Kanlaya Naclungka 2008: Factors Affecting Farmers' Behavior in Rice Stubble-Straw Burning in Amphoe Lat Bua Luang, Phra Nakhon Si Ayutthaya Province. Master of Science (Agricultural Economics), Major Field: Agricultural Economics, Department of Agricultural and Resource Economics. Thesis Advisor: Mr. Kampanat Pensupar, Ph.D. 156 pages.

Open burning generally results in the emission of smoke and other pollutants which affect air quality, soil degradation and public health. This is especially so in agriculture where open burning is used to remove the crop residue after harvest. This practice can cause respiratory diseases and also a decrease in visibility that can cause traffic accidents. Because of the importance of these problems, it is worthwhile studying the open burning behavior of farmers. The objectives of this research were to study: 1) the fundamental characteristics and the advantages and disadvantages of agricultural open burning as well as the domestic policies that are involved in agricultural burning and the actions required to overcome these disadvantages; and 3) the behavior of farmers and factors that affect their behavior in the locality of Amphoe Lat Bua Luang, Phra Nakhon, Si Ayutthaya Province. This study used both secondary and primary data that were collected through a questionnaire survey based on a random sample of 369 farmers who were growing rice. Statistical analysis was carried out on both descriptive and quantitative data using frequency and percentage with the Likert scale method used to analyse farmer attitude responses and a Logit model used for hypothesis testing.

The results of the study showed: 1) the government has developed a National Master Plan for Open Burning Control in order to reduce and control fire on the ground and in the forest. The Master Plan contains strategies for crop residue management by the agricultural sector. Some parts of the Master Plan have already been implemented, for example, the establishment of networks to demonstrate the use of stubble-tilling machinery ; 2) with respect to rice stubble-straw burning behavior, 61% of farmers still burn, while 39% do not burn; 3) results of the attitude test showed that the farmers still burn for convenience in the preparation of the field for the next harvest; and 4) modeling indicated that factors that significantly affect farmer rice stubble-straw burning behavior are: a) the size of the cultivated area; b) the number of family members who work on the farm c) the ability of agricultural machinery to access cropped areas to manage the rice stubble–straw; and d) the cost of production.

From this study, actions suggested to overcome disadvantages were: 1) the government should provide farmers with a better understanding of crop residue management, such as information on how to develop alternative uses for the crop residue and furnish marketing channels for the recycled products; and 2) the government should support the farmers to obtain machinery that is capable of managing the crop residue. management.

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