

## Project Update: October 2016

Training farmers on the construction and use of wooden boxes for fermentation was the fourth major activity in this project. This activity was carried out from June to October 2016 and the aim was to build farmers' capacity on the use of alternative fermentation techniques that would result in reduction of the amount of wood needed to dry cocoa. So far, this is the only activity that didn't go to schedule because of delay in delivery of material needed to construct the fermentation boxes.

### Methodology

1. The training started with the project team accompanying farmers to their plantations to support the cocoa extraction process and carrying out fermentation using jute bags they have been used to, which the project sought to eliminate. Data on the quantity of wood needed for drying was then collected for analysis/comparison with the new fermentation method to be introduced. After the demonstration and training, all 352 farmers have now adopted the wooden fermentation boxes.



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*Project team and farmers split cocoa for extraction of cocoa beans.*

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*Cocoa fermentation in jute bags.  
This is the process our project will eliminate.*

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*A farmer's pile of wood ready for drying of cocoa.*

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2. After drying cocoa fermented using jute bags and collecting the data, the project team instructed farmers on the best wood to source for construction of fermentation boxes. Once the wood was obtained, they were stored at a depot where carpenters and technicians would support with the design and construction. Most of the farmers found trees for wood extraction in their plantations, while others bought wood from legal wood dealers.



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*A pack of wood to be used for construction of fermentation boxes.*

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*Carpenters take measurements for construction of fermentation boxes.*

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3. The fermentation box is a wooden case made up of two compartments and a lid separated by a removable shutter; with holes bored on the floor of the case to allow for complete drainage of cocoa fluid and moisture. One compartment is filled with cocoa and after three days, the shutter is removed so that the cocoa is moved to the other compartment. This process is repeated about four times over a period of seven days. The movement from one compartment to another ensures complete drainage of cocoa fluid and moisture and results in optimal fermentation in a way that jute bags do not provide. The average dimension of the fermentation box is 1, 5 metres in length, 0, 75 metre in width and 0, 5 metre in height.



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*Fully constructed fermentation box.*

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*Farmers swap their cocoa from jute bags into newly constructed fermentation boxes.*



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*A fermentation box filled with cocoa. Over a period of seven days, cocoa would be moved from one compartment to another about four times.*

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*Farmers set up a fermentation box in a cocoa drying depot.*

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*Two farmers (Jean and Daniel) wait for delivery of the fermentation boxes. Their cocoa in jute backs is stacked behind them.*

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*Jean is delighted at the impact of the fermentation boxes in reducing his firewood usage.*

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*Farmers, Jean and Daniel, dry their cocoa after experimenting the wooden fermentation boxes.*

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