



# Extracting Value



## Presentation Overview

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- » **The Technology**
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- » **Advantexx 70™ Juncea Protein Concentrate**
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## BioExx

- Agricultural technology company focused on **high value proteins** for the **global food market**.
- **Patented technologies** to process agricultural crops (oilseeds) to produce commodity products and specialty proteins.
- Headquartered in Toronto, Canada, our first plant is in Saskatoon with capacity to process 40,000,000 kg of oilseeds per year. **Production is scheduled for January 2009**.
- Business model is to **develop, construct, own and operate** a global base of oilseed and protein processing facilities.
- **Well financed**, pursuing a promising agri-business technology opportunity.



## BioExx

- Management team is dynamic and has a **proven record** of execution on plan.
- Agreements for seed supply and product sales are in place prior to production.
  - Canola/Juncea seed supply with **Viterra**.
  - Advantexx 70 BioExx protein concentrate with **Helm AG** of Germany.
  - Agreement in place for BioExx meal with **Shafer Commodities**.
  - **BioExx oil** agreements underway.



**Saskatoon Plant Under Construction (Start-up January 2009)**



## The Technology

- The BioExx extraction technology utilizes **low temperatures at or less than 50° C.**
- We use less energy input in the solvent recovery process resulting in **higher value meal, quality oil and more soluble proteins.**
- We use **refrigerant-based solvents** that are easily and efficiently recovered at less than 50°C unlike conventional technologies that require temperatures in excess of 100°C.
- Our **key difference is our solvents** have a boiling temperature of approximately minus 20°C which allows for a **cost effective** solvent recovery.
- Our extraction system is **a unique commercial process** that allows for low temperatures to be maintained during the extraction of oils from the biomass.
- This process gives us a **low cost and high quality platform** to produce specialty protein products.



## Environmental Benefits

- The BioExx process and technology is **environmentally friendly**.
- Our solvents are significantly **less toxic** and have **GRAS** (Generally Regarded as Safe) standing in their use as food ingredients.
- Our system is **closed-loop** whereby no solvents or other significant air emissions are generated from the process.
- The **low boiling temperature** of minus 20° C of our solvents allows for **easier recovery and reduced emissions** when compared to traditional solvent extraction facilities.
- The solvent mixture we use is significantly **less flammable** than conventional extraction.
- The closed extraction and solvent recovery system, reduced flammability and significantly lower toxicity results in a **safer working and operating environment** for employees.



## Process and Patents

### OUR PROCESS

•Control the process starting with seed pressing ensuring temperature control **delivering 50% of the protein in soluble form**.

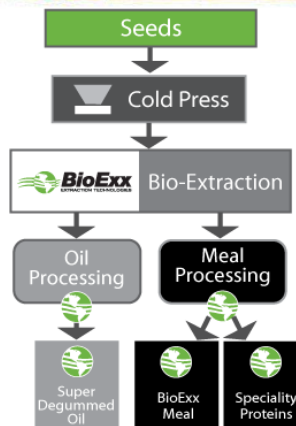
•Protein product is more **readily usable to mono-gastrics livestock and humans** than traditional canola protein.

### OUR PATENTS

•Three patents on the **use of solvents and mixtures**, which enable extraction at low temperature.

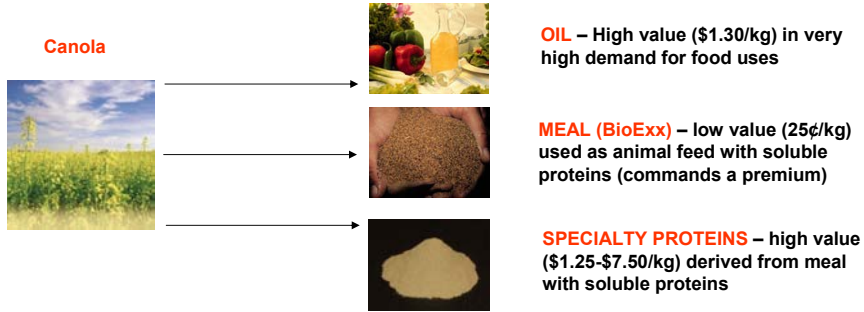
•Patent-pending on the **unique new process for extraction and solvent recovery**.

•Patent-pending on the **process for concentration** of proteins from the meal, and on all resulting products from Concentrates through isolates.





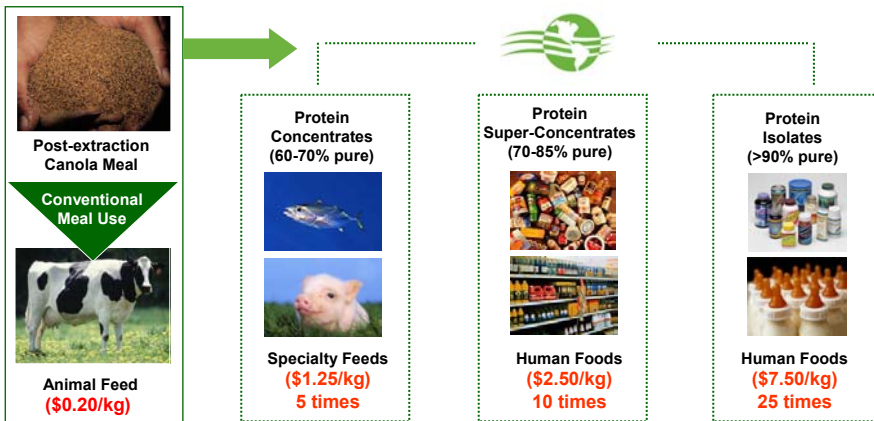
## BioExx Technology Allows Production of Three Products



Patented cold temperature extraction retains valuable soluble proteins



## Maximizing Food Value Through Proteins





## Advantexx 70™ Juncea Protein Concentrate

- **Brassica Juncea** is a new **yellow-seed non-GMO**, canola quality oilseed from the mustard family.
- With **higher protein** and **lower fiber**.
- The Advantexx 70™ protein concentrate is **70 % crude protein** on dry matter basis.
- Advantexx 70™ captures more of the original protein from the seed in a form that is more **readily usable** by livestock and humans than in traditional canola meal.
- Advantexx 70™ will deliver **50% or more** of the protein in **soluble form**.
- The low anti-nutritional factors (ANFs) suggest **great potential** for use in aqua rations as well as **livestock starter diets**.
- Total **Glucosinolate is very low** as well as is phytic acid, sinapine and erusic acid.
- Advantexx™ Juncea Protein is a **fine yellow protein powder** with high bulk density resulting in lower shipping and transportation costs



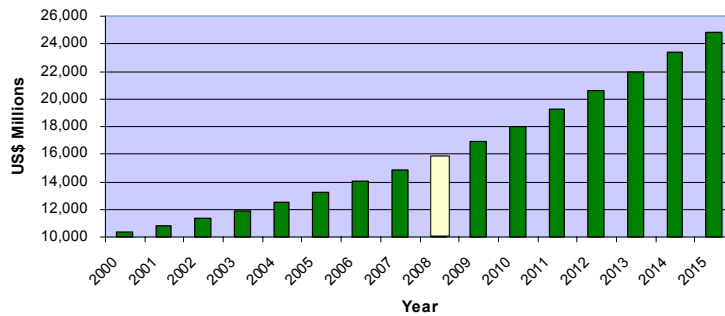
## Outstanding Solution For Aquaculture and Specialty Feeds



**High margin entry-level product for first plant**



## Strong and Growing Global Protein Ingredients Market



**Plant proteins capturing share from animal proteins**

Sources: Global Strategy Analysts Inc.



**“Extracting **GREATER FOOD VALUE**  
through unique technology  
Utilizing **REDUCED ENERGY**  
and  
**EMISSIONS”****



## Partners



**PILOT PLANT CORP.**  
Bioprocessing Services

POS Pilot Plant is a confidential contract research, toll processing, and analytical services organization located in Saskatoon, Canada.



The Feeds Innovation Institute (FII) is a research and development service dedicated to capturing economic opportunities in the domestic feed value chain.



Viterra owns and operates Canada's largest grain handling network. The Viterra Network is also involved in agri-product sales, agri-food processing, equipment sales, livestock and financial products.

## HELM AG

Today **HELM** is one of the world's leading independent chemicals marketing enterprises with branches and sales offices in more than 30 countries. Its specific local knowledge guarantees access to the major markets world-wide.



Shafer Commodities sources and supplies feed ingredients for all sectors of the feed industry.