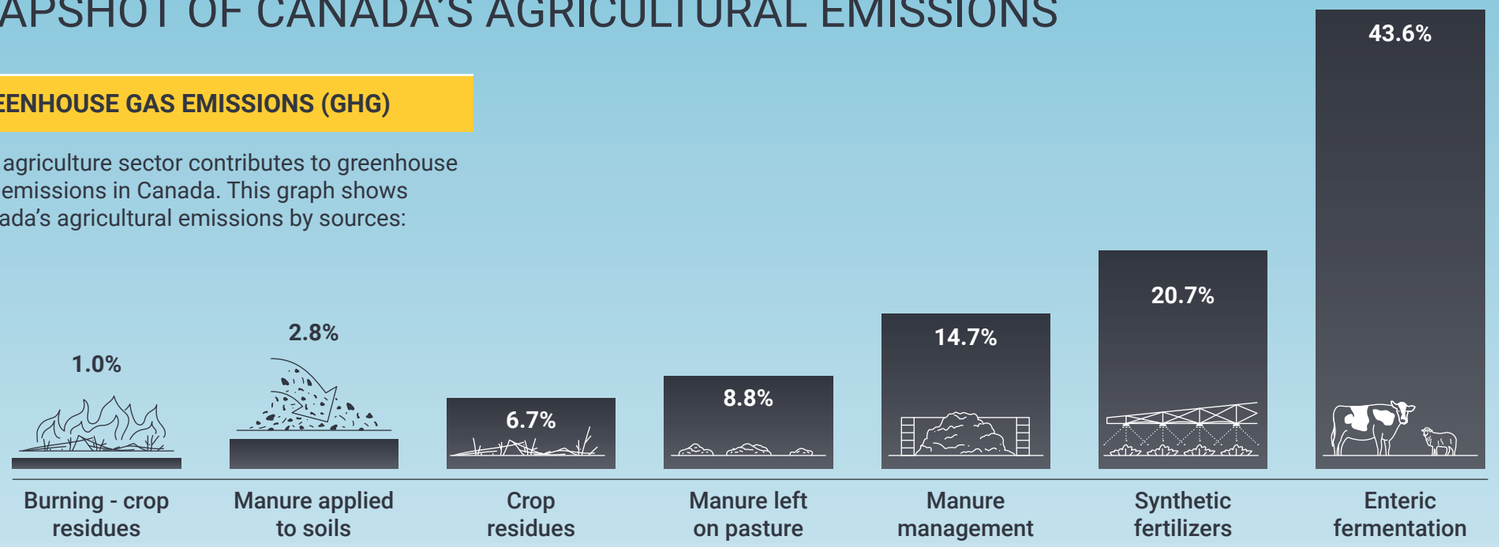
SNAPSHOT OF CANADA'S AGRICULTURAL EMISSIONS

GREENHOUSE GAS EMISSIONS (GHG)

The agriculture sector contributes to greenhouse gas emissions in Canada. This graph shows Canada's agricultural emissions by sources:



Source: FAOSTAT https://www.fao.org/faostat/en/#data/GT/visualize

THE TWO MAJOR GREENHOUSE GAS SOURCES

ENTERIC FERMENTATION

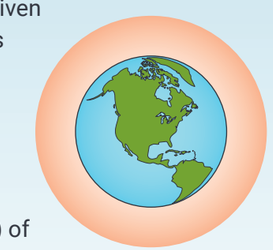
A normal step in the digestive process in ruminant animals (such as cattle, sheep, and goats) that leads to the emission of methane (CH_4) as a by-product.

SYNTHETIC FERTILIZERS

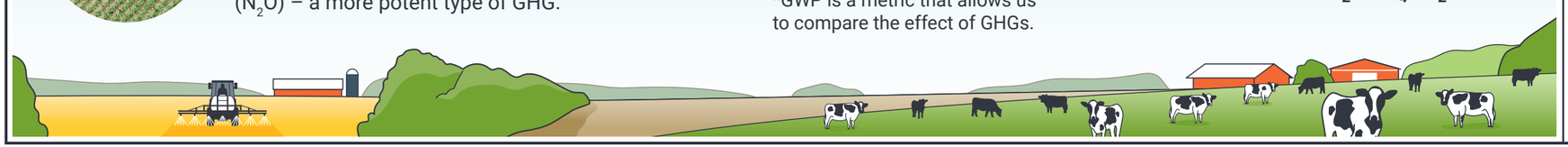
Production of fertilizer leads to carbon dioxide (CO_2) emission, while use of fertilizer on a farm leads to production of nitrate, the raw material for nitrous oxide (N_2O) – a more potent type of GHG.

AGRICULTURE-DRIVEN CH_4 AND N_2O EMISSIONS

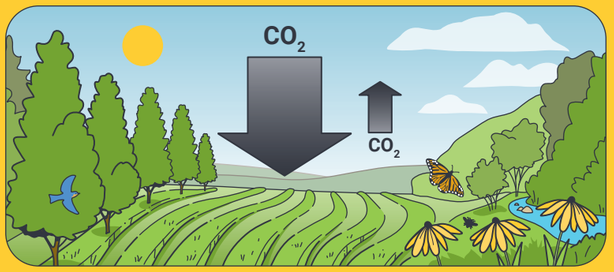
Addressing agriculture-driven CH_4 and N_2O emissions is critical to mitigating climate change. While much of the public focus has been on reducing CO_2, the Global Warming Potential (GWP) of methane and nitrous oxide exceeds that of carbon dioxide.



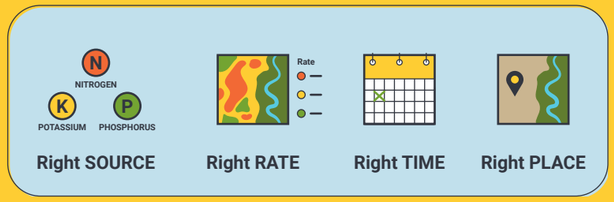
*GWP is a metric that allows us to compare the effect of GHGs.



SUGGESTED STRATEGIES TO REDUCE EMISSIONS



Adopt cultivation techniques that convert atmospheric CO_2 to carbon-based compounds in the soil, while also reducing soil emission and the need for fertilizers.



Adopt the 4R's of nutrient management.

Design and adopt technologies that reduce and capture livestock emissions (e.g. anaerobic digesters for manure management, livestock feed management, breeding energy efficient livestock)