

Changing Dynamics of Indian Edible Oil Industry

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Abstract

Till 1990's the dominant edible oil produced and consumed in India were rapeseed-mustard and groundnut. The technological, economic and policy changes thereafter induced dynamics in consumer demand for food, including edible oils. The possible reason for these shifts are increased urbanization (changing lifestyles), increased awareness, availability of oils in packet form in varied quantities even in remote rural areas, change in relative prices of oils, and increased income levels of households. The results revealed that presently, the dominant edible oil consumed in India is palm oil 50 per cent of the total consumption followed by the soybean and sunflower oil. Rice Bran Oil market in India is still at its nascent stage. In last five years there has been an increase of 20-30 per cent in RBO consumption. The groundnut oil and the mustard/rapeseed oil which was traditionally consumed by households, has been replaced by soybean oil, implying the need for appropriate changes in the production.

Keywords: dynamics, consumption pattern, edible oils

Classification-JEL : L66, Q13, Q16

1. INTRODUCTION

In the agricultural economy of India, oil seeds are important next to food grains in terms of acreage, production and value. Area under oil seeds in India remains 28.2 million hectares while production of the major oil seeds remains just 36.2 million tones only (Oil world, 2017). The Indian edible oil market is the world fourth-largest after the USA, China and Brazil. The diverse agro-ecological conditions in the country are favorable for growing seven annual edible oil seeds, which includes, viz., groundnut, rapeseed-mustard, soybean, sunflower, sesame, safflower and niger oil seeds sector have an annual turnover of about 80000 crores which subjugate a vital position in the agrarian economy of the country. India accounts 9.3 per

cent of world oil seed production of 8.2 million MT. It is second largest producer of groundnut after China and third largest producer of Rapeseed after China and Canada. Among these soybean (39 per cent), groundnut (24 per cent) and rapeseed-mustard (24 per cent) contribute more than 87 per cent of total oil seeds production in the country. However, in terms of vegetable oil production mustard, soybean and groundnut contribute more than 31 per cent, 26 per cent and 25 per cent respectively (NMOOP). Despite favorable climatic conditions and highest area under oil seeds (28.2 Mn. Ha.) India is the second largest consumer after china, meeting more than half of its requirements of edible oil through imports. In India, the demand for oil seeds and vegetable oil is increasing due

to increase in population, increased standard of living and rapid urbanization (Sudhakara babu and Hegde, 2011). India's per capita edible oil consumption is currently estimated at 17.18 kg. Although this represents an increase, Indian vegetable oil consumption remains well under the world average of 24.86 kg. (Oil Seeds and Production Annual_New Delhi_India_4-1-2016.pdf)

According to ICRA, India occupies a prominent position in the world oil seeds industry with contribution of 9.3 per cent in worldwide production. But the demand of edible oils (extracted from oil seeds in addition to palm oil) is significantly higher than the domestic production, leading to dependence on imports (60 per cent of requirement). In FY2016 India's total edible oil demand stood at 21.8 MnT out of which 7.6 MnT was met from domestic production and 14.2 MnT met from imports. The latter valued at around Rs. 65,000 crore, constituted around 2.5 per cent of India's total import bill.

a) Government transformation : According to Corporate Ratings, ICRA over the last ten years, the oil seeds production in the country has increased to around 34 mn tonnes in FY2017 from 24 mn tonnes in FY2007. Considering the importance of oil seeds, and the high level of imports, various oil seeds development schemes have been funded by the government to encourage cultivation of oil seeds and palm. There has been some progress in increasing the area under cultivation and improving yields, but the growth has been slow. Average yield of various oil seeds crops in India, though improved, is lower than world average and significantly lower than other major oil seeds producing nations." As area under oil seeds has been almost stagnant during the last decade, there is little scope for extension of area given the competing demands. Thus yield rates need to be stepped up significantly in order to increase the production of oil seeds.

The government is currently running

'National Mission on oil seeds and Oil Palm (NMOOP)' to encourage the adoption of newly released varieties and improved agro-techniques in oil seed crops. The mission targets increasing production of oil seeds to 42 mn tonnes by FY2022 from estimated 34 mn tonnes in FY2017. ICRA estimates that this can help lower the proportion of imports in total edible oil consumption in the country to around 55 per cent in FY2022 from around 60 per cent in FY2017, translating into saving of around Rs. 6,500 crore of foreign exchange.

b) Economic transformation : Economic growth is the driving force for the significant change in consumer demand for food including edible oils. As the economy grows and income rises, the household demand for edible oils increases due to change in the food consumption pattern. Household income and prices of edible oils are the major economic factors that determine the demand. In the early 1990s India used to meet more than 90 per cent of its edible oil requirement through domestic production. With progressively declining import duty, India's self-sufficiency declined to 30 per cent, hitting oil seed farmers and crushers.

According to government data, India was the largest importer of soybean oil in 2015-16, accounting for 30 per cent of the global shipments In India, the edible oil consumption is changing in the recent past due to several socioeconomic and policy changes.

c) Technological transformation : Nontraditional edible oils are oils extracted from seeds like the rapeseed (canola oil) soybean (soybean oil), corn, sunflower, safflower, etc. They were practically non-existent in our diets until the early 1900s when new chemical processes allowed them to be extracted. Unlike mustard or butter oil, these vegetable oils can't be extracted just by pressing or separating naturally. They must be chemically removed, deodorized, and altered.

Factors such as increasing health concerns and demand for healthy edible oils

such as olive and canola oil are expected to fuel revenue growth of the global edible oils market. Edible oils manufacturers are adapting new processing technique such as cold pressing to extract edible oils and new edible oils products are introduced in the market, which are healthier and have balanced fatty acid profile, and are preferred by consumers. Increasing disposable income and consumer preferences for healthy edible oils and rising demand for snacks and fried food products are expected to further fuel demand for edible oils such as olive oil, canola oil, and rice bran oil.

2. EDIBLE OIL PRODUCTION (DEMAND AND SUPPLY)

In 1951, India produced a meagre 5 million tonnes of oil seeds. This number went up to 9 million tonnes in 1970 and there has been remarkable progress. Currently, oil seeds share 14 per cent of the area under major crops. At present, India's largest oil seed producing state is Gujarat, thanks to its position as top groundnut producing state of India. Rajasthan is India's top Rapeseed & Mustard producing state, followed by Madhya Pradesh and Haryana. Almost half (48.12 per cent) of Rapeseed and Mustard is produced by only Rajasthan. India's top Soya bean producing state is Madhya Pradesh with a share of 44 per cent in India's total production of this protein rich crop. Among other oil crops, Karnataka is largest producer of Sunflower.

The current demand for vegetable oil in India in 2015-16 was around 235 million tonnes. This demand is met from domestic sources and imports. The domestic sources of vegetable oil are of two types viz. primary and secondary.

- Primary sources include Groundnut, Rapeseed (Mustard), Soybean, Sunflower, Sesame, Niger seeds, Safflower, Castor and Linseed.

- Secondary sources include Coconut, Cottonseed, Rice bran, Solvent Extracted Oils and oils from Tree and forest origin.

Primary sources cover around 60MT of the total demand, while secondary cover 29 MT, thus making domestic supply to meet around 89MT of the total domestic demand. Of this, around 5MT is exported or used in industries. The Net domestic availability of Edible Oils thus remains around 86.37 MT and rest is met through imports. In 2015-16, India imported 148.20 million tonnes of edible oils. Thus, India has an alarming level of import dependency on oil.

TABLE 1
India's Edible Oil Demand And Supply
(million Tonnes)

Year (Nov-Oct)	Production	Import	Consumption
2008-09	6.34	8.18	14.06
2009-10	6.20	8.82	14.83
2010-11	7.25	8.37	15.74
2011-12	6.64	9.98	16.30
2012-13	6.70	10.38	17.32
2013-14	7.11	11.62	18.28
2014-15	6.17	14.42	20.08
2015-16	5.82	14.59	20.81
2016-17 (E)	7.60	15.20	22.00
2017-18 (F)	7.66	15.12	22.75

Source: GGN International; E= estimate; F= forecast;
Figures in million tones

Hence there is a huge demand-supply gap exists and India is number one edible oil importer of the world. The 60-65 per cent import dependency worsens during the unfavorable monsoon years.

The reason is that domestic demand for vegetable oils and fats has been rising rapidly at the rate of 6 per year but domestic output has been increasing at just about 2 per cent per annum. In India, the average yields of most oil seeds are extremely low as compared to those other countries of the world. The cultivation of oil seeds in India is in high risk regions where there are uncertain returns on the investments.

3. CONSUMPTION PATTERN

During 1973-74 largest consumption was of groundnut oil at 58 per cent. This reduced to only 1 per cent in 2016-17. During 1973-74 there was no consumption of palm oil but it increased

from 29 per cent to 50 per cent now. The per capita edible oil consumption in India is also increasing and is currently estimated 17.18 kg for 2016/17; however, it's below the world average per capita consumption of 24.86 kg. Slow growth in domestic edible oil production and strong consumption demand has further widened the supply deficit; filled mostly through imports. The deficit has now widened to 70-percent of which palm and soy oil shares are 65-percent and 25-percent, respectively. Incidentally, palm oil's share in the consumption basket has not really changed in recent years. Soy oil's share has grown along with incremental rises in demand for other domestic oils.

Fortified, blended, branded, and packaged edible oils have gained about two-third share of the total edible oil market (Industry sources). Health and wellness continue to be the key messaging for promoting edible oils. Rising awareness of food safety and hygiene, coupled with changing lifestyles, have also helped marketers promote sales of their brands through innovative campaigns. Fortified refined palmolein, safflower, olive and rice bran oil are finding acceptance as healthy cooking oils. Manufacturers and refiners have brought changes to existing capacity to include traditional oil blends, given the diverse taste and preference of Indian consumers.

a) Regional Preference is Paramount : Coconut, peanut and sunflower oils continue to be widely consumed in south India, peanut and cottonseed oils are more prevalent in Gujarat and Maharashtra, rapeseed oil in northeast, eastern and northwest India, while soybean oil prevails in central India, and rice bran oil is picking up across eastern India. Cottonseed oil is finding acceptability due to its light color, neutral odor and blending characteristics with other oils.

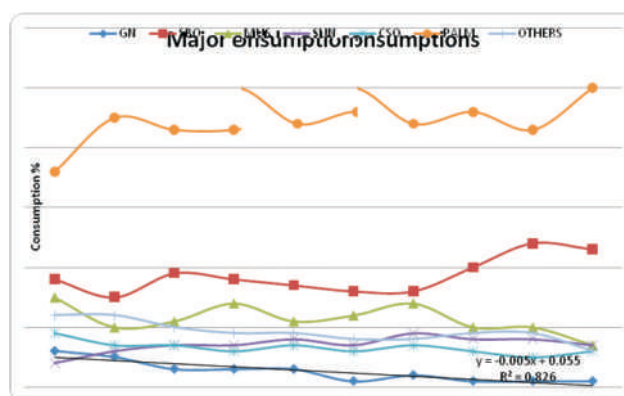
The percentage of refined oils that are directly branded and packaged by the refiners has shown robust growth in last few years. Branded edible oils sold in low-volume, low-

TABLE 2
Edible Oil Consumption in India Qty: '000 T

Particulars	2001-02		2007-08		2016-17	
	Qty	%	Qty	%	Qty	%
palm oil	2944	29.08	4437	35.81	10664	50.00
soy oil	2258	22.3	2170	17.51	4746	22.25
rapeseed oil	1721	17	1814	14.64	1512	7.09
sunflower oil	309	3.05	539	4.35	1541	7.22
cotton oil	443	4.38	1070	8.64	1267	5.94
groundnut oil	1216	12.01	689	5.56	239	1.12
RBO	403	4.25	770	6.21	930	4.36
others	804	7.94	901	5.27	431	2.02
Total	10125	100%	12390	100%	21330	100%

Source : GGN Research

Fig 1 : Major Consumption



Source: GGN International

Others: Sesame, Safflower, RBO, SE Oils, Domestic Palm Oil & Misc. Edible Oils

priced packages to standard size packets and jars are selling well; indicates a growing consumer preference for branded products. Household and institutional buyers (food processors, restaurants (quick-service) and hotels) are the end beneficiaries. Institutional buyers often buy cooking oils in bulk or as vanaspati (partially hydrogenated vegetable oil). These are again repacked and re-sold under different private labels. 99-percent of Indian households use edible oils and therefore they make a potent vehicle for fortification. Since vitamin A and D are fat-soluble vitamins, oils fortified with these nutrients can address micronutrient malnutrition and also provides 25-30 percent of the recommended dietary allowances for vitamins A and D.

4. MAJOR EMERGING OILS CATEGORY

a) Soybean Oil: Market for Soybean oil increased from 17 per cent in FY'2007-08 to 23 per cent in FY' 2016-17. Western part of the country was the largest consumer of soybean oil in the country accounting for 28 per cent consumption, northern part with 19 per cent of total was second largest consumer followed by east (6 per cent) and South (6 per cent). Adani (Fortune) is the leading player in India soybean oil sector with a staggering 14 per cent market share.

b) Sunflower Oil: Sunflower oil market in India has showcased a promising growth in revenues during the past few years. The sunflower oil consumption is between 4 per cent to 7.22 in FY'2007-08 to FY'2016-17. Kaleesuwari (of the Gold Winner brand) was the leading player in sunflower oil in India. Cargill was the second largest player. Ruchi Soya, Adani Wilmar and other players such as Rasoya proteins, Kaneriya Oil industries, local and regional players as well as imported brands also command a substantial proportion in the overall market.

c) Cottonseed Oil: India produces about 1.2 million tonne cottonseed oil every year and nearly 60-65 per cent production of it is done in Gujarat. The state has over 1,000 cottonseed oil mills.

The Solvent Extractors' Association of India (SEAI) has urged the government to raise the import duty on crude and refined cottonseed oil to provide relief to cotton farmers. The customs duty for crude and refined vegetable oils was changed recently but the duty on crude and refined cottonseed oil remains unchanged at 12.5 per cent and 20 per cent respectively.

d) Ground Nut Oil: Market for ground nut oil declined between FY'2016-17 to FY'2007-08. It declined from 5.56 per cent in FY'2007-08 to 1.12 per cent in FY'2016-17. During 1973-74 largest consumption was of Groundnut oil at 58 per cent which reduced to only 1 per cent now. In case of groundnut, despite CAGR of close to

21 per cent in minimum support price in last three years, the production has been falling due to erratic monsoon and higher production cost compared to options of cotton and soya available to growers. The production of groundnut has been falling by average 8 per cent since last five years leading to rise in oil prices.

e) Rice Bran Oil: India is the second-largest producer of Rice bran oil after China and the country has the potential to produce more than 1.4 million tons of rice bran oil. In FY'2016, the market for Rice Bran Oil in India grew at a sizeable growth rate of 14.0 per cent. Adani Wilmar is the leading player in the Rice Bran oil segment. Sathi, Healthy heart, Nature Pure, Ricela, Fortune, Porna, Dhara, Orysa, Riso, Tandul, Priya were some key brands active in the market. According to the SEA, the current production of rice bran oil is around 8 lakh tonnes and some food companies are raising the production capacity to meet the growing demand. Production of rice bran oil (RBO) holds immense potential in India considering the surge in paddy production at 150 million tons over the last 10 years. According to The Solvent Extractors Association (SEA) of India, the rice bran oil production in the country is currently at 9 lakh tons (lt) against the potential of 14.6 lakh tons i.e. 75 per cent of total global production of 1.2 million tons. India is leading producer of RBO followed by Japan, Thailand and China. Out of 9 lakh tons of oil produced in India, only 3 lakh tons is consumed as edible while rest is blended with other oils or used by Vanaspati industry. As per SEA data, India RBO production is tremendously increasing 50 thousands annually. If the demand increases there is much more expectation in production increase of RBO. In last five years there has been an increase of 20-30 per cent in RBO consumption.

f) Palm oil: Consumption of palm oil in India is 50 per cent of the total consumption followed by the soybean and rapeseed oil. During 1973-74 there was no consumption of palm oil but it increased from 35 per cent in FY'2007-08 to 50 per cent in FY'2016-17. Palm

oil, being cheapest of all, is widely used for commercial purpose and by class of people who cannot afford higher priced groundnut, cotton, soybean oils.

5. CONCLUSION

From the present investigation it may be concluded that there is shift in consumption of edible oils from traditional oil to non-traditional oils. The groundnut oil consumption is declining whereas OEO's consumption is increasing. Regarding consumption, the pattern has changed; shift is towards non-traditional oils like rice bran, sunflower and soybean oil etc. edible oils. The preference for newer oils and overall increase in per capita consumption of edible oils will likely to continue in the coming years at a faster pace. Rising income levels and cheap

imports have helped increase per capita consumption. The major reasons for the general increase in consumption of edible oil were discovered as: overall increase in population, change in food habits, increase in per capita income and health consciousness. Hence, augmenting the production of household preferred edible oils are crucial to meet the demand domestically. The horizontal increase (area expansion) is near impossible in India, hence, the productivity improvement through extension of frontier technologies especially in the household preferred edible oil crops like sunflower, rice bran etc., is the need of the hour. Indian Growth story is very much intact and our demand will keep growing.

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