



ABDC Biomass - Securing a Sustainable Supply
Edmonton, AB
March 5, 2013

**We've Been Doing This for 60 Years –
What's Taking Alberta So Long?**



Leaders in the Field
MATERIALS FOR A SUSTAINABLE FUTURE

- **The world's largest purchaser and processor of linseed flax straw.**
- **Supply flax tow to our paper operations in the United States for more than 60 years.**
- **We purchase 90,000 tons of flax straw annually from Manitoba, Saskatchewan & North Dakota from more than 900 farmers and 180,000 acres of flax.**
- **Subsidiary of SWM INTL, a producer of specialty papers with 2,800 employees, \$700 million US in sales, and operations in 90 countries.**
- **Facilities located in Canada, United States, France, Brazil, Indonesia, Philippines & China.**
- **Listed New York Stock Exchange**

To be the undisputed leader of natural fiber solutions by providing engineered biomaterials to the biocomposite, bioproduct and bioenergy sectors helping foster the developing new bioeconomy.

To grow & develop technology for processing flax and hemp fiber, along with shive and hurd into a new business, that allows us to partner with customers to supply custom applications throughout North America and around the world.

Core Values

Innovation

We believe that only through innovation can we displace non-renewable materials with our natural raw inputs.

This is reflected in our commitment to ISO manufacturing standards, our use of technology and the creativity of our workforce.

Sustainability

Our long term success depends on sustainable practices from field to factory. This allows future generations to enjoy the resources we have today.

Synergy

We believe that true partnerships with customers generate ideas and applications that neither party could create on their own.

Leadership

We take responsibility to lead the industry in the development and application of residual agricultural materials.



Our Product Line

Our line of natural fiber products is processed from unused straw and is a blend of oilseed flax fiber and flax shive. We also source and process hemp straw.

We process our straw into the following innovative products:

FlaxCustomBlend

FlaxCustomBlend is a technical grade flax fiber which is cleaned and customized based on customer specifications targeting a range of 5% to 15% shive content. FlaxCustomBlend can be used as substitutes in a wide range of manufacturing applications.

HempCustomBlend

HempCustomBlend is available on a special order basis.

Hemp80Blend

Hemp80Blend is a blend targeting 80% fiber. It can be used as substitutes in a wide range of manufacturing applications.

Flax80Blend

Flax80Blend is a blend targeting 80% flax fiber content. Flaxblends are also used to make natural, environmentally sustainable fiberboard panels. Flax is mixed with other agri-forestry products and resins to create building material products for both interior and exterior applications.

HempFlour

The smallest of the hurd fractions, HempFlour can be used as a filler in plastic applications or burned as a biofuel.

FlaxCustomGrind

FlaxCustomGrind is a blend of ground flax fiber and shive customized based on customer specifications

FlaxBed

FlaxBed is premium horse bedding containing the larger shive fractions. It has low dust with a neutral ph providing a healthy environment for both horses and handlers. Beds made from Flax are not only dry, but warmer in the winter and cooler in the summer.

FlaxFlour

The smallest of the shive fractions, FlaxFlour can be used as filler or compressed into pellets or logs and burned as biofuel.

FlaxShiveBlend

FlaxShiveBlend is a combination of fiber and shive that will not exceed 50% fiber content and is used in applications not requiring the cleanliness of the higher blends.

FlaxFill

FlaxFill is a premium flax shive fraction used primarily as filler or extender for composite applications like injection molding or artificial lumber.

FlaxMulch

FlaxMulch or raw shive can be burned loose or used as mulch in commercial growing applications.



http://www.flaxstalk.ca/



Leaders in the Field.

CONTACT US

- Home
- Our Story
- Products
- Process
- Success Stories
- Industry
- Producers

Linking Field to Factory

We are North America's most reliable source of agricultural biomass.



Straw Purchasing

It all starts sustainably. We buy unused straw from a network of over 900 farm operations.



LEARN MORE



LEARN MORE

Straw Processing

We produce a range of innovative fiber and related products for use as biomaterials and biofuels.



LEARN MORE

BioProduct Shipping

Our transportation center works with our partners to cost-effectively ship throughout North America & Internationally.

Greener Products

Manufacturers making products from our renewable materials reduce their carbon footprint.



LEARN MORE

Textiles Intelligence - Press Release

July 2011 - For immediate release

Sales of natural fibres for use in composites set to double by 2015

Sales of natural fibres for use as reinforcement materials in composites in Europe could increase to 40,000-50,000 tons by 2015 compared with 20,000 tons in 2010, according to a report in the latest issue of Technical Textile Markets -- a quarterly publication from the global business information company Textiles Intelligence.

The global market for natural fibre composites reached a total value of US\$2.1 bn in 2010, according to the USA-based market research company Lucintel, and demand for natural fibres and resins will continue to grow rapidly.

The major reasons for using natural fibres are to reduce weight, achieve a better environmental balance, reduce costs and manufacture complex structural elements.

Admittedly, questions have arisen about the cost benefit of natural alternatives and the added challenges of consistency in quality control.

However, it has been convincingly demonstrated by manufacturers and researchers that bio-based material composites can now be produced with major improvements in stiffness and strength.

FlaxStalk What the Future Holds

- Future demand is for more stringent straw quality requirements that may lead to the development of a contracted straw purchasing program.
- This is envisioned as a partnership between producers, processors and end users to ensure the highest income to farmers for straw quality in return for participating in specified agronomic and harvesting procedures.
- This program would start at 5,000 contracted acres eventually going to 20,000 acres annually.
- Only the highest quality straw can produce or hope to meet the requirements of technical grade flax fibres needed by tomorrows biocomposite opportunities in bioproduct parts for transportation and green building materials.



- Nano-Crystalline Cellulose (NCC), the race for the ultimate biocomposite material, the pursuit of large scale flax biorefinery.
- Blue Goose Biorefineries Inc. is looking into the creation of a joint venture to build a 10 MT/Day demonstration facility capable of producing economical NCC alongside food and pharma grade microcrystalline cellulose (MCC).
- Blaine Kunkel, President & CEO, using R3™ technology currently being up scaled at the University of Saskatchewan, plans on processing cellulose from flax shive.
- A commercial sized facility could have a 200MT/day capacity, utilizing a yearly mix of 30,000 MT of processed flax shive along with 30,000 MT of cereal straw.
- Researchers in Green Energy are investigating the production of biodiesel from Flax; avoiding the “Food or Fuel” controversy found in production from other crops.



Can Alberta Sustainably Supply the World?

There are now 7 billion people on Earth. Is anyone volunteering to lower their standard of living to accommodate increasing demands on existing resources? Where are the raw materials going to come from to meet our needs and improve life for all of us? A sustainable supply of Biomaterials!

Welcome to the new bioeconomy. Everything is being reinvented. Innovation is leading to the rise of sustainable agricultural biomaterial opportunities. Biomass Researchers are helping provide natural fibre solutions that can help us enter into the new bioeconomy.

Any Questions ?

Joe Hogue

Manager,
New Business Development
jhogue@swmintl.com

Lisa Findlay

FlaxStalk
Customer Service Representative
lfindlay@swmintl.com

