# LAUNCHING FORTIFIED INFANT FLOUR IN THE SAHEL REGION: LESSONS LEARNT AND FUTURE OPPORTUNITIES

April 2024

This memo aims to present (1) the business and impact opportunity of an infant flour in Sub-Saharan Africa, (2) the learnings generated by the MERIEM project on infant flour, and (3) present different potential approaches for replication or scale-up of this initiative.

## 1 Infant flour is an untapped opportunity in most African countries

It is commonly admitted that the first 1000 days of an infant, between a woman's pregnancy and her child's second birthday is the most critical window to shape its neurodevelopment and growth. Poor nutrition during this phase can have irreversible consequences on one's life.

In Africa, infant flour is widely consumed throughout early childhood. When fortified with vitamins and minerals, it is the most appropriate complementary food[1] for children of 6-24 months, as it contains all the nutritional intake required for children to grow.

Yet, none of the products available at scale on the market offer an affordable, nutritious, and practical solution to parents:

- On the one hand, international brands like Cerelac offer convenient instantaneous formula (especially in urban settings) and aspirational branding but are too expensive for the majority (~1.1$/ 100g). As a result, these brands benefit from a wide penetration but very low average purchase, especially among low-income populations;
- On the other hand, local porridges are on average 5 time cheaper (~0.2$/100g) but either do not have sufficient energy density nor fortification to meet iron and other mineral deficiencies frequently found among Sub-Saharan African children[2], or are not available at a large scale. In addition, they usually require a minimum of 10-minute preparation.

The market gap between local and imported infant flour is observed in many African countries, as exemplified by the table below:

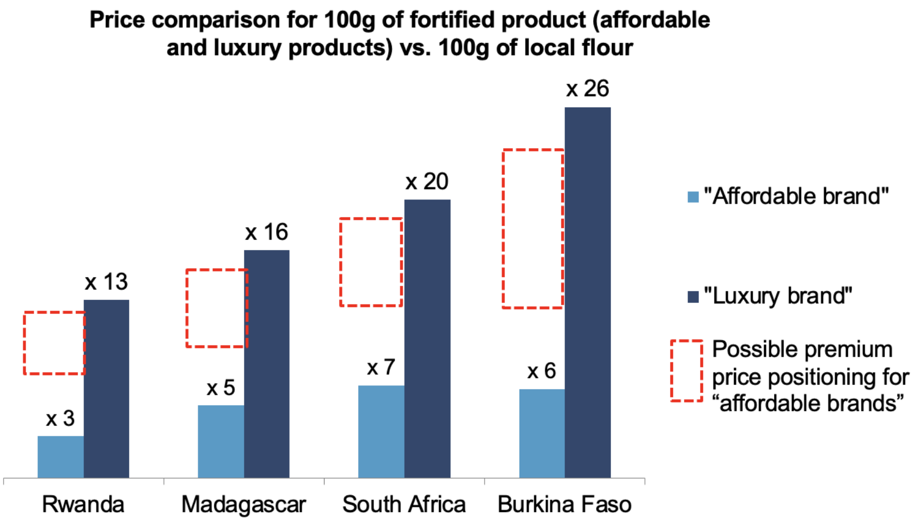
[1] As part of a balanced diet and after the period of exclusive breast-feeding

[2] 62% of children aged 6-59 months have micro-nutriment deficiencies (Stevens, Micronutrient deficiencies among preschool-aged children and women of reproductive age worldwide: a pooled analysis of individual-level data from population-representative surveys, Lancet Global Health 2022;10)

| Country | Product | Imported | Fortified | Instant | Pack size (g) | Retail price per ton (EUR) |
|---|---|---|---|---|---|---|
| Burkina Faso | Cerelac | Yes | Yes | Yes | 400 | 12 126 € |
| | Natavie | No | Yes | No | 120 | 2 523 € |
| | Misola | No | Yes | No | 1000 | 1 360 € |
| Ivory Coast | Cerelac | Yes | Yes | Yes | 250 | 10 811 € |
| | Nutribon | No | Yes | Yes | 200 | 9 910 € |
| | Phosphatine | Yes | Yes | Yes | 250 | 9 369 € |
| | Baka de mil ivoire | No | Yes | ? | 250 | 6 126 € |
| | GLP bebe | No | No | ? | 300 | 3 604 € |
| | Flour | No | No | No | 5000 | 901 € |
| Kenya | Cerelac | Yes | Yes | Yes | 400 | 14 117 € |
| | Local fortified | No | No | No | 1000 | 3 198 € |
| Rwanda | Tiger foods | Yes | Yes | Yes | 1000 | 13 892 € |
| | Cerelac | Yes | Yes | Yes | 400 | 12 072 € |
| | Cerelac | Yes | Yes | Yes | 1000 | 9 766 € |
| | Super meal | No | Yes | Yes | 1000 | 9 550 € |
| | Nootri Toto | No | Yes | No | 500 | 3 252 € |
| | Maize flower | No | No | No | 1000 | 2 225 € |
| | Babysoya | No | No | No | 1000 | 2 171 € |
| | Flour | No | No | No | Bulk | 1 080 € |

*Source: Hystra analysis, based on field observations*

With (i) an estimated 165 million[3] children from 0 to 4 in Africa, (ii) most of whom consume cereals[4] usually under a porridge format on a regular basis and (iii) a demonstrated willingness to pay a premium for safe and nutritious porridge flour even among the lower income segments[5], there is a clear business opportunity to seize:




*Source: Hystra analysis, based on 2013-2019 field observations*

[3] United Nations, Department of Economic and Social Affairs, Population Division (2022)

[4] 77% of children aged 6-23 months are fed with grains in Eastern and Southern Africa (2018), Unicef [The state of the World's Children 2019]

[5] BoP consumers in Kenya are willing to pay 83 KES dollars for 100 g of improved flour and 51 KES for the same quantity of conventional flour according to Christine G.K. Chege, Kenneth W. Sibiko, Rosina Wanyama, Matthias Jager, Eliud Birachi in "Are consumers at the base of the pyramid willing to pay for nutritious foods?" (2019)

## 2 Experiments in the MERIEM project[6] have confirmed this opportunity – and raised several challenges

To confirm this hypothesis, fortified infant flour was launched in all MERIEM countries — Burkina Faso, Mali, Niger — with various local private companies.

Below is an overview of the products developed:

| | | Main characteristics | Partners and launch date | Result |
|---|---|---|---|---|
|  | Burkina Faso– Super Leo | Instant flour in pack of 400G and 70G, sold respectively at 1250 and 250 FCFA | Fortis (distribution)<br>Sodepal (production)<br>Launch date: 03/2022 | 2022 sales<br>-13 000 packs of 400G<br>-40 000 packs of 70G<br>-1 400 retail points selling Super Leo / 5500 listed<br>-23% awareness<br>-27% consumers purchasing product >5 times |
|  | Mali — Samani | Flour to cook in pack of 400G and 70G, sold respectively at 1400 and 250 FCFA | UCODAL SARL<br>Soft launch: 25/06/22<br>Launch: 14/09/22 | Sales between September-November 2022:<br>-6 355 packs of 400G<br>-11 500 packs of 70G |
|  | Niger — Vitamli + | Flour to cook in pack of 500G sold at 1300 FCFA | STA<br>Pilot: 03-10/22 | Pilot sales<br>-7 000 packs<br>-717 retail points selling Vitamil+ / 2 620 listed |

Via this project, we have further confirmed that:

1. Producing fortified flour requires limited capital expenditures, and it is feasible to profitably produce a fortified flour 40% cheaper than international brands without compromising on quality or reach[7]
2. Local players, from shop owners to producers and government confirmed their interest for this product
    a. M. Saidou Tiendrebeogo, CEO of Fortis, is confident with the potential for Super Leo: “We have proven that we can market a quality infant flour produced in Burkina Faso, even setting up our own production line”
    b. Over 700 stores in Niamey sold Vitamil+ during its pilot launch
    c. Products are strongly supported by local government bodies, as shown in Burkina Faso with Super Léo: *“Marketing of new Super Leo flour contributes to government’s efforts to prevent malnutrition”* Hélène Ouedraogo, Head of the Nutrition Department, Ministry of Health and Public Hygiene, Burkina Faso
3. Consumers appreciate a product made with local ingredients[8] and once they have tried it, they purchase it on a recurring basis, with 47% of consumers having purchased Super Leo 2-5 times and 27% more than 5 times according to an independent survey of 78 Super Leo consumers[9].

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6 The Meriem project was implemented jointly by Hystra and Gret from 2018 to 2023 in Burkina Faso, Mali and Niger, to support local food businesses in the development of affordable fortified products for infants and women of reproductive age. Find out more on https://www.meriem-nutrition.org/

7 In Burkina, Super Léo is sold at 1250 FCFA for 400G, vs 2000 FCFA for Cerelac

8 79% of respondents prefer infant flour made in Burkina, compared to international ones according to an independent survey made by ICI to evaluate Super Léo impact in November 2022

9 ICI study, November 2022

Yet, many challenges have arisen, generating useful learnings that would need to be considered when thinking about replication:

- Working with small, local producers requires strong control over production despite the technical assistance provided by the project. In all countries, the project team has faced various issues regarding production, from raw material sourcing to non-compliance on food safety standards, to recurring stock-outs to storage issues. This has severe consequences in terms of brand image as well as consumption frequency and brand adherence.
- Affordable infant flour can become a sustainable business but generates low margin (compared to other Fast Moving Consumer Good products) and has a limited and rotating market base. As a result, it must be integrated into a portfolio of - ideally complementary - products to lower production and distribution costs.
- While partnering with distributors is key to generate volumes, it is critical to have vendors that are pushing the products in stores, especially in its first years when demand for the product is low. Vendors need to oversee geographic zones, and quickly identify which neighborhoods have more families in low-middle income levels to focus their efforts in these areas, targeting both large and small retail shops. We believe that this effort needs to be sustained over time as there is a continuous and almost complete rotation of the target population every 2-4 years[10]
- Formats needs to be comparable to competitive products to enable consumers to easily understand how much more affordable (up to 40% cheaper than market leader) product is: while we decided to launch 70G packs to minimize packaging costs and ensure it would be sufficient for 2 meals, their unit price was mechanically more expensive than imported 25G products, and therefore not so attractive to consumers. Similarly, for larger formats (in our case 400G) studies reveal that customers are primarily interested in the listed prices, without comparing the corresponding quantities
- While being the most expensive marketing investments, TV and radio are the channels that trigger the least purchases: 24% and 27% versus over 50% for market animations, POS, and recommendations[11].

## 3 Hystra believes there is an opportunity for replication & impact at scale provided the right skills and operating model are identified

Investing in the scale up or replication of a fortified infant flour requires specific skills and capabilities that are generally not met by any one player and require partnership building:

- Production expertise in terms of product formulation, raw material sourcing, production processes and quality control as well as distribution capabilities to ensure both sales volumes and brand awareness
- Local anchorage for effective advocacy to government bodies and other key institutional partners on nutrition issues and related regulations, but also more global competencies in terms of fortification and business modelling
- A for-profit mindset to ensure the long-term sustainability of the product, and a social motivation for impact to accept lower profitability.

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[10] However, after a few years in the market some flours brand become known enough to be self-sustainable without intense sale push, as demonstrated by Cerelac or flour like Koba Aina commercialized by Nutri'zaza in Madagascar

[11] Hystra analysis, based on ICI survey on Super Léo, november 2022

In our view, three models are able to mobilize the required skills and capabilities needed to replicate and scale up the success and impact of the brands initiated by MERIEM:

- **A franchise model**: the production is handled by local operators (franchisees) who also oversee the distribution. The franchisor in turn provides support on brand and packaging, premix, marketing materials, and support in advocacy
- **A joint venture model:** a company is set up to scale up one of the three existing MERIEM brands. Production is outsourced to local or regional partners, depending on regional taxes and transportation costs. The company then establishes a joint venture with a large-scale distributor to distribute its products in multiple countries, and complements this numerical distribution by some dedicated direct sales force to push the product
- **Convincing a multinational** to add the product to its portfolio: in this model, a multinational FMCG company already distributing its products in the region integrates the infant flour into its portfolio, ideally complementing other products (e.g., water, milk, etc.)

Each of these model shows its own strengths and weaknesses, and their relevance to any particular context will be influenced by key market conditions (including existing distribution networks, transportation costs, etc.)

| | Franchise model | Joint venture | MNC partnership |
|---|---|---|---|
| **Strengths** | • Local production and sourcing<br>• No importation costs and cheap labor | • Ability to plan and coordinate marketing<br>• Local production and sourcing<br>• Cheap labor | • Economies of scale on production with low distribution marginal costs<br>• Quality control |
| **Weaknesses** | • Small scale production with no economies of scale<br>• Quality risks<br>• Limited distribution capabilities | • Quality risk<br>• Potential importation costs<br>• Ability "push" the products in coordination with distributors | • MNC costs (brand, overheads etc)<br>• Importation costs |

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In case these opportunities are of interest, and you would like to know more, please contact jcharbit@hystra.com.