



from Farm to Fuel

A canola-based biodiesel industry would benefit Canadians.

From the farm gate, to value added processing and use as an ingredient, canola currently contributes over \$11 billion in economic activity to the Canadian economy. A 2006 study found that every \$100 million of additional demand for canola generates an additional \$83 million in Canadian Gross Domestic Product and more than 730 direct jobs in value-added industries including crushing, processing and food production¹.

Driving Investment

A renewable fuel strategy that includes canola biodiesel would send a strong new demand signal to the industry. However, this demand signal alone is not sufficient to generate the investments in Canadian based facilities. Other jurisdictions have recognized the role canola plays as the foundation feedstock for biodiesel. The EU is forecast to import between 100,000 to 120,000 tonnes of Canadian canola oil in 2006, rising to 400,000 tonnes annually by 2010 for use in their biodiesel production facilities². In response to support programs at the local, state and federal levels in the US, investments in production capacity are being made in the United States that will use canola as the preferred feedstock for domestic production and possible export³ and Washington State will be the site of a 35 million gallon biodiesel plant that will source canola from Canada⁴. In order to ensure the Canadian demand for biodiesel is not met by importing biodiesel from the US, policy incentives that support a “made in Canada” supply and maintain a competitive balance across North America are required.

Made In Canada Benefits

Investing in a domestic biodiesel industry has economic benefits that begin at the farm gate. To provide the stability of supply required for year-round domestic oil production, the canola industry aims to maintain carryover stocks (stocks left over after all market commitments have been made) of approximately 1 million tonnes. Any carryover in excess of 1 million tonnes, however, has the effect of decreasing prices. Carryover from the 2004–2005 canola crop was 1.7 million tonnes and is projected to be over 2.5 million tonnes for 2005–2006. If domestic biodiesel production facilities were in place, 1 million tonnes of this

carryover could have supplied over 500 million liters of pure biodiesel foundation stock, resulting in 500 new jobs in the biodiesel industry, capital expenditures of over \$165 million and annual operating revenues in excess of \$1.8 billion⁵. As production facilities for biodiesel would locate in proximity to the feedstock, the majority of the economic impact would occur in western Canada. A 110+ million-litre biodiesel facility can be constructed within 18–24 months, the impact would be in the short term. Studies indicate every investment of \$1 in biodiesel infrastructure returns \$2 of economic activity in construction and supporting industries.

The return on investment in biodiesel is sensitive to the price of diesel fuel, which is directly impacted by the price of crude oil. According to estimates by Promar International, the world price of crude oil will remain above US\$40.00 per barrel (\$ per litre) until 2030, which is the threshold for biodiesel profitability⁶.

Additional Value Added Benefits

Sustainable, predictable supply of the co-products of biodiesel production also provides opportunities for additional economic activity. The canola meal from crushing the canola is a high protein livestock feed that can replace more expensive imported protein meal in dairy and hog rations. The glycerin produced from the transesterification process is a precursor in food and beverage, cosmetic and pharmaceutical processes and animal feed industries.

New domestic markets for canola would also foster additional investments in research and development activities in other industrial uses. Canola-based products are gaining notice from industry and consumers because they are environmentally friendlier, less of a human health hazard, and superior in performance to many products currently on the market. With the Canola Council of Canada forecasting canola production to increase to 14 million tonnes by 2015, other market opportunities for environmentally friendly chemicals derived from canola oil may emerge including lubricating oils, diesel fuel additives, plastics and plasticizers, adhesives, agrochemicals, solvents and paint strippers, surfactants and other industrial chemicals.

¹ M Goodwin Consulting Ltd., “Canola Socio-Economic Value Report”, 2006

² Oil World “Oil World Weekly” January 20, 2006

³ www.admworld.com “Archer Daniels Midland Announces Plans to Build Biodiesel Production Facility”, 2005

⁴ Grant County Economic Development Council “Legislation allocates \$2.5 million for Port of Warden Biodiesel Project”, 2006

⁵ Canadian Bioenergy Corporation, “Developing a Canadian Biodiesel Industry” 2005

⁶ Promar International “Evaluation and Analysis of Vegetable Oil Markets”, 2005

⁷ Canola Council of Canada, personal communication 2006

⁸ After California Air Resources Board, 2000 “The Carl Moyer Advisory Board Report” using a 86 cent Canadian dollar