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**A PERSPECTIVE ON THE FUTURE DEVELOPMENT
OF THE SOUTH AFRICAN PHOSPHATE FERTILIZER
INDUSTRY**

by

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A Perspective on the Future Development of the South African Phosphate Fertilizer Industry

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1. Structure of the Industry

The current South African phosphate fertilizer industry consists of a single phosphate rock mine located on the Northeast border of the country in the town of Phalaborwa. The mine is about 900 km from the nearest port of Richards Bay. Although it is closer to the port of Maputo, infrastructure constraints still restrict the use of the port for the export of phosphate rock.

The phosphate rock mine is located at the extreme Northeast part of the country in the Lipompo Province which has amongst the highest unemployment rate in the country. This part of the province is also the least developed. As a result, the phosphate rock mine is a major employer in the province.

The mine was established and is owned by a Government development funding institution. In its development, the viability of the mine depended amongst other things on favorable rail tariff considerations based on Government subsidies to the rail corporation. The establishment of the mine was therefore centered on developmental needs rather than commercial imperatives.

The country has four phosphoric acid production facilities including the phosphate rock producer. Three of the phosphoric acid producers are located in the interior of the country and one at the coast. The total phosphoric acid production capacity in the country is about 1200 000 metric tonnes of P_2O_5 . About 500 000 t P_2O_5 is exported as phosphoric acid.

The three phosphoric acid producers receive their phosphate rock feedstock from the other phosphoric acid producer. Theoretically, the phosphate rock producer is a competitor to its phosphoric acid producing customers. Two of the phosphoric acid producers are located next to sources of sulphuric acid produced as a byproduct of other processes.

Three of the facilities, including the phosphate rock producer, produce monoammonium phosphate (MAP). The other two MAP producers, are located next to sources of ammonia. Only the phosphate rock producer produces diammonium phosphate (DAP). Most of the MAP and DAP is produced for local consumption. Only one of the facilities produces triple super phosphate. There is a number of blending facilities independent of the DAP/MAP producers which import urea and potash for blending purposes.

Domestic consumption of phosphate fertilizers is about 550 000 t P_2O_5 equivalent.

2. Legal / Legislative Framework

In 1994, South Africa went through a political change. The new Government adopted a policy position that “Government has no business to be in business”. Subsequent to the change in Government, parastatals are expected to be commercially viable and to operate with limited Government subsidy if any. Within this context, parastatals as an arm of Government are expected to enable private sector activity in business instead of competing with the local business sector for the provision of services. As a result, once the sector in which a parastatal is active has adequate private sector participation, the specific parastatal is privatized so that Government resources are freed to concentrate on other developmental challenges. The Government went on to establish the Department of Public Enterprises as a shareholder ministry to look at the state-owned enterprises in order to identify those that needed to be restructured and retained as well as those that are mature to be privatized.

The Government further adopted an economic strategy to enhance the competitiveness of the country by eliminating those business activities that the country did not have a competitive advantage in. This process included the removal and/or lowering of subsidies and import tariffs on various products. Farming subsidies were removed in the process.

In order to enhance the competition in the private sector, the competition legislation was revamped to restrict anticompetitive behavior. Every proposition for a merger and/or takeover must be cleared by the Competition Tribunal for its effect on competition as well as the impact on consumers.

The Government of South Africa has been actively campaigning for the removal of agricultural subsidies at both the World Trade Organization (WTO) as well as at the European Union. This position is bound to affect the long-term structure and the future development of the phosphate fertilizer industry in South Africa.

3. Phosphate Fertilizer Economics

Total phosphate rock demand in the country is about 3.5-million tonnes (Mt). Production is about 3.2-Mt although the nameplate capacity is higher. Two-thirds of the phosphate rock is consumed by a single phosphoric acid production facility located close to the Richards Bay port. This facility is capable of sourcing phosphate rock from import markets at similar economics to domestic phosphate rock. However, for the balance of the phosphoric acid producing facilities, the economics of phosphate rock imports may be challenging due to the inland travel distances.

The total phosphoric acid demand in South Africa is about 550 thousand tonnes (Kt) P_2O_5 per annum. Domestic production is 1200 Kt P_2O_5 . The country therefore has a balance of up to 650 Kt P_2O_5 for exports. The country has been able to build up its capability through the use of indirect subsidies along the supply chain. As a result, South Africa has barked international trends by being able to compete in the international market with phosphoric acid produced from raw materials equivalent to imports. However, a question has to be raised on the potential for long-term survival of the industry under the current structure as well as the current legislative framework. DAP, MAP and NPK supply seems to be in balance with demand.

4. Options for Future Development

The future development of the phosphate fertilizer industry will depend on the interventions and/or decisions taken by the government into both the legislative environment as well as the perceived necessary industry structure. The role of the industry in influencing the government will be essential. The microeconomics of the individual industry players will also influence the future development of the industry and is dependent on future phosphate rock supply.

4.1. Discontinue primary production

The establishment of the phosphate fertilizer industry is rooted on government subsidies to state-owned business enterprises. If government continues with its stated policy of removing all agricultural subsidies as well as the proposed restructuring of state-owned enterprises the logistics costs at the different ports will possibly increase significantly from its relatively low base.

This development would adversely affect the delivered cost of both sulphur and phosphate rock imports. Rail logistics, which are currently operated by a state-owned entity, are also likely to increase significantly. This would adversely affect the competitiveness of the industry to utilize domestic phosphate rock for fertilizer production. The competitiveness of the industry in the phosphoric acid export market will also be adversely affected. It would seem that under this scenario, the industry might in the long term be forced to import finished and semi-finished products for blending.

4.2. Withdraw from the international market

The industry currently has access to limited resources both sulphur and sulphuric acid as well as adequate phosphate rock. The potential significant increase in logistics costs may force the industry to limit its primary production of phosphate fertilizers to domestic requirements. Under this scenario, phosphoric acid production capacity would be reduced by more than 50%. The structure of the industry would also change possibly to a situation where either none of the fertilizer producers own any phosphate rock production facility or each of the different players would secure its own phosphate rock production facility.

4.3. Consolidation

The country has one phosphate rock production mine and a single dominant phosphoric acid producer. Excess phosphoric acid production capacity in the country is more than double the country's domestic requirements. One of the phosphoric acid production facilities is located at the coast. This facility ought to be suitable for economic phosphoric acid production using imported raw materials with the flexibility to use domestic raw materials when necessary.

However, due to the long distances from the coast to the major farming areas inland, it maybe uneconomical to supply all of the country's requirements with phosphate fertilizers produced at the coast. Therefore it would seem that there would be a need for another phosphoric acid producer inland to cater for domestic fertilizer needs. From a country perspective, it seems likely that the inland phosphoric acid production facilities may be consolidated.