

AgriProfit\$

2011

**Cost and Return Benchmarks
for Crops and Forages**

**Peace Region
Grey Wooded Soil Zone**

Alberta 
Government



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OVERVIEW

2011 Peace Region Grey Wooded Soil Zone

The *AgriProfit*® Business Analysis and Research Program provides a provincial overview of costs and returns for field crops and forages. The Economics Branch collects cost of production information annually from Alberta producers to generate regional benchmarks. Producer participants are critical to providing a financial representation of Alberta's cropping industry.

AgriProfit® cropping benchmarks are analyzed by soil zone group, top third producers, and owned land versus rented land where available. Top third averages are calculated from fields that have the highest return to equity. Analyzing crops by owned versus rented also provides insight into differences in management.

Benchmarks allow for comparison of individual crop costs and returns to other farms in a similar production area. Benchmarks should not replace individual cropping and financial records. There is a risk of over or underestimating costs and returns if basing them on regional benchmarks and forecasts. Strategic planning is more effective when individual costs are used. Managing unit costs of production is one of the most significant strategies to ensure profitability in a mature commodity market.

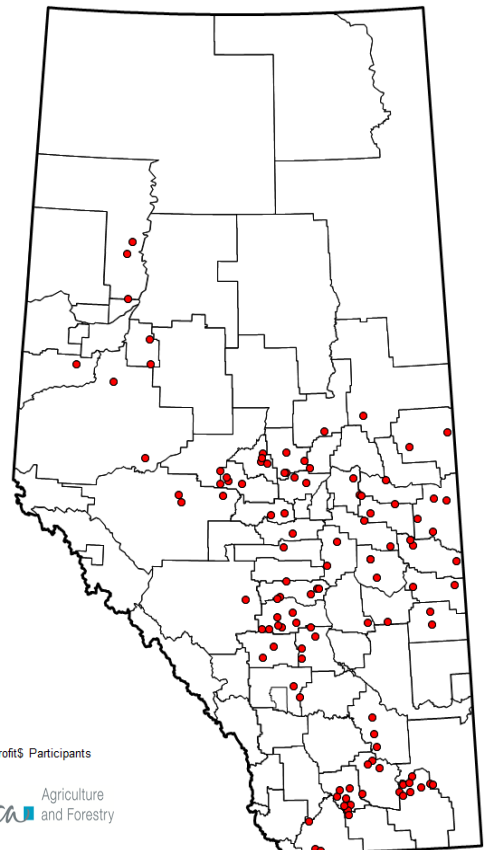
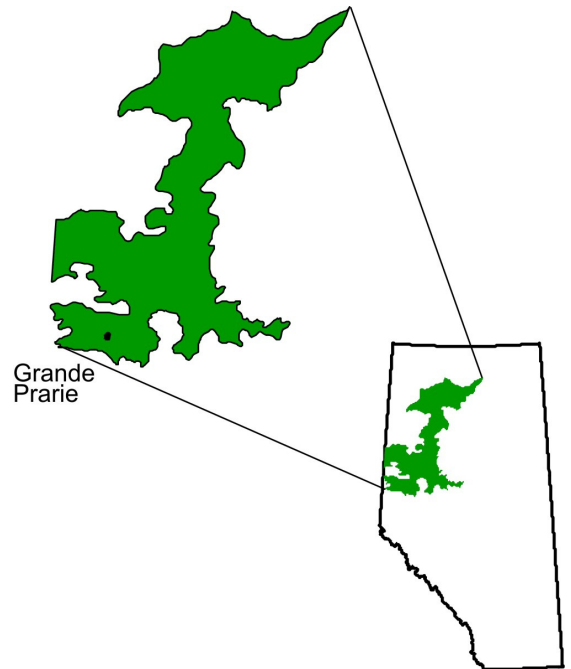
The top map shows the Peace Region in Alberta; this is the soil grouping method used for this study. Please note that farms highlighted within these zones may contain characteristics of neighbouring soil zones. The map on the bottom shows the distribution of the 2011 participants.

Questions or Comments:

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Alberta Agriculture and Forestry

2011 Crop Enterprise Analysis

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Crop: Spring Wheat - All
Soil Zone: All - Dryland
Unit: Bushel

		----- \$/Acre -----		---- \$/Bushel ----	
		Average	Top 1/3	Average	Top 1/3
(A)	1. Crop Sales	459.28	--	6.57	--
	2. Crop Insurance Receipts	0.00	--	0.00	--
	3. Other Receipts	0.00	--	0.00	--
	Gross Receipts	459.28	0.00	6.57	0.00
(B)	Cost Items				
	1. Seed	29.55	--	0.42	--
	2. Fertilizer	73.70	--	1.05	--
	3. Chemical	20.52	--	0.29	--
	4. Hail/Crop Insurance Premium	5.13	--	0.07	--
	5. Trucking and Marketing	1.54	--	0.02	--
	6. Fuel	11.11	--	0.16	--
	7. Irrigation Fuel and Electricity	0.00	--	0.00	--
	8. Repairs - Machinery	11.93	--	0.17	--
	9. Repairs - Buildings	4.04	--	0.06	--
	10. Utilities and Miscellaneous	9.52	--	0.14	--
	11. Custom Work	0.53	--	0.01	--
	12. Operating Interest Paid	0.00	--	0.00	--
	13. Paid Labour	11.09	--	0.16	--
	14. Unpaid Labour	7.26	--	0.10	--
	Variable Costs	185.91	0.00	2.66	0.00
(C)	1. Cash/ Share Land Rent	44.14	--	0.63	--
	2. Taxes, Water Rates, License & Ins.	4.13	--	0.06	--
	3. Equipment and Building: a) Depreciation	37.84	--	0.54	--
	b) Lease Payments	0.00	--	0.00	--
4. Paid Capital Interest	4.59	--	0.07	--	
	Capital Costs	90.69	0.00	1.30	0.00
(D)	Cash Costs	(B+C-B14-C3a)	231.50	--	3.31
(E)	Total Production Costs	(B+C)	276.60	--	3.96
	Gross Margin	(A-D)	227.78	--	3.26
	Return to Unpaid Labour	(A-E+B14)	189.94	--	2.72
	Return to Investment	(A-E+C4)	187.27	--	2.68
	Return to Equity	(A-E)	182.68	--	2.61

Investment

Buildings	193.06	--
Machinery	304.84	--
Irrigation Machinery	0.00	--
Total (incl. Land)	642.06	--

Management

Average Yield	(Bushel/acre)	69.92	--
Expected Market Price	(\$/Bushel)	6.57	--

2011 Crop Enterprise Analysis

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Crop: Spring Wheat - Own
Soil Zone: All - Dryland
Unit: Bushel

		----- \$/Acre -----		---- \$/Bushel ----		
		Average	Top 1/3	Average	Top 1/3	
(A)	1. Crop Sales	592.11	--	7.31	--	
	2. Crop Insurance Receipts	0.00	--	0.00	--	
	3. Other Receipts	0.00	--	0.00	--	
	Gross Receipts	592.11	0.00	7.31	0.00	
(B)	Cost Items					
	1. Seed	12.00	--	0.15	--	
	2. Fertilizer	58.05	--	0.72	--	
	3. Chemical	25.23	--	0.31	--	
	4. Hail/Crop Insurance Premium	4.41	--	0.05	--	
	5. Trucking and Marketing	12.60	--	0.16	--	
	6. Fuel	25.13	--	0.31	--	
	7. Irrigation Fuel and Electricity	0.00	--	0.00	--	
	8. Repairs - Machinery	10.25	--	0.13	--	
	9. Repairs - Buildings	0.70	--	0.01	--	
	10. Utilities and Miscellaneous	8.52	--	0.11	--	
	11. Custom Work	5.50	--	0.07	--	
	12. Operating Interest Paid	0.00	--	0.00	--	
	13. Paid Labour	0.00	--	0.00	--	
	14. Unpaid Labour	14.36	--	0.18	--	
Variable Costs	176.75	0.00	2.18	0.00		
(C)	1. Cash/ Share Land Rent	0.00	--	0.00	--	
	2. Taxes, Water Rates, License & Ins.	17.83	--	0.22	--	
	3. Equipment and Building:	a) Depreciation	100.07	--	1.23	--
		b) Lease Payments	0.00	--	0.00	--
	4. Paid Capital Interest	14.28	--	0.18	--	
Capital Costs	132.18	0.00	1.63	0.00		
(D)	Cash Costs	194.50	--	2.40	--	
(E)	Total Production Costs	308.93	--	3.81	--	
	Gross Margin	397.61	--	4.91	--	
	Return to Unpaid Labour	297.54	--	3.67	--	
	Return to Investment	297.45	--	3.67	--	
	Return to Equity	283.17	--	3.49	--	

Investment

Buildings	513.02	--
Machinery	799.54	--
Irrigation Machinery	0.00	--
Total (incl. Land)	2812.56	--

Management

Average Yield	(Bushel/acre)	81.05	--
Expected Market Price	(\$/Bushel)	7.31	--

DEFINITIONS AND ALLOCATIONS

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