

MN 2000 MISC-1977

UNIVERSITY OF MINNESOTA  
DOCUMENTS

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ST. PAUL CAMPUS  
LIBRARIES

COMPARISONS  
OF  
CROP BUDGETS  
FOR VARIOUS CROPS  
FOR DAKOTA COUNTY IRRIGATORS

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December, 1977

SOUTHEAST

CORN BUDGET

12 22 77

PER ACRE

SOIL AREA 1

UNITS OR QUANTITY  
APPLIC.

PRICE

TOTAL  
AMOUNT

CASH  
COSTS

RETURNS

CORN	160.000 BU.	2.000	320.00	
TOTAL RETURNS			320.00	

PLANTING COSTS

DISK 24 FT	2	.086 HR/A	25.965	4.45	1.25
SPRINGTOOTH DRAG 30		.063 HR/A	15.484	1.03	.17
CORN PLANTER 8-30		.131 HR/A	34.491	4.52	1.03
CORN SEED		.350 BAG	45.000	15.75	15.75

FERTILIZER

NITROGEN	10.000 LBS.	.240	2.40	2.40	2.40
ANHYDROUS AMMONIA	170.000 LBS.	.130	22.10	22.10	22.10
PHOSPHORUS P205	30.000 LBS.	.170	5.10	5.10	5.10
POTASSIUM K2O	60.000 LBS.	.080	4.80	4.80	4.80
ANHYDROUS APPLIC	1.000 ACRE	3.000	3.00	3.00	3.00

SPRAYING COSTS

SPRAYER SOFT		.042 HR/A	15.345	.65	.13
HERBICIDE	18.000		1.000	18.00	18.00
INSECTICIDE	4.000		1.000	4.00	4.00

CULTIVATION

CULTIVATOR 8-30	2	.129 HR/A	15.303	3.95	1.02
IRRIGATION OPER.		7.000 IN.	2.800	19.60	19.60

HARVEST COST

COMBINE CORN 4-30 MD		.385 HR/A	44.051	16.95	5.46
MEDIUM TRUCK	2	.385 HR/A	13.451	10.35	3.70
PLOW 5-16		.344 HR/A	18.466	6.35	1.93
DRYING	160.000 BU.	.140	22.40	22.40	22.40

OTHER COSTS

LAND EXPENSES	925.000		.050	46.25	
TAXES	925.000		.010	9.25	9.25
IRRIGATION OVERHEAD	450.000		.130	58.50	
CROP INSURANCE	320.000		.025	8.00	8.00
INTEREST ON CASH COSTS	149.142		.045	5.71	

TOTAL COSTS 294.13

RETURNS OVER TOTAL COSTS			25.87	
RETURNS OVER CASH COSTS			170.85	
RETURNS OVER CASH COSTS 20 PCT RETURNS REDUCTION			106.86	
RETURNS OVER CASH COSTS 50 PCT RETURNS REDUCTION			10.86	

CASH COSTS/ACRE	149.14	MACHINE OPERATING COSTS/A	14.74
MACHINE OWNERSHIP COST/A	26.47	FUEL USE/ACRE (GAL)	12.59
TOTAL COST PER BU.	1.84		

	THRU PLANT	GROWING	HARVEST	OTHER	TOTAL
CASH COST	77.78	20.62	33.48	17.25	149.14
LABOR HOURS	.41	.26	1.50	0	2.16
LABOR VALUE	1.40	.77	4.88	0	7.05

## SEED

120 BUSHEL

UNITS OR QUANTITY  
APPLIC.

PRICE

TOTAL  
AMOUNTCASH  
COSTS

## RETURNS

SEED CORN	80.000 BU.	4.150	332.00	
CORN	20.000 BU.	2.000	40.00	

## TOTAL RETURNS

372.00

## PLANTING COSTS

DISK 54 FT	2	.086 HR/A	25.905	4.45	1.25
CORN PLANTER 8-30		.131 HR/A	34.491	4.52	1.03
CORN SEED		.250 BU.	25.000	6.25	6.25

## FERTILIZER

NITROGEN	35.000 LBS.	.240	8.40	8.40	
ANHYDROUS AMMONIA	120.000 LBS.	.130	15.60	15.60	15.60
PHOSPHORUS P205	35.000 LBS.	.170	5.95	5.95	5.95
POTASSIUM K20	84.000 LBS.	.080	6.72	6.72	6.72
ANHYDROUS APPLIC	1.000 ACRE	3.000	3.00	3.00	3.00

## SPRAYING COSTS

SPRAYER 30FT		.071 HR/A	10.970	.77	.16
HERBICIDE		7.510	1.000	7.51	7.51
INSECTICIDE		3.500	1.000	3.50	3.50

## CULTIVATION

CULTIVATOR 8-30		.129 HR/A	15.303	1.97	.51
IRRIGATION OPER.		7.000 IN.	2.800	19.60	19.60

## HARVEST COST

COMBINE CORN 4-30 MD		.096 HR/A	44.051	4.23	1.36
MEDIUM TRUCK		.096 HR/A	13.451	1.29	.46
DRYING	20.000 BU.	.140	2.80	2.80	2.80
FLOW 5-15		.344 HR/A	18.466	6.35	1.93

## OTHER COSTS

LAND EXPENSES	925.000	.050	46.25		
TAXES	925.000	.010	9.25	9.25	9.25
IRRIGATION OVERHEAD	450.000	.130	58.50		
CROP INSURANCE	372.000	.025	9.30	9.30	9.30
INTEREST ON CASH COSTS	104.587	.045	4.71		

## TOTAL COSTS

230.93

RETURNS OVER TOTAL COSTS			141.07	
RETURNS OVER CASH COSTS			267.41	
RETURNS OVER CASH COSTS 20 PCT RETURNS REDUCTION			193.01	
RETURNS OVER CASH COSTS 50 PCT RETURNS REDUCTION			81.41	

CASH COSTS/ACRE	104.59	MACHINE OPERATING COSTS/A	6.71
MACHINE OWNERSHIP COST/A	13.47	FUEL USE/ACRE (GAL)	5.85

	THRU PLANT	GROWING	HARVEST	OTHER	TOTAL
CASH COST	59.38	20.11	6.55	18.55	104.59
LABOR HOURS	.37	.13	.54	0	1.04
LABOR VALUE	1.32	.39	1.70	0	3.41

SOUTHEAST

CORN BUDGET  
SEED

12 22 77

130 BUSHEL  
UNITS OR QUANTITY  
APPLIC.

PRICE

TOTAL  
AMOUNT

CASH  
COSTS

RETURNS

SEED CORN	28.000 BU.	9.860	275.08	
CORN	10.000 BU.	2.000	20.00	
TOTAL RETURNS			296.08	

PLANTING COSTS

DISK 16 FT	2	.129 HR/A	16.574	4.27	1.09
CORN PLANTER 8-30		.131 HR/A	34.491	4.52	1.03

FERTILIZER

NITROGEN	18.000 LBS.	.240	4.32	4.32	
ANHYDROUS AMMONIA	150.000 LBS.	.130	19.50	19.50	
PHOSPHORUS P205	46.000 LBS.	.170	7.82	7.82	
POTASSIUM K2O	60.000 LBS.	.080	4.80	4.80	
LIME (APPLIED)	1.000 TON	8.000	8.00	8.00	
ANHYDROUS APPLIC	1.000 ACRE	3.000	3.00	3.00	

SPRAYING COSTS

SPRAYER SOFT		.071 HR/A	10.970	.77	.16
HERBICIDE	10.000		1.000	10.00	10.00
INSECTICIDE	4.000		1.000	4.00	4.00

CULTIVATION

ROTARY HUE 16		.092 HR/A	14.482	1.33	.19
IRRIGATION OPER.	4.000	IN.	2.800	11.20	11.20

HARVEST COST

PICKING AND HAULING	1.000 TON		16.000	16.00	16.00
COMBINE CORN 3-38 SM	.089 HR/A		35.982	3.20	1.03
MEDIUM TRUCK	.089 HR/A		13.451	1.20	.43
DRYING	10.000 BU.		.140	1.40	1.40
PLOW 5-16	.344 HR/A		18.466	6.35	1.93

OTHER COSTS

LAND EXPENSES	925.000		.050	46.25	
TAXES	925.000		.010	9.25	9.25
IRRIGATION OVERHEAD	450.000		.130	58.50	
CROP INSURANCE	296.080		.025	7.40	7.40
INTEREST ON CASH COSTS	112.553		.045	5.06	

TOTAL COSTS 238.16

RETURNS OVER TOTAL COSTS			57.92	
RETURNS OVER CASH COSTS			133.53	
RETURNS OVER CASH COSTS 20 PCT RETURNS REDUCTION			124.31	
RETURNS OVER CASH COSTS 50 PCT RETURNS REDUCTION			35.49	

CASH COSTS/ACRE	112.55	MACHINE OPERATING COSTS/A	5.86
MACHINE OWNERSHIP COST/A	12.28	FUEL USE/ACRE (GAL)	5.27

	THRU PLANT	GROWING	HARVEST	OTHER	TOTAL
CASH COST	65.72	11.39	20.78	15.05	112.55
LABOR HOURS	.46	.09	.52	0	1.07
LABOR VALUE	1.58	.28	1.66	0	3.51

SOUTHEAST

ALFALFA ESTABLISHMENT  
COMPANION CROP OATS

12 22 77

SOIL AREA 1

	UNITS OR APPLIC.	QUANTITY	PRICE	TOTAL AMOUNT	CASH COSTS
RETURNS					
OATLAGE		9.200 TON	15.000	138.00	
ALFALFA HAY		1.870 TON	55.000	102.85	
TOTAL RETURNS				240.85	

PLANTING COSTS

PLOW 5-15		.344 HR/A	18.466	6.35	1.93
FIELD CULTIVATOR 18		.115 HR/A	16.125	1.85	.56
DISK 16 FT		.129 HR/A	16.574	2.14	.54
SPRINGTOOTH DRAG 30		.063 HR/A	16.464	1.03	.17
GRAIN DRILL P# 14 FT		.179 HR/A	27.533	4.94	1.31
OAT SEED		2.500 BU.	1.600	4.00	4.00
ALFALFA SEED		15.000 LBS.	1.500	22.50	22.50

FERTILIZER

NITROGEN		50.000 LBS.	.240	12.00	12.00
PHOSPHORUS P205		30.000 LBS.	.170	5.10	5.10
POTASSIUM K20		60.000 LBS.	.080	4.80	4.30
LIME (APPLIED)		3.000 TON	8.000	24.00	24.00

CULTIVATION

IRRIGATION OPER.		8.000 IN.	2.800	22.40	22.40
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HARVEST COST

SWATHER-COND. 12FT	3	.183 HR/A	25.793	14.19	2.59
FORAGE HARV. 2 ROW		.300 HR/A	26.590	7.98	1.93
BALER PTO TWINE	2	.264 HR/A	13.304	7.04	1.66
TWINE (BALE)		.190	15.000	2.85	2.85
BALE WAGON	4	.264 HR/A	11.464	12.13	1.99
FORAGE WAGON	2	.604 HR/A	12.693	15.34	3.28

OTHER COSTS

LAND EXPENSES		925.000	.050	46.25	
TAXES		925.000	.010	9.25	9.25
IRRIGATION OVERHEAD		450.000	.130	58.50	
CROP INSURANCE		240.850	.025	6.02	6.02
INTEREST ON CASH COSTS		128.980	.045	5.80	

TOTAL COSTS 296.46

RETURNS OVER TOTAL COSTS				-55.61	
RETURNS OVER CASH COSTS				111.87	
RETURNS OVER CASH COSTS 20 PCT RETURNS REDUCTION				63.70	
RETURNS OVER CASH COSTS 50 PCT RETURNS REDUCTION				-9.56	

CASH COSTS/ACRE	128.98	MACHINE OPERATING COSTS/A	16.06
MACHINE OWNERSHIP COST/A	39.32	FUEL USE/ACRE (GAL)	14.15

	THRU PLANT	GROWING	HARVEST	OTHER	TOTAL
CASH COST	76.91	22.40	14.40	15.27	128.98
LABOR HOURS	.33	0	4.70	0	5.53
LABOR VALUE	2.67	0	14.94	0	17.61

SOUTHEAST

ALFALFA HAY  
FULL PRODUCTION  
SOIL AREA 1

12 22 77

	UNITS OR APPLIC.	QUANTITY	PRICE	TOTAL AMOUNT	CASH COSTS
RETURNS					
ALFALFA HAY		5.250 TON	55.000	288.75	
TOTAL RETURNS				288.75	

FERTILIZER					
FERTILIZER SPRDR 20		.094 HR/A	15.310	1.44	.28
PHOSPHORUS P205		30.000 LBS.	.170	5.10	5.10
POTASSIUM K20		120.000 LBS.	.080	9.60	9.60

CULTIVATION					
IRRIGATION OPER.		10.000 IN.	2.800	28.00	28.00

HARVEST COST					
SWATHER-COND. 15FT	3	.147 HR/A	26.222	11.54	2.17
RAKE (HYD)		.286 HR/A	8.613	2.47	.61
BALER PTO TWINE	3	.264 HR/A	13.304	10.55	2.49
TWINE (BALE)		.530	15.000	7.95	7.95
BALE WAGON	6	.264 HR/A	11.469	18.20	2.99

OTHER COSTS					
LAND EXPENSES		925.000	.050	46.25	
TAXES		925.000	.010	9.25	9.25
IRRIGATION OVERHEAD		450.000	.130	58.50	
CROP INSURANCE		288.750	.025	7.22	7.22
INTEREST ON CASH COSTS		75.654	.045	3.40	

TOTAL COSTS 219.46

RETURNS OVER TOTAL COSTS				69.29	
RETURNS OVER CASH COSTS				213.10	
RETURNS OVER CASH COSTS 20 PCT RETURNS REDUCTION				155.35	
RETURNS OVER CASH COSTS 50 PCT RETURNS REDUCTION				68.72	

CASH COSTS/ACRE	75.65	MACHINE OPERATING COSTS/A	8.54
MACHINE OWNERSHIP COST/A	20.50	FUEL USE/ACRE (GAL)	8.06
TOTAL COST PER TON	41.80		

	THRU PLANT	GROWING	HARVEST	OTHER	TOTAL
CASH COST	14.95	28.00	16.20	16.47	75.65
LABOR HOURS	.09	0	4.69	0	4.79
LABOR VALUE	.28	0	14.87	0	15.15

SOUTHEAST

SWEET CORN

12 22 77

PER ACRE  
SOIL AREA 1UNITS OR  
APPLIC.

QUANTITY

PRICE

TOTAL  
AMOUNTCASH  
COSTS

## RETURNS

SWEET CORN		8.000 TON	38.000	304.00	
TOTAL RETURNS				304.00	

## PLANTING COSTS

DISK 24 FT.	2	.086 HR/A	25.900	4.45	1.25
SPRINGTOOTH DRAG 30		.063 HR/A	16.400	1.03	.17
CORN PLANTER 8-30		.131 HR/A	34.491	4.52	1.03
CORN SEED		.350 BAG	45.000	15.75	15.75

## FERTILIZER

NITROGEN		35.000 LBS.	.240	8.40	8.40
ANHYDROUS AMMONIA		110.000 LBS.	.130	14.30	14.30
PHOSPHORUS P205		60.000 LBS.	.170	10.20	10.20
POTASSIUM K2O		100.000 LBS.	.080	8.00	8.00
ANHYDROUS APPLIC		1.000 ACRE	3.000	3.00	3.00

## SPRAYING COSTS

SPRAYER 50FT		.042 HR/A	15.345	.65	.13
HERBICIDE		13.500	1.000	13.50	13.50
INSECTICIDE		5.500	1.000	5.50	5.50

## CULTIVATION

CULTIVATOR 8-30	2	.129 HR/A	15.303	3.95	1.02
IRRIGATION OPER.		5.000 IN.	2.800	14.00	14.00

## HARVEST COST

HAULING SWEET CORN		30.600 ACRE	1.000	30.60	30.60
PLOW 5-16		.344 HR/A	18.400	6.35	1.93

## OTHER COSTS

LAND EXPENSES		925.000	.050	46.25	
TAXES		925.000	.010	9.25	9.25
IRRIGATION OVERHEAD		450.000	.130	58.50	
CROP INSURANCE		304.000	.025	7.60	7.60
INTEREST ON CASH COSTS		145.633	.045	6.55	

TOTAL COSTS				272.35	
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RETURNS OVER TOTAL COSTS				31.65	
RETURNS OVER CASH COSTS				159.32	
RETURNS OVER CASH COSTS 20 PCT RETURNS REDUCTION				97.52	
RETURNS OVER CASH COSTS 50 PCT RETURNS REDUCTION				6.32	

CASH COSTS/ACRE	145.68	MACHINE OPERATING COSTS/A	5.58
MACHINE OWNERSHIP COST/A	12.16	FUEL USE/ACRE (GAL)	5.43
TOTAL COST PER TON	34.04		

	THRU PLANT	GROWING	HARVEST	OTHER	TOTAL
CASH COST	81.28	15.02	32.53	16.85	145.68
LABOR HOURS	.41	.26	.34	0	1.01
LABOR VALUE	1.40	.77	1.03	0	3.20

SOUTHEAST

DOUBLE CROP  
SWEET CORN  
AND PEAS

*peas*  
*4*  
*500000*

12 22 77

UNITS OR QUANTITY PRICE TOTAL CASH  
APPLIC. AMOUNT COSTS

RETURNS

PEAS	31.500 CWT.	5.220	164.43	
SWEET CORN	2.930 TON	38.000	111.34	
TOTAL RETURNS			275.77	

PLANTING COSTS

PLOW 5-16	2	.344 HR/A	18.466	12.71	3.53
FIELD CULTIVATOR 18		.115 HR/A	16.125	1.85	.56
CORN PLANTER 5-30	2	.175 HR/A	28.218	9.85	2.19
SPRINGTOUTH DRAG 30		.063 HR/A	16.464	1.03	.17
DISK 16 FT		.129 HR/A	16.574	2.14	.54
PEA SEED	270.000 LBS.		.270	72.90	72.90
SWEET CORN SEED	11.000 BU.		1.270	13.97	13.97

FERTILIZER

NITROGEN	51.200 LBS.	.240	12.29	12.29	12.29
PHOSPHORUS P205	52.000 LBS.	.170	8.84	8.84	8.84
POTASSIUM K20	155.000 LBS.	.080	12.40	12.40	12.40
ANHYDROUS AMMONIA	125.000 LBS.	.130	16.25	16.25	16.25
ANHYDROUS APPLIC	1.000 ACRE	3.000	3.00	3.00	3.00

SPRAYING COSTS

SPRAYER 30FT		.071 HR/A	10.970	.77	.16
HERBICIDE		8.590	1.000	8.59	8.59

CULTIVATION

CULTIVATOR 6-30		.172 HR/A	12.285	2.11	.53
IRRIGATION OPER.		6.500 IN.	2.800	18.20	18.20

HARVEST COST

HARVEST PEAS	31.500 CWT.	1.000	31.50	31.50	31.50
HAULING SWEET CORN	11.220 ACRE	1.000	11.22	11.22	11.22

OTHER COSTS

LAND EXPENSES	925.000	.050	46.25		
TAXES	925.000	.010	9.25		9.25
IRRIGATION OVERHEAD	450.000	.130	58.50		
CROP INSURANCE	275.770	.025	6.89		6.89
INTEREST ON CASH COSTS	233.314	.045	10.50		

TOTAL COSTS 371.01

RETURNS OVER TOTAL COSTS				-95.24	
RETURNS OVER CASH COSTS				42.46	
RETURNS OVER CASH COSTS 20 PCT RETURNS REDUCTION				-12.70	
RETURNS OVER CASH COSTS 50 PCT RETURNS REDUCTION				-95.43	

CASH COSTS/ACRE	233.31	MACHINE OPERATING COSTS/A	8.01
MACHINE OWNERSHIP COST/A	17.27	FUEL USE/ACRE (GAL)	7.67

	THRU PLANT	GROWING	HARVEST	OTHER	TOTAL
CASH COST	155.72	18.73	42.72	16.14	233.31
LABOR HOURS	1.41	.17	0	0	1.59
LABOR VALUE	4.66	.52	0	0	5.18



SOUTHEAST

DOUBLE CROPPED  
PEAS AND SNAP  
BEANS

12 22 77

UNITS OR APPLIC.	QUANTITY	PRICE	TOTAL AMOUNT	CASH COSTS
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RETURNS

PEAS	35.000 CWT.	5.220	182.70	
SNAP BEANS	65.000 CWT.	4.270	277.55	
TOTAL RETURNS			460.25	

PLANTING COSTS

SNAPBEAN SEED	1.000 ACRE	60.000	60.00	60.00
GRAIN DRILL Pw 14 FT	.179 HR/A	27.533	4.94	1.31
CORN PLANTER 4-38	.207 HR/A	21.412	4.43	.91
PLOW 5-16	2 .344 HR/A	18.466	12.71	3.85
FIELD CULTIVATOR 18	3 .115 HR/A	16.125	5.54	1.69
DISK 22 FT	2 .064 HR/A	32.351	4.17	1.25
SPRINGTOOTH DRAG 30	2 .063 HR/A	16.464	2.06	.34

FERTILIZER

ANHYDROUS AMMONIA	45.000 LBS.	.130	5.85	5.85
NITROGEN	15.000 LBS.	.240	3.60	3.60
PHOSPHORUS P205	100.000 LBS.	.170	17.00	17.00
POTASSIUM K20	50.000 LBS.	.080	4.00	4.00
ANHYDROUS APPLIC	1.000 ACRE	3.000	3.00	3.00

SPRAYING COSTS

SPRAYER 30FT	.071 HR/A	10.970	.77	.16
HERBICIDE	3.500	1.000	3.50	3.50

CULTIVATION

ROTARY HUE 16	2 .092 HR/A	14.482	2.67	.39
IRRIGATION OPER.	10.000 IN.	2.800	28.00	28.00

OTHER COSTS

LAND EXPENSES	925.000	.050	46.25	
TAXES	925.000	.010	9.25	9.25
IRRIGATION OVERHEAD	450.000	.130	58.50	
CROP INSURANCE	460.250	.025	11.51	11.51
INTEREST ON CASH COSTS	155.607	.045	7.00	

TOTAL COSTS 294.75

RETURNS OVER TOTAL COSTS	165.50
RETURNS OVER CASH COSTS	304.64
RETURNS OVER CASH COSTS 20 PCT RETURNS REDUCTION	212.59
RETURNS OVER CASH COSTS 50 PCT RETURNS REDUCTION	74.52

CASH COSTS/ACRE	155.61	MACHINE OPERATING COSTS/A	9.90
MACHINE OWNERSHIP COST/A	21.15	FUEL USE/ACRE (GAL)	9.42

	THRU PLANT	GROWING	HARVEST	OTHER	TOTAL
CASH COST	100.46	28.39	0	26.76	155.61
LABOR HOURS	1.74	.18	0	0	1.93
LABOR VALUE	3.68	.55	0	0	6.24