



## **Methods for Estimation of Nitrous Oxide Emissions in Result of Agricultural crop Residues Mineralization**

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**Abstract:** The new approach to the estimation of nitrous oxide emissions resulting from crop residues input into soils is proposed for countries of Eastern Europe. The proposed approach for estimation of plant biomass amount includes use of regression equations, while estimation of GHG emissions as a result of agricultural crop residues mineralization is based on the crops yield and harvested area, nitrogen content in sideline products, stubble and roots as well as nitrous oxide emission factor. Overview and comparison analysis of common methodologies that are to be applied for emission estimation from this source in the world practice is provided. Developed approach to estimation of nitrous oxide emissions in result of crop residues mineralization to the maximum extent takes into account agricultural practices adopted in Eastern European countries, is more precise than IPCC methods and may be used in course of preparation of subsequent IPCC Guidelines for National GHG Inventories.

**Key words:** *Greenhouse gases, nitrous oxide emissions, crop residues, agricultural soils*

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