

## Analysis of Internal Environment of a Pig House using Energy Recovery Ventilator

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**ABSTRACT:** *In this study, Energy Recovery Ventilator (ERV) was applied in a pig house model where the internal temperature, relative humidity, and CO<sub>2</sub> were analyzed. The experiment was performed in a pig house model where an ERV was installed and two pigs (8 months, ca. 20 kg) were bred. In the pig house model, the internal temperature, relative humidity, and CO<sub>2</sub> were divided into three cases and were then measured. In Case (A), ventilating fan and ERV were not used. In Case (B), a ventilating fan was installed and operated. In Case (C), an ERV was installed and operated in the pig house model. In Case (A), the internal temperature between 12:00-17:00 hours was measured at about 23-24 °C, which was lower than usual temperature for breeding. For Case (B), the internal temperature was 22-25 °C and the relative humidity was about 70-80%. In Case (C), the internal temperature was 29-32 °C.*

**Keywords:** *Energy recovery ventilator, pig house, ventilation, waste heat*

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