



Bi-weekly Bulletin

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CANADA: AREA SEEDED FOR 2005-2006

A farmer's decisions on which crops to seed are heavily influenced by expected net returns, as well as current prices, spring soil moisture conditions, expected delivery opportunities, cash flow needs, crop rotation requirements, potential disease and pest problems and on-farm stocks. In 2005-2006, prices for wheat and oilseeds (except canola) are forecast to decline from 2004-2005 due to rising world stock levels. Feed grain prices are projected to strengthen slightly, mainly due to reduced US corn production. Based on these factors, Market Analysis Division (MAD) has projected crop areas for 2005. In western Canada, the areas seeded to winter wheat, barley, canola, lentils, mustard seed and canary seed are expected to decrease, while the areas of spring wheat, oats, flaxseed, dry beans, chickpeas and sunflower seed are forecast to increase. In eastern Canada, higher spring wheat and dry bean areas are expected to offset the smaller area of winter wheat, with only marginal changes expected for corn and soybeans. This issue of the Bi-weekly Bulletin examines the net returns and area seeded for grains, oilseeds, pulses and special crops in Canada.

Background

Expected returns are an important factor 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. Variable costs change with the type of crop grown, while fixed costs vary little with the type of crop. Therefore, 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 in MAD's analysis of seeding intentions.

While expected net returns are a valuable indicator of area shifts between land use options, it is not the only factor to consider. Delivery opportunities can be a major factor, with a farmer requiring immediate cash flow perhaps choosing to grow feed barley rather than wheat, despite less attractive expected net returns, as the Canadian Wheat Board regulates the delivery of milling wheat, and may not accept delivery of the entire year's production. Crop rotations must also be considered, as certain crops cannot

be grown consecutively on the same fields due to disease pressure, so that the area of an otherwise attractive crop may be restricted. Large stock levels can also discourage production of additional grain.

As each province's agriculture department uses a different methodology, the crop budgets used here are not comparable across provinces, but only between crops within a province. Saskatchewan Agriculture, Food and Rural Revitalization provides crop budgets for crops seeded to fallow and stubble land for each soil zone. Alberta Agriculture, Food and Rural Development provides budgets for crops seeded to fallow and stubble in the brown and dark brown soil zones, with only stubble-seeded budgets for crops in the black and grey soil zones. Manitoba Agriculture, Food and Rural Initiatives provides only average crop budgets, as the majority of Manitoba crops are grown on stubble and most of Manitoba's agricultural area is in the black soil zone. The Ontario Ministry of Agriculture and Food provides average crop budgets for various tillage systems.

Productivity in western Canada is correlated with soil type. For example, the brown soil zone in the semi-arid region of the Prairies is more subject to drought than the dark brown soil zone, resulting in wider variations in crop yields. The black soil zone, located in a higher moisture region, has higher average yields and is rarely subject to drought. The grey 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

The price forecasts used by MAD in this analysis assume normal growing conditions in Canada and other major growing regions of the world in 2005-2006. Actual prices could differ considerably as a result of unusual weather in Canada or major importing or exporting countries, as well as other changes in market factors.

The prices shown for each crop in each region represent the forecast average price in that region for the expected grade of each crop. For spring wheat, it is assumed that farmers in the black soil zones would expect to achieve a No.2 CWRS grade, with 13.5% protein, while a No.1 CWRS grade would be expected in the drier brown soil zones. Durum producers in the brown soil zone might expect to produce a No.1 CWAD with 13% protein. For barley, potential returns are given for malting barley as well as for feed barley, and farmers hoping to have their barley selected for malting would have to weigh the possibility that their crop may not meet malting specifications and have to be sold for feed. For dry peas, prices for food grade green and yellow

peas are given, but, as with barley, not all peas will be sold for human food, and farmers should also take into account the significantly lower net returns for feed peas.

Price levels at seeding time, or prices received the previous year, can also impact on seeding decisions, as projected prices are often not accurate, and many farmers will therefore make decisions based on their own expectations or past experience. In the spring of 2005, this factor may be most significant for crops such as flaxseed, sunflower seed and dry beans, where prices in 2004-2005 have been relatively high due to production problems. CWRS wheat area may also be supported, as top quality CWRS prices are relatively good in 2004-2005, and few farmers expect to produce feed quality wheat.

Conversely, sharp declines in prices for feed barley and canola in 2004-2005 may negatively impact on farmers' outlook for these crops.

YIELD FORECASTS

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

For 2005-2006, MAD assumes that yields will be near trend for all crops. Despite below normal precipitation in parts of the southern Prairies since last fall, moisture reserves were replenished by above-normal rainfall in the summer of 2004, and normal precipitation levels are assumed during the 2005 growing season.

Environment Canada's spring forecast calls for below normal precipitation in Alberta, the Peace River District of British Columbia and north-western Saskatchewan, above normal in eastern Manitoba and normal precipitation in the remainder of the Prairie agricultural region. For the summer growing

season, precipitation is expected to be normal except for north-western Alberta and BC Peace, which remains dry. Spring temperatures are forecast to be near-normal across the entire Prairie agricultural area, with temperatures during the summer rising to above normal for BC, Alberta and Saskatchewan, and Manitoba experiencing normal summer temperatures. If this forecast is correct, trend yields should be achievable in most regions except north-western Alberta and the BC Peace River District.

In Ontario and Quebec, Environment Canada forecasts that conditions will be dry in the spring, but rising to wetter than normal for the summer. Summer temperatures, however, are expected to be cooler than normal. A dry spring may reduce winter wheat yields, while a cool summer may slow corn and soybean development, despite expected adequate moisture.

EXPENSES

As projected 2005 costs are not yet available for Alberta, MAD has used the 2004 provincial cost estimates, adjusted by the Farm Input Price Index projected by Agriculture and Agri-food Canada.

Fertilizer

Fertilizer costs are a significant factor in seeding decisions. 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 ammonia factory requires about 33.5 million British thermal units (MBtu) to produce one tonne of ammonia. Natural gas costs are currently about US\$6.10/MBtu compared with about US\$5.80/MBtu a year ago and US\$7.00/MBtu in 2003. With natural gas priced at about US\$6.10/MBtu, 1 tonne of nitrogen fertilizer will cost about US\$230 to produce {33.5 MBtu x \$6.10 + \$25 (fixed cost)} (Cdn\$290 at the current exchange rate) compared to about US\$220 (Cdn\$280) in 2004 and US\$260 (Cdn\$400) in 2003. Tight North American supplies are expected to keep natural gas prices relatively

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	2004	2005f	Change
kha.....		%
Winter Wheat	642	483	-24.8%
Spring Wheat	7,527	8,007	6.4%
Durum Wheat	2,230	2,244	0.6%
All Wheat	10,399	10,734	3.2%
Oats	1,995	2,122	6.4%
Barley	4,678	4,513	-3.5%
Rye (all)	284	230	-19.2%
Mixed Grains	233	233	0.4%
Corn	1,185	1,183	-0.1%
Coarse Grains	8,374	8,281	-1.1%
Flaxseed	728	1,000	37.3%
Canola	5,319	5,016	-5.7%
Soybeans	1,229	1,213	-1.3%
Oilseeds	7,277	7,229	-0.7%
Dry Peas	1,388	1,388	0.0%
White Pea Beans	65	79	21.9%
Coloured Beans	98	109	11.0%
Lentils	778	739	-5.0%
Mustard Seed	317	237	-25.2%
Sunflower Seed	87	100	14.9%
Canary Seed	356	267	-25.0%
Chickpeas	47	54	15.9%
Buckwheat	9	9	-1.1%
Pulse and Special Crops	3,145	2,982	-5.2%
Summerfallow	3,609	3,502	-3.0%

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

f: forecast, AAFC, February 2005

Source: Statistics Canada

high, especially if the winter is colder than normal.

Phosphorus prices are also expected to be higher than for 2004. Higher world fertilizer prices will be partly offset by the stronger dollar, with average Canadian fertilizer prices projected to be about 5% higher in 2005 than in 2004.

Farm Fuel

Strong global demand, instability in Iraq's, smaller US reserves, and the success of the Organization of the Petroleum Exporting Countries in controlling supply, have driven oil prices to over US\$45/barrel (Cdn\$56), compared to under US\$40/barrel (Cdn\$50) a year ago. The stronger Canadian dollar will offset part of the increase in world prices, but Canadian farm fuel prices are expected to be more than 10% higher than in 2004.

Herbicides and Pesticides

Herbicide use varies greatly depending on the crop seeded and by the growing conditions. For the majority of crops, use is expected to be similar to 2004, with prices 2% to 3% higher.

Between 2000 and 2003, grasshoppers were a serious pest in many parts of Saskatchewan and Alberta due to dry conditions. However, cool wet conditions in 2004 reduced grasshopper numbers, and grasshoppers are not expected to be a serious problem in 2005. Therefore, pesticide use for grasshopper control in 2005 may be lower than in the early years of the decade.

Seed

The cost of seed is expected to increase marginally in 2005 for canola and flaxseed. Seed costs for wheat, barley, oats and dry peas, however, are projected to decrease slightly. The seed costs used in this analysis are generally an average of commercial and bin-run seed.

Crop Insurance

Crop insurance costs in 2005 are expected to be relatively unchanged from 2004, despite a significant increase in crop claims, particularly in Saskatchewan and Manitoba.

However, rates will vary depending on the province and crop seeded.

CROP BUDGETS

Comparing budgets across the provinces, custom work costs for western Canada have been included in "other" costs, which also includes overhead expenses such as utilities. For Ontario, custom work costs have been added to chemical and fertilizer costs. In Ontario, "other" costs include 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 returns are for flaxseed and confectionery sunflower seed, followed by green peas, soybeans, oats and canola. Flaxseed returns are supported by tight supplies arising from the cool 2004 growing season and August frost across much of the flaxseed growing region of Saskatchewan and Manitoba. Net returns are forecast to be the lowest for Canada Western Red Spring (CWRS) wheat and feed barley due to lower expected prices in 2005-2006. If sold for feed, green pea returns would be reduced to \$34/ha, lower than for all other crops except barley.

In the **Saskatchewan brown soil zone**, the highest net returns are for large green lentils, chickpeas, and durum wheat. Yellow mustard seed, CWRS wheat, and feed barley are expected to provide the lowest net returns per hectare. In the **black soil zone**, flaxseed is expected to provide the highest net return, followed by malting barley (Special Select 2 Row {SS2R}), yellow peas and CWRS wheat. The lowest potential net returns are for canary seed, oats, canola, feed barley and feed peas.

In the **Alberta brown soil zone**, the potential net returns for large kabuli chickpeas, large green lentils and canola are the highest, with the lowest potential net returns for feed barley and CWRS wheat. In the **black soil zone**, green peas and Argentine canola have the highest potential returns, followed by Canada Prairie Spring (CPS) wheat, CWRS wheat and feed barley. Oats

and feed peas are expected to have the lowest net returns.

In **Ontario**, white pea beans are expected to have the highest net return due to strong prices, followed by soft red and hard red winter wheat, soybeans and grain corn. Returns for feed barley are expected to be very low; however most of this crop is used on farm for feeding so that market price is less of a factor in planting decisions. For both wheat and barley, additional revenue may be earned through the sale of straw.

AREA SHIFTS

In **western Canada**, area seeded to spring wheat, flaxseed, oats, dry beans, sunflower seed and chickpeas is expected to increase in 2005. The areas of winter wheat, barley, rye, corn, canola, soybeans, lentils, mustard seed, and canary seed are expected to decline, with durum and dry pea areas relatively unchanged from 2004. In **eastern Canada**, a decline in winter wheat area is expected to be offset by slightly higher areas of spring wheat, corn, soybeans, and a significant increase in dry bean area.

In western Canada, spring wheat area is forecast to increase by 6% to 7.9 million hectares (Mha) in 2005, despite lower potential net returns than for several alternative crops. This is due to a number of factors, included sharply lower winter wheat area because of the late 2004 harvest, relatively stronger wheat returns in 2004-2005 compared to canola, better delivery opportunities than for durum wheat and crop rotation considerations. Area seeded to durum is expected to be relatively unchanged from 2004, despite the higher returns when compared with spring wheat, due to rising stocks and restricted deliveries in 2004-2005.

Area seeded to barley in western Canada is forecast to decrease by 4% in 2005, to 4.2 Mha, due to extremely low prices for feed barley in 2004-05. The expected decline in area is moderated by good expected returns for malting barley and barley's role as a good cash crop and as a major feed ingredient on western farms. However, the area seeded to barley in 2005 is

forecast to be below the 10-year average of 4.5 Mha.

Area seeded to oats in western Canada is projected to increase by 7% to 2.0 Mha due to attractive potential net returns for milling quality oats, and relatively stronger prices in 2004-2005 than for the major alternative crops; barley and canola.

Area seeded to canola in western Canada is projected to decrease by 6% to 5.0 Mha due to lower net returns relative to alternative crops, the large decline in prices in 2004-2005, the greater production risk compared to wheat and rising stock levels. Canola prices are forecast to remain near the depressed 2004-2005 level, due to weak US soybean prices and the strong Canadian dollar.

Flaxseed area is forecast to increase by almost 40% to 1.0 Mha in 2005 due to extremely high prices in 2004-2005 and relatively good projected net returns for 2005-2006. Prices, however, are expected to be pressured by a stronger Canadian dollar and higher supplies.

Pulse and Special Crops

In western Canada, area seeded to pulse and special crops in 2005 is expected to decrease by 6% to 2.91 Mha due to one or more of the following factors: (1) lower expected net returns than for competing crops, (2) high carry-in stocks or (3) higher production risks compared to other crops. Area seeded to mustard seed and canary seed is forecast to decrease by about 25%. Mustard seed prices for all types are expected to increase slightly due to lower supply. Canary seed prices are expected to remain stable, in line with a stable world supply. Dry pea area is expected to be similar to 2004 at 1.39 Mha. Prices are expected to remain stable. The area seeded to lentils is expected to decrease by about 5% to 0.74 Mha. Supply is expected to decrease slightly. Prices for the top grades are forecast to decrease significantly, assuming a return to a normal quality crop from the lower than average quality crop in 2004.

Summerfallow area has been steadily declining since 1988, reaching a low of 3.61 Mha in 2003, because new technology, including improved herbicides and seeding systems, have 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 rose marginally in 2004, mainly due to wet seeding conditions, but is forecast to decline in 2005 and reach a record low of 3.5 Mha. If moisture conditions are dry in the spring, farmers may be reluctant to seed crops on stubble, supporting summerfallow area, but due to above-normal precipitation in 2004, soil moisture conditions are adequate in most parts of western Canada.

Expectations for higher input costs and lower commodity prices, conversely, may support summerfallow area as farmers may take marginal land out of production.

Ontario

Area seeded to winter wheat in the fall of 2004, estimated by Statistics Canada at 0.3 Mha, is down about 5% from 2003 due to lower prices and a late soybean harvest. Winter wheat is a rotational crop and a source of cash during the summer for many Ontario farmers, with seeded area largely dependent on fall seeding conditions, although potential net returns for both soft and hard red winter wheat compare very favourably with corn and soybeans in 2005. As with barley, additional revenue can be realized from wheat in Ontario through the sale of straw.

Area seeded to corn is expected to increase slightly to 0.70 Mha in 2005 due to lower area seeded to winter wheat. Production is forecast to increase only marginally due to lower yields. Average prices in 2005-2006 are expected to rise by \$10/t to about \$115/t (No.2 Canada Eastern cash in-store, Chatham) due to expected higher US prices.

Area seeded to soybeans in Ontario is expected to increase marginally as a result of the decline in area seeded to winter wheat. Production is expected to decline by 7% as yields decline to

normal levels. Prices for soybeans are expected to decline by \$25/t to an average price of about \$205/t (in store Chatham), due to higher soybean production in the US and a strengthening of the Canadian/US exchange rate.

The area seeded to white pea beans in Ontario is expected to increase by about 40% in 2005, due to strong prices in 2004-2005. Area seeded to white pea beans is relatively small, due to higher production risk. Coloured bean area is expected to rise by about 10%. Higher Canadian and US supply, as a result of higher seeded area, lower abandonment and higher yields, are expected to pressure prices for nearly all classes of dry beans.

For more information please contact:

Glenn Lennox, Wheat Analyst
Phone: (204) 983-8465
E-mail: lennoxg@agr.gc.ca

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Market Analysis Division,
Marketing Policy Directorate
Strategic Policy Branch
Agriculture and Agri-Food Canada,
500-303 Main Street
Winnipeg, Manitoba, Canada R3C 3G7
Telephone: (204) 983-8473
Fax: (204) 983-5524

Director: Maggie Liu
 Chief: Fred Oleson

Editor: Gordon MacMichael

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