Alberta Forage Industry Network (AFIN) Position on Climate Change

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"The vast preponderance of evidence, based on years of research conducted by a wide array of different investigators at many institutions, clearly indicates that global climate change is real, it is caused largely by human activities, and the need to take action is urgent." Alan I. Leshner, CEO, American Association for the Advancement of Science.

The effects of climate change are being observed around the world in the form of extreme weather events, temperature changes, glacial retreat and increases in the amount of CO_2 in the environment. Many of the hottest years on record have been documented in the past two decades (United Nations). These issues, and the prediction of 9 billion people on our planet by 2043 (United Nations data), are increasing the demands on the earth's resources.

Perennial forages and native grasslands are recognized for their ability to mitigate the effects of climate change. Furthermore, these perennial plant systems are broadly beneficial, providing ecological goods and services that promote the health, social, cultural and economic needs of our society.

The specific roles that forages and grasslands can play include:

1. reducing greenhouse gas emissions generated per pound of ruminant protein – well managed forage systems improve the diets and productivity of ruminants;
2. increasing agricultural carbon sequestration - forages and grasslands are a carbon sink that can be further enhanced by well managed grazing of livestock;
3. decreasing soil erosion – permanent plant cover prevents large scale erosion events;
4. revitalizing watersheds – permanent plant cover filters, reduces runoff and increases soil/water infiltration thereby increasing surface water quality, replenishing aquifers and reducing the risk of flooding in rural areas and urban centers;
5. supporting regenerative agriculture practices – use of cover crops, perennial forages and livestock improves soil structure, soil biology and nutrient cycling; and,
6. maintaining biodiversity - a variety of flora and fauna, soil organisms, beneficial insects and wildlife species prosper under the protection of permanent forage and grassland cover.

Capturing the broad benefits of forages and grasslands will require a paradigm shift. This can be encouraged by:

1. research policy that recognizes the long term benefits of forages and grasslands and supports their relative competitiveness with cash crop alternatives;
2. risk management programs (e.g. pasture and forage insurance) that put forage production and utilization on an equal footing with cash crop production;
3. new initiatives that encourage forage production, e.g. tax concessions on acreage seeded to perennial forages and cover crops; and,

4. public policy that recognizes and pays for the greater value of carbon sequestered along with other goods and services provided by forage crops and grasslands.

Alberta's petroleum, agriculture, and forestry industries reflect traditional carbon source development and use. New opportunities for carbon capture, through green plant photosynthesis, have the potential to significantly reduce Alberta's carbon footprint. Alberta can be a global leader in its efforts to develop sustainable solutions to mitigate climate change.

AFIN represents the forage stakeholders that have the ability to address climate change in a sustainable manner. Working together, AFIN and other vested stakeholders, both urban and rural, will be part of the solution to help mitigate climate change.

This position document will be reviewed at least every 3 years.