

5 BENEFICIAL PRACTICE AREAS FOR GREENHOUSE GAS MITIGATION

Manitoba Beef Sector

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1

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soil carbon sequestration

- Improve grazing management** on perennial forages and grasslands
- Increase acreage** of perennial forages
- Adopt cover cropping and intercropping** in annual crop systems

- Plant shelterbelts**
- Restore** grasslands and wetlands in locations with environmental benefit
- Preserve** existing grasslands to conserve carbon already stored in the soil




2

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enteric methane emissions

Improve grazing management	to produce higher quality forage and increase feed conversion rates, shortening animal growth periods
Improve herd management	to raise breeding success and calf survival
Employ feed testing and ration balancing	to optimize winter nutrition and identify appropriate feed additives that increase growth rates
Establish backgrounding operations	to incorporate feed grains into rations, reducing the ratio of high fiber feeds in diets
Improve herd genetics	to increase animal productivity

WHY?



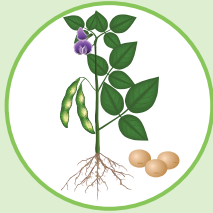
3

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nitrous oxide emissions

- Improve synthetic nitrogen fertilizer use** (ex. 4Rs) to maximize nitrogen uptake and minimize nitrogen loss
- Improve nitrogen use efficiency** in crops through agronomic practices and variety development

- Adopt cropping rotations** that include legumes to reduce inorganic nitrogen requirements
- Integrate grazing** livestock into cropping systems to reduce inorganic nitrogen use



4

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emissions from manure

Employ feed testing and ration balancing	to avoid exceeding animal protein requirements, which reduces the potential for nitrous oxide emissions from urine and manure
Apply manure below the soil surface just before crop uptake	to avoid nitrogen losses
Reduce manure storage time	to reduce manure methane generation
Design barns and manure storage systems	to reduce ammonia emissions

WHY?

5

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fossil fuel consumption

- Extend the grazing season** into the fall and winter to avoid manure hauling
- Improve fuel efficiency** of hauling and farming equipment

- Shift to biofuels** such as biomass heating and biodiesel for transportation
- Shift from fossil fuel** to electric power
- Improve heating efficiency** of barns

