

# Best Management practices



*Growing for a better future.*



## AGRICULTURE and GREENHOUSE GASES

Canadian agriculture is an essential part of the economic, political and social fabric of Canada. Agriculture is the backbone of many rural communities and plays an important role in the quality of life of all Canadians. The agri-food sector is not only the third-largest employer, it is also one of the country's top five industries and accounts for about 8.3 per cent of the Canadian Gross Domestic Product (GDP).

Canadian agriculture also occupies a large and important role concerning the Canadian environment since the farm community is the chief steward and manager of extensive natural resources. More specifically, agriculture in Canada has a unique relationship with regards to greenhouse gases (GHG). On one hand, the agriculture sector may be affected by climate variability, on the other hand, a small portion of GHG emissions originate from various agricultural production and management activities. The agriculture sector can also be part of the solution to adverse climate changes by promoting carbon sequestration and by adopting other greenhouse gas reduction strategies.

It is generally acknowledged that agricultural activities are responsible for about 10 per cent of Canada's GHG emissions. Nitrous oxide (N<sub>2</sub>O), methane (CH<sub>4</sub>) and carbon dioxide (CO<sub>2</sub>) are the primary greenhouse gases released, accounting for 62 per cent, 34 per cent and four per cent of agriculture's total emissions respectively.

### Best Management Practices

The nature of the agriculture industry allows for reduction of GHG emissions by encouraging sustainable management practices that are economically viable and environmentally sound. The agriculture industry is currently developing some tools, including Best Management Practices (BMP) that can reduce GHGs emissions and provide other environmental benefits like clean water, healthy soils and wildlife habitat.

### Agriculture as a solution for reducing environmental risks

By choosing different rotations of crops, tillage practices, fertilizer applications, etc., farmers can alter the carbon cycle and actually promote the storage of carbon in soils. This process called carbon sequestration actually removes excess CO<sub>2</sub> from the air and stores it in the soil in what is called a carbon sink.

Experts predict that Canadian agricultural cropland will become a net sink of CO<sub>2</sub> by 2010, if current trends of conservation tillage and no-till are actively promoted.

Reductions in other greenhouse gases can be facilitated by adopting numerous management practices like improved manure management, fertilizer management and better feed analysis. These help farmers use their resources more efficiently while helping to reduce methane, nitrous oxide and carbon dioxide emissions.

**Keep reading to find out more about what farmers are doing to reduce greenhouse gas emissions and to keep our environment healthy.**



Agriculture and Agri-Food Canada

Prairie Farm Rehabilitation Administration

Agriculture et Agroalimentaire Canada

Administration du rétablissement agricole des Prairies



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