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1.0 EXECUTIVE SUMMARY

The daily life of the villagers especially farmers was inseparably accompanied with scarecrows. The traditional scarecrow standing in the field is to deter animals that are mostly birds. Birds quickly become accustomed to a stationary dummy and start to ignore it as something that poses no threat. Therefore, this study was conducted to develop a modern technology of scarecrows to chase or scare an animal like birds. This also points out how many future buyers will be interested in the product. This study also underlines the product concept and purpose behind the chosen parameters.

2.0 INTRODUCTION Objectives

- To create an innovative product that helps the farmers improving their crops by repelling the pest.
- To invent a tracking tool that fulfilled the demand of the customers.

2.1 Problem Statement

The villagers especially farmers have to deal with some problems regarding to the animals that damage their crops. The traditional method to deter the animals usually used by the farmers who own and cultivate the paddy is by placing the traditional scarecrow. The traditional scarecrows basically are made by the mannequin stuffed with straw which free-hanging often reflective parts movable by the wind are commonly attached to increase effectiveness.

2.2 Methodology: Data Collection

2.2.1 Survey or Questionnaire

Online survey or questionnaire was conducted to identify the farmers that face the same problems, and to identify the probability of the proposed product to be accepted by the market.

2.2.2 Research

Research and study has been done on existing animal repeller tools. Based on the problem statement, it is identified that a high technology scarecrow with the additional feature may be the solution.

2.3 Limitations

The product was designed to help farmers expelling the pests to improve their production of crops. However, this product was designed to cover only 1640 plus feet which is 500 meters in front of the product. For example, if the farmer have about 32,808 plus feet or 10,000 meters of the field, he or she need to purchase a few High-Tech Solar Scarecrow to cover the whole field. Thus, it is very costly as they need to buy more than one unit.

3.0 NEW PRODUCT DEVELOPMENT (NPD)

3.1 Definition

Global competition is one of the major challenges facing businesses in different economic sectors. To survive in such environment, businesses have to ensure that they become more reliable, responsive, customer focused and cost- effective. One of the ways through which they can attain this by integrating the concept of value creation which entails undertaking new product development.

New product development (NPD) is the process of bringing a new product to the marketplace. NPD is a series of steps that includes the conceptualization, design, development and marketing newly created or newly rebranded goods or service. The purpose of NPD is to cultivate, maintain and increase a company's market share by satisfying a consumer demand.

The process of designing new product involves:

