TINGKAT SERANGAN *Rattus argentiventer* (Robinson & Kloss, 1916) PADA BERBAGAI FASE PERTUMBUHAN PADI DI DUSUN CANCANGAN, SLEMAN, DAERAH ISTIMEWA YOGYAKARTA

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INTISARI

Pengendalian populasi hama adalah salah satu tantangan utama yang dihadapi petani dalam upaya mencegah penurunan hasil panen. *Rattus argentiventer* merupakan salah satu hama yang sulit dikendalikan di pertanaman padi yang menyebabkan penurunan hasil panen, karena dapat merusak seluruh tahap pertumbuhan padi, mulai dari fase vegetatif, generatif, pematangan, hingga pascapanen. Meskipun dampak hama ini dikenal luas, informasi mengenai tingkat serangannya pada setiap fase pertumbuhan dan dinamika populasinya di wilayah Dusun Cancangan masih terbatas. Rendahnya pengetahuan petani mengenai sifat biologis *R. argentiventer* serta strategi pengendaliannya turut menjadi faktor penghambat dalam pengendalian hama *R. argentiventer*. Penelitian ini bertujuan untuk mengkaji kerusakan tanaman padi akibat *R. argentiventer* pada berbagai fase pertumbuhan padi melalui pendekatan penghitungan populasi *R. argentiventer*, penilaian kerusakan, dan analisis hubungan antara jumlah *R. argentiventer* terhadap kerusakan tanaman padi. Pengambilan data untuk mengukur intensitas kerusakan tanaman padi menggunakan plot berukuran 1 x 1 meter sejauh 5 meter pada setiap petak pengamatan. Perhitungan populasi *R. argentiventer* dihitung menggunakan metode *trap success* dengan jenis jebakan *single trap*. Hasil penelitian menunjukan sebanyak 166 ekor *R. argentiventer* tertangkap selama satu musim tanam padi, dengan 67% individu memiliki bobot 24–73 gram. Rentang intensitas kerusakan tanaman padi selama satu musim berada pada kisaran 25,08–29,36%, yang termasuk dalam kategori kerusakan sedang. Berdasarkan uji t berpasangan intensitas kerusakan padi antar ulangan berbeda signifikan pada fase vegetatif ($p = 0,01$) dan generatif ($p = 0,00$), dengan rerata kerusakan ulangan kedua lebih tinggi, sedangkan pada fase pematangan tidak signifikan ($p = 0,14$). Analisis regresi menunjukkan hubungan signifikan antara jumlah *R. argentiventer* dan tingkat kerusakan tanaman ($p = 0,001$), dimana setiap penambahan satu ekor *R. argentiventer* meningkatkan kerusakan padi sebesar 4–5,45% dengan nilai η^2 0,50–0,58, yang mengindikasikan pengaruh kuat jumlah *R. argentiventer* dan kerusakan padi. Penempatan perangkap pada jalur lintasan aktif dengan umpan gabah meningkatkan keberhasilan tangkapan sebesar 17,1–44,3% selama satu musim tanam.

Kata kunci: Tikus sawah, pola tanam, strategi pengendalian hama, umur tanaman padi.

ATTACK LEVEL OF *Rattus argentiventer* (Robinson & Kloss, 1916) IN DIFFERENT GROWTH PHASES OF RICE IN DUSUN CANCANGAN, SLEMAN, DAERAH ISTIMEWA YOGYAKARTA

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ABSTRACT

Pest population control is one of the main challenges faced by farmers in an effort to prevent a decrease in crop yields. *Rattus argentiventer* is one of the pests that is difficult to control in rice plantations that causes a decrease in crop yields, because it can damage all stages of rice growth, starting from the vegetative phase, generative, ripening, and post-harvest. Although the impact of this pest is widely known, information regarding the level of attack at each growth phase and its population dynamics in the Dusun Cancangan is still limited. The low level of farmer knowledge regarding the biological properties of *R. argentiventer* and its control strategies also contribute to inhibiting the control of *R. argentiventer* pests. This study aims to study the damage to rice plants caused by *R. argentiventer* at various phases of rice growth seen from the calculation of the population of *R. argentiventer*, assessment of rice plant damage, and the relationship between the number of *R. argentiventer* and damage to rice plants. This study was conducted in agricultural land in Dusun Cancangan close to the study and conservation area of *T. alba*. Determination of the location of the sampling point was based on differences in plant age. Data collection to measure the intensity of rice plant damage used a 1x1 meter plot with a distance of 5 meters in each research plot. The calculation of the population of *R. argentiventer* was calculated using the trap success method with a single trap type. The results showed that 166 *R. argentiventer* were captured during one rice growing season, with 67% of individuals weighing 24–73 grams. The range of intensity of damage to rice plants during one season is in the range of 25.08–29.36%, which is included in the moderate damage category. Based on paired t-test, the intensity of rice damage between replications differed significantly in the vegetative ($p = 0,01$) and generative ($p = 0,00$) phases, with the average damage in the second replication being higher, while in the ripening phase it was not significant ($p = 0,14$). Regression analysis showed a significant relationship between the number of *R. argentiventer* and the level of plant damage ($p = 0,001$), where each addition of one *R. argentiventer* increased rice damage by 4–5,45% with an η^2 value of 0,50–0,58, indicating a strong influence of the number of *R. argentiventer* and rice damage. Placing traps on active paths with grain bait increased capture success by 17,1–44,3% during one growing season.

Keywords: Rice field rat, cropping patterns, pest control strategies, rice plant age.