

Opinion

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Is Global Food System Causing Obesity and Diabetes?



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Opinion

Obesity and diabetes are global human health epidemics. Every year millions more are added to suffer: creating enormous personal and social burdens; loss of life quality, work productivity, and increase health care expenses. Although genetic and lifestyle factors are causes, calorie centered global food system may be a major contributor to this situation.

The traditional food systems, existed over hundreds of years, provided foods to communities within their local and geographical boundaries. Cereals, oil crops, pulses, animal products, vegetables, fruits and spices were major part, often consumed with minimal processing, and eaten as whole fresh foods. From today's nutritional standards, those foods may not be well balanced with all essential macro- and micronutrients; certainly, they were not enriched with one nutrient at the expense of all others.

Last several decades the global population grew rapidly, and a large percentage of populations migrated to urban areas. This presented new food production, distribution, and storage challenges that has not seen in the recent history. The cereal and oil crops responded to these challenges by having high yield varieties, storage, and distribution advantages. However, the same agricultural advantages were not available for other crops; therefore, pulses, vegetables, and fruits productions decreased, and more and more of those traditional lands were used to produce cereals and oils. The economic environment, food processing and packaging operations, and "nutritional" marketing efforts made abundance of caloric foods with no other nutrients.

Food production, like other economic activity, influenced by cost-benefit operations. International and local commodity prices, cost of inputs, and profits determines the land use. Although plant proteins, minerals, and vitamins provides nutritional and health benefits, these values were not part of

economic incentives to produce nutrients rich foods. This failure to capture nutritional value on human health may be a probable cause to continue with calorie rich food productions.

Food must be edible for human consumption. For example, wheat, rice, and pulses needs de-hulling to remove hard seed coats. However, further processing of those agricultural products beyond de-hulling- although justified as economically profitable operations-reduces nutritional value. To name a couple, wheat and rice extreme processing to get whiter starch fractions losses fiber, mineral, and vitamin nutrients. Starch isolation from pulses losses nutritionally valuable plant proteins and micronutrients. The health damages of highly processed foods consumption are not limited to obesity and diabetes but range of other non-communicable diseases including cancer.

Food industry's goal is to make tastier foods and reduce ingredient costs. Sugar and salt are inexpensive ingredients for sweet and salt flavors. Most whole or minimally processed foods have their natural flavors requiring less or no added sugar or salt. However, to create sweeter taste profiles, highly processed foods require sugar and salt ingredients. Added sugars and salt also extend shelf lives by reducing water activity or available water for bacterial and yeast growths. Continue to push for sweeter, and long shelf lives will result in more added sugars and salts in foods worsening the existing obesity, diabetes, and other health issues worse.

Presently, most countries efficiently produce calorie rich and tastier foods at affordable prices for majority of their populations. Often, they are packaged with "healthier" marketing appeals. Continue to push highly processed-calorie dense foods devoid of other essential nutrients will result in greater health burdens of malnutrition. The economic realities of majority, profits for land use and food operations, and misleading marketing claims, and food packaging tactics will continue until concerted efforts are taken to develop healthier food system.



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