

BEHAVIOURS OF CONSUMERS ON EU ECO-LABEL: A CASE STUDY FOR ROMANIAN CONSUMERS

ÇAĞLAR GÖKIRMAKLI*¹; MUSTAFA BAYRAM¹; EUGENIA TIGAN**²

¹ *University of Gaziantep, Faculty of Engineering, Department of Food Engineering, 27310 Turkey*

² *University Aurel Vlaicu of Arad, Faculty of Food Engineering, Tourism and Invironmental Protection, Arad, 310330, Romania*

Abstract

Gökirmaklı, Ç., M. Bayram and E. Tigan, 2017. Behaviours of consumers on EU Eco-label: a case study for Romanian consumers. *Bulg. J. Agric. Sci.*, 23 (3): 512–517

EU Eco-label is a relatively new trend for the consumers. Even it has been available since 1978 awareness of it was increased recently. It is probably because increasing of some concerns also around the consumers such as global warming and some other environmental concerns.

In this study it was aimed to contribute EU Eco-label and consumer behaviours. For this reason, ideas of Romanian consumers were analysed. According to result of this study most of Romanians are recently hear EU Eco-label from the media, mostly. Also, most of them are desired to pay more if products are labelled with EU Eco-label.

Key words: consumer behaviours; Romanian consumers; EU Eco-label

Introduction

The EU Ecolabel helps you identify products and services that have a reduced environmental impact throughout their life cycle, from the extraction of raw material through to production, use and disposal. Recognised throughout Europe, EU Eco-label is a voluntary label promoting environmental excellence which can be trusted (Anon., 2015b). In addition to this definition, some authors were also made definition about eco-labelling. For example, Tang et al. (2004) define eco-label as a mean of information tool that usually utilized logo to convey information to consumers on the environment implications of buying such products. Additionally, Rex and Baumann (2007) describe eco-label as a means for consumers to make choices that will reduce environmental impact and enable them to influence how products are made. Sønderskov and Daugbjerg (2011) define eco-label as a product claim to furnish consumers with credible and easily accessible information on the environmental attributes of

a product. Also, Sammer and Wüstenhagen (2006) advocate eco-label as an important marketing tool to overcome market failure due to information asymmetries between sellers and buyers of environmental friendly products (Kong et al., 2014). Eco-labels refer to a product's collective overall environmental performance (Rashid et al., 2009). The eco-labels may be classified in two categories: those financially supported by government and those that rely on private initiative (Dinu et al., 2012).

The first eco-labelling program is dating since 1978 and it was carried out in Germany (Dinu et al., 2012). Public attention has been paid to eco-labelling since the late 1970s (Korteland, 2007). Since 1992, when the ecological labels began to be granted, the number of companies that demanded and received the eco-label has increased every year. The EU Eco-label „The Flower” awarded only six licenses in 1996, an additional 128 in 2002, and a further 754 in 2008 (Schumacher, 2010). Ecological labels reaching in October 2010 to 1126 (Dinu et al., 2012). In November 2011 the Eco-

*E-mail: *caglargokirmakli@gmail.com, **etigan@yahoo.com

label Index listed 426 certifications and labels in 25 industry sectors (Berger and Hari, 2012).

In order to include a group of products in the eco-labelling scheme (by which it is granted an ecological label to those products considered less damaging for environment than other in the same group), it has to meet two conditions: to represent a significant volume of sales and to have a significant impact on the environment. The following groups of products meet these conditions: textile, shoes, detergents for laundry, dishwashing machines, personal computers etc. (Dinu et al., 2012).

In Romania, there is a specific legislative frame concerning the determination of the procedure of granting the ecological label and of their conditions of use. The groups of products for which are set forth the criteria of granting the Romanian ecological label are similar to the European ones. The exceptions are the alimentary products, the drinks, the medicines and medical appliances meant for being used in professional purposes (Dinu et al., 2012).

For many different areas, some studies are available for relationship of eco-labelling and consumers behaviours in different countries such as, Romania (Dinu et al., 2012), Malaysia (Rashid et al., 2009), Germany (Imkamp, 2000), China (Paull, 2008), Sweden (Lefébure and Rosales Muñoz, 2011), USA (Vlosky et al., 1999), Hong Kong (Yau, 2012), India (Goswami, 2008).

This study is about Consumer behaviours and ideas about European Eco-labelling. In the scope of this study, a questionnaire, which was contained 9 questions, was applied on Romanian people who were lived in Arad city. The questionnaire was made in April and May in 2015.

Factors affecting consumer behaviours on eco-products choosing

Economic theory suggests demand for a product or service is a function of a number of factors; one of these being the tastes and preferences of consumers (Teisl et al., 2008). The consumers play an important role in the protection of environment by their choices when they purchase products (Dinu et al., 2012). A global increase in environmental awareness and concern about issues such as climate change, resource depletion and higher levels of pollution are having a greater influence on the purchasing decisions and product selection of consumers. In a response to this trend and growing demand for eco-friendly products, manufacturers introduced goods suggested to have a less harmful impact on the environment (Du Toit, 2011). It is clear that eco-labels can affect consumer choice (Horne, 2009). Based upon the recent Flash Eurobarometer 258 study we find that for approximately 50% of European citizens, eco-labels play a significant role in their con-

sumption decisions. Hence, eco-labelling is starting to show a significant impact on consumers behaviour (Schumacher, 2010). Eco-labels influence consumer behaviour in two ways. First, they introduce green as a considered attribute at the point of sale. Second, they enable consumers to comparison shop based on green (Anon., 2015a). Eco-label oriented consumers feel more informed; more conscious consumers prefer a subsidy on green goods and a tax on dirty goods; price-oriented consumers do not care about the green subsidy but would vote against a tax on the dirty goods (Schumacher, 2010). Consumers are concerned about the environment and they will support eco-friendly goods, if the quality and performance are as good as regular products. The survey, however, revealed that consumers are of the opinion that eco-friendly products are not as effective as regular products. The analysis also found that consumers are price sensitive and not willing to pay a large premium for eco-friendly attributes (Du Toit, 2011) but they are willing to pay more for green products (Sima, 2014) even if not large amount. Some studies shown these, for example, a recent Danish study shows that consumers are willing to pay extra for products they know are more sustainable. Consumers are willing to pay 10-17% more for eco-labelled toilet paper and detergents. When there are more sustainable alternatives on the market, as e.g. reusable dishcloths instead of kitchen paper, consumers will not pay extra for eco-labelled products (Anon., 2006). Also, a majority of the European citizens (87%) share the opinion that their behaviour can play an important role in protecting the environment and for that reason consumers are prepared to spend more money on environmental-friendly products (Korink, 2013). Interestingly, the Natural Marketing Institute's 2007 LOHAS Consumer Trends Database report determined that not all eco-labels have the same impact. In fact, consumers indicate that they are more likely to make eco-friendly purchase decisions if the eco-labels are also widely recognized and trusted brands in of themselves. Familiar labels for programs like the EPA's Energy Star have a more significant influence on consumer behaviour than others (Anon., 2015a).

The aim of this study is to understand behaviours and ideas of Romanian people about EU Eco-label.

Materials and Methods

In this study, the questionnaire was applied to people by face to face and asked directly one by one in Arad city, Romania, between April and May, 2015. This study covers ideas of Arad city's residents. Questionnaire was applied in this city because it was thought that Arad is able to reflect general Romanian people behaviour and ideas. Questions were contained multiple choice answers.

In this study, to determine the sample size, the formulas given as follow were used (Eqs. 1-4)

$$d^2 = (z^2) \cdot \text{variance}(\hat{P}) \quad (1)$$

$$\text{variance}(\hat{P}) = \left[\frac{N-n}{N \cdot n} \right] \cdot P \cdot (1-P) \quad (2)$$

$$d^2 = (z^2) \cdot \left[\frac{N-n}{N \cdot n} \right] \cdot P \cdot (1-P) \quad (3)$$

$$(1/10)^2 = (1.96^2) \cdot \left[\frac{180\,000-n}{180\,000 \cdot n} \right] \cdot 0.5 \cdot (1-0.5) \quad (4)$$

where d – sensitivity, (1/10);

z – variance estimation, (1.96);

variance (\hat{P}) – the prediction variance of ratio;

P – rate of awerness, (% 50);

N – universe, (180 000);

n – sample, (96).

Results and Discussions

In this study, totally 96 people answered the questionnaire, and 42% of the participants were male, the others 58% were female. A huge percentage (70%) of the participants was also young people (20-30 years old). It was followed by group of people was 31-40 years old as 17 percentage. Also, most of people who were answered the questionnaire has bachelor degree from universities as approximately 64%. This was followed by high school graduated people by 26%. Moreover, generally, people participated to this study was had good living conditions. That is, 45% of people were had sufficient conditions for decent living, 17% people could buy occasionally some expensive things and 19% people could buy everything they need.

First question of the questionnaire was „When did you heard in the first time about eco-labelling”, and the most of people (45%) responded as „this year”, the second common answer (24%) was „2-3 years ago”. The results were shown in Figure 1. Due to young age group, the people know eco-label, especially this year. The second question of the questionnaire (Figure 2) was „From which sources you heard something about eco-labelling?” and the most of people (41.6%) responded as „media”. Media campaigns promoting eco-labelling apparently raise the awareness of consumers (Koszewska, 2011). For this reason, media should be used much more effectively to increase knowledge of people about eco-labelling and to widespread selling of eco-labelling products.

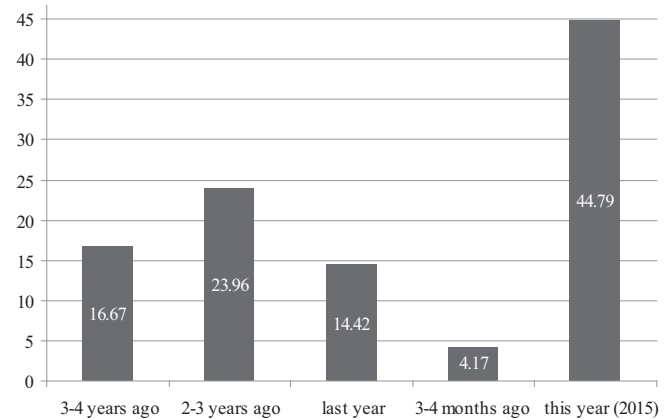


Fig. 1. Question 1: “When did you heard in the first time about eco-labelling?”

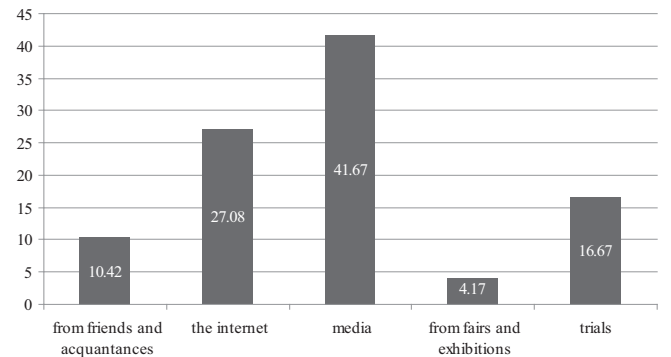


Fig. 2. Question 2: “From which sources you heard something about eco-labelling?”

Third question in the questionnaire (Figure 3) was „How often do you meet with notion of eco-labelling?” and people were responded „enough rarely” approximately 38% as the most common respond. Also „neither rare nor common” and „very rarely” responds were had the same percentage as 17.7%.

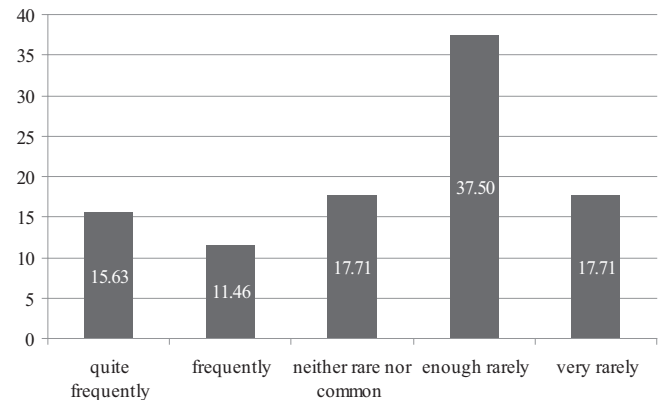


Fig. 3. Question 3: “How often do you meet with notion of eco-labelling?”

For the fourth question, people responds were shown in Figure 4. The fourth question of the questionnaire was „What do you think about the advantages of an eco-labelled service/product?”

One third of the people (33.3%) were thought that eco-labelled products/service was more effective for both consumers and environment. Also, 25% of people were thought that eco-labelled products/service have low environmental impact substances, also 21.9% people thought that „it is safer for humans and nature”. As a result, people thought that eco-labelled things were better way to protect environment and give less harm to it. The result of this study was compatible with (Brécard et al., 2012). According to Brécard et al. (2012) a significant number of consumers seem to share this opinion: 21% of Europeans estimate that buying environmentally friendly products has a positive and significant impact on solving environmental problems.

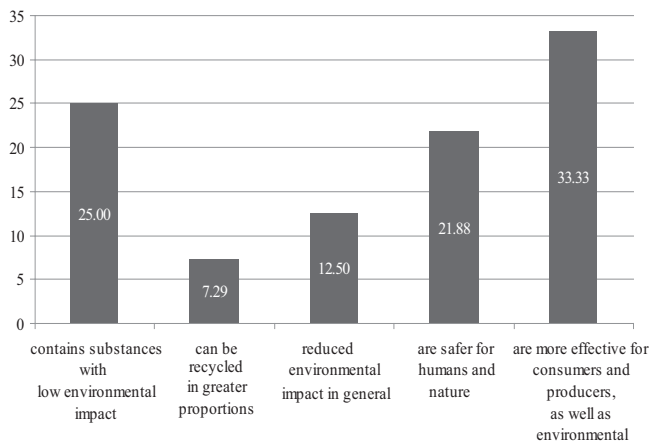


Fig. 4. Question 4: “What do you think about the advantages of a eco-labelled service/product?”

It was interesting that for question 5, the most of people, 90%, given the same answer. Romanian people were thought that advantages of eco-labelled rural locations/tourism in terms of consumer services are the safety of using a service with low environmental impact. With this answer, most of the Romanian people were thought correctly since eco-label’s task is this. The answer given for question 5 by people was shown in Figure 5.

In sixth question (Figure 6), which was „Do you agree to pay extra money for pension tourism/hotel that has European Eco-label?”, people were answered generally (35.4%) agree to pay but a small amount extra money. In addition, 25% of the people were agreed to pay money up to 5% more for eco-labelled tourism/hotel service and products. As it seen, people have intention to pay extra money even if in small amount for eco-labelled products and services.

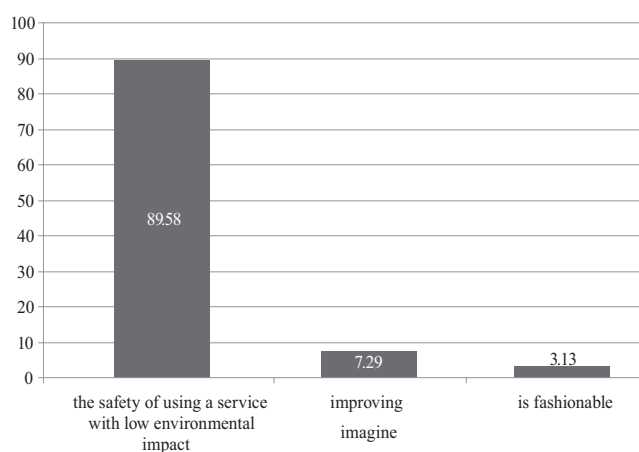


Fig. 5. Question5: “What do you think about the advantages of eco-labelled rural locations/tourism in terms of consumer services?”

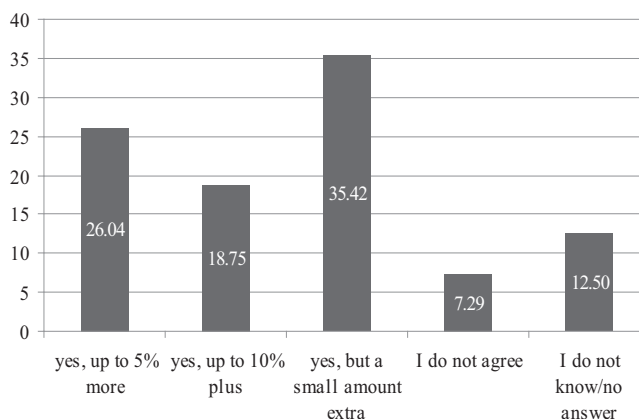


Fig. 6. Question 6: “Do you agree to pay extra money for pension tourism/hotel that has European Eco-label?”

For the question 7, both the question and percentage of answer given by the people could be seen in Figure 7. Romanian people were thought that, having eco-labelling is useful for companies to reduce maintenance costs (33.3%) and provide advantages over the competition (28.1%). Furthermore, people were thought that it improves imagine of the company (26%). Also, a small percentage of people thought that it is useful for a leading position in the market for companies who have eco-labelling on their products.

In question 8 (Figure 8), people were responded „How important does it for you to use our eco-labelled agro-tourism/tourism?” The most of people (44.79%) were responded that „important” and 19.8% people were responded as „very important”. Moreover, 25% of the people were responded as „medium important”. As a result, for Romanian people eco-labelling was seen as an important issue.

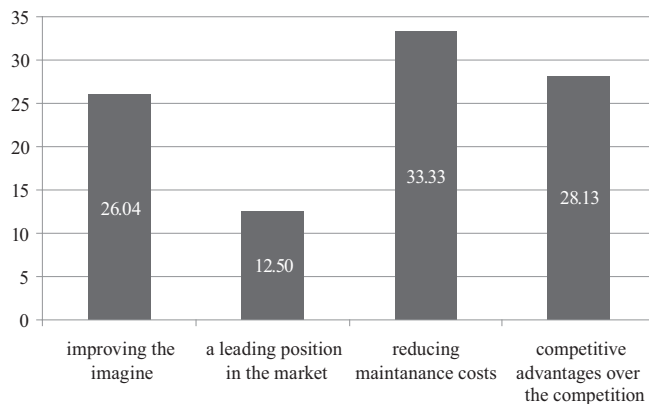


Fig. 7. Question 7: “What do you think about the advantages of eco-labelled rural locations/tourism in terms of the service?”

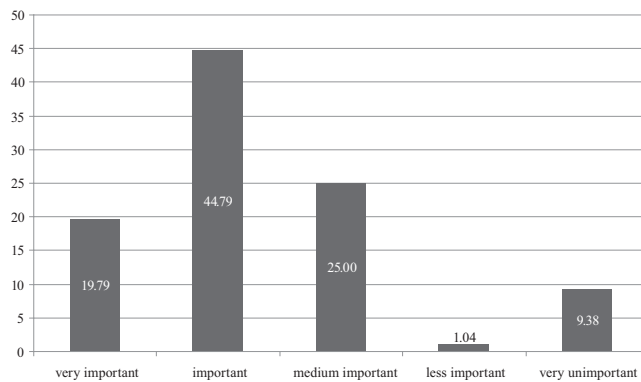


Fig. 8. Question 8: “How important does it for you to use our eco-labelled agro-tourism/tourism?”

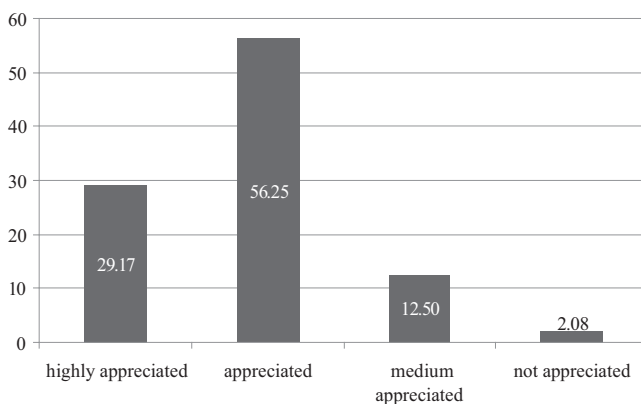


Fig. 9. Question 9: “Would be appreciated eco-labelled agro tourism/tourism and products in the future, what do you think?”

In the ninth question, people were responded „Would be appreciated eco-labelled agro tourism/ tourism and products in the future, what do you think?” The answers were given in Figure 9.

It was shown that, Romanian people were thought as eco-labelling would be more important and more realized in the future.

Conclusion

In this study, it was shown that, media had an important role which affects knowledge of human about eco-labelling. For this reason, by using media in more efficient way, knowledge of human could be improved about eco-labelling. Nowadays, social media are common in young generation, so by especially using social media, awareness of eco-labelling could be improved. However, it should be noted that, especially for media, consumers should be informed with correct information. It is important since their expectations are formed according to information that gave to them. If wrong information was given, the results could be not so good for eco-labelling in the future. In addition, consumers were wished to pay more for eco-labelled products. For this reason, knowledge on eco-labelling should be shared with producers to encourage them for using eco-labelling to their products. By this way, producers may also increase their incomes. Moreover, according to the results, people think that eco-labelling would be appreciated more and more in the future. Based on results of this research, future looks like promising for eco-labelled products in Romania.

References

- ANON, 2006. Study shows that eco-labels have an effect on consumer behaviour (Online). <http://www.euractiv.com/health/study-shows-eco-labels-effect-consumer-behaviour/article-113716> (Accessed 11.06. 2015)
- ANON, 2015a. Eco-labels Impact Consumer Behavior (Online). <https://marketinggreen.wordpress.com/2008/05/24/eco-labels-impact-consumer-behavior/> (Accessed 11.06. 2015)
- ANON. 2015b. The EU Ecolabel (Online). European Commission. <http://ec.europa.eu/environment/ecolabel/> (Accessed 10.06. 2015)
- Berger, V. and J. Hari, 2012. Consumers and eco-labelling: A repertory grid study. Academy of Marketing Conference, *Southampton University*.
- Brécard, D., S. Lucas, N. Pichot and F. Salladarré, 2012. Consumer preferences for eco, health and fair trade labels. An application to seafood product in France. *Journal of Agricultural & Food Industrial Organization*, **10**: 1-32.
- Dinu, V., I. Schileru and A. Atanase, 2012. Attitude of Romanian consumers related to products' ecological labelling. *Amfiteatru Economic*, **14**: 5-6.

- Du Toit, B.-J.**, 2011. The effects of eco-labelling on consumer behaviour in the non-foods fast-moving consumer goods category: A study of South African Consumers, *Stellenbosch: Stellenbosch University*.
- Goswami, P.**, 2008. Is the urban Indian consumer ready for clothing with eco-labels? *International Journal of Consumer Studies*, **33**: 438-446.
- Horne, R. E.**, 2009. Limits to labels: The role of eco-labels in the assessment of product sustainability and routes to sustainable consumption. *International Journal of Consumer Studies*, **33**: 175-182.
- Imkamp, H.**, 2000. The interest of consumers in ecological product information is growing—evidence from two German surveys. *Journal of Consumer Policy*, **23**: 193-202.
- Kong, W., A. Harun, R. S. Sulong and J. Lily**, 2014. The Influence of Consumers Perception of Green Products on Green Purchase Intention. *International Journal of Asian Social Science*, **4**: 924-939.
- Korink, I.**, 2013. Reduce the confusion: the influence of additional shelf information about eco-labels to compare green cosmetics. Master Thesis, *University of Twente*.
- Korteland, M.** 2007. Eco-labelling: to be or not to be?: Desirability of eco-labels from an environmental and poverty perspective. *Delft, CE*, Delft, The Netherlands.
- Koszevska, M.**, 2011. Social and eco-labelling of textile and clothing goods as means of communication and product differentiation. *Fibres & Textiles in Eastern Europe*, **19**: 20-26.
- Lefébure, A. and R. Rosales Muñoz**, 2011. Communicating to consumers in Sweden with eco-labels: Is the message getting through? Master Thesis, *Umeå University*.
- Paull, J.**, 2008. The greening of China's food - green food, organic food, and eco-labelling. Sustainable Consumption and Alternative Agri-Food Systems Conference, *Liege University*, Arlon, Belgium.
- Rashid, N. R. N. A., K. Jusoff and K. M. Kassim**, 2009. Eco-Labelling perspectives amongst Malaysian consumers. *Canadian Social Science*, **5**: 1-10.
- Rex, E. and H. Baumann**, 2007. Beyond ecolabels: what green marketing can learn from conventional marketing. *Journal of Cleaner Production*, **15**: 567-576.
- Sammer, K. and R. Wüstenhagen**, 2006. The influence of eco-labelling on consumer behaviour—Results of a discrete choice analysis for washing machines. *Business Strategy and the Environment*, **15**: 185-199.
- Schumacher, I.**, 2010. Ecolabeling, consumers' preferences and taxation. *Ecological Economics*, **69**: 2202-2212.
- Sima, V.**, 2014. Green behaviour of the Romanian consumers. *Economic Insights-Trends and Challenges*, **3**: 77-89.
- Sønderskov, K. M. and C. Daughjerg**, 2011. The state and consumer confidence in eco-labeling: organic labeling in Denmark, Sweden, The United Kingdom and The United States. *Agriculture and Human Values*, **28**: 507-517.
- Tang, E., G. E. Fryxell and C. S. Chow**, 2004. Visual and verbal communication in the design of eco-label for green consumer products. *Journal of International Consumer Marketing*, **16**: 85-105.
- Teisl, M. F., J. Rubin and C. L. Noblet**, 2008. Non-dirty dancing? Interactions between eco-labels and consumers. *Journal of Economic Psychology*, **29**: 140-159.
- Vlosky, R. P., L. K. Ozanne and R. J. Fontenot**, 1999. A conceptual model of US consumer willingness-to-pay for environmentally certified wood products. *Journal of Consumer Marketing*, **16**: 122-140.
- Yau, Y.**, 2012. Eco-labels and willingness-to-pay: a Hong Kong study. *Smart and Sustainable Built Environment*, **1**: 277-290.

Received July, 31, 2016; accepted for printing May, 2, 2017

NOTE TO CONTRIBUTORS

Types of papers, published in the journal:

- papers reporting results of original research
- short communications
- reviews
- A detailed **Guide for authors** is printed in the first issue to appear each year (see the web page of BJAS).

Acceptance of manuscripts

After the receiving the opinions of the Editorial board expert, the editor-in-chief decides on acceptance of the articles, necessary corrections or revisions. The day the manuscript reaches the Editorial Secretariat for the first time is given upon publication as the date of receipt; the day of the editor-in chief decision is given as the date of acceptance for printing.

Text

- (a) The manuscript should begin with an abstract of not more 250 words or 10% of the paper
- (b) The first page should include the title, author's names and their affiliations
- (c) The text should include Introduction, Materials and Methods, Results, Discussion, Conclusion, Acknowledgements (if any) and References

References

- (a) The references in the text should be cited as the name of the first author plus "et al.", followed by the year of publication
- (b) The reference list should be in alphabetical order

Tables

- (a) The tables should be as simple and as few as feasible for the presentation of the essential data. They should be in Word or Excel program and in separate files, not in the text
- (b) Explanations essential to the understanding of the table should be given at the bottom marked in an appropriate way

Electronic manuscripts

Your disk should be submitted to the editorial secretariat or the article should be send by e-mail
The preferred word-processing packages are Word, WINDOWS

From the beginning of 1995 the Agricultural Academy in Bulgaria is publishing Bulgarian Journal of Agricultural Science (BJAS) - the first agricultural scientific journal in Bulgaria for fundamental and applied researches, published entirely in English language, and one of the few such journals in Central Europe.

Bulgaria is an agricultural country with traditions and long standing experience in the development of agrarian science and production. BJAS, printing in English, in accordance with international standards, provides possibilities for Bulgarian agricultural science to enter adequately into the worlds scientific field, to find its place in reviews, abstracts and electronic means for processing and transfer of scientific information. Besides scientific articles provided in Bulgarian universities and research institutes, BJAS publishes also articles from Eastern Europe and other countries all over the world. The Editorial board of the journal includes prominent scholars from United Kingdom, Belgium, Slovenia, Italy, Poland, Hungary, Germany, Greece, Czech Republic and Bulgaria.

THE JOURNAL IS INDEXED BY:

Abstr. Hyg., AgBiotech, Agri. Eng. Abstr., Anim. Breed. Abstr., Bio-Contr. News & Info., Crop Physiol. Abstr., Dairy Sci. Abstr., Field Crop Abstr., Food Sci. & Tech. Abstr., Forest Abstr., HelminthoL Abstr., Herb. Abstr., Hort. Abstr., IMS Atomind., Ind. Vet., Irr. & Drain. Abstr., Maize Abstr., Nutr. Abstr., Ornament. Hort., Pig News & Info., Plant Breed. Abstr., Plant Gen. Res. Abstr., Plant Grow. Reg. Abstr., Postharvest, Potato Abstr., Poultry Abstr., Rev. Appl. Entomol., Rev. Med. & Vet. Mycol., Rev. Plant Path., Rice Abstr., Seed Abstr., Soils & Fert, Soybean Abstr., Triticale Abstr., Vet. Bull., Weed Abstr., World Ag. Econ. & Rur. Soc. Abstr.

Editorial Board of BJAS

*Contact address: Bulgarian Journal of Agricultural Science
125, Tsarigradsko shosse Blvd.; Bl. 1, Room 214, 1113 Sofia, Bulgaria
e-mail: bjas_sb@abv.bg*