

# RealStrong K-Neutralizer



## RealStrong K-Neutralizer

- \* Beneficial for oil palm & cash crops
- \* Improves soil pH
- \* Supplements K (Potassium) in soil for growth and yield
- \* Chloride-free Potash (Chloride is a contributor to soil toxicity)

### Specially for oil palm

K-Neutralizer is a specialty fertilizer that is used to supplement the level of potassium (K) in the soil. Potassium is needed by healthy oil palms and other crops to grow and provide good yields. This product also has the capability to neutralise soil acidity. The neutrality of soil acidity helps plants absorb nutrients, contributing to their healthy growth.

Field observations have shown healthy crop growth with good fruit sets with usage of K-Neutralizer. Healthy, dark green foliage also indicates crops responding well to its usage. The other advantage of K-Neutralizer is that it contains potash that is chloride free. Chloride is naturally available in soil. However an excess of chloride causes toxicity.

### Composition / Information on Ingredients

Real Strong K-Neutralizer  
6.5% K<sub>2</sub>O + S + TE  
Coffee Dreg  
Seed-based Organic Material  
Amino Acid  
Enzymes  
Magnesium (MgO)  
Chloride free Potash

### Comparisons between Lime Stone and K-Neutralizer

Lime Stone	K-Neutralizer
Does not contain any organic matter to help improve soil's physical properties.	Organic materials present decompose over time to help improve soil structure.
Only effective when mixed or ploughed in with soil.	Application is made easier with broadcasting.
Contains high levels of calcium. Affects K <sub>2</sub> O, MgO and absorption of other elements, indirectly affecting production yield and quality.	Contains 6.5% of K <sub>2</sub> O and other TE such as MgO, B, Zn, Cu, Mn, Amino acid, and also Enzymes. Essential for crop health and for good yields.
Soil pH effectively increases only on close contact - penetration on surface soil only.	Fast and long term release pattern immediately increases soil pH. Organic materials neutralize and contribute to improve the soil pH as well. <i>* subject to type of soil</i>
Shorter time effectiveness.	Effectiveness of fertilizer lasts over a year. <i>* subject to type of soil</i>
Does not help in cation exchange capacity (CEC).**	Presence of organic matter helps to improve soil CEC, at the same time enhance soil microbial activities.**

\*\*Cation Exchange Capacity (CEC) is a measure of the soil's ability to hold positively charged ions. CEC helps in influencing soil structure stability, soil pH, nutrient availability and absorption.

## Field Application



K-Neutralizer contributes to healthy plant growth.



Palm shows healthy growth and high yield performance.



K-Neutralizer is also suitable for most vegetables.

### Suggestion for palm yield and planting

Recommended one application of K-Neutralizer once a year as a supplement to increase the soil pH. This should help to rebalance the soil's eco structure so that nutrients uptake and water retention will be enhanced accordingly.

- The dosage to be applied for oil palm per year : generally 4-10 kg/palm/year.
- The dosage to be applied for cash crops : 1 kg/m<sup>2</sup> ( generally, subject to type of crop ).
- K-Neutralizer helps to reinstate N, K to maintain yield while supplementing TE.
- It also helps to enhance soil fertility and structure while preparing for next planting.

## pH Test Results in Actual Plantation Conditions

### Trial in Sarawak Plantations

Before After



pH 3.4



pH 5.0

Peat soil pH at 3.4 before treatment with K-Neutralizer and 5.0 after treatment.

### Trial in Peninsular Plantations

Before After



pH 4.5



pH 6.5

Clay soil pH at 4.5 before treatment with K-Neutralizer and 6.5 after treatment and maintaining for 6 months.

## Heavy Metal Toxicity Test

Maximum Value for Heavy Metals					
Heavy Metal	Max allowable level <sup>a</sup> (mg/kg)	RealStrong K-Neutralizer	Heavy Metal	Max allowable level <sup>a</sup> (mg/kg)	RealStrong K-Neutralizer
Chromium (Cr)	200	2.9	Cadmium (Cd)	5	0.0
Lead (Pb)	300	0.4	Mercury (Hg)	2	0.0
Nickel (Ni)	150	1.1	Arsenic (As)	50	n.d

The maximum permissible value for heavy metals in fortified organic fertilizers is as specified in this table. K-Neutralizer is safe to handle or be in contact with human skin.

<sup>a</sup>Department of Standards Malaysia



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