

Potensi Pemanasan Global dari Padi Sawah System of Rice Intensification (SRI) dengan Berbagai Ketinggian Muka Air Tanah

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Author Order	6 of 7
Accreditation	
Abstract	System of Rice Intensification (SRI) is known as alternative rice farming for the mitigation of greenhouse gas (GHG) emissions. There are two main gasses emitted from paddy fields, i.e., methane (CH ₄) and nitrous oxide (N ₂ O). Both of these gases have different characteristics as response on water availability in the fields which is represented by groundwater levels. Global Warming Potential (GWP) is used as an index that allowed comparisons of the global warming impacts of different gases at specific time period to warm the earth and it is equivalent to the value of the potential of CO ₂ . This study aimed to analysis the global warming potential from different water regimes with SRI practices. Achieving the objective, rice cultivation with three water regimes was carried out during one planting season (14 April until 5 August 2016) in experimental plots of Department of Civil and Environmental Engineering IPB, Bogor, Java West. The regimes were continous flooding, moderate and dry regimes, respectively. The results showed that dry regime has the lowest global warming potential than those others regimes. Its potential was 34% and 41% lower than those for flooding and moderate regimes, respectively. In addition, dry regime produced more grain yield. Its productivity was 21% greater than that flooding regime. These results were obtained from specific climate and location. To corroborate the results, further research is needed under different weather conditions and multi-locations.
Publisher Name	Balai Teknik Irigasi
Publish Date	2017-08-08
Publish Year	2016
Doi	DOI: 10.31028/ji.v11.i2.81-90
Citation	2
Source	Jurnal Irigasi
Source Issue	Vol 11, No 2 (2016): Jurnal Irigasi
Source Page	81-90
Url	http://jurnalirigasi_pusair.pu.go.id/index.php/jurnal_irigasi/article/view/149/201
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