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A soil-inventory of agricultural used soils of Germany

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In the framework of UNFCCC reports for greenhouse gas emissions of land use and land use change also soil organic carbon stocks and stock changes of have to be reported. Since 1990 a forest soil inventory exists for Germany, but similar data are still missing for agricultural land. Up till now, a very rough estimation of the soil organic carbon stocks based on the soil map of Germany at the scale of 1:1,000,000 and estimated soil organic carbon contents and bulk densities have been used for the national inventory reports.
Now we are starting an extended agricultural soil inventory for Germany which is explicitly designed to detect soil organic carbon stocks and stock changes. We will use a grid of 8x8 km, like it was used for the forest soil inventory. In order to extrapolate from point data and perform regionalisations, not only soil type, soil parent material and basic climate parameters will be taken into account, but under agricultural land use different agricultural management practices will be considered. Management data, like crop rotation, depth and intensity of soil tillage and application of fertilizers, manure and composts are collected from farmers during the inventory via questionnaires. It was shown that those data are essential to estimate and extrapolate point data to report soil organic carbon stocks and stock changes on regional scale. The concept of this soil carbon inventory will be presented.