

UNIVERSITI TEKNOLOGI MARA

**DESIGN AND FABRICATION OF
LOOSEN SOIL BICYCLE**

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ABSTRACT

In this era of globalization, technology is one of the best initiatives to improve the quality of an agriculturally based product. Basically, this Loosen Soil Bicycle has the same function as the existing product but with more advanced and more suitable for the users. The Loosen Soil Bicycle consists of a bicycle frame with a wheel and a blade or tines attached to the frame. There are some problems encountered that led to the fabrication of this project. One of the problems that has been discovered from the old version of Wheel Hoe is it requires physical effort to push and maneuver. Next, the Wheel Hoe can cause higher usage of energy, The use of hoe required the user to bend over from the waist to reach the ground. The objective of this project is to reduce the strain on the user's muscles and joints. The Loosen Soil Bicycle can help gardeners and farmers to work more efficiently and effectively in their fields, resulting in healthier crops and greater yields.

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CHAPTER ONE

INTRODUCTION

1.1 Background of Study

The main purpose of this project is to design and fabricate a project which is Loosen Soil Bicycle with a low-cost budget.

Basically, this Loosen Soil Bicycle has the same function as Wheel Hoe, but the Loosen Soil Bicycle is an upgraded version from the existing design Wheel Hoe. Loosen Bicycle Soil is a gardening tool that is used to cultivate soil and weed gardens. The Loosen Soil Bicycle was developed to make gardening and farming tasks easier and more efficient.[1]

The Loosen Soil Bicycle consists of a bicycle frame with a wheel and a blade or tines attached to the frame. The wheel allows for easy maneuverability and control, while the blade or tines are used to break up soil, remove weeds and create furrows for planting. The Loosen Soil Bicycle is propelled by cycling it forward, and the blades or tines dig into the top layer of the soil and loosen it up. This makes it easier for gardeners to plant seeds or transplant seedlings. The hoe can also be used to weed between rows of plants, and its narrow frame allows it to reach tight spaces. This versatile tool is a great alternative to traditional garden hoe, and it is especially helpful for gardeners with larger plots of land.[2]

The history of the Wheel Hoe goes back to the early 19th century when gardeners in Europe and America began experimenting with different ways to cultivate soil more efficiently. In the United States, the first pattern for a Wheel Hoe was granted in 1834, and by the end of the century they were widely used by small-scale farmers and gardeners.

The idea behind the Loosen Soil Bicycle is to provide an efficient tool that can be easily cycled through the soil, allowing the gardener to cultivate the soil around their plants without damaging the plants themselves.[3] It achieves this by having a single blade or set of blades that can be adjusted to different depths.