

Project title: Development of Land Type Soil CO₂ Emission Analysis System (Public-Private Sector Cooperation Project)

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Supporting Institute/s	General Directorate of Agricultural Research and Policy
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Research Period	01.01.2018- 31.12.2020
<p>Project Summary: Climate change is one of the most important issues that arise from human beings and must be resolved in order to survive on earth in the coming years. Today, climate change is perceived as just an atmospheric problem. However, oceans and soil in climate change; it is as important as the atmosphere. Depending on human activities on the soil, more carbon can be stored in the soil or more carbon can be released from the soil into the atmosphere. Unused carbon passes from the roots of the plant to the soil, and if the soil does not deteriorate, carbon can be kept in the soil for many years in a stable structure. Changes to the soil structure will result in fragmentation of stable carbon structures and CO₂ emissions. Increased CO₂ concentration in the atmosphere leads to more work of microorganisms in the soil and the release of more carbon dioxide. All these negative effects increase the emission of CH₄ gas as well as CO₂ gas and cause a threat to human beings. In climate change, the soil can be transformed into a source of emissions from a storage that holds carbon. Agricultural and forestry researches are conducted to keep the soil as a carbon reservoir. While doing these researches, the emission of greenhouse gases in the soil; accurate, precise, time and location-based measurement is important for investigating impacts. Measuring emission gases is a hot and up-to-date research area all over the world. The aim of the project is to develop a field-type analysis system that measures soil CO₂ emissions. At the end of the project, the goal is to contribute to the economy of the country by exporting a product with a potential for commercialization, with high benefit and to be a successful example for Public-Private Sector cooperation studies.</p>	
<p>Key words: Climate change, greenhouse gas emission, analysis, measurement, CO₂ emission</p>	