

# PEMANFAATAN AIR CUCIAN BERAS DAN TETES TEBU SEBAGAI BIOAKTIVATOR SELAMA PROSES PENGOMPOSAN TERHADAP KADAR N, P, K

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## INTISARI

**Latar Belakang :** Salah satu upaya yang dapat dilakukan oleh masyarakat untuk mengurangi dan menangani jumlah sampah organik sesuai dengan wawasan lingkungan yaitu melakukan penanganan dan pengolahan sampah dengan cara pengomposan. Proses pengomposan dapat dipercepat dengan penambahan bioaktivator air cucian beras dan tetes tebu. Kandungan pada air cucian beras dan tetes tebu seperti nitrogen, fosfor, magnesium, sulfur, bakteri, dan khamir dapat mempercepat proses dekomposisi sampah organik selama proses pengomposan.

**Tujuan Penelitian :** Mengetahui pemanfaatan bioaktivator air cucian beras dan tetes tebu dengan berbagai variasi dosis (150ml, 300ml, dan 450ml) selama proses pengomposan terhadap kadar N, P, K.

**Metode Penelitian :** Jenis penelitian ini adalah penelitian kuantitatif menggunakan metode *Quasy Experiment* dengan *Post Test Only With Control Group Design*. Penelitian ini menggunakan variasi dosis bioaktivator air cucian beras dan tetes tebu dengan perlakuan A 150 ml, perlakuan B 300 ml dan perlakuan C 450 ml. Data hasil penelitian diolah secara analisis deskriptif.

**Hasil Penelitian :** Hasil penelitian ini didapatkan kadar nitrogen (N) total tertinggi yaitu terjadi pada minggu pertama dengan penambahan bioaktivator C sebesar 0,5481%, kadar fosfor (P) tertinggi yaitu terjadi pada minggu kedua dengan penambahan bioaktivator B sebesar 1,1359%, dan kadar kalium (K) tertinggi yaitu terjadi pada minggu pertama dengan penambahan bioaktivator C sebesar 1,8689%. Kadar N, P, K tertinggi selama proses pengomposan terjadi hari ke 1-14.

**Kesimpulan :** Pemanfaatan air cucian beras dan tetes tebu sebagai bioaktivator dapat mempercepat proses pengomposan dan meningkatkan kadar N, P, K kompos.

**Kata Kunci :** Bioaktivator, Air Cucian Beras, Tetes Tebu, Kompos.

## UTILIZATION OF RICE WASHING WATER AND MOLASSES AS BIOACTIVATORS DURING THE COMPOSTING PROCESS ON N, P, K LEVELS

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### ABSTRACT

**Background:** One of the efforts that can be made by the community to reduce and handle the amount of organic waste in accordance with environmental insights is to handle and process waste by composting. The composting process can be accelerated by adding bioactivators of rice washing water and molasses. The content in rice washing water and molasses such as nitrogen, phosphorus, magnesium, sulfur, bacteria, and yeast can accelerate the decomposition process of organic waste during the composting process.

**Research Objective:** Knowing the utilization of rice washing water bioactivator and molasses with various dose variations (150ml, 300ml, and 450ml) during the composting process on N, P, K levels.

**Research Methods:** This type of research is quantitative research using the Quasy Experiment method with Post Test Only With Control Group Design. This study used variations in the dosage of rice washing water bioactivator and molasses with treatment A 150 ml, treatment B 300 ml and treatment C 450 ml. The research data were processed by descriptive analysis.

**Research Results:** The results of this study obtained the highest total nitrogen (N) levels which occurred in the first week with the addition of bioactivator C of 0.5481%, the highest phosphorus (P) levels which occurred in the second week with the addition of bioactivator B of 1.1359%, and the highest potassium (K) levels which occurred in the first week with the addition of bioactivator C of 1.8689%. The highest levels of N, P, K during the composting process occurred on days 1-14.

**Conclusion:** The utilization of rice washing water and molasses as bioactivators can accelerate the composting process and increase the N, P, K content of compost.

**Keywords:** Bioactivator, rice washing water, molasses, compost.