

**EKSPLORASI DAN KARAKTERISASI KOKSINELID PREDATOR
AGENS PENGENDALI HAYATI KUTU PERISAI TEBU
(*Aulacaspis tegalensis* Zehntner (Hemiptera: Diaspididae))**

Sudi Pramono
12/336345/SPN/00489

ABSTRAK

Penelitian tentang eksplorasi dan karakterisasi koksinelid predator agens pengendali hayati kutu perisai tebu (*Aulacaspis tegalensis* Zehntner) bertujuan untuk mendapatkan jenis predator yang berpotensi dan prospektif sebagai agens pengendalian hayati kutu perisai tebu. Percobaan dilaksanakan di kebun tebu dan laboratorium Entomologi PT Gunung Madu Plantations, Gunung Batin, Lampung Tengah, pada bulan April 2015 sampai bulan September 2016. Kajian meliputi eksplorasi, karakterisasi, dan seleksi predator koksinelid yang berpotensi. Percobaan lapangan menggunakan rancangan acak kelompok, sebagai perlakuan adalah tebu varietas GMP 1, GMP 2, GMP 3, GMP 4 dan galur RGM 99.370, RGM 97.8837, dengan empat ulangan. Kepadatan populasi kutu perisai tebu dan kompleks predatornya diamati pada 45 batang tebu sampel yang diambil secara acak sistematis pada setiap unit percobaan, mulai tanaman berumur 4 bulan sampai 12 bulan dengan interval 15 hari. Uji status predator, identifikasi jenis predator, dan studi potensi memangsa predator dilakukan di laboratorium. Seleksi predator berdasarkan kriteria skor karakteristik predator yaitu dominansi, dependensi terhadap mangsa, sinkronisasi, agregasi pada koloni mangsa tertinggi, dan frekuensi eksistensi selama musim tanam tebu. Hasil penelitian menunjukkan bahwa semua varietas dan galur tebu terserang kutu perisai tebu mulai tanaman berumur 6 sampai 12 bulan dengan populasi yang bervariasi. Predator koksinelid yang ditemukan dan berpotensi sebagai kandidat agens pengendalian hayati; urutan pertama adalah *Chilocorus melanophthalmus*, kedua adalah *Scymnus* sp. dan *Chilocorus nigritus*, dan ketiga adalah *Telsimia* sp.

Kata kunci: eksplorasi, karakterisasi, predator, *Aulacaspis tegalensis*, tebu

**EXPLORATION AND CHARACTERIZATION OF PREDATORY
COCCINELLIDS AS BIOLOGICAL CONTROL AGENT AGAINST
SUGARCANE SCALE (*Aulacaspis tegalensis* Zehntner (Hemiptera:
Diaspididae))**

Sudi Pramono
12/336345/SPN/00489

ABSTRACT

*The research on the exploration and characterization of predators biological control agents of sugarcane scale (*Aulacaspis tegalensis* Zehntner) aimed to obtain potential and prospective predators as a biological control agents against the sugarcane scale. The experiments were conducted at sugarcane plantation and Laboratory of Entomology at PT Gunung Madu Plantations, Gunung Batin, Central Lampung, from April 2015 to September 2016. The studies comprised of exploration, characterization, and selection of potential coccinellid-predators. Field experiments using randomized block design and the treatments were varieties of GMP 1, GMP 2, GMP 3, GMP 4, and strains of RGM 99.370, RGM 97.8837, with four replications. The population density of the sugarcane scale and its predatory complex were observed on 45 samples of sugarcane plant - which were taken by systematic random sampling at every experimental unit - started from aged of 4 to 12 months at 15 days intervals. Test of predatory status, identification of predator species, and study on predation were conducted in the laboratory. Selection of the predator was based on the scores of predator characteristics namely dominancy, dependency to the prey, synchronization, aggregation to the highest colony of prey, and frequency of the predator existence during the sugarcane planting season. Results showed that all varieties and strains of sugarcane were attacked by the sugarcane scale from 6 to 12 months old plants with varied populations. The coccinellid predators found and potentially as candidate of biological control agent; number one was *Chilocorus melanophthalmus*, number two were *Scymnus* sp. and *Chilocorus nigritus*, and number three was *Telsimia* sp.*

*Keywords: exploration; characterization, predator, *Aulacaspis tegalensis*, sugarcane*