# Bi-weekly Bulletin

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# CANADA: AREA SEEDED FOR 2001-2002

Expected net returns, derived from projected prices, yields, and variable costs of production, exert a major influence on seeding decisions. However, soil moisture conditions, expected delivery opportunities, cash flow, crop rotation requirements, potential disease and pest problems, and on-farm stocks are also very important factors that are taken into consideration. In Canada, area for 2001-2002 is expected to shift from canola and summerfallow to spring wheat, barley, flaxseed, soybeans, dry peas, and chick peas. This issue of the *Bi-weekly Bulletin* examines the returns and expected area seeded for grains, oilseeds, and special crops in Canada.

Expected returns are one of the most important factors affecting cropping decisions. Returns, net of variable or operating costs, affect short-term cropping decisions, while returns, net of total costs (fixed and variable), influence long-term decisions, such as rotation patterns and entry into, or exit from, the industry. It should be emphasized that the net returns shown in the crop budgets do not represent the profitability of growing a crop since other costs must also be accounted for. Fixed costs such as land rental, property taxes, hired labour and machinery depreciation, as well as the value of a farmer's own labour, are not included.

As each province's agriculture department uses a different methodology, the crop budgets are not comparable across provinces. Saskatchewan Agriculture and Food provides crop budgets for crops seeded to fallow and stubble land in the brown, dark brown and black soil zones. Alberta Agriculture, Food and Rural Development (AAFRD) provides budgets for crops seeded to fallow and stubble in the brown, and dark brown soil zones. For the black and gray soil zones, AAFRD provides budgets for only the crops seeded to stubble. Manitoba Agriculture provides average crop budgets which do not differentiate between fallow and stubble. The Ontario Ministry of Agriculture Food and Rural Affairs provides average crop budgets.

Productivity in western Canada is dependant on soil type. For example, the brown soil in the semi-arid region of the Prairies is subject to wide variations in crop yields and is more subject to drought than the dark brown soil zone. The black soil zone is located in a higher moisture region and has better moisture retention characteristics than the brown soil zone, resulting in higher average yields. This zone is rarely subject to drought. The gray soil zone, extending into the northern regions of the Prairies, is characterized by higher moisture levels, cooler temperatures, and a shorter growing season. Climatic conditions also influence the susceptibility of crops to disease and pest infestations, requiring different combinations and levels of herbicides and pesticides.

#### PRICE FORECASTS

Average farm prices by province have been forecast by Agriculture and Agri-Food Canada (AAFC). Price forecasts for wheat (except Ontario), durum, and malting barley are based on the Canadian Wheat Board (CWB) March 2001-2002 Pool Return Outlook (PRO) and AAFC's assumption that the port-to-farm basis will increase marginally from 2000-2001. Price forecasts can vary considerably as a result of unusual weather in the major importing or exporting countries, and other changes in market conditions.

#### YIELD FORECASTS

Average provincial yields have been forecast by AAFC, using trend analysis. Adjustments for soil zone are based on historical data from Statistics Canada. Adjustments to a 'stubble' basis were based on provincial data. Actual yields can vary greatly due to factors such as weather, disease, pests or input use.

#### FERTILIZER COSTS

Rising fertilizer costs in 2001 will have a significant impact on net returns and therefore may affect seeding intentions. Natural gas is the primary raw material required for the production of ammonia, which is the foundation for virtually all forms of nitrogen fertilizer. The average North American plant requires about 33.5 million British thermal units (MBtu) to produce one tonne of ammonia. With natural gas currently priced at about US\$5/MBtu, one tonne of nitrogen fertilizer will cost about US\$193 to produce {33.5 MBtu x \$5 + \$25 (fixed cost)}. Prices for natural gas, and therefore fertilizer, are not expected to decline until summer when demand for natural gas

significantly drops. During January, approximately 35% of total North American ammonia production was shutdown because fertilizer prices had not risen enough to compensate for the higher cost of production. Currently, all production capacity has returned and it is estimated that supplies of fertilizer are sufficient to meet expected demand. For 2001-2002, nitrogen fertilizer prices are forecast to average significantly higher than

CANADA:	AREA	SEE	DED
	2000	2001f	Change
	'000	) ha	%
Durum	2,643	2,680	1.4%
Wheat ex. Durum	8,545	8,733	2.2%
All Wheat	11,188	11,413	2.0%
Barley	5,081	5,180	1.9%
Corn	1,178	1,183	0.5%
Oats	1,820	1,832	0.7%
Rye	188	184	-2.1%
Mixed Grain	270	246	-8.8%
Coarse Grains	8,537	8,625	1.0%
Canola	4,895	4,359	-10.9%
Flaxseed	595	650	9.3%
Soybeans	1,069	1,113	4.2%
Oilseeds	6,558	6,122	-6.6%
Dry Peas	1,240	1,364	10.0%
White Pea Beans	75	63	-15.4%
Coloured Beans	95	90	-4.8%
Lentils	699	699	0.0%
Mustard	212	223	5.0%
Sunflower Seed	75	82	9.6%
Canary Seed	166	166	0.0%
Chick Peas	295	369	24.9%
Buckwheat	16	16	0.0%
Special Crops	2,872	3,072	7.0%
Summerfallow	4,688	4,523	-3.5%

The sum of individual commodities may not equal totals due to rounding.

f: forecast, AAFC, March 2001

Source: Statistics Canada





2000-2001 values. The forecasts were based on dealer survey estimates. Fertilizer input costs could increase as much as 22% for some crops, while the Nitrogen component of fertilizer cost has risen as much as 38%. It is expected that producers may switch some of their seeding to crops that require a lower percentage of nitrogen fertilizer.

#### **CROP BUDGETS: PRAIRIE PROVINCES**

There are significant differences in the variable costs between provinces and soil zones. A high percentage of the variation between provinces is due to seed (including treatment) costs, and the costs of fertilizer and pesticides. To compare budgets across the provinces, custom work costs for western Canada have been included in the chemical costs, while for Ontario, custom work costs have been added to chemical and fertilizer costs. The 'other' cost category is used to assign a value to overhead expenses such as utilities. In Ontario, other costs includes marketing fees and drying. The cost of management and/or owner/operator labour has not been included in the budgets.

In Manitoba, the highest projected net return is for spring wheat, followed by dry peas, small green lentils, flaxseed, and oats. Net returns are forecast to be the lowest for canola and feed barley. Strong local feed demand and good returns for malting barley, however, should support barley production.

In the Saskatchewan brown soil zone, the highest net return is for large kabuli chick peas and desi chick peas, but the increase in area seeded to these crops will be limited due to higher production risks. The projected net return is lowest for feed barley. In the black soil zone, malting barley (Special Select 2 Row - SS2R) and spring wheat have the highest potential net return, followed by dry peas, flaxseed, and feed barley. Projected returns from oats and canola are the lowest. In the Alberta brown soil zone, the potential net returns for large kabuli chick peas, and large green lentils are the highest, but again, area seeded to these crops will be limited due to higher production risks. For the major grains, spring wheat, and durum are expected to have the highest net returns, while feed barley is forecast to have a somewhat lower net return. Polish canola is not expected to cover variable costs of production. In the **black soil zone**, the net returns for spring wheat, Prairie Spring (CPS) wheat, and dry peas are forecast to be the highest. Argentine canola, feed barley and oats are expected to have more modest net returns.

In Ontario white pea beans have the highest net return. Net returns from sovbeans are expected to exceed the returns for corn. Expected returns for wheat are lower than for corn or soybeans. Feed barley returns are

## **CROP BUDGETS: 2001-2002**

MANITOBA							
	Spring	Feed		Flax-		Small Grn.	Dry
	Wheat	Barley 4/	Canola	seed	Oats	Lentils	Peas
Variable Costs <sup>1/</sup>				\$/h	a		
Seed (inc. treatment)	27.36	18.80	50.19	19.35	26.69	31.95	43.68
Fertilizer	69.74	69.74	83.75	61.28	64.88	43.05	39.95
Chemicals	79.07	49.42	121.08	61.78	14.83	126.03	64.25
Fuel	30.89	30.89	30.89	27.80	27.80	33.36	35.83
Repairs	24.71	24.71	24.71	24.71	24.71	27.18	25.95
Crop Insurance	12.85	10.63	19.52	12.11	12.36	21.50	12.97
Interest	12.16	10.39	15.90	10.65	9.09	13.84	11.25
Other	18.53	18.53	18.53	18.53	18.53	18.53	19.77
Total Variable Costs	275.31	233.11	364.57	236.21	198.89	315.44	253.65
Projected Returns 2/	2 CWRS*	1 CW	1 CAN	1 CW	3 CW	2 CAN	2 CAN
Projected Yield (t/ha)	2.44	3.20	1.63	1.45	2.89	1.35	2.42
Projected Price (\$/t)	174.00	85.00	220.00	215.00	90.00	290.00	145.00
Projected Revenue (\$/ha)	424.56	272.00	358.60	311.75	260.10	391.50	350.90
Net Return (\$/ha)	149.25	38.89	-5.97	75.54	61.21	76.06	97.25

SASKATCHEWAN: Brown Soil Zone - conventional seeded stubble

	Spring Wheat	Durum Wheat	Feed Barley <sup>4/</sup>	Lg Grn Lentils	Yellow Mustard	Lg Kabuli Chick Peas	Desi Chick Peas
Variable Costs <sup>3/</sup>			-	\$/	ha		
Seed (inc. treatment)	16.62	20.13	13.63	44.46	6.67	221.31	63.36
Fertilizer	46.19	46.19	46.19	20.50	51.13	20.50	20.50
Chemicals	45.99	46.53	41.27	86.82	58.22	65.75	55.30
Fuel	24.70	24.70	24.70	27.17	25.94	27.17	27.17
Repairs	14.82	14.82	14.82	22.23	14.82	22.23	22.23
Crop Insurance	2.91	3.53	4.32	15.22	6.30	23.93	18.90
Interest	5.90	6.08	5.68	8.35	6.35	14.52	8.03
Other	6.35	6.35	6.35	6.35	6.35	6.35	6.35
Total Variable Costs	163.48	168.33	156.96	231.10	175.78	401.76	221.84
Projected Returns 2/	1 CWRS*	1 CWAD*	1 CW	1 CAN	1 CAN	2 CW	2 CW
Projected Yield (t/ha)	1.74	1.72	2.13	0.99	0.82	1.17	1.54
Projected Price (\$/t)	174.00	152.00	90.00	340.00	340.00	560.00	275.00
Projected Revenue (\$/ha)	302.76	261.44	191.70	336.60	278.80	655.20	423.50
Net Return (\$/ha)	139.28	93.11	34.74	105.50	103.02	253.44	201.66

SASKATCHEWAN: Black Soil Zone - conventional seeded stubble

	Spring Wheat	Malting Barley	Feed Barley <sup>4/</sup>	Oats	Dry Peas	Flaxseed	Canola
Variable Costs <sup>3/</sup>	Witcat	Bancy	Dancy	5/h	a	TRASCOU	Ganola
Seed (inc. treatment)	18.06	14.99	14.99	14.84	35.57	13.83	29.64
Fertilizer	63.73	63.73	63.73	63.73	20.50	63.73	73.61
Chemicals	63.97	52.34	52.34	34.41	58.76	58.88	67.55
Fuel	24.70	24.70	24.70	24.70	27.17	27.17	25.32
Repairs	19.76	19.76	19.76	19.76	28.16	23.71	19.76
Crop Insurance	4.27	4.17	4.17	4.10	6.20	4.79	5.19
Interest	7.66	7.09	7.09	6.42	6.97	7.56	8.67
Other	9.53	9.53	9.53	9.53	9.53	9.53	9.53
Total Variable Costs	211.68	196.31	196.31	177.49	192.86	209.20	239.27
Projected Returns 2/	2 CWRS*	SS2R	1 CW	3 CW	2 CAN	2 CW	1 CW
Projected Yield (t/ha)	2.31	2.80	2.90	2.42	2.18	1.33	1.23
Projected Price (\$/t)	170.00	139.00	85.00	85.00	140.00	210.00	225.00
Projected Revenue (\$/ha)	392.70	389.20	246.50	205.70	305.20	279.30	276.75
Net Return (\$/ha)	181.02	192.89	50.19	28.21	112.34	70.10	37.48
Totals may not add due to roun	ding						

Manitoba Agriculture

AAFC forecast, March 2001

Saskatchewan Agriculture and Food

Off-Board

Wheat: 13.5% protein / Durum: 12.5% protein

## **CROP BUDGETS: 2001-2002**

#### ALBERTA: Brown Soil Zone - stubble

	Spring Wheat	Durum Wheat	Feed Barley <sup>4/</sup>	Polish Canola	Lg Grn. Lentils	Lg Kabuli Chick Peas
Variable Costs <sup>1/</sup>				\$/ha		
Seed (inc. treatment)	17.29	18.53	14.82	22.23	49.40	197.60
Fertilizer	58.29	58.29	58.29	65.21	18.28	18.28
Chemicals	58.05	58.05	29.64	60.52	60.52	107.45
Fuel	19.76	19.76	19.76	19.76	19.76	19.76
Repairs	17.29	17.29	17.29	17.29	19.76	19.76
Crop Insurance	8.42	9.66	9.61	15.09	14.82	14.82
Interest	4.94	4.94	4.94	4.94	6.18	6.18
Other	1.00	1.00	1.00	1.00	1.00	1.00
Total Variable Costs	185.02	187.52	155.35	206.04	189.71	384.85
Projected Returns 2/	1 CWRS*	1 CWAD*	1 CW	1 CAN	1 CAN	2 CW
Projected Yield (t/ha)	1.75	1.84	2.28	0.78	0.96	1.16
Projected Price (\$/t)	182.00	155.00	95.00	230.00	345.00	560.00
Projected Revenue(\$/ha)	318.50	285.20	216.60	179.40	331.20	649.60
Net Return (\$/ha)	133.48	97.68	61.25	-26.64	141.48	264.75

#### ALBERTA: Black Soil Zone

	Spring Wheat	CPS Red Wheat	Feed Barley <sup>4/</sup>	Oats	Dry Peas	Argentine Canola
Variable Costs <sup>1/</sup>				\$/ha		
Seed (inc. treatment)	27.17	49.40	22.23	19.76	59.28	29.64
Fertilizer	89.29	89.29	89.29	89.29	35.82	110.41
Chemicals	59.28	59.28	54.34	25.94	66.69	79.04
Fuel	22.23	22.23	22.23	22.23	22.23	22.23
Repairs	24.70	24.70	24.70	24.70	27.17	24.70
Crop Insurance	7.26	7.76	6.67	8.03	7.78	11.95
Interest	4.94	4.94	4.94	4.94	4.94	6.18
Other	1.00	1.00	1.00	1.00	1.00	1.00
Total Variable Costs	235.87	258.60	225.40	195.89	224.91	285.15
Projected Returns 2/	2 CWRS*	1 CPS	1 CW	3 CW	2 CAN	1 CAN
Projected Yield (t/ha)	2.60	3.05	3.19	2.57	2.55	1.55
Projected Price(\$/t)	178.00	137.00	90.00	85.00	145.00	230.00
Projected Revenue(\$/ha)	462.80	417.85	287.10	218.45	369.75	356.50
Net Return (\$/ha)	226.93	159.25	61.70	22.56	144.84	71.35

	SWW Wheat	HRW Wheat	Feed Barley	Grain Corn	Soybeans	White Pea Beans
Variable Costs <sup>3/</sup>				\$/ha		
Seed (inc. treatment)	69.16	107.69	53.85	121.03	91.39	81.51
Fertilizer	134.12	170.68	120.54	212.79	32.60	48.91
Chemicals	12.35	12.35	85.22	122.27	103.74	96.33
Fuel	31.12	31.12	41.50	51.87	40.01	47.42
Repairs	44.46	44.46	49.40	46.93	39.52	61.75
Crop Insurance	16.18	16.18	9.02	25.56	21.00	38.04
Interest	26.68	25.44	14.33	23.22	13.21	14.94
Other(includes drying)	0.00	4.50	n/a	106.56	<u>9.89</u>	<u>n/a</u>
Total Variable Costs	334.07	412.42	373.86	710.23	351.36	388.90
Projected Returns 2/	1 CEWW	1 CERW*	Feed	2 CE	2 CW	1 CAN
Projected Yield (t/ha)	4.70	4.25	3.22	7.64	2.70	1.70
Projected Price(\$/t)	110.00	130.00	105.00	125.00	240.00	485.00
Projected Revenue(\$/ha)	517.00	552.50	338.10	955.00	648.00	824.50
Net Return (\$/ha)	182.93	140.08	-35.76	244.77	296.64	435.60

Totals may not add due to rounding

<sup>1/</sup> Alberta Agriculture, Food and Rural Development

<sup>2/</sup> AAFC forecast, March 2001

<sup>3/</sup>Ontario Ministry of Agriculture, Food and Rural Affairs (except drying costs)

4/ Off-Board

ONTARIO

\* CWRS: 13.5% protein / 1CWAD: 12.5% protein / 1 CERW 11.5% protein

expected to be very low, however most of this crop is used for on farm feeding so that market price is less of a factor in planting decisions.

#### AREA SHIFTS

Area seeded in Western Canada is forecast to shift into spring wheat, coarse grains, flaxseed and some special crops due to higher expected relative net returns, with areas of canola and summerfallow expected to decline. In eastern Canada, area seeded is expected to shift out of winter wheat into soybeans.

In western Canada, all wheat area is forecast to increase. Spring wheat area is forecast to increase to 8.39 Mha in 2001 from 8.04 Mha largely due to the higher expected net returns in 2001. Area seeded to durum is expected to increase slightly to 2.68 Mha due to strong prices expected in the current crop year and relatively strong returns anticipated for 2001-2002 in comparison to some of the alternative crops. The expected marketability of the durum crop is the major factor which will discourage durum area. For 2000-2001 and 2001-2002 carry-out stocks are forecast to establish records of 2.7 Mt and 3.4 Mt, respectively. The CWB PRO indicates that the price of No. 1 Canada Western Amber Durum (CWAD) 12.5% protein, compared to No.1 Canada Western Red Spring (CWRS) 12.5% protein, is forecast to shift from a premium of \$31 per tonne (/t) in 2000-2001 to a discount of \$17/t for 2001-2002.

Despite relatively low projected net returns for feed barley, area seeded to **barley** in western Canada is forecast to increase modestly from 2000, to 4.89 Mha, due to strong domestic demand from a growing livestock sector, its role as a good cash crop, and strong projected returns from malting barley. Although exports are expected to increase significantly due to larger supplies, carry-out stocks are expected to increase. The premium for malting barley over feed barley is forecast to decline due to increased supplies of malting barley in the major exporting countries. The premium for two-row malting barley over six-row is expected to decrease slightly. Area seeded to oats in western Canada is projected to increase slightly to 1.70 Mha due to relatively good prices for high quality milling oats.

The price outlook for **oilseeds** in Canada remains weak, largely driven by low vegetable oil prices. U.S. soybean supplies are expected to reach a record high in 2001-2002 mainly due to increased production resulting from the high U.S. government marketing loan rate, and high carry-in stocks.

**Canola** prices are forecast to fall from 2000-2001 due to burdensome world soybean, soy oil and palm oil supplies. Low net returns, and higher fertilizer, seed and chemical costs are expected to shift a significant area out of canola into other crops. In western Canada canola area is projected to decrease by 11% to 4.34 Mha. However, due to its historic role

as a cash crop, the area seeded to canola is expected to remain higher than implied by current net returns.

Flaxseed area is forecast to increase by about 9% to 0.65 Mha in 2001, due to relatively good projected net returns. Exports are expected to rise by 8%, primarily as a result of increased EU demand. Prices for flaxseed are expected to remain stable as a result of decreased carry-out stocks expected for 2001-2002.

#### **Special Crops**

In western Canada, area seeded to special crops in 2001 is expected to increase by about 7% to 3.02 Mha. Areas seeded to chick peas and sunflowers are forecast to increase by 25% and 10% respectively. The increase in chick pea area can be attributed to high net returns compared to alternative crops. Dry Pea area is expected to increase by about 10% compared to 2000. The area seeded to lentils is expected to be similar to 2000-2001. Lentil prices are expected to decrease from 2000-2001 levels. Mustard area is forecast to increase by 5% to 0.22 Mha as a result of lower carry-in stocks and improved prices. Prices are expected to increase about 5% over 2000-2001 levels. Net returns are expected to improve about 37% over last year. The oriental and brown mustard varieties have higher yields but usually lower price versus yellow mustard. Area seeded to canary seed is forecast to remain stable at 0.17 Mha. Prices are expected to improve by about 5% in 2001-2002.

**Summerfallow** area has been steadily declining since 1988, reaching a low of 4.69 Mha in 2000, because new technology, especially herbicide, has allowed for continuous cropping. Also the increased availability of alternative crops, some of which are nitrogen-fixing, and the use of crop rotation, has decreased the producers' reliance on summerfallow. Summerfallow area in 2001 is expected to decrease by 4% to 4.52 Mha. If conditions in the spring are



excessively dry, coupled with higher input cost, summerfallow area could be higher than expected. Many farmers, especially in southern Saskatchewan, will not risk seeding a crop into stubble land if there is little moisture. Current moisture conditions in Alberta, South West and Central Saskatchewan range between 40 and 60% below average and seeded area could be significantly reduced should this condition persist until seeding.

#### Ontario

Area seeded to **winter wheat** in the fall of 2000 is estimated by Statistics Canada to be 14% lower than 1999 at 0.24 Mha due to a wet fall and a late soybean harvest. Expected net returns for winter wheat are lower than for other crops such as white beans, soybeans, and grain corn. However, winter wheat is a rotation crop and a source of cash during the summer for many Ontario farmers, with seeded area largely dependent on fall seeding conditions.

Area seeded to **soybeans** in Ontario is expected to increase relative to corn. The increase is due to lower seeded winter wheat area and better expected net returns for soybeans. Soybean area has been steadily increasing over the years due to the increase in no-till operations, the benefits of a wheat/soybean rotation and positive net returns which have been consistently above corn for the last five years.

Although the expected net return is the highest for **white pea beans** in Ontario, the area seeded to white beans is forecast to decrease to 18,000 ha. This is due to relatively low expected prices and higher risk associated in producing white pea beans compared to other crops. **Coloured bean** area is expected to remain similar to 2000-2001 at 20,000 ha.

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