

CANOLA - THE UNIVERSAL OILSEED?

Dale Adolphe

Canola Council of Canada Winnipeg, Canada

The achievements of Canadian plant breeders culminated in 1974 and as a result we have seen a ripple-effect throughout all elements of the Canadian rapeseed industry over the past decade. The achievements had culminated in 1974 into the development of the first B. napus variety low in erucic acid and low in glucosinolates. It was only 3 years later, in 1977, that Canada saw the licensing of the first B. campestris variety that carried the low erucic acid, low glucosinolate quality traits.

I say these plant breeding achievements started a ripple-effect in Canada because the appearance of today's industry in Canada is substantially different from just 10 years ago. More importantly, these substantive differences are all positive. The quality of the crop was so improved and the differences so substantive, it didn't then, nor does it now, seem appropriate to call the crop rapeseed. It is just too different in its quality aspects and performance characteristics to have attached to it the name of a crop that got its beginnings in illumination and lubrication. The low erucic acid, low glucosinolate varieties yield high quality edible oil and protein meal.

That gives a very brief, and somewhat philosophical background to canola. Canola is B. napus and B. campestris seed whose oil component contains less than 2% erucic acid and whose air dried, oil free meal has less than 30 micromoles glucosinolates in each gram.

To see the impact that canola has had on the Canadian industry takes only a few short minutes.

Acreage of canola in Canada, on a five year average basis, has continued on a steep expansion curve since the start of the 1970's. Without the ability to market on the basis of a high quality oil and a high quality protein meal, Canada would not have been able to match the supply with a countering level of demand.

Utilization of the oil in Canada for salad dressings, cooking oils, margarines and shortenings not only surpassed an earlier industry target of a 50% marketshare but has grown to a level that now approaches the 60% mark.

CANADA: Canola Oil Share in Production Of:

	Margarine Oils	Shortening Oils	Salad Oils	Deodorized Vegetable Oils
1976	32.8%	16.2%	50.2%	31.0%
1981	36.2%	46.4%	70.5%	50.7%
1985	38.7%	46.4%	77.4%	56.6%

Source: STATISTICS CANADA

The growth in utilization of the oil is not peculiar to Canada. In Japan, canola oil marketshares have grown at a pleasingly strong rate against all oils, including against soyoil.

JAPAN: Domestic Production of Edible Oil

	Soyoil	Canola Oil	Others
1976	45.3%	26.4%	28.3%
1981	42.1%	32.3%	25.6%
1985	42.4%	35.1%	22.5%

Source: M.O.A.F.F.

Over ten years, canola oil's share of Japan's edible oil production has grown by almost 9 percentage points. That represents a 33% growth over 10 years. During the same period, soyoil lost 3 percentage points and other oils lost nearly 6 percentage points.

A more recent example of the recognition of canola oil's quality traits is the approval by the Food and Drug Administration in the U.S.A. of the low erucic acid material. Oil with over 2%, or let's say rapeseed as we used to know it, is not allowed for edible use in the U.S.

Oil Exports to the U.S.A. ('000 tonnes)

1981	3.7
1982	4.1
1983	4.8
1984	4.0
1985	19.1
1986	49.2

That approval, granted in January of 1985 has already shown its benefit to Canada in the form of U.S. purchases of the oil. We have already passed the stage where our monthly exports to the U.S. exceed the annual totals of just 2 years ago.

To see the impact canola had on Canada we can also draw evidence from the canola meal side of the equation.

Suggested Maximum Inclusion Rates

	Rapeseed Meal	Canola Meal
Laying Chickens	5%	10%
Broilers	15%	20%
Starting Pigs	5%	10%
Grower Pigs	8%	12%
Finisher Pigs	8%	18%
Dairy	10%	25%

Because the suggested maximum inclusion rates for canola meal, as compared to high glucosinolate rapeseed meal, have virtually doubled for all classes of livestock and poultry, we have experienced strong growth in the Canadian domestic market; rapid growth in our canola meal exports to the U.S.A.; and increased utilization of canola meal in Japan. The U.S. market has in fact over the past 3 years become our major meal export market. In Japan, because canola meal's quality warrants its use as a feed ingredient rather than as an organic fertilizer, Japan has directed the meal from their canola crush toward their feed industry; has stepped up its purchases of direct canola meal imports for their feed industry; and has had to supplement their supply to the organic fertilizer industry with rapeseed meal imports, primarily from China.

Although it could be considered a cause and effect type relationship, the strength of canola's reputation also led to an expansion in the processing capacity in Canada. We have seen that as production of canola has grown in Canada, so too has our processing industry. Our domestic crushing industry now stands at a rated capacity of some 1.6 million tonnes per year. Although this rated capacity is yet to be attained on an annual, actual crush basis, we have, of late, experienced monthly crushes that exceed 140,000 tonnes - a level that reflects operations at the rated capacity.

It is indeed canola and the healthy growth rates in canola utilization in Canada and other countries around the world - like Japan and the U.S.A. - that is returning benefits to Canada - benefits based on hard work and accomplishments by Canadian scientists. It is the quest for these same benefits that has almost every rapeseed producing country striving for canola quality. Lastly, it is the accrued benefits from canola that has several countries in North Africa and South and Central America seeking to develop their own canola industry.

It is the venue of this Congress to foster international co-operation on rapeseed developments. It is with the intent of international recognition of the benefits that accrue from canola production and utilization that I have just outlined some of the growth we have seen. Finally, it is on the intent of encouraging an international adoption of the word canola that I wish to end my presentation today.

I want to begin my encouragement of an international adoption of the word canola by assuring you that the statutory definition in Canada makes absolutely no mention of Canada or Canadian. Canola has become a generic term - not just a Canadian term - and no longer just an industry trademark.

Canola is defined in Canadian food acts, seeds acts, and feed acts. These acts do not enforce regulatory guidelines on trademarks. These acts enforce regulations on generic agricultural commodities, of which canola is one.

It is not only in Canada that the generic term canola is being used to describe napus and campestris seed yielding oil of less than 2% erucic acid and air-dried, oil free meal of less than 30 micromoles glucosinolates. In the U.S.A., the States of Washington, Idaho and Colorado already identify canola in their seed regulations. The American Association of Feed Control Officers have established specifications for canola meal. The U.S. - Food and Drug Administration are in the process of including canola oil in their "Generally Recognized as Safe" classification. Organizations in the United Kingdom and Australia are working on the establishment of canola within their existing rapeseed industries.

It is the adoption of canola in Canada, the U.K., Australia and the U.S.A. that clearly illustrates canola is not just a Canadian term - it is becoming a world-wide term.

It is not, however, just a matter of adopting the term canola - it is also a matter of meeting or exceeding the quality parameters that canola depicts. To meet or exceed the quality traits also implies that we are all operating on a level playing ground - that is common methodology.

The common definition of canola refers to less than 2% erucic acid. The erucic acid level, for our purposes, is measured by following the Association of Official Analytical Chemists (AOAC) method 28.066.

The glucosinolate standard for canola is 30 micromoles per gram of air-dry, oil free meal. It is 30 micromoles of any one or combination of four specific glucosinolates: namely 3-butenyl, 4 pentenyl, 2 hydroxy-3 butenyl and 2 hydroxy-4 pentenyl. For purposes of meeting this canola specification, the gas liquid chromatograph method of the Canadian Grain Commission is used as the standard methodology.

For us gathered here today and for us as producers and suppliers of high quality product into the international marketplace, it is critical that we establish a common definition for canola. Without a common definition, a buyer somewhere, sometime is likely going to buy what he thinks is canola but is, instead rapeseed that was misrepresented as canola. We as sellers need to provide the buyer with the security that the canola he buys is the canola he wants - that is a product that parallels the product which has yielded Canada so many benefits over the past decade. No one wins in a situation where the buyer is unhappy.

As a means to prevent the type of misrepresentation that can occur, Canada and the U.S.A. have written the standards of canola quality into federal and state statutes. To misrepresent the product in Canada and the U.S.A. is to break the law! In anticipation of other countries becoming more involved in canola production and canola trade and again to protect against misrepresentation until the standard is incorporated into their statutes, we have registered the canola standard through trademark offices around the world.

In Europe, the canola standard is specified by certification mark or trademark in the Benelux region, France, Norway, Poland, the USSR, West Germany and Spain. Pending are certification marks in Britain, Denmark, Italy, Sweden, and Portugal.

In North Africa, the standard is protected against misrepresentation in Algeria and Morocco. It is pending in Egypt. In the Pacific Rim, the standard is protected in Australia, Indonesia, South Korea and Taiwan with pending status in Hong Kong, Japan and New Zealand.

The protection is also in place in China and Mexico while it is pending in Colombia, India, Pakistan and Venezuela. In total, with the statutory regulations providing the parameters of quality in Canada and the U.S.A., we see that the canola standard of quality is protected and in the process of being protected in 30 different countries.

It is not Canada's intention to "own" canola and the canola standard that we sought through the various protective measures. It was our intention to protect the quality parameters associated with canola against possible misrepresentations by Canadians or anyone else. It is our intention to allow the protection afforded by trademark and certification mark to evolve into regulatory guidelines in countries that incorporate the canola standard in their federal and/or state statutes.

We want canola to be recognized world-wide as a common name for a high quality crop yielding high quality product. To maintain and assure that high quality, we want government regulatory bodies around the world to adopt the canola specifications and incorporate those specifications into their regulatory vehicles.

It is this type of world-wide acceptance that we seek. It is this type of world-wide acceptance that can lead to all of us sharing in the benefits that are accruing from the achievements of plant breeders. It is this world-wide acceptance that creates the public awareness that will truly make canola - the universal oilseed.