AGRI-FACTS
Practical Information for Alberta's Agriculture Industry

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Cost and Returns Budget for Irrigated Perennial Ryegrass – Underseeded to Durum Wheat

This budget estimates the direct income and expenses over the life of a perennial ryegrass stand on one acre underseeded to durum wheat. These numbers are intended to assist producers in evaluating the basic financial requirements over this period.

The *Budget Margin* must provide funds for interest, overhead and other indirect expenses as well as a return for living, loan repayment and investment. A total farm financial analysis should be completed to determine the impact of this enterprise on the total farm business.

Assumptions

The following assumptions and timing for field operations were assumed in deriving these costs:

Year 1 – Establishment and Underseeding to Durum Wheat

Prev. fall	1.	Roundup for perennial weed control and apply fertilizer for wheat
May	2.	Cultivate and prepare field for wheat seed
	3.	Seed wheat/perennial ryegrass (with grass seed attachment on drill with precision depth adjustment)
June	4.	Spray Puma Super, Assert 300 or 2,4-D on wheat
May/Aug	5.	Irrigate as needed for wheat (8 to 9 inches for year)
Aug/Sept	6.	Swath wheat
	7.	Combine/truck/auger
Sept	8.	Bale aftermath
Sept/Oct	9.	Irrigate
Oct/Nov	10.	Apply 34-0-0 to provide 100 lb/ac of N

Year 2 – Production

May	1.	Spray 2,4-D or MCPA
June/July	2.	Rogue
May/July	3.	Irrigate (5 to 7 inches for year)
July/Aug	4.	Swath (disc bind) perennial ryegrass
Aug	5.	Combine/truck/auger
	6.	Bale
Sept/Oct	7.	Breakup stand – apply Roundup, plow and disc 2 to 3 times and heavy harrow.

Price and Production Sensitivity

The following table shows the impact on the budget margin in the established stand resulting from a change in projected market returns and yields. Certified seed usually commands a premium over common, but overall price levels depend on the American and European grass seed market.

Table 1. Price and yield sensitivity

Price	Yields: lbs. Per acre				
$/lb	600	800	1000	1200	1400
0.30	177	237	297	357	417
0.40	237	317	397	477	557
0.50	297	397	497	597	697
0.60	357	477	597	717	837
0.70	417	557	697	837	977

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Table 2. Per acre costs and returns for irrigated perennial ryegrass underseeded to durum wheat

		Yield	Price	Establish	Year 2
Durum Wheat (bus)		75	5.40	405.00	
Perennial Ryegrass (lbs)		1000	0.40		400.00
Baled Durum straw / ryegrass aftermath (bales)		3 / 4	17.50 / 25	52.50	100.00
TOTAL INCOME			$/acre	**457.50**	**500.00**
DIRECT EXPENSES					
		Quantity	Price Unit		
Seed:	Perennial ryegrass	5	$3.00 lbs	15.00	
	Durum	1.5	$8.00 bus	12.00	
Fertilizer:	82-0-0	120	$0.23 lb	27.82	
	11-51-0	50	$0.18 lb	8.92	
	34-0-0*	300	$0.12 lb	36.00	
Chemicals:	Glyphosate (litre)	1	$8.99 litre	8.99	8.99
	Puma Super (litre)	0.4	$39.54 litre	15.82	
	MCPA Amine (litre)	0.45	$6.19 litre		2.79
Custom Baling (aftermath)		3 / 4	$8.50 bale	25.50	34.00
Rogue					10.00
Equipment operating & maint.(incl. Irrigation)**				51.21	47.13
TOTAL DIRECT EXPENSES			$/acre	**201.25**	**102.91**
Budget MARGIN			$/acre	**256.25**	**397.09**

* A blend of N, P, K, & S is sometimes used instead of straight nitrogen.

** This is an estimate of the cash costs (fuel, lube & repairs) Water rights are not included.

This information is provided as a guideline only. Projected yields indicate above average production. An individual crop plan should be developed by each producer.

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