



Frontiers of Potassium

an International Conference

ROME
25-27
January
2017



EXAMINING GLOBAL POTASSIUM RESOURCES

During the upcoming Frontiers of Potassium Science conference, the global resource base of potash minerals will be reviewed, with a look at long-term sustainability (kfrontiers.org).



Maintenance of an adequate potassium (K) supply in the soil is essential for sustaining global food production. Even though K is widespread in minerals and rocks, many soils need additional inputs of K fertilizer to meet the plant nutrition needs.

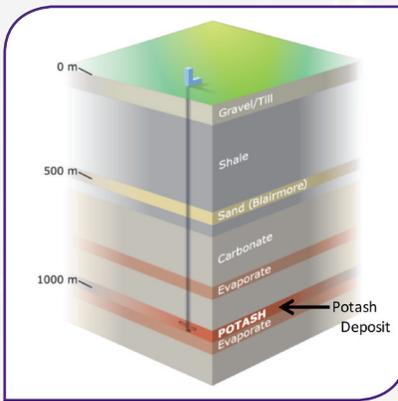
Additionally, crops remove large amounts of K from the soil with each harvest. At some point, it is necessary to replenish the soil supply by replacing this nutrient. The production and application of K fertilizers are essential to maintaining global food supplies.

Potassium fertilizer is commonly called 'potash', a term that came from early methods to make fertilizer where K was leached from wood ash and then concentrated in large pots. This primitive method is no longer practiced and was not environmentally sustainable.

Today, the term 'potash' refers to a variety of K-bearing geologic minerals and fertilizers. There are several K minerals mined for fertilizer, the most common being sylvite (KCl), sylvinitite (KCl + NaCl), and various sulfate-containing K minerals.

► Potash Resources

Many of the global K deposits were formed over 400 million years ago when ancient seas evaporated and the remaining salt was covered with deep layers of sediment. Large reserves of these buried K deposits occur around the world, with the largest reserves and fertilizer production coming from Canada, Belarus, and Russia. Smaller geologic deposits of K exist around the world and they make important contributions to the global K fertilizer supply. Evaporation of brine from water bodies



(such as the Dead Sea or The Great Salt Lake) are also valuable sources of potash.

The world has an estimated 250 billion metric tons of K_2O resources. These resources include reserves (currently mined) and deposits that have been proven or probable. Although K is an abundant mineral in the earth, care should be taken to use it carefully and extend these geological reserves as much as possible.

► Global Potash Supply and Capacity

The need for an adequate K supply for crop nutrition is well known. Consequently, the global demand for potash fertilizer is projected by FAO to grow by 2.6% from 2014 to 2018. The USGS estimates world consumption of potash will increase from 35.5 million tons K_2O annually in 2015 to 39.5 million tons K_2O in 2019.

There is extensive international trade in potash, to move K fertilizer from the mines to farmer fields. Muriate of potash (KCl) is the most widely used K fertilizer, but other potash fertilizers also make an important part of global crop production and trade. The future production and agronomic use of this essential plant nutrient will play a key role in sustaining global food production.



INTERNATIONAL
PLANT NUTRITION
INSTITUTE

3500 Parkway Lane, Suite 550
Peachtree Corners, Georgia 30092-2844 USA
Phone (770) 447-0335 | www.ipni.net