
MARKET AND ECONOMIC FEASIBILITY STUDY FOR GRANULATED LIME IN KENYA



SUMMARY

Kenya Markets Trust (KMT) carried out a study on the market and economic feasibility of granulated agricultural lime in Kenya between August and December 2020. The study objective was to determine the factors that would make the lime granulation business a success by analysing the market and the economics of granulated agricultural lime in Kenya.

Some of the key findings showed that there was generally low agricultural lime use among Kenyan farmers, with many having a challenge with the frequency and timing of using agricultural lime. Major demand regions for agricultural lime were Central (Mt. Kenya and Aberdares region), Rift Valley (South, Central and North Rift), and Western (Western and lake regions) where the demand was driven by use in the three key crops namely coffee, maize and sugarcane.

Whereas the current national annual demand is estimated at approximately 187,000 metric tonnes, it was noted that the quantities currently in use are still lower than the recommended amounts, even under micro-dosing practices. Findings further showed that sources of lime varied from one region to another but most farmers purchased lime from agrovets/agro-dealers and Farmer Producer Organizations. They parted with an average of KES 6,000 and KES 8,000 per metric ton of powdered lime at ex-factory and retail prices, respectively.

Today, availability of powder agricultural lime is predominant in the country compared to granulated lime whose availability is not at the required scale. Most granulated lime is imported from countries like Germany and Sweden but the current market size of granulated lime is rather low, with an estimate of 4,000 MT annually.

As a pointer to the potential of granulated lime use, this study reveals that maize yield increased by up to 62.9% per acre when lime is applied to correct soil acidity. Therefore, increase in lime use in the areas with acidic soils would greatly increase crop productivity in the country. To spur the growth of agricultural lime industry, this study recommends a policy shift to encourage use of agricultural lime, including granular form, in areas with acidic soils by setting up and enacting clear, specific and quality guidelines and standards.

KEY CHALLENGES

To protect farmers and support awareness efforts on the need for agricultural lime, there is need to enact policies and regulations to guide the production of agricultural lime for the Kenyan market. Currently, there are no policies to guide the production, sale and distribution of agricultural lime, including granulated lime. Other key policy challenges and recommendations include the following:

Quality of agricultural liming products: Lack of clear quality guidelines and standards for agricultural lime, including disparities in the terminology and application among players in the industry, has resulted in numerous products in the market amongst market players, each claiming to be marketing agricultural lime.

Use and application of agricultural lime: There are grey areas regarding how long re-application of lime should take. Besides, non-clarity on the best timing and approach for lime application leaves farmers confused as there exists no conversion guidelines for different forms of lime (granulated, hydrated, powder, chalk, liquid and others).

Lime awareness and demand acceleration: There lacks a nationwide lime awareness platform. Additionally, unlike fertilizers, the government (National or/and County) do not have set guidelines for lime subsidies. Good news: the e-voucher system has included lime as one of the inputs.

Soil health awareness: Farmer's awareness on soil health, nutrition and use of lime to correct the pH and its advantages is low due to lack of satisfactory advisory services on necessary interventions from the relevant service providers.

Soil testing facilities: There is a major challenge in the country on the failure to have proper soil testing labs with adequate and well-serviced equipment. Most laboratories have broken equipment and turnaround time for results is long (we can put the average number of days it takes).



POLICY RECOMMENDATIONS

- Development of standards for agricultural lime in general and for specific lime products such as granulated lime. The policy should encompass all the relevant parameters to control production, processing, labelling, marketing, training on usage, demonstration, new product piloting and licensing, transportation, storage, blending, handling and disposal of lime packaging materials.
- The National and County governments to prioritize mapping of soil acidity levels. Furthermore, they should consider subsidisation of lime to encourage farmers applying lime for the first time to use the recommended quantities of lime to achieve good returns.
- The departments of agriculture and other extension service providers should design a curriculum for farmer training. More extension services by trained staff at the national and county levels is required to ensure already-mapped soil acidic areas receive advisory services on necessary interventions.
- The national government and county governments, especially in the three identified high acid soil regions of Central (Mt. Kenya and Aberdares region), Rift Valley (South, Central and North Rift), and Western (Western and lake regions), to have properly equipped and calibrated soil testing laboratories within their areas. These can be installed in partnership with private sector. As part of the Big 4 Agenda's aim to improve food security, the national government should create a budget line to support soil testing infrastructure, including equipment, as well as trained human resources.
- Grey areas that exist in the use, types, timing, application methods, recommended quantities, yield responses and quality of agricultural lime can be solved by undertaking coordinated research. The national government and development organisations should prioritise funding of research on crop response trials, including those comparing powdered lime, granulated lime and other pH adjustment materials in soils. This support should include documentation and sharing of evidence-based information.
- There is need for policy on standards of the lime quality that meets the needs of the market, including that of granulated lime. These standards will ensure that proper labelling is done to guide consumers on usage, uniformity in labelling by manufacturers, and to enhance good practices by manufacturers, distributors, retailers and end-users in uniformity of product, ease of conversion between different types, blending, labelling, transportation, storage and information use.
- Given the benefits of lime, the national, county government and other stakeholders should develop policies and incentives to support increased awareness, use, availability, production and distribution of agricultural lime.
- To fast track investments in granulated lime, the government and relevant stakeholders should engage with current manufacturers of lime in a bid to encourage their investment in granulated lime production.
- To reduce cost of investment, the government and relevant stakeholders should support local machinery and equipment fabricators through training, exposure and provision of required infrastructure.

