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Desk study on consumer behaviour towards sustainable food products

National report – Netherlands

By
PieterJan Brandsma, Rudolf van Broekhuizen, Jo-An Wiersum

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NETHERLANDS

SUS-CHAIN WP3 National Report (deliverable 9.1)

PieterJan Brandsma (WU-Rural Sociology Group)
Rudolf van Broekhuizen (WU-Rural Sociology Group)
Jo-An Wiersum (WU-Rural Sociology Group)

WAGENINGEN UNIVERSITY
WAGENINGEN UR

Table of contents:

Part I Definition of sustainability for food products

In the Netherlands there is not a common shared definition of the meaning and content of sustainable consumption. However, Meulenberg (2003) has taken a promising attempt and defined it as: "consumption based on a decision making process, which takes into account consumer's social responsibility *in addition to* individual needs. Important to notice is that this definition makes a distinction between individual need satisfaction (taste, price, convenience etc.) and the social responsibility aspects (animal welfare, environment, fair trade) of consumer behaviour.

The social responsibility aspects of consumer behaviour are dynamic and can be classified by: 1) The type of society (local, regional, national, supranational, global) a consumer is worried about. For example the purchase of regional products for stimulating the local economy/culture or the purchase of fair trade products because of unequal division of welfare. 2) The type of problem (political, economic, technological and ecological). For example the purchase of organic products because of ecological and technological (genetic modification) problems. For influencing sustainable consumption it is important to know or the individual need satisfaction attributes (taste, price etc) and the social responsibility attributes (environment, animal welfare etc) are compensatory or not.

The need (demand) of consumers for more sustainability is influencing (the design of) food supply chains. For example due to food scandals (dioxin, BSE, MPA) in combination with a greater distance between consumers and producers risk experience of consumers is enlarged (Meulenberg, 2003). This can stimulate the development of new competitive strategies (organic production, regional quality production etc) not only by farmers but also by industries and retailers. Important to notice is that food supply chains also are influencing the demand for sustainable products by implementing new strategies.

The broad interpretation of sustainability and its dynamic aspects makes it difficult for consumers and others to recognise sustainable food supply chains. To shape more clarity in this the Social Economic Council (SER, 2000) has identified two aspects which can determine sustainability in chains.

1. Deliberate focus on value added activities within three dimensions: economic (profit), socio territorial (people), agri environmental (planet). For instance investments of food supply chains

in: quality production, equally distribution of information and margins, reducing food miles, environmentally friendly production, animal welfare etc. Important to notice is that there often is a trade off between or within dimensions for example an organic product with long food miles.

2. Keep up a continuous relation with relevant stakeholders on the principle of transparency and dialog. To cope with the *dynamics* in the environment of food supply chains and to create re-newing a continuous communication with society is required. An example is the regional brewery Gulpener. This company is sponsoring the regional community life and societal organisations and is creating transparency by involving customers with the production process and the suppliers.

There are great differences in how sustainability is created and communicated by food supply chains and how it is recognised by consumers. Within farm shops sustainability is recognised by direct contact (trust) between farmer and consumers. However, in more anonymous market channels such as organic shops and regional supermarkets sustainability is communicated by hallmarks/labels and/or brands. Usually these are stressing only one dimension of sustainability for example the "organic EKO label" which focus on environment or regional labels such as "Waddengoud" which stresses origin and quality production.

The *reputation* to be sustainable is very important for the food industry and supermarkets. Especially because buying food is often a routine process where the buying decision is influenced by the trust in the company brand or reputation of the shop (Meulenberg, 2003). Therefore the industry has developed quality systems such as: KKM (chain quality milk) and IKB (Integral Chain Control) and supermarkets initiated EurepGap. In their market communication the industry and supermarkets often suggests that they are contributing to more sustainability. According to the lobby organization of supermarkets (Zembla, 2003) there are no unsustainable or unsafe products in the assortment. They are selecting the products and the consumer has to rely on that. However, this is more for building a positive image than that they really are investing in sustainability issues.

Part II: general food consumption trends

Consumption behaviour follows trends in production and consumption sometimes in the same but even in opposite directions. However, the trends are often capricious and their impact is difficult to predict. Several researches Meulenberg (2003), Bijman et al (2003), Vuursteen (2001) have related recent consumer trends with (sustainable) consumer behaviour.

First, in spite of current decline in economy, in general there is an increase in welfare which stimulates the development of a lifestyle that satisfy other needs like self-respect and self development next to basic needs. This can lead to a growing demand for sustainable food products that have a strong identity by which the lifestyle (and opinions) of the consumer can be symbolised. However, the percentage of spending of the total income of Dutch households on food (11.3% of total consumption) is decreasing and is low compared to other European countries. On the other hand the increase of welfare in combination with demographic developments like household dilution is leading to negative external effects such as: a) an increase in packaging waste and b) more mobility causes environmental problems. In spite of the awareness of these problems of welfare and problems in agriculture (animal welfare, environment etc) the translation of awareness into sustainable buying behaviour is increasing but is still limited.

Second, the trend towards more individualisation is causing more differentiated and unpredictable consumer behaviour. Consumption is used to distinguish the consumer from others. However, this behaviour seems to reach it limits because of the negative external effects. For food supply chains individualisation is causing a downstream movement of added value in the chain. Individualisation makes planning difficult therefore many products (dairy, potatoes etc) are differentiated as far as possible in the chain.

Third, the increase of double income and one person households is an important socio-demographic development for the purchase of food. Both types of households want to save time and are putting more weight to convenience (prepacked, pre-processed, smaller packages) than to attributes of sustainability in their buying decision. However, double income households have more money available, in a situation of minor time pressure this can lead to the purchase of organic and high quality food. Another important demographic development is the ag(e)ing of the population. Elderly people are having more income and are better educated than former generations. This in combination with their focus on health and sustainability aspects (nature,

environment and animal welfare) can stimulate sustainable consumption and the demand for functional foods.

Fourth, globalisation and modernisation are creating new risks. Inputs are purchased from all over the world and it is difficult to know how or where it is produced. Besides, because of new technologies new products such as GMO products are available whose effects are insufficient known. This in combination with food safety scandals can strengthen the perceived risks in food and can increase the demand for natural products such as organic and regional products.

Fifth, the former mentioned trends are causing more contact of the Dutch consumer with new products and using situations. This is leading to more different eating cultures. Besides, the eating culture of a growing number of non-western foreigners in the Netherlands is also influencing this. However, there is no talk of involvement and a sense of commitment concerning consumption and production of food like in Italy and France.

Part III Consumer behaviour towards sustainable food products

1 Consumers of sustainable food products

1.1 Consumers' values, needs and motivations

Motives can be described as a pattern that is guiding behaviour towards the achievement of certain goals (Van Dam, 1995). It occurs when a need is aroused that the consumer wishes to satisfy. Consumers are more motivated for buying sustainable products if they are involved with the product and it production process. Highly involved consumers have more knowledge and are more prepared to seek en process information about it and are more inclined to corresponding behaviour. Several researches (van Dam, 1995), (Meulenberg, 2003), (KPMG, 2000) are mentioning a gap between high involvement with environment (or awareness of environmental problems) and a low involvement with food consumption. Most purchases for food are automated actions where not a lot of information is searched and processed for. High involvement occurs when motives and goals are: a) corresponding with someone lifestyle or identity b) go together with high risk or c) representing a symbolic value (van Dam, 1995). Research of Ittersum (2001) shows that regional products can cause high involvement. They are purchased because the consumer can identify himself with the social group and culture to which the region of origin refers. Another important motive is to satisfy the need for good quality (taste, healthy).

Next to a certain degree of involvement it is important that consumers relate food with societal problems so that the consumer can take his responsibility with his decision. Feenstra (in: van Dam, 1995) mentions that consumers are not directly connecting food consumption with environment. Van Dam (1995) and research of Biologica (2002b) show that the increasing demand for organic foods is not caused by an increasing awareness of environmental problems but more by a growing concern of health and different incidents regarding health such as contamination of food with pesticides. Results of Biologica (2002b) shows that 68% of the respondents is buying organic because of health, 23% because of taste, 21% is naming reliability and 38% is mentioning other motives regarding nature and environment.

Values can be used for segmenting the market for sustainable products. De Wit et al (2001) show that for reaching other consumer segments it is important to broaden the message of organic to other values next to environment such as health and the desire for authenticity. They identified on the basis of social economic status and values consumer segments (see also figure 1). Three

consumer segments are promising for organic products. First, the most important segment is the postmaterialists (9 percent). They are striving to harmony, solidarity and a social and natural environment. They are buying organic products because of environmental motives. Postmaterialists are often higher educated. Second, cosmopolitans (11 percent) they are striving to self-realisation, their lifestyle is active and various and they are living individualistic. They are socially involved and are buying organic because of reasons of health. Precondition is that organic products are tasty and looking attractive. Cosmopolitans are usually higher educated people with a high income. Third, the somewhat older traditional middle class (22 percent). They are preserve, solidary and are attached to a family live. Organic products are bought because their concern of health. The traditional middleclass is low to average educated and consist for a great part of quadragenarians.

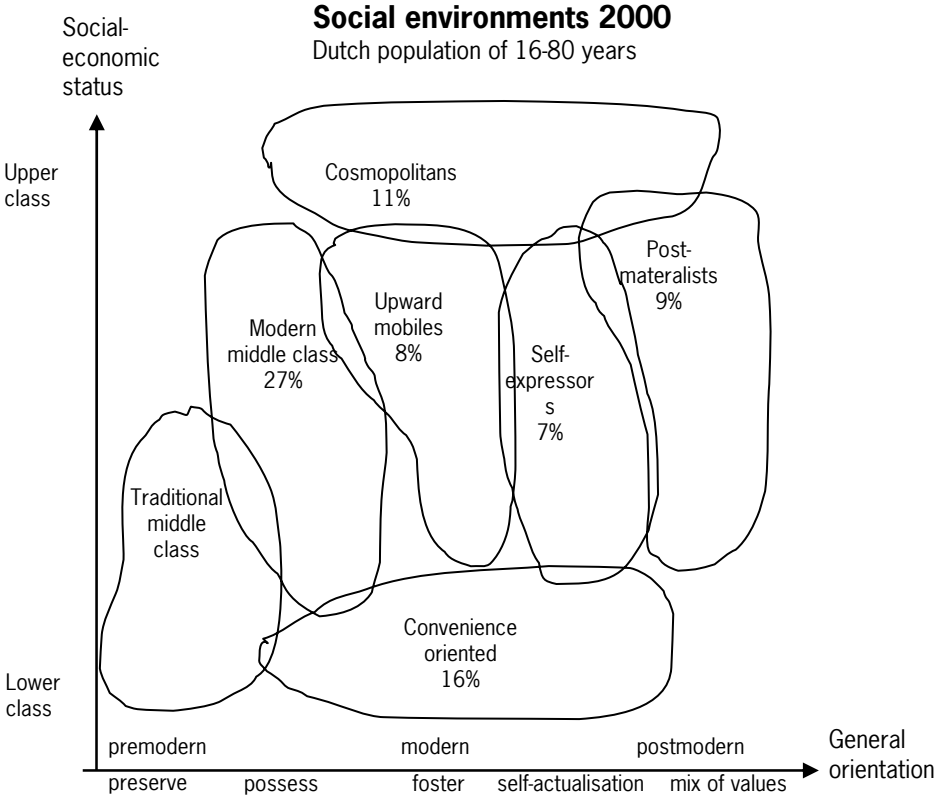

Figure 1 Social environment (source: de Wit et al; 2001)

Also other researches (Dagevos et al,1999), (Meulenberg, 1996) have tried to identify consumer profiles/images for sustainable products on the basis of values, and cultural, economic and demographic variables. However, in practice the consumer cannot be represented by just one profile/image, he often combines different images. This because the same consumer consumes in different roles (in free time or working time) under different circumstances (available time, usage) in a different way (Meulenberg, 1996). For stimulating sustainable consumer behaviour products it is important not to focus only on one image or criteria but to combine them. For

example consumers who are aimed at the need for environmentally, animal friendly and healthy products or consumers who are aimed at the need for hedonistic, variation, convenience, health and environmentally friendly products.

In table 1 the values and needs mentioned in three studies are summarised. Important to notice is that the distinction between values and needs is not always clear and that the studies sometimes use different value classification systems. For the positioning (and stimulation of the purchase of) sustainable products is important to connect the benefits of the product with product characteristics as well as with values (Van Raay in: Oppenhuisen, 2000). For sustainable products it is important to connect in the marketing communication: the benefits (healthy, tasty) with product characteristics (no chemicals, pesticides, short chain) and values (care for environment, enjoyment, security).

Table 1: Overview of values and needs mentioned in studies about sustainable food products

Values	Needs	Ittersum 2003	De Wit et al 2001	Dagevos et al 1999
Sense of belonging to a group/ identification	Social motivation	X		
Hedonistic / pleasure / enjoyment	Good quality/taste	X	X	X
Emotional	Happiness, joy	X		
Protection – health - security	Security, certainty, stability	X	X	
Care for the environment / animal welfare	Benefit for the community		X	X

1.2 Information, knowledge and uncertainty

Consumers can consider different information search strategies before taking a decision. It can be an internal information search by scanning our memory on knowledge and former experiences which is also influenced by culture. On the other hand it can be an external information search for instance by personal environment (friends, family), commercial actors (advertising, packaging etc) and independent organisations (hallmark institutions). For stimulating sustainable consumption it is

important that: 1) consumers are aware of and searching for information on issues of sustainability 2) these information is easy available 3) the information can be trusted.

In general, consumers in the Netherlands are showing limited information search behaviour because there is a low involvement with food products. Consumers of meat products for instance are searching for information just before the purchase on the shop floor (LNV consumentenplatform, 2000). 90% of the respondents is looking for information on the package, 79% is searching on the display and 53% want to ask the purchaser, 54% is reading the magazine of the supermarket or butcher. In addition, 78% of the consumers is satisfied with the current information supply. Of the 19% who is asking for more information 43% is interested in the country of origin. For more than 50% of the respondents information of sustainability aspects (animal welfare, feed, origin etc) is important but with the purchase other attributes as colour and quality are more important.

An increase in the uncertainty about the food safety can stimulate: a) the purchase of hallmarks and b) buying with shops which are creating trust. However, in spite of food-scandals and problems (dioxin, MPA etc) 75% of the Dutch consumers consider food to be safe and reliable (NIPO). For them hallmarks is an additional but price increasing guarantee. The confidence of the majority in the food safety does not automatically mean that consumers are not worried. Origins of worry are amongst others: a) the safety of chicken, meat products and GMO's, b) hormones in and hygiene of pork, beef and chicken c) shortage of vitamins and minerals and the surplus of aromatic and flavouring substances in ready made meals (LEI/WUR).

In a situation of limited search behaviour for instance when there is talk of time pressure hallmarks can simplify and accelerate the decision process for sustainable products. Precondition is that consumers are, in some extent, aware of societal problems and can interpret information. Research of KPMG (2000) shows that 52% of the respondents are taking societal worries (environment, animal welfare) into account with the buying decision and 24% is willing to do that but they don't because information is not available. However, research of SWOKA (in van Dam, 1995) states that consumers have limited knowledge about food production methods and are in general not capable to interpret information about food and environment. The great number of concepts for sustainability also strengthens this latter difficulty. Meusen et al (1998) have identified 16 different sustainability hallmarks in the Netherlands which are stressing different sustainability aspects. The EKO label for instance is focussing on environmental aspects and animal welfare whilst PVE/IKB is focussing on food safety and quality. Actors in the chain were

asked how they judge the hallmark confusion of consumers. 80% of the respondents were judging the hallmarks as confusing for consumers. Van Dijk (1998) found that 32% of the respondents is mentioning that organic and environmentally friendly concepts like Milieukeur are the same.

For stimulating the first purchase of a sustainable product, name recognition and the match between the hallmark image and the lifestyle of the consumer is important. Besides, trust in the claim of the hallmarks is important for repeat purchases. The large number of hallmarks and the high promotional costs are bottlenecks for reaching great name recognition. However, a limited number of hallmarks are well known, research of KPMG (2000) shows that 92% of the respondents are recognising the Max Havelaar hallmark for coffee and 65% of the respondents are recognising the organic hallmark (EKO) mostly because they saw the hallmarks on the product package. 82% of the respondents have confidence in the claim of these hallmarks. The most important reasons for the trust of these respondents are the confidence in controlling organisation (44%) and the confidence in the information on the product package (23%).

1.3 Availability of products and behavioural control

Enlarging the availability (broadness and deepness of the assortment) of sustainable products can increase the purchase of these products. Research of Platform Biologica (2002a) is indicating that 25% of the consumers, who already are buying organic products in supermarkets and organic shops, are not always buying organic because of limited availability / supply, 20% is mentioning the higher price.

The number of distribution channels who are selling organic is increasing however, the broadness and deepness of the assortment organic products is still limited. According to Platform Biologica (2002b) organic has a share in the consumer market of 1.6% in 2002. The growth of organic is for the most part caused by supermarkets. 38% of the organic products is sold by supermarkets, 39% by organic specialised shops, and 13% is sold by other channels (farmer markets, farm shops, catering etc). Research of Milieudefensie (Ekotellingen, 2003) shows that in spite of the increase in distribution channels the average number of organic products in supermarkets is not increasing 52 products in 2003 and 52 products in 2002. Probably this could be caused by the increase of the market share of the discount stores like Aldi and Lidl who are not selling organic products yet. The great differences in the number of organic products in the assortments, between different supermarkets formulas (min 0 – max 375) and within supermarkets of the same formula, is showing that the availability / supply for a great part is dependent of the shop

managers. They judge the inserting of new organic products on criteria as: price, distinctiveness, promotional efforts, turnover-rate, packaging, logistics. With respect to the latter, suppliers of supermarkets and organic stores are mentioning the importance of: 1) collecting the supply of the producers 2) investments in processing and packaging capacity (Platform Biologica, 2002b) for increasing the availability. This to cope with the demand for: convenience and continuous supply of consumers and supermarkets.

Organic products are represented in most of the product categories 28% of the total consumer turnover of organic products is caused by potatoes, vegetables and fruit, 15% by dairy products, 12% by meat products, 7% by bread and 38% by other products.

1.4 The decision process: attitude and consumption behaviour

The decision making process can be characterised by considering the amount of effort that goes into the decision each time it must be made. This decision process varies from on one end: a) routine/automated decision making: the consumer uses very simple decision rules such as the trust in a label and on the other extreme b) extended problem solving: a systematic thinking process where alternatives are judged on a number of criteria which are important according the consumer (van Dam, 1995). We assume that consumers are more inclined to sustainable consumer behaviour when there is more of less talk of a systematic thinking process.

A lot of researches have found a gap between the *attitude* towards sustainable products and *actual* buying behaviour. Wempe, (2000) accounted on the bases of interviews a market share of 11% for organic products, 10% for Max Havelaar coffee. However, organic food has an actual market share of 1.6% (Platform Biologica 2002b) and Max Havelaar products (fair trade) have an actual market share of 3% (www.maxhavelaar.nl). Burell et al (2003) found that 77% of the respondents consider hen welfare to be important but only 9% claim to purchase hen- friendly (semi intensive, free-range) eggs. Research of Kuiper et al (1991) showed that 57.5% of the respondents was considering to buy Max Havelaar coffee. Also 84% of these respondents were also prepared to pay more (0.27 eurocent /250 gr) if the quality and taste was the same as the common used coffee. Even 11% was prepared to pay more than 0.45 eurocent / 250 gr). However, after the introduction only a small part of the respondents was actual buying Max Havelaar now and then (8%) and more frequently (4%).

There are several explanations mentioned for the gap between attitude and actual behaviour. First, sustainable products often have good scores on the sustainability attributes but have an insufficient score on other attributes such as: taste, availability and price compared to other alternatives. According to Meulenberg (2003) buying decisions are often influenced by a *combination of criteria* (or attributes) and the weighting of the criteria such as: a) sensorial quality (taste, colour) (b) food value (c) healthiness (d) convenience (e) variation (f) special character (g) sustainability (h) price. Second, sustainability labels are often not in the *evoked set* (the labels/brands which consumers have in their mind) of the consumer or the label is not *trusted.* It is important to solve these bottlenecks because the buying process (of low value products such as vegetables, fruit) can generally be characterised as a routine process (low involvement, high buying frequency). In this case the consumer is not evaluating a lot of attributes but he uses simple decision rules such as a brand or label/hallmark. Another consequence of a routine decision process is that a lot of consumers make their choice in the shop environment. This makes the positioning (price, assortment, promotion etc) of sustainable products in the shop very important. Research of Hoogendoorn et al (2003) shows that it can be in the interest (good return) of supermarkets to: a) enlarge the organic supply from 2.5% to 10% and b) reduce their supplement price from 40% to 20%. Problem is that in the period of enlarging the supply the returns first will decrease before it will be interesting. Third, the buying of food is often determined by situation or moment, it differs on the ground of the available time (in the weekend of during the week) and on the ground of using situation (for friends, holidays etc). By purchases under time pressure for instance convenience is probably more important than sustainability. Fourth, the gap can also be caused by the research method (attitude, intention, behaviour), this because respondents are often inclined to give socially wishful answers (Wempe, 2000).

The weight of different quality dimensions or product images are important for choosing meat products. Schifferstein et al (1998) found that consumers evaluate four quality dimensions before choosing a product, namely: sensory quality (tender, taste), ease of use (available, easy to prepare), special (for special occasions, lean, premium product), and natural production (no hormones, animal friendly). The research shows that *sensory quality* is the most important and *natural production* is the least important dimension for consumer choice. However, a comparison in time (1995 -1997) suggests that the importance of sensory quality declines and the importance of special and natural increases. The results also shows that the overall image of pork and beef did not deteriorate because of animal diseases like BSE and classic swine fever in 1996 – 1997. The sales of beef decreased after the negative publicity on BSE but returned back to normal after a few months dip.

Research of van Dam (1995) shows that organic food is well evaluated on some attributes compared to non organic products but that some attributes such as a higher price or lesser taste are not always *compensated* by other attributes and can lead to a rejection of the product. The inventory shows that organic products have often the image of healthy and natural food this also because of no use of fertiliser and pesticides. Besides, the perception of food safety is bigger with organic products and the risk perception is lower. However, the price is perceived as more expensive and the perception of taste is not unambiguous (some assess the taste as better and some are disappointed). It has to be noted that the difference in quality perception can be questioned because the concept of "quality" is often not or insufficient defined. It is not known if consumers perceive differences in food value. Consumers indeed perceive organic products as better for the environment.

The country or region of origin can be used as attributes to simplify decision making for consumers. Especially when there is talk of limited problem solving (in between automated and extended problem solving). For targeting segments it is important that the image of a country or region of origin and the product do match. Ittersum et al. (2003) found that the preference for regional products is *directly* influenced by: a) the *perception* of consumers on *bundles* of product attributes such as: quality (nice, taste), health (natural, scale of production), exclusivity (price, fruity) b) the influence of *product specific regional image factors* such as: human, natural and climate. However, the impact of these factors depends on the type of product (less or more added value) under consideration. For beer the effect of the human factor (quality, knowledge, tradition, culture) on the product preference is larger than for potatoes where the natural environment (natural, clean, appropriate type of soil, appropriate amount of sun) is more important. On the other hand preferences for regional products are *indirectly* influenced by the product specific regional images because the three images: human, nature and climate influence the evaluation of the product attributes: quality, health and exclusivity.

Verlegh (2001) found two motives for home country bias, namely consumer's ethnocentrism and national identification. The first reflects the consumer desire to protect domestic economy and employment and the second reflects the desire for a positive national identity, which is created by the need for a positive evaluation of private and social selves. A positive effect for consumer ethnocentrism and national identification was found on willingness to buy domestic (Dutch) tomatoes and apples. It was not found that the willingness to buy foreign apples and tomatoes decreases with a higher level of consumer ethnocentrism. Only for apples and tomatoes from

France is found that the willingness to purchase these products decreases with the level of national identification. It is also found that the desire of consumers to protect their own country (ethnocentrism) products will be stronger when consumers attach greater value and significance to their own country (or social group). Finally national identification has a direct effect on willingness to buy, apart from its indirect effect through consumer ethnocentrism. However, both researches about the country and region of origin does not show us: a) which factors of the country or region of origin have the most impact on consumer preference b) which segments are sensitive to country or region of origin effects.

1.5 Socio-demographic profile

There are no big differences between the socio - demographic profile of organic consumers and the average Dutch households (Table 1). This makes it difficult for targeting consumer segments only on the basis of socio – demographic characteristics. Research of GfK/IRI (in Platform Biologica, 2002b) indicates that households who are buying organic products are something more: a) elderly people b) households without children and c) realising a higher income than average Dutch households. Remarkable is that only 15.6% of the organic buying households is originated from the south whilst 23% of the Dutch households is living in that region. Research by *customers of organic shops* and *organic fruit/vegetables subscriptions* (Platform Biologica, 2002a) indicated that the organic consumer is better educated compared to the average Dutch population. Besides, these customers are more strongly involved with social organisations than the average consumer. They found a preference for the social oriented political party's (56.6% are voting on left way party's) and the membership of environmental support organisations (57% is a member of the organisation nature monuments). Research of Kuiper et al (1991) showed that better educated people more frequently are buying Max Havelaar (fair trade) products. In addition, the name of Max Havelaar is better recognised by: the age category 40-49, better educated people and smaller families.

Table 1 Socio – demographic profile of buyers of organic products; Platform Biologica, 2002b

% buying households	Netherlands	Buyers organic
Householdsize		
> 3 persons	32.9	29.2
2 persons	35.2	39.1
1 person	31.8	31.8
Age of housewife		
>40	42.1	48.6
30-39	22.5	18.5
< 30	16.0	11.9
Family cycle		
HH with child(ren)	27.8	23.1
HH without child(ren)	72.1	76.9
Income (net income / mnd)		
> 1700 Euro	36.8	39.4
1300 - 1700	23.4	28.0
900 – 1300	27.7	19.1
< 900	12.1	13.5
Region		
District South	23.0	15.6
District East	19.9	21.6
District North	10.6	12.9
District West	28.9	29.0
District large cities	17.6	20.8

1.6 Social embeddedness

Social embeddedness do we see as the extent in which individual consumers/citizens and organisations (nature, landscape, environment, tourism, restaurants etc) are involved into activities regarding: a) the design of sustainable chains b) the consumption of the products c) the promotion of the products of these chains. It is assumed to be an important factor for reaching the inconsistent consumer. By building up a continuous relation with individual consumers/citizens and organisations loyalty for sustainable products and chains can be created. Besides, by creating transparency and continuous dialog food supply chains can get legitimacy for their production methods and they can improve their adaptive capability (regarding product quality, product use, production method etc).

The extent of *involvement* of consumers/citizens and (societal) organisations within food supply chains differs between food supply chains but is in general not widely developed in the Netherlands. Within the large food supply chains there is talk of a *disconnection* of agriculture from the Dutch consumers. This is also enhanced by the orientation of Dutch agriculture on

export. Consumers are loosing sight on the sustainability and the quality of the products of these chains because production processes are more and more global intertwined and inputs are global purchased (Vuursteen, 2001). To create (formal) trust by the customer these chains are developing labels and are increasingly using the "icons" of the emerging new supply chains in their promotional strategies. The emerge of covenants between short food supply chains and societal organisations for stimulating sustainability (www.taskforcebiologischlandbouw.nl) is a *starting point* for more involvement of societal organisations into food supply chains. However, covenants are often initiated by government and the large food supply chains have more often a re-active than pro-active approach in this. Small food supply chains are creating involvement and trust generally by *direct* contact between producer and consumer. This varies from only buying on the farm to more extensive involvement such as pergola constructions (www.strohalm.nl) where farmer and consumers are making agreements on price, investments, growing plans etc. In contrary to large food supply chains the involvement of (societal) organisations within small supply chains is more and more based on a *pro-active* approach. For example the Green Hat (marketing organisation for regional food) has initiated a covenant with the regional landscape organisation about using each other communication channels and commercial co-operation. Besides, there is a growing number of restaurants who are processing regional food in their dishes and who are active promoting regional food. Up scaling of short supply chains is important for increasing the availability of sustainable products. However, up scaling without losing the high involvement of consumers/citizens is difficult. Therefore the development of new market strategies and tools for guaranteeing customer involvement, adjusted to the up scaling phase, is needed.

2 Barriers for consumption of sustainable food products

With regard to barriers for the consumption of sustainable food products several aspects concerning the marketing of these products can be identified:

Remoteness between consumption and production

The consumer of today is remote from the production of food, which makes it much more difficult for the consumer to form a clear picture of the circumstances in which the production takes place and of the composition of the final products. As a result of extreme processing, food engineering and transport of food all over the world, it has become increasingly difficult to select foods that does not contain certain raw materials or additives, such as genetically modified organisms, and/or know how or where it is produced (RLG, 1998; Van Bruchem, 2003). Generally consumers do not have the expertise and experience to be able to judge the way in which a product has been

produced (Meulenberg, 2003; Vuursteen, 2001). Because of this remoteness, the' social embeddedness' of the large food chains is low. The involvement and sense of belonging of consumers and citizens and their organisations with food supply chains is very limited.

Lack of a clear information -system

For consumers the current information-system is often more confusing than clear because of:

- The indicated remoteness between consumption and production.
- Sustainability, animal friendliness etc. are not unambiguous and exact measurable concepts. There is a confusing multitude of various opinions and interests. E.g. in the Netherlands there is a heated debate on the supposed sustainability of organic farming compared to some practices in conventional farming (and for instance some scientists of the Wageningen University strongly contest that 'organic' is more sustainable than 'conventional').
- Additional to the previous point: sustainability is a dynamic concept that constantly will be changed.
- Often image and reality are entwined in a confusing and disordered way. E.g. industrial products are advertised by using artisanal images.
- Hallmarks and certification-marks should clear this matter up, and function as 'institutionalised clarity', but so far they don't. The number of hallmarks is confusing and the used criteria are unclear criteria.

(Meulenberg, 2003; Van Bruchem, 2003; RLG, 1998; Meeusen et al 2002; Florschutz et al, 2002; Vuursteen 2001)

Authority, trust and credence

Because of the above mentioned growing remoteness and complex problems as to information, sustainability is a 'credence quality'. The authority of hallmarks as EKO and Max Havelaar (a 'fair trade' hallmark) is based on the trust in the intentions and expertise of the institutions involved. But because of the combination of the 'remoteness' and the 'information-problem', there is a lack of knowledge and a lack of confidence of consumers regarding the way food supply chains try to create trust (Vuursteen, 2001).

Consumers' decision process

With regard to consumers' attitude and behaviour several barriers can be identified:

- Often mentioned is the gap between values and behaviour.
- Besides a relative small (slowly growing) group 'conscious consumers', indifference, laziness and unhealthy eating habits can also be noticed. The majority of consumers don not feel the need to change their behaviour. The decision process is often a routine process where consumers are not evaluating a lot of criteria but using simple decision rules; there have to be very good reasons to change habits. Sustainable products are not in the evoked set of most consumers or are not always trusted by consumers.
- There is only limited connection between the feelings and experiences of consumers and a lot of the used labels. Often labels focus only on one attribute (e.g. organic) whilst consumers associate them with other aspects such as product quality, health etc. The used labels are not in the evoked set of consumers and life-style and identity don not fit with hallmarks (too little sex appeal). A lot of sustainable products score insufficiently on other relevant attributes such as taste, price, and convenience.
- Consumers show little active search behaviour (LNV Consumenten Platform, 2002).

Other market agencies than consumers mostly don not have a clear view on the differentiation of consumers. It is difficult to determine and to target consumer segments; segmentation on the basis of socio-demographic characteristics doesn't work.

Price

- Higher price. There are several reasons for the higher consumer price of sustainable products:
    a) Mostly the creation of sustainability and sustainability attributes leads to higher production costs.
    b) Because of the smaller volumes, the costs per unit of product of processing, distribution, marketing and monitoring are also higher.
    c) Supermarkets have high margins on organic products.
- Prices do not reflect all the costs of a product (included effects on environment, animal welfare etc.); the competition between 'sustainable' and 'other' products is not 'fair'.
- The willingness of a large group of consumers to pay a higher price is limited.

(Vuursteen, 2001; Meulenberg, 2003)

Availability

- It is not always clear where sustainable products are available (Hurk et al, 2000).
- The supply (number of outlets and assortment) of sustainable products into supermarkets is limited.
- There is a lack of differentiation of organic products: e.g. organic convenience products, etc.
- The importance of availability is growing because of the tendency that purchases more and more take place under time pressure (easy to get and to prepare is more important than sustainability).

3 Possibilities to remove barriers

Remove barrier' remoteness between consumption and production'

The problem of remoteness can be partially be solved by stimulating the development and up scaling of short supply chains such as: farm shops, subscription systems, farm products selling in supermarkets etc. However, up scaling without losing transparency and high involvement of consumers/citizens is difficult. Therefore development of new market strategies and tools for guaranteeing customer involvement, adjusted to the up scaling phase, is needed. Long supply chains can improve their transparency by a better use of communication tools and labelling systems.

Remove barrier 'lack of a clear information system' and barrier: 'authority, trust and credence'

Because the dynamic aspects of sustainability there will be always a lack of clear information. However, a continuous and pro-active dialog between food supply chains and stakeholders (societal organisations, government, consumers, research institutes) can provide for the needed transparency. To guarantee consumers that sustainability claims and reality do match government and supply chains have to take their responsibility to develop a clear system of hallmarks (Bruchem, 2003). Because most of the consumers do not want to spend much time on information search there has to be a limited number of hallmarks which are simple and easy accessible.

Remove barrier 'consumers decision process'

With regard to the decision process for sustainable products we can mention several options for solving the identified bottlenecks, namely:

Food systems are increasingly confronted with fast changing preferences and demands of individual consumers. To respond to this 'consumer oriented market', differentiation and segmenting of sustainable products on other relevant attributes such as health, taste, convenience, moment of use next to sustainability attributes is important. Because distinctions only on the basis of classic segmentation criteria are hard to make additional tools for identifying segments are needed (Dagevos et al, 1999).

- To guarantee that sustainable products are in the *evoked set* of consumers *positioning* on the most relevant attributes is a crucial part of the communication strategy. Besides, it is important to stress the differences in attributes between sustainable and competing products because consumers are weighting attributes.

Remove barrier 'price'

One of the most important reason for consumers not to try or repeat the purchase of sustainable products is the big price difference with competing products. One possibility is to convince non-buyers to pay for a higher price like in the current campaign for organic products. However, this will only lead to more demand in a situation of a low supplement price but not in the current situation of a high supplement price by retailers (Hoogendoorn et al, 2003). We mention several possibilities for reducing differences in consumer price.

With clustering and bundling of activities (logistics, product development etc) and up scaling, the cost price of sustainable products can be reduced. Besides, a simplification and bundling of control systems can reduce costs. However, as long as retailers follow a niche price strategy a cost price decrease will not lead to a lower consumer price.

Enlarge the supply (availability) of sustainable products in the supermarkets (Hoogendoorn et al, 2003).

In LNV Consumentenplatform (2003) several governmental- and self-regulation tools are mentioned for processing sustainability aspects into the consumer price. Government can for instance stimulate chain members, who do more than the regulation, by subsidies or impose levies on unsustainable processes in the chain (use of energy, pesticides etc).

Remove barrier availability

Several options for increasing availability such as: product differentiation, product development, up scaling of short supply chains, bundling of distribution networks are already mentioned. For a substantial increase of availability a great diversity of chain combinations and co-operations for instance product differentiation combined with the bundling of distribution networks is needed.

Part IV Strategies to stimulate sustainable consumption

The first remark with regard to strategies to stimulate sustainable consumption is that as to all relevant themes there is not one strategy but always a multitude of various. Exactly a balanced mixture of strategies is crucial.

Regulation

It seems to be clear that not all aspects of sustainability can be realised by means of attempts to influence consumer behaviour. Especially public values and interests like environment and animal welfare are very difficult to influence; regulation is needed and recommendable.
Furthermore, it is possible to establish regulation concerning production processes that indirectly stimulate sustainable production. E.g. a systems that provide a financial bonus to producers and/or processors that produce in a more sustainable way than is prescribed legally and a financial fine for those who don't. This indirectly will stimulate sustainable consumption because of the effect on product prices.
Stimulation by means of direct levies and/or taxes is not impossible, but probably difficult to realise and to design.

Differentiation of supply

It is clear that 'the' consumer doesn't exist: there are more consumption styles. Consequently it is advisable to differentiated strategy concerning the supply of sustainable products. E.g. organic is not simply organic. Organic products can be sold by supermarkets and by McDonalds (organic milk shake or BigMac), but also as processed convenience food or as region specific product etc. Every market demands an own combination of different attributes (taste, region, price, etc.).

Looking for combinations and synergy

The marketing of sustainable products can gain strength if strategies aim at combination, synergy and interlocking with other activities and projects. For example:
Already mentioned is the combination of different product attributes as organic, taste, region, etc.
Creation of a connection and synergy with rural development activities. The combination with region increases the identity of the products and the social embeddedness and sense of belonging of consumers, rural dwellers, tourists etc.
E.g. in Waterland (the peat-land area north of Amsterdam), amongst others as a result of the special management of nature and landscape by farmers the area is attractive for tourists. Because of the region specific farm-management and entailing attractiveness, there is already a

clear basis for a hallmark and PR for a region specific product. Region specific production in combination with nature conservation and agro-tourism; all these activities realise income, but the synergy between them strengthens all parts: the whole is more than the sum of the separate parts. (For precise calculations of these synergy effects see Van der Ploeg et al (2002) and Roep (2002)).

Co-operation within chains, clustering of activities of small initiatives etc. may have substantial positive effects on the efficiency of SFSC's (on price, availability and marketing). That may concern co-operation between SFSC's and large FSC's (the small ones that make use of the distribution and logistic efficiency of the large ones, the large ones that can offer a broader and more attractive assortment of products), and certainly co-operation between small and small (concept of 'land-shops', more efficient PR and marketing, etc). By co-operation small producers, processors, shops etc. can keep their identity but increase the efficiency (on different fields of activity) because of larger volumes. New co-ordination mechanisms can be established.

Process dynamics

Process dynamics is an important element to integrate in strategies. Sustainability is not a situation and sustainability of FSC's as such doesn't exist. Sustainability is a process and it only makes sense to talk about sustainability of FSC's in relation with the specific relevant context. Sustainability is a continuous search for coherency between the projects of relevant actors, dimensions of production systems, etc. In a dynamic context a diversity of strategies (mixture of strategies, for various market segments, with several combinations of sustainability attributes, etc.) is important, because it creates adaptability and flexibility, and a prerequisite for the creation of sustainability on the long term.

Availability

Improved by the above mentioned co-operation between different initiatives, resulting in increase of efficiency regarding logistics and transport, broader distribution, lower prices, etc.

New market channels: a) up scaling of food subscription systems, delivery services, farmers markets, establishment of internet order services and b) public procurement, supermarkets etc.

References

Baggerman, T. en Hamstra, A. (1995): *Motieven en perspectieven voor het eten van NPF's in plaats van vlees.* Delft, Interdepartementale onderzoekprogramma Duurzame Technologische Ontwikkeling.

Boeringa, R. (1997): Landbouw, voeding en gezondheid: een Europees perspectief. In: Y.K. van Dam, C. de Hoog & J.A.C. van Ophem (red.): *Voeding, consument en duurzaamheid.* Leuven-Apeldoorn, Garant.

Breedveld, B.C. & K.F.A.M. Hulshof (1998): De derde Voedselconsumptiepeiling. In: *Voeding Nu*, december 1998

Bruchem C van (2003): Hoe krijgen we burger en consument op één lijn. In: H. Dagevos en L Sterrenberg (red.): *Burgers en Consumenten. Tussen tweedeling en twee-eenheid.* Wageningen Academic Publishers, Wageningen.

Burell, A.en Vrieze, G. (2003): Ethical motivation of Dutch egg consumers. *Tijdschrift voor Sociaalwetenschappelijk onderzoek van de Landbouw*: 18;1, 30-40.

Bijman, J, B. Pronk & R. de Graaff (2003): *Wie voedt Nederland? Consumenten en aanbieders van voedingsmiddelen 2003.* Den Haag, LEI.

Dagevos, J.C. Hansman, H.J.M. (1999): "*Catching" Consumers: applying a consumer images approach.* International Food and Agribusiness Management Association. http:// www.ifama.org/conferences/2002Conference/default.htm.

Dam, Y.K. van, Scholten L.M. (1997) Consument en duurzaamheid: Een literatuurstudie. In: Y.K. van Dam, C. de Hoog & J.A.C. van Ophem (red.): *Voeding, consument en duurzaamheid.* Leuven-Apeldoorn, Garant.

Dam Y.K. van, Kaal, B.F.G., Meulenberg, M.T.G. (1995): *Consument, voeding en milieu.* Den Haag, NRLO.

Dijk, H. van (1998): *Bereik en effect van de campagne milieu- en diervriendelijke voeding 1998.* Leiden, Swoka.

Florschütz, C.C. et al (2002): *Informatie over duurzaamheid: een zoektocht*. Leeuwarden, NIDO.

Hoogendoorn, J. Eerden, L van der (2003): Wil de retail wel meer biologische producten verkopen? In: *Spil* 193-194;3, 22-25.

Hansman, H.J.M. (1999): *De consument gevangen in cijfers: zoektocht naar het bestaan van consumentenbeelden.* Den Haag, LEI.

Hurk, R. van den en Smink G.C.J. (2000): *Consumentenwensen en diversiteit van landbouw(producten): Een Quick Scan.* Leiden, Swoka.

Ittersum, K. van (2001): *The role of region of origin in consumer decision-making and choice.* Wageningen, Ph.D thesis Wageningen University,

Ittersum, K. van, Candel, M.J.J.M. en Meulenberg, M.T.G. (2003): The influence of the image of a product's region of origin on product evaluation. *Journal of Business Research* 56: 215-226.

Kuiper, N.Y. Wijngaarden, J. van Homan, M.E. (1991): *Max Havelaar Keurmerkkoffie houding, intentie en gedrag van consumenten*. Leiden, Swoka,

LNV consumentenplatform (2002): *Waar komt mijn vlees vandaan?* Den Haag, LNV.

LNV consumentenplatform (2003): *De prijs van duurzame voedselproductie* In: beleidsdossier. Den Haag, LNV.

Meeusen, M. en S. Deneux (2002): *Een Babylonische keurmerkverwarring? Een studie naar de verwarring onder ketenactoren over keurmerken op voedingsmiddelen.* Den Haag, LEI.

Melita, F. (2001): *Organic Farming in the Netherlands*. http://www.organic-europe.net.

Meulenberg (1996): De levensmiddelenconsument van de toekomst. In: *Markt en Consument 2010*, NRLO. Den Haag.

Meulenberg (2003): “Consument en burger”, betekenis voor de markt van landbouwproducten en voedingsmiddelen. *Tijdschrift voor Sociaal wetenschappelijk onderzoek van de Landbouw*. 18;1, 43- 54.

Oppenhuisen J. (2000) *Een schaap in de bus. Een onderzoek naar de waarden van de Nederlander*. Amsterdam, Ph.D thesis University of Amsterdam.

Platform Biologica (2002a): *De betrokken biologische consument.* Utrecht, Platform Biologica.

Platform Biologica (2002b): *Eko-Monitor jaarrapport 2002. Cijfers en trends.* Utrecht, Platform Biologica.

Ploeg, J.D. van der, Long, A. en Banks (2002): *Living countrysides, rural development processes in Europe: the state of the art*, Elsevier bedrijfsinformatie, Doetichem.

Prinsen, K. (2000): *Biologische landbouw en Nederlandse consument: een literatuurquickscan.* Den Haag, LEI.

Roep, D. (2002): Value of quality and region: The Waddengroup foundation. In: J.D. van der Ploeg, A. Long, en J. Banks (eds.).): *Living countrysides, rural development processes in Europe: the state of the art*, Elsevier bedrijfsinformatie, Doetichem.

RLG (1998): *Zorg en vertrouwen: de basis voor voedselproductie in de 21e eeuw.* Amersfoort, RLG.

RLG (2001): *Kansen voor de biologische landbouw*. Bijlage 3: de consument. Amersfoort, RLG.

Schifferstein, H.N.J. Candel, M.J.J.M. Trijp, H.C.M. van (1998): A comprehensive approach to image research: an illustration for fresh meat products in the Netherlands. *Tijdschrift voor Sociaalwetenschappelijk onderzoek van de Landbouw:* 13 ;3, 163-175

SER (2000): *De winst van waarden*. Den Haag, SER.

Steenkamp J-B.E.M. en Oude Ophuis P.A.M. (1987): Scharrelvarkensvlees: een alternatief voor gewoon varkensvlees? *Voeding*: 48, (9)

TNS Nipo (2003): Eetgewoonten zullen veranderen. Consument verwacht komende 25 jaar meer buitenlandse en meer kant-en-klare producten te gebruiken. http: //www.tns-nipo.com

Verlegh, P.W.J. (2001): *Country-Of-Origin Effects On Consumer Product Evaluations*. Wageningen, Ph.D. thesis Wageningen University.

Vuursteen, K. (2001): *Het nieuwe consumeren.* Den Haag, Ministerie van Economische Zaken.

Wempe, J. (2000): *'Consumentenzorgen' in Nederland. Maatschappelijk verantwoord consumeren.* Amstelveen, KPMG Ethics & Integrity Consulting.

Wit, M. de en Amersfoort I. van (2001): De eko consument op de snijtafel "vooral postmaterialisten en kosmopolieten kopen biologisch". *Voeding Nu: 4; 18-20*

Zembla (2003): verbal announcement of M. Jansen representative of CBL in: Pistache noten uit Iran, Zembla (oktober 2003)