

# MycoRenew

Biodegradable Plant Pots Made from Mycelium: A Circular Application of Organic Waste.

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**Date:** 12/06/2025

## Introduction

In the horticultural sector, young trees are often planted in plastic containers that must later be removed, resulting in additional costs and environmental impact. Mycelium pots offer a sustainable, biodegradable alternative. These pots are developed using organic waste from waste from landscaping company JvEsch (wood, compost, and grass), transforming residual materials into a circular product that naturally degrades in soil.

## Methodology

### Material Parameter Optimization

- Moisture Content Optimization
- Substrate Composition Optimization

### Testing Phase

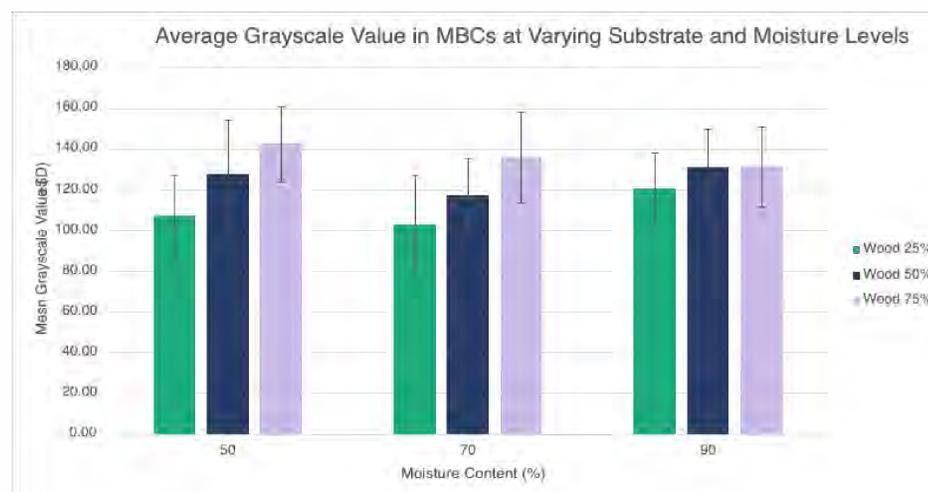
- Image-Based Whiteness Analysis
- Compressive Strength Testing
- Flexural Testing
- Moisture Absorption Testing

### Application Development: MBC-Based Plant Pot

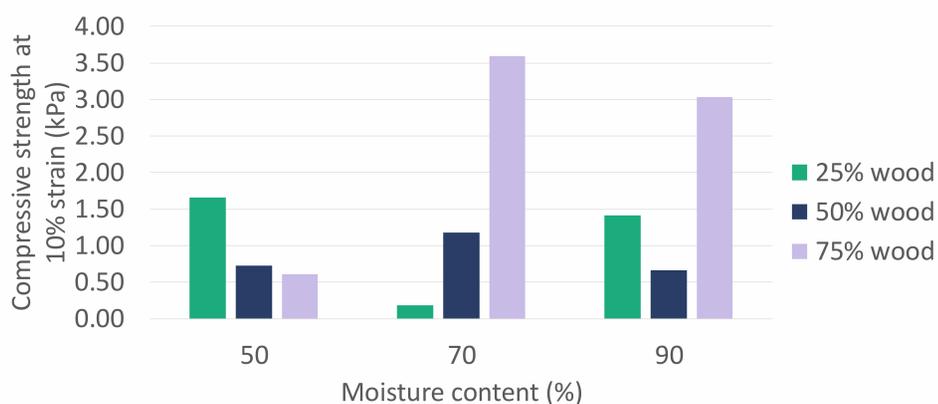
- Design of 3D-Printed Pot Prototype
- Field Testing



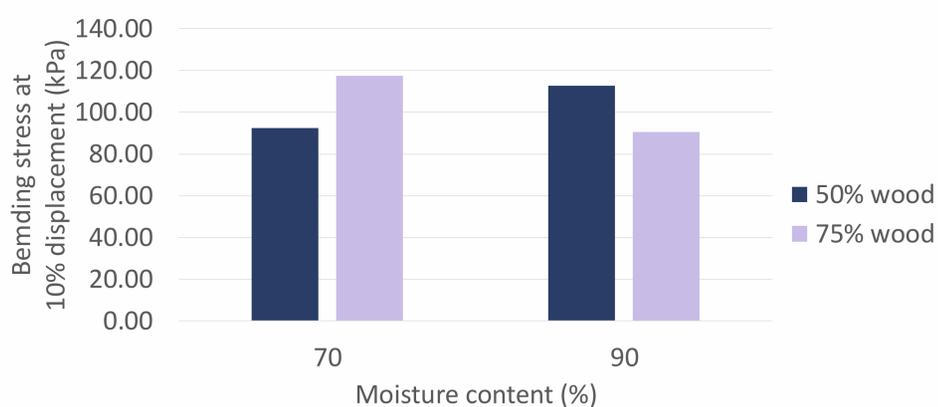
## Results



Average Compressive strength at 10% Strain of MBCs at Varying Substrate and Moisture Levels



Average Bending Stress at 10% Displacement of MBCs at Varying Substrate and Moisture Levels



Average Change in Mass (%) of MBCs During Moisture Absorption Testing at Varying Substrate and Moisture Levels

