Oral Comments to the Senate Standing Committee on Agriculture and Forestry

March 21, 2018

Mr. Chairman and Committee members, thank you for the opportunity to appear before you and present the Alberta Federation of Agriculture's perspectives on the potential impact of the effects of climate change on the agriculture and agri-food sectors.

AFA is a provincial general farm organization, representing producers on non-commodity specific issues. We have been in existence in various forms since 1905 and were incorporated by private statue in Alberta in 1959.

When it comes to the issue of climate change, AFA takes a pragmatic view. While there are varying opinions on Climate Change, the overwhelming majority of the scientific community agree that it is occurring.

Producers in Alberta generally recognize that climate change exists, regardless of the why. Our industry's vulnerability to extreme weather events and the effects of changing climates only reinforces the fact that we must be part of the mitigating efforts to counteract these effects.

Agriculture is in a unique position because of its ability to 'capture' atmospheric carbon in growing crops and storing a portion of that carbon in soil organic matter. Agricultural soils can be a source (by emitting CO2) or a sink (by storing CO2) for CO2 depending on soil management practices.

Alberta, with roughly 24 million acres of cropland, and nearly 22 million acres of pasture land, is in the unique position to make significant contributions to Canada's greenhouse gas reduction targets.

The good news is that our farmers and ranchers have already taken many steps to reduce, remove and/or replace greenhouse gas emissions, subsequently improving efficiency, productivity and sustainability. Greenhouse gas emissions from agriculture represent only 8% of Alberta's total emissions.

Conservation farming practices, such as direct seeding, zero tillage and good fertilizer placement, have increased soil organic carbon levels helping to 'offset' GHG emissions and reduce the industry's net contribution by decreasing inputs like fuel and pesticides. The adoption of these management practices also benefit water, soil and air quality, increasing resilience to changing climates.

As farmers, we know that our most important sustainable natural resources on the Canadian Prairies are soil and water. Both are essential to produce food to sustain human life.

And yet, we are now working on a shrinking land base. Ten percent of the land in Canada is private and two thirds of that private land is urban and industrial. From 2000 to 2012, the University of Alberta estimates we lost 13 hectares per day to urban growth.

While this loss means that we lose valuable production land, it also means that when it comes to carbon reduction, we lose the ability to generate 3.5 tonnes per day of carbon reductions.

Agriculture, along with forestry, is the primary industry that is based on removing carbon from the air, combining it with water and soil nutrients to produce food energy and sequester carbon.

Based on this concept, agriculture is naturally one of the first tools that should be utilized in reducing our carbon footprint. Protecting our farmland from urban encroachment remains a critical issue both from an environmental and food production standpoint.

Adaptation & Resilience

Agricultural production is highly dependent on weather and climate and will be affected by changing trends. There are indications that changes in rainfall and temperature patterns have occurred in Alberta and the impacts vary within each of Alberta's nine different ecoregions, with individual farm management decisions, and with influences of new technologies, markets, trade and policies.

Most climate change models predict warmer but more extreme weather with increases in precipitation through areas of the Prairies. We see three main areas of impact where farmers will need to adapt:

1. The expansion of the growing season with the possible shortening and warming of the winter season.
2. Shifts in the amounts and timing of precipitation.
3. The need to look for new crops and ways to combat new weeds, insects and diseases.

For example, regardless of whether we are talking about wheat, canola or barley, we will be looking at more winter annual crops, rather than spring crops. As well, pulse crops and other crops in crop rotation will be critical to our adaptation to the changing climate. Forage crops also factor in greatly to the resilience of our farms.

With all of the unknown variables that climate change will bring, we can't stress enough the importance of continued research and development in these areas to ensure that our farmers can successfully navigate what comes their way.

Carbon Pricing & Levy

Alberta's carbon market, the first of its kind in North America, gives farmers the opportunity to sell carbon offsets from the voluntary improvements they make within their operations to reduce greenhouse gas.

While the offset system is a good start at rewarding producers for their good practices, it unfortunately does not take into account the entire picture.

Presently, offsets are based on protocols that look at a single concept, for example zero till, or a single commodity, example cattle in a feedlot. Yet we collect and store carbon with our grasslands, the uplands around our sloughs and wetlands and in our crop's root zones.

Carbon inputs continue to reduce as improvements in equipment allow us to travel more efficiently across, around and between our fields. We burn less fuel and, in turn, emit less carbon thanks to emission technology.

Presently, there is not enough research and data to more accurately quantify the net carbon footprints of our farms. AFA would like to see more research done in this area, focusing on the net farm sequestration of an operation.

When it comes to a carbon levy, we understand that it is considered an efficient way to spur change by encouraging people to reduce their carbon footprint.

However, the difficulty producers have is in passing on a carbon levy to a processor or consumer. Farmers do not have the ability to set their own prices, rather, it is dictated by the market.

Again, this is one more reason Canadian farmers, and in particular Alberta farmers, have looked at the possibilities of a carbon offset because we cannot pass that levy cost on to processors or consumers the way that other industries do.

We believe the carbon levy should be neutral to our agricultural business and the energy we use exempt. While we applaud existing efforts to exempt the gas and diesel we farmers use, we also believe in addressing the gap that excludes exemptions for the propane and natural gas used to dry our products, heat our calving barns and power the pumps and generators irrigating our crops and tame pastures.

Lastly, we would want a most favorable depreciation rate on those capital purchases we make in technology that supports carbon reduction efforts. Whether a solar panel for a barn roof, or an upgrade in the tractor we use.

Our aim as farmers is always to become more efficient and competitive in what we do. If the result means a lower carbon footprint, that's a win-win situation.

But in order for people to buy into the methodology of the carbon levy, our government must make the case that it's being invested back into the research and programs that can further evolve our operations while continuing emission reductions.

Again, on behalf of AFA, we'd like to thank the Senate for giving us the opportunity to speak today. We welcome any questions you may have.