



The Worth of a Blade of Grass...

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FORAGE

Collectively, forages cover more acres in the Province of Alberta than any other crop. In addition to their clear contribution to Alberta's economy as commercial crops, a recent report by Alberta Agriculture and Rural Development (ARD) and the Alberta Forage Industry Network (AFIN) suggests forages also confer an array of ecological goods and services (EG&S) which may even outweigh their direct value as crops.

Forages in Alberta include native range and bush (16.1 million acres), tame pasture (6.1 million acres), grass and legume seed crops (244,000 acres), corn silage (70,000 acres), and an additional 5.9 million acres of hayland, annual forage crops for fodder and other forage uses. Alfalfa leafcutter bees are also considered a part of the forage industry. Together, forages account for 28.5 million acres, or 55% of the agricultural land in Alberta.

The primary products of the forage industry are pasture, hay, greenfeed, silage, seed and sod. Livestock are the largest consumers of forage crops in Alberta, starting with the 4.95 million head of beef and dairy cattle in addition to the province's horses, bison, goats, elk, llamas and alpacas. Forages have non-agricultural end-uses as well, as sod and turf for residential areas, parks and golf courses, as feedstock in the bio-energy industry and as native seeds for reclamation in oil and gas.

Ecological goods and services are notoriously difficult to measure. Even the direct value of forages as commercial crops is only an estimate. Forages are often used on their farm of origin or sold to a nearby farmer and the sales are undocumented. Moreover, available estimates do not include the use of crop chaff or straw residue, important forage resources to many farmers.

Based on an attempt to include all **hay** produced and not only what is recorded as sold, hay is by far the most valuable aspect of the forage industry, with the estimated 6.98 million tonnes produced annually in Alberta valued at just over **\$620 million**. **Native and tame grazing pastures** are another important component of the forage industry. Alberta is home to 42% of Canadian native range (16,135,646 acres) and 44% of Canadian tame pastures (6,137,362 acres). Using average stocking rates across soil zones and pasture types, the annual value of pasture for grazing in Alberta is estimated at **\$349.8 million**.

Greenfeed, including crops intentionally seeded for forage and annual crops unsalable due to weather-damage comes in third, with the 1.5 million tonnes harvested annually in Alberta valued at **\$91 million**. **Straw** is used for bedding and is also highly valued as a winter ration by livestock producers. An estimated annual demand for 1.94 million tonnes for feed suggests an overall annual value of **\$77.0 million**. There are **46 sod farms** producing on 9,402 acres in Alberta and this industry garners **\$30.3 million** per year.

Forage seed is another important component of the forage industry and is particularly relevant to the Peace region, which is the second largest grass and legume seed-growing region in the world when including parts of British Columbia. Creeping red fescue, brome grass, timothy, red clover and alsike clover are some of the major seed crops. The region supports numerous forage seed brokers and 8 major processing facilities, 7 of which are in Alberta.

The Peace Region Forage Seed Growers Association (PRFSG) started in 1995 to advance the forage seed industry in the region. In 2004, it became a commission and set a refundable levy on the sale of forage seed grown in the Peace. Since 2007, this levy has generated between \$173,000-\$237,500 annually and these funds go towards research and development, extension activities and the promotion of the industry in the Peace. Between the Peace region and the southern irrigated area, 56,268 acres are seeded to forage for seed in Alberta, contributing **\$23.8 million** to the industry annually.



Q: Why did the cowboy get a dachshund?

A: Someone told him to get a long, little doggie!

EVENTS

Field Days

Join us **August 7th** for our Fairview Field Day. We will tour the GPRC - Fairview Campus corn grazing, in addition to ongoing water projects, tour Dynamic Seeds and our Fairview forage plots and Western Beef Development Centre corn project in the afternoon.

Join us **August 8th** to look at our corn fertilization and variety trials at Andruchiw Farm and visit our new our forage plots at Spirit River.

Join us **August 9th** to tour our experiment regarding stages for swathing oats for greenfeed or swath grazing at Cailliau Farm and visit our new our forage plots at Valleyview.

\$25/member, \$40/farm pair
\$30/non-member, \$45/farm pair

Contact: Karlah
(780) 523-4033 and register today!

NOTE: Our July Pasture walks are CANCELLED due to unforeseen circumstances. Keep posted for a rescheduling!

SAVE THE DATE!!
Western Canadian Grazing
Conference
November 27-29, 2012
Red Deer, AB



Join us on our
Facebook Group!

<http://www.facebook.com/#!/groups/pcbfa/>

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Corn, other annual cereals, perennial grasses and perennial legumes are all grown for **silage** in Alberta. Corn silage is valued at **\$25.8 million** annually, with an average production of 796,480 wet tonnes while the 3.5 million tonnes of cereal silage are valued at **\$114 million**.

Forage exports are another significant component of the industry. Alberta supplies approximately 38% of the forage seed exported by Canada with the annual production valued at **\$36 million**. Other exports include non-timothy hay (valued at **\$4 million** annually), processed alfalfa and compressed timothy hay. **Processed forages** include compressed timothy hay and dehydrated and sun-cured alfalfa pellets. The compressed hay is exported largely to Japan to be used as a fibre in dairy and beef rations and is valued at **\$78 million** per year. The alfalfa pellets are also exported largely to Japan, although approximately 10% is sold domestically. Alfalfa pellet plants typically contract out the forage acres required annually and the 92,041 tonnes are valued at **\$21 million** annually.

Alfalfa leafcutter bees are essential to forage seed production. In the Peace, bees are stocked at 20,000-25,000 bees or 2-2.5 gallons per acre. Farmers usually get a surplus 0.5 to 0.6 times their original stock and each gallon of surplus is valued between \$65-\$90, creating an annual value of **\$16.0 million** in Alberta as a whole. Forages also play an important role in facilitating activities associated with **ag-tourism**. Horseback riding, experiencing the cowboy lifestyle, touring native prairie stands, attending a camp or staying in an on-farm guesthouse all depend on forages. Forages contribute an estimated **\$64.7-\$108.5 million** every year to ag-tourism, which is valued at up to \$325.6 million as a whole.

Collectively, the **total current estimated direct value of forages** in the Province of Alberta lies somewhere near **\$1.6 billion**, with the potential for more through carbon sequestration and the emerging bio-energy industry.

While the direct value of forages is great, the **indirect value** of these perennial stands as providers of ecological goods and services (EG&S) could be as high as **\$2.2 billion**. Permanent vegetative cover prevents soil **erosion** by slowing water and wind movement down and provides a healthy soil structure that encourages water to infiltrate, rather than run over and off of landscapes. This infiltration in turn prevents soil particles, potentially loaded with nutrients, from entering watersheds. Forages thereby contribute to improved **water quality and regulation**. These stands filter water as it percolates downwards and deposit clean water into underground reservoirs, maintaining water tables and protecting wells and other sources of drinking water. With their ability to regulate and stabilize watershed function, forages make a contribution to **recreational fishing** as these stands decrease runoff and store and release water over a longer time period, keeping lake levels high and the water clean.

Forages contribute to other **wildlife-related activities** like hunting and wildlife viewing as they provide habitat and food for the predators, ungulates and waterfowl who have lost a lot of their former range to annual crop production. Forages provide **pollination services** to the numerous pollinator populations that have decreased due to habitat destruction and thereby also contribute to **honey production** for the 670 honey producers producing 28 million pounds of honey in Alberta annually. It is suggested that 5% of what honeybees eat is derived from the tame forages sainfoin, alfalfa and clover. Other EG&S include current carbon sequestration, increasing and maintaining biodiversity, biological control of pests, food production, soil formation, nutrient cycling and numerous other recreational opportunities. Combined, **indirect non-market values** are estimated between **\$0.5 and \$2.2 billion**. **Combining these figures with the direct value of forages suggests an overall value of anywhere between \$2.1-\$3.8 billion for the forage industry as a whole.**

So, what's a blade of grass really worth? Well, after all these numbers, my head is spinning a bit, but I bet if you really wanted to, you could figure it out. Let me know if you do! The full report can be accessed online at: [http://www.l.agric.gov.ab.ca/\\$Department/deptdocs.nsf/all/for13923/\\$FILE/value-alberta-forage.pdf](http://www.l.agric.gov.ab.ca/$Department/deptdocs.nsf/all/for13923/$FILE/value-alberta-forage.pdf).