

Development of Sugarcane Peeling Machine

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Abstract: India is an agricultural country. The cultivation of extensive range of agricultural crops makes sugarcane one of the most significant output crops in India. Sugarcane is commonly referred to as the source of grain of sugar for daily use. Sugarcane has many uses such as medical treatment, food additive and act as a quick burst of energy. In order to get the sugarcane juice, peeling process plays a fundamental role. This process removes the dirt, dust, black spots and other impurities present on the outer layer of the sugarcane. The purpose of this research is to design and manufacture the sugarcane peeling machine. In order to solve the problem that appeared in hand peeling sugarcane, the sugarcane peeling machine is designed. This machine includes electric motor, bearing, peeling blades, gears and chain drive. This paper aims to reduce the total time required due to manual peeling and reduction in operator fatigue due to tiresome peeling operation. The time required to manually peel the sugarcane of length 50 cm is 90 sec and the time required to peel the sugarcane of length 50 cm by sugarcane peeling machine is 20 sec. The proposed machine is expected to peel the sugarcane at a faster rate without much fatigue.

Keywords: Sugarcane, peeling, sugarcane juice, agricultural crop, fatigue

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