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# Soil carbon stock in sub-optimal land due to climate change on development of *Cymbopogon nardus* L at Simawang village, West Sumatera, Indonesia

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Simawang area is one of the critical areas (sub-optimal) that experienced drought from climate changes. Potential dry land belonging to sub-optimal in Simawang, West Sumatera, Indonesia not been fully utilized for agricultural cultivation. Simawang village, West Sumatera, Indonesia is formerly known as the rice barn, due to the climate change area is experiencing a drought, so the rice fields that were once productive now a grazing paddock because of lack of water. This study aims to calculate the soil carbon stock in Simawang village, West Sumatera Indonesia. The study was conducted in Simawang village, Tanah Datar regency, West Sumatera from October 2014 until December 2017. The study was conducted on sub-optimal land to be planted with *Cymbopogon nardus* L. (Sereh wangi in Indonesian language). Composite soil sampling conducted at a depth of 0-20 cm, 20-40 cm. Based on the depth of soil carbon stocks gained higher ground 6473 T/Ha at a depth of 0-20 cm at a depth of 20-40 cm. Efforts to increase soil carbon is expected to be cultivated through *Cymbopogon nardus* L. planting has been done.

## Biography

Juniarti Yuni has completed her PhD from Prefectural University of Hiroshima, Japan. She is the lecturer of Soil Science Dept., Faculty of Agriculture, Andalas University, Indonesia, a Soil Science, Survey and Land Evaluation, as one of Climate Change Indonesian Association. She has published more than 4 papers in reputed journals.

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