

Trust the Health Safety of Fruit – The Importance of Guarantees

Jerko Markovina, Damir Kovačić, Marija Radman, Robert Črep
Department of Agricultural marketing, Faculty of Agriculture, University of Zagreb
Svetošimunska 25, 10000 Zagreb, CROATIA
E-mail: jmarkovina@agr.hr



**Paper prepared for presentation at the 99th EAAE Seminar
'Trust and Risk in Business Networks', Bonn, Germany, February 8-10, 2006**

*Copyright 2006 by [Jerko Markovina, Damir Kovačić, Marija Radman, Robert Črep].
All rights reserved. Readers may make verbatim copies of this document for non-
commercial purposes by any means, provided that this copyright notice appears on all
such copies.*

Trust the Health Safety of Fruit – The Importance of Guarantees

Jerko Markovina¹, Damir Kovačič¹, Marija Radman¹, Robert Erep²

¹*Department of agricultural marketing, Faculty of Agriculture, University of Zagreb, Svetošimunska c. 25, 10 000 Zagreb, Croatia,*

²*Croatian Agricultural Extension Institute, Kaieva 9/III Zagreb, Croatia, jmarkovina@agr.hr*

Abstract

Today there are many agricultural products in the market with different designations and certificates which are as a proof of product quality and adherence to health standards. However, consumers sometimes find it difficult to differentiate these certificates and they have variable degrees of trust for them.

In this article we tried to determine the consumers' general degree of trust in food safety and in the health safety of the fruit offered in Croatia. A comparison is made between the trust degrees for domestic and imported fruit.

Consumers also expressed their opinion about the need for various certificates that guarantee the health safety of food products. In this respect, we also tried to determine the various degrees of trust for different certificates.

Finally, we tried to determine the degree of trust for different sale channels (city markets, supermarkets, specialized shops and direct marketing).

Keywords: *health, safety, trust, fruit, guarantee*

Introduction

The issue of food safety has lately become a topic of great interest. This is mainly caused by the outbreaks of different diseases that may affect human health through the intake of food. The epidemic of BSE (*bovine spongiform encephalopathy*), alleged risks of GMO (*genetically modified organisms*), and the most recent incidents of avian flu have significantly reduced consumer confidence in the healthiness of food products. (Ford et al., 1998.)

Restoring consumer confidence is a great challenge for the food industry, as well as for the governments of the countries affected by „food scares“ such as BSE and avian flu. Besides different disease outbreaks that are covered extensively by the media, consumers are also increasingly worried about other sources of risk associated with food. Hazards associated with food consumption can be classified as microbiological, chemical and technological (Yeung, Morris, 2001.).

Microbiological hazards include all risks caused by bacteria which can cause food poisoning, the most common being salmonella and *Escherichia coli*. Chemical hazards are associated with the use of chemical additives, processes and controls in agricultural and food industries

(Yeung, Morris, 2001.). Technological hazards consist of possible negative consequences of technological procedures in food production, such as food irradiation and genetic modification.

Consumers are usually afraid of the consequences of various modern food production and processing methods. Besides recent concerns over GMO, consumers often say that they are worried about different residues that can be found in food, such as chemical and hormone residues (Herceg, 2000.)

In the recent studies of consumer behavior (e.g. Mitchell, 1998a), it was noted that food choice is often influenced more by the psychological interpretation of product characteristics, rather than physical properties of the products. Perception of food safety risk is a psychological interpretation that influences the attitudes and food buying behavior of consumers.

This fact can be explained as a result of increasing inability of consumers to make their own assessments of the risk related to food hazards and their dependence on social and/or political institutions to provide appropriate information.

In this article we tried to explore the degree of trust for the health safety of fruit offered in Croatia and to determine the degree of trust for the various certificates that guarantee the health safety of fruit. We also tried to examine which sale channels are most trusted as providers of healthy food.

Method

The research was made by means of consumer survey. The survey was conducted on a sample of 111 respondents. One part of the sample (50 respondents - 45%) consisted of visitors of the “*Food days*” fair that was held in Zagreb, Croatia. This fair displayed domestic food from all over Croatia, including fruit, vegetables, wine and other products of Croatian agriculture. The respondents who participated in this survey were randomly chosen among the visitors of the fair. The other part of the sample (61 respondents - 55%) consisted of students of Faculty of Agriculture in Zagreb.

This sample can not be seen as representative for Croatian consumers as a whole, since the visitors of this fair and students of agricultural studies are usually more interested and they know more about food and related matters than the general population.

The results we describe in this article are only a part of the larger survey designed for a project of creating a brand name for Zagreb county apples.

Our sample consisted of 57% of female, and 43% of male respondents and their mean age was 37 (ranging from 21 to 74).

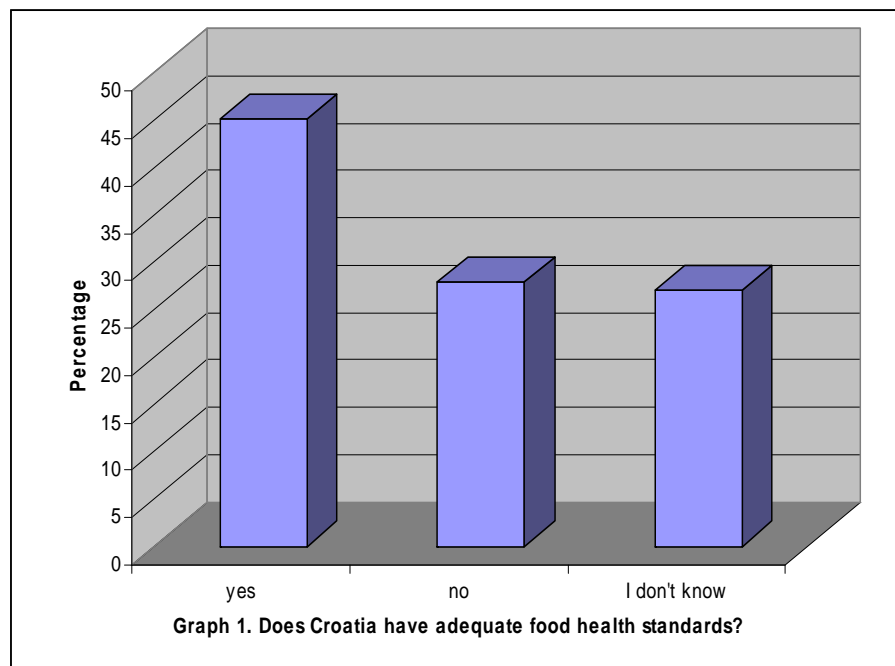
Respondents had to answer several questions regarding their trust in food safety in general and the trust for the health safety of fruit in Croatia. The task of the participants was to indicate their answer among a few offered alternatives.

In addition, there were some questions on the importance of guarantees appearing on the packaging of food. On the list of possible guarantees, respondents had to indicate those they would like to see on the packaging of fruit. The next task for participants was to name one or more institutions whose guarantees they trust the most.

Finally, in the last question we tried to determine the degree of trust for different sale channels where respondents had to rate their degree of trust for each sale channel on a five-point Likert-type scale.

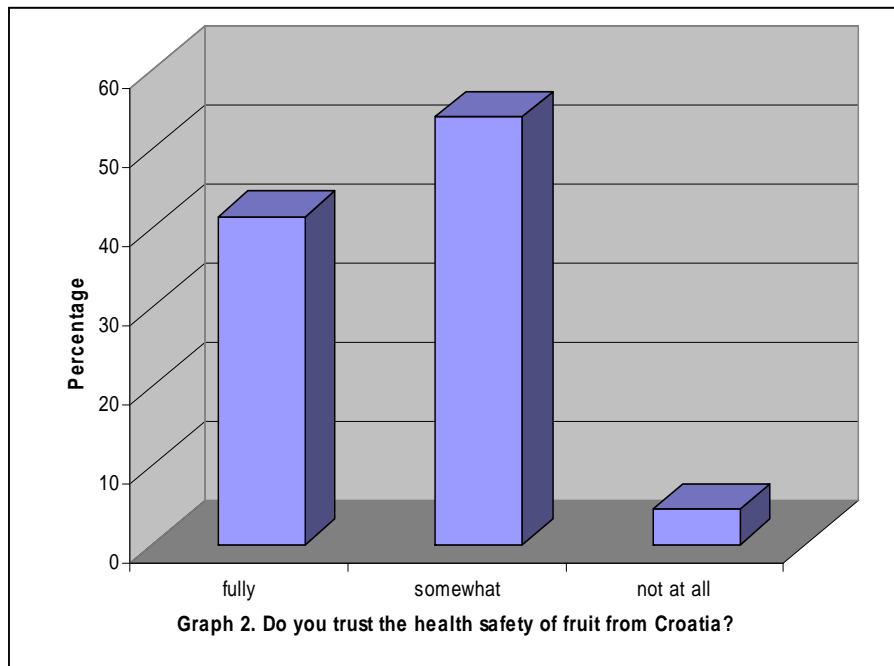
Results and Discussion

Concerning general trust for food safety in Croatia, the results showed that 45% of respondents believe that Croatia has adequate food safety standards, 28% think that these standards are not adequate and 27% are not sure (see Graph 1.)

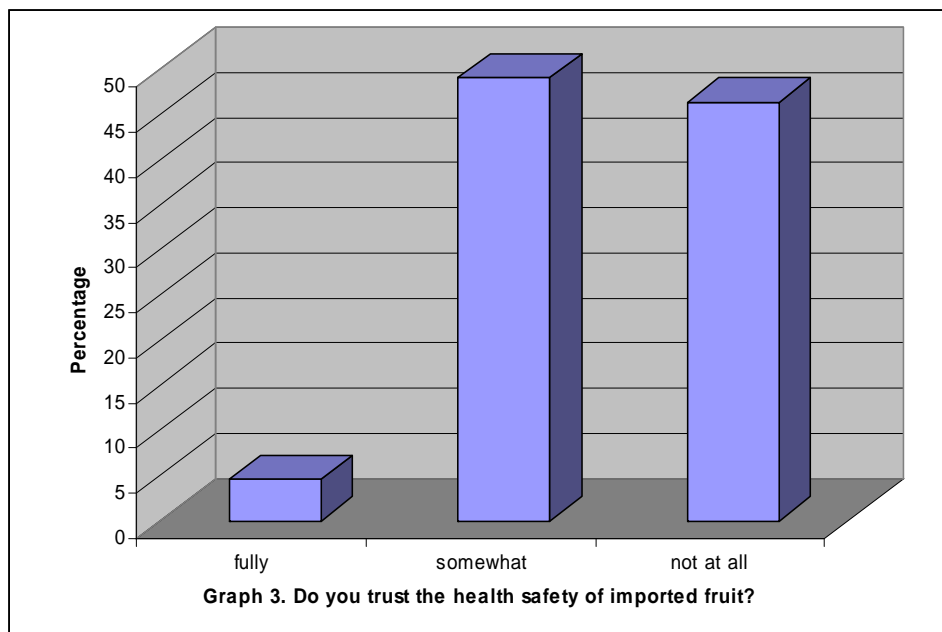


These results are not very encouraging, since it is obvious that less than half of the interviewed consumers trust the food health standards in Croatia, and a significant percentage of respondents do not know enough about these standards.

The following questions were related to trust for the health safety of fruit that is offered in Croatia. As it can be seen on Graph 2, 41% of respondents have full confidence in the health safety of **Croatian fruit**, 54% have partial confidence, and only 5% have no confidence for the health safety of fruit produced in Croatia.



The results for **imported fruit** are very different. Only 5% of respondents have full confidence in imported fruit, 49% have partial confidence, while 46% do not have any confidence in the health safety of imported fruit (see Graph 3).



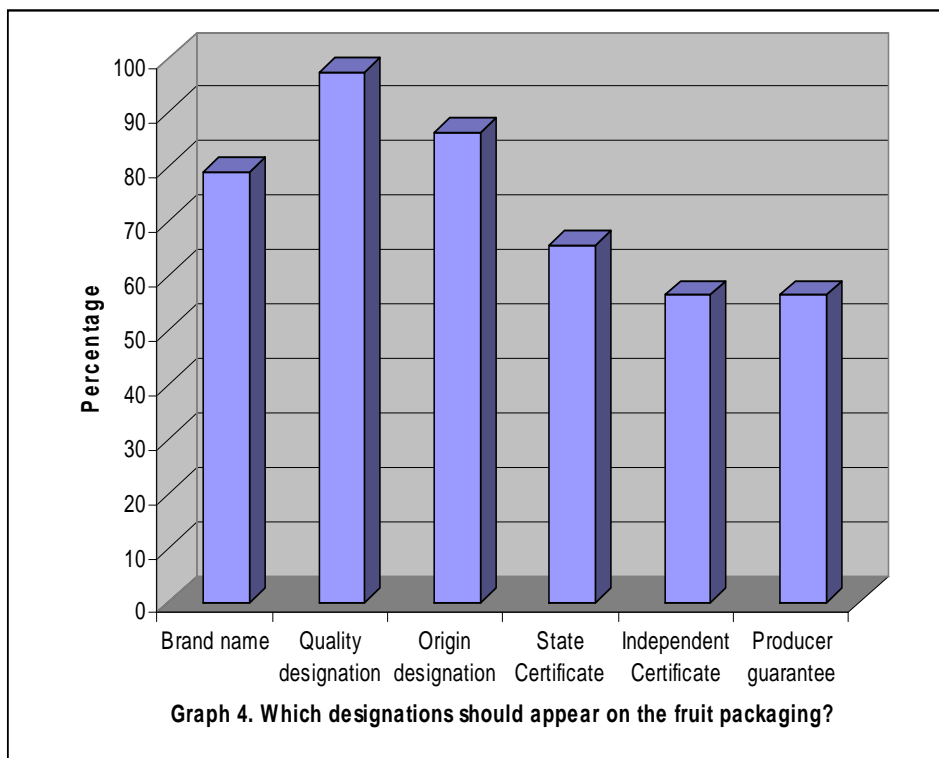
These results are consistent with some previous research (Radman et al. 2002.) that showed that consumers usually prefer domestic food and fruit, and are more confident in its health safety. The reason for this preference might be in the fact that consumers think they know more

about domestic agricultural practices and potential dangers, while in the case of foreign goods, they are uncertain of how the food was produced and they must rely completely on the truthfulness of certificates.

Another explanation for a greater preference of domestic products, already mentioned in Croatian literature (Radman et al., 2002.) is the fact that there is still a strong link of Croatian urban population with rural areas. A big part of urban population in Croatia has family and close relatives in the rural areas, many have weekend houses, and this is why they visit the countryside relatively often. In this way, urban population keeps in touch with tradition and they know how domestic products are being produced and have a bigger appreciation for them.

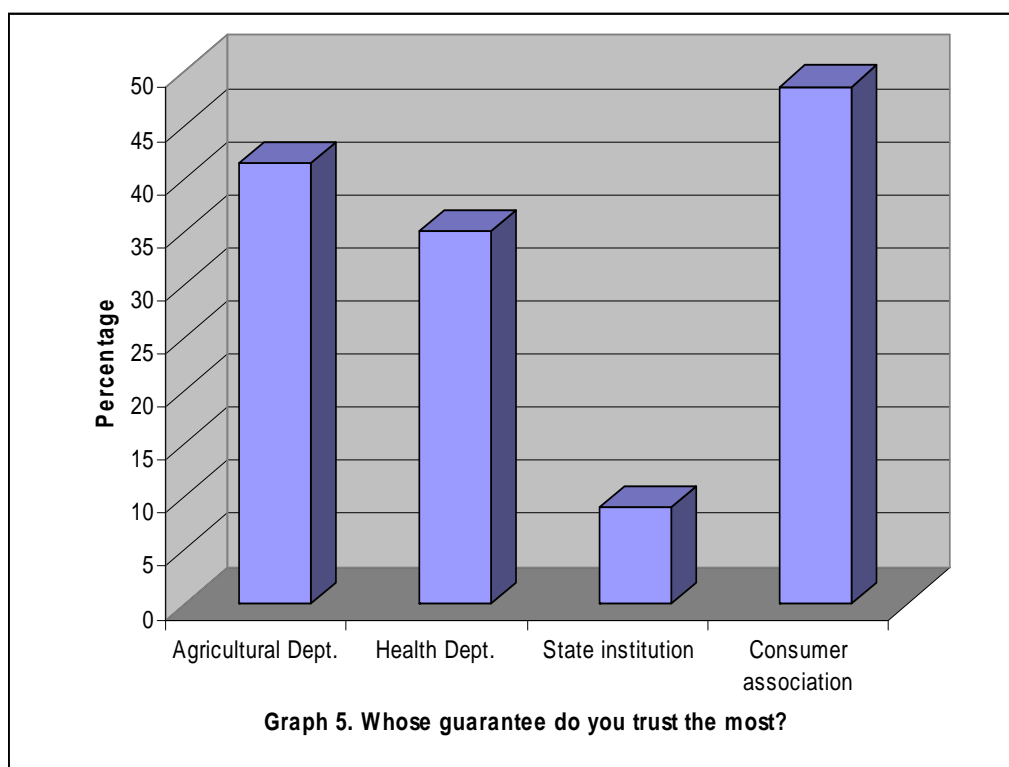
Fruit and other food products in Croatia usually come with different labels, some of which contain special designations that guarantee the origin and implicitly health safety of the product, such as “Croatian quality”.

The results indicate that consumers mostly want to see (and they trust the most) the designations of quality (97%) and origin (86%) on the packaging of fruit. Consumers also trust renowned brand names (79%), and to a lesser extent certificate of state institutions (65%), certificate of independent institutions (56%) and producer guarantees (56%) (see Graph 4). From these results we can conclude that consumers want to be reassured that the product is of high quality, and they want to know its country or region of origin, and this is often provided through a known brand name. Other certificates and guarantees are less trusted.



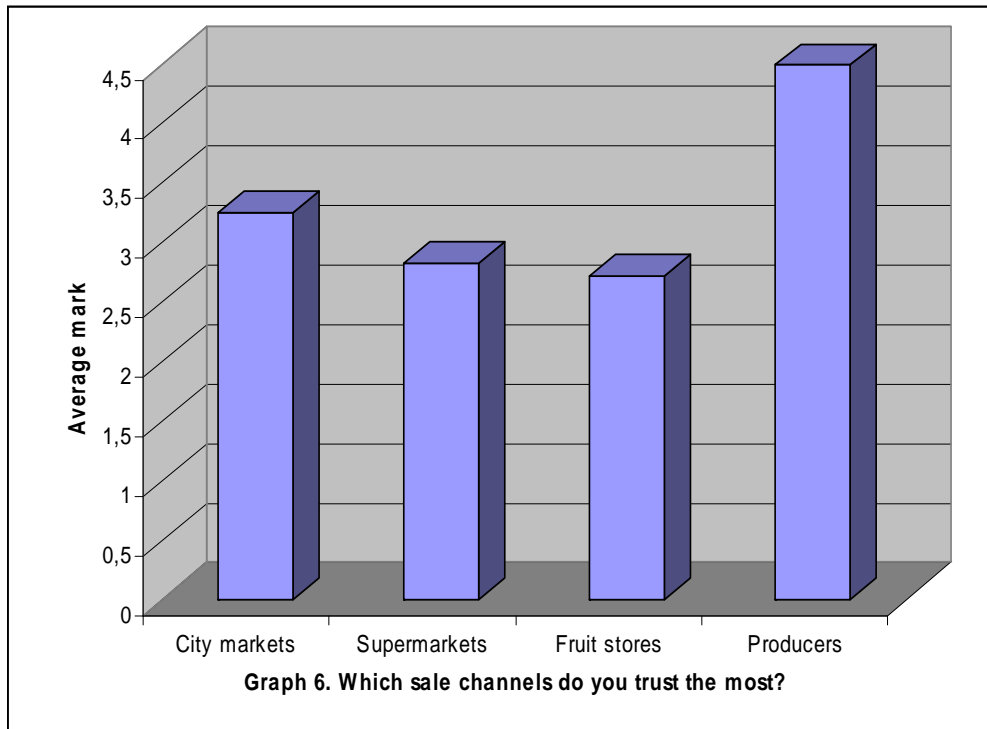
However, these results can be somewhat puzzling, because designations of quality and origin (which are highly trusted) can sometimes be issued by state institutions that have much lower degree of consumer trust. Such result may appear to be the consequence of consumer perception that various state institutions do not do their duties properly or that they may be corrupted and issue certificates without real value. This opinion was often repeated in our interviews with participants in the survey.

Furthermore, we explored the degree of trust for various institutions that issue food safety certificates. Graph 5 shows that the most trusted institution for consumers is the consumer association (49%), followed by Ministry of Agriculture (41%), Ministry of Health (35%) and various state and local institutions (9%). It is obvious that the overall confidence in institutional guarantees is rather low. The most trusted institution (consumer association) has only 50% of consumer trust and other institutions even less. The explanation for this fact is already stated in the previous section, and it reflects generally low degree of trust for state institutions in Croatia.



A similar survey was conducted in Croatia in 2000. (Herceg, 2000.) and the results showed that the most trusted institution then was the Ministry of Health (its sanitary inspection), followed by consumer association, and finally the Ministry of Agriculture. Our results, five years later, show that consumer association is on the top of the list, and the Ministry of Health is only third. This change in consumer trust may be attributed to an increased trust of Croatian citizens for the non-governmental, independent institutions, while the trust for official institutions has decreased significantly due to various scandals that were handled badly.

Finally, consumers expressed their degree of trust for different sale channels where fruit can be bought. Respondents expressed their trust for each sale channel on a five-point Likert-type scale. Graph 6 shows average marks for each sale channel and it can be seen that the highest degree of trust is shown when buying fruit directly from their producers (4,49). Many consumers stated that the reason for this is because they know the producers personally and they believe their production procedures to be safe and healthy.



City market –as defined by the current regulations, city markets consist of an outdoor area as well as buildings where people trade food and other goods. The outdoor area is primarily used to sell agricultural products, such as fruit and vegetable, dairy products from private production, eggs and flower. The trust for the health safety of fruit offered in city markets is about average (3,25) and consumers often say that fruit in city markets can be mislabelled or not labelled at all. However, they trust some market salesmen that they have known for a long time and have been convinced of the quality of their products over the years.

Consumers have rather low confidence for the fruit sold in supermarkets and specialized fruit stores (2,83 and 2,72 respectively). The reasons for this, as respondents stated, are mislabelling, the large percent of imported fruit that is offered and confusing display of merchandise, without designations of origin and quality.

The analyses including demographic variables, such as sex and age of respondents, revealed some differences. We found that women tend to have more trust in generally good sanitary regulations in Croatia than men (Chi=5,87; df=2; p<0,05). Also, women trust designations of origin more than men (Chi=3,93; df=1; p<0,05).

With respect to the age of respondents, we found that younger consumers express a higher degree of trust for imported fruit than the older consumers ($\chi^2=32,97$; $df=8$; $p<0,01$). This can be a logical finding if we accept the view that older people generally tend to respect tradition more than young people.

The differences concerning other variables and demographic variables of sex and age were not found.

Conclusion

The results of this short consumer survey showed a relatively low degree of confidence in food health safety in Croatia. Consumers also believe that domestic fruit is healthier than the imported fruit; therefore, it would be necessary for imported fruit to have credible guarantees that would convince Croatian consumers that this fruit is safe.

The most important indications of health safety for the consumers are designations of quality and origin. Consumers usually have preferences for the fruit coming from certain regions or countries, so it is important that this information is clearly stated on the packaging.

Among the institutions issuing health certificates or recommendations, the most trusted one is consumer association, while state and local institutions are less trusted. These institutions should work toward a better image of their guarantees.

Regarding point-of-purchase trust, the highest degree of trust is shown for the producers themselves, and consumers often tend to relate to producers they trust and have a buying loyalty. Supermarkets and specialized fruit stores have a low degree of consumer trust and they should improve their presentation of the product.

Some findings indicate that women are generally more trustful of the guarantees than men, and that young people have more trust in health safety than older people. These findings may have implications for any future campaigns regarding the promotion of food health safety.

References

- Ford, N, Murphy, G, (1998) "*Managing environmental risks from genetically modified organisms: the role of safety training*", *Environmental Management and Health*, 9, 3.
- Herceg, R. (2000.) "Relevantne odrednice ponašanja potrošača na zagrebačkom tržištu voća i povrća" (*Relevant characteristics of consumer behaviour in the Zagreb market of fruit and vegetables*), Graduation paper, Faculty of Agriculture, Zagreb
- Mitchell, V.-W, (1998 a) "A role for consumer risk perceptions in grocery retailing", *British Food Journal*, 100, 4, 171-83.
- Mitchell, V.-W, (1998 b) "Defining and measuring perceived risk", *The Academy of Marketing Annual Conference*, 380-4.
- Mitchell, V.-W, (1999) "Consumer perceived risk: conceptualisations and models", *European Journal of Marketing*, 33, 1/2, 163-95.
- Radman, M., Kovai, D., Kolega, A. (2002): Consumer Satisfaction with City Markets in Croatia, *Agriculturae Conspectus Scientificus*. 67 (1): p. 33-39.
- Yeung, R.M.W., Morris, J. (2001) „Food safety risk“, *British Food Journal*, 103, 3.