

Global and Local Problems of Sustainability in Hungary

Ferencz, A., Notari, M., Levai, P.
Faculty of Horticulture
College of Kecskemet
Kecskemet, Hungary
Ferencz.arpad@kfk.kefo.hu

Czegledi, M.
Dept. of Farm Business Management
Corvinus University of Budapest
Budapest, Hungary
melinda.czegledi@uni-corvinus.hu

Berde, Cs.
Debrecen University
Debrecen, Hungary
berde@helios.date.hu

Abstract— Recently there is no database that would be able to create a logical relationship between the three parties of the food chain (entrepreneurs, authorities and scientific bodies) and the products or parameters of products in the region. By detecting the correlation between the food chain and the environment, a “Food chain-Environment Problem Map” could be created. Why is it necessary? The individual countries by themselves can not solve the food chain-environmental problems imposed or accelerated by human activities or by the globalisation effectively enough. Because research, measures, development and campaigns enhancing sustainable consumption and the change of approaches, are not carried out covering the whole region. Research activity in the field of the food chain and its environment is made typical without coherency, and parallel activity between researchers is not rare either. A further task of the database is to allow the consumers to conveniently reach understandable and scientifically proven information regarding the food chain-environment problems and on its not isolated solutions. The event focused on the problem of protecting the specific biological values of the environment from the environmentally destructive incineration plants as soon as possible. The solution should regard Europe as a chain of consciously guarded national parks with its specific regional values. As a main principle of the Fair Food Chain Program we are capable of understanding and making others understand that the food chain stretching through European infrastructures needs to be transformed and operated according to FOODLAWMENT recommendations and guidelines to be sustainable, fair and value preserving and we are willing to cooperate with European professionals in this regard.

Keywords- foodlawment, sustainability, traditional products

I. INTRODUCTION

Although sustainable agriculture and the food chain as part of it are a controversial issue, everyone agrees that only sustainable agricultural development can be accepted in the future.

Sustainable agriculture represents development that fulfills present demands without compromising the possibilities of future generations[1].

The following 5 principles provide a more precise description of sustainable agriculture:

- protection of agricultural resources, avoiding environmental pollution and taking Agricultural Health Protection issues into consideration
- maintaining biological diversity and causing the least possible damage to the ecosystem
- the social responsibility of agriculture in providing safe and wholesome food
- fairness between generations
- the global responsibility of sustainable development

Sustainable agriculture is aimed at developing integrated, resource saving and fair agricultural systems that cause minor damage to the environment and maintain the productivity and the diversity of agriculture on the long term beside supporting the short and the long term ecological viability of agriculture and sustaining rural communities and their quality of life. It focuses on identifying the basis, the rules and the continuous interaction between agriculture, the food chain and the environment to be able to operate mutual and mindful systems [2].

The diversity of food chain culture is one of the most treasured European values.

The European Food Chain Parliament, Foodlawment is aimed at harmonizing the interests of producers, manufacturers, distributors (entrepreneurs of the food chain), researchers (representing science), food chain authorities and consumers within a sustainable but ever renewing food chain that preserves its values [3]. Renowned Hungarian and international professionals working in Committees and Sections lead the four-way discussions of often conflicting interests.

The often different interests should harmonised and later realized in practice with the support of national and international professionals working in expert committees

and in sections directing the four-sided dialogs between entrepreneurs, consumers, authorities and scientists [4].

The most accentuated tasks of the European Food Chain Parliament is to become a professional conciliatory forum for lawmakers drafting the harmonization of laws regarding the food chain at community and national levels as well as towards third countries. This is supported by the European Food Directive, stating in Section 2, paragraph 9, that open and transparent consultation should be carried out with the consumers – either directly or through interest protection groups – regarding the drafting, assessment and review of food regulations, unless the urgency of the issue makes it impossible [5].

The operation of the global food chain implies a number of hidden but immense costs and apparent environmental and food chain risks, the most important of which are transportation costs and insufficient control, the lack of necessary information as well as the asymmetry of information related to consumers' [6]. The term "food-miles" was created by the expert groups and indicates how far the ingredients of a product are transported all together until they reach the consumer's table and their waste is disposed of. This aspect, researched further may become such a mathematical, compliant and objective value that can positively influence consumer, entrepreneur and law maker behavior within the sustainable (fair) food chain [7].

Foodlawment supports the amendment of regulations in such a way that facilitates the local marketing of the traditional products of a region and that the consumer making the decisions can obtain relevant information regarding the origin and the – food chain conscious-preparation of products [8].

II. MATERIAL AND METHOD

The secondary market research means the collection, evaluation and analysis of information that has been collected and published before. Information can be objective and subjective.

The main objective of the marketing research is exploring the opinion of the target group and assessing them in a measurable way. The following scales are used in the research for evaluate our results: nominal and ordinal scale. At the nominal scale one uses labels, nominal measures offer names or labels for certain characteristics. Rank-ordering data simply puts the data on an ordinal scale. Ordinal measurements describe order, but not relative size or degree of difference between the items measured. In this scale type, the numbers assigned to objects or events represent the rank order of the entities assessed.

The primary information gathering means would ensure proper data collection, processing and evaluation, serving the aims of the researcher. The survey is the most widely used procedure, which allows the gathering of any type of information. The most important phase of the preparatory work was related to the research for determining the need for information [8]

We made primary examinations in 2008-2010 in Hungary. 3850 questionnaires were prepared and divided up.

We subsequently entered into the system 3672 pieces of questionnaire data.

Both of them have a nationwide attraction-zone, so the sample is almost representative. The questionnaires reached all parts of Hungary, and made sure the distribution age, qualification, occupation and residence.

The questionnaire is the most important device of the primary market research methods. During our quantitative research we used standardised questionnaires, which suited to give numerical data. The standard characteristic of the questionnaire makes it possible that the answers of different consumers are comparable.

During the primary research collected data were evaluated by statistical-mathematical methods. We used the SPSS 11.5 for Windows and LISREL 8.30 program-package during the examinations. We used the following main methods: factor-analysis, multi-dimensional scales and Correspondence analysis.

III. RESEARCH

A. Foodlawment Foodchain-Search System

Foodlawment created a Foodchain-Search System. The value of the work in the food chain comes mainly from information acquired from consumers and the players of the food chain, the consumers make their decisions mainly based on the price of the product and advertisements since they receive no information from entrepreneurs, authorities and researchers. Because there are no relevant discussions, the average consumer is not concerned – yet - about the composition, the mode of action, the mission or the ecological footprint of the given product as part of the food chain, their decision is based on less substantial characteristics. We believe that we can positively influence consumption by letting the consumer know the benefits of buying and consuming the product such as solving – sometimes public- problems, increasing life expectancy and quality of life.

Foodlawment signed agreements with the operators of existing systems in Europe that record and give information on food chain incidents, epidemics, intoxications, contaminations, adulterations and fraud to be able to give swift, authentic information thus helping the prevention and management of food chain incidents, allowing inadequate products, systems and enterprises to be withdrawn from consumption as soon as possible.

We started a pilot project for the food chain authorities in the Carpathian Euroregion – based on the European food law- and initiated hardware and user friendly, communicating software developments so that if any incident occurs in European food chain, the consumer is promptly informed and steps can be taken immediately for prevention and management of the problem.

Foodlawment plans to create and operate a research, development and innovation center based on effective information flow that is coordinated at European level to support a sustainably developing European food chain. As part of this we plan to create a virtual regional research

center to reveal environmental damage caused by food production and its implications on food chain safety. It would be possible to post scientific publications and results that help national and regional authorities in developing a sustainable food production (and consumption) strategy.

B. How the consumers judge the food safety of traditional products?

The behaviour of consumers can be measured easily with the change in the relationship between risk and confidence. Risk is an inner and hidden feature of the foodstuffs. It is very difficult for the consumers to realise the risk. Confidence measures that people do not exploit each other's sensitivity. I make known the results of a qualitative examination which relates to the relationship of the risk and confidence in connection with the food safety. The consumers' opinion about the food safety can be seen on Fig. 1.

It can be seen that the 13% of the respondents think the foods safe, and the 9.3% of them think them unsafe. I could not find significant difference between the "yes" and "no" answers. Those are also determining who answered that the foods are "generally safe".

On Fig. 2-3. I examined whether the customers know the products what they buy during the purchase. 70% of the respondents read very rarely the information about the components on the products, 4% do not read at all. Customers buy most of the products without knowing the materials in the products and knowing their proportion.

On Fig. 4. the rate of additional materials are come out of the scale. It is a very important requirement in connection with the additional materials, that they cannot be harmful for health, and their usage is connected to permission by the authorities. It is thought-provoking why toxins and poisonous materials get to the last place.

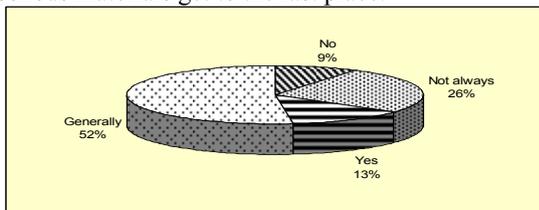


Figure 1. The safe of the traditional foods

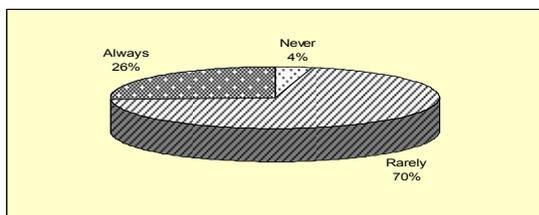


Figure 2. Knowledge of the components of foods

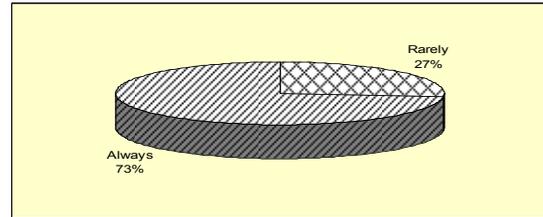


Figure 3. Knowledge of warranty time

IV. CONCLUSIONS

The food chain is more than just a chain of products and incidents; it's a complex system, a mutual critical infrastructure. Achieving agricultural health protection is the only way to provide continuous, sustainable protection of human health at a high level.

Only by achieving the protection of the food chain and raising food chain awareness can we live in a world of consumers thinking and acting responsibly, discussing and cooperating with all players of the food chain to understand and protect our biggest treasure, the sustainable food chain, the foundation of our being.

Nowadays, with penetration of globalisation become forgotten the food preparing skills that were transferred from one generation to another, and included safeness of the process, as well. Culinary habits and style of living of people, families have changed; tourism involves more and more people. Claim for unknown dishes, foodstuffs increased in Hungary, too.

Consumers in every country rightly expect to get safe and healthy food.

- Consumer's judgement of foodstuff safety is: only 13% of respondents answered with definite Yes to the question whether the foodstuffs are safe or not. Other respondents have objections relating to safety; they believe that with penetration of globalisation the uncertainty is more and more increasing. When classifying the dangers of the foodstuffs safety the respondents emphasized the role of additives; toxins were put on the last place. These results require further investigations.
- From among the factors influencing foodstuffs safety the respondents deemed hygiene circumstances to be of great importance; they identified as the largest problem the unprofessional application of chemical insecticides.

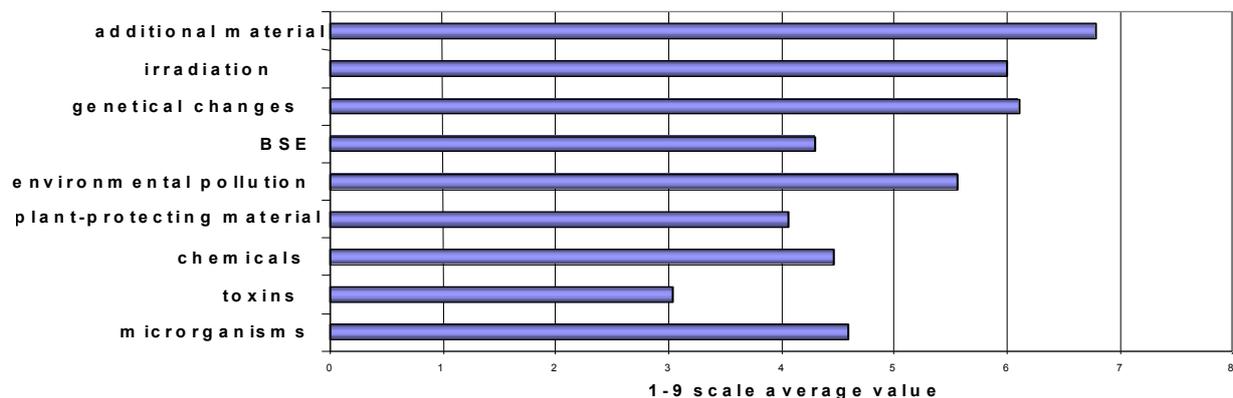


Figure 4. Rank of the sources of danger according to the Hungarian customers

- The respondents prefer to purchase traditional foodstuffs in trade shops. From further answers it can be seen that most respondents deem the price to be as important as the foodstuffs safety.

- Threaten the health and life of individuals,
- Mean great economic and social burden,
- Causes economic and health catastrophe,
- Threaten with the collapse of a product domestic and international market in hours.

In case of quality improvement of products:

- Costs of medical treatments are decreasing,
- Absence from work is decreasing,
- Productivity and export is increasing,

Employment, social welfare and incomes are increasing. People spend 40% of their income on food, therefore they have every right to get as much information as possible about the food they consume. The big issue of the following years will be the stabilization of food quality since only high quality and safe food is marketable sell it either on Western or Eastern markets. This can be realized by the help of a well-managed food safety institution. A reform has just started on the field of the Hungarian food communication, with major emphasis on the consumers' guidance. The more information the producers and processors possess and offer to the consumers the more market accession they may rely on.

REFERENCES

- [1] H. Dixon, F. Thomas, "The Ingenuity Gap", Vintage, London, 2001
- [2] O. Morton "Is This What It Takes to Save the World?" Nature. Vol. 447. 2007, pp. 143-144.
- [3] E. U. von Weizsäcker "Factor Four' and Sustainable Development in the Age of Globalization", In: Keiner, Marco (ed): The Future of Sustainability. Springer, 2006, pp.179-192.
- [4] H. Norberg "Sustainable Economies – Local or Global?" In: Keiner, Marco (ed): The Future of Sustainability. Springer, 2006, pp. 99-116.
- [5] M. Keiner (ed.) "The Future of Sustainability", Springer, 2006
- [6] P. R. Ehrlich, A. E. Ehrlich, "One with Niniveh: Politics, Consumption, and the Human Future". Island Press, Washington, D. C., 2004 pp. 45-47.
- [7] I. Serageldin "The Rice Genom. World Poverty and Hunger. The Challenge for Science". Science. Vol. 296, 2002, pp. 54-58.
- [8] H. E. Daly, J. Farley "Ecological Economics: Principles and Applications", Island Press, Washington, D. C. 2003, pp. 125-128.
- [9] G. De Fontguyon, E. Giraud, L. Rouached "Qualite des produits alimentaires et marques de filieres", Sociologie du Travail, Vol. 45. No.1., 2008, pp. 77-94.