

The Effect of Different Composition of Dairy Cattle Feces Briquette on Moisture and Briquette Density

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Abstract : Utilization of cow feces as a source of alternative energy can be done with turn it as briquettes. Cow feces generate heat around 4000 Cal/g and the methane gas (CH₄) are quite high. Methane gas is one of the essential elements in briquettes which serve as the ignition, so that is resulting briquettes combustible. This study aims to know the difference of the composition of the constituents of briquette moisture content and density. Dairy cattle feces used as the main ingredient with additional material from the waste of the agricultural industry in the form of husk. This study was conducted with three treatments, namely T0= feces 1: husk 1, T1= feces 2: husk 1, and T2= feces 3: husk 1. Each treatment was replicated three times. The experimental design used was Complete Random Design Pattern in line with testing of Dunnet. The observed variables are moisture content and density of the briquettes. Results of this study showed an average moisture content of T0 is 31,17%, T1 is 28,14%, and T2 is 49.95%. The average density of briquettes at T0 is 1,0787 g/cm³, T1 is 1,1448 g/cm³, and T2 is 1,1133 g/cm³. Summary of the study is to take the difference of the composition of the feces and the husk do not have significant effects on moisture content and density of briquettes ($p < 0.05$).

Keywords : dairy cattle feces, briquette, moisture, density

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