

Nurturing minds and shaping the future: School milk potential to achieve goals of school feeding program.

### Executive Summary

The Home-grown School Feeding Program (HG-SFP) is a model designed to provide school meals to students using foods sourced from local markets. HG-SFP recently has been incorporated as one of the strategies of educational development in Ethiopia aiming to address hunger and food insecurity problems of school children.

Evaluation of the HG-SFP showed that beside their benefit to alleviate hunger in schools the program successfully improved class attendance and academic performance of school children. In addition, the program had a contribution in saving the parents' money and time as a result of the food provided.

However, the evaluation also revealed school meals contributed suboptimal energy and nutrients to deprived school-age children and adolescents. With regard to SFP challenges, lack of permanent clean water provision, delay in ration delivery, poor-quality food provision, inadequate amount of food allocated for the academic year, lack of necessary infrastructure for the program, and lack of training in sanitation and hygiene for cooks were among the major challenges identified.

The reviewed studies suggest inclusion of animal source foods like dairy products might be a win-win solution to reduce the various operational challenges of SFP, to achieve both the broader goal of SFP and improve the dietary energy and nutritional value of school meals to satisfy the recommended daily requirements.

### Key messages

- School feeding contributed valuable dietary energy and nutrients despite suboptimal supply to school-age children and adolescents as well as key operational challenges.
- Inclusion of dairy products in school menu or a shift from broader SFP to school milk program (SMP) might be a win-win solution to reduce the various operational challenges of SFP while achieving both the broader goal of SFP and improve the dietary energy and nutritional value of school meals to satisfy the recommended daily requirements.
- School milk program generates multifaceted economic, nutrition, education, and healthy eating cultural benefits in Ethiopia – In Ethiopia among school age children more than 26.8 million attending their pre-primary and primary education in 40,000 schools (EMS, 2020)
- School milk reduce workload in school meal preparation, school time during feeding beside improve the nutritional quality of the meal served for learners.
- As more Milk is needed to feed school children school milk create alternative and sustainable market for the dairy farmers, processors and present a substantial economic opportunity for the sector.
- School milk program is key entry Points to tackle key challenges of school feeding programs in turn malnutrition and thus offering win-wins between improving the dairy sector performance and early childhood development. The 2023 food and nutrition strategy baseline survey revealed 39 %, 22% and 11% of children in Ethiopia are stunted, underweight and wasted.
- Despite its potential to deliver win-win solutions for early child development, education performance improvement and the dairy sector, the uptake of school milk program relatively low and requires strong advocacy and concerted action using evidence generated by pilot scale up phase implementation by stakeholders



## Background

In Ethiopia among school age children more than 26.8 million attending their pre-primary and primary education in 40,000 schools (EMS, 2020). The recent national food and nutrition strategy baseline survey (EFNS, 2023) of Ethiopia, has revealed that the prevalence of undernutrition among children under five years of age is increased (stunting among children is 39 %, underweight is 22% and wasting is 11%). Cognizant to the problem, the government of Ethiopia is designed and implemented Food & nutrition strategy (1) and Food system plan (2) to tackle the social and economic impact of malnutrition. Among the various strategic directions and game changer action areas identified by the EFNS & FS plan school feeding program is considered as a sound investment to eliminate hunger and contributing to school children education, nutrition, health, and future productivity as adult. According to the UN, School feeding programs are directly contributing the below SDGs.

	<b>SDG 2: Zero hunger</b>	End hunger, achieve food security and improved nutrition and promote sustainable agriculture
	<b>SDG 3: Good health and well-being</b>	Ensure healthy lives and promote well-being for all at all ages
	<b>SDG 4: Quality education</b>	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
	<b>SDG 8: Decent work and economic growth</b>	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
	<b>SDG 10: Reduced inequalities</b>	Reduce inequality within and among countries

Figure 1. Contributions of SFPs to SDGs.

Consequently, the Home-grown School Feeding Program (HG-SFP) recently has been incorporated as one of the strategies of educational development in Ethiopia aiming to address hunger and food insecurity problems of school children. The program is implemented in different parts of the country using different models including among others in Addis Ababa (government led) and some regions like Afar and Somali (donor-led) and recently in Oromia region (community led).

## Key findings of the Home-Grown school feeding program Evaluation

### Opportunities

The results of different evaluations revealed that SFP served school meals remedial to avoid hunger among school-aged children (3); successful in improving class attendance and academic performance of school children and had a contribution in saving the parents' money and time as a result of the food provided (4); results significant increase in absenteeism among youth who did not receive school meals compared with their school-supplied peers (5, 6).

## Limitations

Evaluation conducted in different HG-SFP implementing areas and schools reported the following as challenges: The program creates a high workload for cooks and other personnels due to lack of access to safe drinking water sources, absence of firewood, late delivery of supplies, poor quality of cereal (discoloured and damaged grain), poorly constructed kitchens and adequate stock of plates, cups, and spoons. Other challenges mentioned in the study are preparation of the meals took a long time and compromise school time (2).

Another comprehensive evaluation revealed that despite its valuable contribution to avoiding hunger among deprived school-aged children and adolescents, the SFP contributed suboptimal dietary energy and nutrients compared with the WFP recommendation. The school meals served were not diversified enough and number of important food items, such as milk and milk products were not served. Consequently, since school-aged children who benefit from the SFP come from very destitute families, according to the food and nutrient gap (FNG) analysis (7) they are unlikely to get the balance at home (3).

This policy brief highlights: School milk program Experience of SNV-BRIDGE, models undertaken to promote school milk, components of the SMP to ensure comprehensiveness, process followed to safeguard approval of the SMP by schools and parents, current status, lessons learnt and challenges/myths of SMP and recommendations for research and policy choice.

## School milk Program: Lessons from BRIDGE

**Preamble:** SNV-BRIDGE School milk program (SMP) builds up on the policy, strategies, imitative in Ethiopia and SNV Uganda (TIDE) experience on school milk and implemented in selected schools in Ethiopia.

**Objective:** Beside contribute to improving the nutrition and educational performance of school student by sparking a milk drinking culture among school age children in schools, BRIDGE school milk program aims to support dairy processors to deliver more nutritious, safe, affordable probiotic yoghurt and other dairy products.

**SNV-BRIDGE SMP Models:** BRIDGE SMP is implemented under Community/government -led model, corporate -led model, parent-led schemes, and donor -led model.

- **The community/government -led scheme** includes the provision of free probiotic yoghurt to public and IDP schools where school milk is integrated as part of the menu and the cost is covered by government or community.
- **The corporate led model** is implemented and led by corporates who have schools for the children of their employees.
- **Parent-led Model** entails parents providing probiotic yoghurt at down sized subsidized rates where at the end the parents will be responsible for 100 % coverage of the payment.

- **Donor-led Model** is implemented and led by humanitarian organizations working in Emergency situations with IDPs school children.

**Scope of SNV-BRIDGE SMP: Towards comprehensiveness**

Table 1 summarizes key components of the BRIDGE School milk program currently followed to achieve the nutrition, education, social protection, marketing, and sustainability goals synergistically.

Bridge SMP Components	Focuses
Nutritional and Operational qualities	<ul style="list-style-type: none"> <li>• Working towards quality and safety of dairy products at the producer, processor, and school canteen; dairy products according to availability and preference.</li> </ul>
School base nutrition and Health Education	<ul style="list-style-type: none"> <li>• Capacity Building for the education community</li> <li>• Promotion of healthy Food Consumption; good health and nutrition practices.</li> </ul>
Creating Healthy Environment	<ul style="list-style-type: none"> <li>• Encourage schools access to Safe Drinking Water; Basic Sanitation; Canteen Infrastructure &amp; Utensils and Proper Waste Management</li> </ul>
Community engagement	<ul style="list-style-type: none"> <li>• Community participation &amp; Management to ensure sustainability of the program.</li> <li>• Partnership with community-based Organization &amp; donors and linking to local Economy.</li> </ul>
Support partners via matching grant to help the production of Safety and quality probiotic yoghurt.	<ul style="list-style-type: none"> <li>• Improve processors efficiency who wish to buy processing equipment that helps safe and quality probiotic yoghurt production.</li> <li>• To ensure safety and quality of the produce, the project support Yoba 4 life foundation to train processors on safe and quality production of probiotic yoghurt, periodically collected samples for testing of microbiological quality and proximate composition. Results are regularly communicated with schools and processors for program improvement.</li> </ul>

**Implementation Process:** To ensure sustainability and the buy-in of the program the following are key process used in implementation of BRIDGE-SMP: Identification of schools which are open to the idea in collaboration with education office; Sensitization of school management, parent representatives & government and other stakeholders under the program ownership of office of education; and conducting consultative meetings take place to inform parents about nutrition /education benefits of SMP, approaches the program will follow including financing of the program, strategies used to ensure safety and quality of the produce/program among others.



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**Current status:** The BRIDGE -SMP target mainly pupils who regularly attend Kindergarten schools. Depend on the context learners received 150-250 ml of probiotic yoghurt/milk for 2-3 days/week. In the reporting period the program was successfully scaled up to 162 kindergarten and primary schools (private, public and IDP schools)) in Tigray, Amhara, Sidama, SNNP, Oromia and Addis Ababa. A total 81,03 school age children were having probiotic yoghurt/Fresh boiled milk. Currently, SMP emerged as a new local market opportunity for dairy farmers and processors.



### **Competitive position of Milk products in School feeding program: Key lessons of strategic importance**

As an input for the adaptive management philosophy of the project, the school milk program was reviewed in July 2022 and February 2023 by a joint internal and external (SNV Global, Wageningen University and research) study team. The following are key observations from the reviews:

**Parents and teachers convinced by positive results:** It might be hard to believe, seeing how popular the yoghurt is with the children, but the initial reactions to the SMP were not very positive. At the start of the pilot study, many parents were unwilling to participate because they believed that their children did not like dairy products and due to milk safety issues and allergies.

**School milk break perceived Milk/milk products dislike among learners:** "My daughter's appetite for dairy was very low, and we believed that milk would make her feel sick," says one of the parents. "But this was not the case. In fact, her appetite has improved, her skin and hair are shining, and she has a lot more energy. Her performance at school has also improved." Another parent reported that her daughter used to be tired all the time, "but now she has a lot more energy".

**The teachers were enthusiastic about the effects of the yoghurt as well:** All the teachers involved in the pilot study reported that they observed an improvement in the physical activity and appearance of the students. The positive testimonials of participating parents and teachers on the improved health, education performance and physical activity of participating students have triggered a change in attitude towards the consumption of dairy products.

**Snowball effect to classmates:** Parents who have paid, and their children start taking help to attract other children to ask their parents to pay school yoghurt.

**SMP can improve the image of the school:** Schools participating during the pilot and scale up phase reported that SMP improves their image, and some schools use the program to promote the school and attract more children to enrol in their schools.

**“Bring back our yoghurt!”: School milk program is possible even in resource poor Setting.**

The children’s enthusiasm for the yoghurt meant that school administrators and processors also started to develop an interest in the SMP. School administrators stated that “they felt ‘pressured’ by the children to continue the program after they stopped following the pilot due to parents’ inability to pay”. The administrators mentioned that “the students would come up to him and ask him for yoghurt. It was difficult to overlook the request”. Because of the pressure from students the school (which is the school of the poorest segment of the society) determined to resume the SMP by looking alternative finance source from their limited internal income from shop rental, mobilizing better families or a Yoba producer who was willing to pay for kids unable to pay and sustain the program. However, continuing with the SMP was also in the interests of the schools. The school administrator added that “Not just because well-nourished students perform better (the yoghurt provided them with the energy they needed to focus and the nutrients to keep them healthy, which meant that the number of absentees went down), but also because the SMP meant that they saw a rise in the number of enrolments”.

**Relevance of School milk program:** education offices and schools are interested and working towards its implementation after the Sensitization workshops. The Teachers involved volunteer in coordinating the feeding of their students, parents contribute to costs of milk/yoghurt.

**Efficiency:** The schools participating in the program confirmed that the level of effort they exert is not as difficult as what they thought at the beginning of the program. Most schools reported that it is rather a fun and something that makes the teachers happy to work with children and help them to get milk in school. One of the teachers mentioned the following story.

*“It’s almost 10 am, the sun is already high in the sky, and the children are queuing outside of the school building. Teachers are handing out sachets of yoghurt. Some children are so eager to get their yoghurt that they use their teeth to tear open the sachet. “They want their yoghurt so badly that they don’t want to wait for us to cut open the sachet for them,”*

**School milk help to achieve broader goals of SFP and reduce operational challenges:** In areas where similar school feeding programs were implemented (e.g. Oromia) the program achieved significant results by integrating probiotic yoghurt into existing community-led SFP initiatives for synergetic effect and ensured sustainable financing via community and corporate support. The schools prefer milk as a good diet for students in terms of nutritious value, time saving compared to full meals, and its good impact.

**General sales increases of probiotic yoghurt reported:** Currently 36,500 litres of PBY produced per week for school and regular markets and of which around 16,000 litres consumed by learners in schools (estimated average of 200ml per serving, 2.5 times a week). Schools and parents reported that some producers which are trusted in the community got easy entrance to schools and have in some cases acquired more schools themselves and actively involved in promoting the product and the program.

**They call me 'Mr Milk' Probiotic Yoghurt Supplier:** The School Milk Program has also enhanced the social status of processors in the communities. One of the suppliers even got a 'fancy' nickname from the students at the school where he delivered his yoghurt. "When they see me, they always yell 'Mr Milk!'", he says with a smile. His own children also attend a school where they have a SMP. "As a father, I am proud to supply the children with yoghurt," he says. "Like a gardener that waters seedlings, I give them what they need to grow strong."



## **Schools, parents, Processors, logistic, supply chain and Financing**

**Challenge/Myths from Schools side:** The following are some challenges/myths identified by the review from Schools side:

- **Teachers' workload:** Teachers have extra burdens of organizing handwashing, feeding selected children, keeping attendance, and collecting payments.
- **Fear of food poisoning:** The project believes ensuring food safety requires the commitment from all parties in the value chain and is working with processors and suppliers to wards food safety and quality. However, some private schools are barriers to implement, and they do not want to test the program in fear of losing clients. Therefore, they refuse to offer any type of food at school.

**Financing the program:** Although the project currently documenting the level of withdrawal after subsidy reduction, we already noticed the reduction in participation mainly in public schools due to inability to pay by parents. However, the reduction in community led and corporate led models is lower than the parent led approach. Thus, this calls for the need of exploiting the potential of the corporates social responsibility (CSR) and community internal capacity (Like **Busa Gonofa** initiative of Oromia) for sustainable financing the program.

**Complexity in terms of logistic conditions:** Although this is one of the reasons mentioned by stakeholders to not implement school milk BRIDGE as a dairy vale chain project has an opportunity to link actors in the dairy chain to ensure sustainable supply of quality and safe milk to scale up the program. So far using its matching fund approach for school milk scheme the project empowers small holder processors to produce safe and quality probiotic yoghurt to school milk program. For wider implementation of the program selection of an appropriate supply chain design including making choices in terms of target, modality, and program set up specific to the context of the target region might help to utilize the full potential of the BRIDGE opportunity and engage other stakeholders. As the previously implemented model of linking with smallholder producers may limit a model's feasibility for large scale implementation considering the involvement of large processors might be alternative solution to solve the supply and logistic issues.

**Achieving multiple objectives:** Achieving the education, nutritional quality, nutrition education, healthy environment safety net and market objectives of school milk requires involvement of various

stakeholders, local institutions for sustainability. Thus, mapping institutions potentially contribute for each component and involve at the onset of the program needs attention during the planning phase.

**Sustainability and scale up:** Trend in SMP enrolment varies largely between schools. The reviews and insight study revealed that, parents, schools, and government offices bought in to the SMP concept suggests it is relevant initiative. However, the program was not embraced by all parents and communities (specially in parent-led private schools) thereby limiting full adoption in all schools. Besides, there is a tendency of withdrawal from the program when the subsidy reduced or stopped. Thus, there is a need of strategic approach to ensure:

- **Sustainability:** Achievement of program continuity, having context specific and well-functioning model with local governance, decreasing reliance on external funding.
- **Localization of the program:** Shifting of key activities to local institutions, which not only empowers them to take ownership but brings additional community benefits, thereby enhancing the program's impact and ensuring continuity.



### **Policy Considerations**

Based on the SMP experience during the pilot and scale up phase the brief forward the following key elements to achieve a multiple-win outcome:

1. Influencing policy to integrate milk into school management under the leadership of relevant provincial and municipal governments.
2. Breaking own sectorial silo in school milk: Foster cross-sectoral cooperation at local and national levels between various governmental, NGOs and corporates working on school feeding program or CSR initiatives to achieve sustainable financing and synergetic impact with compromising education process.
3. Assessing school feeling program menu options & conduct discussion with government to integrate school milk in to existing SFP will help to reach more schools and pupils.
4. Getting approval from local education authority and school Management: As the program is mainly operated in schools under the supervision of education authorities getting their assurance is a key to establish an efficient operation system.
5. Testing the caterer-based model of school milk to free up schools from the day-to-day affairs of preparing and delivering meals by outsourcing the service to the private processers
6. Promote and raise public awareness of the multiple benefits of school milk program to build parent/community ownership.
7. Getting in contact with parents to discuss on school milk is a major challenge. The use of digital advisory service to approach parents with school milk benefit messages might solve the problem and maximize adoption. Parents are effectively mobilized when there is concrete effort and engagement of regional governments and influential community leaders and champion parents.



8. Combined intervention packages (Product and operation safety and quality, school-based nutrition and Health Education, Creating Healthy Environment and Community engagement) can deliver synergetic outcomes between cost and benefit of the program and will help to get trust from parents and stakeholders.
9. Implementation of SMP at scale or integration of dairy into the broader school feeding program requires: Building capacity of schools; Share best practices and tools to support quality execution; Engage civil society and businesses for sustainable financing and Coordinate with others in the field to raise awareness and ensure strong support and resourcing.
10. Strengthening Monitoring, Evaluation, and research for the purpose of learning as the basis for evidence-based decision making, to capture early results, use of the experience to implement school milk program at scale and inform policy.

## References

1. National Food and Nutrition Strategy Baseline Survey - Key Findings Preliminary Report. Retrieved from <https://reliefweb.int/report/ethiopia/national-food-and-nutrition-strategy-baseline-survey-key-findings-preliminary-report>
2. Ethiopian Food System. Retrieved from <https://summitdialogues.org/wp-content/uploads/2021/09/Ethiopian-Food-System-the-Journey-Briefing-Document.pdf>
3. Zelalem et al. (2022). School feeding contributed valuable dietary energy and nutrients despite suboptimal supply to school-age children and adolescents at primary schools in Addis Ababa, Ethiopia. Retrieved from <https://www.sciencedirect.com/science/article/pii/S089990072200106X>
4. Tsion et al. (2022). Successes and challenges of the Home-grown School Feeding Program in Sidama Region, Southern Ethiopia: a qualitative study. Retrieved from [https://www.researchgate.net/publication/364068062\\_Successes\\_and\\_challenges\\_of\\_the\\_Homegrown\\_School\\_Feeding\\_Program\\_in\\_Sidama\\_Region\\_Southern\\_Ethiopia\\_a\\_qualitative\\_study](https://www.researchgate.net/publication/364068062_Successes_and_challenges_of_the_Homegrown_School_Feeding_Program_in_Sidama_Region_Southern_Ethiopia_a_qualitative_study)
5. Bekri et al. (2023). Effect of School Feeding Program on School Absenteeism of Primary School Adolescents in Addis Ababa, Ethiopia: A Prospective Cohort Study. Retrieved from <https://pubmed.ncbi.nlm.nih.gov/37309102/>
6. Addis Ababa Education office (2019). Retrieved from <https://reliefweb.int/report/ethiopia/school-feeding-program-helps-cut-dropouts>
7. Food and nutrition gap Analysis-<https://docs.wfp.org/api/documents/WFP-0000142257/download/>