



## DIETARY INCLUSION OF PALM OIL IN BANGLADESHI DIETENSURES BETTER NUTRITION WITH MINIMAL COST: AN OVERVIEW

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### ABSTRACT

*The paper outlines the situation, consumption and importation of fats and oils in Bangladesh considering its latest trend of marketing with palm oil covered by health and economic issue. Recommended dietary intake of fats and oils are missing from Bangladeshi diet having poor knowledge regarding its importance and low purchasing ability. In this regards, Palm oil being the cheapest commodity vegetable oil and also the cheapest oil to produce and refine, can be an important component of the increasing intake of oils and fats in the developing world like Bangladesh. Compared with other imported edible oils, Palm oil having better nutrition value and low cholesterol as well as price and import cost has gained much attention by Bangladeshi government in recent years. The active presence of different suppliers of palm oil, direct interactions between suppliers and local importers and refiners can uplift the present situation of oils and fats consumption aiming popularity for palm oil in Bangladesh.*

**Keywords:** Palm oil, Beta-carotene, Cholesterol, Health issue, Low price, Better nutrition.

### 1. INTRODUCTION

Fat and oil play a significant role in diet. Fats protect and insulate nerves, help keep the heart beating in a normal rhythm, keep the lungs from collapsing and cushion internal organs. Fats also make possible the absorption of vitamins A, D, E and K. It is recommended that adults should consume at least 15 percent of their energy intake from dietary fats and oils, where it seems difficult meeting up the demand for oils and fats from Bangladeshi diet because of poverty and having poor knowledge regarding its importance in diet. In this regards, Palm oil being the cheapest commodity vegetable oil and the cheapest oil to produce and to refine, can be an important component of the increasing intake of oils and fats in the developing world like Bangladesh.

#### 1.1. Oil and Fat Situation in Bangladesh

Bangladesh is deficit in edible oils and fat production as the country is able to produce only about 10% of its requirements and has to import the remaining. In Bangladesh, three major edible oils namely, palm oil; soyabean oil and rape/mustard oil are consumed. Except for red palm oil,

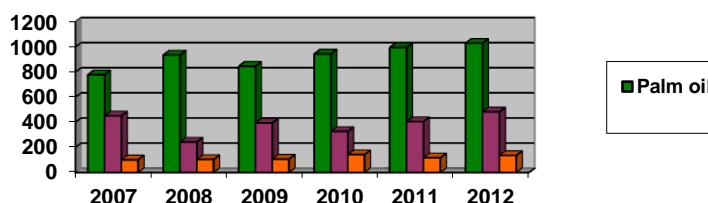
they have the disadvantage of containing no vitamins except vitamin E. Palm oil and soyabean oil are imported in crude form and after refining locally, the refined products are marketed, while rape/mustard is imported in seed form, crushed locally and the virgin oil obtained is marketed thereafter. Crude palm oil (CPO) and crude palm olein(CPO) are refined locally and marketed, while the refined palm oil and palm olein imported are used by vanaspati manufacturers and food processing industries.

### 1.2. Oil and Fat Consumption in Bangladesh

According to oil world, Bangladesh has been one of the fastest growing oils and fat market in recent years, driven by population and economic growth. The consumption of oils and fats in 2012-13 is likely to stand at 1.8 million MT, or a 71% growth over the last 10 years, (<http://www.americanpalmoil.com/publications/Fortune/2013/Fortune-Vol-1-January-2013.pdf>) and with the per capita consumption approaching 12 kg. About 80% of oils and fats consumed in the country annually are sold in loose form. Palm oil dominates the loose selling market while soybean oil dominates in the consumer pack market. Palm oil is an excellent choice for food manufacturers because of its nutritional benefits and versatility. Palm oil is used as cooking oil and also as one of the important raw materials for shortening and food industries. Biscuit and bakery industries prefer to use palm oil, whether in liquid or solid form. At present vanaspati is only produced from palm oil. The other food industries such as the manufacturing of potato chips, fried foods, instant noodles, condensed milk and chocolates prefer to use palm oil. Besides these industries, hotels, restaurants, fast food outlets also consume a considerable quantity of palm oil.

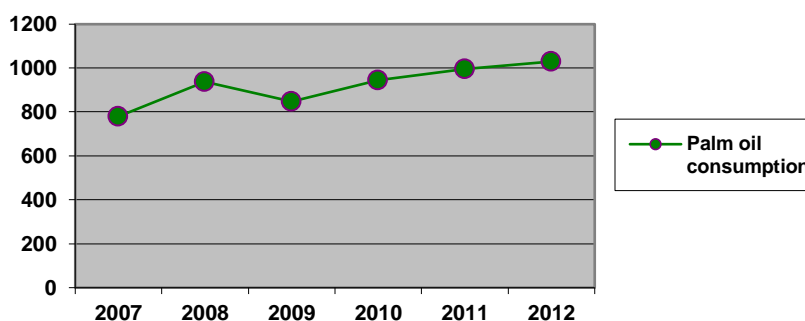
**Table-1.** Consumption of the three major edible oils by year

Year	Palm oil (Qty)	Soybean oil(Qty)	Mustard Oil(Qty)
2007	779	452	102
2008	936	243	105
2009	847	396	108
2010	945	328	143
2011	996	406	118
2012	1030	484	137



**Table-2.** Consumption of palm oil by year('000 MT)

Year	Palm oil (Qty)
2007	779
2008	936
2009	847
2010	945
2011	996
2012	1030



### 1.3. Import of Oil and Fats

Increasing trend in the import of oils and fats is continuing in Bangladesh. During Jan-Aug 2012, the import of total oils and fats increased by 35.29% compared to the corresponding period of 2011. (<http://mpoc.org.bd/?p=1002>) Increase in demand of major 3 edible oils i.e. palm, soyabean and canola/mustard oil led to the higher import of these oils during the period, which contributed to such increase in the total import of oils and fats in the country. Despite substantial rise in the price of edible oils in the international market in 2008, import volume of palm oil in Bangladesh increased substantially due to its competitive price compared to soyabean oil. The import of Crude palm oil(CPO & CPL )during the period was 305,517 tonnes, which declined by about 33.09% while the import of *Refined Bleached Deodorised Palm Oil* RBD PO/PL was 464,211 tonnes, which increased remarkably by about 245.97% compared to the corresponding period of 2011.

**Table-3.** Import of 3 major edible oils ('000MT)

Year	Palm oil	Soybean oil	Canola/mustard oil
2007	581,183	508,441	72,891
2008	815,955	217,278	26,840
2009	1,023,128	396,853	43,918
2010	930,147	435,484	57,381
2011	949,075	422,301	59,711
2012	1,027,194	491,877	64,777

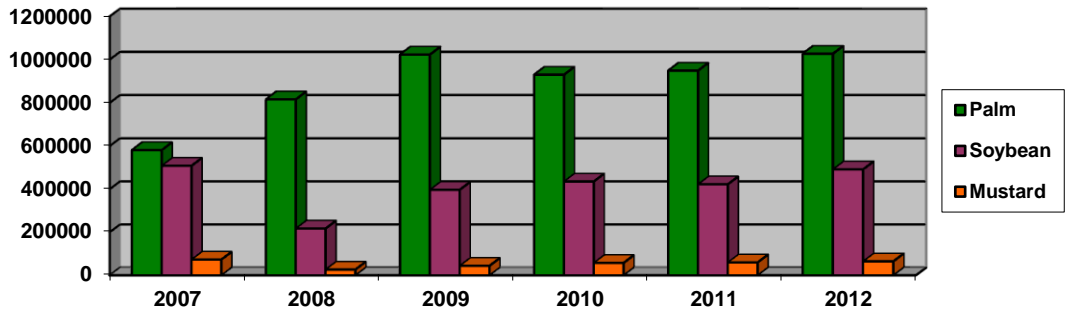
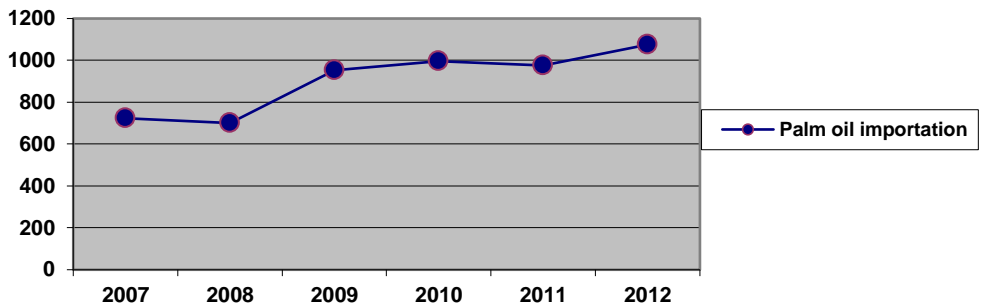


Table-4.Import of palm oil by year ('000MT)

Market Year	Imports	Unit of Measure	Growth Rate
2007	724	(1000 MT)	-19.38%
2008	700	(1000 MT)	-3.31%
2009	951	(1000 MT)	35.86%
2010	996	(1000 MT)	4.73%
2011	975	(1000 MT)	-2.11%
2012	1075	(1000 MT)	10.26%



Source: United States Department of Agriculture

(<http://www.indexmundi.com/agriculture/?country=bd&commodity=palm-oil&graph=imports>)

#### 1.4. Import of Malaysian Palm Oil

Among the world palm oil exporting countries, Malaysia maintained dominance of the palm oil trade by holding 46% of the market share. Malaysia contributed 24% of the global trade by exporting 13.7 million tonnes of palm oil. (Fakhrul Alam, 2008) About half of the world palm oil production (10.8 million tonnes) was accounted for by Malaysia. Besides Malaysia, other palm oil producing countries also recorded favorable growth in production during this period. Import of Malaysian palm oil by Bangladesh greatly improved in 2012, climbing to 269,661 MT or a 93% increase over the 2011 figure.

### 1.5. Palm Oil and Health Issue

The potential role of red palm oil (a natural antioxidant product) played to improve oxidative status by reducing oxidative stress in patients with cardiovascular disease, cancer and other chronic diseases has been proved by studies. (Oguntibeju, 2009) The palm oil is rich in natural chemical compounds important for health and nutrition. Among others, it is a natural source of Carotenoids & Vitamin E as well as supplying fatty acids and other important fat-soluble micronutrients. It also supplies an abundance of calories that gives us much-needed energy for our daily life. Vitamin A deficiency will not be a problem in areas where all members of the family consume even small quantities of red palm oil. (Rice and Burns, 2010) Hence red palm oil, a rich source of bioavailable vitamin A, could be used as a diet-based approach for improving vitamin A status in pregnancy. (Radhika, 2003) Red palm oil doesn't need to be fortified with vitamin A where contains large quantities of carotene, the precursor of vitamin A, commonly 12 000 µg per 100 g (with a range from 600 to 60 000 µg per 100 g). Palm oil is highest natural source of health promoting tocotrienols, preliminary research suggests that the form of vitamin E packed into the oil-palm fruit, tocotrienol, could help fight cancer and prevent strokes. The benefits of palm oil to health include reduction in risk of arterial thrombosis and atherosclerosis, inhibition of endogenous cholesterol biosynthesis, platelet aggregation, and reduction in blood pressure. (Edem, 2002) Palm oil possesses excellent cooking properties. It is more heat stable than other vegetable oils and imparts in foods and baked goods superior taste, texture, and quality. Red palm oil in the maternal diet increases provitamin A carotenoids in breastmilk and serum of the mother-infant dyad. (Canfield, 2001) As a natural vegetable oil, it contains no trans fatty acids or cholesterol. palm oil consumption reduces blood cholesterol in comparison with the traditional sources of saturated fats such as coconut oil, dairy and animal fats. (Chong and Ng, 1991) It improves blood circulation and blood sugar control, protects against heart disease and cancer, boosts immunity, nutrient absorption and vitamin and mineral status, aids in the prevention and treatment of malnutrition, supports healthy lung and liver function, helps strengthen bones and teeth, supports eye health, helps protect against mental deterioration, including Alzheimer's disease.

### 1.6. Prospects for Palm Oil

Palm oil is an excellent choice for food manufacturers because of its nutritional benefits and versatility. It is the highest imported and consumed edible oil in the country. Palm oil now commands about 70% of the market share among the three major edible oil consumed locally. The competitive price of palm oil has made it preferred edible oils in rural areas, where 80% of country people live. Population and economic growth are leading factors for the increasing palm oil consumption. With the increase in the price of agricultural commodities, the purchasing power of the rural people is increasing. Simultaneously their food habits also change towards foods requiring edible oil in their preparation. This too contributes to the increase in per capita consumption of oils and fats in rural areas. Due to urbanization and rapid involvement in industries and business organizations, food habits of middle income group in the urban areas has

been switched to ready to eat, processed meal and for which the food processing industries are expanding. All such food industries consume palm oil or palm based vanaspati shortenings as a major ingredient. These factors are contributing, and will continue to contribute, to higher consumption and import of palm oil into Bangladesh.

## 2. CONCLUSION

In pace with the growth in population and economic development, the consumption and import of fats and oils in Bangladesh are on a rising trend. Among three major edible oils consumed in the country, palm oil is the leading edible oil. It can play significant role in improving the consumption status of oils among general mass possessing comparatively low cost to purchase and refine. Being the world healthiest choice of vegetable oil, it is currently being used by doctors and government agencies to treat specific illnesses and improve nutritional status. Different agencies have launched projects based on Vitamin A fortification in edible oil to combat the deficiency, where red palm oil needs no fortification containing beta-carotene to meet up the demand for Vitamin A in diet. The active presence of different suppliers of palm oil, direct interactions between suppliers and local importers and refiners can uplift the present situation of oils and fats consumption in Bangladesh.

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