

RINGKASAN

Padi (*Oryza sativa* L.) merupakan komoditas pangan utama, namun produktivitas padi sering kali menurun akibat serangan Organisme Pengganggu Tanaman (OPT). Penggunaan pestisida secara berlebihan berdampak negatif terhadap lingkungan, sehingga diperlukan pendekatan ramah lingkungan seperti Pengendalian Hama Terpadu (PHT) yang mengandalkan peranan musuh alami serta penggunaan varietas toleran terhadap OPT. Varietas Inpago Unsoed Protani dan Inpari 32 diketahui memiliki ketahanan terhadap beberapa hama dan penyakit utama padi, namun informasi terkait keanekaragaman serangga hama dan musuh alami pada kedua varietas tersebut masih terbatas, terutama di wilayah Blater, Kabupaten Purbalingga. Oleh karena itu, penelitian ini dilakukan untuk mengidentifikasi serta membandingkan keanekaragaman serangga hama dan musuh alami pada fase generatif tanaman padi di kedua varietas tersebut, sehingga dapat memberikan dasar ilmiah dalam perencanaan strategi pengendalian hama terpadu yang berkelanjutan.

Penelitian ini dilaksanakan di lahan Fakultas Teknik Universitas Jenderal Soedirman, Blater, Kecamatan Kalimanah, Kabupaten Purbalingga, Jawa Tengah, pada bulan Maret hingga Juli 2025. Penelitian menggunakan metode deskriptif komparatif dengan dua varietas padi, yaitu Inpago Unsoed Protani dan Inpari 32 pada fase generatif, masing-masing terdiri atas dua plot berukuran 2×2 meter. Pengambilan data dilakukan melalui observasi lapangan dengan metode *sweep net* dan perangkap lem kuning untuk menangkap hama serta musuh alami, sedangkan intensitas serangan diamati berdasarkan gejala kerusakan tanaman menggunakan skala penilaian tertentu. Variabel yang diamati meliputi intensitas serangan, keanekaragaman hama dan musuh alami serta kelimpahan hama dan musuh alami, yang dianalisis menggunakan rumus intensitas serangan, indeks keanekaragaman Shannon-Wiener (H'), dan perhitungan kelimpahan relatif.

Hasil penelitian menunjukkan bahwa dua jenis hama dominan yang menyerang tanaman padi pada fase generatif adalah *Oxya* sp. dan *Leptocorisa* sp. Intensitas serangan *Oxya* sp. cenderung menurun seiring bertambahnya umur tanaman, sedangkan serangan *Leptocorisa* sp. justru meningkat pada fase pengisian bulir karena tingginya kandungan cairan pada malai muda. Varietas Inpari 32 secara umum menunjukkan tingkat serangan yang lebih tinggi dibanding Inpago Unsoed Protani, yang kemungkinan disebabkan oleh perbedaan morfologi daun dan struktur tajuk. Keanekaragaman hama dan musuh alami berada pada kategori sedang (1,06–1,37), menandakan keseimbangan ekosistem yang masih terjaga. Varietas Inpago Unsoed Protani memiliki keanekaragaman dan kelimpahan musuh alami yang lebih tinggi, terutama dari ordo Coleoptera dan Diptera, yang berperan penting dalam pengendalian populasi hama. Sebaliknya, Inpari 32 cenderung memiliki struktur komunitas yang lebih sederhana.

SUMMARY

Rice (Oryza sativa L.) is the main staple food crop; however, its productivity often decreases due to attacks from Plant Pests (Organisms, OPT). Excessive pesticide use has negative impacts on the environment, thus eco-friendly approaches such as Integrated Pest Management (IPM) are required, emphasizing the role of natural enemies and the use of pest-tolerant varieties. The Inpago Unsoed Protani and Inpari 32 varieties are known to possess resistance to several major rice pests and diseases; however, information regarding the diversity of insect pests and natural enemies in these varieties remains limited, particularly in Blater Village, Purbalingga Regency. Therefore, this study was conducted to identify and compare the diversity of insect pests and natural enemies during the generative phase of rice plants in both varieties, providing a scientific basis for planning sustainable integrated pest management strategies.

The research was carried out in the experimental field of the Faculty of Engineering, Universitas Jenderal Soedirman, Blater, Kalimanah District, Purbalingga Regency, Central Java, from March to July 2025. A descriptive comparative method was applied using two rice varieties, Inpago Unsoed Protani and Inpari 32, each consisting of two plots measuring 2×2 meters during the generative phase. Data were collected through field observations using sweep nets and yellow sticky traps to capture pests and natural enemies, while pest attack intensity was assessed based on visible damage symptoms using a specific rating scale. The observed variables included pest and natural enemy intensity, diversity, and abundance, which were analyzed using the pest attack intensity formula, the Shannon–Wiener diversity index (H'), and relative abundance calculations.

The results showed that the two dominant pest species attacking rice plants during the generative phase were Oxya sp. and Leptocorisa sp. The intensity of Oxya sp. attacks tended to decrease as the plants aged, while Leptocorisa sp. infestations increased during the grain-filling stage due to the high fluid content in young panicles. Overall, the Inpari 32 variety exhibited a higher level of pest attack than Inpago Unsoed Protani, which was likely influenced by differences in leaf morphology and canopy structure. The diversity of pests and natural enemies, categorized as moderate (1.06–1.37), indicated a balanced ecosystem condition. Inpago Unsoed Protani exhibited higher diversity and abundance of natural enemies, particularly from the Coleoptera and Diptera orders, which play an important role in suppressing pest populations. Conversely, Inpari 32 tended to have a simpler community structure.