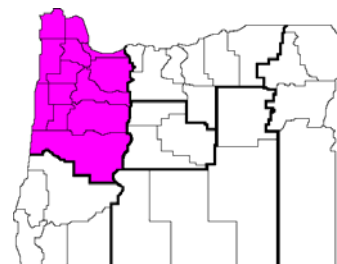


# Enterprise Budget

## Perennial Ryegrass Seed, Establishment and Production North Willamette Valley Region

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AEB 0008, November 2010

This enterprise budget estimates the typical costs of establishing and producing perennial ryegrass seed production in the northern portion of the Willamette Valley of Oregon. The bale and flail (B&F) residue management technique is shown. 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. For perennials, this is divided into two sub-tables, A for the establishment year and B for all subsequent full production years. Table 2, again divided into A and B sections if the crop is perennial, shows itemized details about the cultural operations performed, and their costs, in a chronological sequence. Table 3, again divided into A and B sections, 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 crops such as small grains, oil seeds and forage seeds. The budget estimates establishment costs on a per-acre basis. The established stand is assumed to have a 3-year life including the establishment period.

A land lease charge of \$150 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 Tables 2.A and 2.B, respectively, for details of operations in the establishment year and full production years,

### Establishment Cost

Perennial ryegrass has a full harvest in the first or seedling year, but since the fertilizer and herbicide costs associated with this harvest are different than those in post-seedling production years, this first harvest was included in the establishment budget. The value of the seedling year harvest is credited against the costs. The net return from the establishment year is amortized, with interest included, as an annual fixed cost in the full production year budget which is assumed to represent a stand life of two years. In the event that net return in the establishment year is positive, the amortized net establishment cost would be a negative number in the production year budgets.

### Results

Tables 1.A and 1.B show the costs and returns for establishment and production, respectively. The field operations and their costs are detailed in Tables 2.A and 2.B. The break-even price needed to cover the total cost of production is given in Table 3.A and B. The break-even price is given at the top of the middle column. 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. Since there is a harvest in the establishment year, this Table 3.B requires an assumption that yields and prices do not vary from the assumed budget price in the establishment year. The break even price shown in Table 3.A is the price that would cover all establishment costs during the first, or establishment year. Obviously, higher or lower prices or yields affect the establishment cost that must be amortized in full production years. 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. It is possible to use a computer spreadsheet to numerically search for a break even price that would result in just covering costs during the entire three-year life of the stand. This analysis shows the break even price to be \$0.48 per pound over the life of the stand, compared to an establishment year break even of \$0.61 per pound.

Table 1.A Estimated costs and returns per acre  
 Perennial Ryegrass Establishment  
 North Willamette Valley, 2010

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Per. Ryegrass Seed	lb	0.54	1700.0000	918.00	_____
				-----	
TOTAL INCOME				918.00	_____
DIRECT EXPENSES					
CHEM--FERTILIZER					
Charcoal	acre	75.00	1.0000	75.00	_____
33-0-0-12 LB	lb	0.19	200.0000	38.00	_____
46-0-0 Urea LB	lb	0.22	160.0000	35.20	_____
CHEMI--OTHER					
Surfactant--Induce	gal	22.50	0.2000	4.50	_____
Apogee (PGR)	lb	52.60	0.5000	26.30	_____
MISC BUS EXP					
Misc. business exp	acre	30.00	1.0000	30.00	_____
FEES, FLAT RATE					
Field Registration	acre	1.00	1.0000	1.00	_____
Seed Crop Inspection	acre	3.00	1.0000	3.00	_____
CUSTOM, FLAT RATE					
Soil Sampling	acre	0.50	1.0000	0.50	_____
Lime	ton	56.00	1.0000	56.00	_____
Custom Plant PR	acre	20.00	1.0000	20.00	_____
Rodent Control	acre	3.00	1.0000	3.00	_____
Rogue Weed Spot Sp	acre	7.50	1.0000	7.50	_____
Border Spray	acre	50.00	0.0200	1.00	_____
CHEM--HERBICIDE					
GlyphosateGAL3	gal	15.00	0.3750	5.63	_____
Diuron	lb	4.50	3.0000	13.50	_____
Nortron (pt)	pt	10.75	3.0000	32.25	_____
2,4-D	gal	27.00	0.1250	3.38	_____
Banvel	gal	63.00	0.0625	3.94	_____
SEEDS & PLANTS					
Ryegrass Seed	lb	2.50	10.0000	25.00	_____
CUSTOM, YIELD PROP.					
Seed Clean & Bag(NV)	cwt	8.00	17.0000	136.00	_____
CHEM--FUNGICIDE					
Quilt/Fungicide	gal	128.00	0.1410	18.05	_____
CHEM--PESTICIDE					
Slug Bait	lb	1.48	10.0000	14.80	_____
FEES, PROPORTIONAL					
Commission Assess PR	cwt	0.12	17.0000	2.04	_____
Seed Test Pur/Ger PR	cwt	0.21	17.0000	3.57	_____
Operator Labor					
Self-Propelled	hour	8.65	0.1936	1.67	_____
Machinery Labor					
Tractors	hour	16.00	1.1642	18.64	_____
Self-Propelled	hour	16.00	0.6984	11.20	_____
Pickup	hour	16.00	0.1150	1.84	_____
Truck w/ Tank	hour	16.00	0.0492	0.79	_____
Harvest Truck	hour	16.00	0.0657	1.05	_____
DIESEL FUEL					
Tractors	gal	3.00	13.2786	39.84	_____
Self-Propelled	gal	3.00	5.2835	15.83	_____
Pickup	gal	3.00	0.5000	1.50	_____
Truck w/ Tank	gal	3.00	0.1499	0.45	_____

Harvest Truck	gal	3.00	0.1999	0.60	_____
REPAIR & MAINTENANCE					
Implements	acre	8.61	1.0000	8.61	_____
Tractors	acre	17.40	1.0000	17.40	_____
Self-Propelled	acre	23.43	1.0000	23.43	_____
Pickup	mile	0.16	5.0000	0.83	_____
Truck w/ Tank	mile	1.20	1.5000	1.80	_____
Harvest Truck	mile	1.50	2.0000	3.00	_____
INTEREST ON OP. CAP.	acre	35.78	1.0000	35.78	_____
				-----	
TOTAL DIRECT EXPENSES				743.43	_____
RETURNS ABOVE DIRECT EXPENSES				174.57	_____
FIXED EXPENSES					
Implements	acre	17.55	1.0000	17.55	_____
Tractors	acre	49.24	1.0000	49.24	_____
Self-Propelled	acre	64.53	1.0000	64.53	_____
Pickup	each	6721.63	0.0008	5.60	_____
Truck w/ Tank	each	5407.06	0.0008	4.51	_____
Harvest Truck	each	4505.88	0.0008	3.75	_____
Mach/Equip Ins, Hi	each	6.95	1.0000	6.95	_____
Land Rent NV PR	each	149.99	1.0000	150.00	_____
				-----	
TOTAL FIXED EXPENSES				302.13	_____
				-----	
TOTAL SPECIFIED EXPENSES				1045.56	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				-127.56	_____

Table 1.B Estimated costs and returns per acre  
 Perennial Ryegrass Production  
 North Willamette Valley, 2010

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
<b>INCOME</b>					
Per. Ryegrass Seed	lb	0.54	1700.0000	918.00	_____
				-----	
<b>TOTAL INCOME</b>				918.00	_____
<b>DIRECT EXPENSES</b>					
<b>CHEM--FERTILIZER</b>					
16-16-16 LB	lb	0.25	250.0000	62.50	_____
33-0-0-12 LB	lb	0.19	200.0000	38.00	_____
46-0-0 Urea LB	lb	0.22	185.0000	40.70	_____
<b>CHEMI--OTHER</b>					
Surfactant--Induce	gal	22.50	0.2500	5.63	_____
Palisade (PGR)	gal	220.00	0.1250	27.50	_____
<b>MISC BUS EXP</b>					
Misc. business exp	acre	30.00	1.0000	30.00	_____
<b>FEES, FLAT RATE</b>					
Seed Crop Inspection	acre	3.00	1.0000	3.00	_____
<b>CUSTOM, FLAT RATE</b>					
Rogue Weed Spot Sp	acre	7.50	2.0000	15.00	_____
Border Spray	acre	50.00	0.0200	1.00	_____
<b>CHEM--HERBICIDE</b>					
Prowl H2O	gal	32.00	0.6250	20.00	_____
AxiomOZ	oz	0.73	11.0000	8.03	_____
2,4-D	gal	27.00	0.1250	3.38	_____
Banvel	gal	63.00	0.0625	3.94	_____
<b>CUSTOM, YIELD PROP.</b>					
Seed Clean & Bag(NV)	cwt	8.00	17.0000	136.00	_____
<b>CHEM--FUNGICIDE</b>					
Quilt/Fungicide	gal	128.00	0.1410	18.05	_____
<b>CHEM--PESTICIDE</b>					
Slug Bait	lb	1.48	3.5000	5.18	_____
<b>FEES, PROPORTIONAL</b>					
Commission Assess PR	cwt	0.12	17.0000	2.04	_____
Seed Test Pur/Ger PR	cwt	0.21	17.0000	3.57	_____
<b>Operator Labor</b>					
Self-Propelled	hour	8.65	0.1936	1.67	_____
<b>Machinery Labor</b>					
Tractors	hour	16.00	0.1529	2.45	_____
Self-Propelled	hour	16.00	0.6669	10.69	_____
Pickup	hour	16.00	0.1150	1.84	_____
Truck w/ Tank	hour	16.00	0.0492	0.79	_____
Harvest Truck	hour	16.00	0.0657	1.05	_____
<b>DIESEL FUEL</b>					
Tractors	gal	3.00	1.2111	3.63	_____
Self-Propelled	gal	3.00	5.1978	15.58	_____
Pickup	gal	3.00	0.5000	1.50	_____
Truck w/ Tank	gal	3.00	0.1499	0.45	_____
Harvest Truck	gal	3.00	0.1999	0.60	_____
<b>REPAIR &amp; MAINTENANCE</b>					
Implements	acre	1.25	1.0000	1.25	_____
Tractors	acre	1.52	1.0000	1.52	_____
Self-Propelled	acre	22.76	1.0000	22.76	_____
Pickup	mile	0.16	5.0000	0.83	_____
Truck w/ Tank	mile	1.20	1.5000	1.80	_____
Harvest Truck	mile	1.50	2.0000	3.00	_____
INTEREST ON OP. CAP.	acre	15.87	1.0000	15.87	_____

TOTAL DIRECT EXPENSES				510.81	_____
RETURNS ABOVE DIRECT EXPENSES				407.19	_____
FIXED EXPENSES					
Implements	acre	1.37	1.0000	1.37	_____
Tractors	acre	4.33	1.0000	4.33	_____
Self-Propelled	acre	61.92	1.0000	61.92	_____
Pickup	each	6721.63	0.0008	5.60	_____
Truck w/ Tank	each	5407.06	0.0008	4.51	_____
Harvest Truck	each	4505.88	0.0008	3.75	_____
Mach/Equip Ins, Hi	each	6.95	1.0000	6.95	_____
Land Rent NV PR	each	149.99	1.0000	150.00	_____
AMORT. EST. COST	acre	73.50	1.0000	73.50	_____
TOTAL FIXED EXPENSES				311.93	_____
TOTAL SPECIFIED EXPENSES				822.74	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				95.26	_____

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Table 2.A Estimated resource use and costs for field operations, per acre  
 Perennial Ryegrass Establishment  
 North 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-----			
SOIL SAMPLE				1.00	Aug										
Soil Sampling	acre											1.0000	0.50	0.50	0.50
DISK				1.00	Aug										
Disk	20	215	0.097			8.97	7.30	0.82	2.04	0.11	1.79				20.92
RIP				1.00	Aug										
Ripper	12 ft	180	0.207			8.06	6.78	0.94	1.87	0.23	3.83				21.48
DISK				1.00	Aug										
Disk	20	215	0.097			8.97	7.30	0.82	2.04	0.11	1.79				20.92
PLOW				1.00	Aug										
Moldboard Plow	6 bottom	215	0.196			14.91	14.78	1.77	2.66	0.22	3.61				37.73
HARROW & ROLL				1.00	Aug										
Rol-Har/Dix/Rol	21 ft	200	0.076			3.20	2.46	0.99	2.49	0.08	1.42				10.56
LIME				1.00	Aug										
Lime	ton											1.0000	56.00	56.00	56.00
HARROW & ROLL				2.00	Aug										
Rol-Har/Dix/Rol	21 ft	200	0.076			6.39	4.91	1.99	4.97	0.17	2.83				21.09
PLANT				1.00	Oct										
Custom Plant PR	acre											1.0000	20.00	20.00	20.00
Ryegrass Seed	lb											10.0000	2.50	25.00	25.00
Charcoal	acre											1.0000	75.00	75.00	75.00
SEEDLING WEED CNTRL.				1.00	Oct										
Spray Bug60 7 mph	60'		0.030			1.22	1.93			0.03	0.56				3.71
GlyphosateGAL3	gal											0.3750	15.00	5.63	5.63
Surfactant--Induce	gal											0.0500	22.50	1.13	1.13
DITCHING				1.00	Oct										
Ditcher		140	0.050			1.59	1.38	0.03	0.11	0.05	0.92				4.03
SEEDLING WEED CNTRL.				1.00	Nov										
Spray Bug60 7 mph	60'		0.030			1.22	1.93			0.03	0.56				3.71
Diuron	lb											3.0000	4.50	13.50	13.50
PRE-EMERGE WEED CTRL				1.00	Nov										
Spray Bug60 7 mph	60'		0.030			1.22	1.93			0.03	0.56				3.71
Nortron (pt)	pt											3.0000	10.75	32.25	32.25
SLUG CONTROL				1.00	Nov										
ATV	20 hp		0.050			0.35	0.21			0.05	0.92				1.48
Slug Bait	lb											10.0000	1.48	14.80	14.80
FERTILIZE - SPRING				1.00	Mar										
Fertilizer Buggy	20		0.070			1.79	1.41			0.08	1.30				4.50
33-0-0-12 LB	lb											200.0000	0.19	38.00	38.00
FERTILIZE - SPRING				1.00	Mar										
Fertilizer Buggy	20		0.070			1.79	1.41			0.08	1.30				4.50
46-0-0 Urea LB	lb											160.0000	0.22	35.20	35.20
RODENT CONTROL				1.00	Mar										
Rodent Control	acre											1.0000	3.00	3.00	3.00
BROADLEAF WEED CNTRL				1.00	Apr										
Spray Bug60 7 mph	60'		0.030			1.22	1.93			0.03	0.56				3.71
2,4-D	gal											0.1250	27.00	3.38	3.38
Banvel	gal											0.0625	63.00	3.94	3.94
ROGUE WEED CONTROL				1.00	May										

Rogue Weed Spot Sp	acre									1.0000	7.50	7.50	7.50
BORDER SPRAYING			1.00	May									
Border Spray	acre									0.0200	50.00	1.00	1.00
PLANT GROWTH REG.			1.00	May									
Spray Bug60 7 mph	60'	0.030			1.22	1.93			0.03	0.56			3.71
Apogee (PGR)	lb										0.5000	52.60	26.30
RUST CONTROL			3.00	Jun									
Spray Bug60 7 mph	60'	0.030			3.68	5.79			0.10	1.67			11.14
Quilt/Fungicide	gal										0.1410	128.00	18.05
Surfactant--Induce	gal										0.1500	22.50	3.38
SWATH			1.00	Jul									
Swather	15'		0.174		6.36	8.13			0.20	3.21			17.70
COMBINE			1.00	Jul									
Combine 300	300 hp		0.168		19.19	37.93			0.19	1.67			58.79
CLEAN & BAG SEED			1.00	Jul									
Seed Clean & Bag(NV)	cwt										17.0000	8.00	136.00
CUSTOM BALE			1.00	Jul									
Custom Bale No Chrg	acre										1.0000		
FLAIL			1.00	Jul									
Flail J Knife	15 ft	180	0.132		5.15	4.33	1.25	1.37	0.15	2.45			14.55
MISCELLANEOUS			1.00	Jul									
Misc. business exp	acre										1.0000	30.00	30.00
FEES, CERT/TEST/INSP			1.00	Jul									
Field Registration	acre										1.0000	1.00	1.00
Seed Crop Inspection	acre										1.0000	3.00	3.00
Commission Assess PR	cwt										17.0000	0.12	2.04
Seed Test Pur/Ger PR	cwt										17.0000	0.21	3.57
Land Rent NV PR	each		1.00	Jul				150.00			1.0000		150.00
Harvest Truck	each		1.00	Jul				3.75			0.0008		3.75
Application 1	mile						3.60		0.06	1.05	2.0000		4.65
Truck w/ Tank	each		1.00	Jul				4.51			0.0008		4.51
Application 1	mile						2.25		0.04	0.79	1.5000		3.04
Pickup	each		1.00	Jul				5.60			0.0008		5.60
Application 1	mile						2.33		0.11	1.84	5.0000		4.17
Mach/Equip Ins, Hi	each		1.00	Jul				6.95			1.0000		6.95
TOTALS					96.50	113.77	16.79	188.36	2.28	35.19		559.17	1009.78
INTEREST ON OPERATING CAPITAL													35.78
UNALLOCATED LABOR													0.00
TOTAL SPECIFIED COST													1045.56

Table 2.B Estimated resource use and costs for field operations, per acre  
 Perennial Ryegrass Production  
 North 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-----			
FALL FERTILIZER				1.00	Oct										
Fertilizer Buggy	20		0.070			1.79	1.41			0.08	1.30				4.50
16-16-16 LB	lb											250.0000	0.25	62.50	62.50
SEEDLING WEED CNTRL.				1.00	Oct										
Spray Bug60 7 mph	60'		0.030			1.22	1.93			0.03	0.56				3.71
Prowl H20	gal											0.6250	32.00	20.00	20.00
AxiomOZ	oz											11.0000	0.73	8.03	8.03
Surfactant--Induce	gal											0.0500	22.50	1.13	1.13
SLUG CONTROL				0.25	Dec										
ATV	20 hp		0.050			0.08	0.05			0.01	0.23				0.36
Slug Bait	lb											3.5000	1.48	5.18	5.18
FERTILIZE - SPRING				1.00	Mar										
Fertilizer Buggy	20		0.070			1.79	1.41			0.08	1.30				4.50
33-0-0-12 LB	lb											200.0000	0.19	38.00	38.00
FERTILIZE - SPRING				1.00	Mar										
Fertilizer Buggy	20		0.070			1.79	1.41			0.08	1.30				4.50
46-0-0 Urea LB	lb											185.0000	0.22	40.70	40.70
BROADLEAF WEED CNTRL				1.00	Apr										
Spray Bug60 7 mph	60'		0.030			1.22	1.93			0.03	0.56				3.71
2,4-D	gal											0.1250	27.00	3.38	3.38
Banvel	gal											0.0625	63.00	3.94	3.94
Surfactant--Induce	gal											0.0500	22.50	1.13	1.13
ROGUE WEED CONTROL				2.00	Apr										
Rogue Weed Spot Sp	acre											2.0000	7.50	15.00	15.00
PLANT GROWTH REG.				1.00	May										
Spray Bug60 7 mph	60'		0.030			1.22	1.93			0.03	0.56				3.71
Palisade (PGR)	gal											0.1250	220.00	27.50	27.50
RUST CONTROL				3.00	Jun										
Spray Bug60 7 mph	60'		0.030			3.68	5.79			0.10	1.67				11.14
Quilt/Fungicide	gal											0.1410	128.00	18.05	18.05
Surfactant--Induce	gal											0.1500	22.50	3.38	3.38
SWATH				1.00	Jul										
Swather	15'		0.174			6.36	8.13			0.20	3.21				17.70
COMBINE				1.00	Jul										
Combine 300	300 hp		0.168			19.19	37.93			0.19	1.67				58.79
CLEAN & BAG SEED				1.00	Jul										
Seed Clean & Bag(NV)	cwt											17.0000	8.00	136.00	136.00
BALE & STACK				1.00	Jul										
Custom Bale No Chrg	acre											1.0000			
FLAIL				1.00	Jul										
Flail J Knife	15 ft	180	0.132			5.15	4.33	1.25	1.37	0.15	2.45				14.55
BORDER SPRAY				1.00	Jul										
Border Spray	acre											0.0200	50.00	1.00	1.00
MISCELLANEOUS				1.00	Jul										
Misc. business exp	acre											1.0000	30.00	30.00	30.00
FEES, CERT/TEST/INSP				1.00	Jul										
Seed Crop Inspection	acre											1.0000	3.00	3.00	3.00
Commission Assess PR	cwt											17.0000	0.12	2.04	2.04



Seed Test Pur/Ger PR cwt								17.0000	0.21	3.57	3.57
Land Rent NV PR each	1.00	Jul		150.00				1.0000			150.00
Harvest Truck each	1.00	Jul		3.75				0.0008			3.75
Application 1 mile			3.60		0.06	1.05		2.0000			4.65
Truck w/ Tank each	1.00	Jul		4.51				0.0008			4.51
Application 1 mile			2.25		0.04	0.79		1.5000			3.04
Pickup each	1.00	Jul		5.60				0.0008			5.60
Application 1 mile			2.33		0.11	1.84		5.0000			4.17
Mach/Equip Ins, Hi each	1.00	Jul		6.95				1.0000			6.95
AMORT. EST. COST acre		Jul						1.0000			73.50
TOTALS			43.49	66.25	9.43	172.18	1.24	18.49		423.53	806.87
INTEREST ON OPERATING CAPITAL											15.87
UNALLOCATED LABOR											0.00
TOTAL SPECIFIED COST											822.74

Table 3.A Breakeven price above total expenses and net returns for price/yield combinations, per acre  
 Perennial Ryegrass Establishment  
 North Willamette Valley, 2010

			-----BREAKEVEN PRICE-----										
Per. Ryegrass Seed			0.43	0.46	0.49	0.52	0.56	0.61 <sup>3</sup>	0.67	0.74	0.84	0.97	1.14
PERCENT	YIELD	UNIT	-----dollars-----										
50	850.00	lb	-302 <sup>1</sup> -604 <sup>2</sup>	-280 -582	-255 -557	-226 -528	-192 -494	-151 -453	-100 -402	-37 -339	43 -258	151 -151	302 0
60	1020.00	lb	-241 -543	-215 -517	-185 -488	-151 -453	-109 -411	-60 -362	0 -302	75 -226	172 -129	302 0	483 181
70	1190.00	lb	-181 -483	-151 -453	-116 -418	-75 -377	-27 -329	30 -271	100 -201	188 -113	302 0	453 151	664 362
80	1360.00	lb	-120 -422	-86 -388	-46 -348	0 -302	54 -247	120 -181	201 -100	302 0	431 129	604 302	845 543
90	1530.00	lb	-60 -362	-21 -323	23 -278	75 -226	137 -164	211 -90	302 0	415 113	561 258	755 453	1027 725
100	1700.00	lb	0 -302	43 -258	92 -209	151 -151	219 -82	302 0	402 100	528 226	690 388	906 604	1208 906
110	1870.00	lb	60 -241	107 -194	162 -139	226 -75	302 0	392 90	503 201	642 339	820 517	1057 755	1389 1087
120	2040.00	lb	120 -181	172 -129	232 -69	302 0	384 82	483 181	604 302	755 453	949 647	1208 906	1571 1268
130	2210.00	lb	181 -120	237 -64	302 0	377 75	466 164	574 271	704 402	868 566	1079 776	1359 1057	1752 1450
140	2380.00	lb	241 -60	302 0	371 69	453 151	549 247	664 362	805 503	981 679	1208 906	1510 1208	1933 1631
150	2550.00	lb	302 0	366 64	441 139	528 226	631 329	755 453	906 604	1095 793	1337 1035	1661 1359	2114 1812

<sup>1</sup>The top number in each cell is Returns Above Direct Expenses.

<sup>2</sup>The bottom number in each cell is Returns Above Total Specified Expenses.

<sup>3</sup> For the establishment year, the break even price is what is needed to recover costs during the establishment year. Only the product listed has been varied to calculate net returns.

Table 3.B Breakeven price above total expenses and net returns for price/yield combinations, per acre  
 Perennial Ryegrass Production  
 North Willamette Valley, 2010

			-----BREAKEVEN PRICE-----										
Per. Ryegrass Seed			0.34	0.36	0.39	0.41	0.44	0.48 <sup>3</sup>	0.52	0.58	0.65	0.75	0.88
PERCENT	YIELD	UNIT	-----dollars-----										
50	850.00	lb	-143 <sup>1</sup>	-127	-108	-86	-60	-29	8	55	116	198	311
			-455 <sup>2</sup>	-439	-420	-398	-372	-341	-303	-256	-195	-113	0
60	1020.00	lb	-98	-78	-56	-29	1	38	84	141	214	311	448
			-410	-390	-368	-341	-310	-273	-227	-170	-97	0	136
70	1190.00	lb	-52	-29	-3	27	63	106	160	226	311	425	585
			-364	-341	-315	-284	-248	-205	-151	-85	0	113	273
80	1360.00	lb	-7	18	49	84	125	175	235	311	409	539	722
			-318	-292	-262	-227	-186	-136	-75	0	97	227	410
90	1530.00	lb	38	67	101	141	187	243	311	397	507	653	858
			-273	-244	-210	-170	-124	-68	0	85	195	341	546
100	1700.00	lb	84	116	154	198	249	311	387	482	604	767	995
			-227	-195	-157	-113	-62	0	75	170	292	455	683
110	1870.00	lb	129	165	206	254	311	380	463	568	702	881	1132
			-182	-146	-105	-56	0	68	151	256	390	569	820
120	2040.00	lb	175	214	259	311	374	448	539	653	800	995	1268
			-136	-97	-52	0	62	136	227	341	488	683	956
130	2210.00	lb	220	263	311	368	436	516	615	739	897	1109	1405
			-91	-48	0	56	124	205	303	427	585	797	1093
140	2380.00	lb	266	311	364	425	498	585	691	824	995	1223	1542
			-45	0	52	113	186	273	379	512	683	911	1230
150	2550.00	lb	311	360	417	482	560	653	767	910	1093	1337	1679
			0	48	105	170	248	341	455	598	781	1025	1367

<sup>1</sup>The top number in each cell is Returns Above Direct Expenses.

<sup>2</sup>The bottom number in each cell is Returns Above Total Specified Expenses.

<sup>3</sup>For the production years, the break even price is what is needed to recover costs during a normal number of production years, with the price during the establishment year being what was assumed in the base budgets.  
 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	Annual	Useful	Fuel	Labor	Fuel	R&M	Total	Fixed	Total
		Price	Use	Life	Use				Direct	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	Annual	Useful	Fuel	Perf	Labor	Fuel	R&M	Total	Fixed	Total
		Price	Use	Life	Use	Rate				Direct	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----		Total Direct	--Fixed---		Total Cost
									Imp.	P.U.		Imp.	P.U.	
-----\$/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 Operation Use	Labor Time	Fuel	R&M	Total Direct	Fixed	Total Cost	
												dollars
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.

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