

Organic Soybean Processing Facility Value Proposition

Market

There is a growing demand for organic meats in North America and around the world. This is resulting in increased organic livestock production with a proportionally growing demand for organic feed, especially in species with highly confined and stringent feed formulations such as swine and chicken.

Demand for both organic energy and protein sources will become apparent. Protein sourcing will become important as organic sources are limited mainly to plant based protein of which soy is most prevalent and most useful.

Based on anticipated livestock population increases, projections indicate a current demand of 714,000 bushels of soybeans growing to over 1,260,000 bushels over the next 5 years.

Sector	2005	2010 (projected)
Beef demand (bu)	33,449	66,899
Dairy demand (bu)	122,914	147,497
Pork demand (bu)	372	375,980
Poultry demand (bu)	558,139	669,767
Total demand (bu)	714,874	1,260,142
Total demand (acres)	17,872	31,504

Markets for organic oil are also growing for feed, food and industrial applications. Food markets are continually seeking consistent supplies of organic ingredients, including soy oil. Feed markets, especially in the growing sector of aquaculture, are looking at soy oil as an attractive source of lipid that meets the various demands placed on that industry. In addition, emerging industrial markets for soy oil will seemingly demand unprocessed, non-GMO oil from mechanical crushing facilities. The process of both growing and processing means that there will continue to be a strong market for organic oil.

Building a facility in Ontario to crush beans in order to capture this market represents a real opportunity for forward thinking companies. Locating a facility here will have indirect results of driving organic field crop production, thereby partially alleviating concerns of supply.

In addition it will lay the foundation for the production and export of other soy based protein products, for feed and food use, in both North America and Europe.

Ontario Competitive Advantage

The Great Lakes Basin is the ideal location for this type of facility. This area is home to ample soy production and livestock husbandry, both of which will experience organic growth. This area is also close to feed markets and food markets for co-products and new products.

Ontario in particular is well suited to capturing organic acres given the presence of strong producers and an established organic industry based on world leading identity preservation systems.

Value Proposition

Early estimates indicate that establishment of a mechanical processing facility on existing land will cost approximately \$1,450,000.

Item	Quantity	Cost	Total
Model 9400 Extruder	2	\$183,208.63	\$366,417.27
Model 4500 Expeller	2	\$171,868.96	\$343,737.91
Counter Flow Cooler	1	\$48,779.62	\$48,779.62
Spare Parts, Decanters, etc	1	\$76,020.18	\$76,020.18
Conditioning Auger	1	\$10,642.83	\$10,642.83
Building Costs		\$200,000.00	\$200,000.00
Installation Est. P		\$200,000.00	\$200,000.00
Contingency		\$200,000.00	\$200,000.00
TOTAL			\$1,445,597.80

This facility can be run below capacity in initial years, increasing capacity and sales as markets develop and supply emerges. Anticipated annual production volumes of major products are outlined below.

		Near term	Mid term	Long term
Running time	Hours/Day	22	22	22
Running time	Days/Week	4	5	6
Running time	Week/Year	16	32	48
Annual meal production	Kg/Year	12,762,112	31,905,280	57,429,504
Annual oil production	Kg/Year	1,846,248	4,615,620	8,308,116
Annual bean processed	Kg/Year	15,540,809	38,852,021	69,933,639
Annual bean processed	bu/year	580,190	1,450,475	2,610,856

Premium prices for organic products are expected to remain in the near term, although decrease over time. With realistic projections, the anticipated level of production will result in profitable scenario. Although margins are slim, there are indeed margins to be captured for those interested in this platform, first mover opportunity. The following outlines general annual profits for an extraction facility in the three phases.

		Near term	Mid term	Long term
Inputs				
Soybeans	<i>\$/Bu.</i>	<i>\$13.00</i>	<i>\$11.00</i>	<i>\$9.00</i>

			\$7,542,472	\$15,955,230	\$23,497,703
Labour	<i>\$/kg meal</i>	<i>\$0.0049</i>	\$61,952	\$154,880	\$278,784
Energy	<i>\$/kg meal</i>	<i>\$0.0030</i>	\$38,286	\$95,716	\$172,289
Maintenance	<i>\$/kg meal</i>	<i>\$0.0020</i>	\$25,524	\$63,811	\$114,859
TOTAL			\$7,668,235	\$16,269,637	\$24,063,634
Outputs					
Soy Oil	<i>\$/Kg</i>		<i>\$0.95</i>	<i>\$0.85</i>	<i>\$0.75</i>
			\$1,753,936	\$3,923,277	\$6,231,087
Soy meal	<i>\$/Kg</i>		<i>\$0.48</i>	<i>\$0.40</i>	<i>\$0.32</i>
			\$6,125,814	\$12,762,112	\$18,377,441
TOTAL			\$7,879,749	\$16,685,389	\$24,608,528
Profit					
			\$211,514	\$415,753	\$544,894

Without financial support, these estimates translate into small positive earning over the first five years. By securing outside funds and favourable financing, however, the profits are even healthier.

Sources of funds	
Grants	\$150,000
Patient, favourable debt	\$647,799
Initial investment or debt	\$647,799
Returns	
Cumulative profit over 5 years	\$1,670,287
Interest	(\$200,000)
Initial investment	(\$1,295,598)
5 yr Net Profit	\$174,689

Although the profits are not huge, they are indicative of a good opportunity with many secondary benefits that will be captured by firms.

Offer of Support

Soy 20/20 will work to obtain matching dollars on the investment and/or seek very favourable financing for whatever company wants to move on this idea first. Soy 20/20 is committed to championing this concept and making it a reality in the near future. Soy 20/20 is in a good position to play a major and influential role in making this project a reality in cooperation with interested private industry.

NOTE:

This paper is for discussion purposes and feedback is welcome.

For additional information, please contact Soy 20/20