



COCOA

Monitoring & Evaluation Report

Quarter Four :
October - December 2020



PIND's Cocoa value chain intervention activities are designed to improve the productivity and income of cocoa farmers through the adoption of improved farming practices in planting/re-planting, pruning, weed management, pest and disease management, and harvest and post-harvest operations.

To achieve this, PIND is working with business partners to invest in the promotion of good agricultural practices and technologies by providing quality agricultural information and access to quality agro-inputs and technologies to farmers. In the last two years, PIND has on-boarded and supported input suppliers, equipment dealers/promoters, output buyers (off-takers), and farm service providers to conduct series of training programs and demonstration/promotional activities towards stimulating the adoption of good agricultural practices and technologies by farmers.

Within this quarter, PIND continued with the farmers' training and demonstrations, supported input companies (Saro and BASF) to organize farmers' field days in selected locations in Abia, Edo, Cross River and Ondo States respectively. The farmers' field days were to showcase the results of the harvests and post-harvest operations. Also, PIND continued to work with Subjugate Nigeria Ltd to provide quality improvement support to farmers in Ondo State.

Figure 3. Performance status of cocoa interventions as at Q4 2020—there was no quarterly target for impact indicators in Q4.

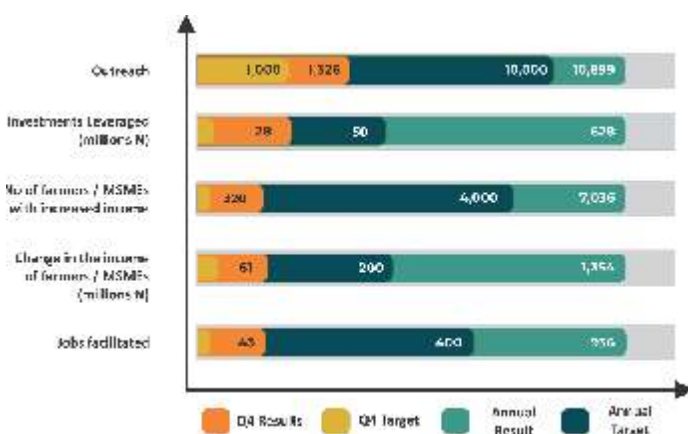


Table 4. Distribution of new outreach activities in Q 4 2020

| | Ondo | Edo | Akwa Ibom | Total |
|---------------------------|------|-----|-----------|-------|
| Number of input companies | | 1 | 1 | 2 |
| Off-take companies | 1 | | | 1 |
| Number of FSPs | | 1 | 1 | 2 |
| Number of farmers reached | 869 | 249 | 208 | 1,326 |

¹⁹ Saro AgroSciences and Indorama (Input dealers), Ehimika Emmanuel and Victor Tom (FSP), Subjugate Nig. Ltd (off taker)

Reaching more cocoa farmers with good agricultural practices and technologies

During the quarter, PIND worked with input suppliers¹⁹/equipment dealers, off-takers, and service providers to organize training programs for farmers and to set up demonstration farms in cocoa-producing clusters/locations through which farmers have access to quality agricultural information, inputs, and technologies.

1,326 additional participants - 457 (improved productivity) and 869 (quality improvement) were reached with GAP training and demonstration on use of improved technologies. In the previous quarters, 9,573 farmers were reached, bringing the total outreach of farmers to 10,899 in 2020, which surpassed annual target of 10,000 in 2020. Table 4 presents the distribution of Q4 outreach activities (Figure 3).

The details of the activities of the partners in Q4 are provided below:

- o Saro AgroSciences worked with Ehimika Emmanuel a farm service provider to organize GAP training and demonstration activities that reached 249 farmers in Edo State
- o Victor Tom, a farm service provider based in Akwa Ibom State worked with Indorama to organize GAP training and demonstration activities that reached 208 farmers in Akwa Ibom State
- o On the quality improvement activities, Subjugate Nigeria Ltd, an off-taker in Ondo State reached 869 farmers with quality improvement training and support in Ondo State

Improving cocoa quality through an incentive-based model

The Nigerian cocoa industry has a reputation for producing poor quality cocoa beans usually filled with impurities, are salty and have high moisture content due to the farmers' poor post-harvest practices. As a result, Nigerian cocoa beans are poorly valued in the international market. Unfortunately, the local industry does not offer enough incentives for farmers to change their practices and behavior. There is no formal system that rewards producers of quality cocoa beans and penalizes those that produce poor quality beans. To address this, PIND designed a win-win business model for quality improvement to stimulate actors (farmers and off-takers) to begin to address the issues associated with poor quality cocoa beans. This model is built around the offer of price premium as an incentive to farmers for producing good quality cocoa beans.

After several attempts to get a willing partner to invest in cocoa bean quality improvement, Subjugate Nigeria Limited, a cocoa bean off-taker, showed interest in trying out this model in Ondo State with a pilot activity which commenced in Q3 with about 1,000 farmers being networked into the program. A Training of Trainers event was conducted for 40 lead farmers who have now stepped down the training program on good agricultural practices as well as post-harvest practices and technologies to 345 farmers

Within this quarter, the 40 lead farmers, with support from Subjugate continued the step-down quality improvement activities to 869 additional farmers/MSMEs. The model guarantees a 1% to 1.5% premium on each kilogram of good quality cocoa bean produced by the farmers. The incentive will be paid based on the prevailing market price for cocoa beans. Using the baseline of an average yield of 959kg on 2.25ha per farmer, and an average market price of

700 Naira per kg of good quality cocoa bean, this amounts to over 10 million Naira worth of incentives to the farmers. This forms part of the income for these farmers in addition to the income from yield increase.

Improving productivity and income of farmers through the adoption of improved practices and technologies

PIND conducted the first impact assessment in the cocoa value chain to track changes in the performance of farmers who participated in the training programs and demonstrations activities. As the 2019 participating farmers had completed the business cycle, it was the right time for an impact assessment to determine changes in their farm yields, income, level of farmers' investments, and jobs with the new innovations.

The 2019 adoption rate for cocoa farmers was 70% which produced 4,985 adopting farmers.²⁰ The assessment was done on the 4,985 farmers that adopted the improved practices and technologies demonstrated by PIND partners: agro-input suppliers, equipment/technology dealers, and farm service providers. The attribution strategy was by benchmarking the 2019 results with the baseline information established earlier.

The summary of findings from the assessment reveals that the average additional income per hectare was 74,590 Naira, derived from the difference between 301,547 Naira (assessment) and 226,956 Naira (2019 baseline),²¹ and the average farm holding for 2019 was 2.55 hectare. This produced attributable additional income of 190,206 Naira per farmer in 2019. The 2019 net attributable income for all the 4,985 adopting farmers was 948,175,669 Naira, owing to the fact that the user-benefit-ratio of the cocoa farmers was 100%.²²

²⁰ An effectiveness survey in 2019 shows that 70% (4,985) of the 7,105 farmers who participated in the training and demonstration activities went ahead to adopt at least 3 out of the 6 GAP modules demonstrated.

²¹ For the 2020 farmers, income multiplier derived from the impact assessment on 2019 farmers were used to estimate their performance. This reflected the increase in price in cocoa (which started in 2019). In estimating impact number, the data from previous impact assessment that shows farmers' performance

after they have harvested was used. Therefore, the income multiplier from the 2019 assessment was used since the 2020 farmers are yet to harvest. The impact survey planned for 2022 for farmers reached between 2020 and 2022 will validate the numbers and adjust for any variation.

²² The assessment reveals that 100% of the farmers who adopted have experienced a yield increase of 16% from 430kg (baseline data) to 498kg per hectare in the first year of adoption.



In projecting the Q4 2020 results for 457 farmers, the 2019 impact assessment results were used as the multiplier. The outcomes monitoring exercise revealed a 70% adoption rate (i.e., 321 of the 457 farmers reached in Q4 2020 adopted the improved practices taught in the training and demonstration activities. The monitoring exercise also found the average farm holding for 2020 adopting farmers was 2.28ha. And the average additional income per hectare was 74,590 Naira. Each adopting farmer benefited from a yield increase of 16% in the reporting year.

Applying these variables, the projected average income of cocoa farmers for Q4 2020 was 192,443 Naira per farmer, which gives a net attributable income change for 321 farmers to be 61,694,585 Naira. In summary, the cocoa sector recorded 7,036 farmers who have experienced increased yield and combined income of 1.35 billion Naira as a result of participating in PIND supported activities through the support market actors in 2020. This exceeded the 2020 target of 4,000 farmers and income of 200 million Naira (Figure 3).

Creating opportunities for farmers to create jobs

Many of the cocoa farmers that adopted improved practices and technologies to expand production engaged more labor to carry out farm management activities such as land clearing, application of agrochemicals, harvesting, fermentation, drying, pruning etc. Findings from the 2019 impact assessment of the adopting farmers showed the average additional job by adopting farmers was 0.13 full-time equivalent in the sector.

Computing net attributable contribution to job for 321 farmers in Q4 2020, 43 additional FTE jobs were created in Q4 2020. This brings the 2020 overall additional jobs to 936 FTE jobs created surpassing the 2020 target of 400 jobs to be created (Figure 3).

Leveraging more investments through the adoption of improved technologies

Since 2019, PIND has been working with agrotechnology and equipment dealers to introduce and promote appropriate productivity improvement technologies (such as mechanical pruner, motorized sprayer, and brush cutter); and quality enhancement technologies (fermentation boxes, and pelle bongo) among farmers. The adoption of these practices and technologies is expected to lead to improved yield for farmers, further stimulating increased investments by them and other market actors.

The attributable equity investment leveraged is the additional spending on the improved processes benchmarked with the baseline information. From the 2019 assessment, the average additional spending was 88,432 Naira per farmer. Computing equity investment for the additional 321 adopting farmers in Q4 2020, the estimated net equity investment by the adopting farmers was 28,350,058 Naira within the quarter. Adding the Q4 investments to the 599,886,968 Naira invested in the previous quarters, the overall amount leveraged in 2020 became 628,236,926 Naira, surpassing the N50,000,000 target set for the year (Figure 3).

