



FarmTech 2009 Annual Special Presentation

Thursday, January 29 10:00 am – 12:00 pm

Barley bio-refining – expanding barley's value to the industry

Background:

Interest in and views about biofuels have changed vastly since the Alberta Barley Commission and the Western Barley Growers Association first undertook the Barley Bioproducts Opportunities Project (BBOP) in 2007. Considerable debate around food versus fuel or changing energy policies remains. However, for barley to be a successful crop platform for biorefining it must improve returns to farmers, generate profits for biorefinery operators, and remain the grain of choice for its largest existing customer base; Alberta's livestock feeders.

The BBOP project has shown that barley biorefining would result in a feed co-product (distiller's grains) with a high-value nutritional profile (high protein and digestibility). This product would fit nicely into the cost versus quality ranges of existing feed sources.

The view also is that major livestock feeders may benefit significantly from barley biorefining, especially if they:

- Have a critical mass of annual cattle throughput (likely 40,000 or more head)
- Purchase significant amounts of feed and can take advantage of feed efficiencies of wet versus dry distillers grains.
- Have the ability to finance a barley/ethanol biorefinery (independently or with partners)
- Could benefit from other aspects of biorefining, including combined heat and power operations to deal with manure-handling issues.

The view of the barley industry leaders and specifically the Alberta Barley Commission is that for Alberta barley producers and barley bio-refiners to be successful, cow/calf producers and livestock feeders must also be successful. These groups are the critical customer segments for barley producers. However barley producers also recognize that production costs are likely to continue to rise across the value chain. Finding ways to strengthen the gross and net value of barley at the farm gate and fed cattle at the other gate is a key strategic outcome in strengthening the value of assets for barley producers and cattle feeders in the long run. As background the recently formed Beef Industry Alliance and the Alberta Meat & Livestock Strategy are examples of industry and government working together for the long-term benefit of agriculture generally and the feed production and feeding industries specifically.

The central question is whether barley bio-refining can be part of the overall solution to improving the competitiveness and returns to barley value chain members, including barley growers and cattle feeders, while also providing reasonable returns to barley based ethanol producers? The second are of interest goes beyond bio-fuels and looks at opportunities to further create and capture incremental value from higher value barley fractions; looking at what are the potential product areas, and what technical and business questions do perspective business's or the barley industry more holistically need to consider.

This is the question that will be explored in detail by an expert panel of speakers from segments of the Industry.

Panel discussion areas:

1. Technical feasibility of barley as a crop platform for bio-refining
2. Synergies of barley bio-refining to the livestock feeding industry and barley producers
3. Bio-fuels market outlook and new plant business feasibility in western Canada
4. Beyond bio-fuels – where are the opportunities for barley?

Session 1 : 10:00 am to 11:00 am

Panel Discussion Areas –

1. Technical feasibility of barley as a crop platform for bio-refining
2. Synergies of barley bio-refining to the livestock feeding industry and barley producers

Panel Speakers

- Dr. David Bressler – Associate Professor, Biorefining Conversions & Fermentations, U of A
- Trevor Nickel - Highmark Renewables Research
- Dr. Ruurd Zijlstra – Associate Professor, Ingredient Evaluation & Feed Processing, U of A

Session 2 : 11:00 am to 12:00 am

Panel Discussion Areas –

3. Bio-fuels market outlook and new plant business feasibility in western Canada
4. Beyond bio-fuels – where are the opportunities for barley?

Panel Speakers

- Matt Machielse – Director, Alternative And Renewable Energy Government of Alberta
- Peter Sandfort – Katzen International
- Dr. Feral Temelli – Professor, Food Process Engineering, U of A

Note: each panel member would be given 15 minutes to present to the audience and following all three presentations in each session the floor would be opened up to a 10 minute question and answer period.

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Barley Bio-refining – A Synergistic industry Opportunity!