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**HABITS OF LUBLIN CITIZENS IN CONSUMPTION AND
PURCHASE OF FRUIT**

ABSTRACT. The paper presents preferences of fruit consumers, based on a survey conducted in May and June 2001 in Lublin. The representative sample of 400 people reflected the age structure of Lublin citizens.

The findings permitted to reveal the reasons for fruit consumption, its importance in nutrition, factors determining the volume of such consumption, most preferred and consumed fruit, frequency of selected varieties in fruit consumption, volume of single purchase, sources and most common places of fruit purchase, fruit qualities essential for consumers and their preferences for varieties of fruit if equally priced.

The willingness to increase fruit consumption voiced by over 81 per cent of those questioned indicates its future rise. The citizens of Lublin particularly wish to consume more grapes, apples, pears, strawberries and sweet cherries.

The increase in fruit consumption will be promoted by a high quality of home-grown fruit, wide selection of fruit and a rise in citizens' incomes as well as the production of fruit safe for consumer health.

Key words: fruit, preference, consumption, purchase

INTRODUCTION. As a result of transformations in Polish economy, a consumer has become the subject of all market activities. Consumer habits in the area of purchase and consumption of fruit influence the activity of trade companies and these, in consequence, put specific demands on fruit producers. Satisfying these demands would increase producers' competitiveness, affect the level of fruit sale and it may influence the profitability of production. On the other hand, the knowledge of consumer preferences and their habits in the consumption and purchase of fruit will allow to adjust its supply to actual demands and to increase fruit consumption. It is vital since the latter in our country reaches 40 to 50 per cent of what is recommended by doctors and dieticians (Laskowski, 2000). In comparison to European Union countries, the consumption of fruit in Poland is twice as low and yearly it amounts to about 53 kilograms per resident (Kubiak et al., 2001).

The aim of the paper is to present the preferences of fruit consumers in Lublin based on a survey.

MATERIAL AND METHODS. The survey was conducted in May and June 2001. The representative sample of 400 consumers reflected the age structure of Lublin citizens. The following age groups were taken into consideration: 20 to 29, 30 to 39, 40 to 49, 50 to 59 and over 60. Other factors determining the division into groups were sex, education, income per family member, biological type of a family as well as the main source of livelihood.

The questions to the consumers included: reasons for fruit consumption, importance of fruit in nutrition, factors determining the volume of fruit consumption, willingness to increase it in future, most preferred and consumed fruit, frequency of consumption of selected fruit varieties, sources and most common places of fruit

purchase, volume of a single purchase, qualities of fruit essential for consumers and their preferences for fruit varieties if equally priced.

RESULTS AND DISCUSSION. The description of the sample of consumers is presented in Table 1.

Table 1. Structure of the sample of consumers according to sex, age, education and income in PLN per family member (indications in per cent)

Specification	Total	Women	Men
Total	100	61.5	38.5
Age:			
20-29	34.0	37.0	23.3
30-39	15.2	13.8	19.0
40-49	20.0	19.9	21.8
50-59	14.3	15.0	14.1
over 60	16.5	14.3	21.8
Education:			
elementary	10.1	9.1	11.4
technical	15.5	16.0	15.0
secondary	38.5	37.0	37.9
university	35.9	37.9	35.7
Monthly income in PLN per family member:			
up to 300	13.1	16.0	9.2
301-500	31.9	31.2	30.3
501-1000	38.9	39.3	38.7
over 1000	16.1	13.5	21.8

Among the consumers 25.4 per cent constituted members of families with two children and 24.4 per cent were single. Over 10 per cent of the respondents represented one of the following family types: married couple without children, family with 1 child or with 3 children. The main source of livelihood for 45 per cent of those questioned was the income from hired labour in the public or private sector, for over 21 per cent it was pension including old age pension and for about 16 per cent it was the income from self-employment.

The consumers indicated many reasons for fruit consumption. Most commonly they stated that fruits are healthy (49 per cent), tasty (35 per cent), they just like eating them (30 per cent) and fruits contain vitamins (22 per cent). The content of vitamins was more important to women and people with low income (up to 300 PLN per family member) as well as families with children. The taste of fruit was less important to those over 60, living on pension including old age pension, contrary to people whose income exceeded 1000 PLN per person, who frequently pointed at fruit taste as one of the reasons for its consumption. Apart from the mentioned features, fruits are consumed as a part of adequate nutrition, they have beneficial effects on our health and also dietetic values, being easily available, relatively cheap, colourful and they can substitute unhealthy sweets.

About 80 per cent of the respondents pointed that fruits are necessary or very important in nutrition. The importance of fruit in the diet was especially highly valued by women, younger people with university education as well as families with children.

Most preferred fruits were apples (24 per cent of indications), strawberries (14 per cent), bananas and pears (8 per cent each), grapes, sweet cherries and plums (7 per cent each). Apples were more frequently chosen by older people, strawberries by women and people with university education while bananas by those with income up to 300 PLN per family member as well as people with technical education. Grapes were not among the favourite fruits of older people and those on the lowest income. Plums were rarely chosen by 20- to 29-year-olds and persons with low income. Sweet cherries were not favourites of the older people and those less educated. However, this variety of fruit was twice as often chosen by persons university graduated than those with technical education.

Among the fruits available all through the year, apples were most often consumed (31 per cent of indications with 74 per cent placing that fruit first), followed by bananas (38 per cent) and oranges (24 per cent). Within the group of seasonal fruits, strawberries had

the leading position while the next two belonged to sweet cherries (28 per cent) and plums (27.4 per cent).

The survey shows that about 52 per cent of Lublin citizens consume apples more often than four times a week, bananas once or twice a week (37 and 21 per cent, respectively), mandarins once a month (49 per cent) or once a week (28 per cent). Strawberries, in the period of fresh fruit supply, are eaten daily by over 40 per cent of consumers and four to five times a week by 23 per cent; sweet cherries are consumed daily by over 24 per cent of the respondents, twice a week by about 19 per cent, whereas plums are consumed once to three times a week by about 54 per cent of those questioned. Women choose apples and strawberries more frequently. Apples are eaten daily by 40 per cent and sweet cherries by 20 per cent of those over 60. The frequency of strawberry consumption increases along with a rise in the income per family member. Apples, strawberries and sweet cherries are chosen more often by families with children as compared to single people.

The respondents indicated taste, nutritional value and price as the most important factors determining the volume of fruit consumption (Fig. 1).

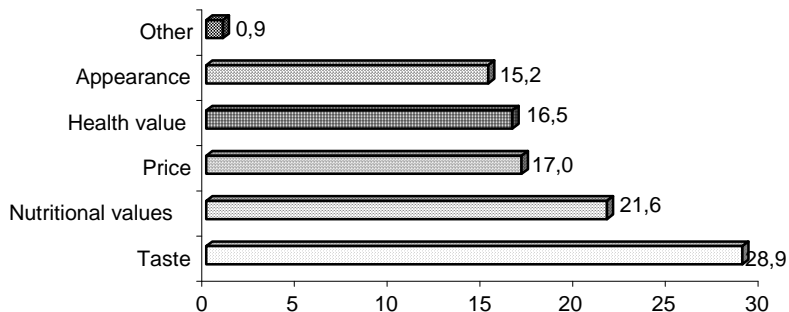


Figure 1. Factors determining the volume of fruit consumption (indications in per cent)

According to the data by the Central Statistical Office (GUS) from 1998, on average, about 22 per cent of consumed fruits and preserves in Poland come from self-supply (Gulbicka and Kwasek, 2000). The survey conducted in Lublin proved a high self-supply of households with currants, cherries, strawberries, raspberries and plums. Purchase, as the main source of supply with apples, was indicated approximately by 69 per cent of consumers, pears – by 70 per cent, plums – over 51 per cent, cherries – over 46 per cent, sweet cherries – 67 per cent, strawberries – 50 per cent, raspberries – 48 per cent and currants – by 39 per cent. The volume of a single purchase varied depending on the variety of fruit. For grapefruits it was up to half a kilo, pears, bananas, oranges, mandarins, cherries and sweet cherries were purchased in amounts from half to one kilo and apples and strawberries – from one to two kilos. The respondents most frequently chose loose fruits considering the possibility to select them and to avoid the risk of buying products with hidden defects. Strawberries and mandarins were most commonly purchased as packed whereas sweet cherries and plums were frequently bought as loose.

Lublin citizens most often are supplied with fruit by the greengrocer (25 per cent), on the market (23 per cent) or in a super-market (14 per cent) (Fig. 2).

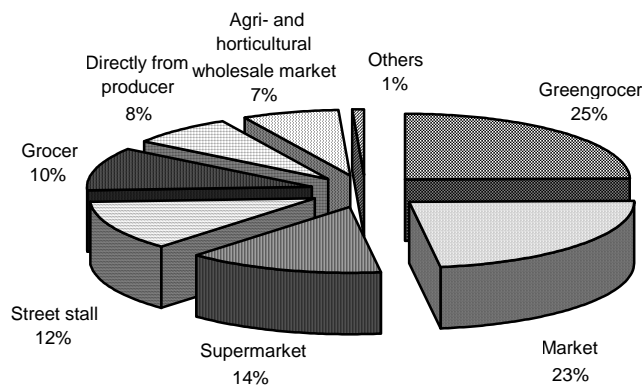


Figure 2. Most common fruit suppliers for Lublin citizens (indications in per cent)

Supermarkets as a source of fruit supply were most frequently chosen by 20- to 29-year-olds. The number of indications decreased along with an increase in consumers' age and it grew along with the rise of their income and level of education. Most common reasons for buying fruit in supermarkets were: wide selection (24 per cent), low prices (23 per cent), short distance from home (20 per cent) and good quality (19 per cent). The consumers were especially concerned with the freshness of fruits (19 per cent), their price (16 per cent), taste (13 per cent), variety (11 per cent) and damages (11 per cent). The survey shows that an increase in fruit consumption will be promoted by its high quality. The fact important to producers and tradesmen is that over 84 per cent of consumers voiced the willingness to pay more for high quality fruits (Tab. 2). Percentage of those people increased along with the rise in the income per family member (from 74 per cent for incomes up to 300 PLN to 94 per cent for over 1000 PLN).

The high quality of fruits should be accompanied by the appearance and practicality of their packages because, although only 2 per cent of the respondents claimed to pay attention to packages, 31 per cent were willing to pay a higher price for properly packed fruits (Tab. 2). Such an opinion was voiced more frequently along with an increase in the income per family member.

Table 2. Declaration of purchase of higher priced fruit in relation to income per family member (indications in per cent)

Specification	Total	Income in PLN per family member			
		up to 300	301-500	501-1000	over 1000
High quality fruit	84.3	73.5	81.1	86.5	93.5
Properly packed fruit	30.7	15.2	27.8	34.5	40.0
Organic fruit (though less attractive)	48.9	53.1	44.1	50.4	49.2

About 57 per cent of those questioned were interested to obtain information about the safety of fruits for consumer health.

About 49 per cent voiced the willingness to pay higher prices for organic fruits (produced without artificial chemicals), despite their less attractive appearance (Tab. 2). Such declarations were more frequently made by women, young people and the respondents with university education. Moreover, 46 per cent of the consumers were interested to obtain information about the country of the fruit origin, period of storage (about 40 per cent) and method of production (36 per cent).

According to the research by the Central Statistical Office (GUS), in 1999 54 per cent of households fully satisfied their needs for fruits and preserves, 38 per cent were partially satisfied while 7 per cent were completely unsatisfied (Gulbicka and Kwasek, 2001). The conclusion is that the demand for fruits is far from being fulfilled, so the future rise in its consumption can be expected. It is confirmed by the results of the survey conducted among the consumers in Lublin, Wrocław and the Małopolska region. The willingness to increase fruit consumption was voiced by over 81 per cent of the questioned citizens of Lublin, women and young people in particular. In other regions of the country the percentage of the respondents who gave such an answer was similar, i.e. 78 per cent in Wrocław and about 87 per cent in Małopolska region (Licznar-Małańczuk et al., 2001; Kurzawiński, 2001).

The increase in fruit consumption will be promoted by a high quality of home-grown fruits, rise in citizens' incomes and changes in dietetic habits. The continuity of supply and a variety of fruits on the market will be of essential importance. The respondents mentioned 32 variations of fruits, the consumption of which they were willing to increase. About 14.6 per cent of those questioned would wish to consume more grapes, 10.5 per cent – apples, 10.4 per cent – pears and 9 per cent – strawberries and sweet cherries. Since the volume of consumption highly depends on the consumers' incomes and fruit prices, an increase in their consumption will be promoted by the introduction of a variety of prices. Assuming equal prices of selected varieties of both home-grown and imported fruits, 55 per cent of the respondents chose the first, among which about 34 per cent were apples and over 21 per cent – pears (Fig. 3).

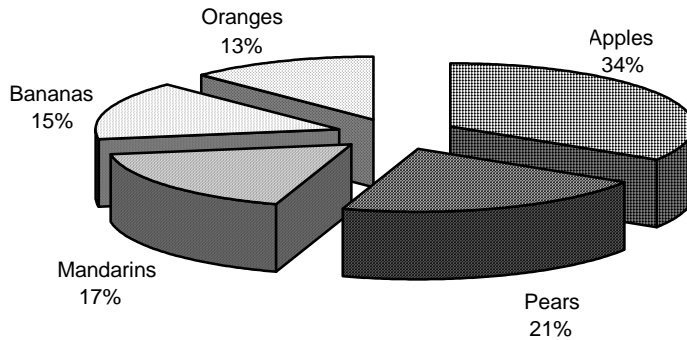


Figure 3. Consumer preferences for fruit species if equally priced (indications in per cent)

CONCLUSIONS

1. Lublin citizens highly value the importance of fruits in the diet, since about 80 per cent of the respondents pointed that fruits are necessary or very important in nutrition and 49 per cent consume them because of health values.
2. Among many varieties, the fruits grown in our country, such as apples, strawberries, pears, sweet cherries, plums and grapes were mostly liked by the consumers. Over 31 per cent of the respondents most often consume apples (in the group of fruits available all through the year) while 33 per cent choose strawberries (seasonal fruits).
3. Of the questioned group, 52 per cent of the respondents consume apples more often than four times a week, and strawberries are chosen, in the period of fresh fruit supply, by 63 per cent. These fruit species are more frequently consumed by women and families with children as well as the older people.
4. Taste, nutritional values and price were, according to the respondents, the most important factors determining the volume of fruit consumption.
5. Lublin citizens most often purchase fruits at the greengrocer's and on the market. This choice depended on (according to the

- number of indications): wide selection of fruits, low prices, short distance from home and good quality.
6. Supermarkets as fruit suppliers were chosen by 14 per cent of the respondents, usually young people (20- to 29-year-old) and the consumers with a higher income per family member.
 7. The volume of a single purchase of most fruits varied from half to one kilo while apples and strawberries were supplied in amounts from one to two kilos. Because of the possibility to select fruits and in order to avoid the risk of buying products with hidden defects, the consumers most frequently purchased loose fruits.
 8. The sellers ought to take into consideration the fact that the consumers pay attention to the freshness of fruits, their price, taste, variety and defects. Over 84 per cent of the respondents voiced the willingness to pay higher prices for high quality fruits.
 9. About 57 per cent of the consumers are interested to obtain information about the safety of fruits for their health, and 49 per cent, especially young people and the respondents with university education, voiced the willingness to pay more for organic fruits, despite their less attractive appearance.
 10. An increase in fruit consumption especially by women and young people, can be expected in future. The survey shows that over 81 per cent of Lublin citizens would increase the consumption of fruits – most frequently mentioned were grapes, apples, pears, strawberries and sweet cherries.

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