



Intisari

Penelitian tentang Emisi N₂O dan CH₄ pada lahan sawah organik dan konvensional di Imogiri, Bantul dilaksanakan untuk mengkaji perbedaan hasil panen padi antara sistem budidaya organik dan konvensional serta perbedaan emisi gas N₂O dan CH₄ yang bersumber dari tanah, tanaman, dan tanaman yang dipotong. Lahan petani yang digunakan menggunakan sistem Jajar Legowo 2:1 jarak tanam 25 cm x 25 cm dengan sistem budidaya organik dan konvensional dengan varietas padi Menthik Susu. Emisi gas diambil menggunakan metode sungkup berpindah (*portable chamber*) serta pengambilan sampel gas diambil pada satu musim tanam empat kali pengambilan, 20 hari setelah tanam (20hst), 40 hari setelah tanam(40hst), 60 hari setelah tanam(60hst), 80 hari setelah tanam(80hst). Hasil penelitian menunjukkan bahwa hasil panen sistem tanam organik memiliki hasil lebih tinggi (7,98 ton/ ha) daripada sistem tanam konvensional (6,15 ton/ ha). Tidak ditemukan perbedaan yang signifikan pada emisi N₂O sedangkan pada emisi CH₄ ditemukan perbedaan nyata pada sumber emisi dari tanaman padi sebesar (78,16 mg/ m²/ hari).

Kata kunci: Emisi, N₂O, CH₄, organik, konvensional.



Abstract

Research on N₂O and CH₄ emissions in organic and conventional rice fields at Imogiri, Bantul was conducted to assess rice yields between organic and conventional farming systems as well as gas emissions from N₂O and CH₄ sourced from the land, crop, and cutting crop. Farmers' land used uses a Jajar Legowo 2: 1 spacing of 25 cm x 25 cm with an organic and conventional cultivation system with Menthik Susu rice varieties. Gas emissions are taken using portable chamber method and gas samples taken in one planting season four times 20 days after planting, 40 days after planting, 60 days after planting, 80 days after planting. The results showed that organic crop yields had higher yields (7.98 tons / ha) than conventional planting systems (6.15 tons / ha). There were no significant differences in N₂O emissions while CH₄ emissions. There were significant differences in the source of emissions from rice plants of (78.16 mg / m² / day).

Keywords: emissions, N₂O, CH₄, organic, conventional.