

Farmers' perceptions and practices in rat management in West Java, Indonesia

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Abstract. Pests are one of the major constraints to rice production in Indonesia. We examined the perceptions, knowledge and current rat control practices of 120 farmers, 40 from each of three villages (Pasirukem, Sukatani, and Tegalarung) in the Cilamaya subdistrict, of Karawang district in West Java. The survey was conducted in November 1999. The respondents were aged 20 to 70 years, and most had only 1 to 6 years of schooling, a mean of 18.9 years in rice farming, and a mean farm size of 2.13 ha. Rats were reported as the most important pest to manage in this region. Controlling rats was important for 98.3% of farmers. There was divided opinion as to when it was best to conduct rodent control: approximately 60% thought it should be done during land preparation and 40% thought only during the rice-growing seasons. However, early rat control was conducted by 87.2% of farmers, with most effort during the land preparation–seedling stage. Most respondents (80.7%) agreed that by controlling rats they could increase rice yields, and 83.3% of respondents believed that rats could be controlled successfully. Cooperation between farmers was identified by 76.7% of farmers as important for successful rat control, although 13.8% of farmers prefer to do rat control by themselves because they were more satisfied with the results. Usually, local government officers coordinated group activities. Individual expenditure on rodent control per hectare ranged from US\$0.3 to US\$45. The common rat control methods were plastic barriers to protect rice seedlings (100%), rodenticides (98.3%), mass hunting (79.7%) and flooding rat burrows or fumigation/digging (44.1%). Most farmers used alternative pesticides such as temik (aldocarb; carbamate) (78.5%), akodan (endosulfan) (77.6%) and azodrin/guzadrin (monocrotophos; organophosphate) (12.9%), because legal rodenticides were difficult to find and/or were more expensive. These are all broad-spectrum poisons and some were mixed with oil before applying to the flooded crop. Although these poisons are of major environmental concern, a majority of farmers did not consider these to be environmentally unsafe.