

## Pelapisan Urea dengan Arang Aktif yang Diperkaya Mikroba Indegenus dapat Menurunkan Konsentrasi *Endrin*

### Urea Coating with Activated Carbon Enriched by Microbial Indigenous Can Reduce *Endrin* Concentration

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**Abstract:** *Endrin* residues are still remain in the land field these compounds are no longer used by farmers and have been banned by the government. This residue can stay in the soil longer and persistant. Microbial enrichment is expected to accelerate the degradation of pesticide residues. Microbes stretcher are *Bacillus substillis*, *Heliothrix oregonensis*, *Catenococcus thiocyli*, and *Achoromobacter sp* obtained from the preliminary research results from soil isolation of idegenus in LIPI Cibinong Microbiology Laboratory. Soil for the planting medium obtained from the village of Karawang, Regency Cilamaya Wetan, Cilamaya District. The experiment was conducted in the field by using lysimeter at the Experiment Jakenan station from July 2013 to December 2013. The objective of the research is to obtain technology of activated carbon-coated urea and biochar which enriched microbial indegenus. The experiment was used randomized block design (RAK) with 3 replications. Plant used are rice. Insecticide residue analysis was carried out in the laboratory in Bogor Balingtan using gas chromatography (GC), with the SNI method 06-6991.1-2004. The purpose of this study knowing the capabilities of urea coating with activated carbon enrichment microbia in reducing the concentration of residues *endrin*. Results of research urea coated activated carbon from coconut shell are enriched with microbes on *paddy field* can lower pesticide residues of *endrin* respectively to 33.6%. This is presumably due to the role of microbes degrading effective as activated carbon as the preferred home. Enrichmentwith microbial indegenuscan improve theeffectivenessof ureacoating biochar andureacoatingactivated carbon coconut shell todecrease concentration *endrin*.

**Keywords:** Activated carbon, microbes, decrease residue, paddy field

**Penanya 1:**

M. Ainul Yaqin

**Pertanyaan:**

Bagaimana pengaplikasian teknologi ini untuk para petani?

**Jawaban:**

Aplikasi dari teknologi ini bisa diadopsi oleh petani di sekitar Pati dan Grobogan dengan menggunakan biochar yang tidak diperkaya dengan mikroba, meskipun penurunannya tidak besar tetapi sangat penting sekali untuk memperbaiki kualitas tanah dan lingkungan.

**Penanya 2:**

Yudi Rinanto

**Pertanyaan:**

- Mengapa hanya ditanaman Padi, bukan di tanaman sayuran? Padahal paling banyak penggunaan pestisida pada tanaman sayuran.
- Mengapa menggunakan 20 ppm?
- Mengapa menggunakan tanah dari Karawang?

**Jawaban:**

- Sebetulnya pada tanaman sayuran juga kami teliti, namun juga ditanaman pangan juga dilakukan, karena banyak petani padi menggunakan pestisida untuk memberantas hama maupun penyakit.
- Supaya nantinya diketahui penurunan yang sangat nyata, dalam penelitian inu kami menggunakan lysimeter sehingga dapat dikontrol semaksimal mungkin.
- Pada penelitian sebelumnya terdeteksi cemaran residu endrin dan Karawang merupakan salah satu lumbung pangan khususnya padi disaerah Jawa Barat.

