Bovine milk vs plant-based beverages: nutrient composition and fortification

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Milk has been considered a completely natural food with an excellent nutrient profile without any anti-nutrients. Various health issues like lactose intolerance, cow milk protein allergy and high cholesterol/fat are some of the possible reasons for the increased consumption of plant-based milk analogues. Several new plant-based beverages are being marketed as milk alternatives. In this study, we compare the nutritional contents of plant-based beverages (PBBs) and bovine milk to determine whether the nutritious content of the fortified PBBs is comparable to bovine milk. The detailed nutritional breakdown and associated adverse effects of consuming these plant-based beverages have been covered in detail, which might aid customers in making an educated choice. Ultimately, the awareness of consumers will decide the priority of food they want to consume.

Keywords: Bovine milk, fortification, nutrients, plant-based beverages.

Definition of milk

'Milk is the natural secretion from the mammary glands of milking animals, acquired from one or more milkings without addition or extraction, and is meant for consumption as liquid milk or further processing[2].' It is universally recognized as a non-replaceable complete food that contains high biological-value proteins, fats, carbohydrates, minerals and vitamins crucial to human health[3].

In a regulatory notification released by FSSAI[4], 'plant milk' was classified as an analogous product, which is an imitation product developed to resemble animal milk or its by-products. The draft notice also forbids the use of 'dairy' names that are spelt similarly to or sound like other 'dairy' terms in the nomenclature of non-dairy products. In general terms, plant milk substitutes are water extracts made by breaking down plants like cereals, pseudo-cereals, legumes, oilseeds, nuts, etc. Homogenization of these fluids