

**MONITORING OF POPULATION DYNAMICS OF RICE FIELD RAT
(*Rattus argentiventer*) IN RICE FIELDS BY USING TRAP BARRIER
SYSTEM**

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ABSTRACT

The rice field rat (*Rattus argentiventer*) as one of the main pests of rice plants is able to cause damage reaching 10-15% per year in Asian countries. Rat growth is related to the rice growth phase. Monitoring the dynamics of the rice field rat population can be done by installing a Trap Barrier System. This study aimed to determine the relationship between the growth phase and population dynamics, and the relationship of intensity of plant damage and the dynamics of the rice field rat population. The research was conducted from February to July 2023 in Sedayu District, Bantul Regency, Yogyakarta. The method used is a quantitative descriptive method. Rats were trapped using traps installed in a Trap Barrier System (TBS). The observation parameters include the number of rats trapped, sex, size, planting pattern in the field, and the intensity of plant damage. Observations of the number of rats trapped, sex, and size of rats were carried out daily for one growing season after the Trap Barrier System was installed. Observation of the intensity of plant damage was carried out once a week during two growing season. Rats trapped on land with trap barrier system installed have a higher number in the reproductive phase. There were more male rats and medium size rats trapped. There was no correlation between the number of rats trapped and the intensity of plant damage to rice fields inside and outside the Trap Barrier System.

Keywords: dinamyc, population, *Rattus argentiventer*, Trap Barrier System