

Place of Rapeseed in the Edible Oil Market¹

J. MCANSH, Rapeseed Association of Canada, 1015-837 West Hastings Street, Vancouver 1, British Columbia, Canada

ABSTRACT

The potential for rapeseed oil in the world edible oil market is evident in the statistics of net exports of the principal vegetable oilseeds from primary producing countries. The last complete year for which figures are available is 1970, and in that year soybeans accounted for some 52% and rapeseed only 7.5% in oil equivalent. Since soybeans have only ca. 50% of the oil content of rapeseed, they are bought mainly for their yield of high protein meal. Conversely, rapeseed is bought for its oil content and produces a meal that is not only lower in protein but up to this time has been less acceptable as an ingredient in animal feed formulations. Fortunately for rapeseed, these problems are being tackled diligently and should be overcome in the near future. When this point has been reached, rapeseed will be a much stronger competitor in world markets for protein meal. The trend in the use of rapeseed oil in the Canadian domestic market is an indicator of the potential in world markets. It is displacing other edible oils that have dominated the Canadian market in the past. In the 1971 calendar year, 35.6% or 160.5 million pounds, i.e., 73,000 metric tons, of vegetable oil used in the manufacture of margarine, shortening and salad oils was rapeseed oil. Rapeseed oil is competing keenly with soybean oil in the Canadian market and in the future should be able to greatly enlarge its share of world trade.

As only one of numerous vegetable oilseeds, rapeseed has many competitors. Rapeseed oil is interchangeable with several other vegetable oils, but the competition does not end there. It must also compete with marine oils, mainly fish oil, and with some of the animal fats. In this environment, price and continuity of supply are key factors to successful marketing.

Rapeseed meal, which is the other end product of rapeseed, faces even stronger competition as a protein supplement in animal feed formulations. It is lower in protein than soybean meal and has higher fiber content. Other characteristics that have prejudiced its use in feed for livestock and poultry are being rapidly overcome by plant breeders and scientists. Happily, we can look forward to some quite revolutionary changes in this area in the very

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TABLE I

1970 World Net Exports (Oil Equivalent)
(from Primary Producing Countries)

Crop	Long tons, 2240 lb	Total exports, %
Soybean	2,781,000	52.3
Peanut	795,000	14.9
Sunflower	735,000	13.8
Rapeseed	404,000	7.6
Cottonseed	290,000	5.5
Olive	228,000	4.3
Sesame	85,000	1.6
Total	5,318,000	100.0

near future.

It is obvious that rapeseed, if it is to remain a viable industry and reach its potential, must produce end products that, when competitively priced, will get a fair share of markets both at home and abroad. Fantastic progress has been made in the past 6 years and there is every reason to believe that this pattern will continue in the next 6 years. There is room in world markets for rapeseed to forge ahead as a source of edible oils and good protein meal.

The production of palm oil in Malaysia, Indonesia and some African countries, as well as the surge in oilseed production in Australia, are new challenges, but when statistics of world trade in edible oils are examined there appears to be room for optimism. The world market for vegetable oils is one that continues to grow. The per capita intake of fats and oils in many countries is still low and, as the less developed countries improve their economies, the trend line should move sharply upward.

Seven vegetable oils and oilseeds make up the major portion of these products moving in world trade. The latest complete figures for the net exports of these principal oilseed crops from primary producing countries are those of the Commonwealth Secretariat, London, England, for the 1970 calendar year (Table I).

It is apparent from these statistics that soybean oil dominates the world market with a share exceeding 52%. Rapeseed, on the other hand, accounted for less than 8% of the total and was in fourth place in the vegetable oil category. It is of interest to note, however, that in the past 10 years rapeseed has more than doubled its share of the world market, while in the same period soybeans made a gain of ca. 25%.

Because palm oil is included in the category of edible-industrial oils, it has been omitted from the above group but statistics for 1971 reveal that palm oil not only increased its share of the world market but that substantial quantities were absorbed into the edible oil segment of that market (Table II).

Since 1963, net exports from the primary producing countries have risen by ca. 2 million long tons (oil equivalent), an indication of the very rapid growth of the world market for edible oils. There is every indication that the market will continue to increase over the next decade and that rapeseed will increase its share of the expanding market. Volume II of "Agricultural Commodity Projections, 1970-1980" published by FAO in 1971 forecasts a 57% increase of rapeseed production between 1970 and 1980 (Table III). Demand projections indicate that this size of increase will be required to meet the needs of a growing population and a generally higher living standard.

This development will be very important for Canada since it is a country producing a large surplus. Canada's

TABLE II

1971 World Palm Oil Exports

Origin	Metric tons
Western Malaysia	533,800
Singapore	194,000
Indonesia	193,000
Zaire	111,900
Ivory Coast	30,000
Nigeria	20,000
All others	146,000
World total	1,228,900

TABLE III

1964-66 and 1970 World Rapeseed Production and Estimated Production in 1980

Commodity	Thousands of metric tons		
	1964-66	1970	1980
Oil	1547	1897	3012
Meal	2633	3218	5015
Seed	4180	5115	8027

domestic utilization of rapeseed in processing plants for the 1971-72 crop year set a new record of 12.0 million bushels. However this was still only 20% of the total disposition in the market place. The remaining 80% represented exports to overseas destinations. The domestic crush could double in the next few years, but this will not lessen appreciably the dependence upon markets abroad for absorption of 75 to 80% of Canada's rapeseed production potential.

These facts have been recognized by the Rapeseed Association of Canada, which has devoted much of its time, energy and cash resources to the development of markets abroad, while at the same time aiming for maximum development of the home market. A nation of only 22 million people has definite limitations on what it can consume and the intake of fats and oils in Canada, on a per capita basis, is already quite high. It is in the area of substitution of rapeseed oil for other competing oils that the main thrust must be. This aspect will be dealt with in greater detail when discussing the Canadian domestic market.

What of the other rapeseed producing countries? We have seen a great surge in production in France and West Germany under the agricultural policy of the EEC (Common Market) induced by the high prices paid to producers (Table III). France has become the leading grower of rapeseed in Western Europe and, in recent years, in all of Europe. This has possibly reached its peak except under unusually favorable growing conditions. West Germany, on the other hand, can probably continue to expand production and become largely self-sufficient in rapeseed.

Poland, a historical producer of rapeseed, experiences considerable fluctuation in the size of its harvest and consequently is an "in and out" competitor in the world market. Much the same situation pertains to East Germany. This leaves only Sweden, a country well advanced in the technology of rapeseed production, as a volume supplier outside of the economic community (EEC).

A further large expansion of rapeseed production in all of Europe is not likely to take place. The weather hazards in growing such a high percentage of winter rapeseed can often nullify acreage expansion.

Major producers outside of Europe are India, China and Pakistan, where the crop has been produced for centuries. These countries now appear to be consuming their production at home and have not been a factor in world trade in

TABLE IV

1969-72 Rapeseed Production by Countries in the European Economic Community

Country	Thousands of metric tons			
	1969	1970	1971	1972 ^a
France	515	585	664	640
West Germany	158	185	228	270
Netherlands	12	22	33	40
Italy	4	6	6	6
Belgium	1	1	1	1
Total	690	799	932	957

^aEstimated.

recent years. Canada, in fact, has been a substantial supplier of rapeseed to India the past 2 years under the aid program and is now also sending rapeseed and rapeseed oil to Bangladesh.

A newcomer and prospective competitor in the years ahead is Australia, which is aggressively moving into the oilseed markets not only with rapeseed but also with safflower and sunflowerseed. Problems with marketing wheat and wool have forced diversification in Australian agriculture in much the same way that wheat marketing problems in Canada gave impetus to increased rapeseed production in the Prairie Provinces.

Perhaps the most dramatic and threatening development to the rapeseed and vegetable oil market is the palm oil production in Malaysia. The depressed rubber market has resulted in replacement of rubber trees with oil palms. Since palm oil comes from trees that have about a 25 year life span, the competition this development could create in the world market is not short term. It could cut into the market share enjoyed by other vegetable oils, but at the present time we see no immediate or serious threat to rapeseed oil. It is expected that other oils will feel the competition of palm oil sooner and with greater effect. This prediction is based on the knowledge that both Canada and the U.S. have greatly increased their importations of palm oil in the first half of 1972, but in Canada there is no evidence yet of decreased use of rapeseed oil in the manufacture of food products such as margarine, shortening, table and cooking oils.

The new low erucic acid rapeseed oil that will be used in Canada in 1973 is expected to enhance the quality and broaden the demand for rapeseed oil, provided that prices are competitive. In this event the use of rapeseed oil in food products manufactured in Canada will increase still more. Oil from the rapeseed varieties now being replaced has been making substantial inroads on soybean oil in the past several years in the Canadian domestic market (Table V).

Ten years ago the use of rapeseed oil in the Canadian food processing industry was not large enough to warrant separate mention in official statistics. In 1971, rapeseed oil accounted for 35.6% of all vegetable oils utilized in the

TABLE V

Proportion of Rapeseed and Soybean Oils Consumed in Canada in Relation to Total Vegetable Oil Usage in Margarine, Shortening and Salad Oils, 1966-71

Year	Metric tons			% of total	
	Total vegetable oil used	Rapeseed oil	Soybean oil	Rape Soy	
1966	184,047	46,417	68,991	25.2	37.5
1967	184,059	46,150	69,721	25.1	37.9
1968	191,451	52,931	66,304	27.6	34.6
1969	208,089	61,478	69,813	29.5	33.5
1970	212,708	59,102	82,982	27.8	39.0
1971	204,632	72,792	64,989	35.6	31.8

production of margarine, shortening and salad oils and for the first time took the lead from soybean oil.

Statistics covering the 6 years, 1966-71, show that rapeseed oil and soybean oil together enjoyed more than 60% of the total market in Canada. Total usage had not increased too significantly in those 6 years, but the use of rapeseed oil showed a gain of more than 10% and soybean oil a drop of close to 6% comparing 1966 with 1971.

Could a similar trend develop in the world market? There is every possibility in the years ahead that rapeseed oil will capture a substantially larger share of the world market. The problems associated with erucic acid content will have disappeared and, equally important, a greatly improved and highly competitive rapeseed meal will have become available.

There is little doubt that rapeseed meal has been a restraining influence on rapeseed sales. The seed is purchased mainly for its oil content but, if the processor cannot dispose of the meal at remunerative prices, crushing margins are reduced with a depressing effect on seed sales.

It has not been easy to convince crushers and end users in other countries that the rapeseed meal produced in Canadian plants is largely taken up by feed formulators, and that when used at the recommended levels, it produces the desired results in all types of livestock and poultry.

Small groups have been invited to Canada from Japan and the U.K. to see for themselves, and these visits have opened up markets in these two countries. Seminars in six countries in Western Europe were conducted in October 1972, by two-man teams comprising an animal nutritionist and a feed formulator. Later this year similar seminars will be held in some South American countries.

The Rapeseed Association of Canada will be sponsoring these seminars and will provide copies of its recent booklet on the use of rapeseed meal in livestock and poultry feeding. The English edition has been translated into five other languages and copies will be available in time for the seminars. This is all part of a promotion campaign carried out by the Association during the past 5 years.

In the research field a continuing program, funded by the Federal Department of Industry, Trade and Commerce, and administered by the RAC, is seeking to bring about further improvement in the quality of both rapeseed meal and rapeseed oil. Most of this work is being done in universities across Canada and progress reports are published as they become available.

Complementing this work are the research programs of the Canada Department of Agriculture Research Station at Saskatoon, the Prairie Regional Laboratory of the National Research Council, Plant Breeders and Animal Science Departments at various universities and the rapeseed processing industry. The team work and cooperation between these various groups has been commendable.

There is good reason, therefore, to sound a note of optimism for the future of rapeseed in the world edible oil market. The tide is running in its favor now and, when one considers the latitude that exists for expansion of rapeseed oil utilization in many countries and the technological changes taking place in rapeseed meal, there is no room for pessimism.

The plant breeders in a number of countries are doing an extraordinarily good job with rapeseed. Our Canadian plant breeders are successfully reducing the glucosinolates from the seed and lowering the fiber content. These two elements have been barriers to the marketing and use of rapeseed meal. When they have been removed, a new impetus will be given the industry and rapeseed will become much more competitive with other protein meals.

Removal of a high percentage of the erucic acid in rapeseed oil, now well on its way in Canada and some European countries, through the production of low (< 5%) erucic acid varieties, will be another plus on the marketing side of rapeseed.

There are better days ahead for rapeseed and its end products in this decade.

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