

## **DESIGN AND DEVELOPMENT OF A MEAT CUTTING TOOL FOR DOMESTIC USE**

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Meat is flesh of animals consumed for food, which helps to provide significant amount of daily nutritional requirement of human. People have to face difficulties when cutting bone in frozen or unfrozen meat. There is no efficient meat cutting tool for domestic use in Sri Lanka, therefore this study was aimed to design and develop an efficient portable meat cutting tool for domestic use. After investigating the available meat cutting tools, sizes of retail meats and properties of raw materials and its influence on the performance of cutting application, an electric portable meat cutting tool was developed. Major components of the tool were electric motor, circular cutting blade, sliding table, meat holder, main frame, tray, casing, on/off switch and an automatic switching off mechanism. The machine was designed to work at different speeds and to cut meat in different sizes. The machine was evaluated for chicken and observed satisfactory results. Cutting capacity of the machine was 15.355 kg per hour and it could save 89.1% of cutting time compared to the manual cutting. The operating cost was only Rs. 0.194 per kg of meat and machines' mass loss was 9%.

**Key words:** Meat, Meat cutting, Meat cutting tool