



TESSENDERLO  
*Kerley*

**GranuPotasse®**

EST. 1919

APPLICATION GUIDE

HIGH GRADE GRANULAR SOP  
FOR SOIL APPLICATION

TESSENDERLO  
*Kerley*



Potassium is an essential element in all plants and in certain crops, such as potatoes it is the most important of the three primary nutrients, i.e. nitrogen, phosphorus and potassium (N, P, K).

While potassium is not directly incorporated into the tissue of the plant, its presence is vital for many important physiological and biochemical functions:

- Potassium is essential for the **development of proteins, enzymes and vitamins**, as well as for **plant photosynthesis**
- It plays a key role in **transport functions** within the plant
- Potassium controls **plant transpiration**, improving the efficiency of water use and hence reducing drought stress
- It is also involved in a range of other **important metabolic** functions

## GRANUPOTASSE

GranuPotasse® is the granular grade of sulfate of potash from Tessenderlo Kerley International and it is sold in many countries throughout the world. This product helps growers to produce high quality crops with maximum export value, while helping to protect sensitive environments.

- **Offers a source of potassium and sulfur**

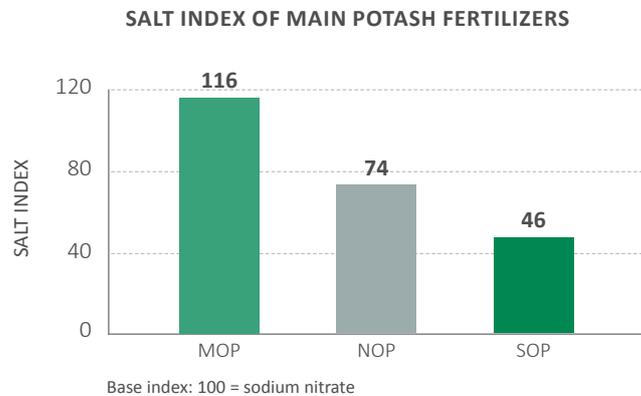
GranuPotasse provides two important mineral elements to plants: potassium and sulfur. Delivered in the sulfate form, which is easily taken up by the plant, sulfur is an important constituent of amino acids and proteins, and it is also required for photosynthesis. GranuPotasse can be easily blended with other fertilizers to produce NPKs.

- **Is virtually chloride-free**

Chloride makes a significant contribution to soil salinity and an excess can be detrimental to the quality of many cash crops with poor chloride tolerance.

- **Has an extremely low salt index**

Salinity can destroy agricultural land by significantly reducing soil and water quality. Out of the three most common potash fertilizers - potassium nitrate (NOP), potassium chloride (MOP) and potassium sulfate (SOP) - GranuPotasse has by far the lowest salt index and it is the best product to use in areas at risk from salinity.



- **Improves the yield and quality of fruit and vegetables**

The use of GranuPotasse gives high quality products with outstanding flavor. In many cases, size and consistency, as well as yield, is improved. Increased pigment content gives better color and appearance and higher levels of both sugar and juice, while reducing acidity to provide better flavor and aroma.

- **Enhances nutritional value**

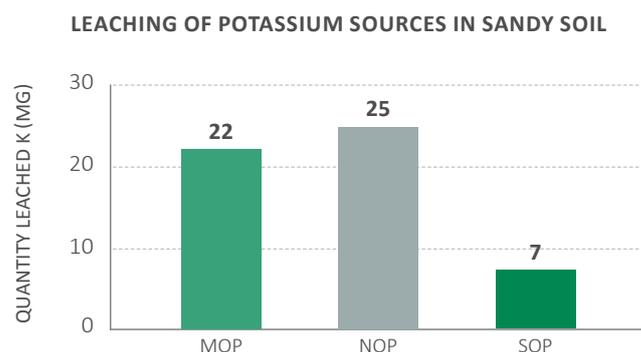
The product has a positive effect on the plant's production of vitamins, oil, starch and sugar. These are the basic factors for high nutritional value.

- **Provides increased durability and resistance**

The use of GranuPotasse ensures firmer fruit and vegetables with a better resistance to bruising. GranuPotasse can also increase the suitability of fruit and vegetables for canning or processing.

- **Consistent performance across a range of soil types**

In alkaline and salt-affected soils, GranuPotasse helps to lower the pH level at the root surface, improving the availability of phosphorus, iron and most other micronutrients. Meanwhile, in acidic soils (mainly light or sandy), GranuPotasse reduces cation leaching and is considerably less prone to leaching than other potash fertilizers.



Source: University of Florida, USA

## CHARACTERISTICS

### Specifications

GranuPotasse combines the essential nutrients potassium and sulfur in an optimal form that is **readily available to plants**.

A 50.2% K<sub>2</sub>O (42% K) and 45% SO<sub>3</sub> (18% S) content enables GranuPotasse to supply a **very high concentration of nutrients**. GranuPotasse is **virtually chloride-free** with a typical Cl content of only 2.3%.

Potassium sulfate		Method of analysis
- K <sub>2</sub> O (w/w)	Min. 50%	Potentiometric
- Cl (w/w)	Max. 2.5%	Potentiometric
- S (w/w)	18%	X-Ray fluorescence

### Typical properties

- Appearance/color	Light grey to beige granules
- Bulk density (struck/loose)	1.40 kg/l / 1.27 kg/l
- Angle of repose	33°
- Sieve analysis	97% between 1.60 mm and 5 mm
- K <sub>2</sub> O (w/w)	50.2%
- K (w/w)	42%
- Cl (w/w)	2.3%
- SO <sub>3</sub> (w/w)	45%
- H <sub>2</sub> O (w/w)	0.2%
- Chemical formula	K <sub>2</sub> SO <sub>4</sub>

### Typical particle size distribution

Particle size	Sieve analysis
> 5.00 mm	1%
> 1.60 mm	98%
< 1.60 mm	2%

### Conversion factors

K<sub>2</sub>O to K: multiply by 0.8301

SO<sub>3</sub> to S: multiply by 0.4



## GRANUPOTASSE FOR DIRECT APPLICATION

GranuPotasse offers a number of important benefits for direct application:

- **Security and flexibility**  
The properties of GranuPotasse enable both early and late application without the risk of leaching or salt damage to the crop.
- **An effective basal or top dressing during the early stages of crop growth.**
- **A dust-free product**  
The special process used to produce GranuPotasse ensures that the fertilizer is virtually dust-free. This results in minimum operator exposure to dust particles when GranuPotasse is spread on the fields, either mechanically or by hand.
- **Consistent granulometry**  
90% of GranuPotasse particles are between 1.60 mm and 4.50 mm in size, ensuring uniform application.
- **Spreading range of up to 28 meters**

## GRANUPOTASSE FOR BULK BLENDING

For bulk blending, GranuPotasse offers a large choice of formulae:

GranuPotasse is the ideal product for blending with other fertilizers, including ammonium nitrate, urea, DAP, and TSP. Combined with one or two other components, it offers a wide range of formulae, providing the grower with a fertilizer that is tailored to the specific needs of each crop and local soil conditions.

- **Ease of handling**  
Consistent granulometry and lack of dust make GranuPotasse easy to handle and mix with other granular fertilizers.
- **Excellent stability**  
GranuPotasse is non-hygroscopic, it stores well in bulk, and it has no harmful side effects. These factors make it a product that can be blended with confidence.

## IDEAL FOR DIRECT APPLICATION OR BULK BLENDING

- High quality GranuPotasse granules are suitable for direct application and/or bulk blending
- The granules are produced via a special four-step process
- After compacting SOP in powder form into sheets, these are then crushed to produce granules
- The granules are carefully sieved to remove oversized and undersized particles and then pass into a separate unit for de-dusting
- A stream of compressed air removes the dust particles, leaving only the granular product



## GRANUPOTASSE FERTILIZER RECOMMENDATIONS\*

The application of GranuPotasse will depend on a variety of factors. In general terms, for annual crops, GranuPotasse should be applied pre-planting with soil incorporation, although a pre-emergence broadcast application after sowing is also possible. In perennial crops, GranuPotasse is either soil incorporated prior to planting or applied annually as a basal dressing, preferably along the row for hedge fruit crops or below canopy for others. For crops with a high potash requirement, split applications of GranuPotasse are recommended. For the best results, a qualified local agronomist should be consulted regarding application timing and method.

### GranuPotasse fertilizer recommendations\*

	K <sub>2</sub> O † (kg/ha)	K (kg/ha)	GRANUPOTASSE (kg/ha)
<b>FRUITS &amp; NUTS</b>			
Avocado	100 - 400	85 - 335	200 - 800
Banana	1300 - 1500	1085 - 1250	2600 - 3000
Citrus	100 - 250	85 - 210	200 - 500
Grape	100 - 200	85 - 165	200 - 400
Mango	10 - 100	8 - 85	20 - 200
Pineapple	100 - 600	85 - 500	200 - 1200
Pome fruits	100 - 200	85 - 165	200 - 400
Stone fruits	80 - 200	65 - 165	160 - 400
Tropical fruits	50 - 200	40 - 165	100 - 400
<b>Melon/Watermelon</b>			
Glasshouse	700	585	1400
Open field	150 - 200	125 - 165	300 - 400
<b>VEGETABLES</b>			
Brassicae	100 - 350	85 - 290	200 - 700
Bulb crops	150 - 300	125 - 250	300 - 600
Lettuce	250 - 300	210 - 250	500 - 600
Pepper	250 - 300	210 - 250	500 - 600
Tomato (field)	100 - 450	85 - 375	200 - 900
<b>ROOTS &amp; TUBERS</b>			
Cassava	50 - 100	40 - 85	100 - 200
Potato	200 - 400	165 - 335	400 - 800
Sweet Potato	50 - 150	40 - 125	100 - 300
Yams	50 - 100	40 - 85	100 - 200
<b>OIL CROPS</b>			
Groundnut	50 - 100	40 - 85	100 - 200
Sunflower	100 - 300	85 - 250	200 - 600
Soybean	50 - 180	40 - 150	100 - 360

	K <sub>2</sub> O † (kg/ha)	K (kg/ha)	GRANUPOTASSE (kg/ha)
<b>BEVERAGES, SUGAR &amp; TOBACCO</b>			
Coffee	150 - 300	125 - 250	300 - 600
Sugar Beet	300 - 400	250 - 335	600 - 800
Sugar cane	80 - 200	65 - 165	160 - 400
Tea	60 - 90	50 - 75	120 - 180
Tobacco	100 - 300	85 - 250	200 - 600
<b>PULSES</b>			
All pulses	50 - 250	40 - 210	100 - 500
<b>PASTURE &amp; FODDER</b>			
Alfalfa	50 - 400	40 - 335	100 - 800
<b>CEREALS</b>			
Barley	80 - 120	65 - 100	160 - 240
Maize	50 - 250	40 - 210	100 - 500
Sorghum	50 - 250	40 - 210	100 - 500
Wheat	100 - 125	85 - 105	200 - 250
Rice	150 - 160	125 - 135	300 - 320
<b>FIBER CROPS</b>			
Cotton	50 - 250	40 - 210	100 - 500
Flax	60 - 100	50 - 85	120 - 200
<b>GranuPotasse fertilizer recommendations per tree</b>			
	K <sub>2</sub> O † (kg/ha)	K (kg/ha)	GRANUPOTASSE (kg/ha)
Olives	0.5 - 1	0.4 - 0.85	1 - 2

\* Actual doses of GranuPotasse required will depend on local growing conditions including, but not limited to: soil type and potash content; crop variety; target yield, etc. The use of tissue and soil analysis to determine crop and soil potash status is recommended. Tessenderlo Group recommends that you seek advice on your fertilization program from a qualified agronomist.

Post-emergence application of GranuPotasse is not recommended in any crops (particularly leafy vegetables) where there is a risk of granules remaining on the leaf surface for an extended period of time.

† 1 kg of GranuPotasse contains 502 g of K<sub>2</sub>O which is equivalent to 417 g of K  
1 kg of K is equivalent to 2.40 kg of GranuPotasse or 1.20 kg of K<sub>2</sub>O



## SULFATE OF POTASH FROM TESSENDERLO KERLEY INTERNATIONAL



	K-LEAF®	SOLUPOTASSE®	GRANUPOTASSE	K50 POTASSE
<b>TYPICAL TECHNICAL CHARACTERISTICS</b>				
Average K <sub>2</sub> O (K)	52.0% (43%)	51.5% (42.8%)	50.2% (41.7%)	50.4% (41.8%)
Average SO <sub>3</sub> (S)	47.0% (18.7%)	47.0% (18.7%)	45.0% (18%)	44.3% (17.7%)
Average Cl	0.2%	0.6%	2.3%	2.1%
Sieve analysis	99% < 0.125 mm	80% < 0.30 mm	97% between 1.60 and 5 mm	97% < 1.65 mm (Tyler 10)
Bulk density	1.53 (struck) 1.25 (loose)	1.46 (struck) 1.21 (loose)	1.40 (struck) 1.27 (loose)	1.54 (struck) 1.09 (loose)
<b>TO PRODUCE</b>				
High value compounds				√
High value blends			√	
High value soluble mixes	√	√		
<b>FOR APPLICATION</b>				
Basal dressing			√	√
On the line or per plant			√	√
Greenhouse, hydroponic system		√		
Open field fertigation (drip, sprinkler, central pivot)		√		
Foliar feeding	√			



## SUSTAINABLE CROP NUTRITION FOR AGRICULTURE

For over 100 years Tessenderlo Kerley International has demonstrated its commitment to nurturing crop life through innovation, research and the development of novel fertilizers for a more sustainable agriculture. Our diverse product portfolio addresses the challenges of modern agriculture by delivering essential nutrients in forms that protect soil health and optimize nutrient use efficiency.

### We provide an extensive range of both liquid and solid/soluble fertilizers



HIGH-PERFORMANCE LIQUIDS

HIGH QUALITY SOLID/SOLUBLES



**Our experts are familiar with your region and crops.  
Their support includes:**

- Agronomic advice
- Providing technical information
- Carrying out field studies that are specific to your issues
- Providing application and storage tips

**For more contact information, please get in touch with:**

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