



PHYNUTRIC professional product

PHYNUTRIC Refined Potassium Humate

Improved urea fertiliser performance



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Inefficient fertilisers inhibit yield potential

Nitrogen losses due to volatilisation, denitrification, leaching and reorganisation

Phosphorous losses due to lock up and blocking within different soil conditions

Potassium and **Magnesium** blocking and immobilisation due to soil type and pH

TYPICAL % UTILISATION OF APPLIED MINERAL FERTILISERS

Soil Texture	Sandy Soil		Medium Loam		Clay Soil	
	Acid Soil	Calcareous	Acid Soil	Calcareous	Acid Soil	Calcareous
pH						
Organic Matter (%)	>2	1 – 1.5	>1	<1	>2	<1.5
Nitrogen	50 - 70	45 - 75	45 - 70	45 - 65	50 - 65	60 - 75
Phosphorous	35 - 50	30 - 45	35 - 60	30 - 50	40 - 55	30 - 55
Potassium	55 - 75	S.D.	50 - 70	50 - 65	40 - 55	35 - 50
Magnesium	50 - 65	S.D.	45 - 65	45 - 70	40 - 50	35 - 45

Source: Soltner (1988), ITG Agrícola (ensayos Navarra) y U.B.-I.R.T.A. (ensayos Cataluña)

PHYNUTRIC Refined Potassium Humate

- ▶ High polymer heterogeneous aromatic potassium salt, containing hydroxyl, carboxyl and other active elements.
- ▶ Fully water soluble product that may be added to liquid tanks and sprayers with far less risk of sludge settling or blockage of sprayer nozzles.
- ▶ **Cationic soil binding coating for urea fertilisers.** *In high humidity climates, it is recommended to add a final coating of PHOLIGO powder to ensure fertilisers remain free flowing.*
- ▶ Can be used for spray irrigation, drip irrigation and as a liquid organic fertiliser/plant growth stimulant, and as a multifunctional fertiliser promoter.

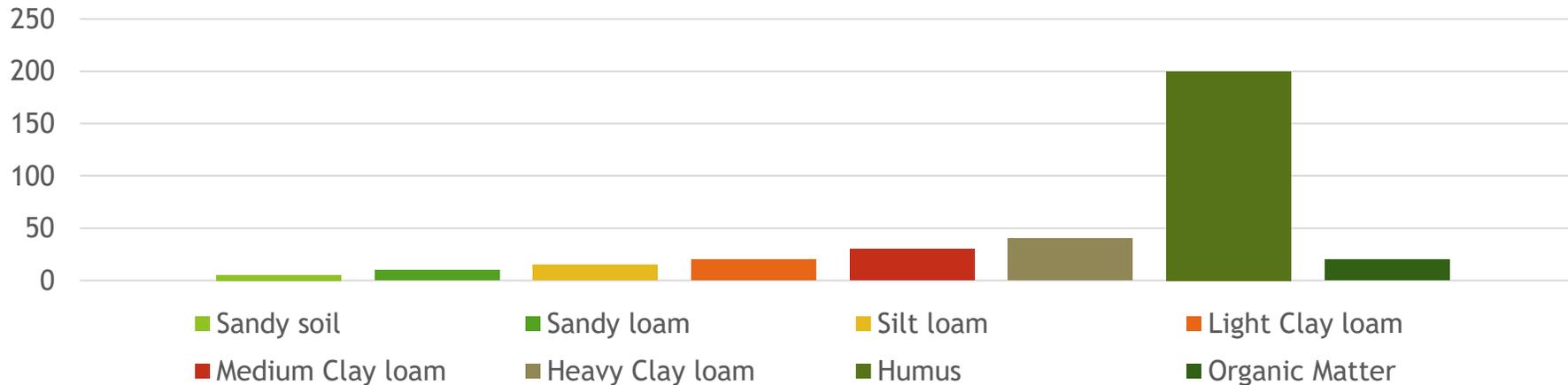
Appearance	Black crystalline powder
Water solubility (dry basis)	100%
Humic acid (dry basis)	60-70%
Fulvic acid (dry basis)	50-60%
K ₂ O (dry basis)	12% min
pH	6 – 8
Moisture	15% max
Anti hard water	25 DH 445 PPM
Packing information	20 kg bags shrink wrapped on 1 tonne pallets

PHYNUTRIC Refined Potassium Humate

Soils have varying levels of static charge which hold on to nutrients until they are absorbed by plant roots, fungi and soil microbes. The measure of this static charge is called the Cation Exchange Capacity or CEC.

Soils with a higher CEC will hold on to more nutrients for assimilation by plants. While soils with a lower CEC will require greater amounts of applied fertilisers to achieve the same level of crop yield.

Typical measure of CEC in various soils
CEC meq/100g





PHYNUTRIC – REFINED POTASSIUM HUMATE

When applied to soils, forms colloidal complexes within the soil, which increase the CEC through formation of stable complexes with the macro and micro elements that are essential for soil and plant health.

Use directly in solution for spray irrigation, drip irrigation and liquid organic fertilisers, or as a multifunctional blended fertiliser combined with nitrogen, phosphorus and other nutrients.

Foliar application

1 kg – 3 kg diluted in 150 – 300 litres / hectare

Fertigation

7kg – 15 kg per hectare subject to soil analysis

Soaking seeds

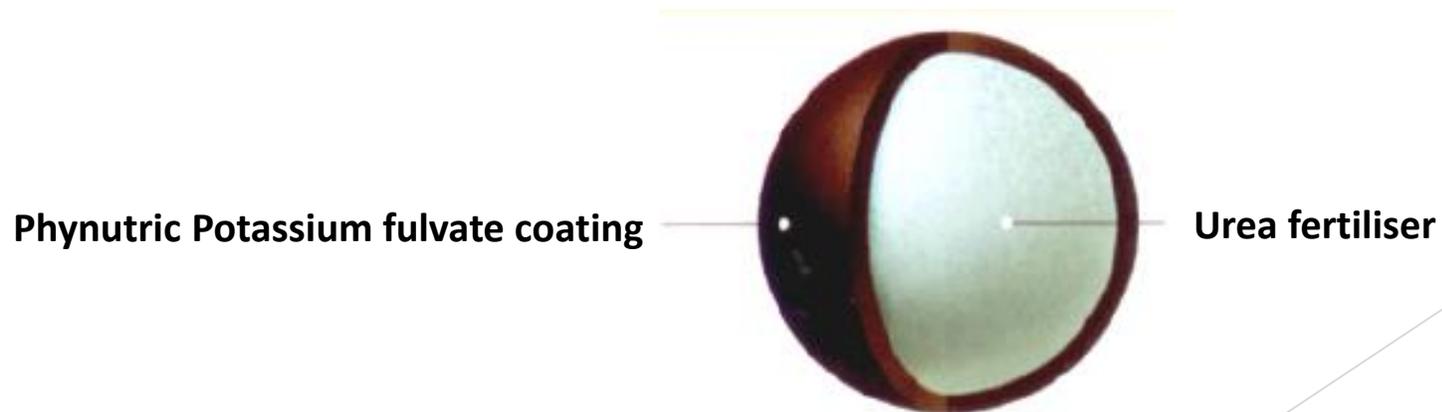
10 – 24 hours in 1/2000 dilution with water

PHYNUTRIC Refined Potassium Humate

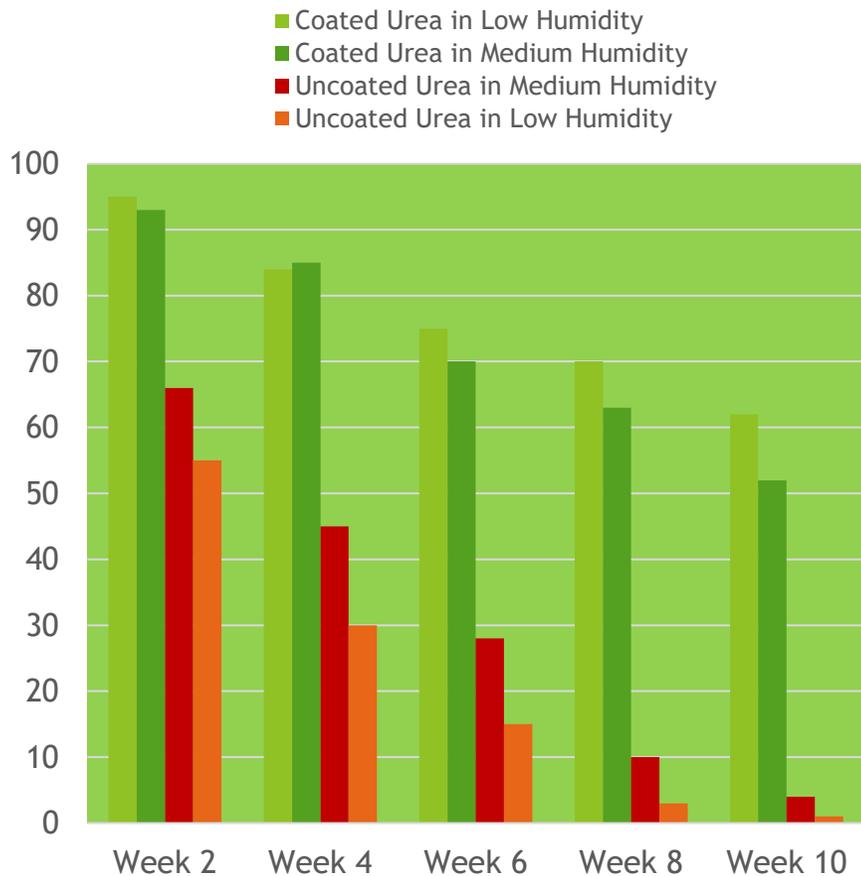
Bio-polymer coating to improve soil applied urea efficiency

Urea is “A-Polar” It is neither a Cat-ion or an An-ion. So it is unable to be attached to the soil.

Humic and fulvic acids form a colloidal complex within the soil, which enable attachment of all nitrogen ions to the soil through the formation of stable complexes with macro and micro elements.



Percentage of Nitrogen present in the soil comparing Coated and Uncoated Urea



Bio-polymer coating improves soil applied urea efficiency

PHYNUTRIC Refined Potassium Humate forms colloidal complexes within the soil, which increase the CEC through the formation of stable complexes with macro and micro elements that are essential for plant health.