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#### Cost and Return Profiles for Selected Crops, 2001 Irrigated Crops

August, 2005





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#### **OVERVIEW**

#### 2001 Irrigated Soil Zone

The AgriProfit\$ Cost and Return study is a provincial overview of costs and returns for various annual field crops and forages grown throughout the province. Participating farmers are surveyed throughout the winter and the Alberta Agriculture Economics Unit compiles all the information into this summary package. This detailed and world-class database is used for extension and research purposes.

In this package you will find a brief summary of various field crops and forages grown in the irrigated soil zone. Where numbers warrant, there are two levels of analysis – the group average and the top third. The top third analysis is based on the top third of fields that have the highest return to equity.

The map on the upper right illustrates the Irrigated Soil Zone area of Alberta. In the case of irrigation, only farms in southern Alberta are included in the sample.

The map on the lower right highlights the locations of participating farmers for the 2001 survey season.

For questions regarding this document please contact:

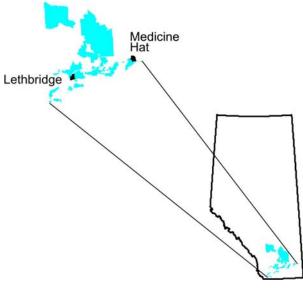
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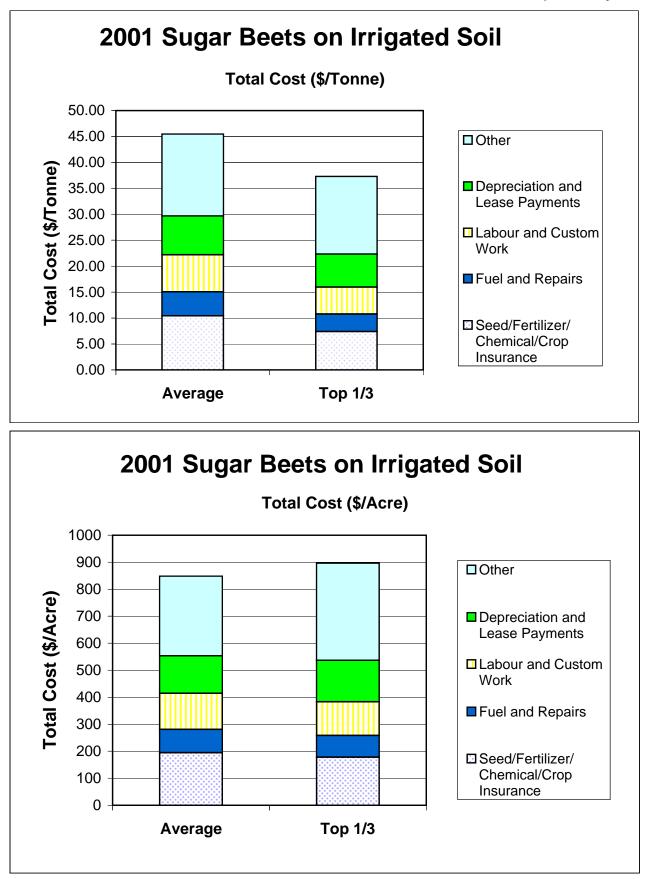
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		Crop: Soil Zone:	Spring Whe - Irrigated	eat - All				
		Unit:	Bushel		\$/A	cre	\$/Bus	hel
					Average	Top 1/3	Average	Top 1/3
(A)	1.	Crop Sales			340.52		4.52	
	2.	Crop Insuran	ce Receipts		0.00		0.00	
	3.	Other Receip	ots		41.89		0.56	
		Gross Recei	ipts		382.42	0.00	5.08	0.00
(B)		Cost Items						
(6)	1.				15.95		0.21	
	2.	Fertilizer			40.77		0.54	
	2. 3.				21.79		0.29	
	4.	Hail/Crop Ins	urance Prem	nium	6.24		0.08	
	 5.	Trucking and		num	1.15		0.02	
	6.	Fuel	Marketing		12.74		0.02	
	7.	Irrigation Fue	and Electric	city	17.80		0.24	
	7. 8.	•		Sity	26.51		0.35	
		Repairs - Bui	-		2.33		0.03	
		. Utilities and M	-	\$	35.28		0.47	
		. Custom Worl		5	8.86		0.12	
		. Operating Int			3.84		0.05	
		. Paid Labour			4.74		0.06	
		. Unpaid Labo	ur		55.91		0.74	
		Variable Cos			253.92	0.00	3.37	0.00
		0 <b>k</b> / 0k	Land David		00.00		0.40	
(C)		Cash/ Share		0.1	32.20		0.43	
		Taxes, Water			11.11		0.15	
	3.	Equipment a	na Bullaing:	a) Depreciation	43.30		0.58	
		Daid Oasital		b) Lease Payments	11.02		0.15	
	4.	Paid Capital			5.48		0.07	
		Capital Cost	S		103.11	0.00	1.37	0.00
(D)		Cash Costs		(B+C-B14-C3a)	257.81		3.42	
<u>(E)</u>		Total Produ		(B+C)	357.03		4.74	
		Gross Marg		(A-D)	124.60		1.66	
		Return to U	•		81.31		1.08	
		Return to In		(A-E+C4)	30.87		0.41	
		Return to Ed	quity	(A-E)	25.39		0.34	
		Investment			100.07			
		Buildings			132.37			
		Machinery			219.58			
		Irrigation Mac			163.33			
		Total (incl.	Land)		1138.66			
		Managemen	t					
		Average Yiel		(Bushel/acre)	75.29			
		Expected Ma		(\$/Bushel)	4.52			
		-		-				

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		•	urum - Al Irrigated	I				
			ushel		\$/Ac	re	\$/Bus	hel
					Average	Top 1/3	Average	Top 1/3
(A)	1.	Crop Sales			624.82		6.58	
	2.	Crop Insurance	Receipts		0.00		0.00	
	3.	Other Receipts	-		38.24		0.40	
		Gross Receipt	S		663.06	0.00	6.99	0.00
(B)		Cost Items						
(5)	1.				17.49		0.18	
	2.	Fertilizer			48.92		0.52	
	3.				7.84		0.08	
	4.	Hail/Crop Insura	ance Prem	nium	12.55		0.13	
	5.	Trucking and M			0.00		0.00	
	-	Fuel	unioung		10.24		0.11	
	7.	Irrigation Fuel a	nd Electric	city	17.27		0.18	
		Repairs - Machi		Sity	13.31		0.14	
		Repairs - Buildi	•		3.12		0.03	
		. Utilities and Mis	•	s	10.23		0.11	
		. Custom Work		5	14.69		0.15	
		. Operating Intere	et Paid		3.02		0.03	
		. Paid Labour	5511 414		2.20		0.02	
		. Unpaid Labour			18.78		0.20	
	17	Variable Costs	i		179.67	0.00	1.89	0.00
(C)	1	Cash/ Share La	nd Rent		22.92		0.24	
(•)		Taxes, Water R		nse & Ins	12.47		0.13	
		Equipment and		a) Depreciation	66.36		0.70	
	0.	_ qpo aa		b) Lease Payments	0.00		0.00	
	4	Paid Capital Inte	erest	<i>b)</i> <u></u>	20.31		0.21	
		Capital Costs			122.06	0.00	1.29	0.00
(D)		Cash Costs		(B+C-B14-C3a)	216.59		2.28	
(E)		Total Productio	on Costs	(B+C)	301.73		3.18	
(-/		Gross Margin		(A-D)	446.46		4.70	
		Return to Unpa	aid Labou	· ·	380.11		4.00	
		Return to Inve		(A-E+C4)	381.64		4.02	
		Return to Equi		(A-E)	361.33		3.81	
							_	
		Investment						
		Buildings			75.13			
		Machinery			354.02			
		Irrigation Machi	nery		366.67			
		Total (incl. La	and)		2898.81			
		Management						
		Average Yield		(Bushel/acre)	94.92			
		Expected Marke	et Price	(\$/Bushel)	6.58			

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		Crop: Soil Zone:	Durum - O - Irrigated	wn				
		Unit:	Bushel		\$/Ac	re	\$/Bus	hel
		•	Ducher		Average	Top 1/3	Average	Top 1/3
(A)	1.	Crop Sales			662.42		6.57	
	2.	Crop Insuran	ce Receipts		0.00		0.00	
	3.	Other Receip	ots		43.65		0.43	
		Gross Recei	ipts		706.07	0.00	7.00	0.00
(B)		Cost Items				_		
. ,	1.	Seed			18.02		0.18	
	2.	Fertilizer			46.18		0.46	
	3.	Chemical			5.88		0.06	
	4.	Hail/Crop Ins	urance Prem	nium	12.81		0.13	
	5.	Trucking and	Marketing		0.00		0.00	
	6.	Fuel			9.87		0.10	
	7.	Irrigation Fue	and Electric	city	17.94	- · · ·	0.18	
	8.	Repairs - Ma	chinery		12.21		0.12	
	9.	Repairs - Bui	ldings		3.46		0.03	
	10	. Utilities and M	Viscellaneou	S	9.41		0.09	
	11	. Custom Worl	k		15.44	- · · ·	0.15	
	12	. Operating Int	erest Paid		2.13	- · · ·	0.02	
	13	. Paid Labour			1.69		0.02	
	14	. Unpaid Labo	ur		16.28		0.16	
		Variable Cos	sts		171.30	0.00	1.70	0.00
(C)	1.	Cash/ Share	Land Rent		0.00		0.00	
	2.	Taxes, Wate	r Rates, Lice	nse & Ins.	15.75		0.16	
	3.	Equipment a	nd Building:	<ul> <li>a) Depreciation</li> </ul>	78.43		0.78	
				<ul><li>b) Lease Payments</li></ul>	0.00		0.00	
	4.	Paid Capital	Interest		27.17		0.27	
		Capital Cost	S		121.35	0.00	1.20	0.00
(D)		Cash Costs		(B+C-B14-C3a)	197.95		1.96	
(E)		Total Produc	ction Costs	(B+C)	292.65	· · ·	2.90	
		Gross Marg	in	(A-D)	508.13		5.04	
		Return to Ur	npaid Labou	ır (A-E+B14)	429.70		4.26	
		Return to In		(A-E+C4)	440.59		4.37	
		Return to Ed	quity	(A-E)	413.42		4.10	
		Investment						
		Investment			25 50			
		Buildings			35.59			
		Machinery	obinon		366.55			
		Irrigation Mac Total (incl.			523.07 <b>3925.21</b>			
		Managemen	+					
		Average Yiel		(Bushel/acre)	100.81			
		Expected Ma		(\$/Bushel)	6.57			
					0.07			

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		•	ırum - Rei Irrigated	nt				
			ıshel		\$/Ac	re	\$/Bus	hel
					Average	Тор 1/3	Average	Top 1/3
(A)	1.	Crop Sales			536.67		6.62	
	2.	Crop Insurance	Receipts		0.00		0.00	
	3.	Other Receipts			25.55		0.32	
		Gross Receipts	;		562.22	0.00	6.93	0.00
(B)		Cost Items						
(5)	1.				16.25		0.20	
	2.	Fertilizer			55.36		0.68	
	<u>2</u> . 3.				12.43		0.15	
	4.	Hail/Crop Insura	nce Premi	um	11.94		0.15	
	5.	Trucking and Ma		um	0.00		0.00	
	6.	Fuel	antoung		11.11		0.14	
	7.	Irrigation Fuel ar	nd Electric	itv	15.72		0.19	
	8.	<b>U</b>		ity is a second s	15.89		0.20	
	9.	•	-		2.33		0.03	
		. Utilities and Miso	-		12.17		0.15	
		. Custom Work	Jonanoodo		12.95		0.16	
		. Operating Intere	st Paid		5.08		0.06	
		. Paid Labour			3.40		0.04	
		. Unpaid Labour			24.64		0.30	
		Variable Costs			199.28	0.00	2.46	0.00
(C)	1.	Cash/ Share Lar	nd Rent		76.67		0.95	
(-)		Taxes, Water Ra		se & Ins.	4.79		0.06	
	3.			a) Depreciation	38.05		0.47	
	-	- 1		b) Lease Payments	0.00		0.00	
	4.	Paid Capital Inte	erest	-,	4.22		0.05	
		Capital Costs			123.72	0.00	1.53	0.00
(D)		Cash Costs		(B+C-B14-C3a)	260.32		3.21	
(E)		<b>Total Productio</b>	n Costs	(B+C)	323.00		3.98	
<u> </u>		Gross Margin		(A-D)	301.91		3.72	
		Return to Unpa	id Labour	· ·	263.86		3.25	
		Return to Inves	tment	(A-E+C4)	243.43		3.00	
		Return to Equit	<i>y</i>	(A-E)	239.22		2.95	
		Investment						
		Buildings			167.81			
		Machinery			324.66			
		Irrigation Machin			0.00			
		Total (incl. La	nd)		492.46			
		Management						
		Average Yield		(Bushel/acre)	81.11			
		Expected Marke	t Price	(\$/Bushel)	6.62			

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			Feed Barle - Irrigated	y - All					
			Bushel			\$/Ac	re	\$/Bus	hel
						rage	Top 1/3	Average	Top 1/3
(A)	1.	Crop Sales			34	8.65		3.42	
. ,	2.	•	e Receipts		2	4.52		0.24	
	3.	Other Receipts			6	5.61		0.64	
		Gross Receip	ots		43	8.77	0.00	4.31	0.00
(B)		Cost Items							
(-)	1.	Seed			1	8.27		0.18	
	2.	Fertilizer				0.44		0.40	
	3.					3.18		0.23	
	4.	Hail/Crop Insu	rance Prem	nium		9.30		0.09	
	5.	Trucking and I				0.00		0.00	
	-	Fuel	lanig			5.53		0.15	
	7.	Irrigation Fuel	and Electric	city		2.93		0.23	
		Repairs - Mac		Sity		2.03		0.31	
		Repairs - Build				3.87		0.04	
		. Utilities and M	•	s		1.15		0.21	
		. Custom Work	ISCENARICOU	5		4.35		0.21	
		. Operating Inte	rest Paid			2.10		0.02	
		. Paid Labour				3.42		0.02	
		. Unpaid Labour	r			0.60		0.30	
		Variable Cost				7.16	0.00	2.33	0.00
(C)	1	Cash/ Share L	and Rent		3	9.68		0.39	
(0)		Taxes, Water		neo & Ine		3.00 4.14		0.39	
		Equipment and		a) Depreciation		4.78		0.14	
	5.		a Building.	b) Lease Paymer		4.78 0.00		0.04	
	1	Daid Capital Ir	toroct	D) Lease Fayinei		1.52		0.00	
	4.	Paid Capital Ir Capital Costs				0.12	0.00	1.28	0.00
<i>(</i> <b>_</b> )									
(D)		Cash Costs		(B+C-B14-C		1.90		2.77	
<u>(E)</u>		Total Product		(B+C)		7.28		3.61	
		Gross Margin		(A-D)		6.87		1.54	
		Return to Un		· · · ·		2.09		1.00	
		Return to Inv		(A-E+C4)		3.01		0.91	
		Return to Equ	uity	(A-E)	7	1.49		0.70	
		Investment							
		Buildings			10	2.73	<b>-</b> -		
		Machinery				2.73 5.19			
		Irrigation Mach	ninerv			9.54			
		Total (incl. I				9.54 <b>3.77</b>			
		Monogora							
		Management		(Duch al/sers)	40	1 0 1			
		Average Yield		(Bushel/acre)		1.84			
		Expected Mar	KET PIICE	(\$/Bushel)		3.42			

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		Crop: Soil Zone:	Sugar Beets - - Irrigated	- All				
		Unit:	Tonne		\$/Ac	cre	\$/Ton	ne
		•			Average	Top 1/3	Average	Top 1/3
(A)	1.	Crop Sales			862.16	1110.24	46.21	46.21
	2.	Crop Insuran	ce Receipts		48.82	32.01	2.62	1.33
	3.	Other Receip	ots		10.54	21.13	0.57	0.88
		Gross Recei	ipts		921.52	1163.38	49.39	48.42
		0						
(B)		Cost Items			50.00	50.00	2.45	0.44
		Seed			58.68	58.68	3.15	2.44
	2. 3.				39.66 75.15	33.36	2.13	1.39 2.66
				~	75.15	63.83	4.03	
	4. 5	•	urance Premiu	(T)	21.29 88.91	22.36 171.92	1.14	0.93 7.16
	5. 6.	Trucking and Fuel	Imarketing		34.58		4.77	1.52
			l and Electricity	,	32.95	36.59 42.07	1.85	1.52
	7. °	Repairs - Ma	el and Electricity		32.95 47.57	37.31	1.77 2.55	1.75
		Repairs - Ma	•		47.37	6.25	0.22	0.26
		•	Viscellaneous		33.61	32.12	1.80	1.34
		. Custom Worl			24.23	12.47	1.30	0.52
		. Operating Int			7.96	10.21	0.43	0.32
		. Operating init	lerest Falu		36.49	14.29	1.96	0.43
		. Unpaid Labour	ur.		72.65	98.43	3.89	4.10
	14	Variable Cos			577.88	<u>639.90</u>	30.97	26.63
(C)	1.	Cash/ Share	Land Rent		82.52	60.53	4.42	2.52
	2.	Taxes, Wate	r Rates, Licenso	e & Ins.	20.19	18.31	1.08	0.76
	3.	Equipment a	nd Building: a	) Depreciation	115.92	98.95	6.21	4.12
			b	) Lease Payments	23.21	54.36	1.24	2.26
	4.	Paid Capital	Interest		28.83	24.18	1.55	10.67
		Capital Cost	ts		270.68	256.32	14.51	20.33
(D)		Cash Costs		(B+C-B14-C3a)	659.99	698.85	35.37	38.75
(E)		Total Produ		(B+C)	848.56	896.22	45.48	46.96
		Gross Marg	in	(A-D)	261.53	464.53	14.02	9.67
			npaid Labour	(A-E+B14)	145.61	365.58	7.80	5.55
		Return to In		(A-E+C4)	101.79	291.33	5.46	12.13
		Return to Ed	quity	(A-E)	72.96	267.15	3.91	1.46
		Investment						
		Buildings			158.61	167.31		
		Machinery			878.02	808.88		
		Irrigation Ma	chinery		341.19	287.26		
		Total (incl.			2136.77	1851.08		
			Lanaj		2100.77	1001.00		
		Managemen						
		Average Yiel	•	Tonne/acre)	18.66	24.03		
		Expected Ma	arket Price (S	\$/Tonne)	46.21	46.21		

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		Crop: Soil Zone:	Sugar Bee - Irrigated	ts - Own				
			Tonne		\$/Ac	re	\$/Tor	ne
					Average	Top 1/3	Average	Top 1/3
(A)	1.	Crop Sales			902.74		46.21	
	2.	Crop Insuranc	e Receipts		19.82		1.01	
	3.	Other Receipt			13.75		0.70	
		Gross Receip	ots		936.31	0.00	47.93	0.00
(B)		Cost Items						
(-)	1	Seed			58.68		3.00	
	2.	Fertilizer			51.09		2.62	
	2. 3.				75.15		3.85	
	3. 4.	Hail/Crop Insu	Iranco Prom		22.10		1.13	
	4. 5.	Trucking and		num	77.77		3.98	
	-	Fuel	Marketing		38.07			
			and Electri	ait <i>i</i>			1.95	
	7.	Irrigation Fuel		City	34.83		1.78	
		Repairs - Mac			47.70		2.44	
		Repairs - Build	•		3.93		0.20	
		. Utilities and M		S	38.02		1.95	
		. Custom Work			15.66		0.80	
		. Operating Inte	erest Paid		4.22		0.22	
		. Paid Labour			19.59		1.00	
	14	. Unpaid Labou			92.48		4.73	
		Variable Cost	ts		579.28	0.00	29.65	0.00
(C)	1.	Cash/ Share L	and Rent		0.00		0.00	
	2.	Taxes, Water	Rates, Lice	nse & Ins.	33.55		1.72	
	3.	Equipment an	d Building:	a) Depreciation	164.90		8.44	
				b) Lease Payments	6.90		0.35	
	4.	Paid Capital Ir	nterest		51.36		2.63	
		Capital Costs			256.71	0.00	13.14	0.00
(D)		Cash Costs		(B+C-B14-C3a)	578.61		29.62	
(E)		<b>Total Produc</b>	tion Costs	(B+C)	835.99		42.79	
		Gross Margir	า	(A-D)	357.70		18.31	
		Return to Un	paid Laboı	<i>ır</i> (A-E+B14)	192.80		9.87	
		Return to Inv	estment	(A-E+C4)	151.68		7.76	
		Return to Eq	uity	(A-E)	100.32		5.14	
		Investment			100.40			
		Buildings Machinan/			198.48			
		Machinery	hinon		844.26			
		Irrigation Mac			858.55			
		Total (incl. )	Land)		3811.10			
		Management						
		Average Yield		(Tonne/acre)	19.54			
		Expected Mar	ket Price	(\$/Tonne)	46.21			

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		Crop: Soil Zone:	Sugar Bee - Irrigated					
		Unit:	Tonne		\$/A	cre	\$/Ton	ne
			101110		Average	Top 1/3	Average	Top 1/3
(Δ)	1	Crop Sales			835.40	1086.13	46.21	46.21
(,,)		Crop Insuran	ce Receints		67.94	51.96	3.76	2.21
		Other Receip			8.42	20.21	0.47	0.86
		Gross Recei			911.76	1158.30	50.43	49.28
			<b>P</b>					
(B)		Cost Items						
. ,	1.	Seed			58.68	58.68	3.25	2.50
	2.	Fertilizer			32.13	34.72	1.78	1.48
	3.	Chemical			75.15	76.23	4.16	3.24
	4.	Hail/Crop Ins	urance Pren	nium	20.76	21.06	1.15	0.90
	5.	Trucking and	Marketing		96.26	184.50	5.32	7.85
	6.	Fuel	-		32.29	33.26	1.79	1.42
	7.	Irrigation Fue	and Electri	city	31.72	42.36	1.75	1.80
	8.	Repairs - Ma			47.49	33.64	2.63	1.43
	9.	Repairs - Bui	Idings		4.26	4.17	0.24	0.18
	10	. Utilities and M	Viscellaneou	IS	30.71	28.50	1.70	1.21
	11	. Custom Work	<		29.89	20.24	1.65	0.86
	12	. Operating Int	erest Paid		10.44	15.77	0.58	0.67
		. Paid Labour			47.63	20.55	2.63	0.87
	14	. Unpaid Labo	ur		59.57	85.89	3.30	3.65
		Variable Cos	sts		576.96	659.56	31.91	28.06
(C)	1.	Cash/ Share	Land Rent		136.94	98.26	7.57	4.18
	2.	Taxes, Water	r Rates, Lice	nse & Ins.	11.38	8.77	0.63	0.37
	3.	Equipment ar	nd Building:	<ul> <li>a) Depreciation</li> </ul>	83.62	62.29	4.63	2.65
				<ul><li>b) Lease Payments</li></ul>	33.98	84.73	1.88	3.60
	4.	Paid Capital	Interest		13.98	22.28	0.77	11.76
		Capital Cost	S		279.89	276.33	15.48	22.57
(D)		Cash Costs		(B+C-B14-C3a)		787.71	39.48	44.32
<u>(E)</u>		Total Produc		(B+C)	856.85	935.89	47.40	50.63
		Gross Margi		(A-D)	198.10	370.58 308.29	10.96	4.96 2.31
		Return to Ur	-	<i>ır</i> (A-E+B14) (A-E+C4)	114.49		6.33	10.41
		Return to In		(A-E+C4) (A-E)	68.89 54.92	244.68	3.81	
		Return to Eq	juity	(A-E)	54.92	222.41	3.04	(1.35)
		Investment						
		Buildings			132.32	106.21		
		Machinery			900.27	811.27		
		Irrigation Mad	chinery		0.00	0.00		
		Total (incl.	Land)		1032.59	917.48		
		Managemen						
		Average Yiel		(Tonne/acre)	18.08	23.50		
		Expected Ma	rket Price	(\$/Tonne)	46.21	46.21		

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		Crop: Soil Zone:	Dry Beans - Irrigated	- All					
		Unit:	Pound			\$/Ad	cre	\$/Pou	nd
						Average	Top 1/3	Average	Top 1/3
(A)	1.	Crop Sales				767.78		0.32	
	2.	Crop Insuran	ce Receipts			0.00		0.00	
	3.	Other Receip				5.28		0.00	
		Gross Recei	pts			773.07	0.00	0.32	0.00
(B)		Cost Items					_		
(-)	1.					52.26		0.02	
	2.	Fertilizer				35.42		0.01	
	3.					56.89		0.02	
	4.	Hail/Crop Inst	urance Prem	nium		16.15		0.01	
	5.	Trucking and				3.39		0.00	
	6.	Fuel				18.02		0.01	
	7.	Irrigation Fue	l and Electri	city		23.97		0.01	
	8.	-		Sity		34.25		0.01	
	9.	•				4.23		0.00	
		. Utilities and M	-	c		23.19		0.00	
		. Custom Work		3		20.16		0.01	
		. Operating Inte				12.50		0.01	
		. Paid Labour	erest Falu			10.26		0.00	
		. Unpaid Labour				68.97		0.00	
	14	Variable Cos				<b>379.63</b>	0.00	0.03	0.00
(C)	1	Cash/ Share	l and Pont			47.04		0.02	
(0)		Taxes, Water		nso & Inc		24.48		0.02	
	2. 3.	Equipment ar		a) Depreciation		24.40 67.91		0.01	
	З.	Equipment a	iu bullullig.	b) Lease Payme	onto	14.79		0.03	
	4	Daid Capital I	ntoroot	D) Lease Fayine	51115	46.22		0.01	
	4.	Paid Capital I Capital Cost				200.44	0.00	0.02	0.00
		Capital Cost	5			200.44	0.00	0.00	0.00
(D)		Cash Costs		(B+C-B14-0	C3a)	443.19		0.18	
(E)		Total Produc	tion Costs	(B+C)		580.07		0.24	
		Gross Margi	'n	(A-D)		329.88		0.14	
		Return to Un	ipaid Labou	ır (A-E+B14)		261.97		0.11	
		Return to Inv	vestment	(A-E+C4)		239.22		0.10	
		Return to Eq	uity	(A-E)		193.00	· · ·	0.08	
		Investment							
		Buildings				205.79			
		Machinery				496.96			
		Irrigation Mac	chinery			165.68			
		Total (incl.				1843.78			
		Management	t						
		Average Yield	b	(Pound/acre)		2424.20			
		Expected Ma		(\$/Pound)		0.32			

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		Crop: Soil Zone:	Dry Beans - - Irrigated	Rent				
		Unit:	Pound		\$/Ac	re	\$/Pou	ınd
		•	, ound		Average	Top 1/3	Average	Top 1/3
(A)	1.	Crop Sales			691.91		0.31	
• •	2.	•	nce Receipts		0.00		0.00	
	3.	Other Receip			4.63		0.00	
		Gross Rece	ipts		696.54	0.00	0.31	0.00
(B)		Cost Items						
(0)	1	Seed			61.25		0.03	
	2.	Fertilizer			32.75		0.03	
	<u>2</u> . 3.				48.71		0.02	
	4.		surance Prem	ium	14.30		0.01	
	 5.	Trucking and			5.11		0.00	
	-	Fuel	marketing		15.37		0.01	
	7.		el and Electric	ity	25.60		0.01	
		Repairs - Ma		ity	31.54		0.01	
		Repairs - Bu			2.69		0.00	
		. Utilities and	•		21.39		0.00	
		. Custom Wor			15.95		0.01	
		. Operating In			12.09		0.01	
		. Paid Labour	lerest Faiu		12.09		0.01	
		. Unpaid Labour	r		81.84		0.01	
	14	Variable Co			381.38	0.00	0.04	0.00
		variable CO	313		501.50	0.00	0.17	0.00
(C)	1.	Cash/ Share	Land Rent		71.06		0.03	
	2.	Taxes, Wate	r Rates, Licer	ise & Ins.	7.81		0.00	
	3.	Equipment a	nd Building:	a) Depreciation	49.19		0.02	
				b) Lease Payments	22.34		0.01	
	4.	Paid Capital	Interest		6.06		0.00	
		Capital Cos	ts		156.46	0.00	0.07	0.00
(D)		Cash Costs		(B+C-B14-C3a)	406.81		0.18	
(E)		Total Produ	ction Costs	(B+C)	537.84		0.24	
		Gross Marg	in	(A-D)	289.73		0.13	
		Return to U	npaid Labou	r (A-E+B14)	240.54		0.11	
		Return to In	vestment	(A-E+C4)	164.76		0.07	
		Return to E	quity	(A-E)	158.70		0.07	
		Investment Buildings			186.64			
		Machinery			475.70			
		•	obinon					
		Irrigation Ma Total (incl			0.00 662.34			
			unuj		002.04			
		Managemer						
		Average Yiel		(Pound/acre)	2233.57			
		Expected Ma	arket Price	(\$/Pound)	0.31			

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		•	ain Silage rigated	e - All				
		Unit: Tor	-		\$/Ac	re	\$/Ton	ne
					Average	Top 1/3	Average	Top 1/3
(A)	1.	Crop Sales			406.45		36.22	
	2.	Crop Insurance R	leceipts		0.00		0.00	
	3.	Other Receipts			5.53		0.49	
		Gross Receipts			411.98	0.00	36.71	0.00
(B)		Cost Items						
	1.	Seed			9.83		0.88	
	2.	Fertilizer			41.66		3.71	
	3.	Chemical			7.65		0.68	
	4.	Hail/Crop Insuran	ce Premi	um	7.07		0.63	
	5.	Trucking and Mar			0.00		0.00	
	6.	Fuel	Ū		27.25		2.43	
	7.	Irrigation Fuel and	d Electric	ity	14.70		1.31	
	8.	Repairs - Machine		,	28.69		2.56	
		Repairs - Building	•		4.47		0.40	
		. Utilities and Misce			15.23		1.36	
		. Custom Work			1.76		0.16	
		. Operating Interes	t Paid		6.70		0.60	
		. Paid Labour			0.43		0.04	
		. Unpaid Labour			39.44		3.51	
		Variable Costs			204.88	0.00	18.26	0.00
(C)	1.	Cash/ Share Land	d Rent		20.25		1.80	
(-)		Taxes, Water Rat		se & Ins	33.75		3.01	
	3.			a) Depreciation	65.15		5.81	
	0.	_ qa.po aa _	and an ig	b) Lease Payments	0.10		0.01	
	4	Paid Capital Inter	est	<i>z</i> ) <u>_</u>	25.55		2.28	
		Capital Costs	001		144.81	0.00	12.90	0.00
(D)		Cash Costs		(B+C-B14-C3a)	245.09		21.84	
(E)		Total Production	o Costs	(B+C)	349.68		31.16	
<u> </u>		Gross Margin		(A-D)	166.89		14.87	
		Return to Unpai	d Laboui	• •	101.74		9.07	
		Return to Invest		(A-E+C4)	87.85		7.83	
		Return to Equity		(A-E)	62.29		5.55	
		Investment			07.00			
		Buildings			87.30			
		Machinery			385.22			
		Irrigation Machine			311.67			
		Total (incl. Lan	d)		2722.22			
		Management						
		Average Yield		(Tonne/acre)	11.22			
		Expected Market	Price	(\$/Tonne)	36.22			

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			Grain Silag - Irrigated	e - Own				
			Tonne		\$/Acre		\$/Tonne	
					Average	Top 1/3	Average	Top 1/3
(A)	1.	Crop Sales			442.50		37.56	
	2.	Crop Insurance Receipts			0.00		0.00	
	3.	Other Receipts			7.21	· · ·	0.61	
		Gross Receipts			449.72	0.00	38.17	0.00
		Coot Home						
(B)		Cost Items			0.00		0.00	
		Seed Fertilizer			9.68		0.82	
	2. 3.				41.89 5.37		3.56 0.46	
	4. Hail/Crop Insurance Premium			7.07		0.46		
	<ol> <li>Trucking and Marketing</li> <li>Fuel</li> <li>Irrigation Fuel and Electricity</li> <li>Repairs - Machinery</li> <li>Repairs - Buildings</li> <li>Utilities and Miscellaneous</li> <li>Custom Work</li> <li>Operating Interest Paid</li> <li>Paid Labour</li> <li>Unpaid Labour</li> </ol>				0.00		0.60	
					31.30			
							2.66	
					13.21		1.12	
					32.83		2.79	
					3.84		0.33	
					17.14		1.46	
					1.15		0.10	
					7.72		0.66	
					0.28		0.02	
					44.61		3.79	
		Variable Cost	S		216.08	0.00	18.34	0.00
<b>(C)</b> 1.		Cash/ Share Land Rent			0.00		0.00	
	2.	Taxes, Water	Rates, Licer	nse & Ins.	42.48	· · · ·	3.61	
	3.	Equipment and	d Building:	a) Depreciation	79.76	· · · ·	6.77	
			-	b) Lease Payments	0.14	· · · ·	0.01	
	4.	Paid Capital In	iterest		31.91		2.71	
		Capital Costs			154.29	0.00	13.10	0.00
(D)		Cash Costs		(B+C-B14-C3a)	246.01		20.88	
(E)		Total Product	ion Costs	(B+C)	370.38		31.44	
<u> </u>		Gross Margin	1	(A-D)	203.71		17.29	
		Return to Un	baid Labou	r (A-E+B14)	123.94		10.52	
		Return to Inv	estment	(A-E+C4)	111.25		9.44	
		Return to Equ	uity	(A-E)	79.34		6.73	
		Investment						
		Buildings			95.41			
		Machinery			454.69			
		Irrigation Machinery			407.28			
		Total (incl. L	.and)		3489.90			
		Management						
		Average Yield		(Tonne/acre)	11.78			
		Expected Marl	ket Price	(\$/Tonne)	37.56			
				· ·				

#### AgriProfit# FREQUENCY AND CUMULATIVE FREQUENCY DISTRIBUTION

Distribution charts organize data into pictures, which is a format that the human processing system (the brain) can better understand. Frequency distributions relate the percentage (or number) of observations falling in a specific range. Cumulative frequency distribution displays the same information as frequency distribution, but it is expressed as a "rate of change" (i.e. the steeper the slope the greater the change). Cumulative frequency also illustrates how many observations lie above or below certain values, rather than only recording the number of items within the intervals.

The frequency information in this benchmark report provides an indication of how crops performed, on a field-by-field basis, within the *AgriProfit\$* pool. Looking forward, this information can be used to evaluate how and why this crop might be included in future cropping plans based on these types of frequencies. In the following discussions, the sugar beet frequency distribution charts are used as an example of how to interpret the frequency information.

The first pair of charts provides the distribution of the sugar beet yield range under irrigation. From these charts a lot can be interpreted about yield performance:

- The low is greater than 14 tonnes per acre and the high is less than 26 tonnes per acre, and
- 70% of the sugar beet fields under irrigation yield between 14 and 22 bushels per acre This detailed information provides a better understanding of yield variability. The average yield is 18.66 tonnes per acre as listed on page 8 of the sugar beet analysis. While the average (or mean) is important, consideration of both the mean and variability ultimately sets the stage for good decision-making and management practices.

The second set of graphs focuses on the distribution of cost totals. Understanding these provides a basis for cost control and managing for yield per dollar invested. It is important to look at cash costs for individual field analysis (as an indication of cash flow pressure points). Cash costs include all cash expenses accrued to the production of that crop. Total production costs are important when assessing all crops together for an overall enterprise analysis, relaying the longer term cost efficiency of each crop and the combined crop mix. Total production costs include the non-cash elements of unpaid labour and depreciation, in addition to cash costs. Looking at the charts, if the price of sugar beets was \$45 per tonne, then 85% of the fields are covering their cash costs and 45% of the fields are covering their total production costs. In the long run, the best mix of crops would cover total production costs and give a positive net return per acre.

The third set of graphs highlights contribution and gross margins. Contribution margin is the return over variable costs, which are a combination of variable cash and non-cash (unpaid labour) costs. It is the best single indicator of profitability at the individual field level and it is used to compare and select crops to grow regardless of the fields being owned or rented. The first objective in setting up a crop plan is to select crops with a positive contribution margin; this will identify the most profitable crop mix over the long term. Gross margin is the return over total cash costs, which include fixed costs (land rent, taxes, water rights, licenses and capital interest). It is valuable in predicting each crop's ability to generate cash flow for the year. From a cash flow point of view, the gross margin provides an indication of the crop's ability to

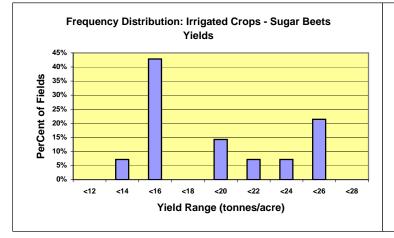
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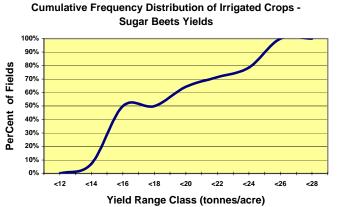
contribute to principal payments and operator withdrawals. From a profitability perspective, gross margin is what is leftover to cover the non-cash costs and provide a return on investment.

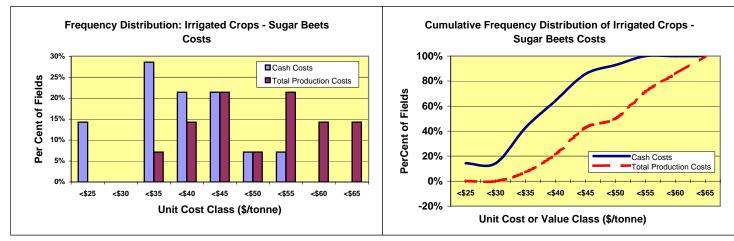
The final set of graphs shows the distribution of returns to equity, or profit per unit of production. This example shows that 50% of the fields had a loss and 50% of the fields at least broke even. Return to equity can be used to compare the profitability of one crop versus another or one farm enterprise to another in the same industry.

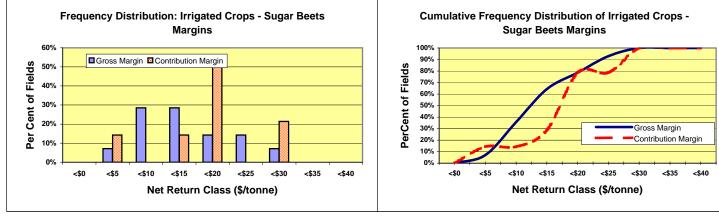
Understanding these concepts in *AgriProfit*\$ and evaluating historical performance on a per bushel basis can be very useful for other AAFRD applications. For example, *CropChoice*\$ is a tool that combines traditional crop planning with the ability to measure the riskiness of your plan. Producers can then creatively evaluate potential risk management strategies.

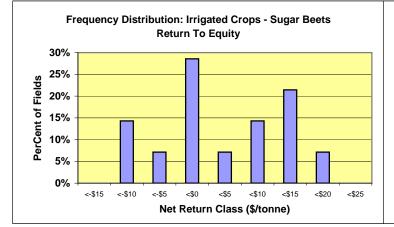


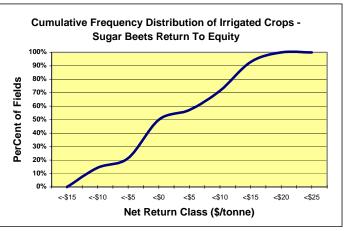


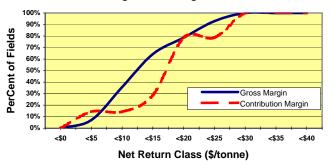












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#### I INCOME

- A Imputed Value of Production total of estimated yields/acre X estimated final prices
- **B** Crop Insurance Receipts added regardless of when payment is received
- C Miscellaneous Receipts such as patronage dividends or input rebates
- **D** Government Program Receipts allocated to all cropped acres equally
- **E** Straw/Aftermath Grazing Revenue value of straw + imputed value of grazing

#### II EXPENSES

- A Crop Specific Inputs allocated by producer to each crop as documented on the survey form
  - 1. Seed
  - 2. Fertilizer
  - 3. Chemical
  - 4. Hail and Crop Insurance
  - 5. Custom Work and Specialized Labour
  - 6. Land Rent cash rent or crop share (converted to a cash basis)
- **B** Allocated Crop Inputs allocation ratios based on research from AAFRD
  - **1. Irrigation to Dryland Ratio** allocated to crops at a 3:1 ratio
  - 2. Trucking and Marketing allocated to specific cropping acres by producer
  - **3. Fuel** Summerfallow allocation of 0.3:1 compared to crop acres; Sugar beets allocation of 2.96:1 compared to other irrigated crop acres
  - 4. Irrigation Fuel allocation based on total pumping hours for each crop
  - 5. Machinery Repairs allocated equally to all acres except summerfallow (0.3:1) and special crops (as specified by producer)
  - 6. Building Repairs allocated to all acres equally except for special crops buildings
  - 7. **Operating Interest** interest paid on operating loans allocated equally
  - 8. Paid Labour based on allocations between crops as specified by producer
  - 9. Unpaid and Operator Labour operator -\$10/hour, other unpaid labour - \$7.50/hour
  - **10.** Land Taxes allocated equally to all owned cropped acres
  - **11. Water Rates** allocated equally to all owned irrigated acres
  - **12.** Water Rates allocated equally to all owned irrigated acres
  - **13. Equipment Depreciation** imputed at 8.5% for power equipment, 11% for non-power, based on current market value

- **14. Insurance and Licenses** allocated to all cropped acres equally
- **15. Building Depreciation** imputed at 5% on the current market value
- **16. Paid Capital Interest** allocated to all owned cropped acres equally except summerfallow (0.25:1)

#### III CAPITAL INVESTMENT

- A Land producer estimate of bare land value for both irrigated and dryland owned acreage
- **B** Buildings allocated equally to all acreage except special crops buildings (allocated to the crop)
- **C** Equipment
  - **1. General Use** allocated to all acres equally, except summerfallow (0.3:1)
  - 2. Crop Specific allocated by producer to each crop based on percentage of use
  - **3.** Irrigation allocated according to pumping hours as specified by producer

#### IV SUMMARY CALCULATION

- A Gross Return = imputed value of production + crop insurance receipts + miscellaneous receipts + government program payments + straw/grazing revenue
- **B** Variable Costs = seed + fertilizer + chemicals + crop insurance + trucking and marketing + fuel + machinery and building repairs + utilities + miscellaneous overhead + custom work + operating interest + paid and unpaid labour
- C Total Capital Costs = land rent + land taxes + water rates + insurance + depreciation + paid capital interest
- **D** Cash Costs = variable costs + capital costs unpaid labour depreciation
- **E** Total Production Costs = variable costs + total capital costs
- **F Gross Margin** (returns left to cover total capital costs and operator equity) = gross return total cash costs
- **G Return to Unpaid Labour** (funds remaining after all expenses have been paid except unpaid labour) = gross return – total production costs + unpaid labour
- H Return to Investment (shows the operation's ability to earn a return on its total assets) = gross return total production costs + paid capital interest
- I **Return to Equity** (amount remaining from operations used to provide a return to individual or shareholder equity) = gross return – total production costs