

IMPORTANCE OF CALCIUM

1. Most soils are acidic due to leaching, atmospheric pollution and application of nitrogenous fertilisers which tend to break down in the soil to form nitric and sulphuric acids – addition of Calcium controls this situation.
2. At different pH levels other nutrients become more or less readily available to plants. This can result in toxicity or deficiency of particular nutrients.
3. The correct soil pH is essential for efficient utilisation of artificial fertilizers. The ideal soil pH is about 6-6.5 for most crops. Addition of calcium will correct acidic soils.
4. Microbial activity is also affected by pH and this is important in the break down of organic matter.
5. Calcium imparts stability to the soil resulting in better water absorption, better water retention and improved microclimate of the soil with more air spaces, this helps improve microbial activity.
6. When quick soil reaction is required it may be advisable to use Hydrated Lime because:-
 - a. It has high neutralizing power due to high Ca composition.
 - b. It has finer particles.
7. Calcium is an essential nutrient.
8. When should one apply Calcium.
 - a. After testing the soil.
 - b. pH or Ca levels in the soil are low.
 - c. Response of plants to artificial fertilizers is poor.
9. Lime should ideally be applied and incorporated into the soil at least one or two months before your crop is planted. This will allow time for correction of your soils, so one is planting into an improved environment.
10. Remember:
 - a. The effect of liming correctly will last for about 4 - 5 years.
 - b. The lime should be applied so as to improve the whole shamba.
 - c. It is no good applying to the planting hole for maize. Next year, you will miss using the same hole.
 - d. All crops require correct pH for maximum nutrient utilization. For more information contact Crop Nutrition Laboratory Services.

NB: pH is the measure of acidity or alkalinity of the soil.

Neutralizing value (NV) is a measure of the ability of a liming material to neutralize acidity compared with pure calcium carbonate. Pure limestone has an NV of 100.

Use **HOMA LIME SUPER CALCIUM FERTILISER** or **CALCIUM FERTILISER** to correct Calcium deficiency and excessive soil acidity and improve yields.

YOUR MAGIC BAG FOR SOIL CONDITIONING

WHY APPLY SUPER CALCIUM FERTILIZER OR CALCIUM FERTILIZER (AGRICULTURAL LIME)?

1. Acidity in the soil is developing with time.
2. The soil's content of organic matter [humus] is being used up.
3. Certain elements essential to plant and animal growth such as Calcium are being removed by the harvesting of crops and continuous land use.

WHEN TO APPLY

Frequency of application depends on:

- Soil texture
- Nitrogen fertilization rates
- Calcium crop removal
- Amount of Lime applied
- Soil pH range required

Apply one to two months before planting for immediate utilization.

AVAILABLE SOIL CONDITIONERS

Calcium Lime (Super Calcium Fertilizer or Calcium Fertilizer) - High in Calcium and has a high neutralizing value i.e reduces acidity/raises the pH level.

Dolomitic Lime - Contains both calcium and magnesium. Magnesium is a trace element and so is required in very small amounts. Dolomite should not be used frequently.

Gypsum- Contains calcium and sulphur and has a small neutralizing value of about 10% and so is less effective. The sulphur forms sulphuric acid in the soil , so is good for reducing alkalinity in high pH soils.

ADVANTAGES OF LIMING ACID SOILS

- Lowers toxic levels of aluminium and manganese.
- Increases soil microbial activity- decomposition
- Overcomes the potential for Calcium deficiency
- Increases symbiotic nitrogen fixation in legumes.
- Increases availability of phosphorus and molybdenum
- Improves water retention in the soil.

The following organisations are already using our products for soil treatment and increased yields:

1. James Finlays (K) Ltd – Kericho
 2. Unilever Tea (K) Ltd – Kericho
 3. Tropical Farm Management – Nairobi
 4. Crop Africa – Nairobi
 5. Western Seed – Kitale
 6. Mumias Sugar Co. Ltd – Mumias
 7. Nzoia Sugar Co. Ltd – Nzoia
 8. Kaweri Coffee Plantation – Uganda
 9. KARI & AGRA – Supports the liming program
 10. S.P. Kruger - Eldoret
- + many others.