

AUGMENTATION SITE SUMMARY

Augmentation Site	Avg Pump Rate (GPM)	Avg Pump Water Lift (ft)	Predominant Power District	Avg 2001 - 2004 Hours For District	Hours Range
Farm2will	735	137	South Central	830.38	709.01 - 989.41
Spring2rope	802	195	Twin Valley	870.4275	720.59 - 1113.45
Thom	763	165	Southern	847.8425	721.08 - 951.53

Table 1: Differences in net returns for each county

HARLAN COUNTY		
	161 bu/acre	225 bu/acre
Dryland	\$6,633	\$14,035
Irrigated	\$11,523	\$26,166
Irrigated - Dryland	\$4,890	\$12,131
\$/acre difference	\$38	\$93

FRANKLIN COUNTY		
	167 bu/acre	225 bu/acre
Dryland	\$8,628	\$15,787
Irrigated	\$13,262	\$26,532
Irrigated - Dryland	\$4,634	\$10,745
\$/acre difference	\$36	\$83

WEBSTER COUNTY		
	161 bu/acre	225 bu/acre
Dryland	\$9,141	\$17,540
Irrigated	\$12,781	\$27,424
Irrigated - Dryland	\$3,640	\$9,884
\$/acre difference	\$28	\$76

Reach Name	# of wells	gpm	divided by	CFS	times	AF per day	days	ACRE FEET Pumped	Amount After 80% Transport Loss (AF)	Diesel Cost per Acre-foot	Total Cost (Diesel)	Electric Cost per Acre-foot	Total Cost (Electric)
E. Ft. Farmers Willow Cr.	179	131627	448.8	293	1.983471	582	62	36067	7213	56.67	\$ 2,043,915.29	\$ 43.61	\$ 1,572,880.64
Lower Thompson Creek	154	117568	448.8	262	1.983471	520	62	32215	6443	54.59	\$ 1,758,589.40	\$ 42.01	\$ 1,353,338.72
Spring Cr. Rope Cr.	361	289524	448.8	645	1.983471	1280	61	78053	15611	51.94	\$ 4,054,052.40	\$ 39.97	\$ 3,119,762.69

**TABLE 2. PRELIMINARY 60 DAY PUMPING COST ESTIMATE
ELECTRIC MOTOR POWER PLANT - FULL INTEREST/DEPRECIATION**

	Farm2will	Spring2rope	Thom	
Pump Rates (gpm)	735	802	763	From Site Summary
Pumping Lift (ft)	200	200	200	
Pumping Hours	1440	1440	1440	
Repairs/hour	\$ 0.55	\$ 0.55	\$ 0.55	(2001, Selley) - Well #3 values, Table 6
Fuel and Lube/hour	\$ 3.67	\$ 3.67	\$ 3.67	(2001, Selley) - Well #3 values, Table 6
Annualized Cost				
Interest	\$ 1,714.00	\$ 1,714.00	\$ 1,714.00	(2001, Selley) - Table 5 using single well, pump, power unit and 1,000 feet of pipe
Depreciation	\$ 2,593.60	\$ 2,593.60	\$ 2,593.60	(2001, Selley) - Table 5 using single well, pump, power unit and 1,000 feet of pipe
Repairs	\$ 792.00	\$ 792.00	\$ 792.00	
Fuel and lube	\$ 5,284.80	\$ 5,284.80	\$ 5,284.80	
Labor	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	Reduced labor due to configuration (e.g. no gates to set/maintain)
Total	\$ 11,384.40	\$ 11,384.40	\$ 11,384.40	
Vol pumped AF	195	213	202	
\$/AF	\$ 58.42	\$ 53.54	\$ 56.28	

(2001, Selley). Roger Selley. "Estimated Irrigation Costs, 2001." Nebraska Cooperative Extension CC 371. August 2001.

**TABLE 3. PRELIMINARY 60 DAY PUMPING COST ESTIMATE
ELECTRIC MOTOR POWER PLANT - PARTIAL INTEREST/DEPRECIATION**

Annualized Cost				
Int/Depr Factor	0.33	0.33	0.33	Only charge a portion of the interest/depreciation
Interest	\$ 565.62	\$ 565.62	\$ 565.62	(2001, Selley) - Table 5 using single well, pump, power unit and 1,000 feet of pipe
Depreciation	\$ 855.89	\$ 855.89	\$ 855.89	(2001, Selley) - Table 5 using single well, pump, power unit and 1,000 feet of pipe
Repairs	\$ 792.00	\$ 792.00	\$ 792.00	
Fuel and lube	\$ 5,284.80	\$ 5,284.80	\$ 5,284.80	
Labor	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	Reduced labor due to configuration (e.g. no gates to set/maintain)
Total	\$ 8,498.31	\$ 8,498.31	\$ 8,498.31	
Vol pumped AF	195	213	202	
\$/AF	\$ 43.61	\$ 39.97	\$ 42.01	

(2001, Selley). Roger Selley. "Estimated Irrigation Costs, 2001." Nebraska Cooperative Extension CC 371. August 2001.

**TABLE 4. PRELIMINARY 60 DAY PUMPING COST ESTIMATE
DIESEL MOTOR POWER PLANT - FULL INTEREST/DEPRECIATION**

	Farm2will	Spring2rope	Thom	From Site Summary
Pump Rates (gpm)	735	802	763	
Pumping Lift (ft)	200	200	200	
Pumping Hours	1440	1440	1440	
Repairs/hour	\$ 0.89	\$ 0.89	\$ 0.89	(2001, Selley) - Well #3 values, Table 6
Fuel and Lube/hour	\$ 4.78	\$ 4.78	\$ 4.78	(2001, Selley) - Well #3 values, Table 6
Annualized Cost				
Interest	\$ 1,895.00	\$ 1,895.00	\$ 1,895.00	(2001, Selley) - Table 5 using single well, pump, power unit and 1,000 feet of pipe
Depreciation	\$ 3,796.80	\$ 3,796.80	\$ 3,796.80	(2001, Selley) - Table 5 using single well, pump, power unit and 1,000 feet of pipe
Repairs	\$ 1,281.60	\$ 1,281.60	\$ 1,281.60	
Fuel and lube	\$ 6,883.20	\$ 6,883.20	\$ 6,883.20	
Labor	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	Reduced labor due to configuration (e.g. no gates to set/maintain)
Total	\$ 14,856.60	\$ 14,856.60	\$ 14,856.60	
Vol pumped AF	195	213	202	
\$/AF	\$ 76.24	\$ 69.87	\$ 73.45	

(2001, Selley). Roger Selley. "Estimated Irrigation Costs, 2001." Nebraska Cooperative Extension CC 371. August 2001.

**TABLE 5. PRELIMINARY 60 DAY PUMPING COST ESTIMATE
DIESEL MOTOR POWER PLANT - PARTIAL INTEREST/DEPRECIATION**

Annualized Cost				
Int/Depr Factor	0.33	0.33	0.33	
Interest	\$ 625.35	\$ 625.35	\$ 625.35	Only charge a portion of the interest/depreciation
Depreciation	\$ 1,252.94	\$ 1,252.94	\$ 1,252.94	(2001, Selley) - Table 5 using single well, pump, power unit and 1,000 feet of pipe
Repairs	\$ 1,281.60	\$ 1,281.60	\$ 1,281.60	(2001, Selley) - Table 5 using single well, pump, power unit and 1,000 feet of pipe
Fuel and lube	\$ 6,883.20	\$ 6,883.20	\$ 6,883.20	
Labor	\$ 1,000.00	\$ 1,000.00	\$ 1,000.00	Reduced labor due to configuration (e.g. no gates to set/maintain)
Total	\$ 11,043.09	\$ 11,043.09	\$ 11,043.09	
Vol pumped AF	195	213	202	
\$/AF	\$ 56.67	\$ 51.94	\$ 54.59	

(2001, Selley). Roger Selley. "Estimated Irrigation Costs, 2001." Nebraska Cooperative Extension CC 371. August 2001.

District	Name	2001	2002	2003	2004	Average	Percent Change for Pumping 60 Days (1440 hours)
N77	Norris	715.08	994.53	880.1	1111	925.1775	156%
N100	Wheatbelt	1111	1111	1111	1128	1115.25	129% *
N98	Twin Valley	720.59	1113.45	845.67	802	870.4275	165% *
N176	Southern	721.08	951.53	903.76	815	847.8425	170%
N101	Southwest	1100.94	1448.59	1227.1	1088	1216.158	118%
N105	South Central	709.01	989.41	880.1	743	830.38	173% Farmers Creek (E. Br.) to Willow Cr.
N79	McCook	914.9	1208.81	990.06	857	992.6925	145%
N88	Midwest	1061.35	1396.62	1230.86	1017	1176.458	122%
C29	Highline	0	0	1191.95	970	540.4875	266%
N78	Dawson	690.42	1035.68	912.66	839	869.44	166%

* add another 100% if they would irrigate too