

Surplus Value of Organic Food and Farming

Joris Aertsens, Koen Mondelaers, Guido Van Huylenbroeck

Abstract – This document presents a multidisciplinary research project concerning a possible surplus value for Organic Food and Farming (OFF). The project has started January 1st 2006 and ends November 30th 2007. By weighing results collected through a review of the literature it will be scientifically assessed whether or not OFF outperform conventional food and farming from a point of view of environment friendliness, nutritional value and safety. Net benefits for society will then be calculated indicating whether the present support given to OFF is at the optimal level. The scientific evidence will be compared with the perception of 400 Flemish consumers. Based on potential gaps between evidence and perception, combined with consumer characteristics, interesting suggestions for communication and promotion strategies concerning OFF will emerge.¹

A lot of studies mention that organic production is more environment friendly, especially on the basis of the prohibition of synthetic fertilizer and pesticides. The prohibition on these products directly reduces the risk of environmental contamination and contributes to a higher biodiversity which is observed on or close to organic fields. By means of a general and more detailed overview of the literature losses of nitrogen and phosphor and spread of pesticides are studied. Moreover for pesticides the comparison will be made specifically on the basis of an existing evaluation system for pest management resources (POCER). The impact on the environment will be also studied by means of life cycle analysis. Costs and benefits of organic product(ion) for the overall society are estimated. This leads to recommendations concerning the optimal level of support for organic agriculture.

This research of the potential surplus value of organic products for human health is focused on vegetables. A number of studies indicate that organic vegetables have a higher nutritional value, also there are indications for a surplus value concerning

food safety. Within the framework of this project a literature overview will be made, but not in a traditional way. The collected data from the literature will be screened and weighed on their reliability and level of detail. In this way we create a much larger and powerful database.

Concerning nutritional value organic vegetables possibly score better on the level of vitamin c, carotenoids and polyphenoles. To this last group of components anti carcinogenous properties are assigned. Concerning food safety especially the residues (of pesticides and nitrates) and natural contaminants (mycotoxine alternariol) are relevant. Concerning microbiological safety there are possibly differences in the presence of pathogenic micro organisms such as Salmonella, Listeria and E. Coli.

By linking these data to a consumption database and using probabilistic techniques also the direct impact of the possible differences with regard to nutritional value and food safety between organic and conventional food for the consumer population is assessed (EU Scientific Steering Committee, 2000). The impact of government policy in promoting organic food on the intake of relevant feeding components can thus be calculated.

In a last part of the project the perception of the consumer is examined with respect to OFF. A lot of attention is given to the possible gap between consumer perception and scientific facts. The facts on nutritional value, environment friendliness and food safety as found in the first parts are compared with the perception. An potential surplus value of organic food is its taste. This research will provide insights concerning the information that can be communicated to the consumer. Also the sensitivities of consumers, and optimal media for communication are examined. Recommendations for future communication strategies are communicated.

Corresponding author: Joris.aertsens@ugent.be .

The following researchers at Ghent University, Belgium are also involved in the project:

Unit of "Agricultural Economics": Guido Van Huylenbroeck, Wim Verbeke, Joris Aertsens, Koen Mondelaers;

Unit of "Food safety and quality": John Van Camp, Bruno De Meulenaer, Frank Devlieghere, K. Baert, I. Vandekinderen, Isabelle Sioen

Unit of "Crop protection": Walter Steurbaut, S. Vergucht, E. De Backer
Faculty of Medicine: Stefaan De Henauf

Also the consumer organisation vzw VELT (Geert Gommers) is involved.