

National Webinar – Fortification of Edible Oil: From Commitment to Action
25th Sept, Friday | 1500 – 1420 hrs
A complete Report

India has a very high burden of malnutrition, including micronutrient malnutrition. Staple food fortification is recognized by the National Nutrition Mission (POSHAN Abhiyan), as one of the most cost-effective and complementary strategy to reduce micronutrient malnutrition, across all population groups. GAIN-India, in partnership with FFRC-FSSAI, has been working to support and promote fortification of edible oil, wheat flour and milk, since 2011, in order to reduce the huge burden of micronutrient malnutrition.

Our major focus has been on fortification of edible oil with vitamin A and D, as almost 62% of Indian population has vitamin A deficiency and 50%-94% of people suffer from vitamin D deficiency (NNMB-NIN Surveys). Deficiencies of vitamin A and D have a strong adverse impact on morbidity, mortality, productivity and economic growth. Vitamin A and D also help to strengthen the immune system and hence their importance in the current pandemic situation cannot be over-emphasised.

GAIN and FFRC-FSSAI's efforts, especially with respect to fortification of edible oil with vitamin A and D, have shown tremendous results. Encouraged, with the positive health outcomes and industry response, GAIN and FFRC-FSSAI jointly hosted the ***“National Webinar on Fortification of Edible Oil: From Commitment to Action.”*** In this webinar, the policy makers, the industry partners and food scientists discussed the challenges, opportunities and the strategies to ensure nation-wide scale-up of edible oil fortification, with quality.

Mr. Tarun Vij, Country Director, GAIN kick started the event with a very warm welcome address which set the context and laid the foundation of the national webinar.

Mr. Arun Singhal IAS, CEO, FSSAI, highlighted in his Key Note Address that, the effectiveness and safety of edible oil fortification in reducing Vitamin A and D deficiency is proven globally. Mandatory oil fortification legislation was first introduced in 1965, 27 countries have mandated oil fortification, since then. Presently, in the open market, there are about 83 brands of fortified edible oil. With this considerable traction of oil fortification, FSSAI has proposed for the mandatory fortification of oil and milk in the open market.

Ms. Inoshi Sharma, IRS, Director FSSAI, highlighted FSSAI's role in Staple Food Fortification. She shared that FSSAI plays a key role in setting up standards and regulations of the +F logo via a dedicated hub called the Food Fortification resource center (FFRC) facilitating alignment in both open markets and Govt. safety net programs. Apart from this FSSAI take the responsibility of building consumer awareness through joint marketing campaigns, building capacities with workshops & pieces of training in compliance with industry standards.

Ms. Deepti Gulati, Head of Programmes, GAIN showcased how the nutrition gaps can be bridged with the power of Nutrition. She highlighted that as micronutrients Vitamin A & D contribute immensely to promote mental & physical growth. Edible oil fortification has strategic advantages, a rich return on investment in a cost-effective way when we want to bring down the incidence & prevalence of micronutrient deficiencies across the country.

Dr. Rajan Sankar, Director, Nutrition, & Senior Advisor, Nutrition, Tata Trusts shared strategies in advancing the quality agenda while scaling-up edible oil fortification. He highlighted that the success of food fortification depends on many factors namely:

1. The food vehicle that we choose, should reach the masses.
2. The proportion of the fortified vehicle that is consumed, thus edible oil is an excellent vehicle to fortify because it has such good penetration as its widely used and accepted cooking medium. We have significant industry players who contribute enough quantity of oil manufacturing and process thus giving us confidence that it's the right vehicle and can be easily done.
3. Effectiveness of Quality Control & Quality Assurance in terms of Oil Fortification. As rightly pointed out by the CEO, FSSAI & Director, FSSAI we have an excellent provision available in India to ensure that the quality is correctly maintained and QA & QC are paid enough attention.

Dr. Rajan also stated that it starts with the quality certification of the Premix, Internal quality control at the production level, & external monitoring by a third party at the factory level & along the supply chain, market, and household level. All this will ensure that the fortification campaigns are helping in reducing vitamin & mineral deficiencies.

Dr. Rajan & Ms. Deepti Gulati were elated as they introduced the rich panel namely Dr. Ganesh Kulkarni, Head, Regulatory R&D, Cargill India Pvt. Ltd., Dr. Shailesh Godhekar, Global Corporate Head for Marico Ltd., Mr. Rajesh Vijayvargiy, Manager, Avi-Agri Ltd. Mr. Arun Om Lal, Vice-President, Hexagon Nutrition, Dr. Priti Amritkar, Director, Labs, Envirocare Labs Ltd.

With the efforts of these industry leaders, we can reach 800 million people across the country with fortified edible oil. We have compiled the key insights from them as to what are the key factors that made them do this and the challenges that came in the way in monitoring it and suggestions that they would have to universalize this.

Speaking about his experience of initiating & scaling-up edible oil fortification and consumer acceptance **Mr. Shailesh Godhekar, Global Corporate Head for Marico Ltd.**, said, "Focussing on the emerging consumer needs, accuracy, and quality, Marico aims to fulfill the consumer healthcare needs at any cost." In August 2017 Marico took a call to fortify oils considering the need of the hour. Challenges faced were quality & standard SoPs, storage, and awareness. With the help of running campaigns on National Consumer day, activating customer care support IVRs, spreading benefits of vitamin A & D so that consumer can enrich with the benefits.

Dr. Ganesh Kulkarni, Head, Regulatory R&D, Cargill India Pvt. Ltd., shared his experiences on behalf of the leaders in oil fortification since 2008. Supporting small scale industries & vendors to support the oil fortification process. He also shared 2 key aspects with regards to the maintaining quality & adequacy of oil fortification. Since the oil manufacturers are dependant on the premix suppliers and vendors we try and ensure that the quality of the premix is up to the mark in terms of food safety, food quality, & regulatory norms. Secondly the overall flexibility of supply chain logistics.

Mr. Rajesh Vijayvargiy, Manager, Avi-Agri Ltd. shared his experiences as to how Avi Agri Ltd grew from manufacturing 700 metric tons to 1500 - 2000 metric tons of oil fortified with micronutrients backed up by GAIN. Manufacturing 9000 metric ton of Oil per month, they have received enough support from the consumer's end in terms of household consumption without affecting the color & taste. To ensure smooth supply even during these unprecedented COVID times, Avi Agri Ltd keeps a bulk pool of premix to enrich 5000 metric tons of oil at a time. Avi-Agri Ltd. with the support of GAIN has reached the population of Madhya Pradesh and adjoining areas with a phenomenal supply of fortified soyabean oil across including MSME levels.

Adding to the discussion, **Mr. Arun Om Lal, Vice-President, Hexagon Nutrition**, talked about premixes, Quality assurance & control at the premix level, its transportation, and how it can be blended with food commodities for seamless fortification. Due to sudden lockdown, there was a challenge

concerning continuing the unit manufacturing & logistics/transportation. With the help of the support of the Govt. & Essential Food commodities act the manufacturing process went on with the help of 20% workforce capacity and shipping continues as well with the support of manufacturers like Cargill India Pvt. Ltd. With COVID spreading and Maharashtra being a hotspot we had to manufacture premixes in other parts and supply PAN India without surging prices, although our output cost increased.

He also laid stress on the fact that micronutrient and nutrients are food grade nutrients. Although in terms of QA/QC the nutrients are divided into food grade, medical grade & animal grade in terms of food we as a pioneer premix manufacturer always use food-grade in regulation with FSSAI on particular requirements. He also added that quality assurance is critically important for a premix manufacturer is the accreditations and certifications as per global standards (UNICEF, GAIN). GMP (Good Manufacturing practices), Food safety management System (FSSE, 2200) – a critical quality assurance indicator are some of the critical certifications that need to be in place. Halaal & Kosher certificates might be required basis the areas the premix is being exported to. Also, ISO 9001-2015, testing, and analyzing the raw and final products are all key areas that comprise the complete premix manufacturing process. ISO-IEC 1725-2005 is another must certification. These robust certifications assure the quality in terms of raw material & Quality Control while processing the premix.

Ms. Gulati also put things into perspective by touching the overages to oil fortification at the end-product level to which Sh. Arun Om Lal responded that overages are divided into 2 parts, one is potency or assay of the nutrients and 2nd is the intended shelf life. Based on these 2 factors the manufacturer the overage is normally 10-15%.

Dr. Priti Amritkar, Director, Labs, Envirocare Labs Ltd. also listed the test method is the heart of the management process. Therefore, the selection of the testing method is to be verified & validated by the NABL lab to conclude that the final product is fit for final consumption. Further, she added that since vitamins are sensitive to temperature, Oxygen levels, light, etc. which makes choosing the right testing method very critical. Globally, there are no standard methods for Vitamin A & D specifically, but still, other methods can be applied & extended for testing & standardization purposes concerning edible oil. As per FSSAI 2019 order, the UV-based AOAC 2001.13 is one such validated method for Vitamin A fortificants. For Vitamin D2 (plant-based vitamin) & D3, FSSAI has a recommended method namely AOAC 2016.05 usually for infant food and adult nutrition matrix but works for edible oil mixes as well. A lot of labs are doing these testing but one needs to be vigilant about the accreditation that these labs hold to be sure about the quality of the results.

The open house saw a flood of questions and answers but some key specific questions were being answered as well. Majorly spoken QnAs were around the potency of micronutrients in oil, fortification of cold-pressed oils, the possibility of fortification of processed foods. Small scale and large scale fortification, the number of premixes and calibration, types of equipment needed, cost evolved, etc. were other key issues discussed.

Ms. Gulati and all the panelists beautifully explained and answered most of the questions.

Mr. Tarun Vij, Country Director, GAIN expressed his gratitude to all esteemed panelists, speakers & participants who came in large numbers to attend this informative and enriching webinar and make it a huge success. Mr Vij shared the **key takeaways** of the Webinar:

- Government will be soon initiating an action to mandate fortification of the 69% of the edible oil being voluntarily fortified at present, along with milk fortification. This will enable universal access of mandatorily fortified edible oil both in social protection schemes and open market.

- Premix compliance is crucial in ensuring good quality product to the end consumer, hence, there is a need for premix standards and good manufacturing practices so that we steadily improve upon quality at all levels of manufacturing and processing at all times.
- There is a need to harmonise the testing methods of laboratories, across the country. This will ensure proper utilisation of lab capacities across the country and help in creating some sort of engagement platform on an ongoing basis, to share the best practices across labs in the country.

GAIN has a large-scale food fortification quality assurance agenda under which they do peer reviews, cross-testing protocols that sensitize the quality of edible oil which is fortified. This is being done so that the end consumer is confident in buying the product that claims to be as mentioned on the food label. Therefore, GAIN & FSSAI would like to assure all the consumers, food industry partners, premix suppliers, that the agenda of Quality is always on priority when it comes to the fortification of staple foods.

The event was attended by more than 1700 participants, which included students, healthcare professionals, from the food processing, regulatory & research, & nutrition industry. This national webinar witnessed a global audience from the UK, US, Canada, U.A.E., Singapore, Philippines, Pakistan, Germany, Australia, Turkey, Bahrain, Nepal, Nigeria & Malaysia.