Agriculture and Agri-Food Canada | Agriculture et Agroalimentaire Canada

# Bi-weekly Bulletin

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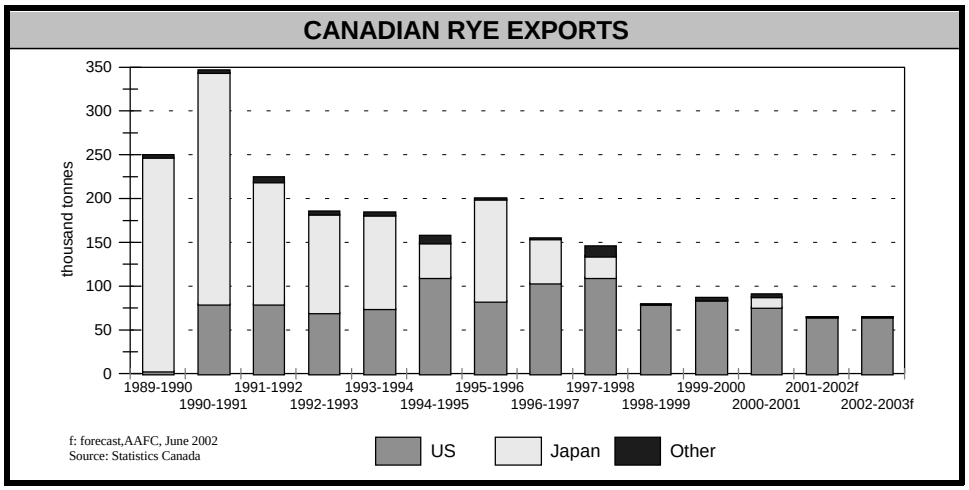
# RYE: SITUATION AND OUTLOOK

**Rye is an important part of Canada's agricultural economy. Although rye production is low relative to some other major crops, it is expected to generate about $13 million (M) in exports for 2001-2002 and may become increasingly important as a low input forage crop. Rye has had a long downward trend in consumption and production in world markets, and it has become somewhat of a niche product in the North American grain market. In 2002-2003, Canadian rye prices are forecast to fall slightly, but they are not expected to decrease to the same extent as prices of other coarse grains as Canadian rye supplies will remain very tight. The forecasts are highly tentative because moisture conditions in parts of western Canada are very dry. Offshore rye prices are forecast to remain under pressure because carry-out stocks of rye in the European Union(EU) will continue to be large and will limit the upside potential for North American rye prices. Government policies, especially in the EU, will continue to play an important role in determining world rye trade for the medium-term. This issue of the *Bi-weekly Bulletin* examines the situation and outlook for rye.**

Rye is believed to have originated in southwest Asia, then was brought into northern Europe about 2,000 years ago. Today rye is produced around the world, but most of the world's supplies are produced in northeastern Europe in Russia, Germany, Poland, Ukraine and Belarus. Rye is used to produce distilled whiskey and rye flour, and it is fed to livestock as grain, hay, or forage. As well, health conscious consumers are increasingly recognizing the benefits of rye in a balanced diet.

Rye is usually planted in the fall as a winter crop, but spring varieties are also grown. Rye requires fewer inputs than other crops because it is very competitive with weeds, and it is sometimes used as a cover crop. Rye is hardier than winter wheat and performs adequately in light soil where other crops may perform poorly, making it useful for preventing erosion.

However, use of rye for food has generally declined over the past 40 years as consumers have switched to wheat based products over time. World feed use has also declined, especially in the former Soviet Union during the 1990s.




## 2001-2002 SITUATION

### World Production

World rye production increased to 22.9 million tonnes (Mt) in 2001-2002, up from 19.1 Mt in 2000-2001, as growing conditions were very good in much of northeastern Europe. Russia (6.6 Mt) , the EU (6.3Mt), Poland (4.9 Mt), were the major producers but production in Ukraine and Belarus also increased significantly, to 1.8 Mt and 1.6 Mt respectively. Canada produced a very small amount of rye relative to these countries, at only 0.2 Mt, its lowest level in recent times.

### Exporters

The EU accounted for 27% of total world rye production in 2001-2002, with the vast majority of that production coming from Germany. The EU controlled about 65% of world exports in 2001-2002, and was by far the largest single exporter. Ukraine had an excellent crop and its market share increased to 28% of world trade. Canada is one of the other noteworthy players in the

Canada

world rye market in 2001-2002, accounting for about 5% of world trade. Eastern Europe was the only other significant exporting region accounting for 2% of world trade, in 2001-2002.

Rye production has become an important issue for EU policymakers. For 2001-2002, the intervention (support) price for rye was €101.31/t (about CAN$142/t), the same as the intervention price for wheat and barley. However, market prices for rye have been below this level, which means that the EU has had to subsidize this commodity in order to export it. In 2001-2002, EU rye production increased to 6.3 Mt from 5.4 Mt in 2000-2001 despite having carry-in stocks of 4.4 Mt. The EU is expected to propose some reforms in the summer of 2002 during a review of Agenda 2000 policies. However, policy changes are unlikely to have a dramatic impact in the short-term. If subsidies for rye are eliminated then EU rye production is likely to decline considerably over the medium-term, with production likely to shift into other cereal grains such as triticale, barley, or wheat.

**Importers**

Japan is the world's largest importer of rye, making up 32% of the world's imports in 2001-2002. Japanese government policies on other cereals have a significant impact on Japanese rye consumption and world rye trade. The Japan Food Agency strictly regulates imports of wheat and barley, but the Japanese rye market is basically open. Japanese rye prices then reflect world market prices and are much lower than the regulated prices for wheat and barley, making it attractive as a feed ingredient.

In the early 1990s, Japan was Canada's largest export market for rye. However, Canada's rye exports to and from Japan, have fallen from over 0.2 Mt at the end of the 1980s to nearly zero at the end of 2001-2002. Some of the reasons for the decline in exports to Japan include EU policies which supported its rye exports and subsequently pressured international rye prices, reduced production of rye in Canada which limited exportable supplies, and increased transportation costs to export terminal positions from Prairie farms.

The other major importer is South Korea, which makes up about 10% of world trade. Rye consumption in Japan and Korea may decline in the medium-term if EU support for the crop is reduced, which would lower EU rye production and raise world rye prices.

The United States (US) is a fairly minor player in world rye markets but has become Canada's largest export market for rye, now that the EU has displaced Canada in Asian markets. US imports of rye from all origins have averaged about 100,000 t over the past 10 years, and Canada's share of this market increased to about 80% during the late 1990s. Canadian rye is exported primarily to Minnesota and Kentucky where it is used for milling and distilling, respectively. Steady US food use and declining US production have helped to support Canadian rye exports. US rye production has averaged about 250,000 tonnes (t) over the past ten years but has declined in the most recent three years, to about 180,000 t in 2001-2002. US rye production has been disadvantaged by US farm programs. The loan rate on rye was US$1.61/bu compared to US$1.89/bu for corn, then was excluded from the US farm program in the1996 and 2002 farm bills.

## CANADA

Area seeded to rye has declined in all three prairie provinces over the past twenty years, although it peaked in 1989 in response to high prices caused by the drought of 1988. Canadian rye production has dropped sharply since the 1980s, falling from an average of more than 600,000 t during the 1980s to less than 200,000 t in 2001-2002. Saskatchewan has historically been the largest rye producing province, with Alberta and Manitoba producing significant amounts as well. Small amounts are also produced in eastern Canada, with most of that occurring in Ontario. About 90% of Canadian rye is planted in the fall and the remainder is planted in the spring. The Rye and Triticale Association is a farmer-led organization which promotes the crop and enhances its profile in the market place.

**Distilling**

Canadian whiskey is well-known for using rye for its starch and flavour. The distilling market is the largest commercial market for rye in Canada, consuming about 50,000 t annually, and this market tends to pay premium prices for quality grain. Alberta Distillers Limited is the largest consumer of rye in Canada, while a few other distillers also use rye in much smaller amounts.

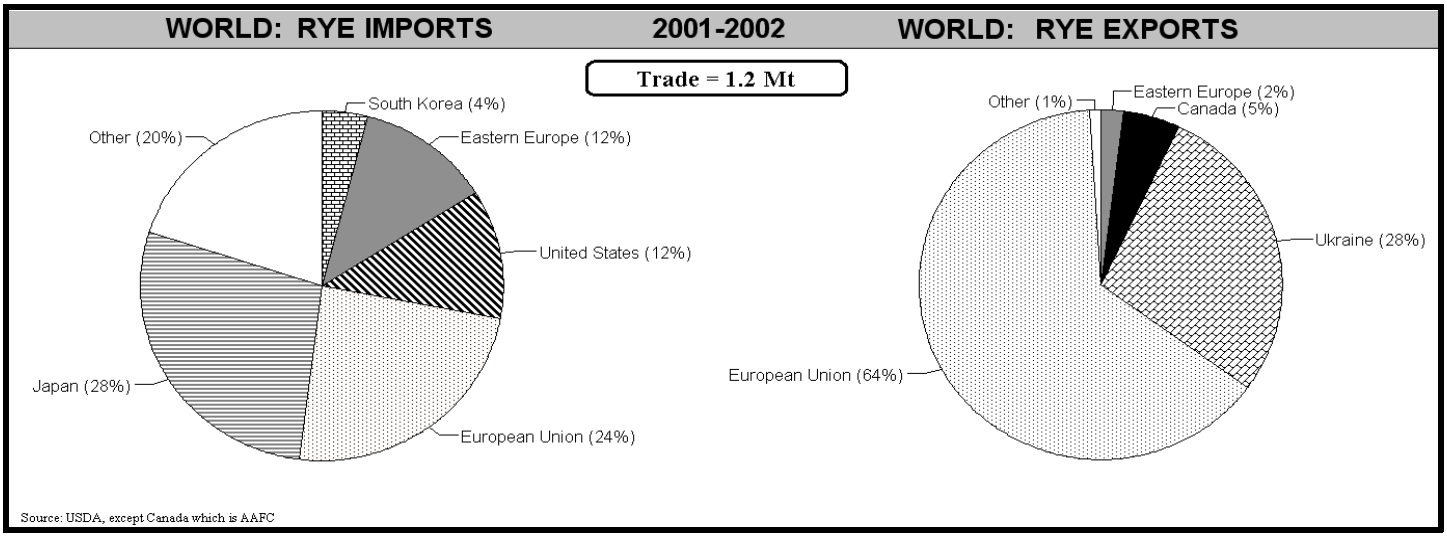
### CANADA: RYE SUPPLY AND DISPOSITION

| *Crop year: August-July* | **2000 -2001** | **2001 -2002f** | **2002 -2003f** |
|---|---|---|---|
| Harvested Area (Mha) | 115 | 102 | 1.11 |
| Yield (t/ha) | 2.27 | 1.90 | 2.12 |
| | .....thousand tonnes ..... | | |
| Carry-in Stocks | 161 | 77 | 35 |
| Production | 260 | 194 | 235 |
| Imports | 5 | 5 | 5 |
| **Total Supply** | **426** | **276** | **275** |
| Food Use | 14 | 14 | 14 |
| Industrial Use | 54 | 48 | 50 |
| Feed, Waste, and Dockage | 175 | 100 | 82 |
| Seed and Other | 17 | 14 | 19 |
| **Total Domestic Use** | **260** | **176** | **165** |
| Exports | 89 | 65 | 70 |
| **Carry-out Stocks** | **77** | **35** | **40** |
| Average Farmgate Price($/t) | 100 | 125-145 | 115-145 |

f: forecast, AAFC, June 2002
Source: Statistics Canada

### PERENNIAL RYE

Agriculture and Agri-Food Canada researchers at the research centre in Lethbridge, Alberta have developed a new variety of rye called Ace-1. This new variety may significantly increase interest in rye because it is a perennial that persists for several years, takes advantage of spring moisture, and has good regrowth for a second cut. Preliminary AAFC research has suggested that it might reduce silage feed costs by 15-20%. The crop shows promising silage and grazing results but it is susceptible to ergot, so researchers recommend against its production specifically for grain. Seed of perennial rye will be available in limited quantities to Canadian farmers in the fall of 2002, and it is expected to be widely available to producers in the fall of 2003.




**Milling**

The other premium domestic market for rye is the flour milling market. However, this market is small, as only about 14,000 t of rye are used as food in Canada. Rye is believed to have some positive health effects as rye contains fibrous complex carbohydrates called pentosans, which may reduce certain types of cancer and heart disease. Research on the health benefits of rye are continuing.

**Feed**

The use of rye grain for feed has fallen as production has declined over the past several years, but rye has potential for growth as a forage and silage crop because rye has relatively low input requirements and the domestic livestock industry is expanding. The nutritional value of rye grain is similar to that of barley, wheat, corn, and triticale, although enzymes may need to be used to help livestock digest pentosans contained in rye. A second concern with rye is its susceptibility to ergot infection. The ergot fungus produces toxins that reduce feed conversion, or produce other symptoms that are even worse, if present in sufficient amounts. Feed rye is normally priced at a discount to feed barley on a per tonne basis, and this discount can vary widely.

**Prices**

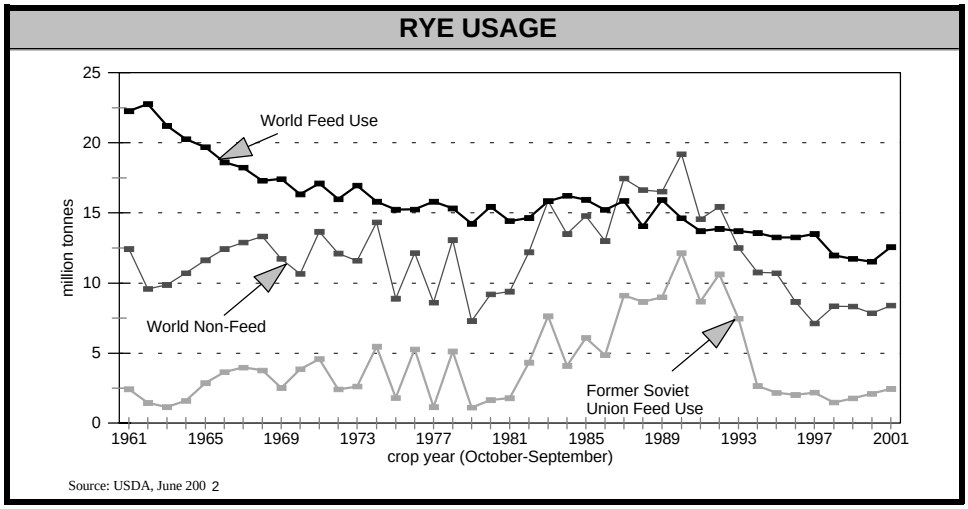
For 2001-2002, very low area seeded and drought reduced Canadian rye production to its lowest level of recent times. This resulted in strong domestic prices for all coarse grains, and especially for high quality rye. The price of rye for food and industrial use has been high this year, at times reaching upwards of $180/t in parts of the prairies, but more generally has been about $140/t. Internationally, rye prices have been weak as production outpaced consumption and world rye carry-out stocks increased by about 35%.The EU currently holds more than 5.0 Mt of rye stocks, which is more than 70% of world stocks. The EU gained a considerable share of the US rye import market in 2001-2002 as the low Canadian supplies and the large EU rye stockpile created the opportunity. The US imported about 60,000 t of rye from the EU by the end of March, giving the EU about 60% of the US import market for 2001-2002. Current information suggests that these imports were used for both distilling and milling uses, with shipments transported by barge from the Gulf of Mexico to processors located in Kentucky and Minneapolis. The EU has not exported rye to the US since 1998, when 9,000 t were traded. Canada has exported about 55,000 t of rye to the US so far in 2001-2002, and with another 10,000 t expected over the rest of the crop year.

## 2002-2003 OUTLOOK

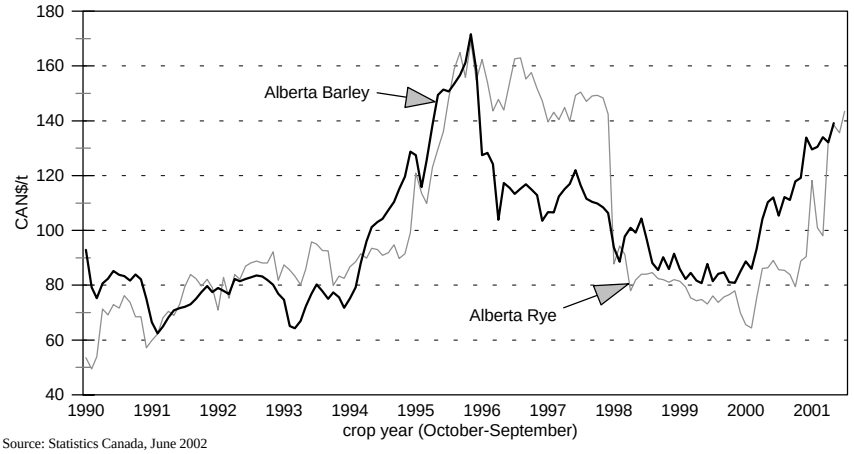
**World**

World rye production is forecast by the USDA to decrease by about 7%, to 21.4 Mt, as production in the major rye producing regions of northeastern Europe is expected to decline. The EU is expected to reduce its rye production by about 0.7 Mt to 5.6 Mt, due to lower area seeded and lower yields, but EU production will still outpace its consumption by 1.5 Mt. In Poland, Ukraine, and Russia, weather conditions have been less than ideal with dry fall and spring weather in parts of those countries potentially causing some crop damage.

US rye production will likely remain low again in 2002-2003, at 280,000 t although it will increase sharply from the extremely low level of about 180,000 t in 2001-2002. Given the low production of rye forecast for Canada for 2002-2003 and the large EU supplies, the US will likely continue to import some rye from the EU until the 2002-2003 harvest is completed in the summer of 2003.



## ALBERTA RYE AND BARLEY PRICES




Source: Statistics Canada, June 2002

**Canada**

Area seeded to fall rye declined by about 10% in 2002-2003 from the previous year as dry soil conditions during the fall discouraged farmers from planting it. As well, snow cover was light during the winter in many parts of the prairies and initial reports suggest that winterkill was significant. However, farmers intend to increase their harvested area and yields are forecast to be higher than in 2001-2002. As a result, Canadian rye production is forecast at 235,000 t in 2002-2003, up from 194,000 t in 2001-2002. This level of rye production will still be historically low, and when combined with small carry-in stocks, it is expected to result in a continuation of low supplies in Canada in 2002-2003. These forecasts are very uncertain at this time, given that very dry conditions currently exist in parts of western Canada and pasture conditions are poor.

**Prices**

Outside of North America, rye production and carry-out stocks are forecast to remain burdensome in 2002-2003 and international rye prices will remain near current low levels.

However, North American rye prices will be strong in 2002-2003 compared to international rye markets and other domestic coarse grain prices. The higher US rye production and the increased supplies of other coarse grains in Canada may ease Canadian rye prices by about $5/t, but with Canadian rye carry-in stocks at the lowest level of recent times, Canadian rye supplies will remain tight. North American rye prices will continue to be limited by the price of EU rye imported into the US. The price of rye in western Canada is expected to average about $115-145/t, slightly lower than in 2001-2002 because of the increased US rye production and increased domestic coarse grain supplies.

## MEDIUM-TERM OUTLOOK

Rye may be on the verge of becoming a specialty crop in Canada, based on downward trends observed in production and consumption over the past 20 years. Rye production will not likely fall much further, given rye's agronomic characteristics and the inelastic demand for rye from food and industrial processing sectors in North America. These small food markets with inelastic demand can be viewed as an opportunity for Canadian growers who are able to consistently produce high quality rye, and who can develop close relationships with buyers. Consumer preferences for specialty products and health foods may help to support demand. Forage use of rye should also increase, because farmers are continuing to expand their livestock operations and because it is a hardy cover crop with minimal input requirements.

However, widespread expansion of the crop for grain is not imminent based on the limited food and industrial use of rye grain in western Canada, the partial substitutability of corn for distilling use, and feed users' preference for barley, corn, feed wheat, and triticale in feed rations.

Foreign government policies, especially in the EU, will be factors to watch in determining world rye trade for the medium-term.

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