

Ensuring potassium iodate for small-scale salt producers in Ghana

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Adequate potassium iodate (KIO₃) for small-scale salt producers is a common challenge to achieving Universal Salt Iodization (USI). In Ghana, an innovative approach is providing affordable KIO₃ for these producers.

The Model

The Global Alliance for Improved Nutrition (GAIN) began facilitating procurement of KIO₃ in Ghana through a partnership established in 2009 with President's Special Initiative on Salt (PSI-Salt) under the Ministry of Trade and Industry (MoTI). In 2010, the partners established a system to improve supply to small to medium scale producers. GAIN provided an upfront supply of 5MT KIO₃ to PSI-Salt under a consignment arrangement. PSI then sold the KIO₃ to salt producers in scale-appropriate quantities. Revenues were used to fund a regular supply of the fortificant.

A restructuring of the Ghana MoTI forced PSI-Salt to unexpectedly close in early in 2010. To ensure supply of KIO₃ would not be interrupted, GAIN investigated transitioning KIO₃ management to a private company. This also offered improved efficiency in procurement and pricing decisions. The Environmental Processing & Associates Ltd (EPA), a Ghanaian company, was selected because of its strong familiarity with the country's USI program. EPA helps customers not only solve issues related to KIO₃ supply, but also in production and marketing of quality iodized salt. Since 2011, this model has been operational, and in 2012, it became fully financially viable.

An overview of the procurement and distribution mechanisms that GAIN helped establish in Ghana is depicted in *Figure 1*. The price of KIO₃ provided to EPA through the GAIN Premix Facility (GPF) was initially agreed upon through consultation with the National Salt Iodization Committee (NSIC).

suppliers, supplies high quality KIO₃ to EPA at cost in 1kg and 5kg packs to meet the needs of small and medium salt producers. The producers order KIO₃ from EPA who then replenishes its stock on a regular basis in order to ensure continuous supply in the market.



USI is progressing in Ghana through support for salt iodization by small-scale producers

The price of KIO₃ to salt producers factors in all related delivery costs such as port clearing, warehousing, and other expenses. The GPF through its network of certified KIO₃

Challenges and opportunities

The model has encountered and addressed several challenges. First, KIO3 was subject to import taxes of 27.5% (the import duty has been set at 10% and VAT at 17.5%, comprising of import VAT at 12.5% and import NHIL at 2.5%) which would burden salt producers if passed onwards. Taxes on the previous consignment through PSI-Salt had been reduced to 5%, however EPA did not qualify for the same benefit. Registration with the Minerals Commission of Ghana would allow the company enjoy 5% import tax, but this would cost \$10,000 annually. The GPF and EPA calculated that this registration in the medium-term would be more cost effective than paying the taxes. EPA is now the only KIO3 distributor registered in the Minerals Commission in Ghana, making the company a preferred supplier. Cost of registration has been built into the resell price of KIO3.

Current reach

The flexibility offered by EPA to sell in small pack sizes has been important for the model's success: most of the KIO3 has been distributed to small-scale producers. To date, the system has supplied 5MT of KIO3 to 5 large producers, 30 small producers and 10 salt traders.

Monthly iodized salt consumption in Ghana is estimated to be around 7.3MT. EPA has been supplying on average 167kg of KIO3 per month over the past 2.5 years. Assuming 100% of the salt consumed in Ghana is adequately iodized, this would equate to about 27% of the total market (Table 1). Although this estimation is not exact, it indicates that market penetration of the distribution platform has been relatively strong but there is room for expansion.

Next steps

GPF and EPA reviewed and analysed consumption patterns in late 2012/early 2013 in Ghana resulting in the issue of a competitive tender for import of 1,000kg of KIO3, or about six months' supply. This purchase is being supplied on consignment terms whereby EPA repays the GPF based on monthly sales of the product in-country. This ongoing exercise of forecasting and aggregating demand is critical for success of the commercial model. This mechanism established in Ghana is being used to inform the establishment of KIO3 distribution systems in other countries with similar contexts.

Figure 1:

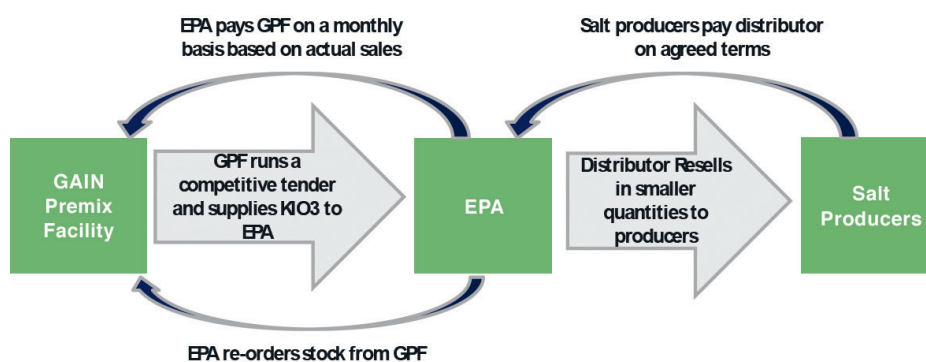


Table 1: Estimated Reach

Ghana Salt Consumption Patterns	
Total population	25'000'000
Average Yearly Consumption of Salt per Capita (kg)	3.5
Average Yearly Salt Consumption (kg)	87'500'000
Average Monthly Consumption (kg)	7'291'667
Distribution Model Performance	
Total Sales of KIO3 (kg)	5'000.0
Total Sales Period (months)	30.0
Average Monthly Sales of KIO3 (kg)	167
Incorporation Rate of KIO3 (kg/MT)	0.083
Average Monthly Salt Iodized (kg)	2,012,048
Average Percentage of Salt Iodized through the Model	27.6%