

The fifth session of the "Food Plus: Food and Nutrition Meetings" series, jointly organized by the Food, Beverage and Agricultural Policies Research Association (GIFT) and the Nutrition Institute, was held on February 26, 2025, in Ankara. This event focused on the topic of "Micronutrient Deficiencies in Türkiye: From Research to Policy Recommendations" We would like to thank the Food Fortification Initiative (FFI) for its contributions in helping us select this topic. The initiative, which aims to provide a holistic perspective on the increasingly common micronutrient deficiencies in society, enabled us to analyze the current situation and discuss relevant policy proposals.

Since 2016, GIFT has been organizing various activities to develop policies in the areas of food, agriculture, and nutrition. Through the Nutrition Institute established within its structure, GIFT focuses on food and nutrition literacy, information verification, and malnutrition-related issues.

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Participants







## **Nutrition Meeting Summary**

In this session, we hosted the Food Fortification Initiative (FFI) and Bayfar Medical. The event began with a presentation by Prof. Dr. Gülden Pekcan, Head of the Department of Nutrition and Dietetics at Lokman Hekim University, who provided an overview of the current state of malnutrition and obesity in Türkiye and discussed past food fortification practices. Following this, Psk. Selma Çalık, Ankara Representative of the Turkish Spina Bifida Association, introduced the organization and its activities, emphasizing the link between inadequate folic acid intake before and during pregnancy and spina bifida

In the second session, Scott Montgomery, Director of FFI, and Jessie Genoway, FFI's Communications Director, elaborated on "The Importance of Food Fortification in Preventing Micronutrient Deficiencies." In addition to food fortification, Prof. Dr. Nuray Yazıhan from Ankara University Faculty of Medicine explained the role of dietary supplements in preventing micronutrient deficiencies. Bayfar Medical representatives also provided insights into the increased efficacy of dietary supplements supported by technological infrastructure and scientific knowledge.

We extend our sincere thanks to the esteemed representatives from the Ministry of Agriculture and Forestry and the Ministry of Health, as well as the academics and sectoral associations who joined us to evaluate efforts on micronutrient deficiencies and contribute to policy development through scientific support.





FFI is a nonprofit organization based in Atlanta, USA that advocates for effective cereal grain fortification to help people attain the nutrition they need to be smarter, stronger, and healthier. For over 20 years, FFI has supported countries in planning, implementing, and monitoring the fortification of industrially milled wheat flour, maize flour, and rice. As the only global organization exclusively focused on these widely consumed cereals, FFI promotes evidence-based decision-making to drive large-scale change. In collaboration with stakeholders in Türkiye—including the Turkish Spina Bifida Association, UNICEF, the World Food Programme, the Global Alliance for the Prevention of Spina Bifida, the Nutrition Institute, and others—FFI advocates for mandatory fortification of stable foods like wheat flour

## What Did We Discuss?

Prof. Dr. Gülden Pekcan began by defining malnutrition and emphasized that if micronutrient deficiencies are not addressed, they may lead to reduced quality of life, increased hospital stays and costs, and higher rates of disease and mortality (especially maternal and infant). She detailed the health consequences associated with deficiencies in each critical vitamin and mineral, and referred to official guidelines developed by ministries to highlight recommended intake levels. She proposed strategies for preventing micronutrient deficiencies, including improving overall nutrition, food fortification, biofortification, dietary supplementation, and enhancement of basic health services. She underlined the importance of collaboration among public and private institutions, the food sector, universities, international organizations, and NGOs, in addressing the issue (TEAM: Together + Everybody + Achieves + More).



In her presentation titled "Empowerment Changes Lives," Selma Calık, Ankara Representative of the Turkish Spina Bifida Association, provided information about the organization, which has been active since 1997. She emphasized the need for more comprehensive identification of neural tube defects such as spina bifida in Türkiye and explained the critical role of folic acid fortification of wheat flour in preventing such defects. She stated that in countries where food fortification is mandatory, the prevalence of neural tube defects may decrease by 31-78%.





Communications Director Jessie Genoway explained that fortifying grains with micronutrients vitamins and minerals—can help ensure that all individuals have access to nutritious diets, thereby strengthening national food systems and supporting national goals. She highlighted that with a cost of just TRY 9 per person annually, food fortification offers a tremendous opportunity to prevent neural tube defects, reduce anemia. and improve the livelihoods of vulnerable populations in Türkiye. She added that mandatory fortification of wheat flour could potentially reach more than 80 million people and prevent an estimated 3,500 neural tube defects and 1.6 million anemia cases among women of reproductive age. She emphasized that food fortification goes beyond health improvement—it enhances economic productivity, reduces healthcare costs, and strengthens food security, particularly during challenging economic times such as inflation. Fortification, which is practiced in more than 90 countries worldwide, contributes to the goal of ensuring a healthy, safe, accessible, and locally produced nutrition system for all.

Food is fortified when essential vitamins and minerals are added as the food is milled or processed. In Türkiye, where iron, vitamin B12, folic acid (particularly in children, pregnant women, women of reproductive age, and the elderly), vitamin D (in the general population), and vitamin A and zinc (especially in children) are common, fortification could be a critical public health intervention.

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## **Did You Know?**

- 1. Food fortification does not alter the taste, appearance, or smell of the food.
- 2. Food fortification is a reliable, effective, and safe method to strengthen nutrition recommended by the World Health Organization.
- 3. With just TRY 9 per person per year, we can prevent micronutrient deficiencies by fortifying wheat flour—the most consumed food item per capita (345g/day).
- 4. When considering folic acid fortification, for example, there is no evidence of adverse consequences resulting from existing mandatory fortification programs that have been implemented in approximately 70 countries worldwide.



During the Food and Nutrition Meetings, we also highlighted that, in addition to food fortification, dietary supplements are an important tool in addressing individual micronutrient deficiencies. In this context, Prof. Dr. Nuray Yazıhan, a faculty member in the Department of Internal Medicine, Division of Pathophysiology, at Ankara University Faculty of Medicine, gave a presentation titled "Nutrition and Supplements for a Healthy Life." She emphasized the importance of digestion and bioavailability—how nutrients are absorbed into the bloodstream and become bioactive in target tissues. She explained that the composition and structure of foods, their combination with other nutrients, and their processing methods significantly affect their absorption and use by the body. Given the high prevalence of bone and joint disorders, anemia, and zinc and magnesium deficiencies in Türkiye, the use of safe, effective, and reliable supplements is essential.

In the final presentation of the day, we heard from Bayfar Medical, who provided an overview of trends in consumer health products globally and in Türkiye. They showcased their portfolio, which includes high-quality empty hard gelatin capsules, plant-based capsules, semi-finished Licaps® liquid-filled capsules, capsule-filling machines, and scientifically validated raw materials with proven efficacy.

The speakers collectively emphasized the importance of regular monitoring of national data, evidence-based policymaking, and the critical role of food fortification and dietary supplements in preventive and protective health practices. They concluded by stressing the need to align future screening tests and content development accordingly.









