

Mustard

Ignoring mustard/rapeseed blends which are grown on the Indian subcontinent, world mustard seed production averages just under 529,000 metric tons per year. Most of this production is destined for the condiment and spice trade. By contrast, the mustard/rapeseed blends grown in India, Bangladesh and Pakistan are crushed to produce vegetable oil and meal. The blend includes about 30% mustard seed. Mustard oil contains allyl isothiocyanate (AITC), which is the organosulfur compound responsible for the hot and spicy smell and taste of mustard, horseradish, and wasabi. Mustard is part of the Brassica family, which includes canola and rapeseed.

Canada is the world's largest producer of pure mustard seed, accounting for an average 28% of the world crop. It is followed by Nepal, which grows 26% of the world mustard seed crop, compared to 13% by Myanmar, 9% by the Ukraine, 7% by Russia, 4% by the Czech Republic, and 3% each in China and the United States. Among this group, production in Canada, the United States and by European countries is mainly for the condiment and spice trade. A large part of the output from Asian countries such as Nepal, Myanmar and China is more likely used to produce mustard cooking oil.

Canada is also the world's most important exporter of mustard seed, with a 57% market share. It is followed by the Ukraine, with an 11% share of the world export market, while Germany, the Czech Republic and Russia, each have a 6% share of the market. On the import side, the United States is the most important destination for mustard seed, accounting for an average 24% of import activity each year. Germany is the second largest importer, with a 17% share, followed by Bangladesh at 12%, France at 9%, and the Netherlands and Nepal at 6% each. Among the top 10 importers, Bangladesh crushes mustard seed for the oil for cooking. This is also probably true of Nepal. The

World's Top 10 Mustard Seed Traders

(5-year average trading volume in metric tons)

Exporters	Quantity	Importers	Quantity
Canada	141,660	United States	64,812
Ukraine	26,977	Germany	45,973
Germany	15,224	Bangladesh	31,685
Czech Republic	14,412	France	23,796
Russia	13,949	Netherlands	16,366
Netherlands	11,075	Nepal	14,904
Belgium	7,067	Poland	10,043
Hungary	3,279	Belgium	9,093
India	2,598	Japan	5,933
Romania	2,552	United Kingdom	3,648

Source: United Nations Food and Agriculture Organization (FAO). This table shows the average annual trading volume for the period between 2006 and 2010.

remaining eight of the top 10 importers mainly use mustard seed in condiments and spices.

Mustard has been used as a spice for over 5,000 years, with references appearing in ancient texts in Sumerian and Sanskrit around 3000 BC, in Egyptian texts around 2000 BC and Chinese texts around 1000 BC. Its use as a condiment is thought to have started with the Romans. Production of Dijon mustard in France started around the 10th century. In recognition of the long tradition of making mustard, Dijon was granted an Appellation d'origine contrôlée in 1937. The first use of mustard as a hot dog condiment was reported at the St. Louis World's Fair in 1904 when R.T. French Company introduced its mild prepared mustard, which is colored a bright yellow by using turmeric.

The Saskatchewan Mustard Development Commission believes the first mustard seed grown in Canada was 40 hectares in Alberta. At that time, California and Montana were the main producing areas in North America. Statistics Canada started reporting mustard seed area in Canada in 1951. There were 40,850 acres sown in Alberta and 1,300 in Manitoba, with production totalling 7,977 metric tons. Production officially expanded to Saskatchewan in 1960, when 15,600 acres were planted, compared to 115,000 in Alberta and 450 in Manitoba. Alberta remained Canada's primary mustard seed producer until 1968, by which time Saskatchewan was consistently the most important growing area for the crop in Canada. Statistics Canada stopped estimating mustard seed production in Manitoba in 2005, because area had fallen to levels which were too small to estimate. Between 2008 and 2012, Saskatchewan accounted for 77% of Canada's mustard seed area.

The United States still grows mustard seed, but production falls far short of its annual needs. In the five years spanning 2008 through 2012, farmers in the United States planted an average 51,160 acres per year, with production averaging 16,153 metric tons.

Canada supplies virtually all the mustard seed imported by the United States, with cross border shipments averaging 64,535 metric tons per year. Less than 3% of the available supply of mustard seed is exported by the United States each year.

While Canada is the dominant supplier of condiment mustard seed in the world, it is a minor crop in Canada. It accounts for roughly 6% of all specialty crop area in Canada or an average of 425,000 acres per year. Yields are significantly lower than those of other specialty crops, with the result it accounts for just 3% of total specialty crop production in Canada, or about 160,000 metric tons per year.

Most of the mustard seed that Canada produces is exported, with shipments averaging 57% of each year's available supply. There is not a lot of month-to-month variation in the quantity of mustard seed which needs to be bought from farmers to cover export needs. Average deliveries range between 8% and 9% of the annual export requirement nearly every month of the year. The only exceptions are April, when shipments tend to jump to 10% of the annual total, July when they dip to 6% and August, when an average of just 7% of all the mustard that will be shipped moves from farms. The decline in July and August simply reflects the transition from one crop year to the next. The consistency in export movement is a reflection of the fact virtually all the mustard from Canada is now destined for the condiment and spice trade. As much as possible, that sector has moved to just in time delivery of ingredients, resulting in a steady flow of product into processing facilities throughout the year.

Canada grows three types of mustard. On average, 57% of the total area is yellow or white mustard, 22% is brown, 16% is oriental mustard, and 8% is unspecified. The unspecified area is only made up of all the brown and oriental mustard grown in Alberta. Similar break downs are not available for the United States or other producing regions in the world.

Canada Mustard Seed Supply and Demand

(acres, metric tons)

	2009-2010	2010-11	2011-12	2012-13	Average
Area (acres)	525,000	470,000	327,958	335,000	450,592
Yield (lbs/acre)	875	854	874	780	791
Production	208,300	182,000	130,000	118,600	161,240
Carry In	42,000	82,000	116,000	83,000	71,600
Supply	250,300	264,000	246,000	201,600	232,840
Exports	127,959	123,651	115,186	124,900	133,187
All Domestic	40,341	24,349	47,814	31,700	29,653
Total Usage	168,300	148,000	163,000	156,600	162,840
Ending Stocks	82,000	116,000	83,000	45,000	70,000
Stocks/Use	49%	78%	51%	29%	43%

In the above table, area is in acres; yield is pounds per acre; and all other numbers are in metric tons. The average is for the five year period between 2007-08 through 2011-12. Estimates are based on data from Statistics Canada. All forecasts are by STAT Publishing.

Canada Mustard Seed Movement From Farms

(the darker the color the more commercial demand)

	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
Aug									
Sep									
Oct									
Nov									
Dec									
Jan									
Feb									
Mar									
Apr									
May									
Jun									
Jul									

The above table shows how export demand changes from month to month during each marketing year. The darker the color, the bigger the percentage of product shipped in an individual month. This shows you the intensity of demand within each marketing year. By putting the years side by side, it is possible to see if there are months when demand tends to be strong and when it tends to be weak. This helps with the timing of sales.

U.S. Mustard Seed Movement From Farms

(the darker the color the more commercial demand)

	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
Aug					
Sep					
Oct					
Nov					
Dec					
Jan					
Feb					
Mar					
Apr					
May					
Jun					
Jul					

Canada Mustard Seed Monthly Movement

(sales as a percent of the marketing year total)

	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
Aug	5%	6%	6%	6%	7%	6%	5%	6%	11%
Sep	6%	5%	5%	6%	9%	13%	10%	6%	9%
Oct	15%	8%	11%	9%	11%	13%	7%	7%	8%
Nov	9%	9%	8%	8%	8%	9%	6%	8%	8%
Dec	6%	8%	7%	8%	7%	6%	7%	6%	8%
Jan	6%	8%	8%	8%	8%	6%	8%	8%	8%
Feb	6%	9%	11%	8%	9%	8%	8%	9%	9%
Mar	10%	11%	11%	10%	9%	8%	8%	9%	9%
Apr	11%	11%	9%	10%	11%	10%	12%	10%	9%
May	10%	10%	9%	9%	9%	8%	9%	9%	12%
Jun	8%	8%	8%	9%	6%	6%	11%	11%	8%
Jul	7%	7%	7%	9%	5%	6%	9%	10%	2%

The above table shows monthly movement as a percentage of the entire marketing year's export movement.

U.S. Mustard Seed Monthly Movement

(sales as a percent of the marketing year total)

	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012
Aug	11%	4%	8%	12%	10%
Sep	8%	7%	3%	6%	8%
Oct	7%	8%	7%	5%	6%
Nov	11%	9%	7%	6%	10%
Dec	9%	11%	3%	6%	10%
Jan	12%	12%	6%	2%	15%
Feb	7%	13%	7%	21%	12%
Mar	5%	11%	10%	16%	7%
Apr	7%	9%	22%	10%	9%
May	10%	6%	12%	5%	6%
Jun	5%	5%	5%	5%	6%
Jul	7%	4%	10%	6%	2%