

Nutrition Improvement Program by DSM Nutritional Products Ltd



Unlocking human potential. Unlimited DSM.

The Nutrition Improvement Program works to eliminate malnutrition around the globe and unlock the human potential of every child, woman and man.

Program Description

The Nutrition Improvement Program is promoting the addition of essential vitamins and minerals to low cost foods, e.g. staple food, to eliminate malnutrition in the developing world.

Malnutrition caused by deficiencies of vitamins and minerals is also known as “hidden hunger”, because most of the people affected by it do not show the physical symptoms usually associated with hunger and malnutrition.

Fighting malnutrition: A challenge for global development

More than a third of the world population is affected by micronutrient malnutrition. Over 2 billion people have nutritional deficiency anemia; almost 2 billion are iodine deficient; more than a quarter of a billion children are vitamin A deficient. Deficiencies of zinc, folate and vitamin D (and possibly other vitamins and minerals) are also widespread, but their prevalence has not yet been established. [Source: World Health Organization, 2006]

Micronutrient malnutrition severely impairs quality of life. It increases the risk of poor health, slows mental and physical development, and reduces work performance and earning potential. Micronutrient deficiencies are responsible for an estimated 7.3% of the global burden of disease, and impose high costs on virtually every developing nation.

What malnutrition causes in one year:

- 1 million children to die before the age of five
- 50,000 women to die during or soon after childbirth
- 19 million infants to be born with impaired mental capacity
- 100,000 infants to be born with preventable physical defects
- Global cost of malnutrition \$19 billion in lost adult work performance and related health expenditure

Why staple food fortification?

When nutrients lacking in the diet are added to a staple food vulnerable populations are able to consume the micronutrients important for their health in adequate amounts without them having to change their dietary habits. Food fortification can be done safely and efficiently (less burden on health-care systems) for a minimal investment (only a few cents per person annually). It is not only technically feasible; it is also the most economical way to reduce micronutrient malnutrition.

“Probably no other technology available today offers as large an opportunity to improve lives and accelerate development at such low cost and in such a short time.”

Source: Enriching Lives, The World Bank)

Implementation methodologies

The Nutrition Improvement Program is working mainly via partnership programs and has successfully participated in various African countries and in Latin America in multi-stakeholder activities which resulted in the mandatory fortification of low cost foodstuffs, like sugar, wheat and corn flour. The result was the reduction of nutritional anemia and vitamin A deficiency in the malnourished population.

The private sector: from donators to partners

The fortification of staple food is not a new way to fight against malnutrition. In fact, it has been done successfully in the developed world for many decades.

In the past, the promotion of the addition of vitamins and minerals to food was done by organizations and government bodies but without the participation of the private sector. But industry can contribute largely to sustainable solutions with its deep scientific know-how of nutritional requirements, with its innovative potential and research and development capabilities and its knowledge of the market to find easy and effective solutions for everybody, e.g. by developing and providing tailor-made and affordable premix blends of the required vitamins and minerals. Instead of limiting the contribution to donations, the private sector now wants to contribute with know-how and sustainable solutions.

Quality and effectiveness

The Nutrition Improvement Program has a very firm position that any food fortification program must have a multinutrient approach. A malnourished person is not deficient in just one nutrient, the nutritional status of the target population has to be established and the missing nutrients added to a fortification program. A single nutrient approach solves only a part of the problem.

It is also important to fortify with high-quality vitamins and minerals, because the nutritional and health status can only improve with effective micronutrients.

Evidence of effective food fortification and impact on development, some examples

In Chile, targeted fortification of milk for infants has successfully reduced the prevalence of anemia in young children by 70%. In Central America the addition of vitamin A to sugar resulted in a substantial anemia reduction in different proportions per country, in Zambia the same addition significantly reduced vitamin A related blindness. In South Africa, where the fortification of maize and wheat flour is mandatory since 2003, we are expecting results this year. In the developed world the positive effects of food fortification to the health of the population are documented since the 1940ies.

The possible positive effects are illustrated in the UNICEF/MI report 'Vitamin and Mineral Deficiency – A Global Progress Report.

Global cost burden:

The economic loss due to malnutrition is severe. India loses 1% of its GDP of 6 billion USD per year, in China's annual loss is 2% of its GDP of 1.4 billion USD.

According to the above-mentioned UNICEF/MI report the world is losing 19 billion USD per year to vitamin and mineral deficiencies and the cost of giving all the world 50% of their requirements of essential vitamins and minerals would cost 1.4 billion USD per year. The cost/benefit ratio is 1:15.

DSM's commitment

As a result of the cooperation with the South African Food Alliance, DSM invested in a large premix production plant in South Africa to develop and distribute ready-to-use premix blends to African countries according to the requirements.

DSM has employed five full-time specialists for the Nutrition Improvement Program, e.g. program managers for India and China as well as commercial, scientific and technical specialists. Of course all our internal as well as external experts are at our disposal if required.

The Nutrition Improvement Program offers free scientific, technical and regulatory support, fully paid by DSM as a contribution to sustainable development in the developing world.

Contact

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We at DSM believe that adequate nutrition is the precondition to eradicate poverty and thus improve development in poor countries, because malnutrition undermines the potential of billions of people worldwide through its irreversible effects on mental and physical development of a person, especially of children. We believe that adequate nutrition should be treated as a human right.