# NERP Reference points

**Nitrous oxide** (N<sub>2</sub>0) – An atmospheric gas whose rising concentration is considered to be a contributor to the greenhouse effect. Over half of the net greenhouse gas emissions from agriculture in North America are attributed to N<sub>2</sub>O.

Offset credit – Also called a carbon credit, a reduction or removal of Greenhouse Gas (GHG) emissions from a project which features new management practices, technology and/or control systems. Credits can be purchased or traded.

NERP – Nitrous oxide Emission Reduction Protocol, a proposed system to help reduce on-farm emissions of nitrous oxide. Developed in Canada, this could have global impact on both agricultural best management practices and the carbon offset market.

**Climate Change Central** – a non-profit organization that empowers Albertans to take action on climate change through consumer rebate programs, demonstration projects, educational outreach, and the development and facilitation of a provincial carbon market, the first in Canada.

**CFI** – The Canadian Fertilizer Institute is an industry association that represents manufacturers, wholesale and retail distributors of nitrogen, phosphate and potash fertilizers.

**IPNI** – The International Plant Nutrition Institute is a global not-for-profit, science-based organization with a focus on agronomic education and research support. Its mission is to develop and promote scientific information about the responsible management of plant nutrition for the benefit of the human family. **www.ipni.net** 

# The benefits of NERP

#### For farmers

If they meet the criteria outlined in NERP they could qualify for an offset credit equal to \$5-\$10 per acre (\$12-\$24 per hectare). They would also be improving the economics of their farm while doing the right thing in reducing Greenhouse Gas emissions.

#### For industry

Once implemented, **NERP** would be a source of creditable and secure offset credits. These, of course, could be purchased or traded in the growing carbon marketplace.

#### For government

A tool like **NERP** could help governments meet their Greenhouse Gas emission reduction commitments.

#### For environmental groups

The opportunity to partner with the agricultural community to work towards the same goal – reduction of Greenhouse Gas emissions, responsibly.

#### For researchers

**NERP** is a science-based transformational tool. Aside from providing all other stakeholders with a solution to their needs, **NERP** also creates opportunities for researchers to advance nitrous oxide science.



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A Canadian development may present a win-win situation for the environment and farmer income, for Canadian farmers and around the world.

The Nitrous oxide Emission Reduction Protocol (**NERP**) is intended to reduce on-farm emissions of nitrous oxide ( $\rm N_2O$ ) in a quantifiable, credible and verifiable way that would allow farmers to earn carbon credits. Currently, it is being readied for introduction in the Canadian province of Alberta, the first jurisdiction in North America to actively regulate Greenhouse Gas (GHG) emissions and establish a regulatory carbon trading market.

### **Government of Alberta**





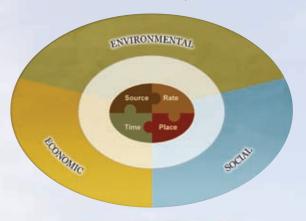
## **Climate Change Central**

**NERP** is a good example of public and private sectors working together to assist farmers to implement Best (Beneficial) Management Practices (BMPs) on-farm as well as reduce overall GHG emissions. Initiated by the Canadian Fertilizer Institute (CFI), **NERP** is the result of a collaborative initiative that includes the Alberta government, Climate Change Central, ClimateCHECK Corporation and the International Plant Nutrition Institute (IPNI).





**NERP** is based on applying fertilizer using BMPs that are part of the 4R nutrient stewardship system. This system encourages farmers to apply fertilizer products using the Right Source @ Right Rate, Right Time, Right Place® framework. Farmers can participate in the **NERP** by implementing a suitable management level from basic through to intermediate, or even advanced. **NERP** supports the three pillars of sustainable development, namely environmental, social and economic sustainability.



Introducing a comprehensive strategy to minimize the emission of  $(N_2O)$  from agricultural soils is the right thing to do.

For more information about **NERP** and other initiatives to help reduce Greenhouse Gases, please visit

www.climatechangecentral.com or www.cfi.ca.

