Jeffries®

CulChar®

Organic Carbon Fertiliser

Slow release carbon chelated nutrition

NASAA
INPUT FOR ORGANIC PRODUCTION
Cert. No. S125M

Jeffries CulChar is a certified organic, carbon rich, slow release and wide spectrum fertiliser with added Jeffries BioChar. It can hold nutrients in a fertile humus-based aggregate to provide ongoing essential support to crops and regenerative fertility to soils.

- **Broad spectrum macro and micronutrients, trace, and mineral elements**
- **Improves soil porosity, structure, and moisture retention**
- **Embedded with humus and humus forming microbiology**
- **Balanced, protected nutrition for progressive growth**
- **Naturally forms fertile soil aggregates**
- **Fosters an ever-increasing beneficial soil microbiome**

Jeffries CulChar has a balanced 3:1:1 ratio of nitrogen to phosphorus and potassium that suits all soil profiles with a 30% organic carbon and BioChar combination ensuring a much better mineralisation of soil nutrition, water holding capacity, porosity, salt-buffering and fertile exchange capacity.

Expect improvements in the texture and functionality of soils. The diverse micro-biome embedded in Jeffries CulChar also provides a positive, productive life to your soil. The calcium component (5% w/w and available) strongly contributes to healthy stems and leaves but there is a lot more offered in the pellet for the overall balanced growth of plants.

The typical analysis chart indicates Jeffries CulChar is a functional and reliable source of trace elements to ensure they don't become deficient for your plants over time. It's most important to note that most of the commonly used synthetic fertilisers do not have any of the trace elements that crops need. Jeffries CulChar makes NPKS formulas work so much better by buffering their negatives, supplementing what they lack, and adding all the essential organic carbon elements the soil needs.

WHAT IS

BIOCHAR?

Biochar is a specialised form of carbon, suitable as a soil amendment. Jeffries BioChar is made by heating biomass in very low oxygen levels, in a process called pyrolysis.

Jeffries BioChar consists of millions of microscopic pores. This structure gives it a very high surface area, creating infrastructure for billions of beneficial micro-organisms to thrive.

As well as improving the soil structure, the porous nature of Jeffries BioChar allows it to store nutrients and water, then release them when they are needed most.

TYPICAL ANALYSIS CHART

Nutritional Element	Jeffries CulChar	Nutritional Purpose
NITROGEN	3.00%	Ongoing essential nutrient. Main growth energy. Drives all cellular expansion and chlorophyll production. Key component to amino acid, enzyme, and protein formation.
PHOSPHORUS	1.00%	Primary source of cellular energy. Only Source of ATP Production. Essential for early growth, cell division and nutrient movement. Essential for DNA transfer to seeds, carbohydrate synthesis and protein synthesis.
POTASSIUM	1.30%	Fertility, flowering, and fruiting energy. Maintains healthy roots, improves drought resistance, buffers excessive salts in cells, aids photosynthesis, reduces energy loss, aids protein formation.
CALCIUM	5.20%	Primary element for cell wall, structure, and membrane formation. Ensures strong stems and helps prevent malformation or stunted shape. Defender against environmental and pathogenic stress.
MAGNESIUM	0.60%	Enables proper photosynthesis, chlorophyll synthesis, production, transportation, and utilization of photo assimilates, enzyme activation, and protein synthesis.
SODIUM	0.41%	Important for osmotic pressure regulation, water absorption and chlorophyll synthesis.
SULPHUR	0.78%	Facilitates photosynthesis and enzyme production. Improves the functioning of other elements. Essential in key amino acid formation. Imparts flavors to produce, and essential for edible oils formation in any oil-bearing plant.
ZINC	264	Essential contributor to improve yield. Controls the structural, enzymatic, and regulatory component of many proteins and enzymes. Key use in enzymes that are responsible for driving many metabolic reactions in all crops.
MANGANESE	249	High yield contributor to legumes and seed count in general. Underpins photosynthesis, respiration, and nitrogen assimilation. Involved in pollen germination, pollen tube growth, root cell elongation and resistance to root pathogens.
IRON	6,635	Essential in chlorophyll production. Important role in phloem (nutrient circulation) functions, oxygen assimilation, stress resistance and the electron-transport chains of photosynthesis and respiration.
COPPER	122	Required for general plant development, lignin synthesis, many enzymatic activities, chlorophyll formation and proper seed production.
BORON	43	Crucial role in cell wall development. Important in flowering, pollination, fruit development, seed set and the translocation of sugars.
SILICON	1,385	Improves cellular robustness. Prevents wilting, improves drought tolerance, helps to buffer any excessive micro-nutrients or toxic soil conditions - particularly the metals.
MOLYBDENUM	3	Essential key element for the formation of the Nitrogenase Enzyme required to convert Ammonium nitrogen to the plant useful Nitrate nitrogen. Essential for legumes and Nitrogen fixing Rhizomes.
COBALT	3	Promotes balanced and healthy growth having a vital role interacting with Iron, Nickel, and Zinc in maintaining cellular robustness and homeostasis.
TOTAL ORGANIC CARBON	30%	Building block of all life forms on Earth. Essential to proper soil functionality. Improves all soil fertility, water holding capacity, structure, plant health and growth promoting microbial activity.
TOTAL ORGANIC MATTER	50%	Incorporating organic carbon but also adding in all the essential humus forming vegetative structure to soils so that plant growth is stimulated while at the same time buffering against any imbalance, excesses or structural problems in the soil.

Note: all traces are expressed as PPM being the mg/kg for solids or the mg/L equivalent for liquids.

APPLICATION RATES – KILOGRAMS PER HECTARE

Subject to soil test, soil type or for use in a soil remediation or combined amendments program. Suitable for various mechanical and belt-spreaders, blended with fertilizers or mineral amendments. Suitable for use in most air-seeders.

VITICULTURE	HORTICULTURE	PASTURE	PIVOT	BROADACRE
Dryland	**Open Field**	**Dryland**	**Onion/Potato**	**Cereals**
100-200kg directly under canopy 300-400kg with interrow as well	1kg per 8-10m^2 800-1,000kg per ha	200-300kg	1,500-2,000kg	50-100kg
Irrigated	**Greenhouse**	**Irrigated**	**Pasture/Hay**	**Canola/Legumes**
150-250kg directly under canopy	1kg per 2.5-3.5m^2 3-4,000kg per ha	300-500kg	300-500kg	150-250kg

CONTACT US TO LEARN MORE

jeffries® soil for generations

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