

Identifikasi Cacing Tanah dan Interaksinya dengan Lingkungan Lahan Berkapur

Identification of Earthworm and Their Interaction with Calcareous Land Environment

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Abstract: The research aims to utilizing interaction earthworm with environment in the calcareous land. The research can be specified through a two-stage: the first year and second year. Results from our earlier studies aims: (1) to find out earthworm interaction with calcareous land, (2) identification of earthworm in calcareous land. Using three examples from different land: monoculture, polyculture, and agroforestry. The research data collected with 3 repetitions in every land. Measurement of micro climates include temperature, humidity, pH, and light intensity. Identification the type of earthworm consist of: the body shape, color, position and the form of klitelum, the prostomium, setae, and the position of genital males and females. Identification using binocular microscopy at 10 to 40x magnification. Analysis correlation were tested to figure out the relationships between variables. If the correlation of relationship between variable is very real or real continued test by STEPWISE REGRESSION to find out the most influential environmental factors on earthworms living. The result of the research are: (1) Earthworm had very significant most correlation (significant = 0,01) with air humidity ($r = 0,855$), light intensity ($r = - 0,825$), and soil humidity ($r = 0,60$). Other environmental factors had a significantly small influence (pH, $r = 0,17$; soil temperature, $r = - 0,28$; and temperature $r = 0,03$). Air humidity is the most influential environmental factors on earthworms living (2) identification of the types earthworm in different three land was found 2 species: *Pontoscolex corethrurus* and *Metaphire javanica*. In monoculture land is dominated by *Metaphire javanica*, whereas in Polikultur and Agroforestry land is dominated by *Pontoscolex corethrurus*. As a result, air humidity is the most influential environmental factors on the lives of earthworms and other environmental factors is relative small influence. On the calcareous land found two species of earthworm: *Pontoscolex corethrurus* and *Metaphire javanica*.

Keywords: calcareous land environment, identification earthworm, *Pontoscolex corethrurus*, *Metaphire javanica*

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DISKUSI

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Pertanyaan:

- Berapa kisaran pH lahan penelitian dan apakah di lahan tersebut cacing dapat hidup dengan baik?
- Apakah hubungan antara N,P,dan K dengan cacing (secara internal dan eksternal)?
- Pemanfaatan cacing di lahan kapur apakah harus dari cacing yang berasal dari lahan tersebut?

Jawaban:

- Kisaran pH pada lingkungan tersebut (lingkungan penelitian) adalah basa, karena tanahnya berkapur.
- Hubungan cacing terhadap terhadap kandungan N,P, dan K adalah sebagai organisme yang memperkaya N, P, dan K karena menghasilkan kascing.
- Cacing yang digunakan untuk mengembangkan dapat berasal dari lahan tersebut dan dari tempat lain (misal cacing yang ditanakkan).