

#### **Technical Datasheet – HappyGround® (Pelletized Soil Enhancer)**

Manufacturer: Rootman®

Product Type: Natural Soil Enhancer Pellet

Applications: Agriculture, indoor & outdoor cultivation, soil restoration, drought-prone

areas

Packaging: 1 kg (2.2 lb) and 3 kg (6.6 lb) bags, and bulk (wholesale)



## **Product Description**

HappyGround® is a natural soil enhancer made from root mats composed of germinated grasses and softwood sawdust. These are processed through an internationally patented, chemical-free method that avoids the use of heavy machinery. Pelletizing includes the integration of a sustainable, carbon-based byproduct that enhances physical structure and contributes to long-term porosity. Its porous, low-density composition supports an ideal balance between aeration and moisture, which enhances root development, microbial life, and overall nutrient efficiency.





#### **Physical Properties**

Property Value / Range

Bulk density (compressed)  $0.06 - 0.08 \text{ g/cm}^3 (3.7 - 5.0 \text{ lb/ft}^3)$ 

True density  $1.48 \text{ g/cm}^3 (92.4 \text{ lb/ft}^3)$ 

Total porosity > 90%

Water retention capacity 400 - 500 g per 100 g of dry matter

(4–5x its dry weight)

Air content > 65% (by volume)

Easily available water 35% (by volume)

Reserve water 14% (by volume)

Hard-to-absorb water 20% (by volume)





# **← Chemical Composition (Report No. 40653-654, IRRIFER Ltda.)**

Parameter / Element	Value
рН	6.7
Electrical conductivity	1.84 dS/m
Total nitrogen (N)	221.1 mg/L
Ammonium (N-NH <sub>4</sub> )	215.2 mg/L
Nitrate (N-NO <sub>3</sub> )	5.9 mg/L
Phosphorus (P)	839.2 mg/L
Potassium (K)	360.6 mg/L
Calcium (Ca)	56.6 mg/L
Magnesium (Mg)	28.6 mg/L
Sodium (Na)	62.9 mg/L
Sulfate (S-SO <sub>4</sub> )	82.2 mg/L
Iron (Fe)	1.4 mg/L
Manganese (Mn)	1.0 mg/L
Zinc (Zn)	0.6 mg/L
Copper (Cu)	< 0.1 mg/L
Boron (B)	0.4 mg/L
Chloride (Cl)	39.0 mg/L



www.rootman.com contacto@rootman.com



## **Key Benefits**

- ✓ Improves soil structure, porosity, and aeration
- ✓ Retains up to 5x its dry weight in water
- ✓ Contains a sustainable carbon-based additive that supports microbial activity and soil resilience
- ✓ Supplies essential nutrients and active organic matter
- ✓ Reduces fertilizer needs and excessive irrigation
- √ 100% biodegradable, free of chemicals and synthetic binders
- ✓ Suitable for organic farming and regenerative agriculture

## Environmental Value & Scalability

- ✓ Produced with natural, renewable raw materials
- ✓ Low-energy process with no synthetic inputs
- ✓ Incorporates a sustainable reuse of carbon-rich thermal byproducts
- ✓ Scalable for both local production and international distribution
- ✓ Aligned with climate-smart agriculture and low-carbon farming practices

## **Commercial Formats**

- o 1 kg (2.2 lb) and 3 kg (6.6 lb) bags
- o Bulk (wholesale) format available for large-scale agricultural use
- o Store in a dry, well-ventilated place to maintain physical properties











#### **&** See Rootman in Action

Discover how our natural materials are transforming agriculture and construction at scale.

**\* Watch the video:** Rootman in Action