12	86.00	5.25
NWOH	cfa	No Till	Dryland	143.24	109.77	33.47	33.47	27.97	6.08	6.48	1.02	76.02	4.76
NWOH	cfo	Conventional	Dryland	168.06	126.05	42.01	42.01	42.20	10.87	10.61	1.72	77.89	4.24
NWOH	cfo	Conservation	Dryland	156.33	122.10	34.23	34.23	30.72	7.25	7.44	1.12	85.00	5.25
NWOH	cfo	No Till	Dryland	142.24	108.77	33.47	33.47	27.97	6.08	6.48	1.02	75.02	4.76
NWOH	afc	Conventional	Dryland	260.20	148.90	111.30	111.30	133.07	41.11	36.20	6.24	9.27	0.31
NWOH	afc	Conventional	Irrigated	377.80	284.68	93.12	93.12	116.64	56.22	17.38	6.22	154.97	6.84
NWOH	afa	Conventional	Dryland	260.66	149.36	111.30	111.30	133.07	41.11	36.20	6.24	9.73	0.31
NWOH	afa	Conventional	Irrigated	378.73	285.61	93.12	93.12	116.64	56.22	17.38	6.22	155.90	6.84
NWOH	afo	Conventional	Dryland	260.20	148.90	111.30	111.30	133.07	41.11	36.20	6.24	9.27	0.31
NWOH	afo	Conventional	Irrigated	377.80	284.68	93.12	93.12	116.64	56.22	17.38	6.22	154.97	6.84
NWOH	sfs	Conventional	Dryland	129.61	92.34	37.27	37.27	39.05	10.42	11.43	1.62	49.10	2.58
NWOH	sfs	Conservation	Dryland	135.48	94.07	41.42	41.42	40.67	10.83	11.79	1.73	49.10	2.58
NWOH	sfs	No Till	Dryland	119.58	88.24	31.34	31.34	31.47	7.89	9.21	1.25	52.72	2.81
NWOH	sfc	Conventional	Dryland	128.21	90.95	37.27	37.27	39.05	10.42	11.43	1.62	47.70	2.58
NWOH	sfc	Conservation	Dryland	134.09	92.67	41.42	41.42	40.67	10.83	11.79	1.73	47.70	2.58
NWOH	sfc	No Till	Dryland	118.19	86.85	31.34	31.34	31.47	7.89	9.21	1.25	51.32	2.81
NWOH	sfw	Conventional	Dryland	128.21	90.95	37.27	37.27	39.05	10.42	11.43	1.62	47.70	2.58
NWOH	sfw	Conservation	Dryland	134.09	92.67	41.42	41.42	40.67	10.83	11.79	1.73	47.70	2.58
NWOH	sfw	No Till	Dryland	118.19	86.85	31.34	31.34	31.47	7.89	9.21	1.25	51.32	2.81
NWOH	sfo	Conventional	Dryland	128.21	90.95	37.27	37.27	39.05	10.42	11.43	1.62	47.70	2.58
NWOH	sfo	Conservation	Dryland	134.09	92.67	41.42	41.42	40.67	10.83	11.79	1.73	47.70	2.58
NWOH	sfo	No Till	Dryland	118.19	86.85	31.34	31.34	31.47	7.89	9.21	1.25	51.32	2.81
NWOH	wfs	Conventional	Dryland	206.89	123.01	83.88	83.88	86.33	35.21	17.32	4.11	30.88	1.68
NWOH	wfs	Conservation	Dryland	204.55	120.48	84.07	84.07	83.83	34.58	16.78	4.08	30.88	1.68
NWOH	wfs	No Till	Dryland	234.05	129.78	104.27	104.27	92.71	35.82	18.12	4.50	30.88	1.68
NWOH	wfc	Conventional	Dryland	206.89	123.01	83.88	83.88	86.33	35.21	17.32	4.11	30.88	1.68
NWOH	wfc	Conservation	Dryland	204.55	120.48	84.07	84.07	83.83	34.58	16.78	4.08	30.88	1.68
NWOH	wfc	No Till	Dryland	234.05	129.78	104.27	104.27	92.71	35.82	18.12	4.50	30.88	1.68
SOH	cfs	Conventional	Dryland	176.21	134.20	42.01	42.01	42.20	10.87	10.61	1.81	85.69	4.50
SOH	cfs	Conservation	Dryland	160.51	124.53	35.98	35.98	33.13	7.96	8.06	1.21	85.69	4.50
SOH	cfs	No Till	Dryland	156.48	120.80	35.68	35.68	30.21	6.70	6.93	1.14	84.93	4.51
SOH	cfc	Conventional	Dryland	180.60	138.59	42.01	42.01	42.20	10.87	10.61	1.81	90.09	4.50
SOH	cfc	Conservation	Dryland	164.91	128.93	35.98	35.98	33.13	7.96	8.06	1.21	90.09	4.50
SOH	cfc	No Till	Dryland	160.88	125.20	35.68	35.68	30.21	6.70	6.93	1.14	89.33	4.51
SOH	cfw	Conventional	Dryland	177.67	135.66	42.01	42.01	42.20	10.87	10.61	1.81	87.16	4.50

ASM Region	Rotation	Tillage	Irrigation	Total	Total	Total	Machinery Costs					Input Costs	
				Cost	Variable	Fixed	Fixed	Variable	Labor	Fuel	Capital	Variable	Capital
SOH	cfw	Conservation	Dryland	161.98	126.00	35.98	35.98	33.13	7.96	8.06	1.21	87.16	4.50
SOH	cfw	No Till	Dryland	157.95	122.27	35.68	35.68	30.21	6.70	6.93	1.14	86.40	4.51
SOH	cfa	Conventional	Dryland	178.65	136.64	42.01	42.01	42.20	10.87	10.61	1.81	88.13	4.50
SOH	cfa	Conservation	Dryland	162.96	126.97	35.98	35.98	33.13	7.96	8.06	1.21	88.13	4.50
SOH	cfa	No Till	Dryland	158.93	123.24	35.68	35.68	30.21	6.70	6.93	1.14	87.37	4.51
SOH	cfo	Conventional	Dryland	177.67	135.66	42.01	42.01	42.20	10.87	10.61	1.81	87.16	4.50
SOH	cfo	Conservation	Dryland	161.98	126.00	35.98	35.98	33.13	7.96	8.06	1.21	87.16	4.50
SOH	cfo	No Till	Dryland	157.95	122.27	35.68	35.68	30.21	6.70	6.93	1.14	86.40	4.51
SOH	afc	Conventional	Dryland	260.20	148.90	111.30	111.30	133.07	41.11	36.20	6.24	9.27	0.31
SOH	afc	Conventional	Irrigated	361.87	268.75	93.12	93.12	116.64	56.22	17.38	6.22	139.77	6.11
SOH	afa	Conventional	Dryland	260.66	149.36	111.30	111.30	133.07	41.11	36.20	6.24	9.73	0.31
SOH	afa	Conventional	Irrigated	362.80	269.68	93.12	93.12	116.64	56.22	17.38	6.22	140.70	6.11
SOH	afo	Conventional	Dryland	260.20	148.90	111.30	111.30	133.07	41.11	36.20	6.24	9.27	0.31
SOH	afo	Conventional	Irrigated	361.87	268.75	93.12	93.12	116.64	56.22	17.38	6.22	139.77	6.11
SOH	sfs	Conventional	Dryland	139.91	102.64	37.27	37.27	39.05	10.42	11.43	1.68	59.12	2.80
SOH	sfs	Conservation	Dryland	171.42	135.15	36.27	36.27	38.66	10.27	11.29	1.65	89.72	5.13
SOH	sfs	No Till	Dryland	123.87	93.39	30.47	30.47	30.27	7.51	8.88	1.21	59.12	2.79
SOH	sfc	Conventional	Dryland	138.51	101.24	37.27	37.27	39.05	10.42	11.43	1.68	57.72	2.80
SOH	sfc	Conservation	Dryland	170.02	133.76	36.27	36.27	38.66	10.27	11.29	1.65	88.32	5.13
SOH	sfc	No Till	Dryland	122.47	92.00	30.47	30.47	30.27	7.51	8.88	1.21	57.72	2.79
SOH	sfw	Conventional	Dryland	138.51	101.24	37.27	37.27	39.05	10.42	11.43	1.68	57.72	2.80
SOH	sfw	Conservation	Dryland	170.02	133.76	36.27	36.27	38.66	10.27	11.29	1.65	88.32	5.13
SOH	sfw	No Till	Dryland	122.47	92.00	30.47	30.47	30.27	7.51	8.88	1.21	57.72	2.79
SOH	sfo	Conventional	Dryland	138.51	101.24	37.27	37.27	39.05	10.42	11.43	1.68	57.72	2.80
SOH	sfo	Conservation	Dryland	170.02	133.76	36.27	36.27	38.66	10.27	11.29	1.65	88.32	5.13
SOH	sfo	No Till	Dryland	122.47	92.00	30.47	30.47	30.27	7.51	8.88	1.21	57.72	2.79
SOH	wfs	Conventional	Dryland	216.16	132.28	83.88	83.88	86.33	35.21	17.32	4.07	40.15	1.73
SOH	wfs	Conservation	Dryland	237.12	153.05	84.07	84.07	83.83	34.58	16.78	4.02	62.79	2.41
SOH	wfs	No Till	Dryland	216.56	135.69	80.87	80.87	84.13	34.39	16.66	4.02	45.55	1.98
SOH	wfc	Conventional	Dryland	216.16	132.28	83.88	83.88	86.33	35.21	17.32	4.07	40.15	1.73
SOH	wfc	Conservation	Dryland	237.12	153.05	84.07	84.07	83.83	34.58	16.78	4.02	62.79	2.41
SOH	wfc	No Till	Dryland	216.56	135.69	80.87	80.87	84.13	34.39	16.66	4.02	45.55	1.98
SD	cfs	Conventional	Dryland	141.38	119.88	21.50	21.50	21.00	5.60	4.40	1.15	92.99	4.74
SD	cfs	Conventional	Irrigated	271.98	224.52	47.46	47.46	28.54	5.75	4.94	1.54	185.30	9.14
SD	cfs	Conservation	Dryland	114.46	99.90	14.56	14.56	16.43	4.93	3.48	1.04	78.68	3.76
SD	cfs	Conservation	Irrigated	274.08	209.12	64.96	64.96	41.17	8.72	7.93	1.89	157.70	8.36
SD	cfs	No Till	Dryland	133.08	102.19	30.89	30.89	26.68	6.15	5.86	1.12	70.29	4.10
SD	cfs	No Till	Irrigated	260.32	201.74	58.58	58.58	34.20	6.31	6.22	1.48	157.70	8.36
SD	cfc	Conventional	Dryland	143.99	122.49	21.50	21.50	21.00	5.60	4.40	1.15	95.60	4.74
SD	cfc	Conventional	Irrigated	279.81	232.35	47.46	47.46	28.54	5.75	4.94	1.54	193.13	9.14
SD	cfc	Conservation	Dryland	117.07	102.51	14.56	14.56	16.43	4.93	3.48	1.04	81.29	3.76
SD	cfc	Conservation	Irrigated	281.91	216.95	64.96	64.96	41.17	8.72	7.93	1.89	165.53	8.36
SD	cfc	No Till	Dryland	135.69	104.80	30.89	30.89	26.68	6.15	5.86	1.12	72.90	4.10
SD	cfc	No Till	Irrigated	268.15	209.57	58.58	58.58	34.20	6.31	6.22	1.48	165.53	8.36
SD	cfw	Conventional	Dryland	143.12	121.62	21.50	21.50	21.00	5.60	4.40	1.15	94.73	4.74
SD	cfw	Conventional	Irrigated	279.81	232.35	47.46	47.46	28.54	5.75	4.94	1.54	193.13	9.14
SD	cfw	Conservation	Dryland	116.20	101.64	14.56	14.56	16.43	4.93	3.48	1.04	80.42	3.76
SD	cfw	Conservation	Irrigated	281.91	216.95	64.96	64.96	41.17	8.72	7.93	1.89	165.53	8.36
SD	cfw	No Till	Dryland	134.82	103.93	30.89	30.89	26.68	6.15	5.86	1.12	72.03	4.10
SD	cfw	No Till	Irrigated	268.15	209.57	58.58	58.58	34.20	6.31	6.22	1.48	165.53	8.36
SD	cfa	Conventional	Dryland	141.38	119.88	21.50	21.50	21.00	5.60	4.40	1.15	92.99	4.74

ASM Region	Rotation	Tillage	Irrigation	Total	Total	Total	Machinery Costs				Input Costs		
				Cost	Variable	Fixed	Fixed	Variable	Labor	Fuel	Capital	Variable	Capital
SD	cfa	Conventional	Irrigated	271.98	224.52	47.46	47.46	28.54	5.75	4.94	1.54	185.30	9.14
SD	cfa	Conservation	Dryland	114.46	99.90	14.56	14.56	16.43	4.93	3.48	1.04	78.68	3.76
SD	cfa	Conservation	Irrigated	274.08	209.12	64.96	64.96	41.17	8.72	7.93	1.89	157.70	8.36
SD	cfa	No Till	Dryland	133.08	102.19	30.89	30.89	26.68	6.15	5.86	1.12	70.29	4.10
SD	cfa	No Till	Irrigated	260.32	201.74	58.58	58.58	34.20	6.31	6.22	1.48	157.70	8.36
SD	cfo	Conventional	Dryland	143.12	121.62	21.50	21.50	21.00	5.60	4.40	1.15	94.73	4.74
SD	cfo	Conventional	Irrigated	279.81	232.35	47.46	47.46	28.54	5.75	4.94	1.54	193.13	9.14
SD	cfo	Conservation	Dryland	116.20	101.64	14.56	14.56	16.43	4.93	3.48	1.04	80.42	3.76
SD	cfo	Conservation	Irrigated	281.91	216.95	64.96	64.96	41.17	8.72	7.93	1.89	165.53	8.36
SD	cfo	No Till	Dryland	134.82	103.93	30.89	30.89	26.68	6.15	5.86	1.12	72.03	4.10
SD	cfo	No Till	Irrigated	268.15	209.57	58.58	58.58	34.20	6.31	6.22	1.48	165.53	8.36
SD	afc	Conventional	Dryland	185.30	99.74	85.56	85.56	93.50	26.20	20.82	4.56	1.50	0.18
SD	afc	Conventional	Irrigated	354.25	195.98	158.27	158.27	153.32	41.27	34.39	6.92	33.81	1.93
SD	afa	Conventional	Dryland	185.30	99.74	85.56	85.56	93.50	26.20	20.82	4.56	1.50	0.18
SD	afa	Conventional	Irrigated	354.25	195.98	158.27	158.27	153.32	41.27	34.39	6.92	33.81	1.93
SD	afo	Conventional	Dryland	185.30	99.74	85.56	85.56	93.50	26.20	20.82	4.56	1.50	0.18
SD	afo	Conventional	Irrigated	354.25	195.98	158.27	158.27	153.32	41.27	34.39	6.92	33.81	1.93
SD	gfw	Conventional	Dryland	112.50	88.89	23.61	23.61	23.86	5.92	5.08	1.23	61.03	2.77
SD	gfw	Conventional	Irrigated	227.25	162.70	64.55	64.55	33.79	5.94	5.30	1.76	122.11	5.04
SD	gfw	Conservation	Dryland	116.95	78.66	38.29	38.29	33.63	8.08	7.34	1.54	41.23	2.27
SD	gfw	Conservation	Irrigated	234.63	150.09	84.54	84.54	47.99	8.81	8.65	2.21	94.91	4.99
SD	gfw	No Till	Dryland	111.16	76.58	34.58	34.58	30.12	6.25	6.69	1.33	42.76	2.37
SD	gfw	No Till	Irrigated	227.03	147.87	79.17	79.17	41.93	7.03	6.96	1.83	98.85	5.27
SD	gfg	Conventional	Dryland	112.50	88.89	23.61	23.61	23.86	5.92	5.08	1.23	61.03	2.77
SD	gfg	Conventional	Irrigated	227.25	162.70	64.55	64.55	33.79	5.94	5.30	1.76	122.11	5.04
SD	gfg	Conservation	Dryland	116.95	78.66	38.29	38.29	33.63	8.08	7.34	1.54	41.23	2.27
SD	gfg	Conservation	Irrigated	234.63	150.09	84.54	84.54	47.99	8.81	8.65	2.21	94.91	4.99
SD	gfg	No Till	Dryland	111.16	76.58	34.58	34.58	30.12	6.25	6.69	1.33	42.76	2.37
SD	gfg	No Till	Irrigated	227.03	147.87	79.17	79.17	41.93	7.03	6.96	1.83	98.85	5.27
SD	gff	Conventional	Dryland	112.50	88.89	23.61	23.61	23.86	5.92	5.08	1.23	61.03	2.77
SD	gff	Conventional	Irrigated	227.25	162.70	64.55	64.55	33.79	5.94	5.30	1.76	122.11	5.04
SD	gff	Conservation	Dryland	116.95	78.66	38.29	38.29	33.63	8.08	7.34	1.54	41.23	2.27
SD	gff	Conservation	Irrigated	234.63	150.09	84.54	84.54	47.99	8.81	8.65	2.21	94.91	4.99
SD	gff	No Till	Dryland	111.16	76.58	34.58	34.58	30.12	6.25	6.69	1.33	42.76	2.37
SD	gff	No Till	Irrigated	227.03	147.87	79.17	79.17	41.93	7.03	6.96	1.83	98.85	5.27
SD	gfo	Conventional	Dryland	112.50	88.89	23.61	23.61	23.86	5.92	5.08	1.23	61.03	2.77
SD	gfo	Conventional	Irrigated	227.25	162.70	64.55	64.55	33.79	5.94	5.30	1.76	122.11	5.04
SD	gfo	Conservation	Dryland	116.95	78.66	38.29	38.29	33.63	8.08	7.34	1.54	41.23	2.27
SD	gfo	Conservation	Irrigated	234.63	150.09	84.54	84.54	47.99	8.81	8.65	2.21	94.91	4.99
SD	gfo	No Till	Dryland	111.16	76.58	34.58	34.58	30.12	6.25	6.69	1.33	42.76	2.37
SD	gfo	No Till	Irrigated	227.03	147.87	79.17	79.17	41.93	7.03	6.96	1.83	98.85	5.27
SD	sfs	Conventional	Dryland	83.94	69.89	14.04	14.04	14.10	3.52	3.08	1.03	52.30	2.46
SD	sfs	Conventional	Irrigated	162.45	113.80	48.65	48.65	23.51	3.72	3.53	1.43	84.99	3.87
SD	sfs	Conservation	Dryland	102.20	68.87	33.33	33.33	28.48	6.30	6.56	1.09	37.10	2.20
SD	sfs	Conservation	Irrigated	186.87	117.01	69.86	69.86	42.89	8.56	9.49	1.84	68.69	3.59
SD	sfs	No Till	Dryland	103.21	74.12	29.09	29.09	23.08	5.10	5.11	0.70	47.45	2.89
SD	sfs	No Till	Irrigated	184.28	120.57	63.70	63.70	32.48	5.30	5.56	1.09	82.49	4.51
SD	sfc	Conventional	Dryland	83.94	69.89	14.04	14.04	14.10	3.52	3.08	1.03	52.30	2.46
SD	sfc	Conventional	Irrigated	162.45	113.80	48.65	48.65	23.51	3.72	3.53	1.43	84.99	3.87
SD	sfc	Conservation	Dryland	102.20	68.87	33.33	33.33	28.48	6.30	6.56	1.09	37.10	2.20
SD	sfc	Conservation	Irrigated	186.87	117.01	69.86	69.86	42.89	8.56	9.49	1.84	68.69	3.59

ASM Region	Rotation	Tillage	Irrigation	Total	Total	Total	Machinery Costs					Input Costs	
				Cost	Variable	Fixed	Fixed	Variable	Labor	Fuel	Capital	Variable	Capital
SD	sfc	No Till	Dryland	103.21	74.12	29.09	29.09	23.08	5.10	5.11	0.70	47.45	2.89
SD	sfc	No Till	Irrigated	184.28	120.57	63.70	63.70	32.48	5.30	5.56	1.09	82.49	4.51
SD	sfc	Conventional	Dryland	83.94	69.89	14.04	14.04	14.10	3.52	3.08	1.03	52.30	2.46
SD	sfc	Conventional	Irrigated	162.45	113.80	48.65	48.65	23.51	3.72	3.53	1.43	84.99	3.87
SD	sfc	Conservation	Dryland	102.20	68.87	33.33	33.33	28.48	6.30	6.56	1.09	37.10	2.20
SD	sfc	Conservation	Irrigated	186.87	117.01	69.86	69.86	42.89	8.56	9.49	1.84	68.69	3.59
SD	sfc	No Till	Dryland	103.21	74.12	29.09	29.09	23.08	5.10	5.11	0.70	47.45	2.89
SD	sfc	No Till	Irrigated	184.28	120.57	63.70	63.70	32.48	5.30	5.56	1.09	82.49	4.51
SD	sfo	Conventional	Dryland	83.94	69.89	14.04	14.04	14.10	3.52	3.08	1.03	52.30	2.46
SD	sfo	Conventional	Irrigated	162.45	113.80	48.65	48.65	23.51	3.72	3.53	1.43	84.99	3.87
SD	sfo	Conservation	Dryland	102.20	68.87	33.33	33.33	28.48	6.30	6.56	1.09	37.10	2.20
SD	sfo	Conservation	Irrigated	186.87	117.01	69.86	69.86	42.89	8.56	9.49	1.84	68.69	3.59
SD	sfo	No Till	Dryland	103.21	74.12	29.09	29.09	23.08	5.10	5.11	0.70	47.45	2.89
SD	sfo	No Till	Irrigated	184.28	120.57	63.70	63.70	32.48	5.30	5.56	1.09	82.49	4.51
SD	wfs	Conventional	Dryland	73.97	56.98	16.99	16.99	16.88	3.86	3.82	0.81	37.76	1.54
SD	wfs	Conventional	Irrigated	127.03	90.38	36.65	36.65	30.94	6.52	8.27	1.54	55.25	2.66
SD	wfs	Conservation	Dryland	89.47	54.00	35.46	35.46	29.34	6.71	6.38	1.39	22.46	0.82
SD	wfs	Conservation	Irrigated	141.75	86.82	54.94	54.94	44.04	9.29	11.30	2.15	38.75	1.88
SD	wfs	No Till	Dryland	91.34	60.34	31.00	31.00	24.62	5.17	5.33	1.23	33.33	1.15
SD	wfs	No Till	Irrigated	138.55	89.86	48.69	48.69	36.18	7.83	8.88	1.85	49.62	2.21
SD	wfc	Conventional	Dryland	73.97	56.98	16.99	16.99	16.88	3.86	3.82	0.81	37.76	1.54
SD	wfc	Conventional	Irrigated	127.03	90.38	36.65	36.65	30.94	6.52	8.27	1.54	55.25	2.66
SD	wfc	Conservation	Dryland	89.47	54.00	35.46	35.46	29.34	6.71	6.38	1.39	22.46	0.82
SD	wfc	Conservation	Irrigated	141.75	86.82	54.94	54.94	44.04	9.29	11.30	2.15	38.75	1.88
SD	wfc	No Till	Dryland	91.34	60.34	31.00	31.00	24.62	5.17	5.33	1.23	33.33	1.15
SD	wfc	No Till	Irrigated	138.55	89.86	48.69	48.69	36.18	7.83	8.88	1.85	49.62	2.21
SD	wfg	Conventional	Dryland	73.97	56.98	16.99	16.99	16.88	3.86	3.82	0.81	37.76	1.54
SD	wfg	Conventional	Irrigated	127.03	90.38	36.65	36.65	30.94	6.52	8.27	1.54	55.25	2.66
SD	wfg	Conservation	Dryland	89.47	54.00	35.46	35.46	29.34	6.71	6.38	1.39	22.46	0.82
SD	wfg	Conservation	Irrigated	141.75	86.82	54.94	54.94	44.04	9.29	11.30	2.15	38.75	1.88
SD	wfg	No Till	Dryland	91.34	60.34	31.00	31.00	24.62	5.17	5.33	1.23	33.33	1.15
SD	wfg	No Till	Irrigated	138.55	89.86	48.69	48.69	36.18	7.83	8.88	1.85	49.62	2.21
SD	wff	Conventional	Dryland	73.97	56.98	16.99	16.99	16.88	3.86	3.82	0.81	37.76	1.54
SD	wff	Conventional	Irrigated	127.03	90.38	36.65	36.65	30.94	6.52	8.27	1.54	55.25	2.66
SD	wff	Conservation	Dryland	89.47	54.00	35.46	35.46	29.34	6.71	6.38	1.39	22.46	0.82
SD	wff	Conservation	Irrigated	141.75	86.82	54.94	54.94	44.04	9.29	11.30	2.15	38.75	1.88
SD	wff	No Till	Dryland	91.34	60.34	31.00	31.00	24.62	5.17	5.33	1.23	33.33	1.15
SD	wff	No Till	Irrigated	138.55	89.86	48.69	48.69	36.18	7.83	8.88	1.85	49.62	2.21
SD	wfo	Conventional	Dryland	73.97	56.98	16.99	16.99	16.88	3.86	3.82	0.81	37.76	1.54
SD	wfo	Conventional	Irrigated	127.03	90.38	36.65	36.65	30.94	6.52	8.27	1.54	55.25	2.66
SD	wfo	Conservation	Dryland	89.47	54.00	35.46	35.46	29.34	6.71	6.38	1.39	22.46	0.82
SD	wfo	Conservation	Irrigated	141.75	86.82	54.94	54.94	44.04	9.29	11.30	2.15	38.75	1.88
SD	wfo	No Till	Dryland	91.34	60.34	31.00	31.00	24.62	5.17	5.33	1.23	33.33	1.15
SD	wfo	No Till	Irrigated	138.55	89.86	48.69	48.69	36.18	7.83	8.88	1.85	49.62	2.21
WI	cfs	Conventional	Dryland	139.46	102.13	37.33	37.33	34.23	9.02	8.07	1.32	62.84	3.74
WI	cfs	Conventional	Irrigated	299.59	193.04	106.55	106.55	53.04	9.42	8.98	2.11	131.16	6.73
WI	cfs	Conservation	Dryland	132.96	98.55	34.41	34.41	30.87	7.85	7.29	1.10	62.84	3.74
WI	cfs	Conservation	Irrigated	293.09	189.46	103.63	103.63	49.68	8.25	8.19	1.89	131.16	6.73
WI	cfs	No Till	Dryland	143.12	110.85	32.27	32.27	26.09	5.84	5.98	0.85	79.09	4.82
WI	cfs	No Till	Irrigated	303.25	201.77	101.49	101.49	44.90	6.25	6.89	1.64	147.41	7.81
WI	cfc	Conventional	Dryland	140.41	103.08	37.33	37.33	34.23	9.02	8.07	1.32	63.79	3.74

ASM				Total	Total	Total	Machinery Costs					Input Costs	
Region	Rotation	Tillage	Irrigation	Cost	Variable	Fixed	Fixed	Variable	Labor	Fuel	Capital	Variable	Capital
WI	cfc	Conventional	Irrigated	301.02	194.47	106.55	106.55	53.04	9.42	8.98	2.11	132.59	6.73
WI	cfc	Conservation	Dryland	133.91	99.50	34.41	34.41	30.87	7.85	7.29	1.10	63.79	3.74
WI	cfc	Conservation	Irrigated	294.52	190.89	103.63	103.63	49.68	8.25	8.19	1.89	132.59	6.73
WI	cfc	No Till	Dryland	144.07	111.80	32.27	32.27	26.09	5.84	5.98	0.85	80.04	4.82
WI	cfc	No Till	Irrigated	304.68	203.19	101.49	101.49	44.90	6.25	6.89	1.64	148.84	7.81
WI	cfw	Conventional	Dryland	140.41	103.08	37.33	37.33	34.23	9.02	8.07	1.32	63.79	3.74
WI	cfw	Conventional	Irrigated	301.02	194.47	106.55	106.55	53.04	9.42	8.98	2.11	132.59	6.73
WI	cfw	Conservation	Dryland	133.91	99.50	34.41	34.41	30.87	7.85	7.29	1.10	63.79	3.74
WI	cfw	Conservation	Irrigated	294.52	190.89	103.63	103.63	49.68	8.25	8.19	1.89	132.59	6.73
WI	cfw	No Till	Dryland	144.07	111.80	32.27	32.27	26.09	5.84	5.98	0.85	80.04	4.82
WI	cfw	No Till	Irrigated	304.68	203.19	101.49	101.49	44.90	6.25	6.89	1.64	148.84	7.81
WI	cfa	Conventional	Dryland	139.46	102.13	37.33	37.33	34.23	9.02	8.07	1.32	62.84	3.74
WI	cfa	Conventional	Irrigated	299.59	193.04	106.55	106.55	53.04	9.42	8.98	2.11	131.16	6.73
WI	cfa	Conservation	Dryland	132.96	98.55	34.41	34.41	30.87	7.85	7.29	1.10	62.84	3.74
WI	cfa	Conservation	Irrigated	293.09	189.46	103.63	103.63	49.68	8.25	8.19	1.89	131.16	6.73
WI	cfa	No Till	Dryland	143.12	110.85	32.27	32.27	26.09	5.84	5.98	0.85	79.09	4.82
WI	cfa	No Till	Irrigated	303.25	201.77	101.49	101.49	44.90	6.25	6.89	1.64	147.41	7.81
WI	cfo	Conventional	Dryland	140.41	103.08	37.33	37.33	34.23	9.02	8.07	1.32	63.79	3.74
WI	cfo	Conventional	Irrigated	301.02	194.47	106.55	106.55	53.04	9.42	8.98	2.11	132.59	6.73
WI	cfo	Conservation	Dryland	133.91	99.50	34.41	34.41	30.87	7.85	7.29	1.10	63.79	3.74
WI	cfo	Conservation	Irrigated	294.52	190.89	103.63	103.63	49.68	8.25	8.19	1.89	132.59	6.73
WI	cfo	No Till	Dryland	144.07	111.80	32.27	32.27	26.09	5.84	5.98	0.85	80.04	4.82
WI	cfo	No Till	Irrigated	304.68	203.19	101.49	101.49	44.90	6.25	6.89	1.64	148.84	7.81
WI	afc	Conventional	Dryland	256.83	137.41	119.42	119.42	124.36	41.11	28.89	5.55	7.32	0.18
WI	afc	Conventional	Irrigated	441.81	242.28	199.54	199.54	174.60	54.19	37.99	7.35	57.62	2.71
WI	afa	Conventional	Dryland	258.25	138.83	119.42	119.42	124.36	41.11	28.89	5.55	8.75	0.18
WI	afa	Conventional	Irrigated	443.71	244.18	199.54	199.54	174.60	54.19	37.99	7.35	59.52	2.71
WI	afo	Conventional	Dryland	256.83	137.41	119.42	119.42	124.36	41.11	28.89	5.55	7.32	0.18
WI	afo	Conventional	Irrigated	441.81	242.28	199.54	199.54	174.60	54.19	37.99	7.35	57.62	2.71
WI	sfs	Conventional	Dryland	114.12	84.06	30.06	30.06	40.40	10.07	8.73	1.47	40.09	2.11
WI	sfs	Conventional	Irrigated	256.35	160.53	95.82	95.82	58.27	10.45	9.59	2.20	95.68	4.38
WI	sfs	Conservation	Dryland	126.35	99.21	27.14	27.14	37.04	8.90	7.94	1.40	57.73	3.04
WI	sfs	Conservation	Irrigated	275.67	182.77	92.90	92.90	54.91	9.28	8.80	2.12	119.82	5.91
WI	sfs	No Till	Dryland	112.90	92.83	20.07	20.07	27.98	5.57	5.75	0.81	60.78	3.26
WI	sfs	No Till	Irrigated	259.95	173.36	86.59	86.59	46.29	6.02	6.61	1.57	119.57	5.93
WI	sfc	Conventional	Dryland	114.12	84.06	30.06	30.06	40.40	10.07	8.73	1.47	40.09	2.11
WI	sfc	Conventional	Irrigated	256.35	160.53	95.82	95.82	58.27	10.45	9.59	2.20	95.68	4.38
WI	sfc	Conservation	Dryland	126.35	99.21	27.14	27.14	37.04	8.90	7.94	1.40	57.73	3.04
WI	sfc	Conservation	Irrigated	275.67	182.77	92.90	92.90	54.91	9.28	8.80	2.12	119.82	5.91
WI	sfc	No Till	Dryland	112.90	92.83	20.07	20.07	27.98	5.57	5.75	0.81	60.78	3.26
WI	sfc	No Till	Irrigated	259.95	173.36	86.59	86.59	46.29	6.02	6.61	1.57	119.57	5.93
WI	sfw	Conventional	Dryland	114.12	84.06	30.06	30.06	40.40	10.07	8.73	1.47	40.09	2.11
WI	sfw	Conventional	Irrigated	256.35	160.53	95.82	95.82	58.27	10.45	9.59	2.20	95.68	4.38
WI	sfw	Conservation	Dryland	126.35	99.21	27.14	27.14	37.04	8.90	7.94	1.40	57.73	3.04
WI	sfw	Conservation	Irrigated	275.67	182.77	92.90	92.90	54.91	9.28	8.80	2.12	119.82	5.91
WI	sfw	No Till	Dryland	112.90	92.83	20.07	20.07	27.98	5.57	5.75	0.81	60.78	3.26
WI	sfw	No Till	Irrigated	259.95	173.36	86.59	86.59	46.29	6.02	6.61	1.57	119.57	5.93
WI	sfo	Conventional	Dryland	114.12	84.06	30.06	30.06	40.40	10.07	8.73	1.47	40.09	2.11
WI	sfo	Conventional	Irrigated	256.35	160.53	95.82	95.82	58.27	10.45	9.59	2.20	95.68	4.38
WI	sfo	Conservation	Dryland	126.35	99.21	27.14	27.14	37.04	8.90	7.94	1.40	57.73	3.04
WI	sfo	Conservation	Irrigated	275.67	182.77	92.90	92.90	54.91	9.28	8.80	2.12	119.82	5.91

ASM		Tillage	Irrigation	Total	Total	Total	Machinery Costs				Input Costs		
Region	Rotation			Cost	Variable	Fixed	Fixed	Variable	Labor	Fuel	Capital	Variable	Capital
WI	sfo	No Till	Dryland	112.90	92.83	20.07	20.07	27.98	5.57	5.75	0.81	60.78	3.26
WI	sfo	No Till	Irrigated	259.95	173.36	86.59	86.59	46.29	6.02	6.61	1.57	119.57	5.93
WI	wfs	Conventional	Dryland	96.82	64.51	32.32	32.32	27.46	6.67	6.54	1.16	33.89	1.99
WI	wfs	Conservation	Dryland	105.30	76.24	29.06	29.06	25.25	6.15	6.19	1.02	47.09	2.87
WI	wfs	No Till	Dryland	87.79	59.69	28.10	28.10	22.85	4.93	5.37	0.95	33.89	1.99
WI	wfc	Conventional	Dryland	96.82	64.51	32.32	32.32	27.46	6.67	6.54	1.16	33.89	1.99
WI	wfc	Conservation	Dryland	105.30	76.24	29.06	29.06	25.25	6.15	6.19	1.02	47.09	2.87
WI	wfc	No Till	Dryland	87.79	59.69	28.10	28.10	22.85	4.93	5.37	0.95	33.89	1.99
WI	wfw	Conventional	Dryland	96.82	64.51	32.32	32.32	27.46	6.67	6.54	1.16	33.89	1.99
WI	wfw	Conservation	Dryland	105.30	76.24	29.06	29.06	25.25	6.15	6.19	1.02	47.09	2.87
WI	wfw	No Till	Dryland	87.79	59.69	28.10	28.10	22.85	4.93	5.37	0.95	33.89	1.99

REFERENCES

Benson, Verel W. 1995. Personal letter to budget reviewers. June 16.

U.S. Department of Agriculture, Economic Research Service (USDA-ERS). 1995. *1994 Cropping Practices Survey*. Washington, D.C.: USDA-NRCS.

U.S. Department of Agriculture, Natural Resource Conservation Service (USDA-NRCS). 1994. *CARE: Cost and Returns Estimator: Version 2.2 User's Guide*. Washington, D.C.: USDA-NRCS.

_____. 1996. CARE electronic data files, College Station, TX: USDA-NRCS, Blackland Research Center.