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This comment was received via email by the VCS Association.

Comments on the proposed new VCS methodology "Quantifying N<sub>2</sub>O Emissions Reductions in USAgricultural Crops through N Fertilizer Rate Reduction" below:

- The width of the 95% confidence bands around the average emissions shown in Figure G4 are substantial. Even with the smallest recommended fertilizer rate from Table E2 (147 kg N ha<sup>-1</sup>), the confidence interval goes from 6 until 17, with an average of 12 kg N-N<sub>2</sub>O ha<sup>-1</sup> day<sup>-1</sup>. Due to error propagation, the uncertainty will be even much greater if this formula is used to calculate the difference in N<sub>2</sub>O emissions due to differences in N application. As a consequence, the probability that emission reductions calculated using the empirical equations G3 or G5 are not conservative is very high. This risk must be mitigated by applying appropriate deductions. According to draft VCS guidance, the half-width of the 95% confidence interval must be less than 15% of the mean. If this is not the case, an appropriate uncertainty deduction must be applied.
- The equations to calculate N<sub>2</sub>O emission reductions do not consider properties such as texture, drainage class and pH. It is well established that these parameters are crucial for estimating N<sub>2</sub>O emissions (see Bouwman and Boumans, 2002 and others). Only organic soils are excluded from the methodology. Equations G3 and G5 are calibrated using empirical data from 2 growing seasons and 5 field sites in the Michigan lower peninsula. Since no information on the range of the aforementioned properties is provided, it is impossible to evaluate how representative the equations G3 and G5 are for the whole NCR region. The provided equations should only be used in fields for which these properties are within the range of the properties calibrated within these fields. At minimum, a sound justification must be provided why omitting factors such as texture or drainage class is conservative.
- The conservative nature of using IPCC emission factors under all conditions and applicability criteria for calculating emission reductions must be fully substantiated.