



UNIVERSITI TEKNOLOGI MARA

**FARM ANIMAL INVENTORY
SYSTEM**

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ABSTRACT

Farmers face substantial challenges because of farm animal disappearances, affecting their way of life and generating concerns about animal welfare. The current paper-based farm inventory method is problematic, as it is difficult to obtain and impedes effective management. Traditional inventory systems that rely on human data entry are inefficient and prone to mistakes, resulting in poor animal supply distribution and inventory imbalances.

The integration of Internet of Things (IoT) technology is presented as a solution to these difficulties. IoT is a great option since it provides real-time data and improves accessibility. The proposed technique is divided into two parts: hardware development and data presentation. Ultrasonic sensors and RFID readers are used to detect animal presence and scan unique identification codes affixed to each animal. This allows for accurate tracking and monitoring of animal inventory. The data presentation step is concerned with giving farmers information.

The key conclusion of the study is that deploying an IoT-based farm animal inventory system increases overall farm efficiency. Farmers can manage their animal population properly and immediately ascertain the number of animals in inventory. This approach decreases the likelihood of animal loss or theft, resulting in greater farm productivity and well-being. The use of IoT technology into the farm animal inventory system provides substantial benefits, including accurate and accessible real-time monitoring, more effective resource management, and the reduction of hazards connected with animal disappearances.

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CHAPTER ONE

INTRODUCTION

This chapter traces the origins of the idea, tracing its inception through background research, articulating clear objectives, addressing a well-defined problem statement, delineating the expansive scope of work, elucidating the project's significance and contribution, and culminating in a comprehensive summary.

1.1 Introduction

Maintaining correct recordkeeping and controlling farm animal inventories are two of the many issues that the agriculture business encounters. Manual counting is time-consuming and prone to human mistakes in traditional procedures. Recognizing the need for a more efficient method, this project focuses on establishing an automated system that counts and tracks farm animals using IoT technology.

Farm management systems and livestock inventories have been the subject of much investigation. The study of the literature focuses on diverse research and approaches related to automated animal counting, and the Internet of Things (IoT) in agriculture. These sources offer useful information and serve as the foundation for the planned project.

Farmers' productivity is limited by the common traditional techniques of manual livestock counting, which take a substantial amount of time and effort. Furthermore, inconsistencies in manual counting might lead to errors in inventory records, affecting the farm management process. This project intends to address these issues by implementing an automated farm animal inventory system that reduces human error while increasing efficiency.