Strengthening African Processors of Fortified Foods (SAPFF), a public-private partnership, has sought to increase the availability of high-quality fortified foods in Nigeria, Tanzania and Kenya. The initiative has focused on enabling fortification excellence among industry leading larger mills with significant market share. This case study focuses on the project activities and results in Nigeria. At present, in Nigeria, it is mandatory to fortify flour, salt, sugar and edible oil with the necessary micronutrients. The staple foods fortified as part of the initiative have varied from country to country. In Nigeria, the initiative has covered wheat flour, edible oil and sugar. Combining the strengths of private sector partners, SAPFF has provided customized technical support to local millers, enabling them to comply with national fortification standards. Moreover, the provision of practical solutions to strengthen fortification and quality assurance/quality control (QA/QC) processes of fortifying mills has helped to increase their profitability and competitiveness, and in the process, has strengthened the business case for food fortification by ensuring fortification benefits for millers outweigh the costs.

SAPFF has also provided a platform for engagement with relevant stakeholders within the fortification ecosystem, such as government ministries, industry associations and NGOs, to create an enabling and sustainable market environment for food fortification.

The initiative was funded by the Bill and Melinda Gates Foundation over the period of 2016-2022. Key partners of SAPFF comprised its implementing partners TechnoServe and the Global Alliance for Improved Nutrition (GAIN). Bühler, a provider of food processing technologies, provided access to its African Milling School. SAPFF has also engaged with Partners in Food Solutions (PFS), a consortium of international companies that provide expertise on food processing, and with local milling associations in respective countries to facilitate industry coordination and alignment with relevant government bodies. The total overall budget allocated to the initiative was $10 million over the 2016-2022 period.

Over four years (2016 – 2020), SAPFF has had significant impact on improving fortification compliance levels of participating companies, from 25% to 33% for edible oils, from 56% to 90% for wheat flour, and from 31% to 94% for sugar. As a result, SAPFF reached 73 million Nigerians with adequately fortified wheat flour, 125 million Nigerians with adequately fortified sugar and 13 million Nigerians with 173,500 MT of adequately fortified edible oil.

**Box 1 SAPFF partners in Nigeria**

<table>
<thead>
<tr>
<th>Implementing partners</th>
<th>Knowledge transfer</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>TechnoServe</td>
<td>African Milling School</td>
<td>Flour Milling Association of Nigeria</td>
</tr>
<tr>
<td>GAIN</td>
<td>Partners in Food Solutions</td>
<td>Cereal Millers Association</td>
</tr>
</tbody>
</table>

**Building local capacity**

As part of SAPFF, a range of international companies have been engaged in building local capacity for large scale food fortification (LSFF) in Nigeria.

SAPFF worked with Partners in Food Solutions, which helped to link participating food processors and mills in Nigeria with corporate volunteers from its consortium of leading food companies, who provided millers with world-leading technical support and advice on improving fortification practices. The Bühler Group, through the African Milling School, has provided its wealth of online knowledge and resources alongside in-person training on topics such as general food fortification, mill efficiency and food safety.

Its fortification curriculum allows food processors to continuously improve their technical understanding.

In total, SAPFF, in coordination with project partners, has deployed 70 technical assistance activities in Nigeria alone to boost compliance levels of millers. Concretely, these efforts comprised assistance in standardizing and streamlining workflows, handling and storing of premixes and best practices in fortifying staples according to quality standards.

**Encouraging compliance**

Furthermore, in response to a call for increased transparency and accountability for high quality fortified foods at the 2018 CEO Forum in Nigeria, SAPFF, together with stakeholders within the Nigerian food system, have developed the Micronutrient Fortification Index (MFI) as an industry-wide reporting system. The MFI is an industry-led platform that generates data on compliance and ranks brands by their performance in fortifying foods, providing consumers with important information about the brands they purchase.

The brand ranking is shared publicly, while the confidentiality of enterprise level data is maintained. The MFI assesses food processors’ quality management systems as well as actual product quality.

“We didn’t understand the food fortification concept until TechnoServe educated us on the importance of increasing micronutrients in foods. In Nigeria, the SAPFF program has helped us address micronutrient malnutrition at scale.” OLADAPA AROWONA, QUALITY ASSURANCE MANAGER, HONEYWELL FLOUR MILLS
Strengthening African Processors of Fortified Foods

Results
Significant progress has been made on improving fortification compliance levels for targeted staples.

Compliance levels for salt were already high at the beginning of the initiative and have been maintained at 96% to date. Compliance among engaged companies rose from 56% to 90% for wheat flour and 31% to 94% for sugar. For edible oil, compliance rose from 25% to 33%.

The MFI has seen good uptake, with participants increasing from four companies in 2019 to 15 in 2020, which together account for the majority market share for the focus fortified staple foods. It is anticipated that more food processing companies will join the MFI going forward.

Insights

- **Data collection enables effective management.** Between December 2020 and February 2021, SAPFF observed a decline in national compliance levels for fortified wheat flour and sugar in Nigeria due to market disruptions linked to Covid-19. Through its data collection efforts, SAPFF registered the dip. The team identified the underlying issues with the partner companies and collaborated to fix them. This incidence shows the importance of continuous data collection, both for the industry as a whole and the individual companies, to manage compliance.

- **Integration with business processes is critical.** SAPFF has underlined the importance of integrating food fortification into industrial processes and day to day business practice. As it becomes locked into day-to-day business processes, it becomes easier for companies to maintain it. If fortification is seen as a separate activity, small disruptions, e.g. in premix supply, can easily lead to a company giving up on the practice.

- **Transparency drives compliance.** The MFI has been led by industry champions with an interest in leveling the playing field for fortification compliance. Other companies have joined the MFI because they do not want to trail behind their competitors. The MFI is an example of a self-regulation mechanism that continuously incentivizes companies to maintain good food fortification standards.

Sources
TechnoServe (2021) Micronutrient Fortification Index Briefing Note
TechnoServe (2021) Micronutrient Fortification Index – Ensuring Improved Access to Safe and Nutritious Food
TechnoServe (2021) Nigeria Food Fortification and Digitalization Roundtable
TechnoServe (2021) SAPFF Project Briefing for USAID
TechnoServe (2021) SAPFF Program Memorandum: New results from Market Survey Tests in Nigeria are signaling a significant drop in food fortifications compliance by major players in the Wheat Flour and Sugar Sectors

Interviews
Interview 1: Dominic Schofield 3/18/2022 (TNS)
Interview 2: Rizwan Yusuf Ali 3/18/2022 (UNICEF, formerly TNS)

Photographs © TechnoServe

PZ Wilmars was created in 2010 as a joint venture between PZ Cussons International and Wilmar International, Ltd. The company's processing facility near Lagos has the capacity to produce 1,000MT of cooking oil every day, and its brands collectively account for nearly 20% of Nigeria's market share.

The firm was one of the first millers to establish a relationship with SAPFF, based on its longstanding commitment to product quality and nutrition.

While PZ Wilmars had been fortifying its cooking oil, a baseline analysis by the SAPFF team found that the Vitamin A levels in its products were inconsistent. This finding became the starting point for a fruitful engagement between the project and the firm. The SAPFF team provided in-plant training to PZ Wilmars personnel, focusing on fortification, good manufacturing practices, and quality assurance and control. The firm also used SAPFF's matching grant facility to purchase an iCheck chroma machine to measure Vitamin A levels during the production process.

PZ Wilmars was an early adopter of the MFI, and two of its brands, Mamador and Devon King's, have consistently been recognized as top performers in the rankings.