

# Korn-Kali®

Technical Helpline – Freephone 0800 0322480

# Korn-Kali®

more than potash.



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6960/04-10/E/eng./mp2

more nutrients.  
more quality.  
more yield.

40% K<sub>2</sub>O · 6% MgO · 4% Na<sub>2</sub>O · 12% SO<sub>3</sub>

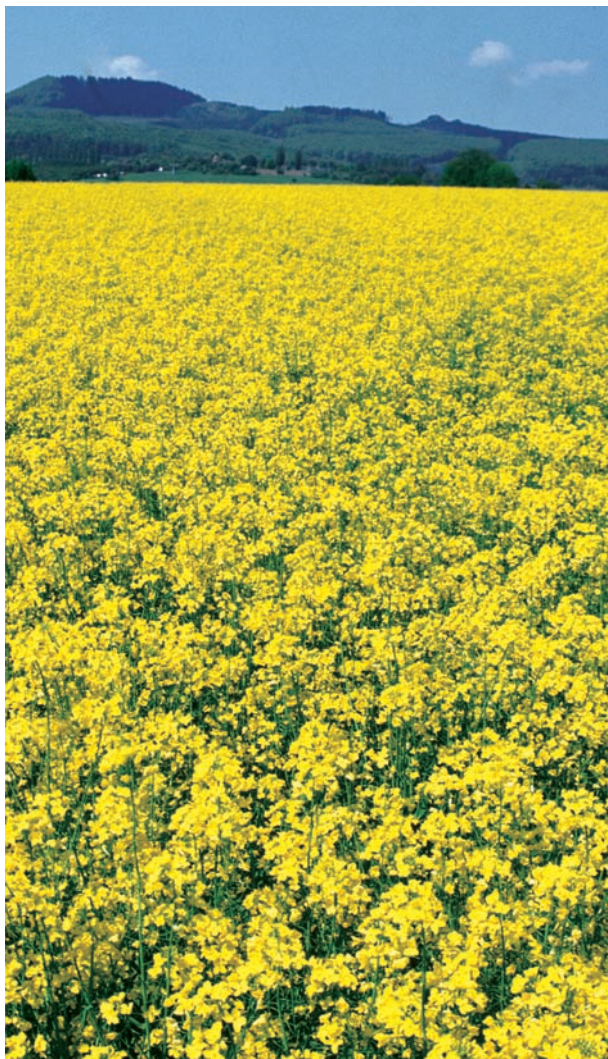


A K+S Group Company

*The Authority in Potassium and Magnesium*

# Korn-Kali®

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## EC FERTILISER

Potassium chloride containing magnesium salts  
40 (+6+4+12)

40% $K_2O$	water-soluble potassium oxide
6% $MgO$	water-soluble magnesium oxide
4% $Na_2O$	water-soluble sodium oxide
12% $SO_3$	water-soluble sulphur trioxide

## Potassium chloride with magnesium, sodium and sulphur

- A true granular potash, magnesium, sodium and sulphur fertiliser
- A particularly cost-effective base dressing in just one pass
- Designed to meet the typical requirement for these nutrients in the target crops
- Potash:magnesium ratio tailored to match typical crop offtake
- Sulphur level makes a substantial contribution to crop requirements
- All nutrients water-soluble and available to the plant regardless of soil pH
- Perfect as a maintenance dressing to maintain soil fertility
- Suitable for use alone or for blending with other nutrients
- Excellent spreading characteristics (tested to spread to 36m)

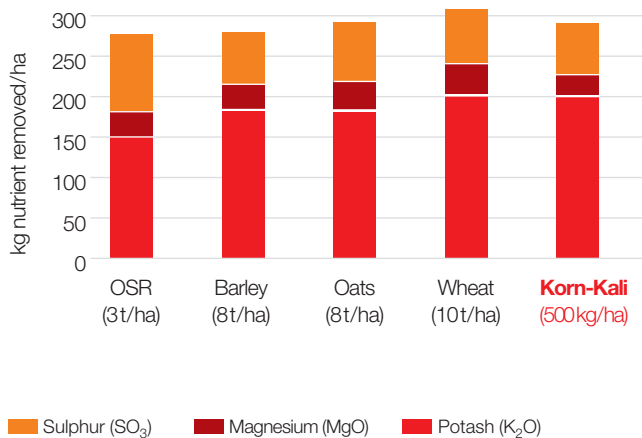
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## Nutrient removal by OSR and cereals

FACTS Magnesium review 2005 and  
K+S long-term averages



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more nutrients.

Role in plants	Importance	Problems of deficiency
<b>Water balance (osmoregulation)</b>	Possibly the most important role of potash is to enable crops to resist stress in times of water shortage and to enable other nutrients and substances to be efficiently transported around the plant.	Serious yield depression particularly evident in dry seasons. Poor efficiency and wastage of nitrogen and phosphorus fertiliser.
<b>Frost protection</b>	Potash is an ingredient in many types of de-icing salt due to its anti-freeze properties. Adequate potash in the plant enables the plant to survive the stresses of cold winters more easily.	Dead leaf margins from frost damage and stunted plants.
<b>Nitrogen incorporation and use efficiency</b>	Potash is needed for amino acid and protein formation. It triggers the incorporation of inorganic N into organic fractions, hence improving the efficiency of applied N	Wastage of N fertiliser costly to the grower and the environment.
<b>Resistance to lodging</b>	Potash increases the formation and deposition of cellulose and lignin which give plants rigidity and strength, as a consequence reduces risk of lodging.	Wilting in beet and other leafy crops. Lodging in cereals.



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more nutrients.

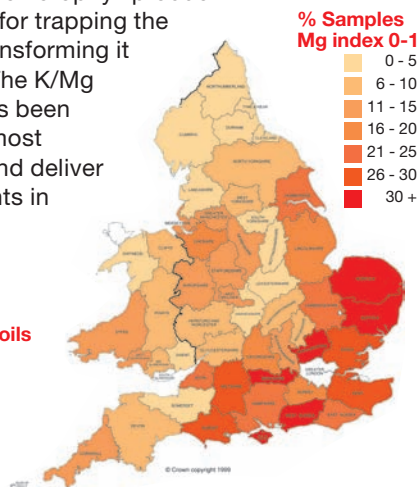
## With potash...

**Korn-Kali** contains 40 % potash (as muriate of potash) in a cost-effective form for combinable crops, grass, maize and sugar beet. Potash is essential, not only for stress resistance, water management, carbohydrate production and transport of other nutrients within a plant but most importantly to maximise the nitrogen use efficiency (the proportion of available N that is utilised by a crop). Trials have clearly shown that nitrogen cannot be used efficiently without sufficient K. Below the target index 2-, the efficiency of N use starts falling and on index 1, yield and quality are seriously affected.

## With magnesium...

**Korn-Kali** contains 6 % water soluble magnesium. Because this magnesium is from ESTA® Kieserit, it is fully water-soluble and therefore available to crops regardless of the soil type. Recent trials comparing different forms of magnesium have demonstrated that magnesium from kieserite is superior to other less soluble forms. Magnesium is crucial for many reactions in plants, for effective grain fill and also for chlorophyll production which is crucial for trapping the sun's energy and transforming it into outright yield. The K/Mg ratio in **Korn-Kali** has been designed to match most crop requirements and deliver both of these nutrients in the right balance.

Diagram showing  
magnesium status of soils  
in England and Wales



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more nutrients.



## With sulphur...

**Korn-Kali** contains 12 % sulphur and as such is one of the only non-nitrogen fertilisers to contain S. Applied at a maintenance rate, **Korn-Kali** supplies sufficient sulphur for many cereal crops and makes a substantial contribution to the S requirement of oilseed rape and silage grass. The sulphur in **Korn-Kali** is in the sulphate form, which is the form that plants take up from the soil and use.

## With sodium...

Sodium is particularly important for two major crop groups, those of maritime origin such as sugar beet and asparagus and for forage crops including grassland although it can be utilised in most arable crops for osmotic functions, similar to potash. Sodium in beet is particularly valuable since it can directly replace some of the potash requirement as it can to varying degrees in other crops. In grassland and forage crops, sodium improves the palatability which leads to less selective grazing and higher intakes and also provides a valuable source of dietary sodium for livestock.

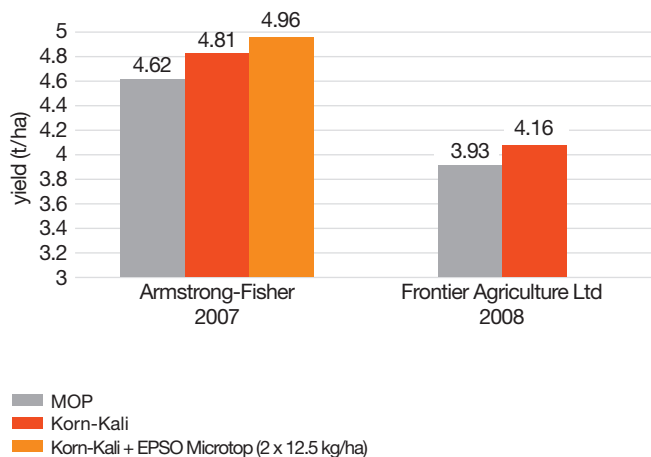
# Korn-Kali®

A truly balanced potash fertiliser



- The result of a balanced potash fertiliser is clear. In trials on oilseed rape and cereals, Where straight potash was compared to **Korn-Kali** (K, Mg, Na & S), the benefit of these supporting nutrients was clear from the yield results

## Independent UK trials comparing Korn-Kali with MOP in OSR



Armstrong Fisher 2008

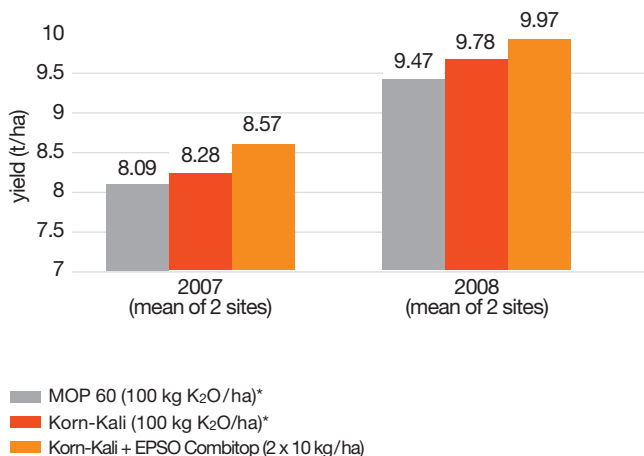
# Korn-Kali®

Korn-Kali® for cereals



With the correct level of base nutrients, winter wheat is able to maximise nitrogen efficiency and yield potential can be fully exploited.

## Maximising yield with a Korn-Kali + EPSO Combipot program



Armstrong Fisher 2008

# Korn-Kali®

## Application of Korn-Kali®



# Korn-Kali®

## Information and contact



Due to its nutrient ratio, **Korn-Kali** can be used as a highly cost-effective “one pass” substitute for muriate of potash (MOP) without the need for extra passes with additional nutrients. In areas with adequate phosphate in the soil, **Korn-Kali** provides the perfect base fertiliser to be used with nitrogen or additional sulphur depending on crop requirements.

Because all of the nutrients are water soluble, **Korn-Kali** is suitable for application on all soil types and to all crops not sensitive to chloride. Annual application of **Korn-Kali** is recommended to replace nutrient offtake and maintain soil fertility. Potash fertiliser can however be applied rotationally on medium and heavy soils since potash may be held in these soils for more than one season. The rotational application should be applied to the crop with the highest potash demand and rates applied must account for future crop requirements in the rotation together with possible transfer of potash to less-available pools in the soil.

In loamy and clay soils **Korn-Kali** is commonly applied after harvest in late summer/early autumn. An early spring application is recommended in light textured or organic soils to prevent losses occurring during winter rainfall.

Due to its granulometry, **Korn-Kali** has excellent spreading characteristics and has been tested to spread to 36 m.

All information contained within this leaflet was correct at time of printing. Information on the use of fertilisers given in this document does not constitute a specific fertiliser recommendation and we advise that you consult a FACTS qualified adviser for such advice.

Ask your merchant or adviser for **Korn-Kali** today.

K+S UK & Eire Ltd. ensure the highest quality of products and service with commitment to helping growers obtain the optimum benefits from the complete product range. To this end, a FACTS qualified agronomist is on hand to deal with questions of how best to integrate **Korn-Kali** into your nutrient management program and maximise returns.

Visit [www.ks-ukeire.co.uk](http://www.ks-ukeire.co.uk) for more information, mail [info@ks-ukeire.co.uk](mailto:info@ks-ukeire.co.uk) with a query, or better still, why not call our **Technical Helpline on Freephone 0800 0322480**

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