



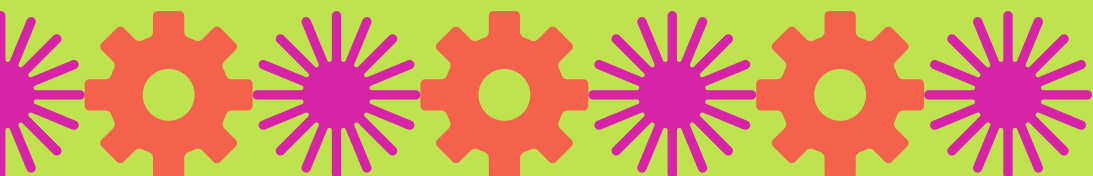
Millers
for
Nutrition



Case Study

WASIL

**Turning Compliance into
Competitive Advantage
in Nigeria**



Summary

WASIL transformed mandatory Vitamin A fortification into a competitive and public health advantage. By fortifying post-deodorization, tightly controlling oxidation, using automated dosing, and conducting 12-month stability studies, the company consistently meets standards set by the Standards Organisation of Nigeria. Strong supplier management, in-house testing, and independent verification through Millers for Nutrition reinforce accuracy and credibility.

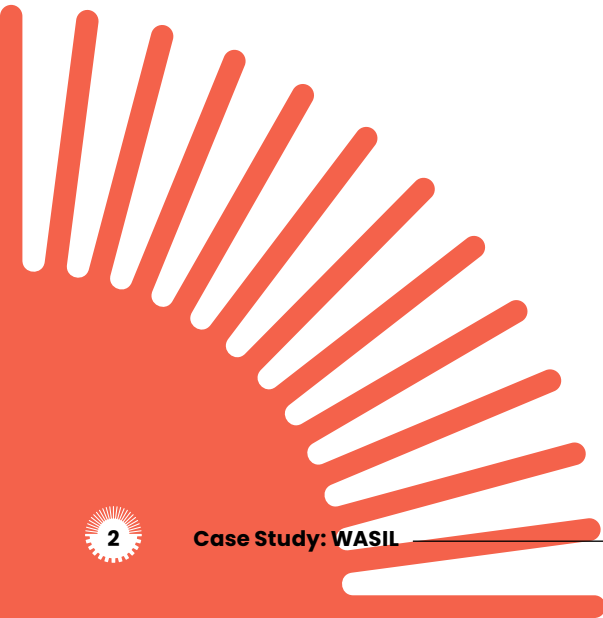




Table of contents

Context: fortification as part of brand strategy	4
Approach: ensuring nutritional impact	5
A strategic opportunity	6
Strengthening nutrition and business outcomes	7

Context: fortification as part of brand strategy



In Nigeria, edible oil fortification with Vitamin A is mandatory under the framework established by the National Agency for Food and Drug Administration and Control (NAFDAC). Producers must ensure a minimum of 20,000 International Units (IU) of Vitamin A per kilogram of oil at the end of the product's shelf life.

At West African Soy Industries Limited (WASIL), fortification has evolved from an obligation into something more strategic: a system of technical excellence and a defining feature of brand quality. Ensuring consistent fortification at industrial scale is not easy. Boddu Veerabhadra Rao describes three major areas of risk that must be controlled simultaneously: raw materials, the processing environment, and productivity at scale. The greatest technical challenge lies in the nature of Vitamin A itself. Retinyl palmitate, the form used in edible oil fortification, is highly sensitive to heat, oxidation, and light. If added too early in the refining process – when oil temperatures are still high – the nutrient can be significantly degraded. Likewise, when oil is stored for extended periods, peroxide values can rise as oxidation progresses, further reducing Vitamin A stability. The single biggest risk, therefore, is under-fortification caused by nutrient destruction before the oil even reaches the consumer.

Food Fortification Leader:
Boddu Veerabhadra Rao

Boddu Veerabhadra Rao serves as the Head of Quality Assurance at West African Soy Industries Ltd (WASIL), managing quality assurance and control across 12 branch laboratories. In this role, he oversees a team of over 100 professionals, implements quality management systems, and drives operational efficiency through process engineering and regulatory compliance.



Approach: ensuring nutritional impact



“Excellence in fortification is a strategic opportunity for WASIL.”

Boddu Veerabhadra Rao
Head of Quality Assurance,
WASIL

To address the risk of underfortification, WASIL fortifies only after deodorization, where the oil is heated to high temperatures, once the oil has cooled to approximately 30–40°C. Peroxide levels are measured prior to fortification to assess oxidation status. This seemingly simple procedural adjustment reflects a deeper leadership principle: nutrient protection must be engineered into the process, not left to chance.

Supply chain management presents a second layer of complexity. High-quality Vitamin A premix has a limited shelf life. Yet, delivery can take up to six months as it is imported from outside Africa and often takes time to go through customs. In some cases, up to 60 percent of the premix potency may deteriorate before arrival. Boddu Veerabhadra Rao responded by establishing dual sourcing strategies in collaboration with Millers for Nutrition, implementing a rigorous supplier assessment programme, and requiring certificates of analysis and food-grade certification for every batch. Premix must arrive with at least 60 percent of its shelf life remaining, and WASIL maintains a three-month inventory buffer. Upon receipt, the company verifies Vitamin A levels in its own laboratory. If degradation is detected, suppliers are informed. WASIL balances the loss by adding more premix in the production process. Suppliers often make up for the loss by providing free premix. The priority is not short-term savings, but nutritional integrity.



Dosing system



Precision in dosing is another critical challenge. Adding 140 to 150 grams of Vitamin A uniformly into 10,000 litres of oil demands mechanical accuracy and homogeneity at molecular level. Across millions of litres, even minor variation can translate into regulatory non-compliance. WASIL therefore relies on mass-flow automated dosing systems. They monitor that the premixer dilution tank is completely emptied. Static mixers guarantee even dispersion. During production, the company targets 24,000–26,000 IU/kg to ensure that levels remain above the mandated 20,000 IU/kg throughout the full 12-month shelf life. Stability studies are conducted across the year to validate that this target is achieved. As a result of these systems, WASIL has never faced regulatory sanctions or customer complaints related to fortification.

A strategic opportunity



What distinguishes Boddu Veerabhadra Rao's leadership is not simply technical rigor, but strategic reframing. In Nigeria's competitive branded oil market, fortification has become a differentiator rather than a burden. Through its engagement with Millers for Nutrition, WASIL has strengthened its internal systems while gaining external recognition from institutional buyers and regulators. Independent market sampling and auditing conducted by Millers for Nutrition provides third-party validation of fortification performance. This transparency builds confidence among regulators and reinforces internal discipline.

Access to affordable analytical technologies, including BioAnalyt testing kits iCheck and iChroma Check 3, has further strengthened in-house quality control. Although initial discrepancies between measurement systems required calibration and adjustment, the process ultimately improved analytical confidence and accuracy.

Recognition has played an important motivational role. Nigeria's Micronutrient Fortification Index (MFI) Award in August 2025 recognized WASIL as Highest Performing New Entrant and Most Improved Miller. The company also received the Pacesetter Recognition Award for its adoption of the Digital Fortification Quality Traceability Plus (DFQT+) system, a GAIN-led digital initiative designed to improve the quality, traceability, and regulatory compliance of fortified foods. The award ceremonies were attended by representatives of the regulator and standards bodies as





well as competitors. The visibility has reinforced internal pride and external credibility. What began as compliance with a national standard has evolved into visible leadership in public health nutrition.

Award winners at the MFI Award ceremony in August 2025. The WASIL team is in the top row, with Boddu Veerabhadra Rao fourth from the right.



Strengthening nutrition and business outcomes



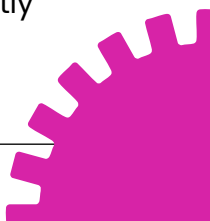
“Quality assurance is not an expense but a cost saver.”

Boddu Veerabhadra Rao
Head of Quality Assurance,
WASIL

Boddu Veerabhadra Rao emphasizes that fortification is a specialized technical discipline requiring continuous training and investment in people and equipment. Robust protocols and automation are not optional luxuries; they are safeguards against costly recalls, regulatory disputes, and brand damage. In his view, quality assurance is not an expense but a long-term cost saver. The financial and reputational consequences of pulling a product from the market far outweigh the upfront investment in preventive systems.

WASIL’s experience illustrates a broader lesson for the food industry. When technical rigor, supply chain management, independent verification, and staff capacity are aligned under clear leadership, fortification becomes more than a mandate. It becomes a marker of excellence, a source of competitive advantage, and a tangible contribution to national nutrition goals.

Through disciplined systems and sustained commitment, WASIL has demonstrated how private-sector leadership can strengthen both public health outcomes and business performance – ensuring that millions of consumers receive the nutritional benefits promised on the label, consistently and reliably.



Imprint

Commissioned by

The Millers for Nutrition Coalition, powered by TechnoServe

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Acknowledgments

This case study was developed with contributions from WASIL, in particular Boddu Veerabhadra Rao, Head of Quality Assurance. It was prepared as part of the Millers for Nutrition Coalition and its partner network, including TechnoServe.

Design and layout

Sonja Lorenz, LOSO Design

Publication date

May 2026

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