

Using **Digital Traceability** to **Increase Food Safety** and **Regain Trust**

CASE STUDY



Food and Beverage



Fruits and Vegetables



Product Serialization and Authentication

EU LIFTS TRADE EMBARGO AFTER GEOTRACEABILITY SOLUTION IMPLEMENTATION

CUSTOMER PROFILE

The Ghanaian horticultural sector exports 70,000 tons of fruits and 20,000 tons of vegetables annually. The agricultural industry, composed mainly of smallholder enterprises, employs more than 50% of the country's labor force.

ISSUE/BACKGROUND

The European Union (EU) imposed an embargo on fruits and vegetables from Ghana in response to several cases of contamination. Losses to the country's economy have been estimated at \$15 million annually.

From 2012 to 2015, the number of plants from Ghana intercepted at EU borders due to the presence of harmful organisms increased significantly, leading Ghana to face the highest number of interceptions globally in 2015.

In October 2015, the European Commission decided to prohibit the introduction of five plant commodities from Ghana into the EU market until the end of December 2016.

CHALLENGE

Ghana must find solutions to improve the safety of these products and regain the confidence of the European Commission.

THE SOLUTION:

To help solve this issue and provide a truly effective solution, OPTEL's geotraceability experts partnered with a number of reputable organizations and concerned stakeholders. The result was a complete, user-centric traceability system that covers all the steps required for the exportation of fruits and vegetables (F&V) and includes all the operators in a multistakeholder value chain.

It encompasses:

- Inspection of exporters, packhouses, growers and fields
- Crop cycle and fieldwork monitoring, including planting, plant protection and harvesting
- F&V traceability from field to packhouse
- Traceability during packing operations, including reception, lot creation (linking input and output) and evacuation
- Traceability from packhouse to export point (airport)
- Linking traceability data with phytosanitary certificate and export documentation
- Centralized cloud data repository for data sharing, viewing, analysis and report generation

OPTEL's geotraceability software is currently used in 17 countries in similar contexts and for various products. The solution has been tried and tested in all these cases and has a very successful track record.

BENEFITS

The export sector can be more competitive and generate more revenues by having access to digital services.

- Through data sharing and storytelling, the solution facilitates compliance, audit, supplier improvement and food safety, and creates value for all parties, from the grower to the consumer (farm to fork).
- The solution has helped establish a public-private partnership to improve visibility and transparency.
- Exporting geotraceable fruits and vegetables can open new markets and trigger higher prices. This will generate higher tax revenues for the State and profit margins for the exporters, allowing for greater reinvestment in the value chain.
- Improving product quality and availability, controlling pests and diseases, improving post-harvest operations, etc.
- Each small-scale grower will also benefit from the data collected on their production. Their personal and cumulative records will allow them to improve their practices, reduce costs and increase revenues. The system can inform them on what specific crop is needed, when, and what the market prices are. Field extensionist support will be facilitated by having access to digitized historical data that could be coupled with weather and soil data.
- The system can also help control unauthorized and counterfeit chemicals.
- Digital services will considerably reduce audit costs for all parties.

RESULTS

- The European Commission lifted the ban on Ghana's vegetable exports on January 1, 2018.
- Ghana now complies with EU phytosanitary legislation to eliminate the presence of quarantine pests.

CONTACT US

For more information, visit
www.optelgroup.com/food-and-beverage/

IMPLEMENTATION PROCESS:

The implementation process consists of several value-added steps and criteria.

- Design the solution with the user:
 - Extensive collaboration with Ghana's Ministry of Food and Agriculture
- Understand the existing ecosystem:
 - Consultancy and needs assessment
 - Interviews and field visits
- Design for scale:
 - Workshop and opinions on the commercial sustainability of the solution have been collated.
- Build for sustainability:
 - Different business models have been presented.
 - A cost-sharing model for the maintenance of the system has been recognized as the best option, and cost-impacting parameters have been identified.
- Be data-driven:
 - Data used as decision-making and optimization tool for the supply chain
 - Data enables quick and efficient actions for product recalls.
- Use open standards, open data, open source and open innovation:
 - The traceability system aligns with GS1 global open standards.
- Reuse and improve:
 - Built through configuration rather than new, bespoke development
 - Quick to be in operation without significant in-vestments
- Address privacy and security:
 - Collection and hosting of private data on individuals and commercial data on exporters
 - Compliance with local and international laws and regulations on data privacy
- Be collaborative:
 - Links all the operators in the horticultural value chain and helps build trust and confidence among the stakeholders

The European Commission congratulates Ghana for reaching this **important milestone** and encourages Ghana to consolidate the **upgraded system** and to continue further improvements in the phytosanitary certification system **to obtain full compliance** with the EU phytosanitary requirements.

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