

IMPORTANCE OF GLUTEN-FREE FOODS IN DEVELOPED AND DEVELOPING ECONOMIES

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ABSTRACT

Celiac disease is caused by a reaction to Gliadin - a gluten protein found in wheat, barley, rye, and sometimes oats. This chronic digestive disorder leads to the malabsorption of minerals and nutrients. In USA expected population of celiac disease patients is 1,174,621 and estimate of undiagnosed cases is 1,079,615. The celiac disease diagnosis rate may reach 50-60% by 2019. Gluten-free sales reached more than \$2.6 billion by the end of 2010 and are now expected to exceed more than \$5 billion by 2015. The markets of America and Europe are flooded with different types of gluten-free products, but a huge opportunity lies in markets of developing countries like India, China and Asia-pacific. To encase such opportunities, concrete studies on value-chain analysis and consumer behavior a required

KEYWORDS: Celiac Disease, Gluten-Free, Gluten in, Gliadin

INTRODUCTION

Importance of Gluten-Free Foods

Wheat flour contains Gluten in and Gliadin, and these two proteins combine with water to form gluten. Gluten acts like elastic, allowing the dough to stretch and trap air bubbles. This enables wheaten bread to rise higher than bread made from flours milled from grains with little or no gluten, such as barley, rye, corn, oats and millet. This means more bread can be made from the same quantity of grain, and in commercial terms this means potentially more revenue from the same outlay. This is partly why wheat is the preferred grain of commercial bakers (Vinnng, 2006).

Celiac disease is caused by a reaction to Gliadin - a gluten protein found in wheat, barley, rye, and sometimes oats. This chronic digestive disorder leads to the malabsorption of minerals and nutrients. Gluten allergy is a part of celiac disease; it is an autoimmune disorder that can occur in genetically predisposed people, where the ingestion of gluten leads to damage in the small intestine. It is estimated that 1 in 100 people worldwide are severely affected and 6 people have sensitivity or intolerance (Celiac Disease Foundation, 2014). Common symptoms are diarrhoea, bloating, gas, stomach cramping, constipation, joint pain, itchy skin, lesions etc. leading to long term effects like anemia, infertility/multiple miscarriage, lactose intolerance, depression and osteoporosis (Coeliac UK, 2014).

Two and a half million Americans are undiagnosed and are at risk for long-term health complications and its patients are also increasing in Europe, Middle East and India. The largest manufacturers of gluten-free products are North America, Europe and Asia-Pacific. Over a four-year period (2010-2014), people with undiagnosed celiac disease cost an average of \$3,964 more than healthy individuals (Long et al, 2010). Most effective treatment for the patients of gluten allergy is a gluten-free diet. The celiac disease diagnosis rate may reach 50-60% by 2019 (Beyond Celiac, 2009). Gluten-free sales reached more than \$2.6 billion by the end of 2010 and are now expected to exceed more than \$5 billion

by 2015(Packaged Facts, 2011).

In USA expected population of celiac disease patients is 1,174,621 and estimate of undiagnosed cases is 1,079,615 (rightdiagnosis.com stat 2015). In terms of volume, the USA gluten-free products market accounted for a share of 193.58 kilotons worth 1,972.34 Million USD in 2015, and is projected to witness a demand for 292.64 kilotons worth 3,180.71 Million USD by 2020 with the highest CAGR of 10.2% from 2015 to 2020 (Markets and Markets, 2015).

The markets of America and Europe are flooded with different types of gluten-free products, but a huge opportunity lies in markets of developing countries like India where potential patients are about 4,260,282 and has many undiagnosed cases of about 3,915,700 (rightdiagnosis.com stat 2015). Gluten-free products in India are mostly prepared at local level and have high chances of gluten contamination or is either being imported, making it difficult for consumers to afford. In terms of volume, the India gluten-free products market accounted for a share of 6.82 kilotons worth 72.75 Million USD in 2015, and is projected to witness a demand for 11.34 kilotons worth 121.39 Million USD by 2020 with the highest CAGR of 10.8% from 2015 to 2020 (Markets and Markets, 2015).

Although many products and their variants are available in metros and big cities like Delhi, Jaipur, and Chandigarh etc. but in other medium to small cities the availability of gluten-free products is rare, in spite of good number of patients (Markets and Markets, 2014).

In India demand for various sections is as follows: bakery products 79.36 kilotons, pizzas & pastas 22.04 kilotons, cereals & snacks 52.10 kilotons, savorys 18.47 kilotons and others 21.61 kilotons, making a total of 193.58 kilotons (Markets and Markets, 2015). Companies like Boulder Brands, Dr. Schär, and Genius Foods are already established in developed countries but their presence in India is quite rare. Companies like Dr. Gluten, Nestle, ITC, Hershey's, Cadbury etc. having good brand image in Indian markets and have a chance to enter in this market segment. In India the demand for gluten-free biscuits, cookies, deserts and wines is increasing due to increased urbanization and fast growing middle class (Yahoo finance, 2015).

Challenge also lies in developing effecting value chain in countries like China and India which has scattered population, diversity in food preferences, highly price sensitive, high export duties, lack of manufacturing plants and food standards. Due to increase in number of patients, awareness about gluten-free products and improved doctor's recommendation and product availability, although the market is establishing itself but still needs a concrete analysis on value chain to serve the population better (Sharma 2015).

One of the major issues gluten-free foods are sky touching prices as compared to regular products. They are almost 200 times expensive than regular foods (Mintel Global New Products Database 2014).

Dr. Makharia's research (2014) found that currently available gluten-free food in Asia-Pacific region have low nutritional level as they are being locally prepared and provides an opportunity for global brands to enter in this markets due to increased number of celiac patients, awareness about availability of international brands and improved incomes. America has wide range of products available from low nutritive to high nutritive value. But mostly people prefer cheap gluten-free products with low nutritive value.

CONCLUSIONS

Thus there is immense need of studies of value chain in both developed and developing nations will provide an

opportunity to leading brands to come up with affordable options with high nutritive value to achieve economies of scale and to satisfy the masses with their quality products. There is scope for product innovation and market expansion for gluten-free products so meet out the demand of existing and newly diagnosed celiac disease patients.

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