



July 18, 2011

## Getting the Most Out of Your Greenfeed

Seeding annual cereals for greenfeed has become a common practice across Alberta. More producers are incorporating it into their livestock's rations, and others are using it as a way to salvage grain crops that have been damaged by hail. In 2010, approximately 575,000 acres of annual crops were harvested as greenfeed, resulting in over 1.73 million tonnes of greenfeed harvested that year.

"A number of different crops can be harvested as greenfeed," says Stephanie Kosinski, forage specialist with Alberta Agriculture and Rural Development. "Spring cereals, such as oats, barley, triticale, and wheat, have traditionally been used. Canola, peas, and winter cereals can also be successfully harvested as greenfeed.

"In order to ensure you get the best bang-for-your-buck, harvest greenfeed crops at the right stage. Harvesting too early can lead to low yields, while harvesting late can result in a feed high in fibre and low in energy and protein, reducing its digestibility."

### Optimal stage to cut different greenfeed crops:

Crop	Harvest Stage
Barley	Milk to soft dough
Oats	Early to late milk
Triticale	Heading to late milk
Wheat	Milk to soft dough
Fall Rye	Boot to heading
Canola	Early to mid-pod

Barley is able to maintain its quality better than oats, triticale, or rye, and has a wider harvest window. In general, you can attain a good balance between quality and yield with cereal greenfeed by harvesting it in the early to soft dough stage. Fall rye, however, loses its quality quickly. If cut at the boot to

heading stage, the quality of fall rye will be similar to that of barley at soft dough. If harvested later, its feed value and palatability will be greatly reduced.

"As with large round bale hay, greenfeed bales can be safely stored at 15 per cent moisture," says Kosinski. "Make sure to test the moisture level before baling. Depending on conditions, canola can take up to ten days or more to dry enough to be baled. Crimping when cutting will help speed up this process.

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“If you won’t be able to cut your greenfeed at the optimal stage, consider turning it into yellowfeed. Yellowfeed is when you spray your annual cereal crop with glyphosate at the milk to soft-dough stage, let dry standing, and then swath and bale. It is important to spray your crop before it hits the desired stage as the plants will continue to grow for a few days after the glyphosate application. It should be noted that spraying annual crops for yellowfeed is a non-registered use of glyphosate. However, crops that have been treated with registered rates of this product are safe to feed to livestock.”

One advantage of yellowfeed is that it dries standing, instead of on the ground in windrows. This reduces losses from weathering if rained on. The glyphosate application can also help control perennial weeds. The main advantage of yellowfeed, though, is that you are able to schedule the harvest to fit your needs. Once the glyphosate has taken effect, the plants will not mature any further and their quality is effectively locked in. Producers who have tried yellowfeed found that the palatability was just as good as, or even better than, regular greenfeed.

Generally, it will take about 12 to 15 days before the crop is dry enough to be swathed and baled. Trials have shown little yield loss when swathing and baling was delayed up to thirty days after spraying. Under very wet conditions, it will take longer for the plants to dry. There is some risk of quality or yield loss due to weathering, but still less than if the crop was in windrows.

“While harvest time might be the last thing on your mind right now, it never hurts to start thinking about options,” says Kosinski. “Whether you choose to harvest your cereals as traditional greenfeed, or try yellowfeed, make sure you closely monitor the stage of your crop. Harvesting at the right stage will allow you to produce the best quality feed you can for your livestock.”

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## **Assessment Examines Potential Environmental, Social, Health and Economic Implications**

The Government of Alberta is beginning a voluntary three-year Environmental Impact Assessment (EIA) process that will examine the potential diversion of water from the Red Deer River to the Special Areas region in East Central Alberta, as well as parts of the County of Stettler and the County of Paintearth.

“We are voluntarily conducting an EIA to ensure an open and accountable process,” said Minister of Municipal Affairs, Hector Goudreau. “Gathering the relevant information will help ensure a good decision is made on whether to proceed with the proposed project.”

The Special Areas region of East Central Alberta has experienced a long history of water shortages. Low precipitation and a lack of secure water supply have been impediments to economic diversification and stability in the region. The areas, under direction of Alberta Municipal Affairs, were established by the province in 1938 due to the extreme hardship of years of drought in the 1930s. The three-person Special Areas Board manages more than 1 million hectares of public land and provides municipal services, such as construction and maintenance of local roads and parks, and emergency and protective services, to the region.

“Households and livestock in the drought-prone areas of East Central Alberta are in need of an improved water distribution system,” said Minister of Agriculture and Rural Development, Jack Hayden. “We need to carefully examine the Special Areas Water Supply Project to determine if it represents a viable way to bring a sustainable water supply to rural communities in the area.”

Potential benefits of the project would include increased reliability of water supply for household and domestic use; stock watering; municipal and industrial use; waterfowl and wildlife conservation and enhancement; recreation, and a limited amount of irrigation.

If constructed, the Special Areas Water Supply Project would be part of the provincially owned water management infrastructure and would be owned and operated by Alberta Environment.

The projected cost for Phase 1 of the EIA is estimated at \$1 million.

The Alberta government is working to build a better Alberta by fostering economic growth, strengthening our health and education systems, investing in infrastructure, supporting safe and strong communities and ensuring a clean and healthy environment.

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## **Positioning Alberta at the Centre of North American Fibre Processing**

Alberta is home to the largest pilot plant for biomass processing in North America and with the Alberta Biomaterials Development Centre's (ABDC) dedicated fibre processing team the centre is creating biomaterial industry advantages here in the province.

ABDC and its partners are committed to providing clients with scientific and engineering services related to the design, scale-up and development of fibre processing to drive the biomaterial economy. ABDC facilitates the transition from concept to commercialization, and provides an integrated approach to innovation and the realization of opportunities.

ABDC provides clients with fibre processing facilities to enable businesses to begin changing the biomaterial economy. Processing forestry and agricultural fibres into biomass is a pursuit the ABDC fosters. With the capacity to process a wide variety of wood and agri-fibre at the pilot-plant level, the ABDC facilitates industry development by integrating and implementing the province's expertise towards development of the biomaterial industry.

ABDC, working with Van Dommele, purchased and commissioned a Van Dommele system that has the capacity to process bast fibres such as flax, hemp or kenaf. A bast fibre plant is composed of a wooden core surrounded by fibres. The processing unit separates the wooden core from the fibres and prepares both for further treatment. At the end of the Van Dommele line, the fibres are ready to be processed into insulation material, structural or non-structural boards (automotive and furniture industry), or composites (in combination with or replacing glass fibres). The wooden core can be applied as stable bedding for horses or as construction material. The installation of this system exemplifies the work of ABDC to propel the biomaterial industry in Alberta to new heights and make Alberta the centre for fibre processing in North America. The Van Dommele fibre processing system is located in Vegreville at Tech Futures, an ABDC partner.

ABDC is hosting a crop walk in Vegreville on July 27, 2011. Contact Ruth DeSantis at 403-948-8516 to find out more information about this and other events.

ABDC is a Government of Alberta initiative supported by partners Alberta Agriculture and Rural Development, Alberta Innovates - Technology Futures and Sustainable Resource Development.

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## **Alberta Biomaterial Development Centre Crop Walk**

There are exciting future opportunities in growing hemp and the potential for strong returns for Alberta growers.

"Growing hemp is often thought of as taboo," says Patti Breland, project coordinator with Alberta Agriculture and Rural Development. "There is much success with growing hemp in northern Alberta. Since 1997 with a license from Health Canada, it has been legal to grow industrial hemp commercially in Canada."

Research conducted at Alberta Innovates – Technology Futures in Vegreville started seven years ago and the expansion of this program has led to the creation of one of the largest hemp research groups in Canada. Currently, there are 20,000 acres of hemp in Canada, and demand for the fibre hemp produces is growing. Manufacturers are looking for hemp fibre supply to green their products.

Alberta Biomaterial Development Centre (ABDC) is sponsoring a Hemp & Flax Crop Walk at the Alberta Innovates – Technology Futures in Vegreville on July 27, 2011. The Centre is building on the success of last year's crop walk and will address questions that producers raised. "If you are a producer wanting to explore these exciting opportunities," says Patti, "come to the Crop Walk and speak with the experts to get your questions answered."

You will also have a chance to tour the recently developed fibre processing facility, which is bringing producers and manufacturers together to commercialize bioproducts. You can register for this event by emailing Ruth DeSantis at [ruth.desantis@gov.ab.ca](mailto:ruth.desantis@gov.ab.ca).

ABDC is your link to capitalize on feedstock expertise and help turn hemp biomass into sustainable opportunities for you and your community ([albertabiomaterials.ca](http://albertabiomaterials.ca)).

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## **Carbon Market Update - Agricultural Offsets**

Private companies are paying farmers directly for environmental improvements based on carbon offset credits from practice improvements in farming operations.

“Amounts of credits that can be generated by a particular practice change are standardized in Government of Alberta approved protocols,” says Sheilah Nolan, climate change specialist with Agriculture and Rural Development. “Since 2007, use of the Tillage Management System Protocol has generated over \$61 million in new income for agriculture producers. This has removed 5.1 million tonnes of carbon dioxide equivalents (CO<sub>2</sub>e) from the atmosphere, equivalent to taking 1 million cars off the road.”

Although agriculture emits only seven per cent of Alberta’s total greenhouse gas (GHG) emissions on an annual basis, agricultural practice improvements have already helped industry meet 20 per cent of the legislated emission reductions required under Alberta’s Specified Gas Emitters Regulation (2007). Opportunities to create offset credits from single practice improvements are not large on an acre or animal basis, but values add up when large numbers of areas or animals are involved, or when a number of practice improvements are combined. New opportunities for offsets from improved management of nitrogen fertilizer are now available in a Nitrous Oxide Emission Reduction Protocol (NERP), from improved feeding and manure management in a Dairy Protocol, and from continuous conservation cropping of summerfallowed land from a new flexibility mechanism within the Tillage Protocol. Interpretive guides have also been completed to support the use of Beef Protocols about management to reduce days on feed, use edible oils or reduce days to harvest.

“Not all farm practice improvements are eligible for offset credits” says Nolan. “There has to be a sound scientific basis for linking a practice change with GHG emission reductions, an improvement that is above and beyond business as usual, and proof that the practice change actually occurred”.

“Farm records are needed to document management improvements. On January 1, 2012, the Alberta Offset System will be increasing verification standards from a limited to a reasonable level of assurance. This will require the same types of third party verification and auditing needed to track other types of income. Electronic records reduce errors and can lower costs. Under the new verification standards, only offset credits created from practice improvements that happen after January 1, 2012 will be eligible for credit after that date. However, current rules will apply until January 1, 2012 and any credit serialized and registered on the Alberta Emissions Offset Registry may be retired after January 1, 2012.”

Many of the farm record and data management systems currently being used to create offset credits with the Tillage Protocol provide an excellent basis for meeting the new verification requirements. “Although it takes effort to create and track records, they have value beyond carbon markets. Good records increase efficiency and build knowledge needed to access other emerging environmental market opportunities,” Nolan adds. “In real estate, the three most important words are: location, location, location. For offset credits, the three most important words are: records, records, records.”

For more information about practice improvements that qualify as carbon offset credits visit  
[www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/cl11618](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/cl11618)

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## **Agri-News Briefs**

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### **Controlled Traffic Farming Field Days**

Controlled Traffic Farming Alberta, in association with partners, is hosting three Controlled Traffic Farming Field Days. The field days, being held at three first-year controlled traffic farming locations in Alberta, will cover systems and equipment used at each location, a project update, and will feature crop walks looking at soil quality, soil variability, zone mapping, nutrient status and variable rate fertilizer. Each event offers three soil and water management continuing education units (CEU) for CCAs. The field days are being held:

- July 27 in Lacombe
- August 2 in Trochu
- August 4 in Jarvie/Dapp

For more information, contact Peter Gamache MAg, PAg, project leader, Controlled Traffic Farming Alberta, at 780 720-4346, e-mail [pmgamache@gmail.com](mailto:pmgamache@gmail.com) or visit the Controlled Traffic Farming Alberta website at [www.controlledtrafficfarming.org](http://www.controlledtrafficfarming.org)

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### **GRO Summer Tour**

The Gateway Research Organization (GRO) is hosting it's annual summer tour in Westlock on July 27, 2011. The day will include a tour of the GRO site where barley, oat, triticale and flax, pulse mixtures, corn silage and pea seed treatment trials are being grown. The tour is \$10 per person with paid 2011 membership (\$30/year) or \$40 for non-members. For further information and to RSVP by July 25, 2011, call 780-349-4546.