

Study On The Composition Of UPA Dairy Cow Dung Briquettes For Integrated Agricultural Development At The Jember State Polytechnic With A Mixture Of Coconut Shell Charcoal

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ABSTRACT

The level of energy demand in Indonesia continues to grow from year to year, but it is not proportional to the amount of energy available to meet these needs. Therefore, new renewable energy is needed as an alternative that can replace the use of fossil energy as fuel. Based on the research and problems above, a study was carried out with the title "Study of the Composition of Making Dairy Cattle Manure Briquettes UPA Integrated Agricultural Development Jember State Polytechnic with a Mixture of Coconut Shell Charcoal". The purpose of this study was to find out the quality of the results of making briquettes with the main ingredient being dairy cow dung mixed with coconut shell charcoal. The characteristic test of the briquettes included moisture content, density, ash content, volatile matter, fixed carbon, burning rate and heating value. In this study, three compositions were made with the main ingredients being dairy cow dung and a mixture of coconut shell charcoal, respectively 40% : 60%, 50% : 50%. 60% : 40%. The results of the study found that the best composition that complied with SNI briquettes No. 01/6235/2000 contained in the composition of 5KS5AR (50% dairy cow manure : 50% coconut shell charcoal) with an average moisture content of 3.128%, an average density of 1.153% gr/cm³, an average ash content of 4.235%, an average - an average volatile matter of 4.22%, an average of 80.887% fixed carbon, an average burning rate of 0.006 gr/sec, and an average heating value of 6530 cal/gr.

Keywords: *Briquettes, Coconut Shell Charcoal, and Dairy Cow Manure*