

CONSULTATION WORKSHOP FOCUS SESSION
Nitrous Oxide Emission Reduction Protocol (NERP)
Calgary, Alberta
October 28 and 29, 2008

DISCUSSION GUIDE
Quantification for Simple/Intermediate/Advanced Group

Desired Workshop Outcomes:

- ❑ Determine which BMPs should be required for each level of the Protocol/N Stewardship Plan.
- ❑ Derive a relationship between sophistication of landscape classification (i.e. none vs concave/convex vs GIS-directed) and the degree of emission reduction expected.
- ❑ Clarify/support/derive appropriate modifiers.
- ❑ Agree on knowledge needed over the next five years, with the goal of developing a Science Plan.

Process and Reporting:

- Review the information provided in the Science Discussion Document and decisions made during Day One.
- Develop options consistent with the area of focus and the related workshop outcomes
- Provide recommendations to the larger group for each option proposed and for each recommendation indicate what response you suggest be provided from this workshop:

1. *“Accept the option today for inclusion in a Nitrous Oxide Emission Reduction Protocol”; or,*
2. *“This option will be acceptable but needs more work following the workshop”*

Note: *If “2” is recommended then the group should suggest where we go from here: who, possible approaches, time frame.*

Also:

- Gaps in research, knowledge and/or industry coordination in this area which are identified as part of the recommendation or during the discussion should be noted for further discussion during the “Gaps” portion of the workshop later in the day.
- The Content Leader will prepare, with the Process Leader’s help, a PPT presentation (see template) to the larger group at which time options will be evaluated.
- The Content Leader will present the PPT presentation of recommendations, with background on each recommendation as appropriate, in anticipation of the larger group being polled as to their level of acceptance of each recommendation.

Related Questions from the *Science Discussion Document*

NOTE: These items are identified in the Document as critical to address. The way they are phrased below is a guideline, the Group may decide to modify the way the option is presented and the group may identify new options through their discussion of the issues.

Decision point 4.4.4.b: The BMPs for the levels of the NERP are allowed as follows:

- BMPs for Product, Time, and Place similar in all levels _____
- BMPs for Product, Time, and Place ‘stacked’ in advanced levels _____
- Newly developed BMPs eligible for all levels _____
- Newly developed BMPs eligible for only advanced levels _____

Further, the group will need to discuss further description of the 4R BMPs (see p. 23 of the discussion document) to:

- Provide details of Right Time fertilizer management:
 - For example, a definition of ‘spring application’ (e.g. after thaw/before seeding, before 01 June, after 15 Oct, etc.),
 - Specification for products having controlled release properties (e.g. specified brands, specified polymer characteristics, etc.).
 - NOTE – regional characteristics will be important here.
- Provide details of Right Place fertilizer management:
 - For example, a definition of ‘banding’ (e.g. with seed and/or below seed, allowable space between bands, allowable depth of band, procedure for measuring band dimensions, etc.);
 - Compared to actually happens in practice, are the simple, intermediate and advanced levels of management identified in Table 5 of the SDD, appropriate? (i.e., should simple have no consideration of different spatial application of N by knolls, midslopes and depressions? Should level 2 introduce but by field knowledge of topography and performance, and is Level 3 appropriate?)
- Provide details of Right Form fertilizer management:
 - For example, a definition of ‘ammonium formulation’ (e.g. any ammonium salt, etc.)

Note – this Group will need to cross reference with Group 2, Practices & Technologies on above descriptions.

Based on the Case Studies Presented and the Regional Emission Factors generated by Canada’s National Inventory Methodology (reference Dr. Lemke and Rochette data), please consider:

Decision point 4.4.4.c: To estimate reductions in N₂O emissions achieved by implementing the NERP, the project farm N₂O emissions calculated according the NIR methodology (See Annex 1) are multiplied by the following modifiers:

- Simple level modifier corresponds to _____
- Intermediate level modifier corresponds to _____
- Advanced level modifier corresponds to _____

Will there be a regional impact on the modifiers?

This group may need to cross reference with Group 1, Measurement and Emissions Factors, to ascertain the appropriate scale at which N₂O emission factors are to be applied, and determine if these modifiers are consistent at that scale.