

## **Comparison of methane emission from conventional and modified paddy cultivation in Malaysia**

### **ABSTRACT**

Methane (CH<sub>4</sub>) is a potent greenhouse gas (Global Warming Potential = 25). Flooded rice fields are main sources for methane. Finding solutions to suppress the methane emission seems necessary toward a sustainable rice production. This study's aim is to assess the methane emission from some modified rice cultivation systems in Malaysia. Three cultivation methods including, two modified cultivation systems (MC) and conventional method (C) were studied. Consequently, the maximum methane emission was significantly lower in MCs (3.15 and 3.29 mg CH<sub>4</sub> m<sup>-2</sup> d<sup>-1</sup>) compared to C (8.91 mg CH<sub>4</sub> m<sup>-2</sup> d<sup>-1</sup>). Irrigation pattern and plant density were the key factors.

**Keyword:** Greenhouse gas; Methane; Rice; Cultivation system; Modified cultivation system; Sustainable production