Distribution Characteristics Based on Data Analysis of Edible Vegetable Oil Supermarkets in SY City

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Abstract. Market research on edible vegetable oils of six main supermarkets in SY City and distribution characteristics based on data analysis including brands, types, packages, and prices of edible vegetable oils were studied, in order to understand the market characteristics of edible vegetable oils and judge the market trend of edible vegetable oils. Results show that edible vegetable oil market of six main supermarkets in SY is oriented by soybean oil, colza oil, peanut oil and blend oil, among which peanut oil and blend oil are dominant with equal occupancy of 21.3% and total occupancy of 41.6%. Tea oil, olive oil, flaxseed oil and other small-variety vegetable oils have also occupied certain market shares gradually. A total of 29 brands are investigated and four brands including JLY, LH, FLM and CSH occupy 51.8%. Edible vegetable oils are packaged in sizes 0.25L to 5L and two popular packing specifications are 1.8L and 5L. 1.8L packing specification occupies 59.6%. Vegetable oil prices investigated from RMB10 to RMB30 per litre occupy 78.0%.

Keywords: Vegetable Oil, Supply, Brand, Package

Introduction
With swift growth of China’s economy and constant improvement of people’s living standard, market needs of edible vegetable oils is constantly changing and show multiple trends day by day. Apart from main edible vegetable oils including soybean oil, colza oil and peanut oil, small-variety vegetable oils including sunflower seed oil, corn oil, olive oil, flaxseed oil, rice oil and camellia oil and some featured edible vegetable oils with alleged nutrition and health care such as walnut oil, purple perilla seed oil and peony seed oil have also entered the consumer market gradually [1]. In order to better guide the production and consumption of edible vegetable oils and help consumers in SY City to understand the edible vegetable oil market and future market trend, this study adopts field investigation to carry out a market research on vegetable oils of main supermarkets in SY from May 1, 2019 to October 31, 2019 to analyze the brands, types, packages, prices and other characteristics of

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edible vegetable oil products.

1. Investigation Method
Field investigation is conducted on the sales of six main supermarkets in SY City to record the brands, prices, packing specifications, manufacturers and other information of vegetable oils.

2. Result and Analysis

2.1. Brand of Edible Vegetable Oil
Total number of edible vegetable oil sample investigated from six main supermarkets is 245. 50 samples from BJH Supermarket (Hexi Store), 44 samples from WH1 Supermarket (Yingbin Road Store), 42 samples from WH2 Supermarket (Bus Terminal Store), 42 samples from WH3 Supermarket (4th Jiefang Road Store), and 27 samples from XJL Supermarket (Commodity Street 1st Lane Store) are included. 29 brands are involved in 245 samples and quantity of each brand is shown in Figure 1. JLY, LH, FLM, CSH, XMY and other familiar brands are all included. Quantities of the first four brands hold a safe lead, occupying 51.8%.

![Fig 1. Brands of edible oils](image)

2.2. Packing Specification of Edible Vegetable Oil
Survey result shows that packing specifications of edible vegetable oils are from 0.25L to 5L based on data analysis, able to meet the needs of different groups. As shown in Figure 2, two popular packing specifications are 1.8L and 5L, among which 1.8L packing specification has obvious absolute predominance in the supermarkets investigated, occupying 59.5%, which indicates that with the improvement of income and living standard, the temptation for consumers to buy in large quantities has been relatively reduced and people pay more attention to practicality and convenience; life style of small families has become more common; it can be reflected from edible vegetable oil packages that characteristics of SY as a tourist city has become more and more obvious; more than 40 years have passed since the reform and opening up, but traditional culture still has quite large influence on people. No matter for businesses or consumers, the meaning of "8" is still as deep as ever.
2.3. Type of Edible Vegetable Oil
Types of edible vegetable oils are quite rich. Apart from common peanut oil, colza oil, soybean oil, blend oil and corn oil, there are rice oil, tea oil, flaxseed oil, and blend oil added with 10% olive oil. Peanut oil and blend oil both occupy 21.3% and their total occupancy reaches 41.6% based on data analysis. Peanut oil processing methods have ancient-style pressing and small pressing apart from conventional processes. Peanut oil with high oleic acid has the same quality as olive oil. Appearance of peanut oil with high oleic acid in the market enriches the types of healthy food oils with high quality. Corn oil, colza oil and sunflower seed oil occupy 15.5%, 10.6% and 9.8% respectively. Among six main supermarket mentioned above, one bottled sesame oil with packing specification of 0.4L (see Figure 3) is only found in BJH Supermarket.

2.4. Price of Edible Vegetable Oil
It can be seen from Figure 4 that the prices of edible vegetable oils are mainly between RMB10 per litre and RMB30 per litre and edible vegetable oils in such price range occupy 78.0%. 49.4% of vegetable oil prices are distributed between RMB10 per litre and RMB20 per litre based on data analysis. In the vegetable oil types investigated, four types have their prices between RMB0 per litre and RMB10 per litre and they are all blend oils; the prices of soybean oil, blend oil, sunflower seed oil and corn oil are distributed between RMB20 per litre and RMB30 per litre, and blend oil, sunflower seed oil and corn oil are oriented; the types whose prices are between RMB30 per litre and RMB100 per litre are peanut oil, small-pressed peanut oil, peanut oil with high oleic acid, olive oil, flaxseed oil, and tea oil. The prices are in order from low to high belong to maize germ oil, peanut oil, small-pressed peanut oil, peanut oil with high oleic acid, olive oil, flaxseed oil, and tea oil; packing specification of Four-Seasons-Balance Flaxseed Oil in WH1 Supermarket is 0.25L and the price is RMB59. Equally, price per litre is RMB236. It is the only vegetable oil whose price per litre is higher than RMB200.
3. Discussion

Peanut is a widely cultivated oil crop and protein crop in the world and also a main oil crop and industrial crop in China [2]. Peanut oil has high nutritive value. Oleic acid and linoleic acid inside is good for human health, lowering the blood pressure and reducing the occurrence of cardiovascular disease [3]. Peanut with high oleic acid is even more beneficial to human health, and processed oils and foods have long shelf life and other advantages and get increasingly valued by the industry and welcomed by consumers [4]. It can be seen from the above text that peanut oil has high market occupancy and moderate cost. Market introduction of peanut oil with high oleic acid also improves the market competitiveness of peanut oil. Thus, peanut oil has broad market prospect. Sesame is an important oil crop in China, with its cultivated area ranking 4th in the world and yield ranking 1st. Moreover, Sesame oil has rich nutrition, pure fragrance and high stability [5]. Sesame lignin in sesame oil has very high biological activity in human body and has many functions including elimination of free radicals in the body, reduction of cholesterol in the serum, enhancement of organic immunity, anti-hypertension, anti-thrombus, remission of atherosclerosis [6]. Various health care effects of sesame have been recognized by academia and the public. But in our survey there was not much sesame oil of any kind, which may be related with its cultivated area in China. Cultivated area of sesame is quite extensive in China but mainly concentrate upon NY City, ZhMD City and ZhK City in the central subregion of HN Province, XF City and ZY City in the northwest subregion of HB Province, FY City in the central subregion of AnH Province, and other places [7]. Some featured edible vegetable oils including tea oil, flaxseed oil and olive oil enter the consumer market [1], and the apparent availability of these vegetable oils is relatively small but their prices are relatively high. Packing specifications are mainly no more than 1L. The main feature of these vegetable oils is high unsaturated fatty acid content and these unsaturated fatty acids are essential for human metabolism. Fatty acids that can’t be synthesized by human body shall be supplemented through ingestion. For groups with special absorption and utilization of nutrients such as the aged, children and pregnant women, the development of featured edible vegetable oils has a broad market prospect [8].

4. Conclusion

Six supermarkets investigated basically cover the main urban area of SY. These supermarkets mainly sell soybean oil, colza oil, peanut oil, and blend oil, among which two edible vegetable oils including peanut oil and blend oil are dominant with equal occupancy of 21.3% and total occupancy reaching 41.6% based on data analysis. Small-variety vegetable oils including tea oil, sunflower seed oil, corn oil, olive oil, flaxseed oil, rice oil and flaxseed oil have gradually occupied certain market shares. A total of 29 brands are investigated and four brands including JLY, LH, FLM and CSH have high occupancy. Edible vegetable oils are packaged in sizes 0.25L to 5L and two popular packing specifications are 1.8L and 5L. 1.8L packing specification is the most popular. Vegetable oil prices investigated from RMB10 to RMB30 per litre occupy 78.0%. All these make consumer market of
edible vegetable oils in SY City present multiple trends day by day.

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