

# CONSUMER PERCEPTIONS OF ORGANIC VEGETABLES, IN IASI

## PERCEPTIA CONSUMATORILOR FATA DE LEGUMELE ECOLOGICE, IN IASI

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**Abstract.** *This study presents the results of a survey regarding consumer perceptions of organic vegetable in Iasi. The survey was conducted to determine consumer attitudes towards organic vegetables and the reasons for consumption or non-consumption of organic vegetables. A total of 100 consumers from different occupational groups living in Iasi participated in the research. The results of the survey revealed that more than half of the survey participants had knowledge about organic vegetables. The majority of the participants were positive towards organic vegetable and purchased them as well. The results of crosstabulation analysis showed that the consumption of organic foods varied with respect to income, profesion and education. The results of the survey also indicated that the participants confidence in organic vegetable was at moderate level. About 21% of the participants was found to rely on organic vegetable Organic vegetable were purchased because they were perceived as healthy, environmentally friendly and more nutritious than conventional foods.*

**Key words:** survey, attitude, consumers, organic vegetable

**Rezumat.** *Studiul prezintă rezultatele unui sondaj cu privire la percepția consumatorilor față de legumele ecologice, din Iasi. Sondajul a fost efectuat pentru a determina atitudinile consumatorilor față de astfel de produse, precum și motivele pentru consumul sau non-consumul de legume ecologice. La acest studiu au participat 100 de consumatori din diferite categorii profesionale, care locuiesc în Iași. Rezultatele studiului au scos în evidență că mai mult de jumătate dintre participanții la sondaj au cunoștințe despre produsele ecologice. Majoritatea participanților au păreri pozitive față de legumele produse ecologic. Rezultatele analizelor încrucișate au arătat că consumul de alimente ecologice, variază în funcție de: venit, profesie și educație. Rezultatele sondajului au indicat, de asemenea, că încrederea participanților în consumul de legume ecologice a fost la nivel moderat. Aproximativ 21% dintre participanți au indicat faptul că pot fi găsite în mod constant pe piață legume ecologice. Legumele ecologice sunt achiziționate deoarece sunt percepute ca fiind sănătoase, sunt obținute într-un mediu ecologic și mai hrănitoare decât cele convenționale.*

**Cuvinte cheie:** sondaj, atitudine, consumatori, legume ecologice

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## INTRODUCTION

Attitudes can be defined as a behavioral predisposition known before, a result of inner feelings, showing favorable or unfavorable way about a given topic or service.

In the world, a consumer attitude on pesticide treatment histories of fresh produce has been measured since 1990. In a case study, consumers initially selected the conventionally produce as cabbage and sweetcorn. After being presented with treatment histories, the majority of the consumers chose no input or reduced input treatments. Over 70% of consumers were concerned or very concerned with pesticide residues and were willing to pay over 10% premium for pesticide residue-free produce (Collins et al., 1992).

In response to food scares related to high levels of pesticide residues sometimes found on vegetables and fruits, consumers in Thailand increasingly demand 'safe' foods, in a number of initiatives and labels indicating 'pesticide safe' vegetables. However, the pesticide-residue problem has proved enduring. This opens a market opportunity for organic foods, which are produced entirely without using synthetic chemicals (Roitner-Schobesberger et al., 2010).

In Romania, the first studies on the behavior of respondents to the production of vegetables have been conducted in 2004 (Stan et al., 2005). Recent studies highlighted the fact that both respondents attitude and preference varies with education level of respondents (Stoleru, 2008, Teliban et al., 2009).

Food consumption is associated with various environmental impacts, and consumers' food choices therefore represent important environmental decisions, consumers' beliefs about ecological food consumption and their willingness to adopt such behaviors (Tobler et al. 2011).

Consumers belong to different backgrounds, age, sex, education and occupation and may have different attitudes and perceptions even selection of the store for buying of food items. In case of food products, factors such as demographic variables, quality, price, food security and information of products and labels have been found to play a great role towards purchasing decisions (Pratibha Goyal et al., 2011).

Moreover, the more income households earn, and the more consumers perceive a potential negative impact on health from pesticides usage, the more likely they would be willing to pay a premium for fresh organic produce (Haghiri et al., 2011). In general, consumers were very well informed about organic vegetables practices, though their subjective knowledge was on moderate to rather low level. Subjective knowledge is shown to be an important factor in explaining organic vegetables consumption. It is significantly, relatively strongly and directly associated with organic vegetables consumption. Objective knowledge, in contrast, is only indirectly associated with organic vegetables consumption, through increased subjective knowledge and more favourable general attitudes towards organic vegetables. Attitudes towards organic vegetables have a direct positive and relatively strong relationship with organic vegetables consumption (Pieniak et al., 2010).

## MATERIAL AND METHOD

In any social analysis, it is important that those involved in the analysis based on questionnaire survey to represent a sample that accurately express how social structure, professional and other population.

On the other hand, some analyzes of this type, designed to highlight the socio-professional groups who are interested in the context of the problem analyzed. Therefore, within the context analysis, socio-professional group of respondents is of major importance.

Consumer perception towards organic vegetables was based on their questionnaire, which included the following aspects: socio-professional attitude to vegetables in general and attitudes towards organic vegetables in particular.

**Presentation of analysis questionnaire.** The questionnaire contains a list of questions forms, which were addressed in writing to obtain relative information as our goal. Developing the questionnaire is a difficult problem, especially for market research, because there is no standard formulation of leading to a relevant model. In fact, a questionnaire is considered to be good when providing expected answers, real and usable. Drafting the questionnaire, took into account primarily the investigation. Questions and possible problems when developing their objectives are strictly followed. In this study, we used an own questionnaire, designed by rules of the literature (Oppenheim, 1997, Buiga, 2003, Stoleru, 2008).

Socio-professional are represented by six questions, and refers to: sex, age, number of family members, education level, net income and occupation of respondents. Attitudinal aspects from survey, concerns the consumption of vegetables, as conventional and environmental goals and summarizes 21 questions.

**Interviewing.** First, all persons who participated in the collection of information, have been trained about the subject from survey and how to do the interviewing. To achieve its purpose, 110 people were surveyed from different social and professional categories (persons with 8 years of schooling, vocational school, high school, college and university) from which we obtained 110 questionnaires. The interviewing was carried out on the area of Iasi, in the following locations: domestic markets (Nicolina, Alexandru cel Bun, C.U.G), super-market (Carefour) and other locations with smaller area. Following validation, have only 100 questionnaires remained for analysis because they had complete responses to all questions, responses assigned within acceptable limits "serious answers" etc.

**The pilot phase of the questionnaire (check survey).** Whatever the experience of drawing up the questionnaire, are very rare situations when it is presented in perfect form, that does not require improvements. Therefore, questionnaire testing is needed, that is verifying the understanding, interpretation and acceptability of questions. The pilot phase is the phase where check questionnaire in terms of form and fund, a standard number of respondents. Phase check pilot survey was carried out on 15 persons (the sample being comprised of individuals with different training levels).

**Data processing** - taken place using SPSS 20 (Statistical Package for the Social Sciences) is a comprehensive and flexible statistical analysis. With such a program can process data from the simplest to most complex. For a correct analysis, it is imperative that data be placed on the variables; they are set as accurately and as data is entered correctly. The success of establishing the correctness of input variables and depend on the final results of the questionnaire analysis. Each row of the data editor is a case or an observation of the survey, each respondent is a case survey. In measuring consumer attitudes, it was intended to analyze the frequency response and the correlations

between different variables, depending on the socio-professional group of respondents.

## RESULTS AND DISSCUTION

The data presented in table 1 can be seen that 46% of respondents currently buying vegetables in the free market. This highlights the fact that there is certainty vegetable product quality, structure and some marketing for vegetable products. Of respondents, 31% frequently buy vegetables from supermarkets.

The analyzing respondents age and location of where they buy vegetables can be seen that active people, between 25 and 65 years old, mainly buys vegetables from the domestic market.

Older people (over 65), having more free time, buying vegetables from the free market frequently (80%) and confirmed the correlation between respondents' profession and the market response, the location where they shopping (fig. 1).

Table 1

Respondents age correlation with the location for buying vegetables						
Location of buying vegetables	under 18 years	18-25 years	25-40 years	41- 65 years	over 65 years	Total
Domestic market	3	7	15	16	5	46
Neighborhood store	1	2	6	2	0	11
Other market	0	2	1	2	0	5
Supermarket	1	7	14	8	1	31
Directly from the producer	0	2	3	2	0	7
Total	5	20	39	30	6	100

Regarding the correlation between the profession and their perception of respondents to buy vegetables on the free market, we can see that it is determined mostly by free time had available. Of the respondents, those employed in healthcare, education and agriculture buying vegetables from domestic market lower percentage compared to pensioners, students or those working in services.

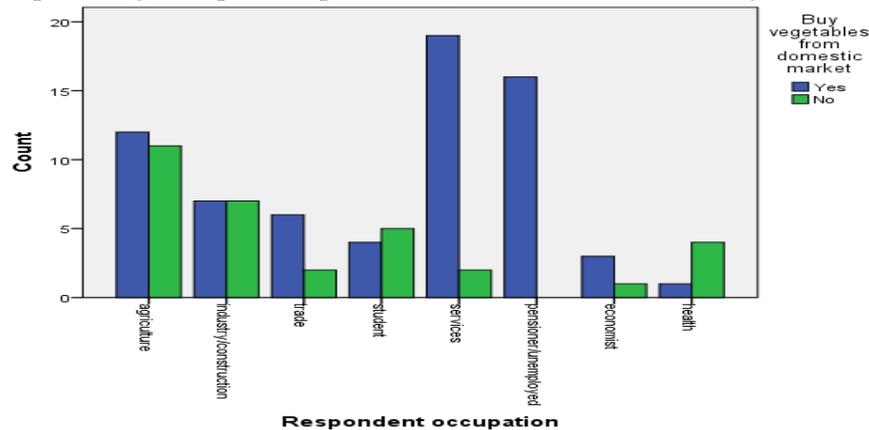


Fig. 1 - Correlation between the profession and answer the respondent on the market as a location where they shopping

So the data is confirmed by results presented in table 2 which shows certainly that the probability is very low correlation of these data ( $p < 0.001$ ).

Table 2

**Person Chi-square test for correlation between profession and domestic market shopping**

Specification	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	24,996 <sup>a</sup>	7	,001
Likelihood Ratio	30,050	7	,000
Linear-by-Linear Association	5,229	1	,022
N of Valid Cases	100		

a. 7 cells (43,8%) have expected count less than 5. The minimum expected count is 1,28.

If respondents' level of education correlates underlying motivation of the respondents purchase vegetables can be observed that those with higher education are most interested in long-term issues such as price, appearance and taste of vegetables purchased. The data presented in tab. 3, can see an increase in dependence between education level of respondents and the number of criteria underlying purchase vegetables. This highlights the growing interest in quality vegetables among people with advanced studies at the expense of those with basic education.

Table 3

**Correlation of respondents' level of motivation studies underlying acquisition vegetables**

Motivation purchase vegetables	Gymnasium	Vocational school	High school	College	University	Total
Vegetable price	4	5	11	2	<b>14</b>	36
Availability	1	1	0	<b>0</b>	3	5
Cultivation system	1	2	4	1	5	13
Appearance	1	4	6	1	<b>15</b>	27
Taste	1	3	5	1	<b>7</b>	17
Other criterion	0	1	0	1	0	2
Total	8	16	26	6	44	100

The price, appearance and taste of vegetables are the most important criteria that determine acquisition vegetables.

Of all respondents can be seen that for 13% of them, how to obtain vegetables is an important criterion, which determines a positive environmental and consumer health. Ask if they know the difference between organic vegetables and those grown with synthetic chemicals, 82% of all respondents said "yes", know this difference and provided answers based on taste, health benefits and superior nutritional properties of ecological vegetables.

Levels of pesticides (chemicals) of vegetables, is a big enough concern for most respondents (88% of them are worried about the level of pesticides), but

most concerned, seem to be that with incomes between 400 and 600 RON (20%) and those with incomes between 800 and 1,000 RON (17%). If sex respondent is correlated with care on the level of pesticides, there is an equal (51% of the women concerned and 49% are men). Correlating age with the same care respondents, shows that respondents most concerned are between 25 and 40, followed by those 41 and 65 aged (fig. 2).

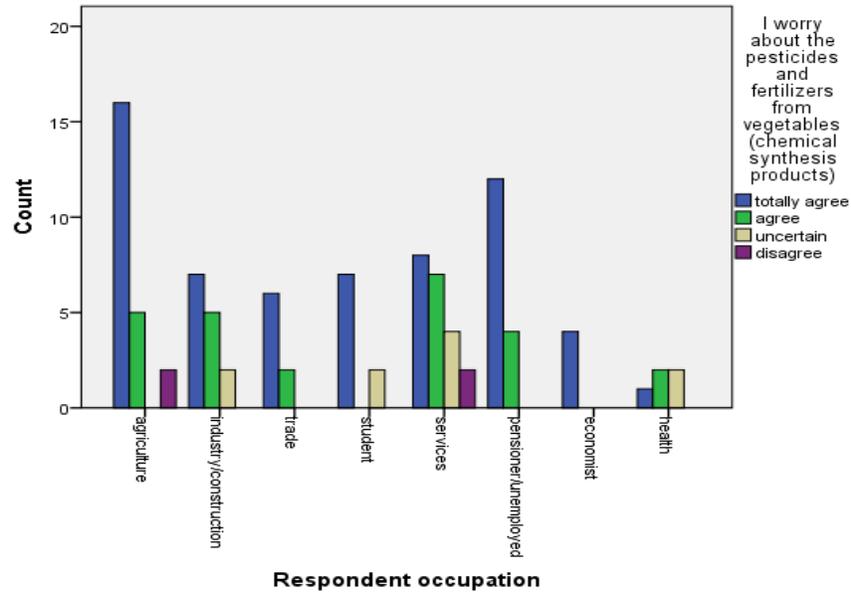
Data presented in table 4 and figure 2 highlight that the data obtained in 78.1% of respondents coincided with probability one can say that the data of 88.5% of respondents profession and caring for the pesticide to correlate .

Table 4

**Person Chi-square test for correlation between respondents towards pesticides from vegetables by income**

Specification	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	28,977 <sup>a</sup>	21	,115
Likelihood Ratio	36,426	21	,020
Linear-by-Linear Association	,336	1	,562
N of Valid Cases	100		

a. 25 cells (78,1%) have expected count less than 5. The minimum expected count is ,16.



**Fig. 2 - Attitude of respondents towards pesticides from vegetables by income**

From the total of respondents (table 5), 90% believe that the level of pesticides imported vegetables is higher than organic vegetables (fig. 3), mostly present perception ( $p < 0.077$ ) at persons with average salary between 400 and 1.500 RON (fig. 4).

Table 5

I think the level of pesticides and fertilizers from imported vegetables is higher than organic vegetables (chemical synthesis products)

Specification	Frequency	Percent	Valid Percent	Cumulative Percent
Valid totally agree	72	72,0	72,0	72,0
agree	18	18,0	18,0	90,0
uncertain	10	10,0	10,0	100,0
Total	100	100,0	100,0	

Table 6

Person Chi-square test for attitude than level of pesticides and fertilizers from imported vegetables is higher than organic vegetables

Specification	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	14,187 <sup>a</sup>	8	,077
Likelihood Ratio	14,958	8	,060
Linear-by-Linear Association	1,465	1	,226
N of Valid Cases	100		

a. 10 cells (66,7%) have expected count less than 5. The minimum expected count is ,14.

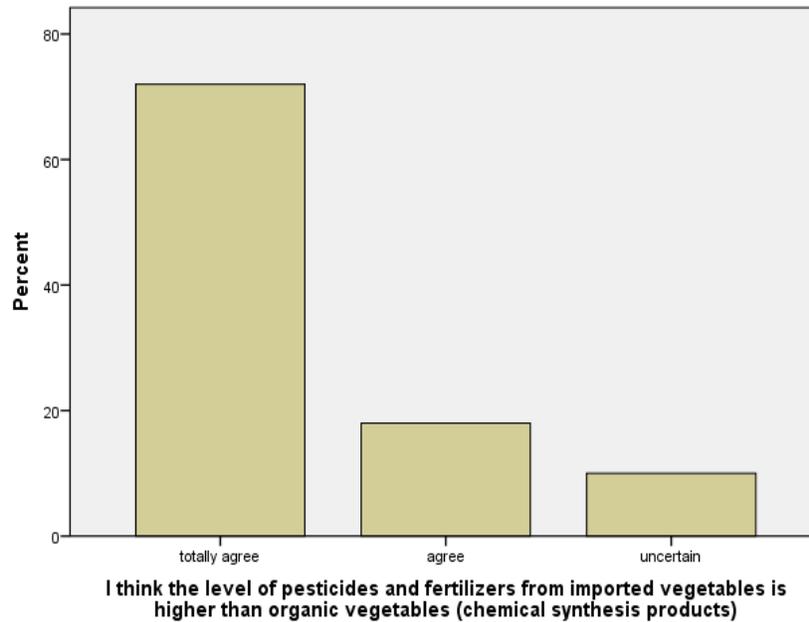
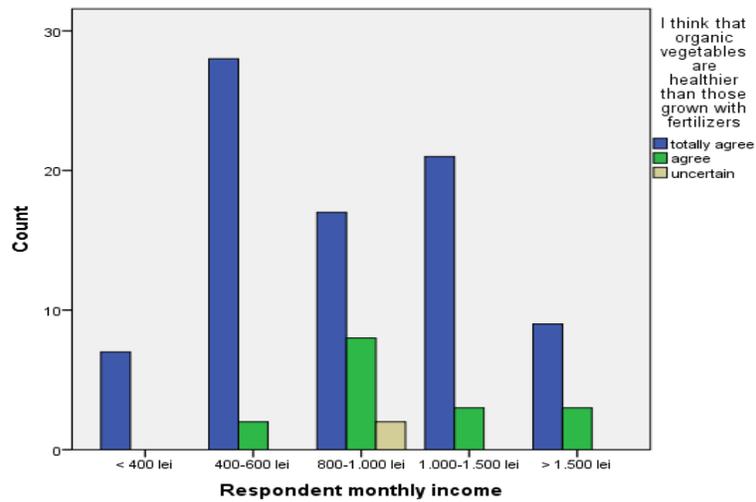


Fig. 3 - The attitude of respondents to the pesticide from organic vegetables



**Fig. 4** - The correlation between income respondents and the consideration that organic vegetables are healthier

If the correlation between respondents and profession perception that organic vegetables are healthier than those imported, it appears that people working in services, agriculture and pensioners are most aware of this (fig. 5). From the data presented in figure 5 we can be observed that the large majority of respondents consider that organic vegetables are healthier than conventional ones.

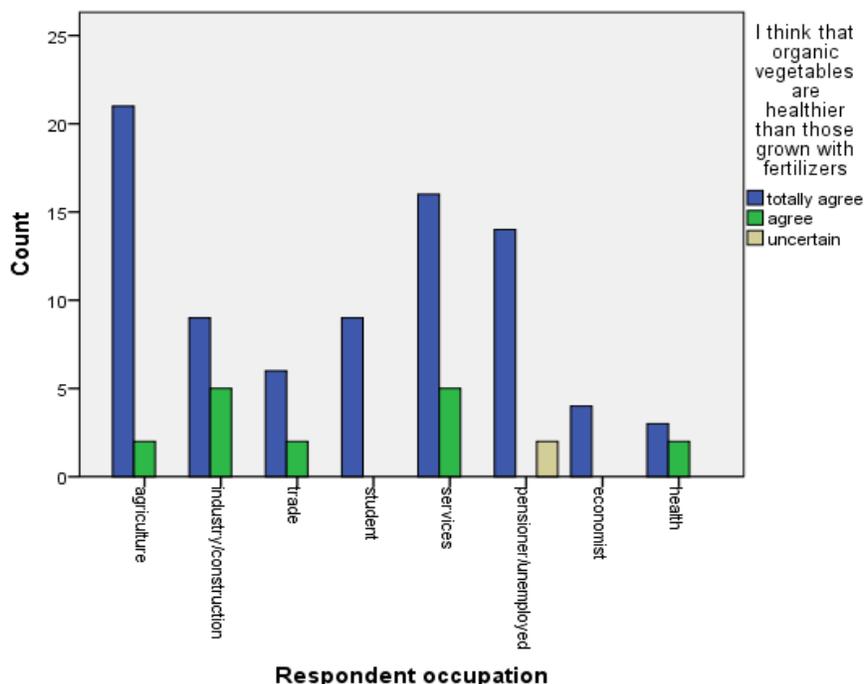
According to occupation of respondents find that the services, agriculture and pensioners realize this in greater proportion. We can say with certainty that the data presented in figure 5 correlates with probability of 95.5% (tab. 7).

*Table 7*

**Person Chi-square test for correlation between respondents towards organic vegetables and their profession**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	24,094 <sup>a</sup>	14	,045
Likelihood Ratio	24,160	14	,044
Linear-by-Linear Association	,404	1	,525
N of Valid Cases	100		

a. 18 cells (75,0%) have expected count less than 5. The minimum expected count is ,08.



**Fig. 5** - Perception of respondents towards organic vegetables according to their profession

The perception that organic vegetables are available in sufficient quantity the consumer market, we can see that 79% of respondents are conscious that vegetables that are in use are not organic. This is positively correlated with that in Romania there are few certified organic vegetable farm (tab. 8).

From the analysis, uncertainty of 66.70% leads us to believe that a majority can not distinguish the organic vegetables grown conventionally. Due to lack of information and promotion of organic vegetable growing.

*Table 8*

**Organic vegetables are available in sufficient quantity to consumer market**

Result	Frequency	Percentage	Cumulative percentage
total agreement	12	12,0	12,0
agreement	9	9,0	21,0
uncertain	<b>46</b>	<b>46,0</b>	<b>67,0</b>
disagreement	19	19,0	86,0
disagree	14	14,0	100,0
Total	100	100,0	

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