

**EFFECTS OF RESPIRABLE DUST ON RESPIRATORY SYMPTOMS AND PULMONARY FUNCTION AMONG PIG FARM WORKERS: CLOSED SYSTEM HOUSING IN EASTERN OF THAILAND**

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**ABSTRACT**

Pig Production may expose workers to potential hazards that have harmful effects on respiratory health from dust and various factors in pig housing.

This study was a cross sectional study conducted among 246 pig farm workers (Animal husbandry and workers) in a closed system housing 20 farms in eastern of Thailand. The objectives were to study the association between concentrations of respirable dust, personal factors, personal behaviors and duration of work associated with respiratory symptoms and abnormality of pulmonary function among pig farm workers. The data were collected by respiratory symptoms questionnaires, respirable dust sampling with the NIOSH methods 0600 and a pulmonary function test.

Results showing factors associated with respiratory symptoms and abnormality of pulmonary functions were as follows: smoking ( $p < 0.001$ ), age ( $p = 0.012$ ) and Body Mass Index ( $p = 0.036$ ) were significant associated with respiratory symptoms. The duration of work was associated with significant respiratory symptoms and abnormality of pulmonary functions ( $p = 0.045$ ,  $p = 0.036$ ). Finally, concentrations of respiratory dust, personal factors (sex) and personal behaviors (wearing a mask) had no significant association with respiratory symptoms and abnormality of pulmonary functions among pig farm workers ( $p > 0.05$ ).

**KEY WORDS: RESPIRABLE DUST/ PULMONARY FUNCTION TEST/ RESPIRATORY SYMPTOMS/ PIG FARM WORKERS**

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