

# Environment



## Environmental Questionnaire

### GLOSSARY

**Ballasted or balanced** – The addition of fluid to tractor tires to help counterbalance weight across all tires, to help improve traction and lower the centre of gravity for larger tires. Assists in improving productivity of tractor use in the field and potentially reducing tractor ruts when spreading manure.

**Biodigester (or anaerobic digester)** – A tank that digests and decomposes organic material (manure, food waste, or crop residues) using bacteria in an oxygen-free (anaerobic) environment. The process creates a renewable energy called biogas (methane and carbon dioxide) and digested organic matter that can be applied to the land as fertilizer.

**Dairy Farms Plus** – A free online tool developed by Dairy Farmers of Canada which allows farmers to assess on-farm environmental and socio-economic practices. Individual farms can calculate their carbon and water footprints, as well as other indicators like fertilizer and pesticide use, and compare their performance to provincial and national averages. By estimating your dairy farm's environmental footprint, you can customize your action plan and prioritize your actions based on the tool's recommendations and your own preferences or expected benefits. Website: <https://dairyfarmsplus.ca/>

**Dragline** – Flexible hose that is usually 6-10" in diameter used to transport manure that is pumped from manure storage to field application equipment, can vary in length and be several miles long.

**Contour cropping** – The agricultural practice of planting across a slope that follows a field's elevation contour lines to help reduce erosion. These contour lines create a water break to help reduce the formation of rills and gullies during times of heavy water run-off.

**Cool Farm Tool** – A free online tool to assess greenhouse gas emissions, biodiversity management, and water management on individual farms. It is intended to help farmers choose management options that improve their environmental performance, and to track and measure improvement over time. Website: <https://coolfarmtool.org/>

**Enteric emissions** – Discharge of gas produced by a digestive process of microorganisms when feed is digested in the rumen of cattle. It is one source of greenhouse gas emissions from agricultural production and may be further managed by adjusting feed, ionophores and other practices.

**Greenhouse gas (GHG)** – Gas that absorbs and emits radiant energy. The primary GHGs in the earth's atmosphere are water vapour (H<sub>2</sub>O), carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), and ozone (O<sub>3</sub>). It is estimated that agriculture contributes 8.4% of all greenhouse gas emissions in Canada.

**Grassed waterway** – A shaped or graded channel established with suitable vegetation to carry surface water at a non-erosive velocity to a stable outlet, to help protect soil and riparian areas from erosion in higher water conditions. Can be natural and/or man-made with grass and other vegetation, and assists diverting water to a desirable location.

**Holos** – A free downloadable software tool developed by Agriculture and Agri-Food Canada to estimate and provide suggestions to reduce greenhouse gas emissions on individual farms. Users can select scenarios and farm management practices that best describe their operation and then adjust these practices to see the effect on emissions. Examples of these adjustments include changing livestock feed, reducing tillage or including perennial forages in rotation. Website:

**Integrated Pest Management (IPM)** – A decision-making process for managing pests in an effective, economical and environmentally sound way. It involves planning and managing agricultural production systems to prevent insects, plant diseases and weeds from becoming pests through prevention, monitoring and control. Controls can be biological, physical, behavioural or chemical.

**Inter-cropping** – An agricultural practice where two or more crops are grown together in the same field, used as a mechanism by which the functional diversity of an agroecosystem can be increased.

**Natural area** – A geographical area that has developed through natural growth without intervention from humans. Examples include native prairie grasslands, natural forests or uncropped areas near wetlands.

**Nutrient Management Plan (NMP)** – Planned use of livestock manure in an environmentally responsible manner that balances source of nutrients from fertilizer and manure with an application strategy to meet crop/field requirements. NMPs are required by many provincial authorities for livestock operations that meet a minimum size (e.g. 300 animal units) or defined nutrient units (e.g. 25 kg P<sub>2</sub>O<sub>5</sub>). NMPs may or may not include storage facility design, application limits, setback distances from water bodies, record keeping and soil testing. NMPs are not mandatory within proAction but can be used to demonstrate how a farm is meeting environmental requirements for managing manure. These types of plans may go by different names in different regions. For example, in Manitoba, the legislation calls this plan a Manure Management Plan, while an NMP refers only to synthetic fertilizers.

**Minimum tillage (minimum till)** – Soil conservation method to manage post-harvest residue from crops with the goal of minimum soil disturbance. Efforts include actions that avoid turning the soil over to minimize moisture and organic matter loss in the soil. Sometimes referred to as conservation tillage.

**Pollinator habitat** – An area with a variety of flowering plants that provide food and nesting space for bees and other insects that carry pollen from plant to plant. This may be a natural setting, such as a prairie meadow, or a man-made area of flowering plants cultivated specifically for pollinators.

**Riparian strip** – A strip of land (typically 10 to 15 metres wide) between water and land environments that provides wildlife habitat, streambank stability, or a corridor for wildlife. It is adjacent to a permanent or temporary waterbody and helps recharge groundwater or enhance nutrient uptake. This area can include trees, grasses, shrubs and other enhancements to help stabilize soil or improve biodiversity.

**Riparian zone** – A transition zone between water and land environments along creeks, streams, gullies, rivers and wetlands. Healthy riparian areas may have any combination of trees, shrubs, and/or grasses depending on the local conditions. The term is derived from the Latin word *ripa*, which means riverbank.

**Rock chute** – A spillway designed to reduce erosion of surface water flowing to an outlet, using rocks and/or other material to help stabilize banks or the bottom of waterways.

**Rotational grazing** – Shifting of livestock to different units of pasture or grasslands in a sequence to enhance the recovery and growth of plants after grazing. The sequence considers livestock density, ground cover, forage utilization and the time needed for plants to rest and re-grow before being grazed again. It can improve use efficiency of grazing land by ruminants.

**Tiled protection** – Use of tiles under agriculture land surfaces as a type of drainage system to remove excess water from soil below its surface. The use of tiles increases the amount of air in pores of the soil to augment conditions for optimal growth of crops.

**Upland habitat** – Habitat that is up-land from a waterbody. The riparian zone (see definition above) is the first upland habitat zone you encounter as you move outward from a waterbody.

**Watercourse** – A natural or artificial channel through which water flows, including the movement of water in rivers, creeks, and other streams which naturally pass over the surface of the land.

**Water and sediment control basin** – A basin that collects or stores runoff water and traps sediment, reducing erosion and preventing gully formation. It is usually placed at the lower end of slopes. Once the water is collected, it sits in the basin, allowing time for

the particles, soil and nutrients to settle and separate from the water. Water is then slowly released through a tile intake and/or through soil infiltration, and sediment is periodically removed.

**Wetland** – A biologically diverse ecosystem permanently or seasonally flooded by water. Wetlands are areas where oxygen-free processes prevail and are characteristically comprised of aquatic plants that are adapted to the unique hydric soil. Wetlands help to purify water, process nutrients, stabilize shorelines and support plant and animal life.