

## IDENTIFIKASI KEANEKARAGAMAN HAMA DAN MUSUH ALAMI PADA RUMPUT GAMA UMAMI (*Pennisetum purpureum* cv. *Gama Umami*) DI DAERAH ISTIMEWA YOGYAKARTA

### INTISARI

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Tantangan yang dihadapi dalam proses manajemen pengembangan tanaman pakan salah satunya adalah hama. Hama adalah organisme yang merusak tanaman sehingga menimbulkan kerugian secara ekonomis. Penelitian mengenai identifikasi keanekaragaman hama dan musuh alami pada Rumput Gama Umami (*Pennisetum purpureum* cv. *Gama Umami*) penting untuk menghasilkan data serta informasi jenis-jenis hama dan musuh alami pada Rumput Gama Umami. Tujuan penelitian ini untuk mengetahui keanekaragaman hama dan musuh alami yang ada pada Rumput Gama Umami (*Pennisetum purpureum* cv. *Gama Umami*) di Daerah Istimewa Yogyakarta. Lokasi penelitian yaitu Lahan Fakultas Peternakan Universitas Gajah Mada, Lahan Pusat Inovasi Agroteknologi Universitas Gajah Mada, Lahan rumput milik peternak di wilayah Bambang Lipuro, Lahan rumput milik peternak Bhumi Khayangan Farm di Gunungkidul, Lahan rumput milik peternak di wilayah Turi, Lahan rumput milik peternak di wilayah Kulonprogo. Penelitian ini menggunakan rancangan percobaan non eksperimental dengan metode survey langsung dilapangan. Replikasi sebanyak 5 kali pada setiap Lahan rumput. Penentuan sampel lokasi dilakukan dengan *purposive sampling*. Data yang diambil antara lain jenis hama, jumlah hama dan musuh alami yang mendominasi, keanekaragaman. Perhitungan menggunakan rumus Kelimpahan Relatif, Frekuensi Relatif, Indeks Nilai Penting, Indeks Shannon Wiener, analisis dilakukan dengan analisis deskriptif. Hasil Penelitian menunjukkan bahwa keanekaragaman hama dan musuh alami Gama Umami di Daerah Istimewa Yogyakarta dalam kategori sedang antara 1 sampai 3. Jenis musuh alami yang didapat meliputi famili *Formicidae*, *Mantidae*, *Coccinellidae*, *Carabidae*, *Pycnonotidae*, *Acrididae*, *Lycosidae*, *Vespidae*, *Braconidae*, *Chrysomelidae*, *Libellulidae*, *Fringillidae*, *Libellulidae*, *Calliphoridae*, *Scincidae*. Jenis hama meliputi famili *Acrididae*, *Pyrgomorphidae*, *Coreidae*, *Hesperiidae*, *Muscidae*, *Pyrrhocoridae*, *Lycidae*, *Trigoniulidae*, *Delphacidae*, *Derbidae*, *Noctuidae*, *Curculionidae*, *Acrididae*. Kesimpulan dari penelitian ini adalah Keanekaragaman musuh alami dan hama di Daerah Istimewa Yogyakarta menunjukkan bahwa Famili *Formicidae* dan *Acrididae* mendominasi di berbagai lahan. Semua lokasi menunjukkan keanekaragaman sedang berdasarkan kriteria yang diberikan.

**Kata kunci:** Daerah Istimewa Yogyakarta, hama, keanekaragaman, musuh alami, rumput Gama Umami.

## IDENTIFICATION OF PEST AND NATURAL ENEMY DIVERSITY ON GAMA UMAMI GRASS (*Pennisetum purpureum* cv. *Gama Umami*) IN THE SPECIAL REGION OF YOGYAKARTA

### ABSTRACT

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One of the challenges faced in the management process of forage crop development is pests. Pests are organisms that damage plants and cause economic losses. Research on the identification of pest and natural enemy diversity in Gama Umami grass (*Pennisetum purpureum* cv. *Gama Umami*) is important to provide data and information on the types of pests and natural enemies associated with this forage species. The objective of this study was to determine the diversity of pests and natural enemies found in Gama Umami grass in the Special Region of Yogyakarta. The research locations included: the Faculty of Animal Science fields of Universitas Gadjah Mada (UGM), the UGM Agrotechnology Innovation Center fields, farmers' grasslands in the Bambanglipuro area, Bhumi Khayangan Farm in Gunungkidul, and other farmers' grasslands in the Turi and Kulonprogo regions. This study used a non-experimental research design with a direct field survey method. Each grassland site was replicated five times. Sampling locations were selected using purposive sampling. Data collected included types of pests, number of pests and dominant natural enemies, and biodiversity indices. The calculations were performed using Relative Abundance, Relative Frequency, Importance Value Index, and Shannon-Wiener Diversity Index, with descriptive analysis conducted on the results. The findings showed that the biodiversity of pests and natural enemies in Gama Umami grass across the Special Region of Yogyakarta was categorized as moderate, with Shannon-Wiener index values ranging from 1 to 3. The natural enemies identified belonged to the families: *Formicidae*, *Mantidae*, *Coccinellidae*, *Carabidae*, *Pycnonotidae*, *Acrididae*, *Lycosidae*, *Vespidae*, *Braconidae*, *Chrysomelidae*, *Libellulidae*, *Fringillidae*, *Calliphoridae*, and *Scincidae*. Identified pest families included: *Acrididae*, *Pyrgomorphidae*, *Coreidae*, *Hesperiidae*, *Muscidae*, *Pyrrhocoridae*, *Lycidae*, *Trigoniulidae*, *Delphacidae*, *Derbidae*, *Noctuidae*, and *Curculionidae*. In conclusion, the diversity of pests and natural enemies in Gama Umami grasslands in the Special Region of Yogyakarta was moderate across all study sites. The ants (*Formicidae*) family dominated among natural enemies, while grasshoppers (*Acrididae*) were the most dominant pest family.

**Keywords:** Diversity, natural enemies, Gama Umami grass, pest, Special Region of Yogyakarta.