



# Bi-weekly Bulletin

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## DRY PEAS: SITUATION AND OUTLOOK

Canada is normally the largest producer and exporter of dry peas in the world, accounting, on average, for about 25% of world production and 50% of world exports. The value of Canadian dry pea exports peaked at \$492 million (M) in 2000-2001, but declined in the following two years due to reduced production caused by unfavourable weather. Exports started recovering in 2003-2004 and reached \$408 million in 2004-2005. Canadian seeded area for dry peas increased by 565% since 1991-1992. The expansion of dry pea production in western Canada has provided producers with an alternative cash crop to use in their rotations and livestock feeders with a new feed ingredient. In addition, the increased production has resulted in increased employment opportunities in western Canada through the expansion of handling, marketing and processing facilities. For 2006-2007, Canadian production is forecast to decrease slightly from 2005-2006 as higher seeded area is more than offset by lower trend yields. This issue of the *Bi weekly Bulletin* examines the situation and outlook for dry peas.

### WORLD

#### Production

World dry pea production has been relatively stable during the past ten years, ranging from a low of 9.9 Mt in 2002-2003 to a high of 12.5 million tonnes (Mt) in 1998-1999. During this period, the concentration of production has shifted out of France into Canada and the United States (US).

Production in Canada increased as producers diversified out of traditional grains because of low returns. Production in the US increased as a result of incentives provided by government programs.

In 1996-1997, Canada accounted for only 11% of world dry pea production, but in 2004-2005 and 2005-2006 Canada's share peaked at 28%.

#### Trade

World trade in dry peas has been variable during the past ten years, ranging from a low of 2.2 Mt in calendar year 2003 to a high of 3.6 Mt in 1999. In 2004, the latest year for which trade data is available, 3.1 Mt of dry peas were

exported. Ten years ago, France and Canada were the largest exporters, each accounting for 29% of world exports. Other major exporters were Ukraine, Australia, Russia, Czech Republic and the US. During the decade, Canada's share grew until it became the largest

exporter in 1997. In 2001, Canada's share of exports peaked at 56%, but fell during the following two years because of low production, before recovering to 50% in 2004. In 2004, France accounted for 18% of world exports and the only other significant exporters were Australia, the US, Ukraine and Russia.

Ten years ago, the main importing countries were in western Europe; with the Netherlands being the largest, followed by Belgium, Germany, and Spain. The only large non-European importer was India. Since then, the largest growth in imports was by countries in Asia. In

WORLD: DRY PEA SUPPLY AND DISPOSITION					
	2002	2003	2004	2005	2006
	-2003	-2004	-2005	-2006	-2007f
Harvested Area (kha)	6,085	6,185	6,395	6,580	6,700
Average Yields (t/ha)	1.62	1.64	1.88	1.73	1.75
	.....thousand tonnes.....				
Canada	1,365	2,124	3,338	3,100	3,040
France	1,715	1,670	1,675	1,355	1,550
China	1,500	1,400	1,160	1,200	1,200
Russia	1,268	1,052	1,243	1,290	1,200
United States	250	274	572	682	910
India	800	730	800	780	780
Ukraine	613	371	636	600	600
Germany	413	392	464	357	400
Australia	160	418	224	372	360
United Kingdom	292	273	217	191	210
Others	1,501	1,425	1,691	1,470	1,490
<b>Total Production</b>	<b>9,877</b>	<b>10,129</b>	<b>12,020</b>	<b>11,397</b>	<b>11,740</b>
Carry-in Stocks	500	700	600	1,100	800
<b>Total Supply</b>	<b>10,377</b>	<b>10,829</b>	<b>12,620</b>	<b>12,497</b>	<b>12,540</b>
Total Use	9,677	10,229	11,520	11,697	11,740
<b>Carry-out Stocks</b>	<b>700</b>	<b>600</b>	<b>1,100</b>	<b>800</b>	<b>800</b>
Stocks-to-use ratio	7%	6%	10%	7%	7%

f: forecast, Agriculture and Agri-Food Canada February 2006  
Source: FAO, UNIP and Statistics Canada - February 2006

2004, India was the largest importer in Asia, followed by Bangladesh, China and Pakistan. Dry pea exports to Asia are nearly all for food. Spain became the largest importing country in Europe, followed by Belgium, Netherlands Italy and Germany. European imports were nearly all for livestock feed. Latin America is also a major importing region for dry peas, especially Cuba and Colombia. Smaller volumes of dry peas are imported by countries in Africa and the Middle East. Exports to Latin America, Africa and the Middle East are generally for food.

## CANADA

### Production

Dry peas are a cool season crop with a relatively shallow root system. They are, generally, as drought tolerant as cereal grains, but cannot tolerate heat stress during flowering. Dry peas take about 90-105 days to reach maturity, depending on the variety grown. The crop is best suited to the black soil zone, with well drained, clay loam soils being ideal for dry pea production. However, dry peas have performed well in all areas of the Prairies, especially in summers with cool and moist conditions. Poorly drained, cold soils can favour the development of seedling diseases and root rots. Dry peas should not be grown on saline soils and should not be grown on the same field more than once in every four years to avoid the rapid increase of soil-borne and foliar diseases.

Dry pea production provides an agronomically sound way of extending and improving crop rotations. They are capable of fixing part of their nitrogen requirements if properly inoculated with the pea strain of Rhizobium. Thus, acceptable yields can be produced in some years with little nitrogen fertilizer. However, a soil test should be used to determine required nutrients. The crop following dry peas in the rotation generally yields more than the same crop grown after cereals or oilseeds.

Canadian dry pea seeded area increased by 565%

since 1991-1992, with a record 1.39 million hectares seeded in 2004-2005. There has also been an upward trend in average yields, which helped to increase production by 725% to a record 3.3 million tonnes (Mt) in 2004-2005. Production decreased moderately in 2005-2006 due to lower seeded area and lower yields. The growth in dry pea production has been largely in Saskatchewan. In 2005-2006, Saskatchewan accounted for 78% of Canadian production, Alberta for 20%, and Manitoba for 2%. Small amounts of dry peas were also produced in British Columbia and in eastern Canada. Canada produces several types of peas, with the large and medium yellow types accounting for 68% of 2005-2006 production. Green peas accounted for 30% of the production and the remaining 2% consisted of maple, Austrian winter, green marrowfat and small yellow.

### Marketing

Dry peas are sold on the open market to dealers located throughout the Prairie Provinces. Feed peas are sold mainly to large grain elevators, whereas food peas are sold mainly to specialized cleaning

and handling facilities. Dry peas are also sold directly to processing plants, feed mills and livestock producers.

Feed peas are generally shipped bulk by rail, from the elevators to ports and other markets. Food peas are also generally shipped by rail, either bulk, in bags or in containers.

### Domestic Use

About 35% of the dry peas produced in Canada are consumed domestically, with the largest use being livestock feed, followed by seed and food. Most of the increase in domestic use is due to greater use for livestock feed in the Prairie provinces, especially for feeding hogs. Domestic use is forecast to increase in 2005-2006 because of higher supply and increased use for livestock feed.

### Exports and Imports

On average, about 65% of Canadian dry peas are exported. In 2004-2005, 31% of the exports went into the feed market, mainly in Europe, and 69% into the food market mainly in Asia and Latin America.

The feed market consumes both yellow and green types. Although both yellow and green peas are sold into the food markets all over the world, the main market for green peas is Latin America and for yellow peas, Asia. Spain accounts for most of Canadian dry pea exports to Europe, followed by Belgium. In Asia, the largest importer is India, followed by China, Bangladesh and Pakistan. In the western hemisphere, Cuba, Colombia, US, Venezuela and Peru are the largest importers. United Arab Emirates is the largest importer in the Middle East, with most of the imports re-exported to other countries in the region. Canadian exports are forecast to increase in 2005-2006 because of higher supply and strong demand in the feed markets in Europe and the food markets in Asia.

Canadian imports, nearly all from the US, have been growing as US production increases and many producers near the Canadian

<b>WORLD: DRY PEA EXPORTS</b>					
	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>
	.....thousand tonnes.....				
Canada*	1,857	1,969	792	1,002	1,538
France	766	565	836	528	566
Australia	335	337	391	92	185
United States**	90	102	94	118	179
Ukraine	25	108	181	43	174
Russia	2	19	131	44	88
Other	<u>354</u>	<u>409</u>	<u>440</u>	<u>363</u>	<u>341</u>
<b>Total</b>	<b>3,429</b>	<b>3,509</b>	<b>2,865</b>	<b>2,190</b>	<b>3,071</b>
<b>WORLD: DRY PEA IMPORTS</b>					
	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>
	.....thousand tonnes.....				
Spain	625	523	215	190	724
India	137	849	870	700	643
Belgium	544	415	215	249	361
Netherlands	271	165	114	268	210
Bangladesh	110	260	277	115	186
Italy	141	104	100	88	139
Cuba	49	85	43	53	110
Germany	79	57	38	37	91
China	114	178	133	77	90
Pakistan	85	110	91	64	41
Colombia	56	86	56	38	38
Other	<u>603</u>	<u>637</u>	<u>559</u>	<u>622</u>	<u>641</u>
<b>Total</b>	<b>2,814</b>	<b>3,469</b>	<b>2,711</b>	<b>2,501</b>	<b>3,274</b>
The difference between imports and exports is attributed to the timing of delivery.					
Source: FAO, except *Statistics Canada and **USDA-February 2006					

border deliver to Canadian dealers.

### Prices

Since there is no futures market for dry peas, prices are negotiated directly between the dealers and customers, based on supply and demand factors for each type, for immediate delivery or for delivery at some future date. Some dry peas are grown under production contracts which guarantee a price for part of the production.

The price of feed peas is related to prices of alternate feed grain and protein meal ingredients. There are, however,

regional price differences within the Prairie Provinces based on local supply and demand factors. Food pea prices are normally at a premium to feed pea prices, however the quality standards are higher. The premiums for yellow food peas and green food peas are usually different, depending on the supply and demand factors for each type. Prices for maple, Austrian winter, green marrowfat and small yellow peas also vary depending on the supply and demand factors for each type.

Average prices are forecast to decrease in 2005-2006 due to higher Canadian

supply and lower prices for alternative feed ingredients.

### OUTLOOK: 2006-2007

#### World

World dry pea production is forecast to increase by 3%, from 2005-2006, to 11.74 Mt, due mainly to higher expected production in the European Union (EU) and the US. Although EU seeded area is expected to decrease because of a shift to rapeseed planting, average yields are expected to recover from the drought reduced low levels in 2005-2006, resulting in higher production. In the US,

### CANADA: DRY PEA SUPPLY AND DISPOSITION

<i>August-July crop year</i>	<b>2002 -2003</b>	<b>2003 -2004</b>	<b>2004 -2005</b>	<b>2005 -2006</b>	<b>2006 -2007f</b>
Seeded Area (kha)	1,297	1,303	1,388	1,366	1,450
Harvested Area (kha)	1,050	1,271	1,345	1,319	1,400
Yield (t/ha)	1.30	1.67	2.48	2.35	2.17
.....thousand tonnes.....					
Carry-in stocks	275	310	205	595	400
<i>Production:</i>					
<i>Yellow</i>	850	1,325	2,360	2,120	2,080
<i>Green</i>	485	705	885	920	900
<i>Other</i> <sup>1/</sup>	30	94	93	60	60
<b>Total Production</b>	<b>1,365</b>	<b>2,124</b>	<b>3,338</b>	<b>3,100</b>	<b>3,040</b>
Imports	41	24	56	90	100
<b>Total Supply</b>	<b>1,681</b>	<b>2,458</b>	<b>3,599</b>	<b>3,785</b>	<b>3,540</b>
<i>Exports</i>					
<i>Asia</i>	413	422	966	1,100	1,050
<i>Europe</i>	17	652	567	750	600
<i>South America</i>	68	66	110	120	120
<i>Central America and Antilles</i>	47	75	59	60	60
<i>Africa</i>	33	28	41	55	55
<i>United States</i>	26	36	39	40	40
<i>Middle East</i>	19	32	59	70	70
<i>Oceania</i>	5	5	4	5	5
<b>Total Exports</b>	<b>628</b>	<b>1,316</b>	<b>1,845</b>	<b>2,200</b>	<b>2,000</b>
Total Domestic Use <sup>2/</sup>	743	937	1,159	1,185	1,240
<b>Total Use</b>	<b>1,371</b>	<b>2,253</b>	<b>3,004</b>	<b>3,385</b>	<b>3,240</b>
<b>Carry-out Stocks</b>	<b>310</b>	<b>205</b>	<b>595</b>	<b>400</b>	<b>300</b>
Stocks-to-use ratio (%)	23%	9%	20%	12%	9%
Seeded Area (kac)	3,205	3,220	3,430	3,375	3,583
Harvested Area (kac)	2,595	3,141	3,323	3,259	3,459
Yield (bu/ac)	19	25	37	35	32
<b>Average producer price (Western Canada)</b>					
Food – Yellow <sup>3/</sup>	\$/t	202	184	143	129
	\$/bu	5.50	5.00	3.90	3.60
Food – Green <sup>3/</sup>	\$/t	266	213	171	134
	\$/bu	7.25	5.80	4.65	3.65
Feed	\$/t	165	160	114	105
	\$/bu	4.50	4.35	3.10	2.85

<sup>1/</sup> Small yellow, maple, Austrian winter, green marrowfat

<sup>2/</sup> Includes food, feed, seed, waste and dockage. Total domestic use is calculated residually.

<sup>3/</sup> No. 1 Canada grade

f: forecast, Agriculture and Agri-Food Canada, February 2006

Source: Statistics Canada and AAFC

seeded area is forecast to increase by a third due to higher expected net returns than for many alternative crops, resulting mainly from the high loan deficiency payments or market loan gains received by dry pea producers. World supply is forecast to increase marginally to 12.54 Mt. Use is expected to increase slightly, while carry-out stocks remain stable.

#### Canada

Canadian production is forecast to decrease slightly to 3.04 Mt, as a 6% increase in seeded area is more than offset by lower trend yields. Soil moisture reserves are generally adequate and it is assumed that precipitation will be normal for the growing and harvest periods. Supply is expected to decrease by 6% to 3.54 Mt. Domestic use is forecast to increase by 5% to 1.24 Mt because of strong demand for livestock feed, but exports are expected to decrease by 9% to 2.0 Mt due to the lower supply and lower expected demand from Europe. Carry-out stocks are forecast to decrease, with a stocks-to-use ratio of 9%. Prices are forecast to increase slightly because of lower Canadian supply and stronger demand.

#### OUTLOOK: LONGER-TERM

#### Canada

Research is continuing to develop improved varieties to make Canada more competitive in world dry pea markets. Work is also continuing on market development to increase the demand for Canadian dry peas in domestic and export markets. In the feed market, programs are underway to develop markets for feed peas in several eastern Asian and Latin American countries, as well as to increase the use of dry peas for livestock feed in Canada. In the food market, programs are underway to promote pulses, including dry peas, in a healthy diet. These programs are expected to increase the demand for Canadian dry peas, increase their value and increase domestic processing.

One of the major challenges facing the Canadian dry pea industry is the maintenance of a level of production which is adequate to meet market needs. This is difficult to do because of the variable weather conditions from year to

year, especially for moisture, in the dry pea growing areas. Due to the variable weather conditions, average yields since 1991-1992 ranged from 1.3 tonnes per hectare (t/ha) to 2.7 t/ha and abandonment ranged from 1% to 19%. Although the seeded area increased sharply during the early and mid 1990s, the increase in seeded area has been much lower since 1998-1999. To encourage additional seeding, financial returns need to be as good as, or better than, for alternative crops.

The second challenge is competing with subsidized production from the US. The *US Farm Security and Rural Investment Act of 2002* (FSRIA) included dry peas under the loan program for the first time. High government support from loan deficiency payments (LDPs) or market loan gains (MLGs) resulted in sharply higher US dry pea production, with the US becoming a major competitor in world dry pea markets. An LDP is obtained by a producer when the price is below the loan rate and MLG occur when a producer chooses to take a loan and then repay it at a lower level when the price is below the loan rate. Changes made to the loan program for 2003-2004, resulted in higher payouts. In 2003-2004 the market price on which the LDP was based was lowered to feed from No. 1, while the loan rate remained unchanged. This made it easier to qualify for a LDP or MLG and increased the payout because prices of feed peas are lower than prices of No. 1 grade peas.

The FSRIA is scheduled to end with the 2007 crop. For later years, the area seeded will depend on the support programs available at that time, as well as on expected net returns for alternative crops. However, dry peas are becoming an established crop over a larger area than before 2002. Therefore, even if the seeded area should drop, it is expected to be significantly higher than it was prior to 2002.

Another factor to watch is dry pea production in the EU. Under the EU Common Agricultural Policy reforms, a single direct payment is replacing most payments currently offered. The payment will be independent of current

production levels or prices, although there will be a supplemental payment for protein crops, which includes dry peas. The decoupling of most payments is expected to result in some shift in production from dry peas into cereal grains and rapeseed because, in some areas, net returns for these crops are higher than for dry peas. The expected decrease in EU dry pea production will provide an opportunity for Canadian exporters to increase feed pea sales to the EU. However, there will be competition for the EU market from the US and possibly Ukraine, if Ukrainian production increases significantly.

*For periodic updates on the situation and outlook for dry peas, visit the Market Analysis Division Website for "Canada: Pulse and Special Crops Outlook".*

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**USES OF DRY PEAS**

There are two uses for dry peas, livestock feed and human food. Use for livestock feed is mainly in Europe and Canada, whereas use for food is mainly in Latin America and Asia.

**FEED**

The hog production industry is the most important user of feed peas, although poultry, cattle and other livestock also consume them.

**Feeding Hogs**

Dry peas are a good source of energy and protein for hogs. When protein quality and amino acids, such as lysine, are considered in diet formulation for hogs, peas are very price competitive. Moreover, dry peas do not have to be heat treated to deactivate anti-nutritional factors.

Usually dry peas displace soybean meal and high energy grains, such as wheat or corn, in a hog ration in a one-third to two-thirds ratio. Therefore, a formula of one-third soybean meal and two-thirds wheat or corn, whichever has the lower price, gives an approximation of the opportunity price of dry peas. Dry peas are a very economical feed ingredient and can substitute for imported corn and soybean meal in western Canada.

**Nutrition**

Dry peas have high energy content. North American hog rations are normally formulated on the basis of digestible or metabolizable energy. However, in Europe, hog rations are normally formulated on the basis of net energy. Using net energy for feed formulation increases the value of dry peas in hog rations by about 10% because the net energy content of dry peas is about 37% higher than for soybean meal.

Dry peas are known for having high quality protein, with a protein content of about 22%. The digestibility of protein from dry peas is good, with digestibility values of 83-86% for hogs and 84-88% for poultry. Dry pea protein fed to cattle is readily digested. Dry pea protein, protein from cereals, and canola meal are nutritionally complementary, enhancing each one's value when used in rations.

**Feed Products**

A common feed product is a mixture of two-thirds ground peas and one-third canola meal. In this mixture, dry peas complement canola meal. Although canola meal is an excellent source of protein, it is low in digestible energy. Dry peas have high energy digestibility, and their amino acid profile, which is high in lysine, complements the amino acid profile of canola meal, which is high in methionine and cystine. Another feed product is an extruded blend of ground dry peas and canola seed. In addition to the two ingredients complementing each other, the high oil content is a readily available source of energy and can be used as a replacement for such products as corn oil or rendered fat. A more recent development is an extruded blend of ground dry peas and flaxseed which contains essential omega-3 fatty acid obtained from the flaxseed oil.

**Feeding Other Livestock, Fish and Pets**

Although dry peas are most widely used in feeding hogs, they are also used for feeding all classes of poultry. In feeding poultry, they are a good source of protein and a moderate source of energy. The nutrient profile makes dry peas a very economical ingredient for layers, but they can also be used for broilers. Dry peas are also a good source of supplementary protein for cattle, as well as a good source of energy. The relatively slow degradation rate of starch in peas may be beneficial in animals fed diets containing a high concentration of grain. An emerging use of dry peas is to manufacture protein concentrate for feeding to farmed fish. It can be combined with flaxseed oil to replace fish meal and fish oil. A small, but important user, is the bird seed industry, for which some specialty peas, such as the maple and Austrian winter types, are used. Dry peas are also used as an ingredient in the manufacture of pet food. Some small yellow seed is sold for seeding in silage mixtures.

**CANADA: COST SAVINGS OF USING DRY PEAS IN A HOG RATION <sup>1/</sup>**

	<b>Opportunity Price of Dry Peas <sup>2/</sup></b>	<b>Actual Price of Dry Peas</b>	<b>Feed Cost Saving <sup>3/</sup></b>
	.....\$/t.....		
Winnipeg	178	108	17
Saskatoon	194	99	24
Calgary	203	120	21

<sup>1/</sup> February 2006  
<sup>2/</sup> Based on one-third soybean meal and two-thirds corn  
<sup>3/</sup> Based on 25% inclusion rate  
 Source: AAFC

**ENERGY VALUES IN DIGESTIBLE ENERGY (DE), METABOLIZABLE ENERGY (ME) AND NET ENERGY (NE) SYSTEMS**

<b>Ingredient</b>	<b>DE</b>	<b>ME</b>	<b>NE</b>
	.....KCAL/KG.....		
Corn	3,780	3,650	2,970
Wheat	3,870	3,780	2,900
Dry Peas	3,880	3,750	2,640
Soybean Meal	3,910	3,650	1,930

Source: Noblet et al. 1994

## **FOOD**

Food use of dry peas includes canning, split and whole dry markets, as well as constituent products such as protein, flour, starch, and fibre. These products are then used in baked goods, baking mixes, soup mixes, breakfast cereals, processed meats, health foods, pastas and purees. Dry peas can also be cooked and eaten as a vegetable.

### **Domestic Use**

The domestic food market is much smaller than the feed market, but is important for producers and dealers. The domestic processing industry includes splitting, canning, packaging of whole or split seed, the production of dry soup mixes, milling for flour, or fractionating into fibre, protein concentrate and starch. The marrowfat type, as well as some others, are used in the confectionery markets and to make a spread called pea butter.

### **Healthy Diet**

Pulses, including dry peas are increasingly being used in health-conscious diets to promote general well-being and reduce the risk of illness. They are low in fat, low in sodium, cholesterol free, high in protein, and are an excellent source of both soluble and insoluble fibre, complex carbohydrates, and vitamins and minerals, especially B vitamins, potassium and phosphorus.

Since dry peas are low in fat, low in sodium and are cholesterol free, they are an excellent heart healthy food that may be beneficial to the prevention of cardiovascular disease. Dry peas are an inexpensive, high quality source of protein. Studies have shown that whole pulses (including dry peas) have demonstrated cholesterol and lipid lowering effects in humans.

Studies have reported the beneficial effects of soluble dietary fibre on cardiovascular disease in humans, especially in lowering both total serum and LDL-cholesterol levels. In addition, clinical research has shown soluble fibre to be beneficial in the management of type-2 diabetes. Insoluble dietary fibre consumption can be beneficial to a healthy colon and has been associated with reducing the risk of colon cancer. Diets high in fibre have demonstrated beneficial effects on weight loss because they deliver more bulk and less energy.

Dry peas are an excellent source of the B vitamin folate which is an essential nutrient. In addition, folate consumption during pregnancy has been shown to reduce the risk of neural tube defects.

Flour made from dry peas is gluten free and is a very nutritious option for people with celiac disease.

### **Potential Use**

In addition to current uses, research is ongoing to develop edible food coatings from dry peas. These would be used to extend the shelf life of perishable food. Starch from dry peas can be used in bio-industrial products, such as ethanol and paper production and new applications are being investigated, such as using starch to make biodegradable plastics.

## **ORGANISATIONS**

The **Canadian Grain Commission** administers quality control standards for dry peas. There are three grades for green peas and four grades for peas other than green. However, normally 1 and 2 Canada grade peas are used for the food market. For the feed market, there is a Canada Feed Peas grade. In addition, dry peas can be graded "Sample" if they do not meet the specifications under the grades. For further information, or to access the *Official Grain Grading Guide*, please visit the CGC website: [www.grainscanada.gc.ca](http://www.grainscanada.gc.ca)

The **Canadian Special Crops Association** (CSCA - [www.specialcrops.mb.ca](http://www.specialcrops.mb.ca)) establishes trade rules and serves as a forum for exporters, dealers and brokers involved in the industry of trading Canada's pulse and special crops, including dry peas. The website includes a section where buyers can submit a request for prices.

**Pulse Canada** ([www.pulsecanada.com](http://www.pulsecanada.com)) is an industry organization, with the CSCA and provincial pulse growers' organizations as members. It is involved in policy issues, coordinating research efforts and market development. The website contains information on pulse crops, markets, and health and nutrition.

## **PULSE INNOVATION PROJECT**

The Pulse Innovation Project is managed by Pulse Canada and funded mainly by a \$3.2 million, over three years starting in 2005, contribution from Agriculture and Agri-Food Canada under the Science and Innovation pillar of the Agricultural Policy Framework. The goal of the Pulse Innovation Project is to stimulate innovation in product development by understanding industry needs and targeting research that will boost the incorporation of pulses, including dry peas, into food and industrial products. It will support the development and commercialization of products by working with food processors and ingredient manufacturers to ensure that the end results are foods that will be found on grocery store shelves, targeting products that are economic, convenient and enhance nutrition and health. In addition, the project will explore and support industrial avenues for pulses to ensure the maximum value added opportunities for producers.