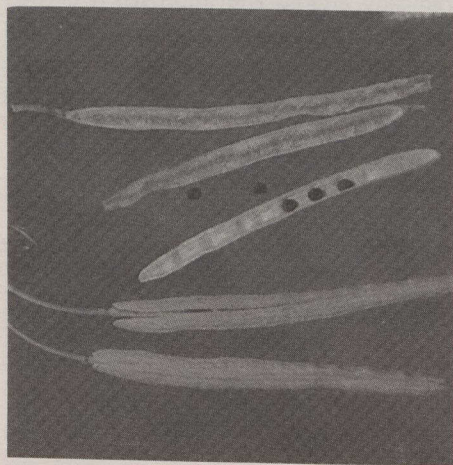


of total national canola production. Although 1982 was not the best year for this crop, Alberta farmers grew 975 000 tonnes on 770 000 hectares. Spring planting for 1983 saw a 31 per cent increase over that of 1982 in Alberta's canola seeding, with canola ranking third behind wheat and barley.

#### Ideal conditions

Wheat is still the king in Alberta, but the cooler temperatures and shorter growing season on the Canadian prairies are ideal for canola. So, when a soft world market for cereals depressed western Canada's oats and barley markets in the late 1960s, canola was introduced as a viable alternative in certain areas, including the Peace River district in the northwest corner of Alberta. Canola caught on so well there that the area has virtually become Canada's heartland for this custom-designed rapeseed....

The crushing and refining of canola is a sophisticated technological process. After cleaning and grading, the seeds are passed through rollers to crack the outside coat and rupture most of the interior oil cells. The resulting wafer-thin flakes are then cooked to break any remaining oil cells and coalesce the droplets. The resulting mash is pressed to remove about 28 per cent of the oil. Then it is treated with normal hexane, an easily removed solvent that extracts the last of the oil.



*The long, narrow canola pods are so tiny that 15 seeds laid side by side are no longer than a paper clip.*

The product can then be sold as crude oil, put through another step and sold as crude degummed oil or be refined and further processed into consumer products.

"Canola oil is an extremely versatile product," says Gay Thomson, section manager for processed foods with Alberta Agriculture. "It has equalled or bettered

#### Canola on the world export market

The future of canola on the world export market looks as vibrant as a field of the crop in bloom if gradual changes in the global edible oil picture are any indication. In the past ten years, production of animal source oils dropped 5 per cent and marine source oils 1 per cent. Meanwhile production of vegetable source oils (including canola oil) increased 6 per cent. During the same period, world consumption of rapeseed oil rose only 1 per cent, but Canada's new double-low canola was just beginning to influence the market.

As appreciation of canola's special properties grows, world demand for seed, oil and meal will continue to rise. For example, in 1982 world consumption of rapeseed jumped 15 per cent. Since well over half of Canada's 1982 production was exported as seed, a considerable portion of that 15 per cent was canola. By comparison last year's soybean and sunflower seed production increased 8 per cent and 14 per cent respectively.

Uncrushed canola seed is in greatest demand on the export market, since most countries prefer to process the seed domestically into oil and meal. About 47 per cent of Alberta's canola production is exported in the form of seed — 90 per cent of that to Japan, which has traditionally been Canada's largest importer of canola seed.

In 1982 Algeria was the second largest market for seed and the dominant market for Canadian canola oil. India, herself a major rapeseed producer, was the second greatest importer of oil, Hong Kong the third, and Japan the fourth. Norway took the greatest share of Canadian canola meal last year, 54 per cent of the total export product. The Netherlands and the United States ranked second and third in this area.

its competitors in salad and cooking oils, salad dressings and mayonnaise, margarine and shortening, proving it can be substituted for any of the other vegetable oils."

Since most salad oils and dressings are refrigerated, canola's natural "winterizing" has special importance: it remains completely clear and free-flowing after 12 hours at 0 degree Celsius. Other vegetable oils can pass this test but usually only after they have been "winterized" by light hydrogenation.

When blended with egg yolks and vinegar, as in salad dressings and mayonnaise, canola oil has an excellent emulsion stability and shelf life. This is why it is also used as an emulsifier in peanut butter.

The cooking of fried foods demands high quality, light/heat stable, heavy duty frying shortenings or oils which are reasonably priced. Such products made from 100 per cent canola oil have been very successful, providing bland flavour, light colour, a smoke point comparable to that of sunflower, soy or corn oils, and a resistance to oxidative breakdown at normal frying temperatures.

#### Canola in shortening

Pastry and baked goods have been produced very successfully using pure canola in shortening. And the possibility of using liquid canola oil in place of hydrogenated shortening in commercially made cakes is being tested....

Consumer products made from canola

oil have been well-received internationally, with the main exports going to Pacific Rim countries.

Canadians use a lot of canola themselves. On the domestic consumer market, canola is definitely number one. In 1976, canola made up 39.3 per cent of all vegetable oils used in the country. By 1982, that figure had shot up to 51.8 per cent. In the same year, soybean oil captured 27 per cent of vegetable oil sales and corn oil accounted for 6 per cent of total Canadian oil usage. Figures for the first quarter of 1983 indicate canola oil is still gaining on its competitors.

Canola also makes a superior addition to livestock feed programs. After all the reasonably recoverable oil is removed from canola seeds, a high protein, solvent-free meal remains. The main feature of this meal is that it contains less than one-tenth the glucosinolate found, for example, in European rapeseed. This amount is considered negligible in livestock and poultry feed. Canola meal is used to replace or sometimes to complement higher priced soy meal, the standard for poultry and livestock mixed feed, in sophisticated nutritional meal balancing.

Canola is still a relatively minor oil in the world market. But with all its special qualities and extreme versatility, plus the fact that it produces 40 per cent oil compared to soybean's 18 per cent, it is receiving serious attention....

*(Article from Alberta Venture.)*