Enterprise Budget

Spring Oats, Willamette Valley Region

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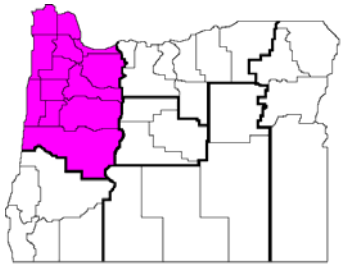

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This enterprise budget estimates the typical costs of producing spring oats in the Willamette Valley of Oregon. The residue from the previous crop is disked three times before the crop is seeded. While efforts were made to reflect common practices, this budget does not represent any particular farm and thus should be used only as a guide to estimating actual costs. Assistance provided by area producers is greatly appreciated.

Several Willamette Valley seed, grain and forage budgets were estimated as a group and are presented in a similar, consistent format. Table 1 shows the summary returns and cost information, with inputs grouped by various categories. Table 2 shows itemized details about the cultural operations performed, and their costs, in a chronological sequence. Table 3 shows break-even prices and net returns around the assumed price and yield for the crop.

Land and Cropping Pattern

This budget is based on a farm with 1200 acres in continuous production of grass seeds or related, similar technology crops such as small grains, oil seeds and forage seeds. Historically, most of the acreage in the Willamette Valley has been in grass seeds, with wheat or oats as a rotation crop, but with the declining grass seed prices and several recent years with strong grain prices, wheat and other grains have been much more widely planted. The budget estimates establishment costs on a per-acre basis.

A land lease charge of $120 per acre is included to represent the cost of leasing or owning land. Land cost varies depending on specific location and competition for production of alternate crops.

Labor and Capital

Hired labor typically costs approximately $16 per hour including worker's compensation, FICA, and other payroll expenses. For this study, all labor is treated as owner/operator labor valued at $16 per hour, and is assumed to be a cash cost. For mechanized operations, labor hours are calculated based on machinery hours. Opportunity costs of capital are charged at a rate of 10 percent for current and intermediate capital provided by the owner/operator.

Machinery and Equipment

The machinery complement is sufficient to farm 1200 production acres. Late 2010 replacement costs are used, assuming the machinery is half depreciated. Table 4 (subdivided into A, B, C and D sections) shows the cost of operating owned machinery in the cultural practices used in this and several related Willamette Valley seed, grain and forage budgets. Your machinery costs may differ.

Cultural Practices

The budget shows farming operations in the order they typically are performed. See Table 2, for details of operations.

Results

Table 1 shows the costs and returns for spring oats. The negative net returns do not necessarily translate into a loss in the common interpretation of the word. These budgets include investment costs for all owned resources, such as land and machinery as well as the cost of owner labor. These may not be cash costs for many operators.

The field operations and their costs are detailed in Table 2. The break-even prices needed to cover the total cost of production is given in Table 3. The break-even price of $7.12 per bushel is considerably higher than the $3.10 per bushel price assumed in the budget. In fact, at the assumed price, not even all variable costs (otherwise referred to as direct expenses) can be recovered and a producer would be well advised to consider other crops in that situation. Please note that at the break-even price, returns over total costs at the assumed (100%) budget yield are zero—by definition all costs would be covered. Table 3 also shows the sensitivity of returns over variable (or operating costs) and returns over total costs (net profit) as either prices or crop yields are varied.

Table 1.A Estimated costs and returns per acre
Spring Oats, Willamette Valley
Willamette Valley, 2010

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Spring Oats	bu	3.10	65.0000	201.50	_____
TOTAL INCOME				201.50	_____
DIRECT EXPENSES					
CHEM--FERTILIZER					
16-16-16 LB	lb	0.25	200.0000	50.00	_____
40-0-0-6 LB	lb	0.21	100.0000	21.00	_____
MISC BUS EXP					
Misc. business exp	acre	30.00	1.0000	30.00	_____
CHEM--HERBICIDE					
MCPA Amine	gal	18.00	0.1875	3.38	_____
SEEDS & PLANTS					
Treated Oat Seed	lb	0.25	150.0000	37.50	_____
CUSTOM, YIELD PROP.					
Transport to PDX	bu	0.27	65.0000	17.55	_____
Operator Labor					
Self-Propelled	hour	8.65	0.2105	1.82	_____
Machinery Labor					
Tractors	hour	16.00	0.4952	7.93	_____
Self-Propelled	hour	16.00	0.0695	1.12	_____
Pickup	hour	16.00	0.1150	1.84	_____
DIESEL FUEL					
Tractors	gal	3.00	8.3238	24.97	_____
Self-Propelled	gal	3.00	1.8878	5.65	_____
Pickup	gal	3.00	0.5000	1.50	_____
REPAIR & MAINTENANCE					
Implements	acre	4.04	1.0000	4.04	_____
Tractors	acre	11.59	1.0000	11.59	_____
Self-Propelled	acre	16.66	1.0000	16.66	_____
Pickup	mile	0.16	5.0000	0.83	_____
INTEREST ON OP. CAP.	acre	11.43	1.0000	11.43	_____
TOTAL DIRECT EXPENSES				248.81	_____
RETURNS ABOVE DIRECT EXPENSES				-47.31	_____
FIXED EXPENSES					
Implements	acre	9.61	1.0000	9.61	_____
Tractors	acre	33.02	1.0000	33.02	_____
Self-Propelled	acre	42.85	1.0000	42.85	_____
Pickup	each	6721.63	0.0008	5.60	_____
Mach/Equip Ins, Low	each	3.43	1.0000	3.43	_____
Land Rent WV Wheat	each	119.99	1.0000	120.00	_____
TOTAL FIXED EXPENSES				214.51	_____
TOTAL SPECIFIED EXPENSES				463.32	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				-261.82	_____

Table 2.A Estimated resource use and costs for field operations, per acre
Spring Oats, Willamette Valley
Willamette Valley, 2010

OPERATION/ OPERATING INPUT	SIZE/ UNIT	POWER UNIT SIZE	PERF RATE	TIMES OVER	MTH	POWER UNIT COST		EQUIPMENT COST		ALLOC LABOR		OPERATING/DURABLE INPUT			TOTAL COST
						DIRECT	FIXED	DIRECT	FIXED	HOURS	COST	AMOUNT	PRICE	COST	
						dollars					dollars			dollars	
Disk	20	250	0.097	3.00	Apr	29.47	29.20	2.45	6.12	0.33	5.36				72.60
FERTILIZE - SPRING				1.00	Apr										
Spray Bug60 7 mph	60'		0.030			1.22	1.93			0.03	0.56				3.71
Operator Labor	hour														
16-16-16 LB	lb											200.0000	0.25	50.00	50.00
PLANT				1.00	Apr										
Drill	13 ft	160	0.139			7.09	3.82	0.96	1.92	0.16	2.57				16.36
Harrow/Cultipacker	16ft		0.139					0.63	1.57						2.20
Treated Oat Seed	lb											150.0000	0.25	37.50	37.50
SPRING GRS/BRDLF CTL				1.00	Apr										
Spray Bug60 7 mph	60'		0.030			1.22	1.93			0.03	0.56				3.71
MCPA Amine	gal											0.1875	18.00	3.38	3.38
FERTILIZE - SPRING				1.00	Apr										
Spray Bug100 7mph	100'		0.014			0.68	1.06			0.01	0.15				1.89
40-0-0-6 LB	lb											100.0000	0.21	21.00	21.00
COMBINE				1.00	Aug										
Combine 300	300 hp		0.168			19.19	37.93			0.19	1.67				58.79
HAUL GRAIN				1.00	Aug										
Transport to PDX	bu											65.0000	0.27	17.55	17.55
MISCELLANEOUS				1.00	Aug										
Misc. business exp	acre											1.0000	30.00	30.00	30.00
Pickup	each			1.00	Aug				5.60			0.0008			5.60
Application 1	mile							2.33		0.11	1.84	5.0000			4.17
Mach/Equip Ins, Low	each			1.00	Aug				3.43			1.0000			3.43
Land Rent WV Wheat	each			1.00	Aug				120.00			1.0000			120.00
TOTALS						58.87	75.87	6.37	138.64	0.89	12.71			159.43	451.89
INTEREST ON OPERATING CAPITAL															11.43
UNALLOCATED LABOR															0.00
TOTAL SPECIFIED COST															463.32

Table 3.A Breakeven price above total expenses and net returns for price/yield combinations, per acre
Spring Oats, Willamette Valley
Willamette Valley, 2010

			BREAKEVEN PRICE									
Spring Oats			4.84	5.17	5.54	5.98	6.50	7.12[3]	7.88	8.84	10.06	11.69	13.97
PERCENT	YIELD	UNIT	dollars										
50	32.50	bu	-82[1]	-71	-59	-45	-28	-8	16	47	87	140	214
			-296[2]	-286	-274	-259	-242	-222	-197	-166	-127	-74	0
60	39.00	bu	-52	-39	-25	-8	12	36	66	103	150	214	303
			-267	-254	-239	-222	-202	-178	-148	-111	-63	0	89
70	45.50	bu	-22	-8	8	28	52	80	115	158	214	288	392
			-237	-222	-205	-185	-161	-133	-98	-55	0	74	178
80	52.00	bu	6	23	43	66	93	125	165	214	278	362	481
			-207	-190	-171	-148	-121	-89	-49	0	63	148	267
90	58.50	bu	36	55	77	103	133	169	214	270	341	437	570
			-178	-159	-137	-111	-80	-44	0	55	127	222	356
100	65.00	bu	66	87	111	140	174	214	263	325	405	511	659
			-148	-127	-102	-74	-40	0	49	111	190	296	445
110	71.50	bu	95	119	145	177	214	259	313	381	468	585	748
			-118	-95	-68	-37	0	44	98	166	254	371	534
120	78.00	bu	125	150	180	214	254	303	362	437	532	659	837
			-89	-63	-34	0	40	89	148	222	318	445	623
130	84.50	bu	155	182	214	251	295	348	412	492	596	734	927
			-59	-31	0	37	80	133	197	278	381	519	712
140	91.00	bu	184	214	248	288	335	392	461	548	659	808	1016
			-29	0	34	74	121	178	247	333	445	593	801
150	97.50	bu	214	246	283	325	376	437	511	604	723	882	1105
			0	31	68	111	161	222	296	389	508	667	890

[1]The top number in each cell is Returns Above Direct Expenses.
[2]The bottom number in each cell is Returns Above Total Specified Expenses.
[3] This is the breakeven price at the assumed (100%) budget yield. Prices to the left and right are for higher and lower yield levels.
Only the product listed has been varied to calculate net returns.

Table 4.A Tractors/Harvesters: estimated purchase price, annual use, useful life, fuel use, and direct and fixed cost per hour, 2010

Item Name	Size	Purchase Price	Annual Use	Useful Life	Fuel Use	Labor	Fuel	R&M	Total Direct	Fixed	Total Cost
		dollars	hours	years	gal/hr	$/hour					
Tractor 130	130	95,700	400	20	6.57	16.00	19.73	11.96	47.69	27.26	74.96
Tractor 140	140	121,000	500	20	6.50	16.00	19.50	12.10	47.60	27.58	75.18
Tractor 160	160	113,000	470	20	11.00	16.00	33.00	9.61	58.61	27.40	86.01
Tractor 180 Oper.	180	143,000	500	20	9.10	16.00	27.32	11.44	54.76	32.59	87.35
Tractor 200	200	154,000	550	20	10.12	16.00	30.36	11.20	57.56	31.91	89.47
Tractor 215	215	165,000	250	20	11.00	16.00	33.00	26.40	75.40	75.21	150.61
Tractor 250	250	220,000	250	20	11.00	16.00	33.00	35.20	84.20	100.29	184.49
Tractor 310	310	231,000	500	20	15.68	16.00	47.05	18.48	81.53	52.65	134.19

Notes:
Labor: Includes allocated labor from power unit.
Total Direct: Does not include interest on operating capital.

Table 4.B Self-propelled machines: estimated purchase price, annual use, useful life, fuel use, performance rate, and direct and fixed cost per acre, 2010

Item Name	Size	Purchase Price	Annual Use	Useful Life	Fuel Use	Perf Rate	Labor	Fuel	R&M	Total Direct	Fixed	Total Cost
		dollars	hours	years	gal/hr	hr/ac	$/acre					
ATV	20 hp	5,600	200	10	1.38	0.050	0.92	0.20	0.14	1.26	0.21	1.47
Combine 300	300 hp	300,000	200	10	8.00	0.168	1.67	4.04	15.15	20.86	37.93	58.80
Combine 300 slow	300 hp	300,000	200	10	8.00	0.210	1.82	5.05	18.94	25.81	47.41	73.22
Fertilizer Buggy	20	35,000	200	20	5.52	0.070	1.29	1.16	0.61	3.08	1.40	4.48
Fertilizer Buggy	30	44,000	200	20	6.50	0.047	0.86	0.91	0.51	2.29	1.17	3.47
Fertilizer Buggy OB	80	35,000	200	20	5.52	0.056	1.03	0.92	0.49	2.44	1.11	3.56
Spray Bug100 7mph	100'	190,000	300	20	8.00	0.014	0.14	0.35	0.32	0.82	1.06	1.88
Spray Bug40 4mph	40'	60,000	250	20	7.00	0.079	1.45	1.66	0.66	3.79	2.16	5.96
Spray Bug60 10mph	60'	140,000	250	20	7.00	0.021	0.38	0.44	0.41	1.24	1.34	2.59
Spray Bug60 7 mph	60'	140,000	250	20	7.00	0.030	0.55	0.63	0.59	1.78	1.92	3.71
Spray Bug80 7 mph	80'	163,000	300	20	5.52	0.021	0.38	0.34	0.40	1.13	1.30	2.43
Swather	15'	62,000	200	10	8.00	0.174	3.21	4.19	2.16	9.56	8.12	17.69

Notes:
Labor: includes allocated labor plus any additional labor from self-propelled machine.
Direct: Does not include interest on operating capital.

Table 4.C Implements: estimated purchase price, annual use, useful life, performance rate, and direct and fixed cost per acre, 2010

Item Name	Size	Power Unit	Purchase Price	Annual Use	Useful Life	Perf Rate	Labor	Fuel	---R&M---- Imp.	P.U.	Total Direct	--Fixed--- Imp.	P.U.	Total Cost
			dollars	hours	years	hr/ac	$/acre							
3-Point Blade	10 ft	140	3,500	100	20	0.050	0.80	0.97	0.00	0.60	2.38	0.19	1.37	3.96
Chisel Plow	21 ft	310	20,000	100	20	0.143	2.28	6.73	1.07	2.64	12.73	3.26	7.53	23.53
Cultimulcher	12 ft	140	7,000	150	10	0.140	2.24	2.73	0.13	1.69	6.79	0.98	3.86	11.63
Cultipacker	20 ft.	180	10,000	200	10	0.097	1.55	2.65	0.38	1.11	5.70	0.72	3.16	9.59
Disk	20	215	28,000	200	10	0.097	1.55	3.20	0.81	2.56	8.13	2.04	7.30	17.47
Disk	27	310	35,000	200	10	0.071	1.15	3.38	0.75	1.32	6.61	1.88	3.78	12.29
Ditcher		140	2,000	100	20	0.050	0.80	0.97	0.02	0.60	2.40	0.11	1.37	3.89
Dixon Harrow MF	16 ft	180	3,000	350	10	0.350	5.60	9.45	0.18	3.53	18.76	0.45	10.06	29.27
Drill	13 ft	140	11,000	120	10	0.139	2.23	2.71	0.95	1.68	7.59	1.92	3.84	13.36
Field Cultivator	45 ft	130	27,000	120	20	0.066	1.07	1.32	0.52	0.80	3.72	1.71	1.82	7.26
Flail	14 ft	140	14,500	180	20	0.157	2.51	3.06	0.94	1.90	8.42	1.44	4.33	14.20
Flail J Knife	15 ft	180	13,500	180	12	0.132	2.12	3.63	1.24	1.52	8.52	1.37	4.33	14.23
Harrow	20 ft	180	15,000	350	10	0.138	2.21	3.74	0.35	1.39	7.71	0.89	3.98	12.59
Harrow/Cultipacker	16ft	160	15,000	200	10	0.125	2.00	4.12	0.56	1.20	7.88	1.40	3.42	12.72
Land Leveler	24 ft	140	12,000	35	25	0.114	1.83	2.23	0.78	1.38	6.23	4.24	3.16	13.64
Land Leveler MF	16 ft	140	8,000	35	10	0.040	0.64	0.78	0.18	0.48	2.08	1.37	1.10	4.56
Moldboard Plow	6 bottom	215	18,000	200	10	0.196	3.14	6.48	1.76	5.18	16.57	2.65	14.77	34.00
No-Till Drill	15 ft	160	37,000	80	15	0.100	1.60	3.30	2.31	0.96	8.17	5.78	2.74	16.70
Ripper	12 ft	180	12,000	200	10	0.207	3.32	5.68	0.93	2.37	12.32	1.87	6.77	20.97
Rol-Har/Dix/Rol	21 ft	200	43,000	200	10	0.076	1.23	2.33	0.99	0.86	5.42	2.48	2.45	10.36
Roller	20 ft	180	10,000	200	10	0.114	1.83	3.09	0.22	1.15	6.31	0.86	3.29	10.46
Roller MF	18 ft	180	8,500	200	10	0.200	3.20	5.40	0.34	2.01	10.95	1.27	5.75	17.98
Roller-Harrow	21 ft	200	21,000	200	10	0.076	1.23	2.33	0.48	0.86	4.91	1.21	2.45	8.58

Notes:
Labor: Includes labor from Power unit plus additional labor from the implement.
Total Direct: Does not include interest on operating capital.

Table 4.D Single durable inputs: estimated purchase price, annual use, useful life, fuel consumption rate, labor, fuel, R&M, total direct, fixed and total cost per year, , 2010

Item Name	Unit of Measure	Purchase Price	Annual Use	Useful Life	Fuel Use	Operation Time	Labor	Fuel	R&M	Total Direct	Fixed	Total Cost
		dollars	miles	years	gal/hr	hr/mile	$/yr	$/yr	$/yr	$/yr	$/yr	$/yr
ATV	mi	4,500	2000	10	1.00	0.0333	663.10	189.98	225.00	1078.08	675.88	1753.96
Harvest Truck	mile	30,000	1000	10	3.50	0.0285	525.68	299.98	1500.00	2325.67	4505.88	6831.56
Pickup	mile	33,000	10000	6	5.00	0.0200	3680.00	3000.00	1650.00	8330.00	6721.63	15051.63
Truck w/ Tank	mile	36,000	1500	10	3.50	0.0285	788.53	449.97	1800.00	3038.50	5407.06	8445.57

Notes:
Labor: Includes allocated labor from the durable input.
Total Direct: Does not include interest on operating capital.