









Smart Bio-Hydrogel from Citrus Waste for Improving Soil Water Retention

Faculty of Agriculture - Al-Qadisiyah University

Introduction

- Water scarcity is a major agricultural challenge
- Organic waste is increasing
- Sustainable solutions are needed

Objectives

To develop a smart bio-hydrogel from citrus waste to improve soil water retention and reduce irrigation water requirements.

Methodology

- Citrus waste (peel)
- Carboxymethyl
- Amplified hydrogel
- Hydrogel synthesis

Impact on Plant Growth



Expected Results

- Increased water retention
- Reduced irrigation
- Improved crop yield





