



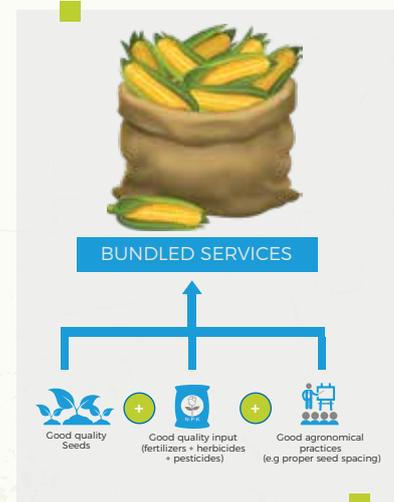
HOW TO INCREASE THE QUALITY AND QUANTITY OF SMALLHOLDER FARMERS' MAIZE PRODUCTION

HTMZ 001

One of the primary drivers for poor yields experienced by smallholder maize farmers is the fact that they often use seeds from their harvest of grains for the next planting season. The use of these saved or retained seeds results in diminishing returns from one season to the next with smallholder farmers achieving yields as low as 0.7 tonnes per hectare, compared to the national average of 1.5-1.8 tonnes per hectares (which is still low).

Another significant contributor to smallholder farmers' (SHFs) low yields, is that they typically do not handle their harvesting, drying, threshing, cleaning, sorting and bagging operations well.

This can result in post-harvest losses as high as 20% of production. Furthermore, poor harvest and post-harvest practices can lead to high level of impurities within the produce such as stones, nails, and microbe loads, and contamination by aflatoxins. Both of these factors cause off-takers to reject supplies of maize from smallholders, thus limiting the price farmers can receive for their produce.



HOW TO OVERCOME THESE CONSTRAINTS

In order to tackle these constraints, BIF focused on the introduction of certified seeds and the right inputs (for example fertiliser and herbicide), as well as increasing farmers' knowledge of best agronomic practices.

The aim was to increase the quality of farmers' produce to the point where large scale off-takers would be willing to purchase it. The main target market was poultry farmers, who would benefit from improving their supply of high-quality grain and potentially reducing their costs by eliminating the need to add premixes, toxic binders and other additives to the maize they purchased.

BIF's main intervention in this market was to facilitate contract farming arrangements between smallholders and off-takers, that included the supply of bundled services (improved seeds, inputs, and extension services) to improve farmers' productivity and the quality of their produce.

The bundled services concept was tested in various locations, with different numbers of farmers ranging from just over 100 to almost 11,000 farmers. Using 6 tonnes per hectare yield potential seed, farmers on average increased their yields to 3 tonnes per harvest, with some achieving 4 to 5 tonnes per hectare.

In order to improve farmers' agronomic practices, BIF invested time with significant actors in the maize industry to institutionalise within these organisations knowledge on how to train SHFs in correct post-harvest practices. This aimed to reduce smallholder maize farmers' post-harvest losses and increase their ability to supply high quality maize to industrial off-takers.

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HOW TO INCREASE SALES OF YOUR INPUT TO SMALLHOLDER FARMERS

HTMZ 002



After BIF's interventions in the maize market We've had reduced mortality, we've increased productivity, we have more fertile eggs coming out now. Our hatchability has also increased as well, all round the standards have increased.

Owuno Ogbah, MD Efugo Farms, Poultry Farmer & Off-Taker



Under perfect market conditions, industrial off-takers would sign a contract farming agreement with SHFs to purchase their produce, as this ensures a ready market for the SHF and steady supply for the Industrial Off-taker.

This situation, however, has not emerged in Nigeria as SHFs tend to produce low quality and quantity yield, which off-takers reject.

These poor quality and quantity yields are largely attributed to SHFs':

- Lack of technical knowledge of best agricultural practices
- Lack of access to improved seeds and other quality inputs
- Lack of information on the standards and quality needed by off-takers

To solve these constraints, BIF developed a different type of contract farming model that included a new player in the value chain - Value Chain Integrators. The Integrators are responsible for ensuring that SHFs receive the required inputs - including the right kind of seeds, fertilizer and technical skills - all bundled into one service within a contract farming arrangement between the off-taker and SHFs.

The value chain integrator helps the off-taker to gain the trust of the farmers and manage the cropping cycle to achieve the terms of the contract for both parties. The role of the value chain integrator is typically played by an Input company.

PROOF OF CONCEPT

The model has seen SHFs improve the quality of their produce increase their yields from 0.7-1 tonnes per hectare to as high as 3.5-4 tonnes per hectare. Efugo Farms, an industrial off-taker who tested this new contract farming model for poultry feed production, noted a reduction in poultry mortality, increased productivity, and increased hatchability. Governments have also developed interest in how BIF's model can improve the livelihoods of farmers.

The Kaduna State Government, for example, has observed first-hand the model's ability to increase the income of some of the poorest groups of its population.

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