

Review: SGI Metabasalt as a Nutrient Source for Grape Vines



Background

Grapes produce an aesthetically pleasing landscape and are widely cultivated to be eaten as fruit or processed into products such as juice, wine, and raisins. Fertilizers can increase annual yields by providing essential nutrients and improving soil health. Secondary macronutrients and micronutrients derived from SGI Metabasalt can supply essential plant nutrients, which often are limiting factors in primary fertilizer-based growing systems.

Role of SGI Metabasalt for Grape Vines

SGI Metabasalt, also known as greenstone, is a metamorphosed form of basalt. Minerals from metabasalt provide essential nutrients to plants and trace elements known to support healthy soil and crops. The following are components of SGI Metabasalt believed to benefit grape vines:

- 1. Effect on pH**
Most chemical fertilizers are known to decrease the soil pH to below optimum levels. SGI Metabasalt acts as a slow release “lime” to neutralize soil acidity and boost soil pH to optimum levels (5.5 to 6.5).
- 2. Effect on Soil CEC**
SGI Metabasalt has a cation exchange capacity (CEC) of 15 meq/100 g and could help soil improve its CEC.
- 3. Secondary Nutrient Source**
SGI Metabasalt is rich in calcium and magnesium, essential plant nutrients. Calcium is an essential component of a cell wall, providing firmness, increased shelf life, and indirectly influencing disease and insect susceptibility. Additionally, calcium decreases fruit cracking in grapes. Magnesium is a building block of chlorophyll, helping in photosynthesis and enzymatic activation ([WVU Extension, 2019](#)). Deficiency symptoms are more common in acidic soil environments, but SGI Metabasalt increases the soil pH while supplying magnesium.
- 4. Micronutrient Source**
SGI Metabasalt is rich in micronutrients such as iron, cobalt, zinc and magnesium.
- 5. Source of Beneficial Element**
Silicon (Si) plays an important role in providing structural support to the plant cell and reducing abiotic stress. SGI Metabasalt is rich in silicon derived from mineral quartz. Silicon also controls the occurrence of powdery mildew and decreases insect pest infestation on plants. Wine produced from silica-treated grapes were ranked better in sensory evaluations ([Wenzel et al. 2020](#)).

SGI Metabasalt

- Reliable source of secondary nutrients and micronutrients, plus other trace elements demonstrated to support plant growth
- Remineralizes soil and increases microbial activities
- Naturally derived, safe for all applications, and OMRI-listed for organic use

Learn More

SGI Metabasalt is available in a variety of volumes to meet your needs. Find out more by contacting:

agriculture@specialtygranules.com
866-266-8504