Identifying and Implementing an Information Management System for Smallholder Cocoa Farmers

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Background: The cocoa sustainability challenge

- By 2020, the world will require at least 1 million more metric tons of cocoa to meet global demand
- Almost 70 percent of the world’s cocoa supply comes from West Africa
- A triple-threat of environmental, economic, and social factors in the region has created a cycle of decline in cocoa production

Mars’ challenge

- Mars’ Cocoa Sustainability program aims to develop the ‘last mile’ link to introduce farm rehabilitation technologies and training methods that enable cocoa farmers to triple their yields
- Cocoa entrepreneurs from Cocoa Development Centers (CDCs) and Cocoa Village Centers (CVCs) will rehabilitate aging farms via a three-part package of grafting, soil fertility management, and pruning

Project challenge: What information management system can be implemented in the cocoa supply chain to gather accurate farm-level financial and agricultural data over time to evaluate its program?

Analysis framework

Survey design
Deployment
Incentives
Verification
Playback

Create a survey that solicits accurate farm-level data and verifies this data while the information is being collected

1. Encourage intermediary to conduct accurate surveys
2. Encourage farmers to participate in data collection
3. Farmer Progress Feedback
4. Farmer Progress Feedback

Tablet-based survey

Additional Farmer Touchpoints

Farmer Progress Feedback

Ensures improvement of farmers

Relays results back to farmers in a format they comprehend and can act upon

Model for reaching 150K farmers

Figure 1: Universal information management framework developed by our team – applicable to all contexts in which Mars conducts data-gathering

Figure 2: Prototype for data collection in Cote d'Ivoire

Recommended prototypes

1. Tablet-Based Survey with Visuals/Audio for Low-Literacy Farmers
2. Farmer Journals to Encourage Bookkeeping
3. Farmer Progress Feedback to “Gamify” Bookkeeping
4. Bookkeeping Game and Leaderboard
5. Transaction Tracking

 Foundations of Management

Mars

1 million ton cocoa shortfall by 2020
70% of world’s cocoa is from West Africa
Cycle of decline for cocoa in West Africa