Universität für Bodenkultur Wien
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Master thesis

Title of Master thesis

Comparison of European and North American organic standards and labels

Survey of North American consumers' perception of organic labels and motives for buying organic food

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Vienna, June 2011

Acknowledgment

I would like to thank my advisor Ao.Univ.Prof. Dipl.-Ing. Dr. Rainer Haas for his support and encouragement during this research project, my parents for their financial and moral support and my brother Georg for his help and assistance.

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1 Introduction

1.1 Problem definition

About 35 million hectares of world's land is managed organically throughout the world by now (cf. WILLER, 2010a, 19). In the last decade from 1999 to 2008 organic farmland area has almost tripled (cf. WILLER, 2010b, 35). The largest areas of organic farmland are found in Oceania with about 35% of the world's organic land, followed by Europe and Latin America with 23% each. Asia counts 9%, North America 7% and Africa 2.5% of world's organic farmland (cf. WILLER, 2010a, 20ff).

With growth of organic farmland and more and more producers, 1.4 million producers in 2008, global market for organic products is rising too (cf. WILLER, 2010a, 19). 2008 organic market sales amount to 50.9 billion U.S. dollars. For comparison, 2005 sales only reached 33.2 billion U.S. dollars. The biggest markets for organic food and drinks are North America, worth about 23 billion U.S. dollars and Europe with about 26 billion U.S. dollar sales in 2008 (cf. SAHOTA, 2010, 54ff). But especially for North America it's challenging to meet consumers rising demand for organic products (cf. SAHOTA, 2010, 55). Thus it appears that imports of organic products and also knowledge about different policies and regulations in exporting countries are necessary. For example in the U.S. the organic food production act of 1990 was the first defining 'organic' and organic certification (cf. USDA, 2010a, s.p.). National Organic Standards were implemented in the year 2002 (cf. DIMITRI and OBERHOLTZER, 2009, 10). In Europe the first regulations already came out in 1991 and new regulations were implemented in 2009 (cf. WILLER, 2010c, 137). In 2010 the European Union also introduced a new organic farming logo that is used for labeling organic products within the European Union (cf. EUROPEAN COMMISION, 2010, s.p.).

1.2 Aims

The theoretical part of this thesis will give a short overview of organic farming in general and then focus on standards and regulations of organic farming in Europe and North America. Main differences will be emphasized and compared to each other. Therefore also the new organic farming logo of the European Union will be illustrated and compared to the U.S. organic farming logo. Product labeling will be discussed then. Also explanatory models from social psychology about consumer's perception of quality labels will be presented in this part of the thesis.

The aim of the empirical part is to find out, if North American consumers know organic farming logos and what they combine/associate with organic food. Furthermore motives for buying/consuming organic food will be examined.

Afterwards the results of theoretical and empirical investigations should be implemented in recommendations for the introduction of European organic products on the North American market.

1.3 Research questions

That implies following research question, which will be discussed in this thesis:

- What are the main differences in organic farming standards and regulations between Europe and North America?
- What do consumers associate with labels/quality seals on food products?
- Do North American organic consumers know organic labels, do they know the European organic label and what do they associate with organic food?
- What are the North American organic consumers' motives for buying organic food products?

- Can European labeled organic products be introduced on the North American market without any further modifications?

1.4 Materials and method

The theoretical part is the foundation for discussion of the thesis' aims and will elaborate the first two research questions as well. 'The world of Organic Agriculture' by Willer and Kilcher (2009 and 2010), 'Looking east, looking west' by Haas et al. (2010), 'The Ethics of What We Eat' by Singer and Mason (2006) and the European and North American standards and regulations for organic farming build up the base of the theoretical part. Furthermore international studies and articles about organic agriculture, labeling and social psychology will be used to answer the research questions.

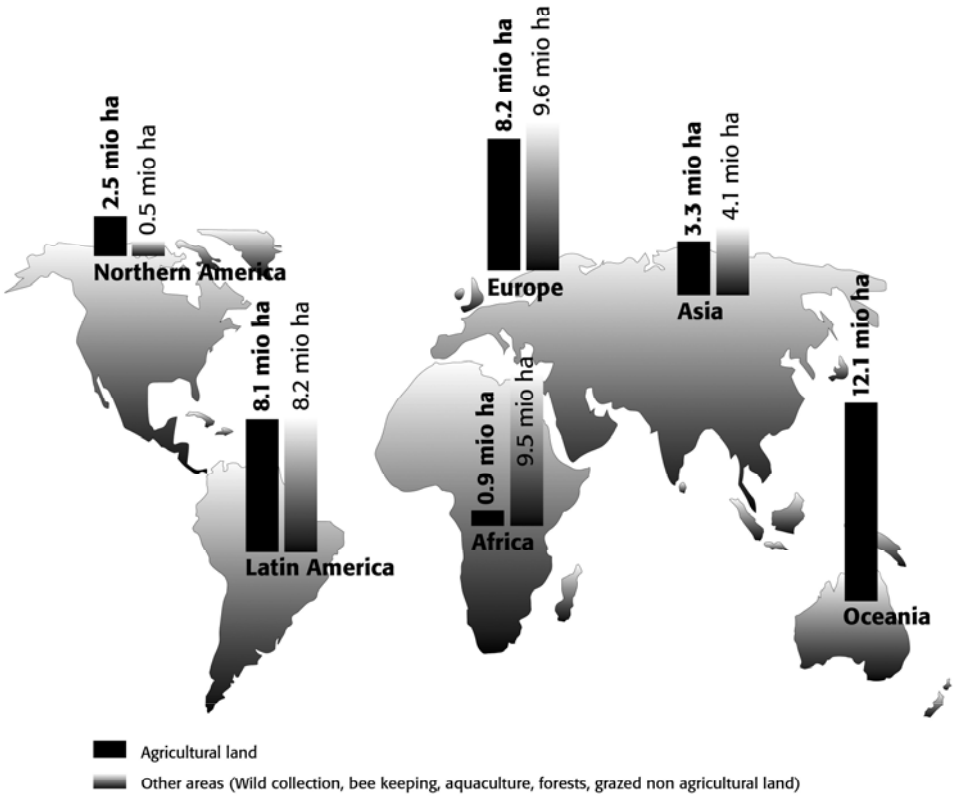
The empirical part is necessary for answering the third, fourth and fifth research question. A laddering interview with North American consumers will be conducted, concluding an association test as well. The concept of the empirical part will describe the method and structure that will be used in more detail.

2 Organic agriculture

2.1 Organic area

There are 35 million hectares of land worldwide, which is under organically management now. 1.4 million producers manage the area and most of them are found in Africa with almost half a million producers there. The following figure shows world's organic farming area.

Figure 1: World's organic farmland



Source: FIBL/IFOAM, 2010, 20.

The largest organic area is found in Oceania with 12.1 million hectares, or 35% of the world's organic land. 8.2 million hectares, or 23% percent of this land is in Europe. Latin America also manages 8.2 million hectares of organic land. 3.3 million hectares are in Asia, that is 9% of the world's organic land. In North America 2.5 million hectares, or 7% are managed organically. The

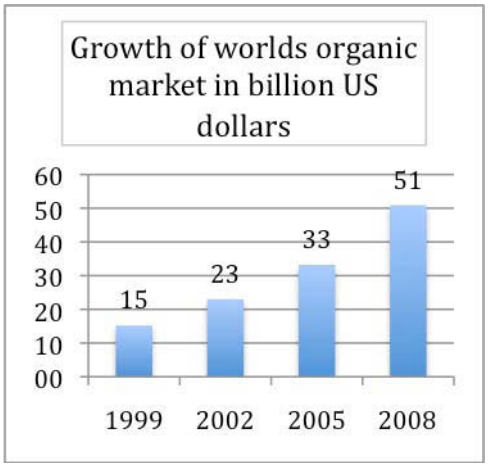
smallest area is found in Africa with 900.000 hectares, which counts only for 2.5 % (cf. WILLER, 2010a, 19ff).

2.2 Organic market

2.2.1 Market shares

Organic market showed a high growth rate worldwide in the last few years. Following figure illustrates that organic market more than tripled in the last 10 years. Now organic market is worth almost 51 million US dollars.

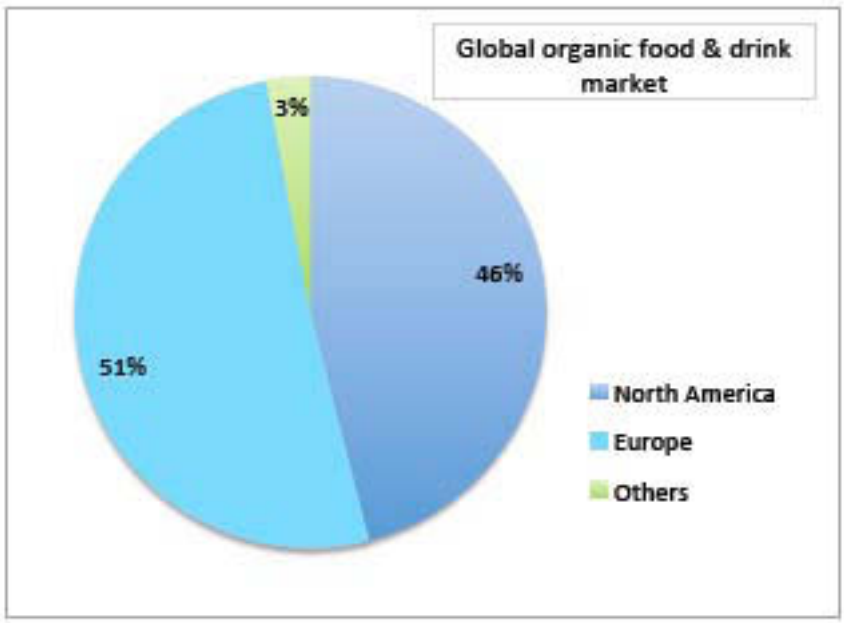
Figure 2: Organic market shares



Source: Own illustration of SAHOTA, 2010, 54.

The highest market shares of organic food are found in Europe and North America. Organic food sales were worth 26 billion US dollars in Europe and 23 billion US dollars in North America in 2008. Looking at the following figure makes it obvious, 51% of organic market shares count for Europe, 46% for North America and only 3 % for the rest of the world (cf. SAHOTA, 2010, 55).

Figure 3: Global organic food and drink market

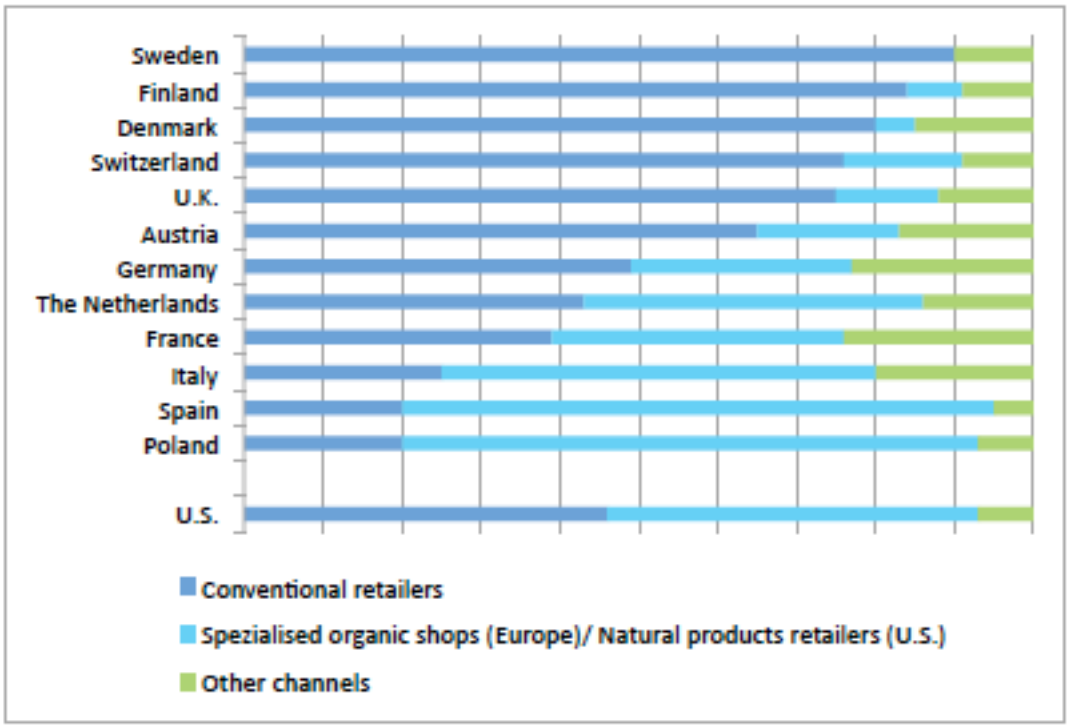


Source: Own illustration of SAHOTA, 2010, 56.

2.2.2 Organic distribution channels

Organic distribution channels changed over the years. With growing demand organic products are not found only in specialized organic stores anymore, but also in conventional grocery stores and that to a great extent. In 15 of 27 analyzed European countries over 50% of organic products are sold by conventional retailers. Sweden, Norway and Finland are leading with over 80% (cf. VAN OSCH et al., 2008, 378). Also shelves in American conventional retailers are getting filled with organic products (cf. OTA, 2006, s.p.). The following figure shows market shares of distribution channels, comparing Europe and the U.S.

Figure 4: Market shares of distribution channels in Europe and the U.S.



Source: Own illustration of VAN OSCH et al., 2008, 378; OTA, 2006, s.p.

The European data is available from the 2008 Specialized Organic Retail Report. U.S. data comes from OTA's 2006 Manufactury Survey. So probably some slight changes exist already.

2.3 Future of organic market

Despite the impact the financial crisis had in 2008, organic market probably will continue to grow in the next couple of years and is more and more heading towards getting a mature market in future. Instead of only specialized stores selling organic products, they can be bought in retail chains around the world, almost all of them also having their own private label organic products. For example the U.S. retail chain Safeway introduced '*O Organics'*, which is now one of the biggest brands in the organic food industry worldwide (cf. SAHOTA, 2010, 56). Also in Europe organic retailer brands are seen in almost every supermarket.

Due the fact that organic food can be bought in almost every supermarket now, consumers are facing a variety of organic products in stores. But they are often ≥ 30% more expensive than their non-organic counterparts (cf. HAAS et al., 2010, 33). Discounters on the other hand sell organic products often cheaper than regular supermarkets. Introduction of organic 'mainstream brands' together with discounters selling organic products cheaper and on the other side premium organic products could in fact divide organic market also in two sectors, an 'mass organic market' and ' premium organic market'. As a consequence organic farming is on the way to partially conventionalize, let's just mention for example organic factory farms or long transportation routes, to meet the huge demand. On the other side a premium market only affordable for the wealthy arises (cf. HAAS et al., 2010, 43; HOWARD, 2009, 13). Hence that's a step backwards to times were organic farming was in his early stage of development. Organic market changes are important to watch. Maybe other niches like 'local', 'sustainable' or 'slow food' are getting in the position to earn more attention from consumers in future (cf. Howard, 2009, 27). If basic principles of organic farming are left behind, organic made products maybe don't longer succeed in future anymore.

2.4 Organic consumers

Demand for organic products is still rising and retail shelves are full with organics. Hence the question of who is buying organic appears?

Organic products are often associated with healthy nutrition, no use of pesticides or synthetic substances, locality or also sustainability. Speaking of the typical organic consumer, different consumer groups like young and sportive people, seniors or also families can be mentioned (cf. MIKINOVIC, 2007, s.p.). Organic consumers, which buy organic products on a regular basis, do often know more about organic products and are also more educated (cf. ZANOLI et al., 2004, 26). Main motives for buying organic are a healthy lifestyle, hedonism and better taste of products and also gaining good conscience in facts of environment and sustainability (cf. MIKINOVIC, 2007,

s.p.). Particularly healthy lifestyle and sustainability are describing a consumer group often associated with buying organic. The so-called LOHAS, which means Lifestyle of Health and Sustainability, define an important consumer group on the organic market. Especially in Western Europe organic consumer groups are often described as LOHAS. For LOHAS quality and good taste of products are important. But also good production standards and the sustainable character of producing food are necessary. Further their own health and social responsibility rank high among their principles (cf. HAAS et al., 2010, 26).

Overall health is one of the most important reasons for organic consumers buying organic products. 48% of Europeans and 57% of North Americans indicate that they buy organic, because it's healthier for them. Further reasons also mentioned are 'it's better for my children' or 'it's better for the environment'. Also important to notice is that a higher price is the main reason for not buying organic products (cf. NIELSEN, 2007,1f).

To sum it up, it can be stated that organic consumers are concerned about health, environment and good manufacturing standards. They like good and tasty food and are found in different age groups. But it has to be mentioned that there is no 'typical' organic consumer found anymore. There are more or less different target groups. For example a survey conducted by the 'Institut für sozial-ökologische Forschung' (Institute of social-ecological research) in Germany defined five target groups of organic consumers: a group that is holistically convinced, an established upscale target group, a 50+ health oriented group, a group of distanced skeptics and a group of young and undecided (cf. ISOE, 2003, 20).

With the huge range of opportunities consumers are confronted on the organic market, many questions appear. For example: How do we know what's really produced organic? Are there any rules/regulations for producing organic? What do organic labels or quality seals mean? Among others these questions will be discussed in the following chapters.

3 Organic standards and regulations

3.1 General overview

3.1.1 Development of standards and regulations

Once organic farming was only an idea of progressive thinking pioneers, today the former niche market is a market segment growing towards being a real alternative or even competition to conventional farming.

But with rising of the organic market, rules and standards became necessary. Therefore the International Federation of Organic Agriculture Movements IFOAM, which was founded in 1972, developed the IFOAM Basic Standards (IBS) in 1978 and published them in 1980. This international guideline also influenced the 1999 adopted 'Guidelines for the Production, Processing, Labeling and Marketing of Organically Produced Foods' of Codex Alimentarius Commission (cf. IFOAM, 2009, 1ff).

In Europe and the U.S. first drafts of governments for defining and controlling organic farming were generated in the late 80's. The first European regulation valid within the EU came into force in 1993, called 'Council Regulation EEC No. 2092/91'. The 2007 published new 'Council Regulation EC 834/2007' was implemented in 2009. Also the now mandatory organic farming logo was published in 2010 (cf. IFOAM EU GROUP, 2009, 8). In the U.S. 1990 'Organic Food Production Act OFTA' stated to implement national standards for organic produced and labeled food. In 2002 the USDA implemented the 'National Organic Program NOP', which is in force since then (cf. GOLD, 2008, s.p.).

3.1.2 Import regulations

Like mentioned before, Europe and North America are the biggest markets for organic food. Because supply can't meet demand in certain cases importing organic food from third countries is necessary. Hence, beside

organic food standards, import regulations are important too. Therefore certifying agencies operate as control bodies in organic food production. But for example in the EU and the U.S. and also in Japan certifying agencies from third countries have to be authorized before importing organic products. For the approving process the exporting country needs to accept the standards and regulations of the importing country, or there is a bilateral agreement between those two countries. A bilateral agreement means that both countries accept the other countries standards and from certifying agencies controlled products as equal and that they can be sold without further requirements. For example the U.S. and Canada have such an agreement since 2009. The U.S. and the European Union are also in negotiations about a bilateral agreement, but they didn't reach a settlement yet (cf. HUBER et al., 2010, 77f).

3.2 Differences between Europe and North America

Organic farming standards in Europe and the U.S. are consistent in many parts, but noteworthy differences are found if examining them.

To illustrate the differences between European and U.S. organic farming standards the 'Council Regulation (EC) No 834/2007 of 28 June 2007 on organic production and labeling of organic products and repealing Regulation (EEC) No 2092/91' of Europe and the 'National Organic Program (NOP) standards' of the U.S., in force since 2002, will be compared in this chapter.

The European Council Regulation No 834/2007 together with the Commission Regulation (EC) No 889/2008, which contains detailed rules for implementation of Council regulation No 834/2007 are to be found at http://eur-lex.europa.eu/. The U.S. National Organic Program is available at http://www.nationalaglawcenter.org/readingrooms/organicprogram/.

3.2.1 Comparison of European and U.S. organic standards

First the structure of standards and main contents will be displayed. The **European Council Regulation (EC) No 834/2007** is subdivided in seven parts from title I to VII. The **National Organic Program** of the U.S. is also divided in seven subparts, from A to G. They are divided as follows:

European Council Regulation (EC) No 834/2007	U.S. National Organic Program
I Aim, scope and definitions	A. Definitions
II Objectives and principles of organic production	B. Applicability
III Production rules	C. Organic production and handling requirements
IV Labeling	D. Labels, labeling and market information
V Controls	E. Certification
VI Trade with third countries	F. Accreditation of certifying agents
VII Final and transitional rules	G. Administrative

Table 1: Content of Organic Standards

Source: PUBLICATIONS OFFICE, 2010; THE NATIONAL CENTER FOR AGRICULTURAL LAW RESEARCH & INFORMATION, 2010.

3. Organic standards and regulations

In the **European Council Regulation (EC) No 834/2007** main points of organic agriculture and standards are listed before subpart I starts.

I. Aim, scope and definitions

Aim and scope are explained first. Then important terms like ‘organic production’, ‘control body’ or ‘labeling’ are defined.

II. Objectives and principles of organic production

Objectives of organic agriculture are explained in this part of the standards. The main objectives are:

- To build up a sustainable management system,
- To produce high quality products and
- To produce a variety of food products.

Further principles of organic agriculture are described then and are following:

- Use of living organism, resources from organic production and mechanical production methods.
- No use of genetically modified organisms (GMO’s) or products made with it and strict restrictions in use of synthetic production goods.
- Further care has to be taken to enhance soil richness, to protect animal welfare and plant health, to use organic feed and to enhance ecological balance.
- Moreover it is necessary to use organically resources for food production and to make sure to produce food with care and therefore use biological, mechanical and physical production methods.

III. Production rules

Main production rules, farm production rules, feed production rules and processed food production rules are listed in this part.

Main production rules are following:

- Use of GMO's is prohibited
- Use of ionizing radiation is prohibited.

Farm production rules are following:

- Plant production: crop rotation, prevention of soil erosion, cultivation techniques, use of organic seeds and no use of mineral nitrogen fertilizers are necessary. Further rules for wild plant harvesting and production of seaweed are explained
- Livestock production:
    - Livestock should be born and raised organically.
    - Exceptions in case of conversion period are possible.
    - It's necessary to protect animal health and welfare and give livestock the opportunity for outdoors and fresh air.
    - Moreover organically and non-organically livestock have to be raised separated.
    - Also breeding and feed of livestock is explained in detail. For example use of growth hormones and synthetic amino acids is prohibited. Other allowed and not allowed substances are listed in Commission Regulation (EC) No 889/2008.

In the case of feed production rules it's important to notice that use of chemically synthesized solvents is prohibited. Further speaking of processed food production rules, the list of allowed and prohibited substances is important.

IV. Labeling

Following facts are important labeling organically produced products:

- Products produced in accordance to the standards requirements and with no less than 95% organic ingredients can be labeled with the terms ‘Bio’ or ‘Öko’. In addition to that also the code number of the control authority or control body that controls the operator has to be labeled.
- Pre-packaged food has to be labeled with the community logo. Further place of production also has to be labeled with ‘EU-Landwirtschaft’ (EU-Agriculture), if produced in the EU; ‘Nicht-EU-Landwirtschaft’ (Non-EU-Agriculture), if not produced in the EU or ‘EU-/Nicht-EU-Landwirtschaft’ (EU-/Non-EU-Agriculture), if produced partially in the EU and partially not.
- For products of third countries the community logo is optional. If products are labeled with it, code number of control authority or control body and place of production has to be labeled too.

V. Controls

This part describes the control system.

- Compliance with the control system is obligatory for all operators that are included in the process of production and trading of organic products.
- It’s necessary to notify the competent authority and to comply with the control system.
- In the case of major non-compliance, prohibition to sell products labeled as organic can be imposed by the control body.

The competent authority can choose to confer the control authority to one ore more control bodies. Requirements for control bodies are following:

- Objectivity and qualified personnel

- Expertise, equipment and infrastructure
- Accreditation by a competent authority.

VI. Trade with third countries

Organic products from third countries can be imported to the EU, if the production standards are conform with the EU standards and the competent control body is approved. Approved control bodies are listed in a control body register. They are controlled and approved on a regular basis.

VII. Final and transitional rules

Free movement of goods within the EU is emphasized in the final and transitional rules. Further list of control bodies and information needs to be sent to the commission on a regular basis (cf. PUBLICATIONS OFFICE, 2010, s.p.).

The U.S. **National Organic Program** starts with Definitions.

A. Definitions

Terms like for example ’buffer zone, ‘compost’, ‘label’, or ‘tolerance’ are explained and defined to prevent misunderstanding or misinterpretation of the following rules.

B. Applicability

Following subjects are described in this part:

- Certifying: What has to be certified?

- Exclusions, which are outlined later in the document.
- Recordkeeping: all activities during production, harvesting and handling need to be displayed and available for inspection.
- Allowed and not allowed substances and methods, which are also outlined later in the document.

C. Organic production and handling requirements

The main points of organic production and handling requirements are:

- The production and handling system plan: it has to include practices, procedures and substances used, a monitoring and recordkeeping plan, and additional information if requested of a certifying agency.
- Land requirements, soil protection and crop rotation. Therefore also time for spreading manure and allowed substances are specified.
- Organic seeds and planting stock may be used. If they aren't commercially available non-organic seeds or plant stocks can be used to produce organic crop.
- Crop pest and diseases: activities to prevent them should be implemented. If there are problems tough, only allowed substances may be used and actions may be set.
- Origin of livestock: the livestock has to be from organic breed. Exceptions are poultry that is under organic management from the second day of life, milk or milk products from dairy animals one year after transition and offspring of breeder stock that is fed organically since the last third of gestation.
- Livestock feed and living conditions are specified. Feed has to be organic and meet all nutritional requirements. The livestock needs to get access

to outdoors, fresh airs, a clean and dry bedding and shelter. Also practices to prevent pests and diseases are necessary.

- Temporary variances are possible, but only under certain circumstances like for example a drought or a tornado and are adopted individually.

D. Labels, labeling and market information

The term ‘organic’ can only be used for products that were produced under these standards. There are three different opportunities for labeling organic products corresponding to the amount of organic ingredients:

- ‘100 % organic’: 100 % or all ingredients have to be organic (not including water and salt).
- ‘Organic’: 95% of the ingredients have to be organic (not including water and salt).
- ‘Made with organic’: 70% of the ingredients have to be organic (not including water and salt).

Products labeled with ‘100 % organic’ or ‘organic’ may use the USDA organic seal and information of the certifying agent. Products labeled with ‘made with organic’ are not allowed to use the USDA organic seal. Products with less than 70 % organic ingredients can’t use the term ‘organic’, with exception of the ingredient-list where organic ingredients can be named.

E. Certification

The basic points of the certification process that an operation needs to go trough to get certified, are the following:

- The general requirements claim that the operation has to comply with the National Organic Program standards. Further an organic production and

handling system plan has to be prepared. Also agreement on inspections, insight in all records up to 5 years ago is necessary and certifying fees will accrue.

- The applying process is divided in the application of the operation, a review from a certifying agent followed by an inspection and a review of the inspection report trough a different certifying agent. If the certifying agent considers the requirements as complied, the operation can be certified organic.
- Non-compliant operations can try to correct the issues and then apply again.
- Certified operations have to pay annual fees, update the organic production and handling system plan, update minor-compliances and agree on an inspection in the first 6 months and following annual inspections.

F. Accreditation of certifying agents

This part of National Organic Program standards describes the process of certifying agents accreditation. Following requirements have to be observed:

- Qualified domestic or foreign certifying agents can apply. Foreign applicants need to provide information that their governmental standards meet the requirements of the National Organic Programs standards or that there is a bilateral agreement between their country and the U.S.
- Accreditation is valid for 5 years.
- General requirements:
    - Expertise and ability of the applicant is necessary.
    - The personnel need expertise and have to be trained.

- Further an annual performance evaluation has to be done and fees have to be paid.

- If operations are certified, annual reports and fees come up for the certifying agents.

Moreover it's noteworthy that private or governmental operations can apply to be certified as certifying agents.

G. Administrative

In this part the national list of allowed and prohibited substances in organic agriculture is displayed first. Further it's pointed out that state organic programs can be developed, if they meet the requirements of the national standard. Also fees, compliance and inspections are explained again (cf. THE NATIONAL CENTER FOR AGRICULTURAL LAW RESEARCH & INFORMATION, 2010, s.p).

3.2.2 Differences of European and U.S. organic standards

The structure and the main principles of the European and U.S. organic standards, as shown in the previous chapter, are the same. But some quite important differences are found examining them.

Production and handling requirements

	EU	U.S.
Plant production	• Restriction for N (nitrogen) in soil: 170 kg/year and hectare.	• C:N (carbon,nitrogen) ratio of compost has to be between 25:1 and 40:1.
Livestock production	• Different requirements for non-organic animals used for organic livestock production, e.g.: milk and milk products can be used after transition period of 6 months.	• Different requirements for non-organic animals used for organic livestock production, e.g.: milk and milk products can be used after transition period of 12 months.
Living conditions	• Detailed requirements for living conditions, e.g.: time for being outside, minimum space per animal, minimum age/weight for slaughter.	• General requirements for living conditions, but no detailed rules.
Feeding	• Herbivores need to get 50% of their feed from own farm. • Feed from in-conversion farm ≤ 30% is allowed, or if from own farm ≤ 60% is allowed.	• Specific requirements for dry mater intake. • Feed from in-conversion farms isn't allowed.

Veterinary treatment	• 3 courses of treatment/ year are allowed. Waiting time before slaughter after a treatment is the double amount of time as regulated by law for conventional livestock.	• Animals treated with antibiotics, or substances containing prohibited (non-) synthetic substances, can't be sold/labeled organic.
Conversion period	• 2 years for plants and plant products, grassland or perennial forage for feeding only. • 3 years for perennial crops.	• 3 years conversion period in every case. • Buffer zones (areas between organic/non-organic farmland) are required.
GMO's	• No use of GMO's at all. Threshold limit of 0,9 %, if GMO's got into organic products unintentionally.	• No use of GMO's, but no certain rules are available.

Table 2: Differences in production and handling requirements

Source: PUBLICATIONS OFFICE, 2010; THE NATIONAL CENTER FOR AGRICULTURAL LAW RESEARCH & INFORMATION, 2010.

Labeling

	EU	U.S.
Labels	• ‘Bio-‘ or ‘Öko-‘ can be used for products containing ≥ 95% organic ingredients. • Place of production has to be labeled: EU-Agriculture, Non-EU-Agriculture, or EU-/Non-EU-Agriculture.	• ‘100 % organic’ can be used for products containing only organic ingredients. • ‘Organic’ can be used for products containing ≥ 95% organic ingredients. • ‘Made with organic ingredients’ can be used for products containing ≥ 70% organic ingredients.
In-conversion labeling	• In-conversion organic plant products can be labeled ‘Erzeugnis aus der Umstellung auf den ökologischen Landbau’ or ‘Erzeugnis aus der Umstellung auf die biologische Landwirtschaft’ (means product is from in-conversion organic agriculture), if they are harvested ≥ 12 months after conversion.	• In conversion organic products can’t label the term ‘organic’ anywhere on the product.

Table 3: Differences in Labeling

Source: PUBLICATIONS OFFICE, 2010; THE NATIONAL CENTER FOR AGRICULTURAL LAW RESEARCH & INFORMATION, 2010.

Certification, Controls

	EU	U.S.
Control system	• Every member state sets up a control system. • Therefore one or more competent authorities are nominated. They have to approve one or more control bodies then. Control bodies are accredited with EN 45011 or ISO Guide 65.	• The federal authority sets up accreditation and all certifying agents.
Exceptions	• No exceptions.	• Operations that earn 5000 U.S. $ or less per year trough organic sales don't have to be certified by USDA accredited certifying agents. Though they have to comply with the USDA standards and can label their products 'organic' then.

Table 4: Differences in control systems

Source: PUBLICATIONS OFFICE, 2010; THE NATIONAL CENTER FOR AGRICULTURAL LAW RESEARCH & INFORMATION, 2010.

Imports

	EU	U.S.
Import standards	• In the EU organic products only can be imported, if a competent authority of the EU approved the certifying agency. • Therefore 3 different lists for importing are found now. - First, a list of inspection bodies with equivalent inspection system and production standards. - Second, a list of inspection bodies that are accredited with EN 45011/ISO 65 and have a compliant production standards. - Third, a list of countries that have implemented rules equivalent to EU production standards and inspection systems.	• In the U.S. organic products only can be imported, if a competent authority of the U.S. approved the certifying agency. • Therefore the foreign country's standards have to meet the U.S. organic standards, or there is a bilateral agreement between the U.S. and the foreign country.
Equivalency agreements	• The EU has equivalency agreements with: Argentina, Australia, Costa Rica, New Zealand, India, Israel Switzerland and Tunisia.	• The U.S. and Canada have an equivalency agreement since 2009. • Further recognition agreements with Denmark, India, Israel, Japan, New Zealand and the U.K. are found.

Table 5: Differences in importing

Source: PUBLICATIONS OFFICE, 2010; THE NATIONAL CENTER FOR AGRICULTURAL LAW RESEARCH & INFORMATION, 2010; HUBER et al., 2010, 76f.

In conclusion it can be stated that there are important differences in production requirements. It seems that European requirements for this part are more specific and thus more severe. But it appears that U.S. standards are stricter in fact of medical treatment of organic livestock. They have longer conversion periods for products and no labeling for in-conversion organic products. Controlling and certification system vary also between those two nations. Negotiations about a bilateral agreement between Europe and the USA lead to the question if harmonization of standards would be a solution to prevent problems concerning importing organic products. Nevertheless differences in labeling are also notable and will be discussed in the next chapter in more detail.

4 Organic labeling

4.1 Product labeling

Main functions of labels are to inform consumers about the product and to help selling them. With more and more pre-packaged food products on the market labeling plays an important rule differentiating them, but also enhancing brand loyalty trough consumers. Food labeling in fact of food safety and prevention of fraud got more important too (cf. CHEFTEL, 2005, 1). For example food scandals (like BSE, dioxin, etc.) made people anxious about what to buy and played a part in enhancing the organic food market in recent years (cf. HAAS et al., 2010, 31). Hence that organic food labeling is necessary to inform consumers and to ensure that organic products accomplish organic standards.

4.2 Organic quality seals

Together with the European and U.S. organic standards also national organic labels have been established. Recently the European Union introduced a new national organic label that is mandatory for all pre-packaged organic products produced under the EU organic standards.

4.2.1 EU organic label

The new organic logo is valid since the first of July 2010. Beside the organic logo also the number of the control authority or control body has to be placed. In addition to that it has to be labeled, if the product is from EU-Agriculture, Non-EU-Agriculture, or EU-/Non-EU-Agriculture (cf. BECK et al., 2010, 3ff).

Figure 5: EU organic logo

Source: European Commission (2010)

Figure 6: EU organic logo (old)

Source: European Commission (2010)

For comparison only, the old EU organic farming logo is illustrated too.

4.2.2 U.S. organic label

The so-called USDA organic seal is the following:

Figure 7: USDA organic seal

Source: USDA (2010b)

The U.S. organic logo was published with the introduction of the National Organic Program. Only products with labeled '100 % organic' or 'organic' are allowed to use the USDA organic seal. Beside the organic seal also the seal/mark of the certifying agent has to be labeled (cf. USDA, 2008, s.p.).

4.2.3 National organic and organic farming association labels

Labels of different nations (Germany, Denmark, etc.) and also organic farming associations are used beside public organic logos/labels. The following figure shows common national and farming association labels in Europe.

Figure 8: National and farming association labels

Source: CANAVARI et al., 2007, 27.

For example Denmark implemented the logo called 'Ø' (Økologimaerke) and France the AB-Logo (AB means Agriculture Biologique). In Austria the 'Austrian Bio Zeichen' (means Austrian Organic Label) can be used. It's also used for guaranteeing Austrian origin (70% of ingredients have to be Austrian

origin) and is colored red and white therefore. But it is also available in black and white, guaranteeing organic production only.

In Germany a variety of organic labels is available. The most popular organic labels are ‘Demeter’, ‘Bioland’ and ‘Naturland’ (cf. HAAS et al., 2010, 31f). For example ‘Demeter’ is an international organic certification organization founded by Rudolf Steiner, a pioneer of organic agriculture. The label and first standards were already introduced in 1928 (cf. DEMETER, 2010,s.p.). ‘Bioland’ is an organic farming association with higher production standards in certain points compared to the EU-standards. Also ‘Naturland’ is a farmers association in Germany and requires higher standards too (cf. TENFELDE, 2008, 13f).

Organic farming associations can also be found in the U.S.. ‘Organic Valley’ was founded in 1988 by a group of farmers in Wisconsin and is now the largest independent organic association found in the U.S. with sales of about 200 million dollars a year (cf. ORGANIC VALLEY, 2010a, s.p.; NELSON, 2004, s.p.).

Figure 9: Organic Valley

Source: ORGANIC VALLEY, 2010b.

‘Earthbound Farm’ is a farming association originated in California in 1984. Now their manly vegetable and fruit products can be found in most supermarkets or organic specialized stores in North America (cf. EARTHBOUND FARM, 2010, s.p.). It has to be mentioned that since 1999 the conventionally producing company ‘Tanicmura and Antle’ hold shares of

Earthbound Farm (cf. Howard, 2009, 20). Conventional companies owning organics, or holding shares will be discussed later too.

Figure 10: Earthbound Farm

Source: EARTHBOUND FARM, 2010.

A further association in New York State is called 'Northeast Organic Farming Association of New York' or NOFA-NY. There are other organizations of NOFA also in Connecticut, Massachusetts, New Hampshire, New Jersey, Rhode Island and Vermont. NOFA first started in 1971 and is a non-profit organization that works with farmers, gardeners and consumers for a sustainable agriculture. (cf. NOFA-NY, 2010, s.p.; FRASER, 2009, s.p.).

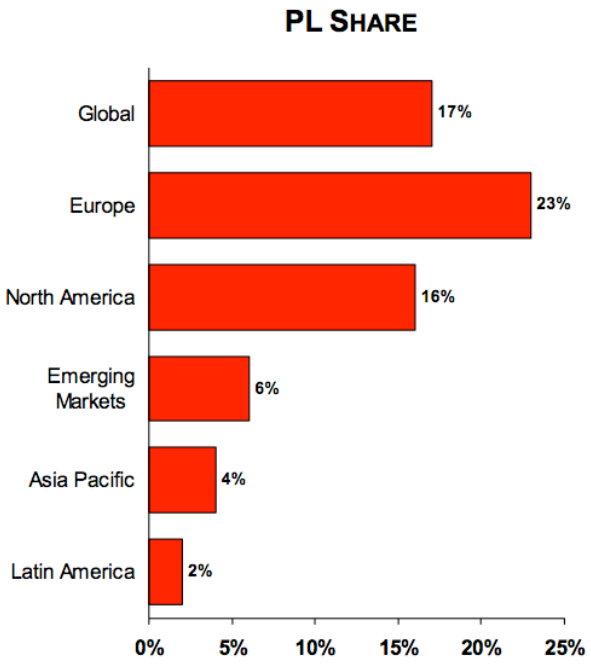
4.3 Organic private label products

In the U.S. next to products with the USDA seal mainly organic private label (PL) products capture the market for organics. Also in Europe organic private labels are common in supermarkets. With organic products being found in almost every grocery store in Europe and the U.S. now, retailers decided to introduce their own organic brands and sell them in stores.

Private labels, or also called retailer brands, are labels introduced and owned by a retailer. They stay in contrast to national brands, which are introduced and owned by companies in the industry.

The following graph shows private labels shares around the world.

Figure 11: Conventional and organic PL shares



Source: A.C. NIELSEN, 2005,3.

The highest shares of PL's are found in Europe and North America. Retailer concentration has a big influence on private label development. Also almost everyone buys private labels, so no typical private label consumer is found.

Continuing of rising variety of retailer brands is expected and probably will continue with higher concentration of retailers (cf. A.C. NIELSEN, 2005, 3ff).

The strategy of private label placement changed over the years. When they first were introduced in the seventies, they were counterparts to discounter products. Then in the eighties also 'me-too' products were popular in the private label category. With 'me-too' products retailers were copying national brand products. Another decade later not only price was the main driver of private labels. Retailers also established quality or premium private labels (cf. JONAS and ROOSEN, 2004, 5f). As a consequence private labels also began to influence the organic market when organic products appeared in retailers. Retailers in Europe or North America have launched their private labels. Mintel's Global New Products Database found out that in 2003 only about 35 new organic retailer brands were introduced on the market, but in 2007 already 540 new organic retailer brands were placed in stores (cf. DRIFTMIER, 2009, s.p.).

To give an insight in the variety of retailer brands, examples of private labels in Europe and North America will be discussed next. The European retailers with highest turnovers in 2006 were Carrefour with 59,4 billion Euros, Tesco with 43,5 billion Euro and the REWE group with 37,7 million Euro turnover. Only the U.S. retailer chain Wal-Mart's turnover was higher with 124 billion Euros (cf. BMLFUW, 2008, 83). They all have their own organic brands placed in stores.

4.3.1 Carrefour

For example Carrefour introduced 'Carrefour Bio', which is called 'Carrefour Agir Bio' now, in 2005 (cf. HAAS et al., 2010, 32). Carrefour is the leading seller of organic products in France and is selling about 1.733 organic products in 13 countries (cf. CARREFOUR, 2008, s.p.).

Figure 12: Carrefour Agir Bio

Source: CARREFOUR, 2010.

4.3.2 Tesco

'Tesco Organic' is the organic brand introduced by Tesco. The brand includes 1200 organic products (cf. TESCO, 2007a,s.p.).

Figure 13: Tesco Organic

Source: TESCO, 2007b.

4.3.3 REWE group

The REWE group, also leader in organic private label sector, for example owns the Austrian private label 'ja! Natürlich' ('yes! naturally). REWE is selling more than 1000 store keeping units (SKU) of 'ja! Natürlich' already (cf. HAAS et al., 2010, 32f).

Figure 14: Ja! Natürlich

Source: JA!NATÜRLICH, 2010.

4.3.4 Safeway

In the U.S. organic private labels are on the rise too. The retail chain Safeway introduced 'O' organics in 2005 and is now one of the leading brands in organic industry with over 300 products (cf. SAHOTA, 2010, 56).

Figure 15: O Organics

Source: N.N., 2010a.

4.3.5 Whole Foods

The leading organic & natural retailer is Whole Foods, with almost 300 stores worldwide (cf. SAHOTA, 2010, 56). One of their organic brands is called '365 Organic Everyday Value', which is also available in a non-organic variant and called '365 Everyday Value' then (cf. WHOLE FOODS, 2010, s.p.).

Figure 16: 365 Everyday Value

Source: WHOLE FOODS, 2010.

If the 365 Everyday Value product is organic, the term 'organic' is labeled on the logo.

The following two retailer chains Wegmans and Tops are mentioned, because they are located mostly in New York State, where the empirical part of this thesis is implemented.

4.3.6 Wegmans

For example Wegmans is a retail chain mainly located in New York State and Pennsylvania. Annual turnover is about 5.15 billion dollars. The company was voted No. 3 at the '100 Best Companies to Work For' of Fortune magazine in 2010. Wegmans brand 'Wegmans Organic – Food you feel good about' counts over 200 items (cf. WEGMANS, 2010a, s.p.).

Figure 17: Wegmans Organic

Source: WEGMANS, 2010b.

4.3.7 Tops

Tops - Friendly Markets is located in New York State and Pennsylvania too. Their organic private labels brand is called 'Full Circle'. But it has to be mentioned that only some products are organic, also 'natural' products are found beyond this label (cf. TOPS, 2010, s.p.).

Figure 18: Full Circle

Source: Tops, 2010.

Wegmans and Tops are both listed under the 50 member-owners of the Topco Associates. Topco also offers brands to the membership including for example one of their premium/value added brand 'Full Circle'. Beside Tops

'Full Circle' is also sold at other members of Topco (cf. TOPCO, 2010, s.p.; HOWARD, 2009, 25).

4.3.8 Trader Joes

Trader Joes is a retail chain, owned by the German 'Aldi' Co-founder Theo Albrecht, which made his way from California to different states in America including big cities on the east coast like Boston, Washington D.C. and New York City. The concept of the retail chain is different compared to other retail chains like Tesco, Wal-Mart, Costco, or else. It's specialized on affordable, but also upscale food products with organic as one of their main drivers. However, they focus on private label products and less store-keeping units (SKU's), but with a high turnover. So you can't buy 'anything' there. Further they don't have their own organic private label, but some of their private label products are organic. (cf. N.N., 2010b, s.p.).

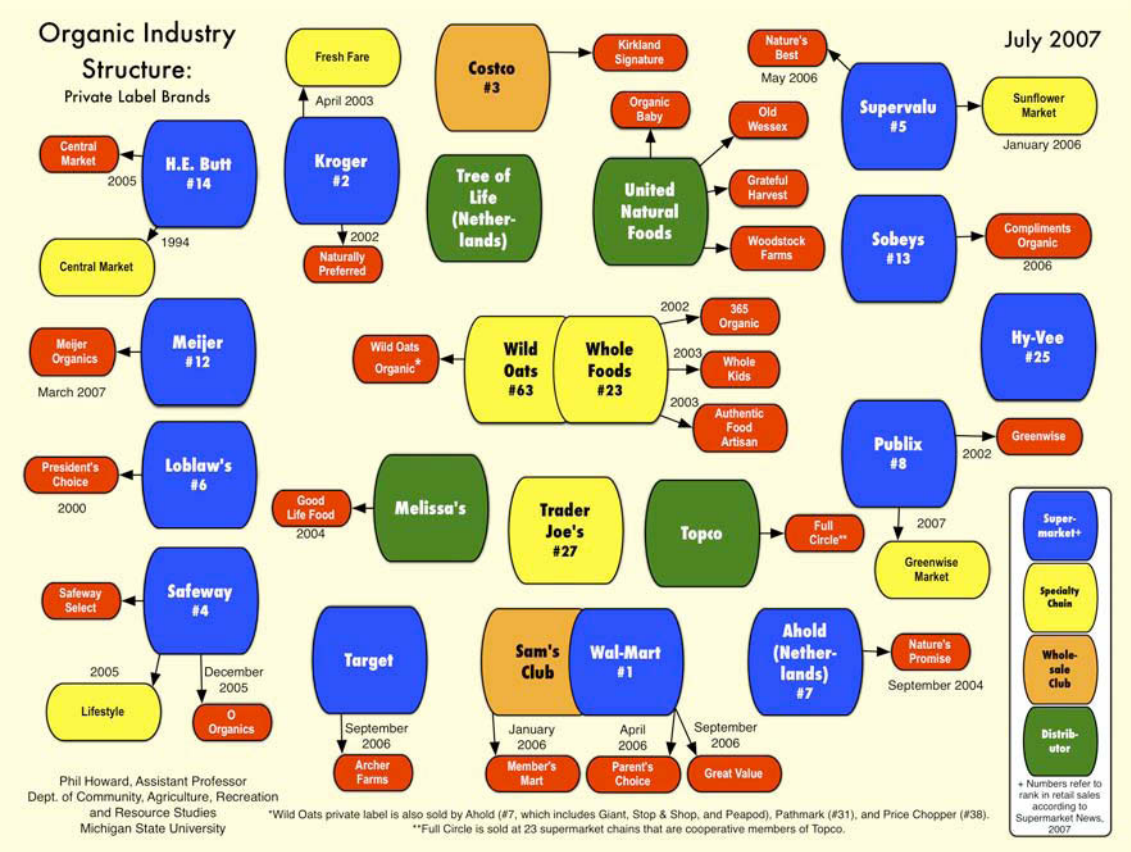
4.3.9 Wal-Mart

Also Wal-Mart, which is known for selling products cheaper than its competitors, is now participating on the organic market.

4.3.10 Organic Private Label concentration

The following graph shows organic private labels in the U.S. The small red shapes display organic brands. The yellow bigger shapes are specialty chains like Whole Foods and the blue ones are supermarkets. Green shapes are distributors.

Figure 19: Organic Private Labels



Source: HOWARD, 2009, 25.

The figure illustrates the variety of organic private labels found on the U.S. market. With rising organic private labels, retailer dominance is increasing even more (cf. HOWARD, 2009, 16f).

Also introducing some private organic label food products and/or selling some organic products can have a positive influence on the whole retailer, not only on the organic product sector. The conclusion from one good/bad characteristic of a person, thing, etc. to the positive/negative image of the entirety is called ‘halo effect’. Selling organic products could be used to create a ‘halo effect’ so that the supermarket is seen more positive in its entirety, also called a positive image transfer (cf. HOWARD, 2009, 26; MOWEN AND MINOR, 1998, 245).

It’s obvious that retailers and their organic brands play a major role in the organic food industry. They strengthen their power with selling organics,

especially their own brands. But attention should be paid. Retailers like Wal-mart are on the way to sell organic products very cheap, in a way that can only lead to mass-production again and that has nothing in common with organic farming and further mentioned standards and rules, at least in the opinion of some critics (cf. POLLAN, 2006, s.p.).

4.4 Organic brand products

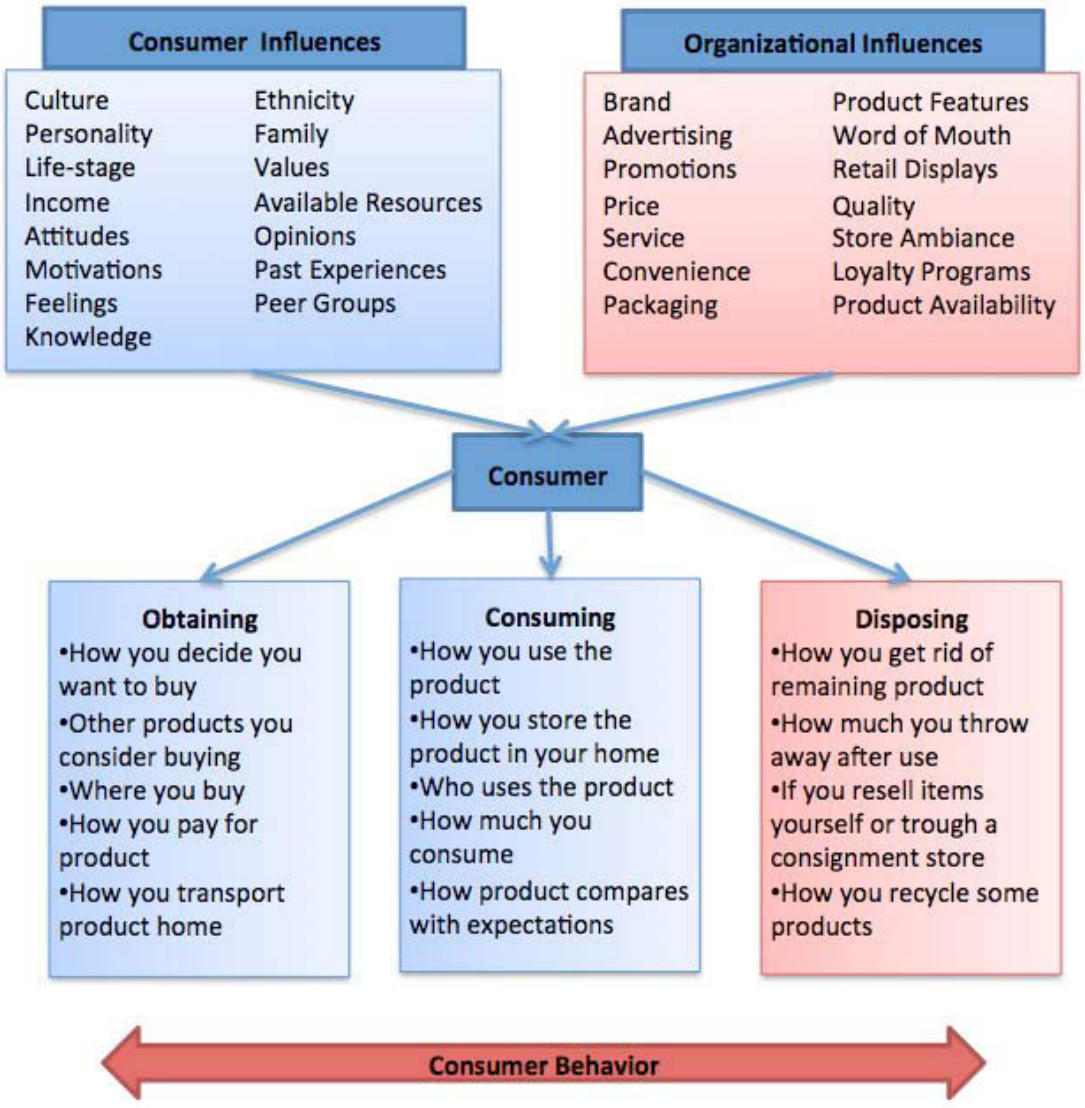
Next to retailer brands, also some other 'big players' in the organic industry, especially in the U.S. are noteworthy. Many world-leading conventional brands like Heinz, Coca Cola, Pepsi, Kraft, Kellogs, Danone and a lot more, acquired organic brands and they are often 'stealth ownerships'. So consumers probably don't now that the organic product they buy is owned by a conventional brand. Moreover it's important to mention that it is almost mandatory for the 'big brands' to play a part in organic industry, it represents a strategic move of diversification (cf. HOWARD, 2009, 16f).

To give a short insight, Danone for example is an associate of Stonyfield Farm with 85% equity since 2004. Stonyfield Farm is producing organic milk products and is 4th of leading yogurt marketers in the U.S.. Horizon Organic Dairy, owned by Dean Foods now, is even bigger than Stonyfield and leading in milk distribution. Coca Cola and Pepsi both are owners of fruit juice/ smoothie companies, which are producing natural and organic juices/ smoothies. Further Kellogg's also got into the organic industry with among others acquiring 'Kashi'. The company is specialized on producing cereal products, but most of them are natural as well (cf. HOWARD, 2009, 18f; KASHI, 2010, s.p.). Many conventional companies also sell organic products beside their conventional products. To sum it up, many big conventional companies acquire organic companies or at least they get associates in recent years.

5 Consumer behavior

Activities people perform during obtaining, consuming and disposing of products and services can be defined as consumer behavior. Following figure shows that and different factors, which influence consumer behavior as well (cf. BLACKWELL et al., 2001, 6).

Figure 20: Consumer Behavior



Source: Own illustration of BLACKWELL et al., 2001.

- Obtaining can be explained as the activities before and during purchasing a product, for example: searching for information about a product.

- Consuming is defined as all activities during use of the product including the person who uses the product, the amount that is used, or else.

- Disposing can be explained as the activities after consuming the product. For example how the product gets thrown out, is it recycled, etc. (cf. BLACKWELL et al., 2001, 6f).

5.1 Process of food purchase

For describing processes of consumer's decisions the 'Consumer Decision Process' (CDP) model can be used. The model is divided in seven steps.

- Need Recognition: It all starts at the point where a consumer has a need or a problem. At this stage consumers are influenced by environmental factors; individual factors like motivation or knowledge, which will be described later; and memory.

- Search for Information: If a consumer notices that he has a need, he will start searching for information. This can happen trough external sources like ads, asking friends, etc., but also through internal sources like retrieving information from memory.

- Pre-Purchase Evaluation of Alternatives: Before the purchase alternative options are evaluated. The decision can be influenced again through motivation, attitudes, or knowledge for example. Before the decision to purchase a product is made, also a quality expectation is formed.

- Purchase: First a retailer is chosen and then a product. At this stage primary made decisions can be changed, for example through the

influence of a sale or promotional event another product than the previously planned is purchased.

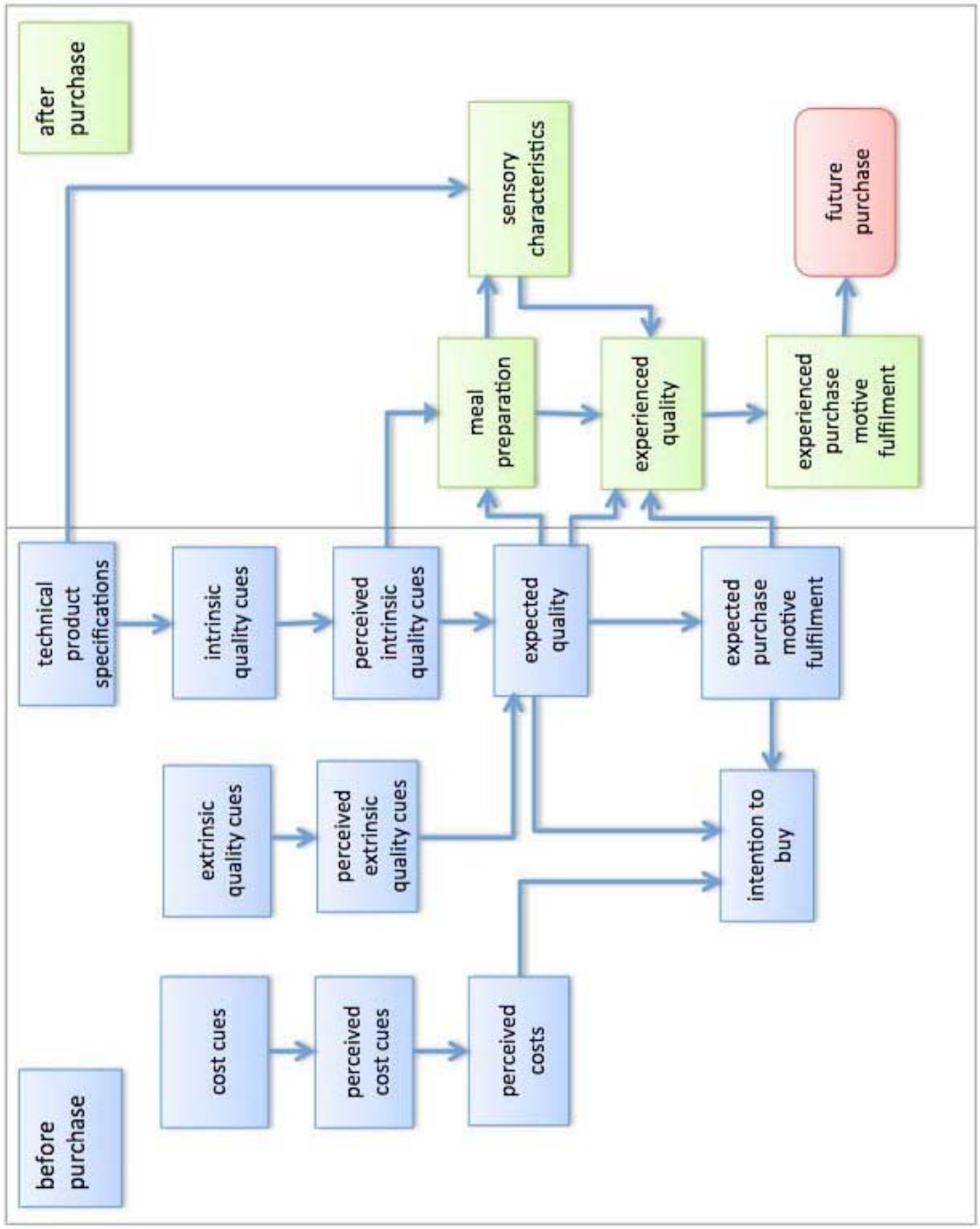
- Consumption: This stage describes the use of the product purchased before. The quality experience occurs during/after consumption. The time of the day, mood of the consumer, or else can influence this experience. The Total Food Quality Model in figure 21 shows the factors, which influence consumers food choice and quality perception.

- Post-Consumption Evaluation: After consumption another evaluation is made. At this stage experiences of purchase and consumption lead either to satisfaction, or to dissatisfaction. Together with the quality experience the decision, if a product will be purchased again in future, is made.

- Divestment: This stage describes what happens with a product after consumption, for example old toys are sold at a yard sale (cf. BLACKWELL et al., 2001, 71ff; GRUNERT, 2002, 275f).

The before mentioned Total Quality Food Model by Grunert et al. was first published in 1996. It's divided in two parts, 'before purchase' and 'after purchase'. The quality expectation is formed in the 'before purchase' part. Therefore quality cues, intrinsic quality cues, which are visible characteristics of a product, and extrinsic quality cues like for example the brand, store or price, are used as information source. Quality dimensions can be divided in search dimensions, which can be ascertained before the purchase, experience dimensions, which can be ascertained after purchase and credence dimensions, which can't be ascertained before or after purchase. After the purchase of a product, a quality experience occurs. The quality experience often is different to the expected quality. Experienced quality is also influenced by different factors like for example the preparation, the product itself, or the consumers' mood. The future purchase of a product then depends on consumers' fulfillment of the experienced purchase motives (cf. GRUNERT, 2002, 276f; GRUNERT, 2005, s.p.).

Figure 21: Total Quality Food Model



Source: Own illustration of GRUNERT et al., 1996.

5.2 Influences on consumer behavior

Psychological factors are very important speaking about consumers' behavior. So findings of behavioral science are necessary for understanding consumers' decision of food purchases (cf. KROEBER-RIEL AND WEINBERG, 2003, 8). For explaining the consumer behavior certain mental conditions and cognitive processes have to be defined. These conditions can be for example motives or attitudes, which lead to a certain purchasing decision. Processes start with absorbance and perception of information, followed by processing and memorizing of information and end with a certain behavior and consequential a decision if a product is purchased or not (cf. TROMMSDORFF, 2002, 34f; KROEBER-RIEL and WEINBERG, 2003,50).

Conditions	Processes
• Activation • Emotions • Knowledge • Motives • Attitudes • Values • Lifestyles	• Absorbance of information • Perception • Learning • Thinking • Deciding • Behavior

Table 6: Conditions and processes

Source: Own illustration of TROMMSDORFF, 2002, 34f.

5.2.1 Conditions

- Knowledge: Is described as a condition of subjective knowledgability concerning attributes and relations of objects. Change of condition through absorbance and processing of information is possible (cf. TROMMSDORFF, 2002, 36).

- Activation: It describes the condition of arousal, which can be influenced through intrinsic stimuli like for example thoughts, or also extrinsic stimuli like for example music. A special form of activation is the involvement. It describes the willingness of consumers to absorb and process information. The degree of involvement depends on how important a product or service is in the consumers' point of view. Personal, product and situational factors can influence the degree of involvement (cf. TROMMSDORFF, 2002, 36; BLACKWELL et al., 2001, 91).

- Emotions: They can occur through intrinsic or extrinsic stimuli and are defined as a condition of inner excitement, which can appear in different strength and in a positive or negative way. Feelings do have a big influence on our behavior and thus also on purchasing decisions. That's also why commercials are loaded with emotions or stimuli that have an effect on our feelings (cf. TROMMSDORFF, 2002, 36).

- Motive: Human behavior is determined through motives. They are defined as a latent condition, which can influence behavior. Feelings and knowledge can operate on motives. Motives can also be defined as aim oriented emotions (cf. TROMMSDORFF, 2002, 36; KROEBER- RIEL and WEINBERG, 2003, 56).

- Attitude: Is the evaluation of a certain object in a certain situation and contains an emotional, a cognitive and an intentional perspective. The attitude displays what we like and what we don't like (cf. KROEBER- RIEL and WEINBERG, 2003, 54ff).

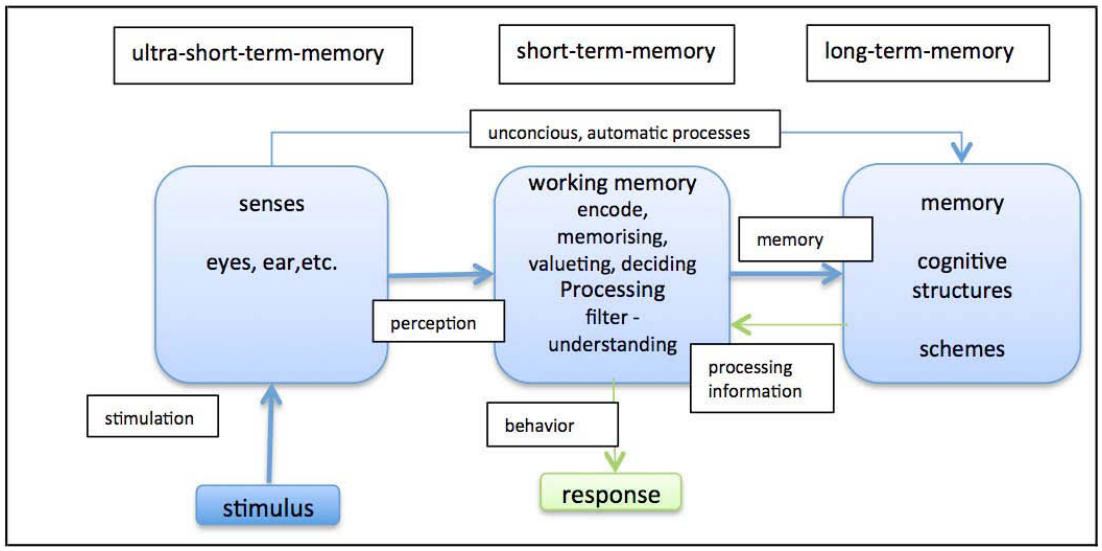
- Value: Is the consistent system of attitudes with a normative, binding character. It describes the willingness to react constantly positive or negative towards objects of attitude. The term value can also be explained as the beliefs about life and certain behavior (cf. TROMMSDORFF, 2002, 180; BLACKWELL et al., 2001, 215).

- Lifestyle: It is the complex condition concerning characteristic feelings, knowledge, motives, values, etc. of a person (cf. TROMMSDORFF, 2002, 37).

5.2.2 Processes

For explaining processes a model called 'Drei-Speicher-Modell' (model of three memories) is displayed next.

Figure 22: Drei-Speicher-Modell



Source: Own illustration of TROMMSDORF, 2002, 239.

- Stimulation: If stimuli from the environment are strong enough, they are absorbed by a sense organ like eyes, ears, etc. (cf. FRICKER, 1984, s.p.).

- Perception: The perception process is divided in three parts.

    - The first part is the exposure stage, in which information is absorbed by the sense organs like eyes, ears, or else.

- The second part is called attention stage. Only a few stimuli of endless can be absorbed of human beings. Therefore a selection process is necessary. The selection process is influenced by involvement. Involvement therefore is stimulated by certain motives.

- The third part is the comprehension stage, in which the meaning of information is identified through organization and interpretation of information.

- Memory:

  - Learning is a necessary process for memorizing information. Through learning knowledge is acquired and information is therefore memorized in long-term-memory.

  - Information memorized can be separated in different memory types called procedural memory and declarative memory. Procedural memory includes most of all motor skills like running or chewing. Declarative memory can be further separated in semantic memory and episodic memory. Semantic memory includes knowledge about things and also their verbal meaning, knowledge about facts, analytic knowledge to solve problems, etc. Episodic memory includes information to a particular context and is memorized mostly as images of personal experiences.

  - Information chunks can be defined as key facts of information. Important consumer information chunks for marketing are stored in semantic memory. For example the brand name, the logo/seal, the price, the geographic origin or awareness of ads.

- Processing information and response: New information is only a split-second available in ultra-short memory, or also called sensory-memory. Through selection some information is processed in working memory and is memorized only for about 18-20 seconds. The capacity of working memory is smaller than capacity of sensory-memory. In sensory-memory

all incoming information can be buffered. The capacity and the time information memorized in long-term-memory are unlimited. Long-term-memory can be retrieved for processing of new information. The processing process leads to a reaction, called behavior (cf. TROMMSDORF, 2002, 239ff; MOWEN AND MINOR, 1998, 63f).

5.3 Perception

One of the key issues in this thesis is consumers' perception of organic labels. Therefore perception is described in more detail now. Like mentioned before, perception is divided in three stages: Exposure stage, attention stage and comprehension stage.

- Exposure stage is the first step of processing information. The sensory organs of consumers get activated at this stage. So marketing communication can influence consumers at this point. Stimuli from the environment activate the sensory organs. But the stimuli have to be strong enough. The absolute threshold is the level at which stimuli are detected 50 percent of the time. But stimuli can also be perceived unconscious, so below the absolute threshold, and this is then called subliminal perception. A further threshold is the 'Just noticeable difference' (JND) threshold. It's like the name says, the just noticeable difference, or the smallest amount between the intensity of a stimuli that can be detected in 50 percent of the time. Furthermore adaption level has to be mentioned. It's the point in which increase of a stimuli don't lead to a further effect on consumers anymore.

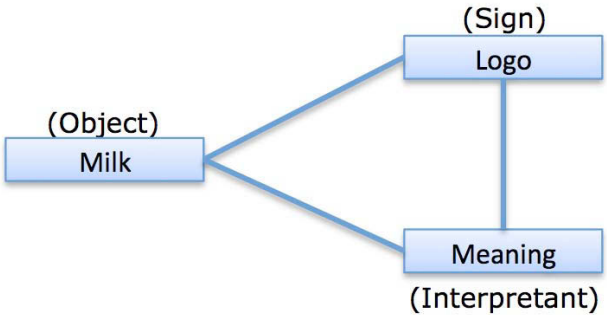
- Attention stage is necessary for comprehension of information and further on also memorizing in long-term-memory. For marketing it's necessary to capture consumer's attention, because otherwise information of a product maybe gets lost.

- Comprehension stage is necessary for organizing and interpreting the information, which was absorbed before. The process of interpretation

already starts in attention stage. It's often very difficult for marketing to reach the desired effect, because stimuli are often interpreted very different from different consumers (cf. MOWEN AND MINOR, 1998, 67ff).

Semiotics defines the exploration and meanings of symbols or signs. Symbols or signs can communicate meanings, but are also often interpreted different depending for example on the culture. In figure 23 the relation of the 'object', for example a food product like milk, the 'sign' and the 'meaning' is displayed. This field of study is called semiosis analysis. The purpose is the communication of the object's meaning, in this case of the milk. For communication a logo is in place. This could be for example an organic logo. The interpretant is the consumer, which reacts to the meaning he gets from the sign. For example he buys the product, because for him the meaning of the sign means the product is produced organic (cf. Peirce, s.a., in MOWEN AND MINOR, 1998, 85).

Figure 23: Semiosis analysis



Source: Own illustration of MOWEN AND MINOR, 1998.

Further it has to be mentioned that decoding of symbols takes place in comprehension stage (cf. MOWEN AND MINOR, 1998, 85).

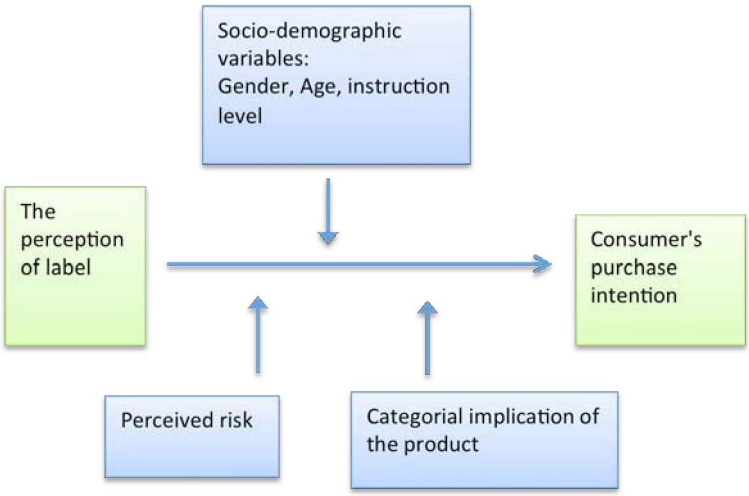
Brands and labels can be important quality cues. If the quality experience of a purchased product is satisfying, the brand/label will probably be purchased again. But concerning quality labels, findings from several studies show that consumers often misunderstand them or don't know how to interpret them (cf. GRUNERT, 2002, 277). Thus the following chapter will discuss perception of labels and quality seals on food products, especially of organic products.

5.4 Perception of organic product labels/quality seals

A label is one of the attributes to differentiate between products and can help to make a purchase decision. JEDDI and ZAIEM (2010) analyzed the impact of label perception on consumer's purchase intention. Therefore influence on perception of labels through socio-demographic variables, perceived risk of purchase and the categorical implication was tested. Products from different categories are evaluated differently. A deep system for solving the problem is used, if the implication for a product is strong. If not, an easier and also quicker way is used to evaluate a product. Findings of this study were that higher perceived risk, higher categorical implication and socio-demographic variables all have a strong impact on the label perception and in order to that also on the purchase intention. For example women with higher education were more sensitive to labels. The study also confirmed the hypothesis of the positive impact label perception has on the consumer's purchase intention (cf. JEDDI and ZAIEM , 2010, 1ff).

The following figure illustrates those findings.

Figure 24: Impact of label perception



Source: Own illustration of JEDDI and ZAIEM, 2010,8.

5. Consumer behavior

A study placed in the Netherlands concentrated on consumer's understanding of labels. The differences between products labeled with an organic logo only, an organic logo and additional information, and information that the product is from the world market, were examined. Results confirmed that consumers were familiar with the organic logo and attributes given to the organic products were indeed positive. Though a further outcome of the survey was that the organic logo wasn't understood completely correct. Products labeled with organic logo and the additional information were rated higher than the products with only the organic logo. They concluded that consumers maybe have problems differentiating between conventional and organic farming, and more transparency and communication would clear up misunderstandings (cf. HOOGLAND et al., 2007, 48ff).

A further study in Europe investigated consumers understanding and perception of 'organic'. Among others it was tested, what consumers understand by the term 'organic'. The perception of organic labels was examined too. The following table shows main terms associated with the term 'organic'

	France	Germany	Norway	Spain	UK
What does organic mean?	Natural	High welfare	Characterized by confusion and ambivalence	Synonymous with ecological and natural	Freedom from artificial inputs
	Limited human intervention	Natural	Natural	Non-use of pesticide	Limiting environmental damage
		Environ-mentally kind		Not environmentally damaging	

Table 7: Associations with the term 'organic'

Source: Own illustration of AARSET et al., 2004, 98.

Most often ‘naturalness’ was mentioned talking about organic, followed by environmental benefits. Differences are found between countries, but main meanings are almost equal. Testing consumer perception of labeling wasn’t that satisfying. Previous mentioned lack of knowledge was found in this survey too, together with the problem of not trusting labels and confusion of consumers (cf. AARSET et al., 2004, 97ff).

But trusting the label, especially an organic label/quality seal is quite important. Organic food can’t be visually differentiated from conventional food and so is defined as credence good product. Consumers can’t verify if the product is organic or not and so they have to believe it (cf. GREENE, 2000, 26). Therefore the organic label should be a communicator of organic standards to counteract against the asymmetry in the matter of information (cf. JANSSEN and HAMM, 2010, 87). If consumers don’t trust the organic label or don’t understand it, why should they buy the organic product instead of a cheaper conventional product?

A study in Germany, where a variety of organic labels is found, examined if consumers can manage differentiating labels and if they understand their meanings. In Germany a national label called ‘Bio-Siegel’ can be used, also many private organic associations have their own label like ‘Demeter’, ‘Bioland’ or ‘Naturland’ and certainly the EU-logo is in use too. In discussions with research groups, preference of certain organic labels, knowledge of organic standards and different labels were evaluated. It was interesting that most consumers didn’t know the old EU-logo, but almost everybody did know the national ‘Bio-Siegel’. Also often ‘Demeter’ was associated with high standards. Products only labeled with ‘Bio’ or ‘Öko’ were trusted less. That leads to the conclusion that they didn’t know that there is a law for using those terms. Also results about the new mandatory EU-logo aren’t consistent. It was mentioned that products maybe be easier to identify in future, but also that it could lead to lower standards. Researchers came to the conclusion that lack of knowledge of organic standards is a problem in case of understanding labels. It is recommended that the new EU-logo is communicated with information, so that consumers get more familiar with

organic standards and gain more confidence in dealing with labels (cf. JANSSEN and HAMM, 2010, 86ff).

A study in Denmark, where a national label called 'Ø' (Økologimaerke) is often used on organic products, consumers are confident with products where this label is used. Also 93% of the survey did know the Danish label. But the survey also showed results that consumer don't trust organic products without that label, especially foreign products (cf. MILLOCK et al., 2004, s.p.).

Looking from Europe to the U.S. other issues concerning labeling have to be faced. A study from the Hartman Group of 2006 found out that 27 % of the respondents thought that the USDA seal is allowed to use only for totally organic products. 43 % said that they didn't know the labels meaning at all (cf. HAUMANN, 2009, 231).

A survey of The Shelton Group in 2009 found out that American consumers are confused with the terms 'organic' and 'natural'. As a matter of fact 31 % preferred '100% natural' and only 14% chose '100 % organic' as most trustworthy. Due to the fact that there is also a lack of knowledge concerning organic labeling, it is necessary to fill the gap. Many products in the U.S. are labeled with the term 'natural', but in contrast to 'organic' products they aren't certified by certifying bodies yet (cf. CROSS, 2010, s.p.).

On the other side 2005 Whole Foods Market Organic® Foods Trend Tracker found out that 40 % of Americans notice the USDA's organic seal. In 2003 only 19% of consumers did so (cf. WHOLE FOODS, 2005, s.p.).

To sum it up, labels are an important source of information about the product for consumers. Organic products are a so-called credence good, so consumers have to trust the label. From the site of the producer or also especially the government, it is a necessity to provide information about what stands behind those labels. The new mandatory EU-logo for example could help to fill this gap, if communication is working too. In the USA the USDA

seal is already in common use, but information about differences between ‘organic’ and ‘natural’ should be communicated more clearly.

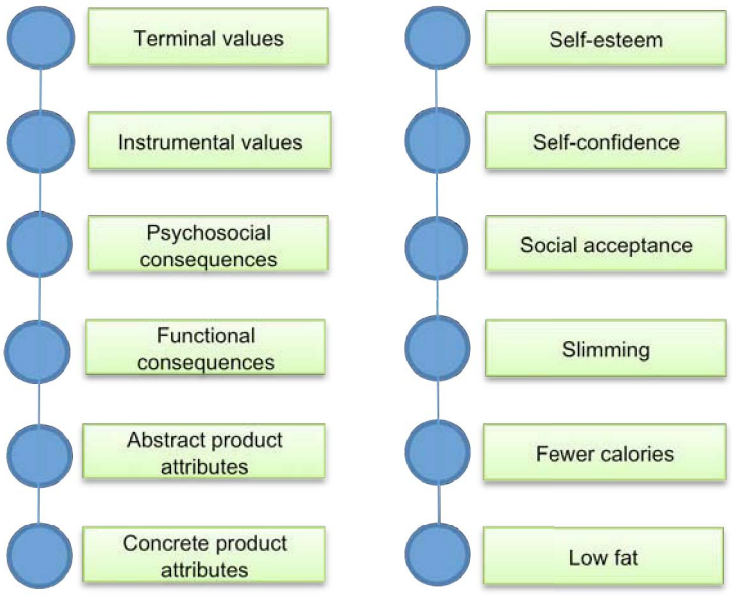
6 Means-End Chain Theory and Laddering

6.1 Means-End Chain Theory

Food quality is a very general used term. Beside product-oriented quality and process-oriented quality also user-oriented quality is an important field of study. User-oriented quality is a subjective quality perception of a consumer and can be defined as the process of consumer's value perception of food products. The value perception of a food product is determined through self-relevant consequences like nutrition, survival, socializing, pleasure, enjoyment or else (cf. GRUNERT, 1995, 171).

The means-end chain theory links the objective product characteristics and self-relevant consequences for understanding subjective quality perception of consumers. A means-end chain can therefore be described as a model of consumer's cognitive structure.

Figure 25: Means-end chain



Source: Own illustration of GRUNERT, 1995, 172.

The figure illustrates how product attributes are linked with self-relevant consequences and in addition to that lead to certain values. The example shows that the concrete product attribute ‘low fat’ is connected with the abstract product attribute ‘fewer calories’. They are linked to the functional consequence ‘slimming’ and the psychosocial consequence ‘social acceptance’. They again lead to instrumental values, in this example ‘Self-confidence’, and terminal values, in this example ‘Self-esteem’ (cf. GRUNERT, 1995, 172).

The means-end chain describes the knowledge structure of consumers’ knowledge that is linked with personal knowledge of consequences and values. So the means-end chain approach gives insight in consumers’ motivation for purchasing products by linking consumers’ needs and product characteristics (cf. ZANOLI AND NASPETTI, 2002, 644). For understanding means-end approach, thinking of consumers’ decision making as a problem-solving process can be helpful. Consumers are setting a course of actions/’means’ to make a decision and to reach an ‘end’ (cf. REYNOLDS and WHITLARK, 1995, 9).

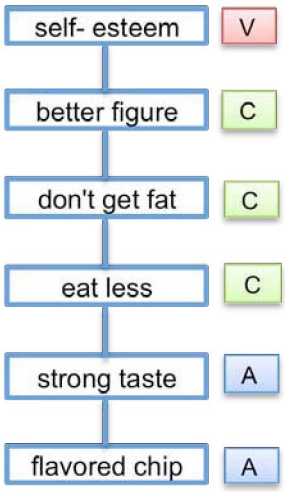
To find out about consumers’ motivation to purchase products the simple question ‘Why?’ isn’t enough in most cases. Consumers are not aware of the wholeness of the decision-making process most of the time. So different steps are necessary to find that out. Reynolds and Gutman (1988) suggest a stage process for measuring means-end chain. It starts with the election of most relevant product attributes for consumers. Then an in-depth interview, the so-called ‘laddering’, is used to find out how consumers link product attributes to consequences and values. Further a hierarchical value map (HVM) is developed (cf. ZANOLI and NASPETTI, 2002, 645).

6.2 Laddering

Means-end chains can be measured with a method called ‘laddering’ (cf. GRUNERT and GRUNERT, 1995, 209). It is an in-depth interview and can be defined as a method to find out about how consumers link product attributes

to consequences and values (cf. ZANOLI and NASPETTI, 2002, 645). It can be achieved by using a series of directed probes, by asking the respondents 'Why is … important for you?'. The aim is to establish ladders from attributes (A) to consequences (C) and finally to values (V). Following figure is an example of such a ladder of a salty-snack study (cf. REYNOLDS and GUTMAN, 1988, s.p.).

Figure 26: A-C-V ladder



Source: Own illustration of REYNOLDS and GUTMAN, 1988, s.p.

Attributes, consequences and values can be explained like follows:

- Attributes can further be separated in concrete attributes and abstract attributes.
    - Concrete attributes are tangible. Visual characteristics are used for describing them. Examples for a concrete attribute of a ready meal could be 'expensive', or 'doesn't contain meat'.
    - An abstract attribute is intangible. Subjective characteristics are used for describing them. Examples can be 'easy to prepare', or 'tasty'.
- Consequences are expected functional and psychological implications of the purchase, consumption or disposal of products. Examples can be 'easy to digest', 'keep fit', or else.

- Values are defined as specific modes of conduct, or also end-stages of existences that are persistently thought to be personally or socially preferable. Examples can be ‘good health’, or ‘optimal performance’, or else (cf. COSTA et al., 2004, 408f).

Grunert and Grunert (1995) differentiate between the motivational view and the cognitive structure view of laddering. Both are important for data acquisition and analysis and of course interpretation of data gained through laddering. With the motivational view of laddering insight in consumers’ buying motives is given. A key point is to find out how basic motives are linked to shopping behavior. The cognitive structure component defines that consumption-relevant knowledge is stored and organized in human memory, assuming a basic hierarchical model of different cognitive categories organized in chains and networks. The knowledge about that is a necessary foundation for using the laddering technique (GRUNERT and GRUNERT, 1995, 209f).

6.2.1 Interview Environment

The environment for performing a laddering interview should be as quiet as possible and hence not that crowded. Respondents have to reflect and so a hectic and loud atmosphere wouldn’t lead to desired answers. It should be mentioned to the respondents that there are no right or wrong answers. It’s a good way to calm and relax respondents to create a pleasant environment for the interview. It is very important to do this, because using laddering the respondent is in the position of the ‘expert’. The purpose of the interview is to find out how the respondent sees the world. Therefore the interviewer needs to get below the respondent’s surface. So it’s very important to have a trained interviewer. The interviewer needs to be familiar with means-end chain theory and the laddering technique. Further the interviewer needs to give the interviewee the impression to be interested, but also needs to be in control of the dialogue in the interview. It’s essential that the interviewer is neutral concerning given information and judgmental or aggressive comments have to be avoided. To sum it up, a neutral and quiet atmosphere is required for

the laddering interview. In addition to that the interviewer needs to be familiar with in depth interviewing/laddering techniques (cf. REYNOLDS and GUTMAN, 1988, s.p.).

6.2.2 Method

- First respondents have to generate relevant product attributes by using techniques like triadic sorting, ranking, free sorting, or else. The most important attributes/characteristics of the product are used for laddering. Consumers' preference for this certain characteristics will be considered then.

- Through questions like 'Why do you prefer …? Why is … important for you?' particular values of preferred characteristics are requested. The means-end ladder is build through asking 'Why is this important for you?'. Asking that will be continued until the terminal level is reached or the interviewee is exhausted.

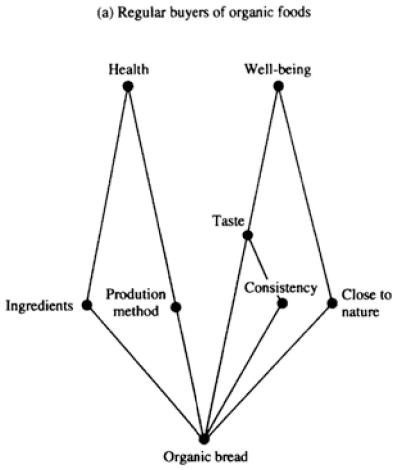
- About two to four ladders per respondent are generated most of the time by using the laddering method.

- Attributes, consequences and values that are found through laddering have to be coded.

- An implication matrix is developed then. It is absolute necessary that information about how often one category followed another is appearing in the implication matrix.

- Hence a hierarchical value map can be generated. The hierarchical value map (example: figure 27) displays major means-end chains of a consumer-sample. A certain cut-off level is set before. Links, which are beyond this level don't appear in the hierarchical value map (cf. GRUNERT, 1995, 172; ZANOLI and NASPETTI, 2002, 645).

Figure 27: Hierarchical value map



Source: GRUNERT, 1995, 173.

6.2.3 Types of interviews

Basically it can be differentiated between two types of laddering interviews, 'soft' laddering and 'hard' laddering. Soft laddering refers to the technique in which the respondent is restricted as little as possible in his natural flow of speech. In contrast to that hard laddering forces the interviewee to produce ladders one by one. Self-administrated questionnaires and data collection techniques using a computer are examples of hard laddering. Using soft laddering method, influence of the interviewer can lead to biases. So it's necessary to have a trained interviewer, who is familiar with laddering technique. Also soft laddering should be used when respondents are either little experienced/show low involvement, or are very experienced/show high involvement. Hard laddering can be used for example if an average experience or involvement of the respondents can be assumed (GRUNERT and GRUNERT, 1995, 216f).

6.2.4 Analysis

After completing laddering interviews, they have to be transcribed. The data of interviews need to be separated in phrases of the conversations. It's necessary to find the key elements of the conversations. These elements are

then used for content analysis. They are also called ‘chunks of meanings’. For assistance in analyzing laddering interviews a special software called LADDERMAP can be used (cf. GENGLER and REYNOLDS, 1995, 125).

First step of content analysis is to separate the ‘chunks’ in attributes, consequences or values. Then a dictionary of content codes needs to be developed. Therefore a categorization of chunks is required. After encoding the laddering data quantitative analysis by developing a hierarchical value map (HVM) is possible (cf. GENGLER and REYNOLDS, 1995, 119ff).

Before the HVM can be designed an aggregate implication matrix with sums of all links of associations is constructed. The matrix displays how often each association leads to another association. Direct associations and indirect associations are the two options to count associations. Direct associations are A → B or B → C considering a means-end chain of A → B → C. An indirect association is A → C if a means-end chain of A → B → C is considered. The strength of an association is indicated through the sum of direct and indirect associations (cf. GENGLER and REYNOLDS, 1995, 129). Before developing the HVM, a cutoff level has to be determined. Reynolds and Gutman suggested setting it between 3-5 in a sample of 50-60 respondents (cf. REYNOLDS and GUTMAN, 1988, s.p.). Only associations equal or above a certain cutoff level are shown on the HVM (cf. GENGLER and REYNOLDS, 1995, 129). The HVM includes the content codes from content analysis. They are displayed on a map, where they are connected with lines. The lines show the pathways from attributes, through consequences to values. The HVM shows three levels: attributes, consequences and values. The attributes are located on the lowest level of the map, leading to consequences and further to values. Values are located on the highest level of the map. Consequences can be separated in functional and psychosocial consequences. The links/connections between the nodes are the personal meanings of respondents and are necessary for understanding and using the HVM (cf. GENGLER and REYNOLDS, 1995, 128ff). Further it can be stated that the HVM can give a deep view into consumers’ perception. Characteristics, which are more important for consumers’ choices and motives for choosing a

product rather than something else, can be discovered through laddering (cf. ZANOLI and NASPETTI, 2002, 646).

6.2.5 Applying results of laddering technique

Outcomes of means-end chain analyses and associated techniques like laddering can be used for several fields in consumer research and product design:

- To find out about cognitive positions of existing products, for understanding consumers' purchase decisions.
- To build a foundation for positioning strategies of new products.
- To find out what are consumers needs and especially which product attributes a relevant for those needs.
- To find consumers' valued product attributes of existing products to use those finding for product improvements.
- To link product-knowledge with established self-knowledge of consumers for marketing communication strategies.

There are several ways to use data provided by means-end chain analysis (laddering), but there are also several limitations, which have to be considered using the laddering technique. For example it's a very labor- and time intensive technique. Also problems with consumers' don't being able to express links between certain purchasing motivations and values, because of the fact that purchasing food products is a very routinised habitual behavior. Further also biases through influence by the interviewer can lead to problems in using the laddering technique (cf. COSTA et al., 2004, 412).

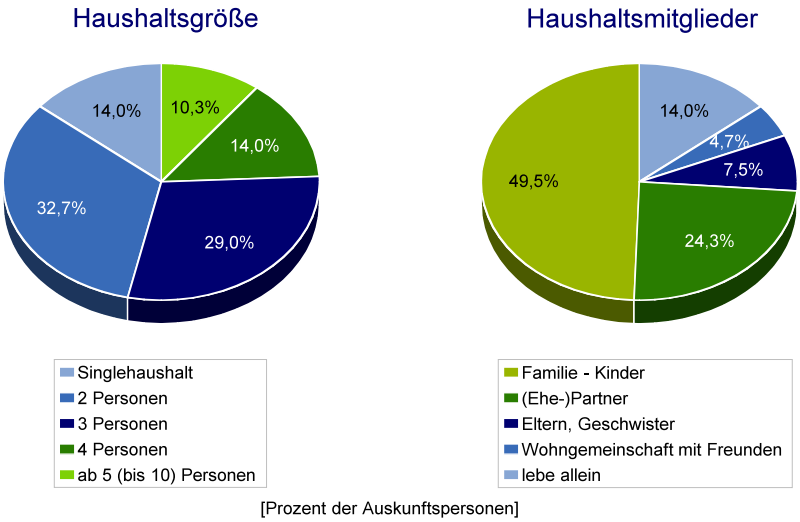
7 HVM of Austrian organic consumers

A 2007 survey ordered by the Agrarmarkt Austria Marketing GmbH focused on Austrian consumers motives, beliefs, barriers and prejudices buying organic food. Therefore 107 qualitative in-depth interviews using laddering technique were conducted. The focus group consisted of 18-69 years old heavy and light users of organic products. The findings of this study will be used for comparison with findings of the empirical survey of North American organic consumers.

7.1 Sample

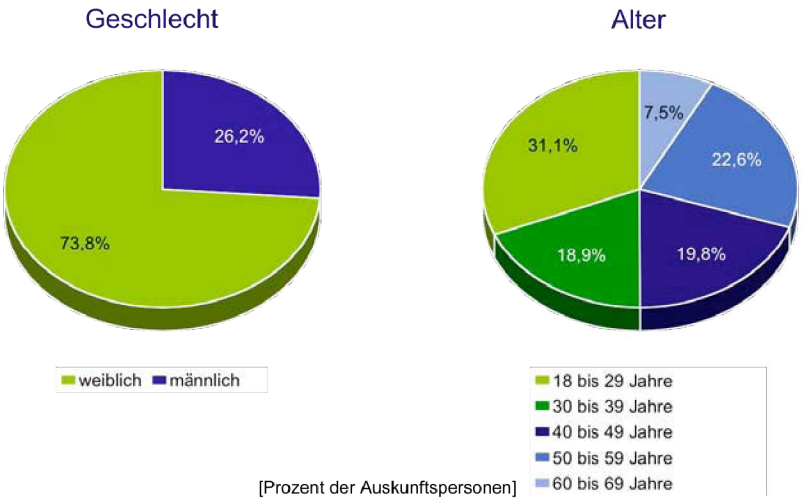
Following figures illustrate the sample. Household size from single (light blue) to more than 5 persons (green) and household members: family – kids (green), (married) couple (dark green), parents, siblings (dark blue), apartment sharing friends (blue) and living alone (light blue) are shown (figure 28). Then gender (green = female, dark blue = male) and age of the sample (green = 18-29 – light blue = 60-69) are illustrated (figure 29).

Figure 28: Household size and members



Source: MARKT- UND MARKENFORSCHUNG MARKETMIND, 2007,7.

Figure 29: Gender and Age

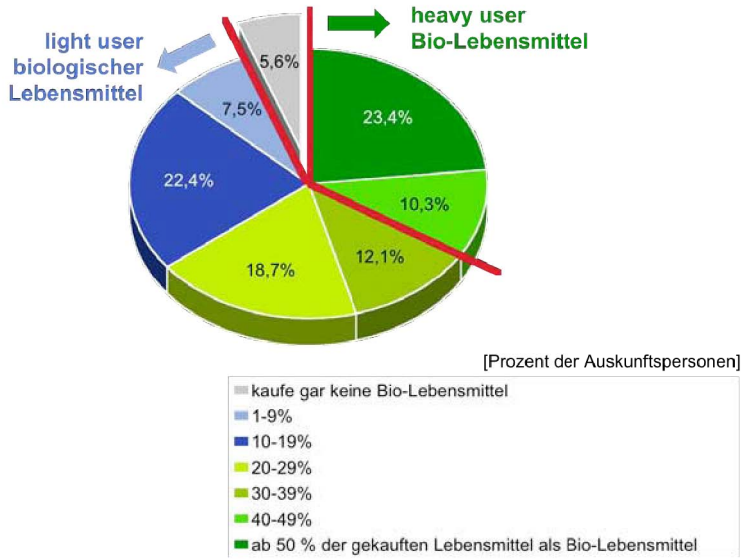


Source: MARKT- UND MARKENFORSCHUNG MARKETMIND, 2007,8.

Purchase patterns of the sample were examined. 94.4 % of the sample said they buy organic food and only 5.6% of the sample said they don't buy organic food. Participations aged 50 and older without kids (17.4%) did indicate that they don't buy organic more often than families (0-4%) and younger aged with no kids (3.6%). A slight difference between urban and rural areas was noticeable, 7.1% living in urban areas said they don't buy organic food and 3.9% in rural areas said they don't buy organic food (cf. MARKT- UND MARKENFORSCHUNG MARKETMIND, 2007,7ff).

The following figure shows the share of organic food of the whole purchase. Starting at 'don't buy organic food' (grey) with 5.6% and ending with '50% of the whole purchase' (dark green) with 23.4% of the sample. In addition to that also light users and heavy users are illustrated. Light users are classified as users buying 1-9%, 10-19%, 20-29% or 30-39% organics of their whole purchase. Participations with 40% or more organic food of their purchase are classified as heavy users.

Figure 30: Share of organic food



Source: MARKT- UND MARKENFORSCHUNG MARKETMIND, 2007,11.

87.1% of the sample said that there was a trigger leading to buy organic food, only 12.9% said that there wasn't any reason. The reasons given were: awareness of the person, information from media, encouragement trough the social environment, starting a family and practical reasons (cf. MARKT- UND MARKENFORSCHUNG MARKETMIND, 2007,11ff).

7.2 Associations and knowledge of organic food

Further associations and knowledge of organic food were requested. A semantic net was build. The semantic net is shown on page 68 (figure 31). Associations were given in following categories:

- No chemical substances
- Healthy diet
- Austrian origin
- Food
- Nature, protection of the environment

- Better animal husbandry
- Higher quality
- Quality seals & labels

In the category ‘no chemical substances’ more than 30% mentioned ‘no harmful substances and additives’ and ‘no pesticides/fertilizers/…’ and 20%-30% ‘organic farming’ and ‘no synthetic fertilizers, no chemical substances in the soil’. In the category ‘healthy diet’ more than 30% mentioned ‘health through conscious diet’ and 20%-30% ‘good feeling eating organic’. More than 30% said ‘from domestic farmers’ and 20%-30% mentioned ‘Austrian products’ in the category ‘Austrian origin’. In the category ‘food’ 20-30% mentioned ‘no GMO’s’. In the category ‘nature, protection of the environment’ 20-30% think ‘untouched nature, fields and meadows’ are important. Also 20-30% mentioned ‘species-appropriate’ in the category ‘better animal husbandry’, ‘better taste’ in the category ‘higher quality’ and ‘ja!natürlich’ (Austrian organic retailer brand) in the category ‘quality seals & labels’. Negative indications were ‘higher price’ in the category ‘quality seals & labels’ by more than 30%, ‘skepticism if really organic’ in the category ‘higher quality’ by 20-30% and ‘less choice’ in the category ‘food’ by about 10% of the sample (cf. MARKT- UND MARKENFORSCHUNG MARKETMIND, 2007,18ff).

7.3 Motives and barriers buying organic food

Moreover barriers and motives buying organic food were determined by using the laddering technique. The hierarchal value map is illustrated on page 69 (figure 32). Three main motives for buying organic food emerged.

- 1. Motive: Maintain and support health
    - No chemical/synthetic substances in organic food prevent intake of harmful substances. Austrian origin (with shorter transport distances) ensures more freshness of the food and food richer in nutrients and therefore can help to strengthen the immune system.

  - Fitness, well being and life expectancy and health can be increased up to (old) age.

- 2. Motive: Pleasure, life enjoyment, treating yourself good

  - Mainly because of the better taste of organic food also well being and good mood can be enhanced.

  - To treat family and friends with good food is an important social value.

- 3. Motive: Clear conscience

  - Strengthen the Austrian agriculture and especially organic farmers.

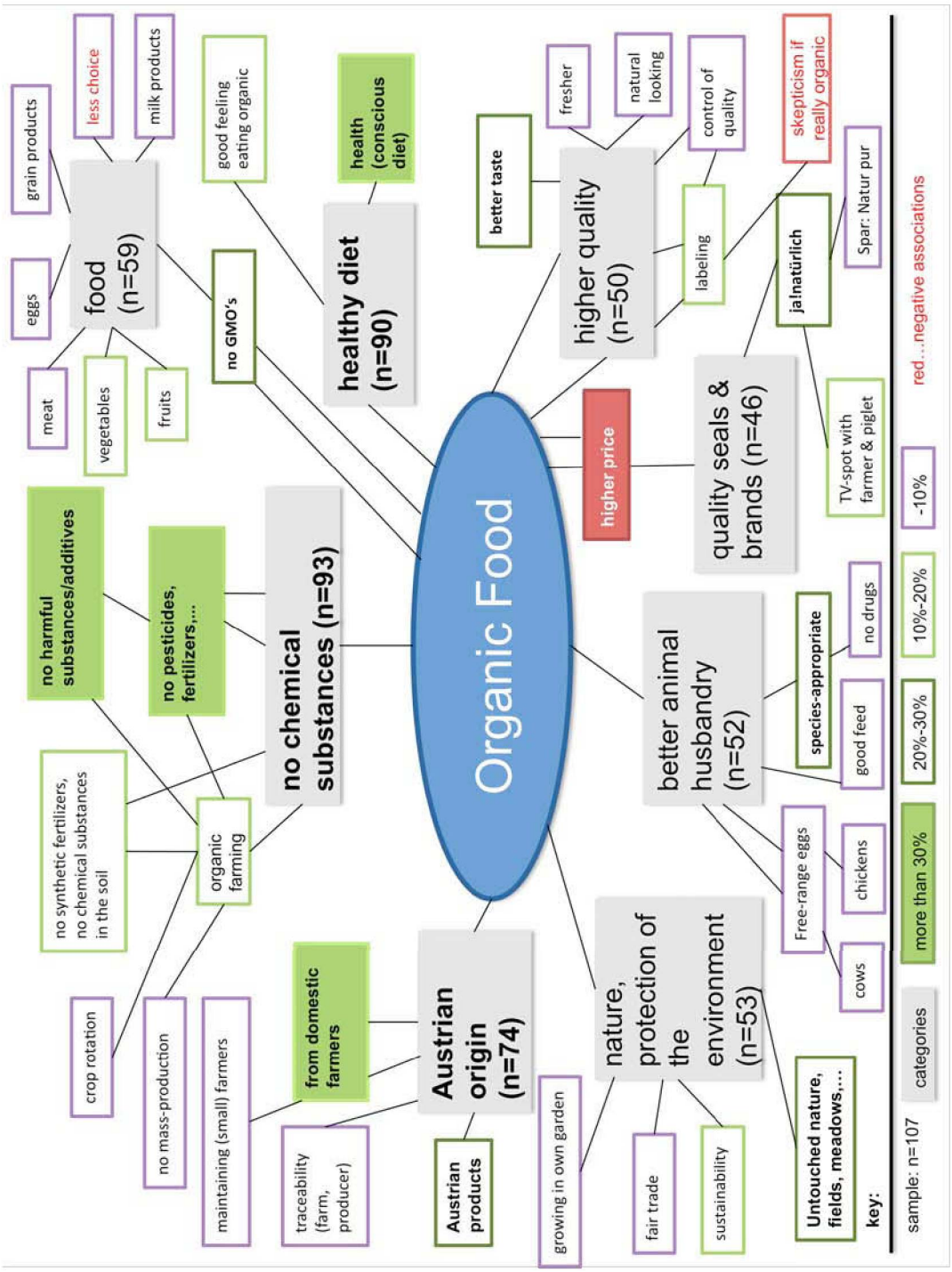
  - Sustainability in case of protection of the environment and animals.

  - Transparency of origin and ingredients is very important and also the quality and quality control lead to trust and safety for the consumer.

  - For parents: Responsibility towards their kids (cf. MARKT- UND MARKENFORSCHUNG MARKETMIND, 2007,28ff).

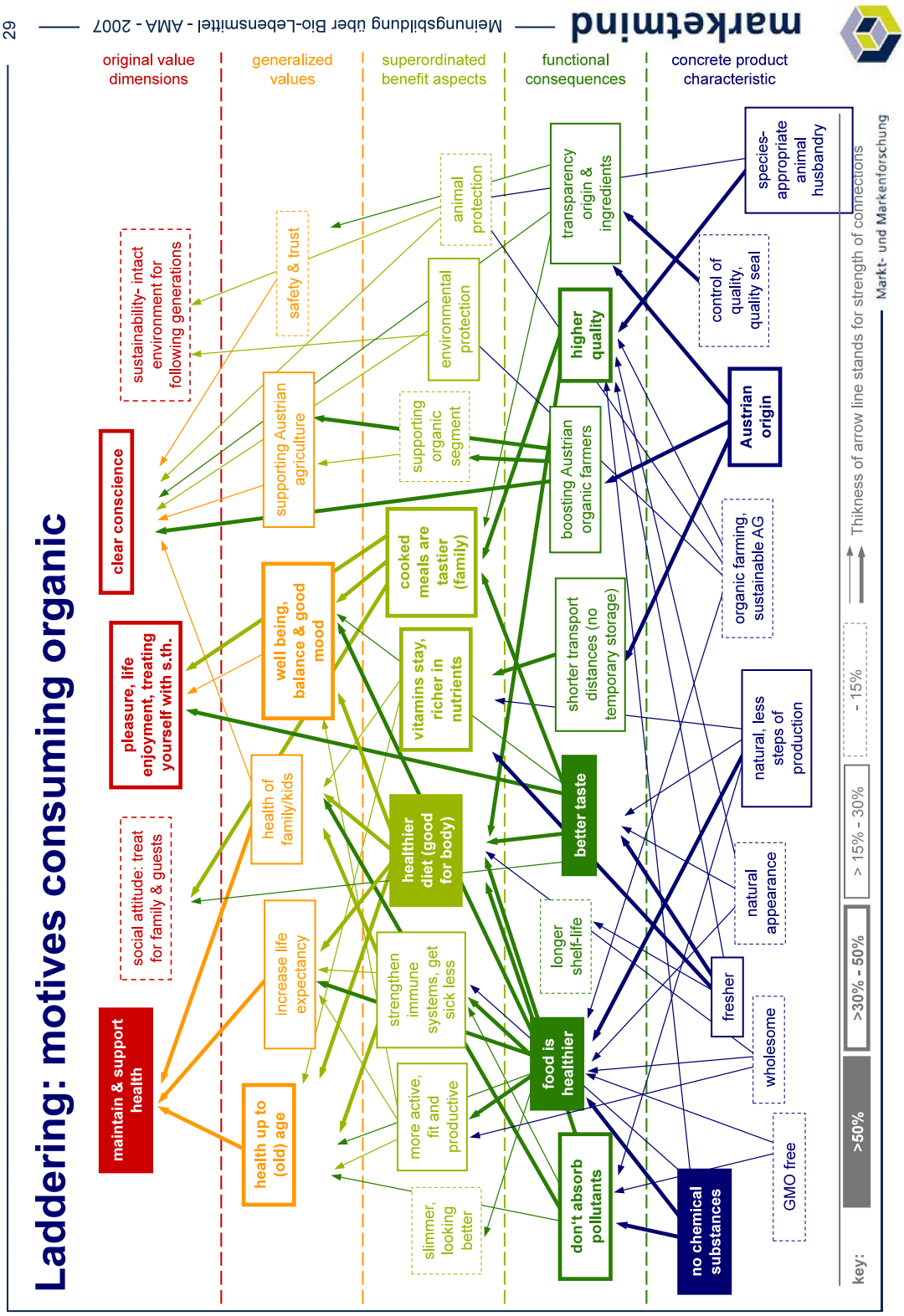
In addition to that an image profile of organic food was created with the sample. The image of organic food is described mainly with positive terms like ‘healthy, no chemical substances’, ‘Austrian origin’, ‘natural and clean’, or ‘high in quality’. But also negative associations like ‘expensive’ are mentioned. Overall it can be stated that the image of organic food is very positive. Austrian origin, short transport distances, sustainability and quality are important for Austrian organic consumers. Also health, well being and enjoyment are important factors speaking about organic food. The main barriers buying organic food are higher prices, less availability and options, or the missing convincing argument for the personal benefit of buying organic food (cf. MARKT- UND MARKENFORSCHUNG MARKETMIND, 2007,50ff).

Figure 31: Associations 'Organic Food'



Source: Own illustration of MARKT- UND MARKENFORSCHUNG MARKETMIND, 2007,18.

Figure 32: laddering: motives for consuming organic



Source: MARKT- UND MARKENFORSCHUNG MARKETMIND, 2007,11 (translated from German).

8 Method and structure of empirical survey

8.1 Performance of interviews

Interviews were conducted between March 3rd and March 18th 2011. The interviews took place in Ithaca, NY. Most of them were hold in a local supermarket called 'Greenstar' and in downtown Ithaca. Also a few interviews were performed in cafes and neutral places after making an appointment. In all of the mentioned places people had time and were able to sit down during the interviews.

8.2 Participations of interviews

Participants were found through personal contact in store, flyers, mailing lists or asking them directly. North American consumers aged 18-69 were interviewed in this survey.

For a better comparison of results, the quote was based on the 2007 Austrian organic consumer survey performed for the Agrarmarkt Austria Marketing GmbH (chapter 7). Therefore organic food consumers were separated in heavy users and light users. Light users are defined as users buying 1-9%, 10-19%, 20-29% or 30-39% organics of their whole purchase. Participations with 40% or more organic food of their purchase are classified as heavy users. Furthermore also participations were separated in their different life cycle phases. The life cycle phases are defined as follows: People ≤ 39 years old without kids, families with kids living in household and youngest kid ≤ 9 years old, families with kids living in household and youngest kid ≥ 10 years old and people ≥ 50 years old without kids living in household (cf. MARKT- UND MARKENFORSCHUNG MARKETMIND, 2007,11).

The sample size of the survey was 50. The ratio heavy users to light users was 50:50 and 12-13 people of each life cycle phase were interviewed.

8.3 Course of interviews

The questionnaire was based on the questionnaire developed for the 2007 Agrarmarkt Austria survey about Austrian organic consumers (chapter 7).

The main focus of this survey was on laddering interviews to find out consumers motives/values of buying organic food. Free elicitation was used for collection of attributes. Mentioned attributes were then ranked by participations. Based on that consequences and motives/values of buying organic food were identified then.

Furthermore to find out spontaneous associations for organic food an association test was conducted.

Moreover interviewees were asked some additional questions in following categories:

- Daily shopping of organic food
- Reasons and causes for buying organic food
- Knowledge about certified organic food claims
- Knowledge about organic labels
- Reasons that speak against buying organic food
- Differences between organic food and conventional food production
- Differences between organic food and conventional food in relation to health
- Socio-demographic data of participation.

Table 8 on the following page displays the course of interviews in detail.

Question	Type	Technique
How much of your daily shopping is organic (in %)?	Purchasing patterns	Close-ended question
Was there a trigger that made you buying organic food?	Causes	Open question
What do you associate with ORGANIC food? (*Themes, pictures, situations)*	Associations	Open question (association test)
Only 2 out of 6 phrases of this list are certified for the use of organic product labeling. Please try to find the 2 phrases.	Knowledge	Close-ended question
Do you know the USDA organic seal?	Knowledge	Close-ended question
Do you know one of the following organic seals?	Knowledge	Close-ended question
Laddering: Please tell me the most important reasons why you are buying organic food?	Motives, Values	Laddering Technique
Are there also any personal reasons you can think of, which speak against buying organic food? If yes, are there any disadvantages or do you have any concerns regarding organic food?	Inhibiting factors	Open question
From your point of view, what are the main characteristics that differentiate organic food products and conventional food products?	Differences to conventional food	Open question
Do you think organic food is as healthy or unhealthy as conventional produced food, healthier than conventional produced food, or unhealthier than conventional produced food? Please mention some reasons for your answer.	Differences to conventional food	Close-ended / open question
Sex, age, education, household size, household members	Socio-demographic information	Close ended question

Table 8: Course of interviews

Source: Own illustration

8.4 Analysis of interviews

8.4.1 Laddering interviews

Laddering interviews were written down during interviews and immediately transcribed/digitalized. Then all statements were categorized in attributes, consequences and motives/values. Summary content codes were built. Further implication matrixes for heavy and light users were developed to create the hierarchical value maps (HVM).

8.4.2 Association test

All associations mentioned were assigned to categories. The categories and associations mentioned in these categories are displayed in a semantic net.

Categories are following: Healthy, better production methods, food, organic farmers/farms, better for the environment, no chemicals and taste.

Further distinctions between negative and positive/neutral associations were made.

8.4.3 Additional questions

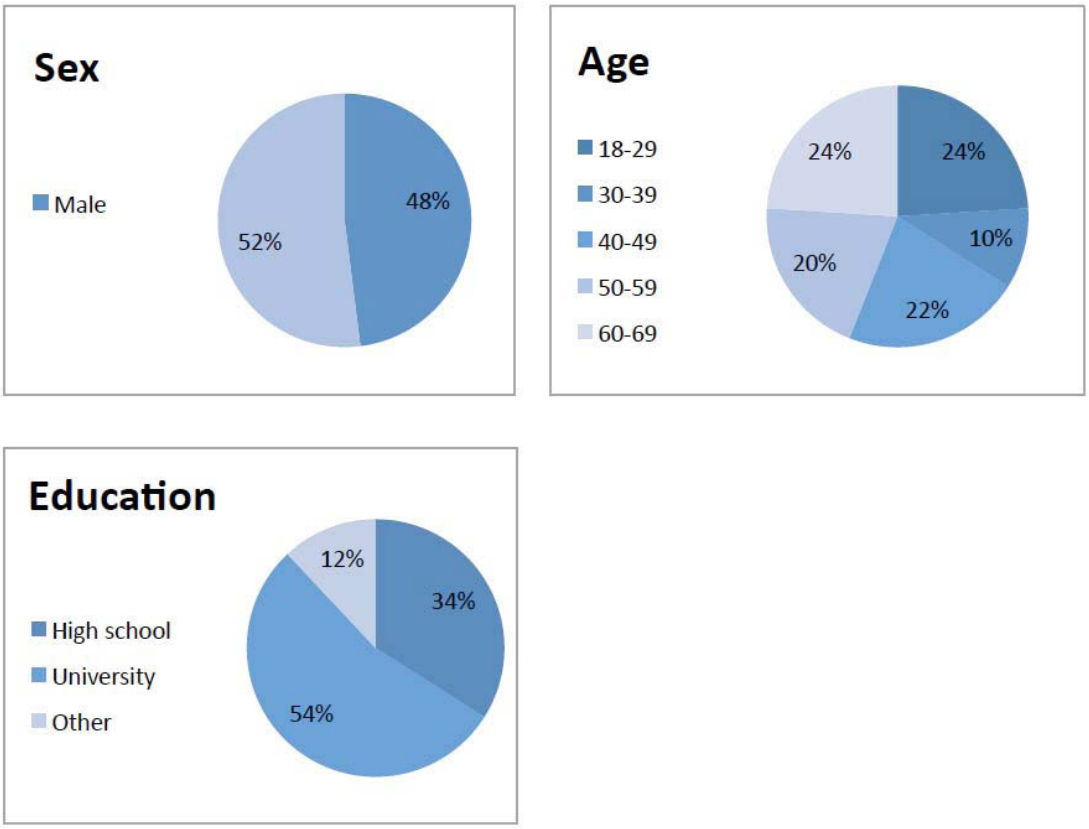
Additional questions were transcribed/digitalized as well. Information about organic consumers knowledge and opinions about organic food were analyzed and results will be graphically illustrated and discussed.

9 Results

9.1 Sample description

Following graphs show the composition of the sample. First sex, age groups and education status of the sample (n=50) are displayed.

Figure 33: Sex, age group, education of sample

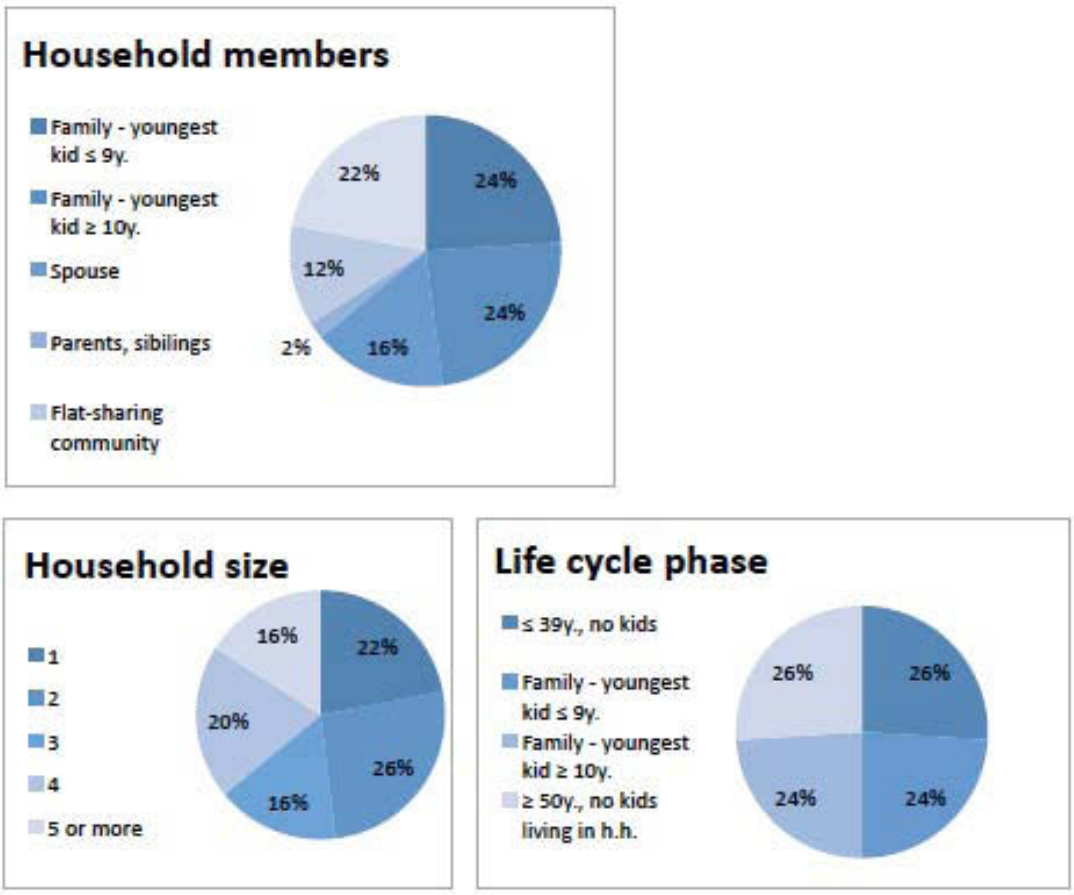


Source: Own illustration

The sample consists of 52% women and 48% men. 24% of participations are 18-29 years old, 10% are 30-39 years old, 22% are 40-49 years old, 20% are 50-59 years old and 24% are 60-69 years old. 54% of the sample finished education with a university degree, 34% finished high school and 12% finished another form of education.

Also household members, life cycle phases and household size of participations were collected and are shown in following figure.

Figure 34: Household size & members, life cycle phase



Source: Own illustration

22% of the sample live alone, 26% with another person, 16% with two other persons, 20% with three and 16% are living in a household with five or more people.

Household members are divided as follows: only 2% live with parents or siblings, 12% are living in a flat-sharing community, 16% with their spouse, 22% alone, 24% with family and youngest kid of 9 years or younger and 24% with family and youngest kid of 10 years and older.

Life cycle phases of interviewees are the following: 26% are 39 years old or younger and don't have kids, 24% have a family and the youngest kid is 9 years old or younger, 24% have a family and the youngest kid is 10 years or older and 26% are over 50 years and don't have kids living in their household (h.h.).

Table 9 displays the overall distribution within the sample and is split into heavy users and light users.

	Heavy user (n=25)		Light user (n=25)		All (n=50)	
Sex	n	%	n	%	n	%
Female	15	60	11	44	26	52
Male	10	40	14	56	24	48
Age						
18-29	2	8	10	40	12	24
30-39	3	12	2	8	5	10
40-49	8	32	3	12	11	22
50-59	6	24	4	16	10	20
60-69	6	24	6	24	12	24
Education						
Elementary school	0	0	0	0	0	0
High school	6	24	11	44	17	34
University	16	64	11	44	27	54
Other	3	12	3	12	6	12
Household size						
1	3	12	8	32	11	22
2	8	32	5	20	13	26
3	3	12	5	20	8	16
4	7	28	3	12	10	20
5 or more	4	16	4	16	8	16
Household members						
Family – kids, youngest	8	32	4	16	12	24
Family – kids, youngest	9	36	3	12	12	24
Spouse	4	16	4	16	8	16
Parents, Siblings	0	0	1	4	1	2
Flat-sharing community	1	4	5	20	6	12
Living alone	3	12	8	32	11	22
Life cycle phase						
≤ 39 y., no kids	3	12	10	40	13	26
Families, youngest kid	8	32	4	16	12	24
Families, youngest kid	9	36	3	12	12	24
≥ 50 y., no kids living in	5	20	8	32	13	26

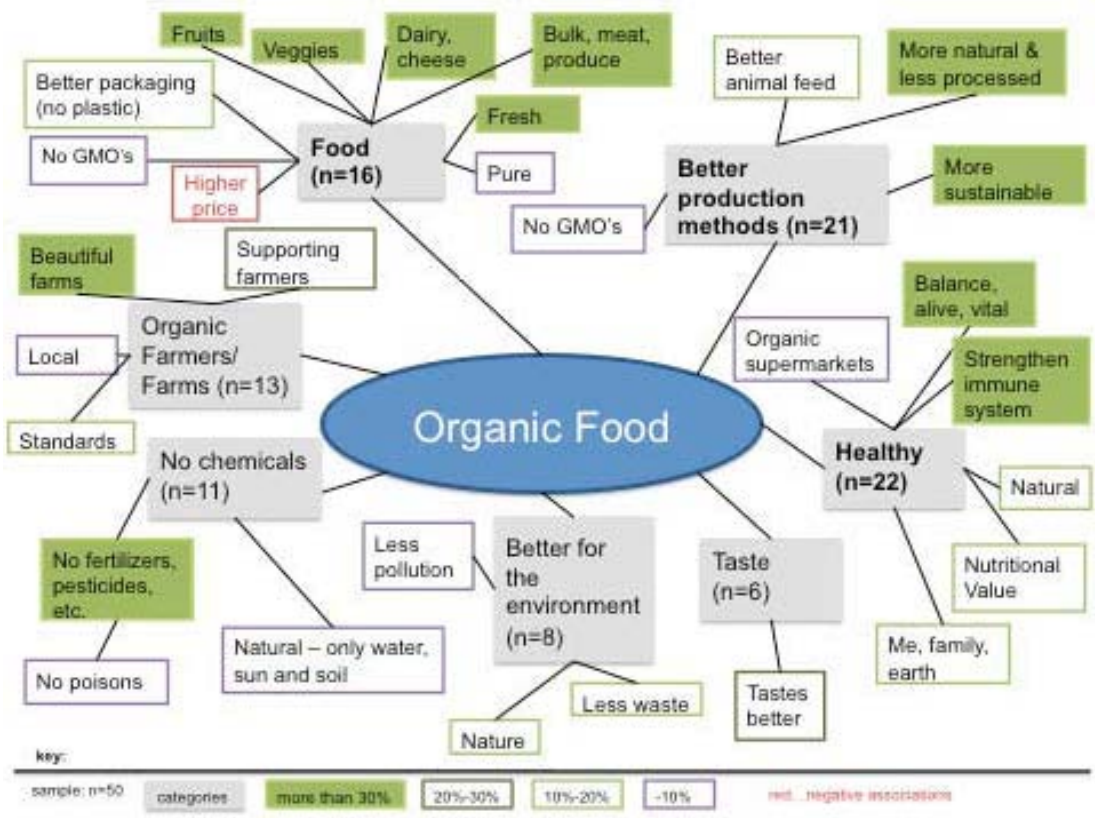
Table 9: Distribution within the sample

Source: Own illustration

9.2 Association test

Figure 35 shows the semantic net build on associations consumers named during the association test.

Figure 35: Semantic net - Organic food



Source: Own illustration

Main associated categories mentioned are: 'Healthy' (n=22), 'better production methods' (n=21) and 'food' (n=16). They are followed by 'organic farmers/farms' (n=13), 'no chemicals' (n=11) and 'better for the environment' (n=8). Also associations in the category 'taste' (n=6) were mentioned by a few participations.

'Healthy' nutrition and the health factor were the main associations organic consumers made. Balancing live and being vital were mentioned by more than 30% in this category as also to strengthen the immune system. Personal health and the health of the family, nutritional value and natural are important associations consumers made too. Also organic supermarkets in connection to 'healthy stores' were mentioned by 10% of interviewees in the category 'healthy'.

In the category ‘better production methods’ interviewees associated mostly more sustainable processing, less processed food and natural way of production (more than 30%). In addition to that, also better animal feed (10-20%) and no use of GMO’s (10%) in production was mentioned.

An important category is also ‘food’. More than 30% of participations associated different kind of products like milk & cheese, veggies, fruits, but also produce and bulk with organic food. Further the ‘fresh’ factor was also mentioned by more than 30%. Better packaging of food products, especially less or no plastic was associated with organic food too (10-20%). Regarding food also pureness and no GMO’s in food were mentioned (10%). But also the negative fact of higher prices was associated with organic food a couple of times (10%).

Most associations made in the category ‘organic farmers/farms’ were regarding beautiful farms and nature (more than 30%). But also supporting of organic farmers was mentioned, especially local farmers and standards farmers have to follow were mentioned.

‘No chemicals’ was an association interviewees often made with organic food too. No chemical fertilizers, pesticides, poisons, etc. and only natural inputs were mentioned by more than 30% in this category.

In addition to that ‘better for the environment’ was also an association made by organic consumers. For example less waste and pollution and better for the nature were named.

In the category ‘taste’ participations mostly mentioned the better taste of organic food.

Comparing outcomes with the associations made in the 2007 Agrarmarkt Austria survey with Austrian organic consumers there are many similarities, but also differences found. Following table shows the associations identified in the two surveys.

North American consumers (New York)	European consumers (Austria)
Healthy	Healthy diet
Food	Food
No chemicals	No chemical substances
Better for the environment	Nature & protection of the environment
	Higher quality
	Quality seals & labels
	Austrian origin
	Better animal husbandry
Taste	
Better production methods	
Organic Farmers/Farms	

Table 10: Comparison of associations – organic food

Source: Own illustration

The health factor and no chemical/less chemical inputs as also better production methods and the food/food products itself are highly associated with organic food by organic consumers in both surveys. A major difference is that the origin of food products (Austrian) appears to be very important for Austrian organic consumers and was associated by more than 50%. Origin wasn't associated with organic food by North American consumers, although

sometimes ‘local’ as preference was mentioned. European organic consumers also named quality seals & labels and quality controls of organic products. North American consumers didn’t associate them at all with organic food. Further North American organic consumers also linked taste to organic food, European organic consumers didn’t make this association during the association test, but also linked it in the later performed laddering interviews. In addition European organic consumers made more associations related to animal welfare (cf. MARKT- UND MARKENFORSCHUNG MARKETMIND, 2007, 18).

9.3 Laddering

Motives and values for buying organic are displayed in following figures. For comparing heavy and light users hierarchical value maps (HVM) were developed for both groups. Because of the cut-off level set (cut-off level=3) not all attributes, consequences or motives are displayed in the HVM’s. Therefore summary codes and all mentioned categories are attached in the appendix.

9.3.1 Heavy users

First figure shows the HVM of heavy users (n=25). Most important attribute mentioned was ‘healthy’ leading strongest to the consequence of ‘preventing diseases’ and the value of ‘health’. ‘Healthy’ and ‘no chemicals’ are also related with ‘fewer intakes of harmful substances’, which also leads to ‘health’.

Further ‘good for the environment/the planet’ was an attribute mentioned very often. The strongest linkage is found to the consequence ‘protecting the environment’ which also leads to a further consequence of acting ‘more sustainable’ and leading to ‘environmental health’ as the motive/value at the end of the constructed ladder.

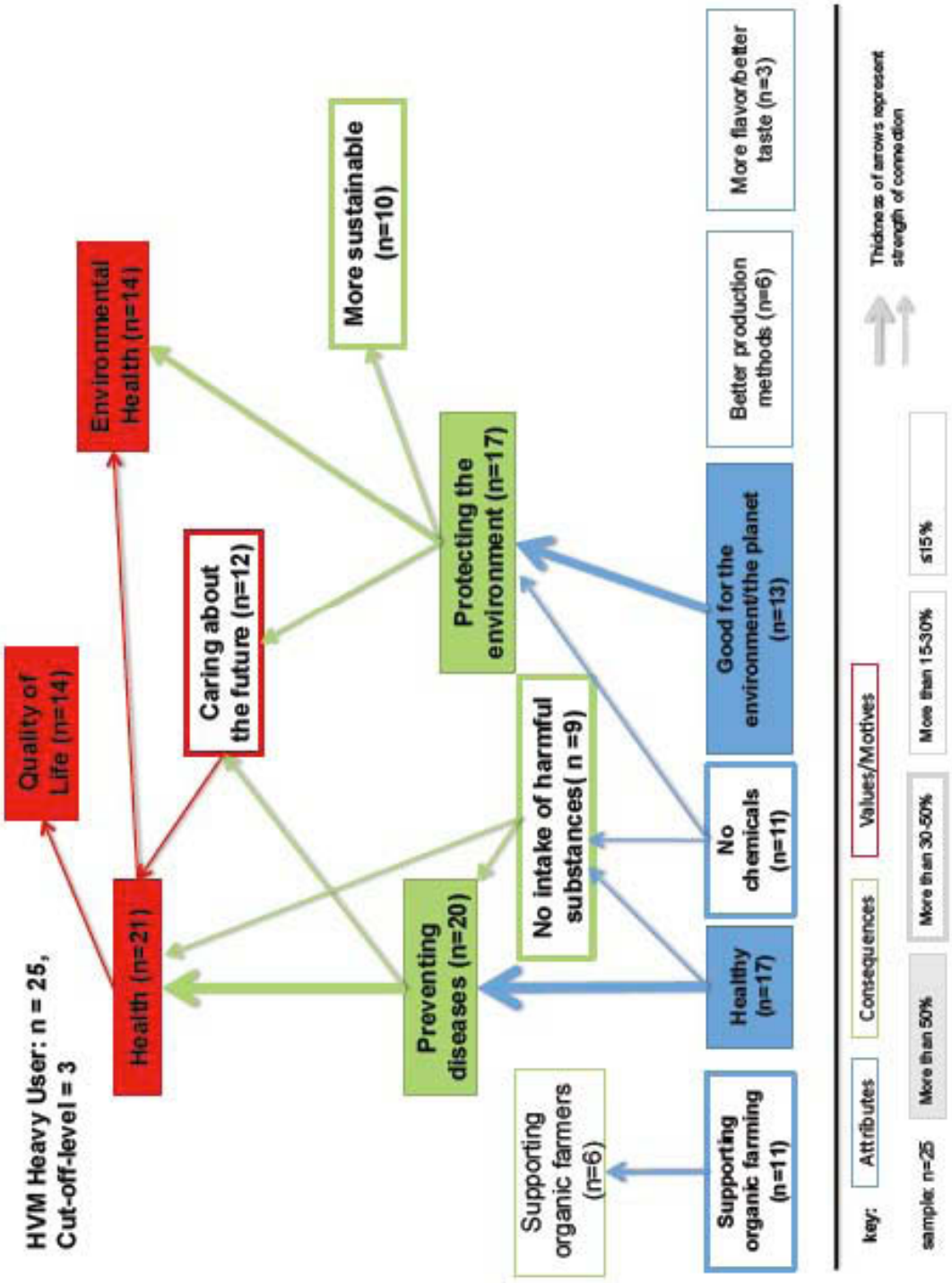
The attribute ‘supporting organic farming’ was mostly connected to the consequence of ‘supporting organic farmers’.

For a better comparison ‘better production methods’ and ‘more flavor/better taste’, attributes given very often, are displayed even though connected consequences and values varied too much between interviewees to be presented in the HVM.

The consequences ‘preventing diseases’ and ‘protecting the environment’ are also strongly correlated with the value of ‘caring about the future’.

Moreover ‘health’ was also connected to ‘quality of life’, having a good/happy and long life.

Figure 36: Hierarchical Value Map - Heavy User



Source: Own illustration

9.3.2 Light users

The next figure shows the HVM of light users (n=25). Most important attribute mentioned was also ‘healthy’ with the strongest connection to ‘preventing diseases’ as a consequence, leading to the further consequence of ‘good for me/my body’, but mostly directly to the motive/value of ‘health’.

Further attribute ‘no chemicals’ leads to ‘preventing diseases’ too, as also like ‘healthy’ to ‘no intake of harmful substances’ and again ‘health’ is the value behind that.

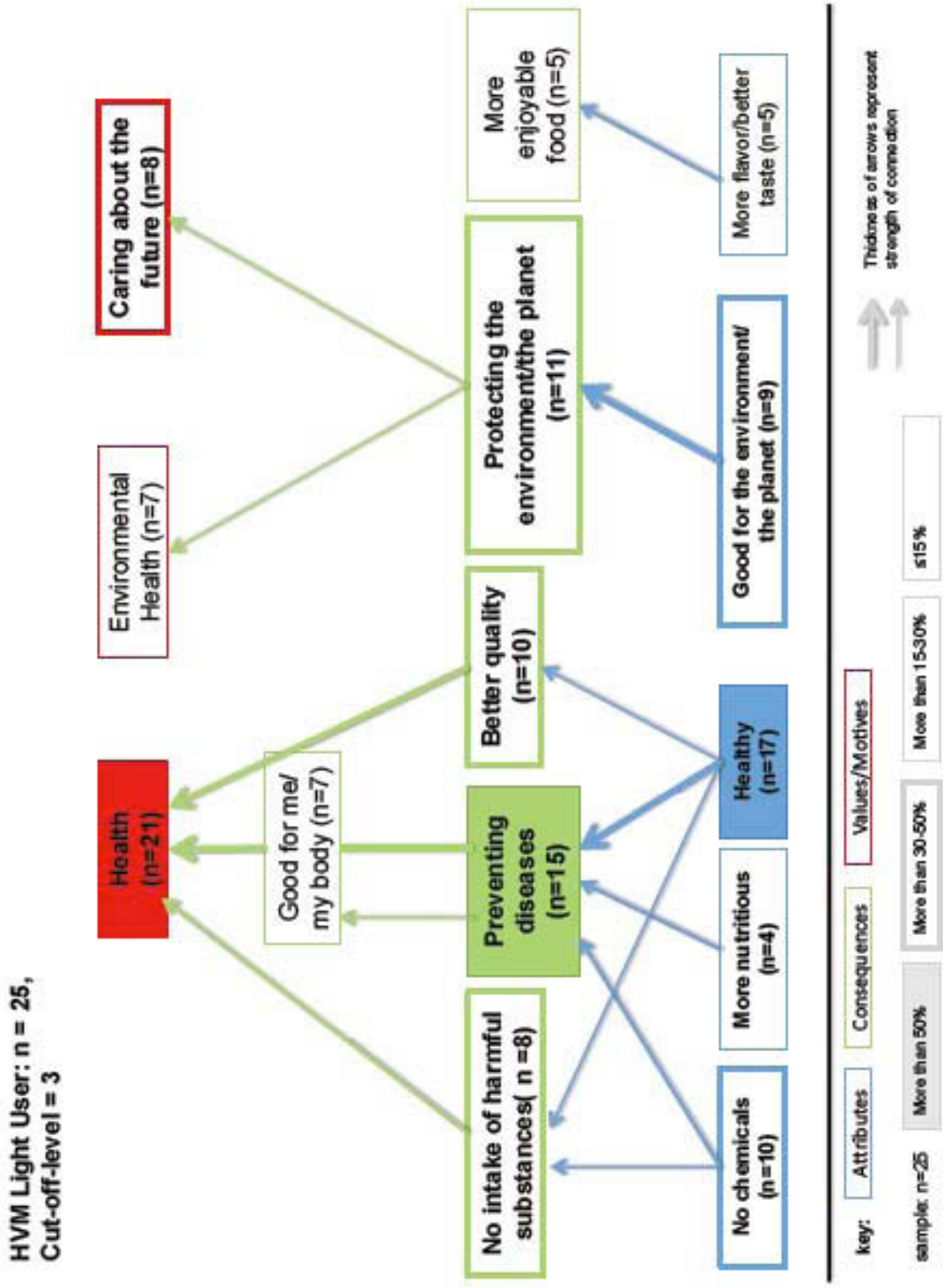
‘Good for the environment/the planet’ is linked to the consequence of ‘protecting the environment/the planet’ and further leading to motives/values ‘caring about the future’ and ‘environmental health’.

The attribute ‘more flavor/better taste’ of organic food is strongly correlated to ‘more enjoyable food’.

Further the attribute ‘healthy’ is also related to the consequence ‘better quality’, which again is linked to ‘health’.

Some interviewees also mentioned ‘more nutritious’ as an attribute, which leads to ‘preventing diseases’ as a consequence.

Figure 37: Hierarchical Value Map - Light User



Source: Own illustration

9.3.3 Comparison of heavy and light users

Comparing heavy and light users most noticeable is the strong linkage both groups made between the attribute ‘healthy’ and the following consequences of ‘preventing diseases’ and ‘no intake of harmful substances’ leading to the motive/value of ‘health’.

In addition to that a strong connection between ‘good for the environment’ and leading to ‘protecting the environment’ followed by motives/values of ‘caring about the future’ and ‘environmental health’ is found in both groups.

Differences can be found too. For example supporting of organic agriculture/farming is very important for heavy users, the attribute ‘supporting organic farming’ was named very often linked to the consequence of ‘supporting organic farmers’ and their families.

Light users on the other side made more connections from the attribute ‘more flavor/better taste’ and connected it to the consequence of ‘more enjoyable food’.

Also heavy users linked ‘protecting the environment’ strongly to ‘more sustainable’, which light users didn’t. In addition to that a stronger connection of ‘health’ and ‘quality of life’ can be found in the group of heavy users. Further the connections ‘healthier’ → ‘preventing diseases’ → ‘health’ and ‘good for the environment/the planet’ → ‘protecting the environment/the planet’ → ‘environmental health’ were stronger compared to light users, even though they were the strongest connections light users made too.

9.3.4 Comparison with European organic consumers

Comparing results with data of the 2007 survey with Austrian organic consumers similarities, but also differences are found.

First of all ‘health’ as the main motive behind buying organic food for both consumer groups is undisputed. Also attributes and linked consequences and motives/values seem to be quite similar.

But taking a closer look differences are conspicuous too. For example the attribute ‘Austrian origin’ was mentioned by more than 30% of Austrian organic consumers, ‘local’ as counterpart was only mentioned by 6% of North American organic consumers.

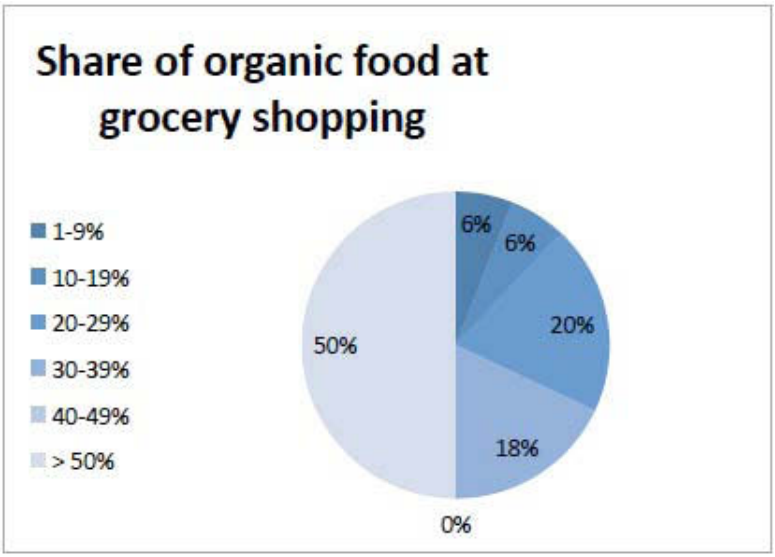
Further ‘better taste’ was mentioned by more than 50% of Austrian organic consumers, but only by 16% of North American organic consumers. In addition to that Austrian organic consumers link better taste to ‘healthier nutrition’, which wasn’t the case for North American organic consumers.

Looking at motives/values behind buying organic food some differences are found too. For North American organic consumers ‘environmental health’ is a very important motive/value to buy organic food. The connection wasn’t linked that high by Austrian organic consumers, even though it’s also a motive/value for them to buy organic food. On the other side a ‘peace of/a good conscience’ is a motive/value more than 30% of Austrian organic consumers connected with buying organic food. North American organic consumers didn’t, instead ‘human/social responsibility’ was stated by 32% of interviewees, which seems to be quite similar in meanings.

9.4 Additional questions

The share of organic food at grocery shopping is displayed in the following figure. A share of 1-9% and 10-19% was mentioned by both 6% of the sample. 20-29% share of organic food were named by 20% and 18% said their share of organic products of shopping is 30-39%. All together that implies 50%, which are defined as light users. A share over 50% - defined as heavy users - was mentioned by 50% of the sample.

Figure 38: Share of organic food



Source: Own illustration

Next figure shows triggers for consumers to buy organic food. Only one interviewee said that there is no trigger, three said it was always their way of life and 2 said they only buy it, because it's available.

Mentioned most often was health, related to personal and family's health (14 times), to stay/be healthier (10 times) and allergies (1 time), but also for the health of the planet/environment (12 times) and two statements about better treatment of animals were given.

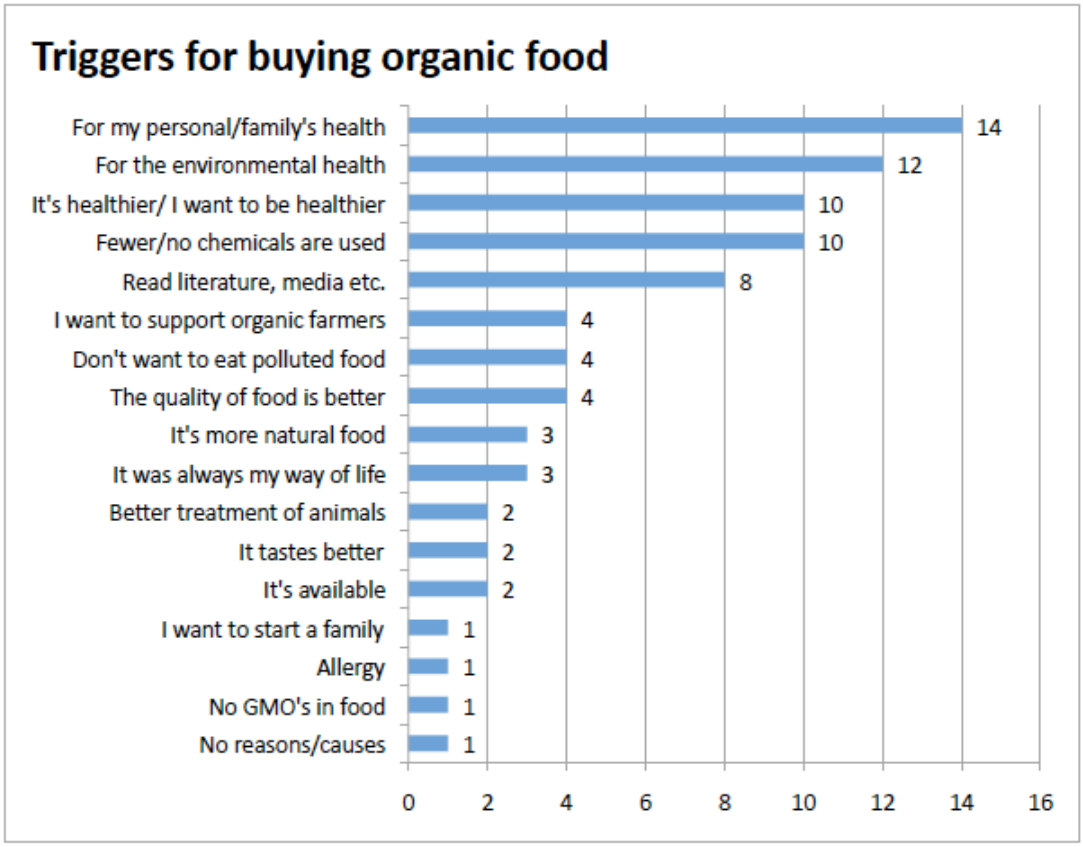
The awareness that fewer chemicals are used was mentioned ten times. Followed by readings and media influence with eight statements and supporting of organic farmers with four statements.

Also food in general was mentioned as a trigger. Four interviewees pointed out the better quality of organic food and four that they don't want to eat polluted food, followed by three statements about organic food being more natural and two statements about better taste.

Compared to triggers mentioned in the 2007 survey with Austrian organic consumers main difference is that suggestions/ideas from peer groups (friends and family) wasn't stated by North American organic consumers as a

trigger to start buying organic food (cf. MARKT- UND MARKENFORSCHUNG MARKETMIND, 2007, 13).

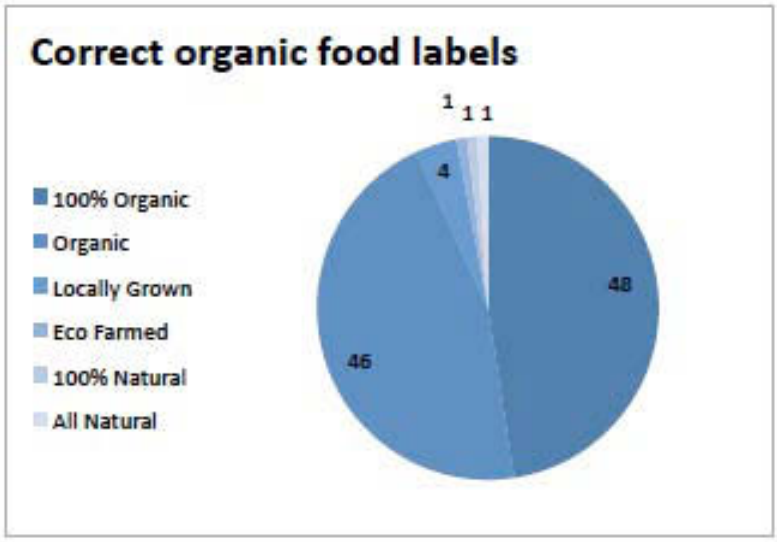
Figure 39: Triggers for buying organic food



Source: Own illustration

The following two figures display results about organic consumers' knowledge about organic food. First results of correct certified organic food labels are shown. 48 of 50 interviewees (96%) picked the first correct phrase, '100% organic' and 46 of 50 interviewees (92%) the second, 'organic'.

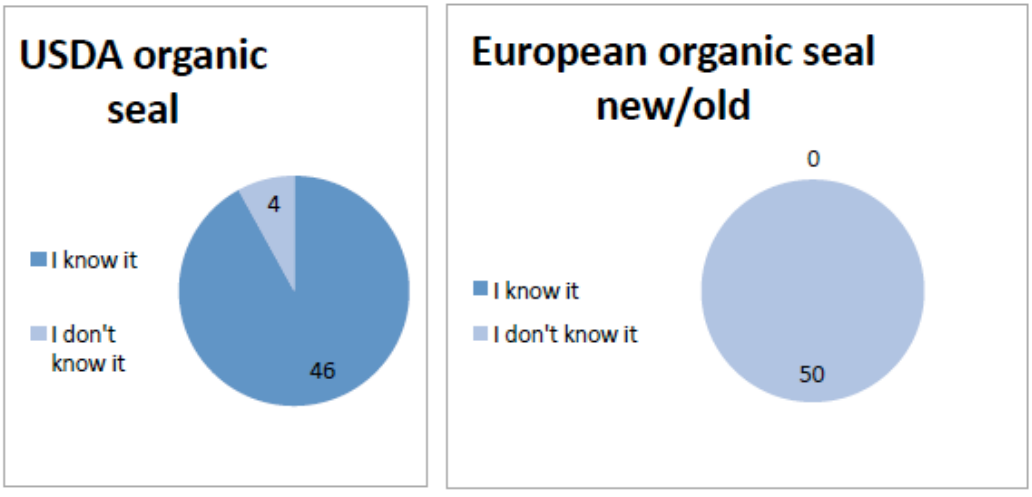
Figure 40: Correct organic food labels



Source: Own illustration

Also 46 of 50 interviewees (92%) said they know the USDA organic seal. However the old and the new European organic seals wasn't known by any of the interviewees as shown in following figure.

Figure 41: Organic seals

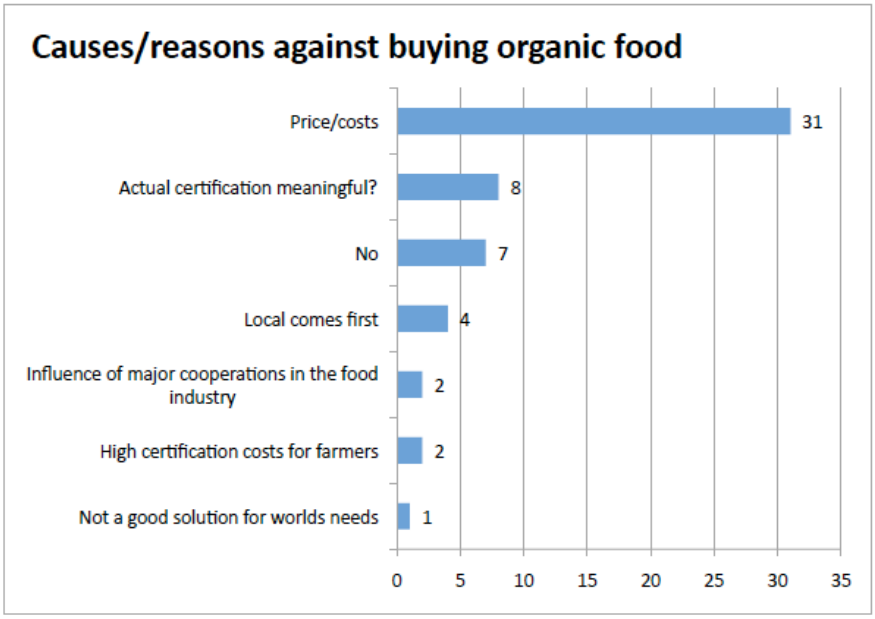


Source: Own illustration

Organic consumers were also asked, if there is any cause/reason that would speak against buying organic food. Higher prices or costs were mentioned most often, by 31 of 50 of interviewees (62%). Eight interviewees (16%)

aren't convinced by actual certifications and labeling and said that could be a reason to not buy organic food. Only seven interviewees (14%) said that there is no cause or reason for not buying organic food. Also four participations (8%) mentioned that local comes first. Other reasons were influence of big companies in the organic industry and costs for organic farmers as also questioning the sustainability of the organic food system.

Figure 42: Reasons against buying organic food



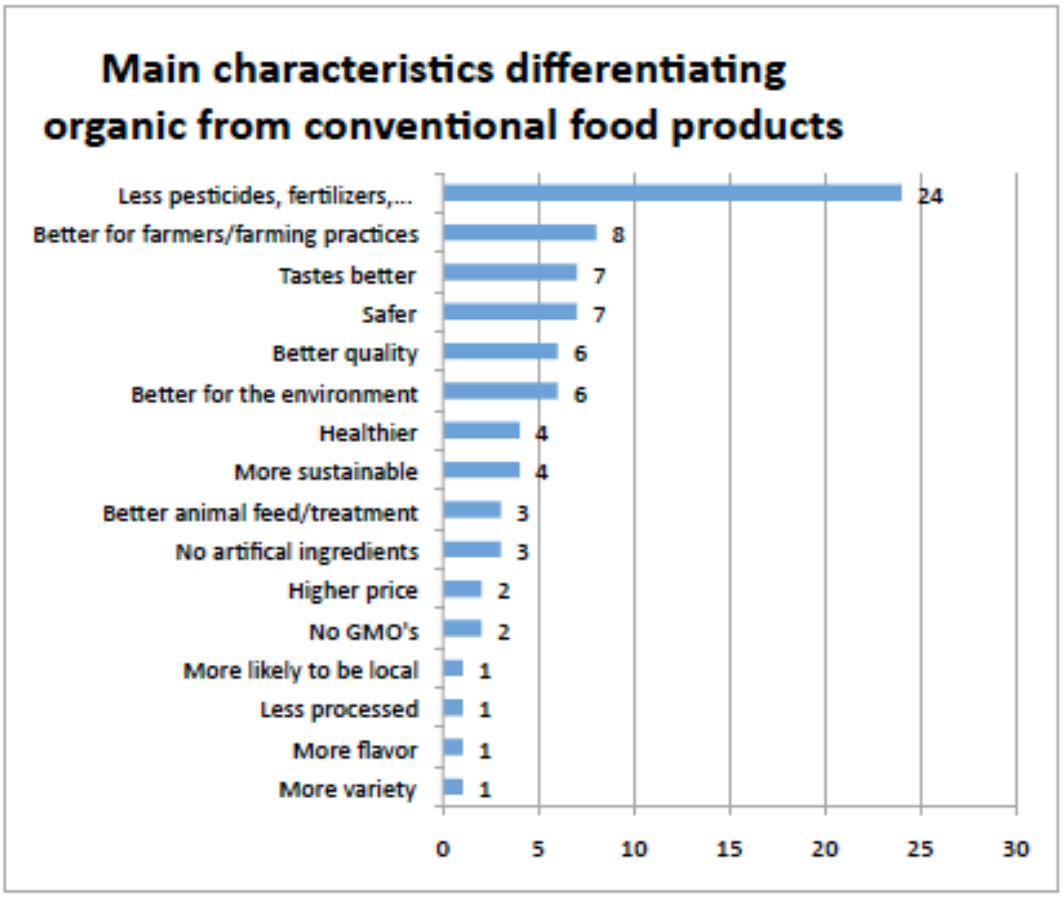
Source: Own illustration

Compared to reasons mentioned in the 2007 survey with Austrian organic consumers not many differences are found. Even more - almost 80% - said that price is the reason for not buying organic. Also consumers weren't convinced about organic food/certification and that was mentioned by about 22% of interviewees. 6.5% of Austrian consumers mentioned that quality and taste isn't always better and shorter shelf life of organic food was mentioned by 6.5% too (cf. MARKT- UND MARKENFORSCHUNG MARKETMIND, 2007,36). Overall price seems to be the main reason for consumers for not buying organic, followed by mistrust of labels/certification.

Further organic consumers were asked to name differences between organic and conventional food products. Results are displayed in the following figure.

24 of 50 organic consumers (48%) mentioned no/less use of pesticides/fertilizers/etc., followed by eight interviewees (16%) mentioning better farming practices/better for farmers and seven interviewees (14%) each for better taste and safety issues regarding food. Further characteristics differentiating organic from conventional food mentioned were for example better quality, healthier, no artificial ingredients or better for the environment. Austrian organic consumers mentioned almost equal characteristics for differences between organic and conventional food (cf. MARKT- UND MARKENFORSCHUNG MARKETMIND, 2007,38).

Figure 43: Differences organic and conventional food



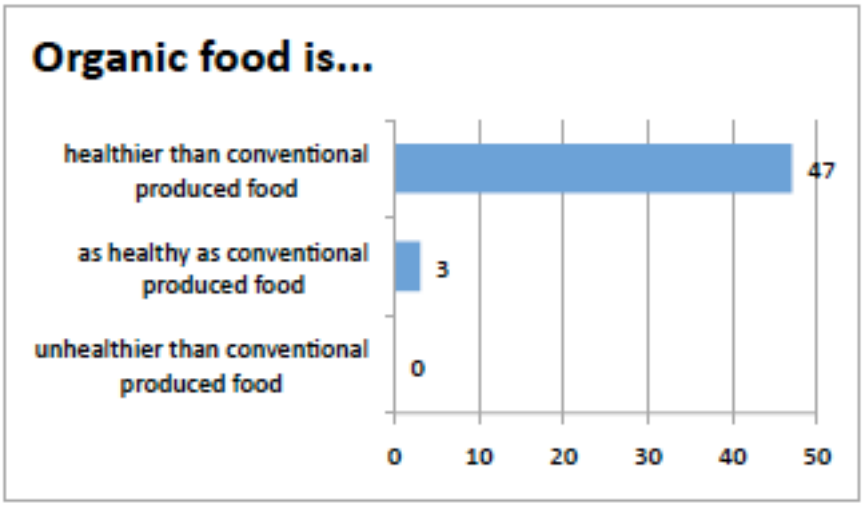
Source: Own illustration

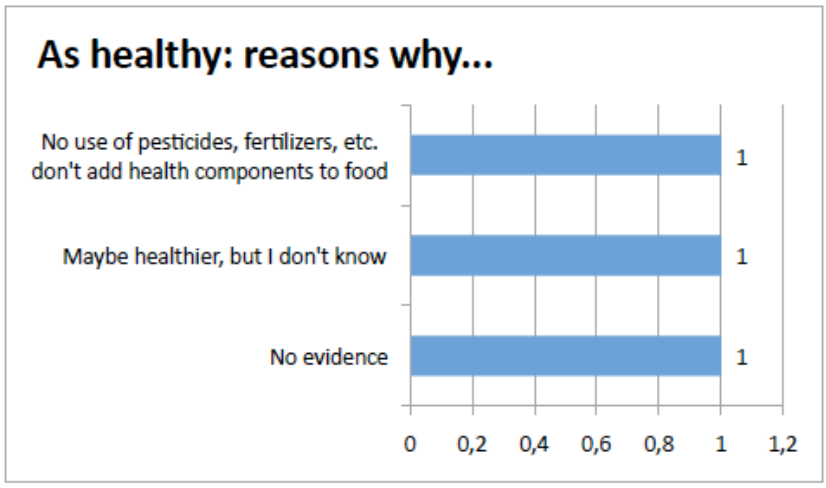
The last of additional questions was related to the health image of organic food. 47 of 50 interviewees (94%) said that organic food is healthier than conventional food. Three interviewees (6%) said that organic food is as

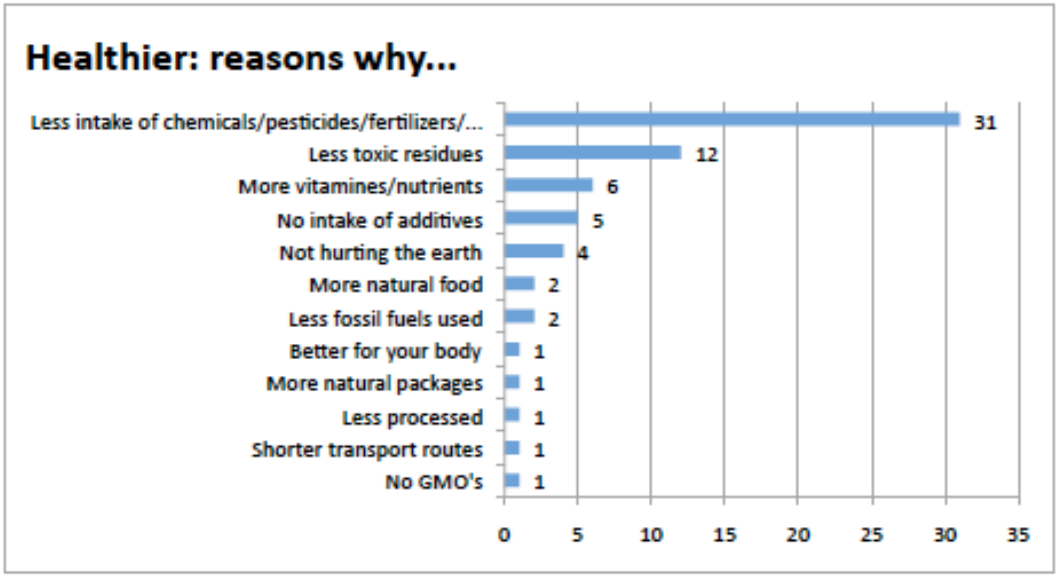
healthy as conventional food and mentioned for e.g. that they don't know if it's healthier, there is no evidence that it's healthier and that differences in production don't add a health compound to the food. For 31 of 50 consumers (62%) thinking that organic food is healthier, fewer intakes of chemicals makes organic food healthier and 12 of the interviewees (24%) think less toxic residue is a reason for organic food being healthier than conventional food. Still six interviewees (12%) think that they get more vitamins and nutrients with organic food. Worth mentioning is also that four interviewees mentioned 'not hurting the earth' as a reason for organic food being healthier than conventional food, meaning the circle of not harming the environment followed by poison free food and further getting healthier food and a healthier diet.

Fewer chemicals were also mentioned by almost 60% of Austrian organic consumers. Shorter transport routes were ranked higher (almost 14%), but again similarities are found regarding the mentioned reasons (cf. MARKT- UND MARKENFORSCHUNG MARKETMIND, 2007,48).

Figure 44: Organic food and health







Source: Own illustration

Further it needs to be mentioned that multiple answers were possible for open questions. Statements of interviewees were categorized and displayed in previous figures.

10 Discussion

10.1 Discussion of results

The aim of this thesis was to answer the five generated research questions. First two research questions were answered trough the theoretical part of this thesis. To answer last three research questions results of the empirical part of this thesis will be used. But it needs to be stated that a qualitative approach was chosen for the empirical part, so the answers can only be seen as hypotheses.

The third research question is following:

- *Do North American organic consumers know organic labels, do they know the European organic label and what do they associate with organic food?*

Findings of association test made with North American organic consumers are very comprehensive. Interviewees were able to make many associations for organic food.

It seems that North American consumers strongly connect organic food with health and being healthy. They associate a higher nutritional level, but also balance and vitality in life with organic food being healthier. The fact that many interviewees have children explains why the health of the family was mentioned very often.

The second big category people made associations in, is better production methods. It appears that more natural methods and less processing in food production is linked to organic food very often. Also associations to being more sustainable and thinking about future generations were made quite often and seem to be important for organic consumers. Strongly linked to that is also thinking about the environment and producing less waste and of course no chemicals and fewer pesticides used. Previous studies like e.g. the global Nielsen consumer report about organic and functional foods (2007) show similar results and confirm the outcome of health as one of the main

reasons for buying organic. Also thinking about the family/children and concerns about the environment were outcomes of previous conducted surveys. (cf. 2.4 Organic consumers).

Further the food itself is in people's mind thinking about organic food. They associate fresh products and food in different categories with organic food. Some interviewees for example mentioned 'The dirty dozen', a list the local supermarket 'Greenstar' developed to help consumers. It includes products that are usually highly contaminated with pesticides and therefore should be better bought in the organic version rather than the conventional one.

The negative factor of price wasn't mentioned quite often during the association test, but later in the interview the leading answer in reasons for not buying organic food. It appears that price isn't the 'first' association organic consumers have thinking about organic food, but if you ask them directly about negative factors of organic food, they mention the higher prices of organic food. In addition to that it can be an important reason why people don't buy organic food, simply because they can't afford it. Also many interviewees mentioned that they have to reduce the share of organic food in their grocery shopping, because they can't afford it anymore.

Supporting organic farming and farmers, especially the local ones were also associations organic consumers made and seem to be important for them.

Only few North American organic consumers associated taste or better taste with organic food. For that reasons it seems that organic consumers don't highly associate better taste with organic food. But looking at results of Austrian organic consumers associations, taste wasn't mentioned at all. Although in both surveys taste or better taste were named as attributes in the laddering interviewees. It seems that taste also isn't one of the first association organic consumers have about organic food, but if they make up their minds, taste or better taste is also linked to organic food.

After conducting the association test organic consumers were asked to find correct phrases certified to use for organic food in the U.S. and they were

asked if they know the USDA organic label and/or the European organic labels (new/old).

Results showed that overall interviewees know about phrases that are certified for the use of organic products and also know the USDA organic seal. It appears that organic consumers have knowledge about organic food and regulations/labels. These findings corroborate the outcome of previous studies that organic consumers often know more about organic products (cf. ZANOLI et al., 2004, 26). Several store checks in Ithaca showed that organic products are only found labeled with the USDA organic seal. Also foreign brands were labeled with the USDA organic seal. That confirms results of interviewees not knowing the new and the old European organic label.

In conclusion North American organic consumers know the USDA organic label, but they don't know the European organic label. They strongly associate health(y), better production methods/better for the environment, fewer chemicals, supporting organic agriculture and fresher/purer food with organic food.

The fourth research question is following:

- *What are the North American consumers' motives for buying organic food products?*

Outcomes of laddering interviews and hierarchical value maps developed from the data provided by laddering interviews display motives/values behind buying organic food and also link statements made starting at attributes, going trough consequences and further to motives/values.

Results displayed in the hierarchical value maps clearly show the importance of health and environmental health for organic consumers buying organic food. It appears that organic consumers are really concerned about that. They are seeking less produced food and are worried about chemicals used in conventional production.

It seems that less/no use of chemicals as also better production methods in general to protect the environment a very important for organic consumers, both for heavy and light users. But also thinking about their personal and family's health and about health of the whole planet and future generations. It appears that they are making their minds about what will happen in future and how to be a better role model for others as well.

Further the quality of life is an important motive/value standing behind buying organic food. People want to be healthy and have a long and happy life. For some organic consumers buying organic food is strongly connected to enjoyment and further leads to life enjoyment in general. It seems that very personal reasons are leading to buying organic food. Organic consumers want to enjoy their life and be healthy and it looks like they think buying organic food satisfies those motives/values.

The picture of organic consumers created of the above mentioned motives/values for buying organic is quite similar to outcomes of studies conducted in Europe. This group is especially in Western Europe often called LOHAS, meaning Lifestyle of Health and Sustainability. It appears that North American organic consumers can be defined as LOHAS too, caring about their personal/family's health and quality of life as also being concerned about the future, environment and having a social responsibility (cf. HAAS et al., 2010, 26).

In conclusion main motives/values for North American organic consumers for buying organic food are definitive health and environmental health. But also caring about future generations, being responsible and enjoying life are important motives.

Further also some additional questions were asked, which seems to substantiate outcomes of laddering interviews.

First results from asking the questions about triggers that lead people start buying organic food and causes/reasons that speak against buying organic food are very interesting.

Again health - personal's, family's and environmental - was mentioned most often as a trigger to start buying organic food. Fewer/no chemicals in food production/food were named again too. These results reflect outcomes of laddering very well. Moreover people also stated that they started buying organic food after reading for example about negatives of pesticides & co. So media and studies seem to function as a trigger and are good information sources and are used by interviewees to make up their minds.

Looking at reasons against buying organic food the issues of price and mistrust are remarkable. These results are in accordance with previous studies, such as higher prices as a reason for not buying organic food were mentioned i.e. in the 2007 Nielsen consumer report about organic and functional food (cf. NIELSEN, 2007,1f). Also price sensitivity is found in the 2007 survey with Austrian organic consumers. To sum it up higher prices still play a huge part in consumers decision of buying organic food. Also certification/labeling and consumers questioning or mistrusting is a big issue regarding organic food. These outcomes confirm results of various studies conducted in Europe and North America (cf. 5.4 Perception of organic product labels/quality seals). Trusting a label is important. As mentioned in chapter 5.4 organic food is a credence good product, meaning it can't be visually differentiated from conventional food. Believing in the label, trusting the label is therefore very important (cf. GREENE, 2000, 26). It leads to the conclusion of communication and more transparency being a necessity to inform and educate consumers.

Second organic consumers also were asked about main differences between organic and conventional food products. Results reflect outcomes of laddering interviews and previous questions. Less use of chemicals and better farming practices are main differences mentioned and it looks like they are very important for organic consumers. But organic consumers also seem to be concerned about the safety issue and think quality and taste of organic food is better than conventional food.

Third organic consumers were asked if they think organic food is healthier, as healthy as conventional food or unhealthier than conventional food. It's pretty obvious that most interviewees said that they think organic food is healthier than conventional food. Like mentioned previous in discussing laddering interviews results and results from further questions, health is the most important motive for organic consumers buying organic food. Statements justifying this believe are "fewer or no chemicals and no intake of them", "it's more nutritious" or "has more vitamins".

In conclusion health and environmental health and caring about the future are main motives and are confirmed by results of additional questions. But also more qualitative and tastier food in general appears to be important and life enjoyment as a motive behind that. Speaking about concerns higher prices and confusion or mistrust about labeling and certification are in organic consumers minds too.

The fifth research question is following:

- *Can European labeled organic products be introduced on the North American market without any further modifications?*

This research question was not part of the qualitative survey but based on personal observations in store checks and the experience with interviews this questions is addressed indirectly. To answer this question thoroughly, a survey with quantitative approach is absolutely essential. But observations for example made trough store checks show that most organic food products at least in Ithaca are from the U.S. or Canada. Also organic consumers mentioned that they would prefer buying local if possible. Often interviewees mentioned that they don't want organic food that is shipped from far places like California, thinking about environmental health but also about food quality.

Further speaking about labeling, problems could evolve because of consumers not knowing or getting confused about labeling. For example organic consumers in this survey didn't know the European organic label at

all. If that were also the fact speaking about a broader population, thinking about applying to get the USDA organic label would be necessary.

In conclusion the fact of the value of thinking of the environment and being more sustainable speaks against imported organic products, but if considered to import them attention to labeling issues should probably be given to avoid confusion of consumers.

Outcomes of this survey reflect outcomes of previous surveys conducted by i.e. Markt- und Markenforschung Marketmind (2007), Nielsen (2007), Haas et al. (2010), Mikinovic (2007) or Aarset et al. (2004) and other studies mentioned in this thesis; and the hierarchical value maps visually display results very well, but again a qualitative approach was used, so the given answers to research questions have to be seen as hypotheses.

10.2 Discussion of method

The aim of the empirical part was to determine organic consumers' motives/values for buying organic food and to compare results with a previous conducted survey with Austrian organic consumers in 2007.

A qualitative approach was chosen. The method used is called laddering and is explained in chapter 6. After conduction laddering interviews together with an association test to find out spontaneous associations for organic food and some additional question, data was transcribed, categorized in attributes, consequences and motives/values and used to construct hierarchical value maps for displaying results.

Soft laddering is the kind of laddering-technique used for interviews, because respondents are restricted as little as possible in their natural flow of speech (cf. 6.2.3. Types of interviews). Also the sample size including 50 people was small enough to perform interviews with the soft laddering method.

The interviews were conducted in a quiet atmosphere, making interviewees feel comfortable. Also they were able to sit down answering the questions

and a certain amount of anonymity was possible and therefore gave participants the opportunity to talk about quite personal topics.

Before laddering interviews started respondents were asked to name the most important reasons for them buying organic food and rank them. Free elicitation was chosen, because of the lower influence rate of respondents. They got to choose on their own instead of for example having a list and just ranking them (cf. 6.2.2. Method).

The response in laddering interviews was surprisingly good. Concerns before starting the interviews about people being in a rush, especially for the interviews in the supermarket weren't approved. Consumers who stopped by for being interviewed were interested and did take the time for answering all questions.

The interviews were, as mentioned in literature, transcribed immediately and then categorized. Unfortunately there is not a lot of literature found for analyzing data of laddering interviews, but literature by Reynolds and Gutman was very helpful for analyzing data of laddering interviews (cf. REYNOLDS and GUTMAN,1988, s.p.).

Constructing the actual outcome of laddering interviews, the hierarchical value maps or HVM's was quite challenging too. Several trials were necessary to develop a meaningful visualization of attribute-consequence-value-chains (A-C-V) organic consumers made.

Also a limitation in constructing the value maps, especially for light users, which needs to be mentioned, is the fact that light users often weren't able to construct many A-C-V chains. It seems that some light users are only buying organic food occasionally and so their motives behind buying organic food aren't that distinctive either.

In conclusion, the method of performing laddering interviews and constructing hierarchical value maps of consumers' motives/values is an interesting, but challenging experience. The outcome is quite amazing and

worth the time that is needed to perform interviews and even more to analyze data and to construct the hierarchical value maps.

11 Abstract

The present work examines organic standards and labels as also organic consumers motives/values for buying organic food. The aim of this thesis is to display possible differences between European and North American organic standards and labels as also to gain knowledge about North American organic consumers motives for buying organic food. The focus of the theoretical part is on organic standards and labels and consumers' perception of labels in general. In the empirical part a survey with North American organic consumers is performed to provide data about motives of buying organic food.

The theoretical part starts with a short introduction and an insight into organic agriculture and the organic market/consumer in general. Also a short outlook for the future of the organic market is provided. Then organic standards and regulations are discussed. The development of organic standards and rules is discussed and the latest regulations of Europe 'European Council Regulation (EC) No 834/2007' and North America 'The National Organic Program' are compared (cf. chapter 3). Differences can be found regarding product and handling requirements, for example requirements for livestock, but also in control systems, imports and labeling. There are differences in how organic products are classified and Europe and North America both have their own national organic seal. Besides national labeling also organic brands and private labels can be found. Organic brands and especially organic private labels of retailers are still on the rise and are influencing the organic market to a great extent (cf. chapter 4).

Moreover behavior and especially perception is discussed theoretically to give an insight in the importance of consumers' perception of labels. Examples of consumers' perception of organic labels are displayed and discussed. Also means-end-chain theory and laddering method are explained and build the basics for the empirical part. The means-end chain theory links objective product characteristics, or also called attributes to certain

consequences that further lead to values. Laddering is the method used therefore (cf. chapter 6).

For the empirical part laddering interviews are performed with a sample of 50 people, they are separated in 25 heavy users (more than 40% of food purchase is organic) and 25 light users (less than 40% of food purchase is organic) and take place in Ithaca, NY. Besides laddering interviews also an association test is conducted and several additional questions are asked to compare outcomes with Austrian organic consumers' motives from the 2007 survey performed for the Agrarmarkt Austria Marketing GmbH (cf. chapter 7)

Main associations are summarized in categories, which are following: Healthy, better production methods, food, organic farmers/farms, no chemicals, better for the environment and taste. Beside lots of similarities origin/local products are mentioned way less compared to 'Austrian origin', an association more than 50% of Austrian organic consumers made.

Results of laddering data are displayed in hierarchical value maps (HVM's) for heavy and light users. Main motives of organic consumers are 'health' and 'environmental health', followed by 'quality of life' and 'caring about the future'. Outcomes from association test support these motives. Also motives and values are quite similar comparing them to results of the 2007 survey in Austria. Additional questions support the results of laddering even stronger and also show organic consumers' reasons for not buying organic food, which are the following: higher price and confusion and/or mistrust regarding organic labeling and certification. Findings from literature show that there is a lot of confusion with organic labeling too (cf. chapter 5).

In conclusion, it can be stated that there are some differences between European and North American organic standards and labeling. In addition to that there are differences between European and North American organic consumers too, but also a lot of similarities are found, especially if speaking of consumers' motives. Moreover higher prices of organic food and confusion regarding organic labeling and sometimes mistrust in certification are issues concerning European as also North American organic consumers.

12 Appendix

12.1 Questionnaire

Questionnaire

1. How much of your daily shopping is organic (in %)?

○ 1-9%	○ 20-29%	○ 40-49%
○ 10-19%	○ 30-39%	○ > 50%

2. Was there a reason/cause that led you to start buying organic food?

3. What do you associate with ORGANIC food? *(Themes, pictures, situations)*

4. Only 2 out of 6 phrases of this list are certified for the use of organic product labeling. Please try to find the 2 phrases.

○ All Natural	○ Organic
○ 100% Organic	○ Eco Farmed
○ Locally Grown	○ 100% Natural

5. Do you know the USDA organic seal?

○ Yes ○ No

6. Do you know the following organic product seals?

○ Yes ○ No

○ Yes ○ No

1

Laddering:

7. Please tell me the most important reasons why you are buying organic food?

8. What does ... mean to you? Why did you choose it?

9. And why is that important to you?

10. And why is the latter important to you?

(Questions 8-10: Perform for every reason mentioned in question 7)

11. Are there also any personal reasons you can think of, which speak against buying organic food? If yes, are there any disadvantages or do you have any concerns regarding organic food?

12. From your point of view, what are the main characteristics that differentiate organic food products and conventional food products?

13. a) Do you think organic food is…?

- ○ …as healthy or unhealthy as conventional produced food
- ○ …healthier than conventional produced food
- ○ …unhealthier than conventional produced food

b) Please mention some reasons for your answer.

2

14. Socio-demographic information

Sex	Age	Education (finished level)
○ Male	○ 18-29	○ Elementary school
○ Female	○ 30-39	○ High school
	○ 40-49	○ University
	○ 50-59	○ Other
	○ 60-69	

Household size	Household members
○ 1	○ Family - Kids, Youngest ≤ 9y
○ 2	○ Family - Kids, Youngest ≥10y
○ 3	○ Spouse
○ 4	○ Parents, Siblings
○ 5 or more	○ Flat-sharing community
	○ Living alone

12.2 Data codes

Data encoding

Statement	ACV	Category
Respondent 1		
Healthier food	A	Healthy
I need to follow dietary restrictions	C	Preventing diseases
Other foods unhealthy/not that healthy, it would make me sick	C	Good for me/my body
Health/Healthiness	V	Health
Ingredients I want to have/ better ingredients	A	Ingredients
It's less produced	C	Better quality
I know what's in it	C	More transparency
Health/Healthiness	V	Health
Traceability	V	Safety
Respondent 2		
Healthier products	A	Healthy
Not sprayed/no pesticides	A	No chemicals (pesticides, fertilizers,...)
Better quality	C	Better quality
No intake of chemicals/pesticides	C	No intake of harmful substances
They could harm you	C	Preventing diseases
I have a long live	V	Increasing life expectancy
Health / prevention of diseases	V	Health
Support organic farming	A	Supporting organic farming
I want to support farmers/ their livelihood	C	Supporting organic farmers
Supporting higher production of organic food in general	C	Boost organic production
Better environment	V	Environmental health
Time to grow/ caring during production	A	Better production methods
Not polluted food	A	No chemicals (pesticides, fertilizers,...)
Better food	C	Better quality
Care about animals	C	Animal health care
Care about environment	V	Environmental health
Kind to the earth, being sustainable	V	Sustainability
Respondent 3		
Doesn't have poisons (no chemicals)	A	No chemicals (pesticides, fertilizers,...)
Poisons/pesticides not in environment	C	Protecting the environment/the planet
Don't harm farmers and don't harm me	C	Preventing diseases
Personal health	V	Health
Environmental health	V	Environmental health
Health of others/ caring of society/community	V	Health of the community
Respondent 4		
Give my daughter a healthy diet	A	Healthy

Need to give daughter healthy food, no other option. I want to reduce her health problems.	C	Preventing diseases
Future of my child	V	Caring about the future
Health	V	Health
To avoid poisons/healthier	A	No chemicals (pesticides, fertilizers,...)
Not poisoning myself	C	No intake of harmful substances
Be fully alive	C	Good for me/my body
Health	V	Health
Fulfilling purpose on planet/earth	V	Human/social responsibility
Other food is toxic	A	No chemicals (pesticides, fertilizers,...)
Prevent negative effect on your psychological/spiritual being. Clarity (not influenced), having the ability to see the truth and don't let toxins cloud my mind	C	Keeping a clear mind
Fulfilling purpose on planet/earth	V	Human/social responsibility
Be fully alive (vitality)	V	Quality of life
Don't want to hurt the earth	A	Good for the environment/the planet
Better for my daughter, me and the community, we are all interconnected	C	Protecting the environment/the planet
Environmental health	V	Environmental health
Health of Community	V	Health of the community
Own health	V	Health

Respondent 5

Healthy	A	Healthy
Fewer aches, pains, diseases	C	Preventing diseases
Medical calculuses	C	Reducing medical costs
Quality of life	V	Quality of life
Philosophy, growing organic is important	A	Supporting organic farming
Clear thinking	C	Keeping a clear mind
Respect for your human body	C	Good for me/my body
Respect for the earth	C	Protecting the environment/the planet
General happiness and success	V	Quality of life
Fulfillment of your responsibility while living on mother earth	V	Human/social responsibility
Improve ecology of planet	A	Good for the environment/ the planet
Sustain our species	C	More sustainable
Passing good habits to the children, so that they can pass them to their children - cycle	V	Human/social responsibility
Chance to evolve -> education	V	Quality of life
Knowing our selves and our potentials will be realized	V	Quality of life

Respondent 6

Healthy food benefits health of our family, I/we like to stay healthy	A	Healthy
Chemicals get in our body and our bodies are not designed for that, esp. children's bodies, bc. they are smaller	C	Preventing diseases

Prevent diseases	C	Preventing diseases
Better life quality	V	Quality of life
Benefit of the earth, I want the earth to stay like that	A	Good for the environment/the planet
More sustainable	C	More sustainable
We have to be concerned about that, the soil needs to be healthy	C	Protecting the environment/the planet
Important for our children and their children	V	Caring about the future
Would hate to think that because of us the earth would be harmed	V	Environmental health
Support farmers and companies that make the effort to produce without chemical pesticides	A	Supporting organic farming
Harder work to grow organic, so I want to support their efforts	C	Supporting organic farmers
Selfishly, so that I continue to benefit from that	V	Quality of life
That all benefit from that	V	Health of the community

Respondent 7

Organic methods are more sustainable	A	Better production methods
To provide our kids a world where there is enough food	C	More sustainable
We are supposed to do that with the world, that's being human	V	Human/social responsibility
Thinking about future and food for our kids and about the environment/earth	V	Caring about the future
Providing future for kids, environment/earth	V	Human/social responsibility
No possibility of sustainable farming with fossil fuels and fossil fertilizer inputs	A	Better production methods
If we build a system that depends on limited life span, we have a limited term system, that is unstable	C	Protecting the environment/the planet
Speaking of long-term continuation of livelihood is important. That's common sense, it's logical (it just makes sense I guess)	V	Quality of life

Respondent 8

Less chemicals (in every imaginable form)	A	No chemicals (pesticides, fertilizers,...)
Chemicals kill something (insects, fungicides,...). We need a way of controlling that doesn't rely on that (companies like Monsanto) and think about long term effects (use of pesticides).	C	Preventing diseases
Health	V	Health
Important for the health of the earth	V	Environmental health
Good long life	V	Quality of Life
We are a small planet in the universe, resources are little and can be destroyed easily, no recreation	V	Human/social responsibility
No use of GMO's	A	Better production methods
Genetic manipulation, you can't confine them, the pollens get everywhere	C	Protecting the environment/ the planet
Benefits look good at first, but long term important	V	Caring about the future

Protection of the ecological system/environment	V	Environmental health

Respondent 9

No GMO's	A	Better production methods
It's a test market on public, the confederation wants to sell that, but the consumer should decide or not, it needs to be labeled, more transparency is needed	C	More Transparency
Reproductive problems in animals are shown already, we don't know if in the future also humans get problems with that	V	Caring about the future
Likely less energy is used to produce it, that's good for the environment	A	Good for the environment/the planet
We also reduce the dependence on oil and other energy sources	C	Protecting the environment/the planet
Less pollution for the environment and also less war	V	Environmental health
I'm more concerned for the farmers, I want to minimize their exposure of pesticides, hormones, etc.	A	No chemicals (pesticides, fertilizers,...)
For farmers is important to use organic farming methods. Cancers and other diseases are related to exposure of pesticides,...	C	Preventing diseases
I care for others, I realize their suffering. I don't want to be involved with hurting others	V	Human/ social responsibility

Respondent 10

Higher quality	C	Better quality
Cooking organic food you get better food and better flavor	C	More enjoyable food
My own products (own a restaurant) are better and so I sell more, my income	V	Quality of life
Less waste	A	Better production methods
It's more economic, you get more for your money	C	More sustainable
Products from long distance are not so fresh and the quality isn't that good	C	Better quality
More flavor	A	More flavor/better taste
Food is more enjoyable to eat, more tasty	C	More enjoyable food
I enjoy eating, personal and also as a restaurant owner it's important for me	V	Life enjoyment

Respondent 11

Healthier, because no pesticides are used	A	Healthy
Cancer is related to them, you get sick, it kills you	C	Preventing diseases
It's important for my health	V	Health
Support farmers	A	Supporting organic farmers
It takes a lot of gut to do that. They elected to produce a smaller amount, but the quality is excellent.	C	Better quality

The food quality is better, you can taste it	C	More enjoyable food
You want to taste the best taste you can taste. I'm enjoying my life	V	Life enjoyment

Respondent 12

It's healthier	A	Healthy
I have a lot of illnesses, I don't want chemicals/pesticides in my body	C	No intake of harmful substances
My Health is important	V	Health
It tastes better	A	More flavor/better taste
I'm not always careful what I eat, but I want it to taste good. It's a pleasure to eat good food	C	More enjoyable food
For me it's enjoyment	V	Life enjoyment

Respondent 13

Healthier	A	Healthy
I don't want to get sick, i.e. get cancer	C	Preventing diseases
I like to live long(er)	V	Increasing life expectancy
Local (vs. mass agriculture)	A	Local
I want to support the local farmers, they are good people and I like their effort	C	Supporting organic farmers
I just like the idea, the macrobiotic idea. It's better for you, speaking of Vitamins, etc.	V	Personal well-being

Respondent 14

Better quality, safety of the products	A	No chemicals (pesticides, fertilizers,...)
Diseases can be prevented	C	Preventing diseases
I stay alive, have a longer live	V	Increasing life expectancy
No pesticides are in it	A	No chemicals (pesticides, fertilizers,...)
I buy organic, because it's better for my health	C	Good for me/my body
I want to stay healthy, because I want to see my grandchildren grow up	V	Health

Respondent 15

It's the right thing to do, it's healthier	A	Healthy
I don't want to be sick. I'm trying to avoid getting cancer and things like that	C	Preventing diseases
I think it's just to like living life	V	Life enjoyment
I also buy organic because of the planet	A	Good for the environment/the planet
We are all interconnected. It's a perfect system if we collaborate with it	C	Protecting the environment/the planet
That's important for the life of the planet, to continue life in general	V	Environmental Health

Respondent 16

More sustainable way of growing food	A	Better production methods
I live in Ecovillage in Ithaca, it's a living practices. We need to adapt more sustainable long term practices	C	More sustainable

In the long term it's more sustainable, that's why I support organic farmers and organic farming	V	Caring about the future
Healthier food, it's more nutritious	A	More nutritious
"We are what we eat", it's hard to be healthy, when you're not feeding your body healthy food.	C	Preventing diseases
I'm exercising, I'm eating well. We only have one body. It's a precious resource.	V	Personal well-being
Treating our body good is important	V	Health
And also the life of the planet	V	Environmental Health
Supporting farmers/local growers	A	Supporting organic farming
I support local farmers to build a community, they are important members of the community. The whole system of food production needs to be integrated in the system. I don't believe in the corporate model of farming	C	Boost organic production
They take care of the soil well and use more sustainable practices	C	More sustainable
That's Good for the environment/the planet	V	Environmental Health

Respondent 17

Safeing the planet, exploitation of humans/animals	A	Good for the environment/the planet
I care about following generations, I believe in sacredy of life	C	Protecting the environment/the planet
I don't want to destroy the planet. We are capable of doing that now	V	Environmental health
It tastes better	A	More flavor/better taste
I like to eat	C	More enjoyable food
I like to give my family healthy and delightful food	V	Quality of life
Better for health	A	Healthy
I don't like being sick and my family and kids. Cancers are connected to it, diseases	C	Preventing diseases
I want to stay healthy	V	Health

Respondent 18

Personal health, it's healthier	A	Healthy
I survive, being active as long as possible. When you're sick a doctor can do anything anymore. You have to take care of yourself	C	Preventing diseases
I have children, I want them to be healthy and not sick	V	Health
Environmental concerns	A	Good for the environment/the planet
We need to protect the water safety	C	Protecting the environment/the planet
The environment isn't going to survive if we don't take care of water/soil	V	Environmental health
Supporting organic farmers/farming	A	Supporting organic farming
I support them, because organic farmers are they who are taken care of the environment (soil, water)	C	Protecting the environment/the planet

Often organic is also local. I think that's the only way for the future. People that locally produce food for their own areas	V	Caring about the future

Respondent 19

Family's Health	A	Healthy
There is a correlation between unhealth/illness and over processed food	C	Better quality
I want to avoid illness	C	Preventing diseases
It's for my children, I want them to have long and healthy lives	V	Health
Environmental protection	A	Good for the environment/the planet
That's where our future's food comes from	C	Protecting the environment/the planet
If the earth gets sick, so do we. So we need a healthy earth for our future	V	Environmental health

Respondent 20

Local organic food	A	Local
I like the idea of the way of whole foods supply. It makes no sense to transport it thousand of miles. I support the farmers, esp. local ones.	C	Supporting organic farmers
Long transport distances are correlated with pollution and greenhouse gases.	C	Protecting the environment/the planet
It's important for human beings to have clear air and not being self destructing	V	Environmental health
No chemicals. It makes no sense to put chemicals on it.	A	No chemicals (pesticides, fertilizers,...)
It's for my own health, I don't want to get sick.	C	Preventing diseases
My and my family's health and the health of the species	V	Health

Respondent 21

It's healthier	A	Healthy
It keeps me from visiting the doctor	C	Preventing diseases
So I save money	C	Reducing medical costs
I enjoy living in a alternative way, it's a commitment not confirmed to the world	V	Life enjoyment
Nutrition	A	More nutritious
The standard American diet is lousy. I came from that. Now I'm eating almost kosher, gluten-free, vegan and also raw for most part. It's so much better. The standard American diet is not good for you	C	Better quality
I want to live long	V	Increasing life expectancy
And feel better and I want to be a good example for other persons.	V	Personal well-being

Respondent 22

It's healthier food	A	Healthy
I don't get sick	C	Preventing diseases
Better for the body	C	Good for me/my body

I support my health/my family's health	V	Health
Harmful chemicals	A	No chemicals (pesticides, fertilizers,...)
They don't build up in my body. The can cause cancer, damage my organs,etc.	C	Preventing diseases
It's important for my health	V	Health
More nutritious food	A	More nutritious
The soil conditions (fertilizers), it's more natural. The biodiversity is intact, so natural nutrients are higher.	C	Better quality
It's not shelf life-orientated, but higher in nutrients, which is important for our diets.	C	Better quality
I'm also healthier, stay healthier I guess	V	Health
It's not harmful to land, ecosystems,..	A	Good for the environment/the planet
Healthy soils are more sustainable.	C	More sustainable
We all depend on a healthy ecosystem	V	Environmental health
Ecosystems are under terrible attack of human inputs. That threatens all of us. Family farming prevents that, it's not industrialized (extremely harmful)	V	caring about the future

Respondent 23

Healthier	A	Healthy
Products with whole grains, reduced sugar,...They are healthier. I don't need all that sugar.	C	Better quality
I want to stay healthy	V	Health
Reduced pesticide use	A	No chemicals (pesticides, fertilizers,...)
Pesticide use is reduced. It just environmentally seen. Pesticides run of into the water supply. With reduced/no use of pesticides, water doesn't get contaminated	C	Protecting the environment/the planet
It's just Good for the environment/the planet.	V	Environmental health
I don't get it non-organically	A	No non-organic complement available
They are products you don't get non-organically, for example carrots. Other products like vanilla bars, there are more flavors available, more diversity	C	More diversity
I like trying new types/flavors. It's more fun, more enjoyment to try new stuff.	V	Life enjoyment

Respondent 24

Healthier	A	Healthy
You pay more, but if I buy cheaper (non-organic) products, I get the feeling they are less nutritious.	C	Better quality
I feel less healthy. I love my live, I like being healthy	V	Health
If I have a family, I will try to buy only/more organic food.	V	Caring about the future

Respondent 25

Impact on the environment	A	Good for the environment/the planet

I don't have kids,so... I value it. Farming can continue	C	Protecting the environment/the planet
I also don't want animals to get DDT and else in their feed	C	Animal health care
No pollutants come in the environment. I'm reading Rachel Carlson's book also.	V	Environmental health
Healthier (a little bit)	A	Healthy
I don't want to put any bad stuff in my body	C	No intake of harmful substances
I care about my health	V	Health

Respondent 26

Healthier for me and my family	A	Healthy
What can you do without health, it's everything. Diseases free living is important.	C	Preventing diseases
I want my family and me to stay healthy	V	Health
I think it's an quality of life issue	V	Quality of life
Healthier for the earth	A	Good for the environment/the planet
If more chemicals are in the earth, they come into us	C	No intake of harmful substances
I think it's the right thing to do, to protect the environment	C	Protecting the environment/the planet
I feel native Americans had it right. They were thinking about next generations, not only about now	V	Caring about the future
It's really criminal for this earth. I try to have a positive attitude, but what are we doing. Look what's happening at Japan right now with nuclear reactors, etc, that's really bad	V	Human/social responsibility

Respondent 27

Sustainable for earth	A	Good for the environment/the planet
We have a better change of surviving, if we don't use chemicals	C	No intake of harmful substances
I'm thinking about the future, we don't know what after 10-20 years of treatments with chemicals happens. Just look what happened with DDT, for example birds died of that	V	Caring about the future
Human life is important. I have a preference for life.	V	Life enjoyment
No chemicals	A	No chemicals (pesticides, fertilizers,...)
They are disrupting hormones, chemicals are supposed to kill things. Just to make food look good	C	No intake of harmful substances
What if they build up in my system?	C	Preventing diseases
I Think that kind of food is less healthier	V	Health

Respondent 28

No toxins in it	A	No chemicals (pesticides, fertilizers,...)
They can make you very sick. You can get cancer and any number of different things are related to that	C	Preventing diseases

I think food inspectors are necessary to prevent that. You need healthy food to stay healthy	V	Health
It tastes better	A	More flavor/better taste
I eat it. It's much better	C	More enjoyable food
I like to enjoy what I eat, if it tastes good I buy it again that makes me happy.	V	Life enjoyment

Respondent 29

Healthier	A	Healthy
I think it's healthier for anyone. I like to be smart about what I eat. In fact unhealthy food is related to diseases like cancer	C	Preventing diseases
I think I just like staying healthy.	V	Health
Positive attributes, better produced	A	Better production methods
I think how it's produced is better. You know where it comes from,	C	More transparency
I want to know where it's from and where my money is going	V	Safety

Respondent 30

Healthier	A	Healthy
I want to avoid toxins	C	No intake of harmful substances
I think they contribute to making you ill	C	Preventing diseases
I want to prevent diseases/cancer/.. and stay healthy	V	Health
Healthier for the soil	A	Good for the environment/the planet
We can't function without it	C	Protecting the environment/the planet
I wouldn't be able to take care of myself and my family	V	Caring about the future
Also other people, for all of us it's necessary	V	Human/social responsibility

Respondent 31

Healthier	A	Healthy
Want my family to stay healthy. It is important for me and my family	C	Preventing diseases
Especially food for my children. I want them to have a healthy life	V	Health
I guess just survivability.	V	Life enjoyment
No pesticides.	A	No chemicals (pesticides, fertilizers,...)
Keeping resources clean.	C	Protecting the environment/the planet
We are going down like the titanic with all the pollution. We need to make field/crops healthier. Monocultures are bad	C	More sustainable
We need to be sustainable	V	Sustainability

Respondent 32

Local/organic small scale farms (friends)	A	Supporting organic farming
Supporting local farms, the culture of them	C	Supporting organic farmers
I think it's just a good way to live	V	Quality of life

Environmental factor	A	Good for the environment/the planet
Respect for the planet and protecting the planet	C	Protecting the environment/the planet
It just makes sense to me. That's what we need to do	V	Human/social responsibility

Respondent 33

Healthier	A	Healthy
Keeps us alive	C	Preventing diseases
Better for my health and my family's health	V	Health
Quality of lives	V	Quality of life
Good for the environment/the planet	A	Good for the environment/the planet
Maintaining health of the planet	C	Protecting the environment/the planet
Maintaining health of people	C	Preventing diseases
Thinking of future generations	V	Caring about the future

Respondent 34

Safer	A	Better production methods
Want my family to stay healthy and don't get sick	C	Preventing diseases
Staying alive as long as possible	V	Increasing life expectancy
I like my life	V	Life enjoyment
Less contaminated	A	No chemicals (pesticides, fertilizers,...)
Why would anybody want contaminated food? People just don't know or it's too expensive for them to buy. I don't want that garbage in our bodies.	C	No intake of harmful substances
That can't be healthy for you	V	Health

Respondent 35

No pesticides, ...	A	No chemicals (pesticides, fertilizers,...)
No junk gets in my food	C	No intake of harmful substances
For my health	V	Health
Local private farms	A	Local
I want to support them	C	Supporting organic farmers
I want to support organic farming, I think it's necessary for our survival	V	Human/social responsibility

Respondent 36

No toxins in it	A	No chemicals (pesticides, fertilizers,...)
They don't get in my body	C	No intake of harmful substances
It's good for anybody	V	Health of the community
It's good for me	V	Health
Better for the planet	A	Good for the environment/the planet
We shouldn't poison the planet.	C	Protecting the environment/the planet
We need it	V	Human/social responsibility

Respondent 37

Healthier	A	Healthy

When you have kids, you think about that, what you put in their bodies. They grow, so they need healthy food	C	No intake of harmful substances
Health is the most important thing. When you're not healthy you have nothing. Healthy living comes first. The health of my family is important	V	Health
Better for farm ecosystems	A	Good for the environment/the planet
All living things are interrelated to each other. The use of pesticides brings everything out of balances	C	Protecting the environment/the planet
The environment gets out of balance and that leads to loosing biodiversity	C	More sustainable
Biodiverstiy is important, also for the health of ecosystems	V	Environmental health

Respondent 38

Healthier	A	Healthy
Less medical costs	C	Reducing medical costs
Less pain, less allergies	C	Good for me/my body
Less stuff that builds up in my body	C	No intake of harmful substances
I'm feeling healthier/better	V	Health
It's a better quality of life	V	Quality of life
I'm buying what's NOT in it	A	No chemicals (pesticides, fertilizers,...)
No petrochemicals, etc. are coming into the environment. Pesticides, herbicides,... that are designed to kill things, kill tissues as well	C	Protecting the environment/the planet
You protect your own health	V	Health
Supporting organic/local farming	A	Supporting organic farming
I want to support the farmers	C	Supporting organic farmers
They keep control of food production. That's important for our future	V	Caring about the future

Respondent 39

Healthier	A	Healthy
It's more nutritious	C	Better quality
I want to stay active as long as possible	V	Increasing life expectancy
It's better for you. And you need to take less supplements, I'm bad at that	V	Health
Support organic farming	A	Supporting organic farming
If you don't support it, you won't have it	C	Boost organic production
All farms should be organic. That's the only way for the future	V	Caring about the future

Respondent 40

Tastes good, better flavor	A	More flavor/better taste
Enjoy a meal. I want to enjoy what I eat	C	More enjoyable food
You don't get energy to work, to live without it	V	Personal well-being
Healthier	A	Healthy

I don't want to go to the hospital. You minimize getting ill/sick	C	Preventing diseases
I'm scared of pesticides, hormones. I don't want them in my food (i.e.: no hormones in my milk)	C	No intake of harmful substances
I want to stay healthy	V	Health

Respondent 41

Healthier	A	Healthy
I'm concerned about pesticides residue	C	No intake of harmful substances
My father in law has cancer, so I'm concerned	C	Preventing diseases
It's important for my future children. You have to think of long term effects	V	Caring about the future
Also for my personal future health	V	Health
Tastes better	A	More flavor/better taste
The quality is better (especially local food)	C	Better quality
I enjoy it more	C	More enjoyable food
It makes me feel good	V	Personal well-being
You feel good, physiologically and physically	V	Quality of life
Environmental impact	A	Good for the environment/the planet
I'm a conservationist. Life long career/interest	C	Protecting the environment/the planet
Humans need to figure out how to use the planets resources efficiently	C	More sustainable
It's important for the future, our children and grandchildren. We need to feed ourselves	V	Caring about the future
It's also connected to my health, it's important how it affects my health	V	Health
It's important to also think about the growers health	V	Health of the community
I want to promote sustainable food systems	A	Supporting organic farming
More sustainable	C	More sustainable
I'm a conservationist, I'm aware that we need to feed ourselves.	V	Human/social responsibility
There needs to be a balance in nature. So that's why I'm supporting it	V	Sustainability

Respondent 42

Better flavor/taste	A	More flavor/better taste
More nutritious. Better quality of produce	C	Better quality
I want to enjoy it	C	More enjoyable food
It enhances my health	C	Preventing diseases
Because when I eat produce, I want to get the full health benefit out of it	V	Health
And also it enhances my quality of life	V	Quality of life
I want to support organic farming	A	Supporting organic farming
I think of it politically. It should be practiced. It's good to have it as an alternative to conventional farming	C	Boost organic production
Better soil practices, it's no damage to the soil and products	C	Protecting the environment/the planet

It's important to me to contribute good practices, I think that's just good behavior	V	Human/social responsibility
Vitamin B12	A	More nutritious
You just get it if you have a healthy soil, trough micro absorbance trough the soil	C	Better quality
So if the soil is healthy, you're also healthier	V	Health

Respondent 43

Healthier	A	Healthy
Don't want to get sick, want to be healthy	C	Preventing diseases
Good for me	C	Good for me/my body
It feels better	V	Personal well-being
You have a better life	V	Quality of life
It's good for the planet	A	Good for the environment/the planet
We protect our resources	C	Protecting the environment/the planet
It's important for future generations	V	Caring about the future
That's an obligation we have	V	Human/social responsibility

Respondent 44

No poisons in it	A	No chemicals (pesticides, fertilizers,...)
I don't want to get poison into my body	C	No intake of harmful substances
I don't want to get sick	C	Preventing diseases
I can't afford it (costs)	C	Reducing medical costs
I feel better, healthier and so I can do my job efficient	C	Good for me/my body
And be happy in life	V	Life enjoyment
I want to support organic farming	A	Supporting organic farming
I want to support their effort. I want to boycott big companies, they have negative effects on the world.	C	Supporting organic farmers
I think about the people involved and I want other people to be healthy too	V	Health of the community

Respondent 45

Healthier	A	Healthy
I value my life	V	Life enjoyment
I value my health	V	Health
And also the environment/ecosystem	V	Environmental health
Supporting organic farming	A	Supporting organic farming
Organic farmers are growing healthier food with no chemical inputs	C	Supporting organic farmers
It's healthier for the environment/ecosystem	V	Environmental health
We have a responsibility to future generations	V	Caring about the future

Respondent 46

Healthier food	A	Healthy
No poisons and no intake of them	C	No intake of harmful substances
For my personal well-being	V	Personal well-being
Keeping farmland healthy	A	Good for the environment/the planet

Better for the soil fertility I worry about long-term fertility and productivity	C	More sustainable
Fertilizers are contra productive, without them you get more nutritious food	C	Better quality
I prefer quality rather than eating food that has all that stuff in it	C	More enjoyable food
Many diseases are contributed with that. I want to be healthy	V	Health
I want to live till I'm 180	V	Increasing life expectancy
Also I want other humans not to suffer	V	Health of the community

Respondent 47

Healthier	A	Healthy
Food is my remedy. For my soul, mind and body	C	Good for me/my body
Better personal feeling	V	Personal well-being
Own health	V	Health
More nutritious	A	More nutritious
For my kid, needs nutrients for his body (bones,..)	C	Better quality
For a healthy life	V	Health
Better for the planet	A	Good for the environment/the planet
Spread the love' - Taking care of the planet	C	Protecting the environment/ the planet
Like the native Americans (future generations)	V	Caring about the future
Tastes better	A	More flavor / better taste
I like to eat what I enjoy	C	More enjoyable food
You are what you eat'	V	Quality of life

Respondent 48

Environment	A	Good for the environment/the planet
We all live here. I want good things to happen	C	Protecting the environment/ the planet
I want good lives for all of us	V	Health of the community
Healthy	A	Healthy
I like to be healthy	V	Life enjoyment
I want to live a healthy life, I want my family and me to be healthy	V	Health

Respondent 49

Healthier	A	Healthy
Fewer chemicals, pesticides,...	A	No chemicals (pesticides, fertilizers,...)
Maybe more natural, everything is so processed now	C	Better quality
It's better for your body	C	Good for me/my body
You want to add natural things to your body, it's better for your health	V	Health

Respondent 50

Caring about animals	A	Caring about animals
Animals need to be treated right during their life/production of food. Even if farmer wants good yield, they need to care about animals	C	Animal health care
Welfare of animals is important to me	V	Human/social responsibility

It makes me feel good	V	Personal well-being
Healthier	A	Healthy
I don't get sick	C	Preventing diseases
I don't get fat, I stay in shape	C	Good for me/my body
Nobody wants to get ill/fat. My life is better when I'm healthy	V	Quality of life

12.3 Summary codes

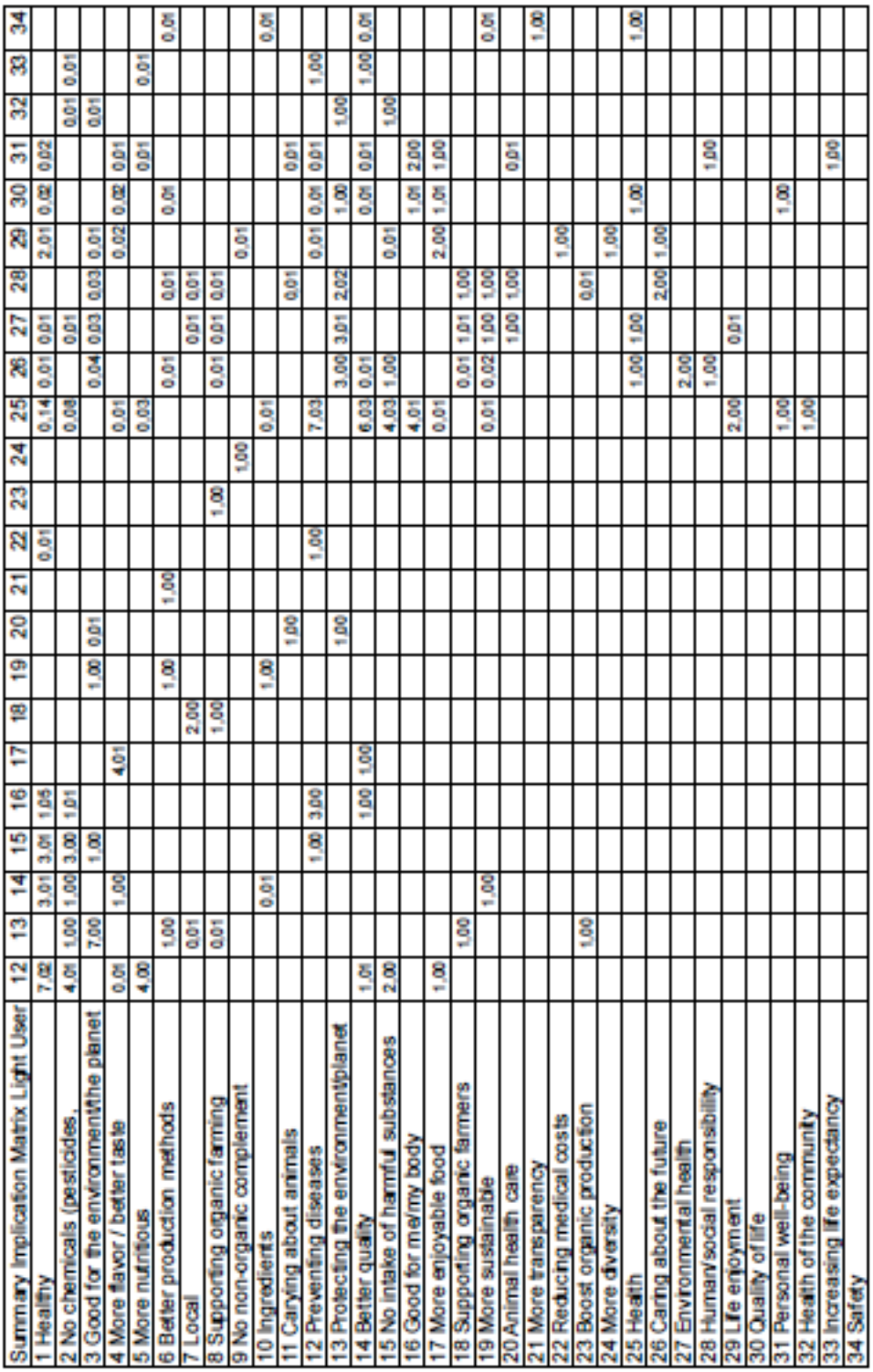
Heavy Users		Light User	
Attributes		Attributes	n
Healthy	**17**	**Healthy**	**17**
Good for the environment/the planet	**13**	**No chemicals (pesticides, fertilizers,...)**	**10**
No chemicals (pesticides, fertilizers,...)	**11**	**Good for the environment/the planet**	**9**
Supporting organic farming	**11**	**More flavor / better taste**	**5**
Better production methods	**6**	**More nutritious**	**4**
More flavor / better taste	3	Better production methods	3
Local	1	Local	2
More nutritious	1	Supporting organic farming	2
No non-organic complement available	0	No non-organic complement available	1
Ingredients	0	Ingredients	1
Carying about animals	0	Carying about animals	1
Consequences		Consequences	n
Preventing diseases	**20**	**Preventing diseases**	**15**
Protecting the environment/ the planet	**17**	**Protecting the environment/ the planet**	**11**
More sustainable	**10**	**Better quality**	**10**
No intake of harmful substances	**9**	**No intake of harmful substances**	**8**
Better quality	**8**	**Good for me/my body**	**7**
More enjoyable food	**6**	**More enjoyable food**	**5**
Supporting organic farmers	**6**	**Supporting organic farmers**	**3**
Good for me/my body	**4**	**More sustainable**	**2**
Boost organic production	**3**	**Animal health care**	**2**
Reducing medical costs	**3**	**More transparency**	**1**
Keeping a clear mind	2	Reducing medical costs	1
Animal health care	1	Boost organic production	1
More transparency	1	More diversity	1
More diversity	0	Keeping a clear mind	0
Values		Values	n
Health	**17**	**Health**	**21**
Environmental health	**14**	**Caring about the future**	**8**
Quality of life	**14**	**Environmental health**	**7**
Caring about the future	**12**	**Human/social responsibility**	**7**
Human/social responsibility	**9**	**Life enjoyment**	**7**
Life enjoyment	**6**	**Quality of life**	**5**
Health of the community	**6**	**Personal well-being**	**5**
Increasing life expectancy	**5**	Health of the community	2
Personal well-being	3	Increasing life expectancy	2
Sustainability	3	Safety	2
Safety	0	Sustainability	0

12.4 Implication matrix

12.4.1 Heavy User

Summary Implication Matrix Heavy User	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1 Healthy	11.02			3.02	1.01			0.01		1.01				0.12		0.05	0.02		0.02		0.03	0.01	
2 Good for the environment/the planet		9.02	3.02	1.00	0.01	0.01								0.03	0.07	0.01	0.04	0.03		0.03	0.01		
3 No chemicals (pesticides, fertilizers,...)	2.03	3.00	0.01	3.01	2.00			0.02		0.01	1.00		0.01	0.06	0.03	0.02		0.04	0.01	0.01	0.01		0.02
4 Supporting organic farming		1.01	1.01		1.00	0.01	5.00	0.01	2.01		1.00				0.02	0.03	0.03	0.02	0.01	0.02			0.01
5 Better production methods	1.00	1.00	2.00		0.02							1.00	0.01		0.02		0.03		0.01		0.01		0.01
6 More flavor / better taste					1.00	2.01										0.02			0.01			0.01	
7 Local							1.00															0.01	
8 More nutritious	1.00													0.01	0.01							0.01	
9 Preventing diseases								0.01		2.00				9.03	0.03	1.04	3.00	1.01	1.03	0.01	2.01	1.00	
10 Protecting the environment/ the planet	2.00		3.00											1.03	5.04	1.00	4.02	1.02		0.03			0.01
11 More sustainable		1.00			2.00									0.02	2.01	0.01	2.01	2.00		0.02	0.01		1.01
12 No intake of harmful substances	3.00	1.00						1.01		0.01				3.03			0.02	0.02	0.01		0.01	1.00	
13 Better quality	0.01			1.00		4.00							1.00	0.03	0.01	0.02			0.01	0.01	1.02	0.01	0.01
14 More enjoyable food														1.00		2.01			2.00	0.01	0.01	1.00	
15 Supporting organic farmers									1.00						0.01	2.00	1.00			1.01		1.00	
16 Good for me/my body		1.00		1.00										1.01		0.02		0.02	1.00				
17 Boost organic production			1.00												1.01		1.00						
18 Reducing medical costs				0.01				2.00						0.01		1.01			0.01				
19 Keeping a clear mind		0.01						1.00								0.02		1.01					
20 Animal health care																	1.00						
21 More transparency															1.00							0.01	
22 Health															3.00	3.01		1.01	1.00	1.02	2.00		
23 Environmental health														0.01		1.00		0.01		2.00		1.00	
24 Quality of life																		2.00		1.00			
25 Caring about the future														3.00	2.00			1.00		0.01			
26 Human/social responsibility																2.00						1.00	
27 Life enjoyment																							
28 Health of the community														1.00									
29 Increasing life expectancy														1.00					1.00	1.00			
30 Personal well-being														1.00	0.01	1.00							
31 Sustainability																							

12.4.2 Light User



Summary Implication Matrix Light User	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
1 Healthy	7.02		3.01	3.01	1.05						0.01			0.14	0.01	0.01		2.01	0.02	0.02			
2 No chemicals (pesticides,	4.01	1.00	1.00	3.00	1.01									0.08		0.01					0.01	0.01	
3 Good for the environment/the planet		7.00		1.00				1.00	0.01						0.04	0.03	0.03	0.01			0.01		
4 More flavor / better taste	0.01		1.00			4.01								0.01				0.02	0.02	0.01			
5 More nutritious	4.00													0.03						0.01		0.01	
6 Better production methods		1.00						1.00		1.00					0.01		0.01		0.01				0.01
7 Local		0.01					2.00									0.01	0.01						
8 Supporting organic farming		0.01					1.00					1.00			0.01	0.01	0.01						
9 No non-organic complement													1.00					0.01					
10 Ingredients			0.01					1.00						0.01									0.01
11 Carrying about animals									1.00								0.01			0.01			
12 Preventing diseases				1.00	3.00						1.00			7.03				0.01	0.01	0.01		1.00	
13 Protecting the environment/planet									1.00						3.00	3.01	2.02		1.00		1.00		
14 Better quality	1.01				1.00	1.00								6.03	0.01				0.01	0.01		1.00	0.01
15 No intake of harmful substances	2.00													4.03	1.00			0.01			1.00		
16 Good for me/my body														4.01					1.01	2.00			
17 More enjoyable food	1.00													0.01				2.00	1.01	1.00			
18 Supporting organic farmers		1.00													0.01	1.01	1.00						
19 More sustainable			1.00											0.01	0.02	1.00	1.00						0.01
20 Animal health care																1.00	1.00			0.01			
21 More transparency																							1.00
22 Reducing medical costs																		1.00					
23 Boost organic production		1.00															0.01						
24 More diversity																		1.00					
25 Health															1.00	1.00			1.00				1.00
26 Caring about the future																	2.00	1.00					
27 Environmental health															2.00								
28 Human/social responsibility															1.00					1.00			
29 Life enjoyment														2.00		0.01							
30 Quality of life																			1.00				
31 Personal well-being														1.00									
32 Health of the community														1.00									
33 Increasing life expectancy																				1.00			
34 Safety																							

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