Marketing Potential for Biocyclic-Vegan Products? A Qualitative, Explorative Study with Experts and Consumers

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Abstract

The number of consumers who follow a vegetarian or vegan diet and people who purchase organic food is increasing worldwide. The labelling of food products with a vegan label only refers to the ingredients, not to the production method. Therefore, animal products e.g. slurry, meal pellets and animal by-products can be used in the chain of agricultural production. A new biocyclic-vegan label, which refers to an exclusion of any animal by-product during production, was introduced in Germany in 2017. The product life cycle consists of five stages. The production method of biocyclic-vegan agricultural products is a new approach. Therefore, very little is known about consumer awareness of these products. As a result, this study is of an exploratory nature and investigates which needs biocyclic-vegan products can satisfy and which additional values these products offer in comparison to organic products. As little is known about the biocyclic-vegan production method, telephone interviews involving six experts and six vegetarian/vegan consumers from Germany were carried out. The interviews took place in January 2018. The consumer convenience sample was selected based on age, gender and profession while the experts were selected based on their expertise. On average the interviews lasted 20 minutes. The interviews consisted of 20 questions. Both, consumers and experts were included to gain knowledge from each perspective. The three key results are that most interviewees knew about biocyclic-vegan production and were able to explain the meaning. Another major result is that consumers mention that the purchase reason is to support the idea of biocyclic-vegan agriculture while experts name ethical reasons as a main purchase reason. The third key result is that the barriers of purchasing the products are the price, lack of knowledge and credibility. As this is an explorative study, further research is needed e.g. more in-depth interviews consisting of a larger sample size and a more diverse sample including consumers following different diets such as flexitarians. Moreover quantitative approaches would give valuable insights into the topic.

Key Words

animal by-product; food choice; agricultural production method; livestock exclusion; stockfree; veganic; stockless; vegan organic

1 Introduction

Food consumption accounts for 20% to 30% of individuals environmental impact (TUKKER and JANSEN, 2006). Consumer awareness of their own influence through their diet on environmental problems is low (HARTMANN and SIEGRIST, 2017). It is important to communicate sustainable-related information of food to the consumer to make them aware of their own influence. One means of increasing awareness is labelling, which focuses on sustainable information such as fair trade, rainforest alliance and animal welfare. Consuming organic products or following a vegan diet are two ways for consumers to reduce the environmental impact of their diet. The influence of an organic vegan diet has the smallest negative impact on the environment according to a life cycle assessment (BARONI et al., 2007). In Germany, biocyclic-vegan production method is emerging. It is a combination of organic agriculture and stock-free agriculture, with special emphasis on the cycle of nutrients in the soil. This means that it is necessary when using resources to provide compensation in exchange, in order to get unlimited availability of these resources.

From a marketing perspective, the attributes of organic as well as vegan of food products are attributes which are based on trust (credence products) because the consumer cannot prove these attributes. Often such attributes are communicated through food labels. On the one hand food labels are an easily recognisable concept for consumers. On the other hand, due to the increasing number of labels, there are discussions about whether labels help consumers in their decision-making or confuse them (OSEI et al., 2012; COWBURN and STOCKLEY, 2005). The German organic label is only allowed to be placed on a product if the company is certified. Therefore, quality standards

are comparable between products with the same organic label. The vegan label often refers to the ingredients of the products and does not include the production method. This means that vegan-labelled products are only free of animal ingredients according to the list of ingredients. Therefore, it is possible that, for example, a ready-to-eat pumpkin soup is sold with a vegan label but during production the pumpkin was treated with animal fertiliser. One challenge is that the term vegan is not legally defined. As many vegans follow a plant-based diet not for health reasons, but for ethical reasons, they reject the keeping and use of livestock (JANSSEN et al., 2016).

Labelling of vegan-grown products is possible for the first time in Germany with the biocyclic-vegan label. The label exists in other countries such as France, Switzerland, Greece, Cyprus and the Netherlands. The biocyclic-vegan label combines the ecological production method with special emphasis on the nutrient cycle and the entire exclusion of livestock from the whole supply chain. This means that the keeping of farm animals and the use of animal products is completely excluded (BIOZYKLISCH-VEGANER ANBAU E.V., 2018a). The label was introduced in October 2017 in Germany. In June 2018, there were two certified farmers in Germany and one online shop supplying such products. One farmer was certified in France and in Greece and Cyprus approximately 80 famers were certified.

Much research has focused on the motivation for buying organic products (PADEL and FOSTER, 2005; ZANOLI and NASPETTI, 2002; NASIR and KARAKAYA, 2014). One study analysed the motivation for following a vegan diet (JANSSEN et al., 2016) and another study analysed the potential of vegan organic agriculture (SCHMUTZ and FORESI, 2017).

Biocyclic-vegan agriculture is in the very early stage of the product life cycle in Europe. Therefore, not much research has been undertaken and little is known about it. In 2014, there were zero results on web of science for the term “stockfree organic” (HAGEMANN and POTTHAST, 2015). In 2018, there were still zero results for this term, but when using “stockless organic” there were 14 results, for “vegan organic” 22 results and for “veganic” zero results. When using the term “biocyclic-vegan”, there were no academic results from science websites. Therefore, this study is of an explorative nature with the aim of improving understanding of the marketing potential of biocyclic-vegan agriculture. We conducted a qualitative study consisting of 12 telephone interviews of six experts and six consumers. This study can lead to recommendations on how to improve the effectiveness of biocyclic-vegan labels, as well as providing advice on marketing.

2 Theoretical Background

2.1 Origin and Principals of Biocyclic-Vegan Agriculture

The development of the idea of biocyclic-vegan agriculture goes back to the German organic pioneer, Adolf Hoops. As early as the 1950s, he showed on his farm in north Germany how nature's self-healing powers can be specifically promoted when building healthy humus cycles (BIOCYCLIC NETWORK SERVICES, 2018b). Since biocyclic agriculture is based on a vegan approach, this was finally developed in cooperation with vegan consumer initiatives, producers and agricultural experts, and the further development of the “Biocyclic guidelines” to the “Biocyclic-vegan guidelines” (BIOZYKLISCH-VEGANER ANBAU E.V., 2018c; BIOCYCLIC NETWORK SERVICES, 2018a). In 2016, the producer association “Biocyclic-vegan cultivation” was founded. Its task is to support the promotion of biocyclic-vegan agriculture and to support and advise organic farmers. The biocyclic-vegan label can be used on product packaging by certified companies. The International Federation of Organic Agriculture Movements - Organics International (IFOAM Organics International) has produced biocyclic-vegan guidelines which have been recognised as the first international vegan organic standard since 2017 (BIOZYKLISCH-VEGANER ANBAU E.V., 2018c).

The principal of biocyclic-vegan cultivation, meaning the land cultivation under exclusion of animal husbandry, is a relatively new approach in organic farming in Germany. According to the principles of organic farming, the use of synthetic fertilisers, pesticides and genetically modified organisms is prohibited. Under European regulations, the use of horn meal, blood meal and composted manure from conventional livestock husbandry is allowed in organic agriculture. With biocyclic-vegan production, this is prohibited. In addition, biocyclic-vegan land management is supported by a sustainable and closed production method. The aim of the biocyclic idea is the conversation or the rehabilitation of healthy cycles of life (BIOCYCLIC NETWORK SERVICES, 2017). This means that there is compensation for the resources used in order to ensure the availability of resources in the future. The application of ripe vegetable compost substrate plays a cen-

tral role besides the regular supply of organic matter from legume cultivation, mulching and area composting in the maintenance and development of soil fertility. In this way, the natural production bases are secured in the long term. This is in line with the idea of a closed-loop approach.

Conservation of resources and the promotion of biodiversity are part of the biocyclic-vegan farming idea. In addition, decentralised structures and largely regional production and marketing are aimed for (BIOZYKLISCH-VEGANER ANBAU E.V., 2018b; BIOCYCLIC NETWORK SERVICES LTD., 2017). The principle of vegan cultivation can be distinguished from livestock-free agriculture. Livestock-free agriculture is characterised by less than 0.2 livestock units per hectare. In addition, these farms have no significant cooperation with livestock farmers. However, the use of animal inputs in the form of organic commercial fertilisers, such as hair meal pellets is not excluded (SCHMIDT, 2003). Biocyclic-vegan agriculture, on the other hand, strives for complete exclusion of animal products. Nonetheless, the move towards vegan farming by livestock-free farmers is relatively small. The share of livestock-free organic farms in Germany is around 25 percent with a tendency to rise (SCHULZ et al., 2013). Accordingly, the potential of biocyclic-vegan agriculture is certainly given.

2.2 Biocyclic-Vegan Label

German, Austrian and Swiss producers who operate in accordance with the biocyclic-vegan guidelines described in Chapter 2.1 and who meet the requirements have been able to label their products with the corresponding biocyclic-vegan label (Figure 1) since 2016. It is possible to label their organic products with an additional organic label (BIOZYKLISCH-VEGANER ANBAU E.V., 2018d). Such labelling enables them to communicate their organic and vegan production methods to consumers and thus gives them the opportunity to distinguish themselves on the market. Since these product characteristics cannot be checked by the consumer, either before or after purchase, such products are referred to as credence goods. Along the value chain, these foods have an information asymmetry from production to the end consumer (AKERLOF, 1970; VOERSTE, 2009). This is remedied by an independent control of the production process (JAHN et al., 2005). In order to ensure the quality of the label, biocyclic-vegan producing farms undergo an audit by independent inspection and a certification body (BIOZYKLISCH-VEGANER ANBAU E.V., 2018d).

Figure 1. Biocyclic-vegan label

Source: BIOCYCLIC-NETWORK SERVICES (2018)

3 Material and Methods

3.1 Data Collection and Survey Design

The study follows a qualitative research approach and is of explorative nature. Qualitative research allows an in-depth exploration of new research topics. An advantage of this method is that an open and personal exchange of thoughts and views within a pleasant discussion is possible. This enables the researcher to interact during the interview in participants individual decision-making process (LAMNEK and KRELL, 2010). Twelve guideline-based telephone interviews consisting of 20 questions were conducted across Germany in January 2018. The interviews varied between 15 and 40 minutes depending on how detailed respondents answered the questions. On average the interview length was 20 minutes. The convenience samples of consumers were selected based on their age, profession and gender. We tried to achieve a diverse distribution of these characteristics in order to get a broader perspective of consumers. The experts were selected on the basis of two criteria: they had to be related to either organic farming or veganism. The six consumers consisted of five consumers following a vegan diet and one vegetarian, while the selection of the six experts was based on their profession and knowledge about the topic, rather than their own dietary behaviour. Interviews allow participants to talk about their own perception and their experience. (HSIEH and SHANNON, 2005) The interviews were divided into two parts: first, participants were asked to introduce themselves and their connection to organic agriculture. Second, they were asked questions about organic and vegan products. Afterwards, a short text explaining the meaning of biocyclic-vegan production was provided to ensure common understanding. Lastly,

more specific open questions about biocyclic-vegan products were asked. The interview guidelines were discussed and tested by experts.

3.2 Data Analysis

In a first step, the telephone interviews were audio-recorded and, in a second step, transcribed. Afterwards, a qualitative content analysis, based on KUCKARTZ (2016) was undertaken. The qualitative data analysis was conducted using MAXQDA software. In a first step, deductive categories were built based on the interview guidelines and the research question. Afterwards, inductive subcategories were formed in order to have a methodical mixed form of a deductive-inductive formation (KUCKARTZ, 2016). The aim was to compress the available material into essential content (STRÜBING, 2013).

4 Results

4.1 Knowledge about Organic and Vegan Agriculture

In the first part of the interview, consumers and experts were asked to state the advantages and disadvantages of stock-free agriculture. All consumers reported ethical reasons, such as animal welfare, and environmental problems, like the advantage of stock-free agriculture. In comparison, the experts stated ecological reasons, including environmental and climate aspects. For five out of six experts, ethical reasons played a major role. Additionally, the experts own health, as well as social aspects like feeding the world, were important. Only one consumer said that growing up with the kitschy view of traditional farming might be a disadvantage, while the experts mentioned the nutrition cycle, using farm land which cannot be used in another way and the nutritional value of meat (e.g. vitamin B12 and iron).

Furthermore, consumers and experts considered that organic products meet consumer needs in terms of environmental aspects and health aspects, especially non-toxic food due to no use of pesticides during cultivation. In the expert's opinion, consumers purchase organic products because they had a good conscience, better working conditions for the farmers, improved taste and global equity.

Most consumers knew the biocyclic-vegan label and could explain the specifications of it. Even the consumers who did not know the label could explain its meaning. Most experts had heard about the biocyclic-vegan label before and all could explain it. The explanations given varied from basic to very specific.

4.2 Perceived Added Value and Credibility of Biocyclic-Vegan Production

Half of the consumers saw the reduction of environmental problems, like over-fertilisation, as an added value of organic products. Furthermore, ethical reasons (animal welfare) and health (contamination by hormones and drugs) were important drivers. Some consumers reported taste and living in harmony with nature to be a plus. Experts reported ethical reasons to be an added value and half of them thought that the closed-loop approach was particularly important. Ecological aspects (e.g. greenhouse emissions) seemed to be essential as well.

In order to ensure the credibility of biocyclic-vegan products, consumers and experts thought certification could help if monitoring is applied. For consumers, using sustainable packaging such as paper wrapping was important to ensure credibility. Both thought that transparency in the production process (e.g. offering open door days where consumers can take a look behind the scenes) were advisable. Lastly, consumers mentioned that showing videos of a look behind the scenes on the internet could improve credibility. According to experts, personalisation of the farmers was key.

4.3 Purchasing Behaviour

There are different purchase motives for biocyclic-vegan products. One consumer motive is to support the idea of biocyclic-vegan agriculture. Other motives are their own health, the environment, as well as healthy food without any chemical residues. From an expert point of view, ethical reasons are most important, followed by health and environmental aspects. Only experts mentioned ethical reasons; this might be due to the fact that five of six consumers who were involved followed a vegan diet. Moreover, experts thought that closeness to nature, general critics of consumption and originality (meaning doing something else than everyone else does) could enhance purchase. According to consumers and experts, the price could be a barrier of purchasing. Consumers thought that the rejection of a vegan way of life could play a role as well. Both cited ignorance of the biocyclic-vegan concept. In terms of purchase barriers, consumers and experts concurred. According to consumers and experts points of view, consumers who follow a vegan diet are the main target group of such products. Moreover, experts believed that consumers

with a different diet were important, especially vegetarian and flexitarian, as well as consumers who purchased organic food.

4.4 Marketing Mix

In the opinion of consumers, the point-of-sale is the place where necessary information about the speciality of the product should be given. Other important communication channels are magazines, e.g. free magazines in organic stores. Consumers and experts agreed that the internet is key. Both mentioned social media as an effective communication platform. In particular, consumers considered that Facebook groups (e.g. vegan groups) were important to promote biocyclic-vegan products. Additionally, consumers suggested using flyers and offering guided farm tours to provide background knowledge. The experts did not advise to use television as a communication channel.

After deciding which communication channel to use, it is important to decide how to communicate product features. Half of the consumers suggested using pictures of livestock farming and production of meal pellets and horn meal as a deterrent on product packaging like cigarette warning labels. Moreover, focusing on the advantage of organic products and showing documentations about the biocyclic-vegan concept might be helpful. Experts suggested that giving talks about the topic will educate-consumers. Moreover, giving consumers the possibility to join the production cycle give the farmers the chance to explain the product features in detail. The experts agreed with the idea of using consumers as influencers to communicate the added value of organic production of the products.

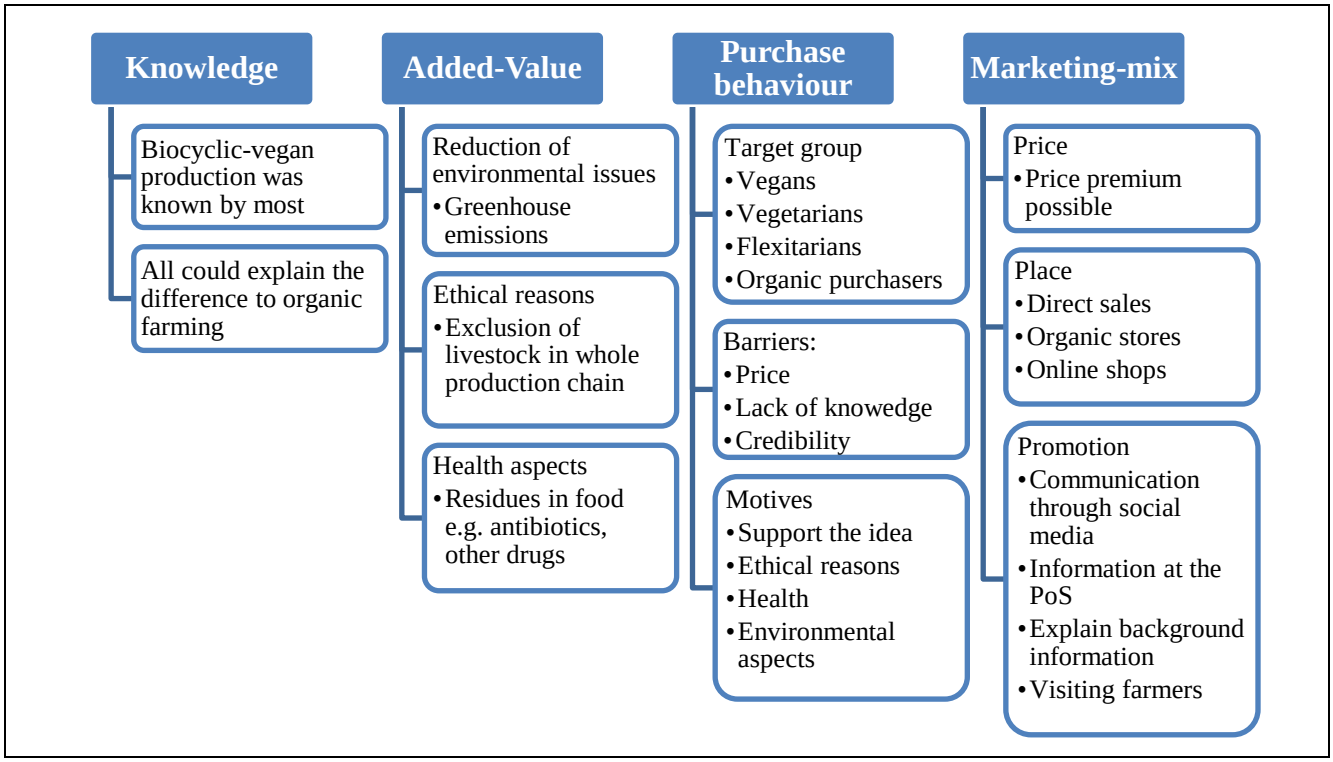
According to consumers, organic shops are important for selling biocyclic-vegan products. In addition, direct sales, such as farm shops and weekly markets, are important according to the consumers and experts point of view. Consumers also mentioned supermarkets and delivery services, while the experts suggested selling via the internet or through wholesalers. Half of the experts viewed that the products could be sold through all distribution channels.

When discussing the image of discounters, the majority of consumers and experts agree that selling biocyclic-vegan products in discounters is not harmful for product quality. One consumer and one expert considered this to be harmful.

Moreover, half of the consumers stated that they were willing to pay higher prices for biocyclic-vegan products than for organic products. In comparison, experts stated that their willingness to pay for biocyclic-vegan products is greater than for organic products. Two experts stated that they were not in a position to assess consumers willingness to pay.

Figure 2 summarises the main results of the qualitative interviews.

Figure 2. Summary of the main results



Source: authors presentation

5 Discussion

5.1 Knowledge about Organic and Vegan Agriculture

In the case of consumers, ethical reasons were the main advantage of stock-free agriculture, while experts mentioned ecological advantages first. This difference might be due consumers following a meat-free diet while experts were meat-eaters. As the consumers followed a vegan or vegetarian diet, they might be more aware of animal welfare aspects than the experts.

The interviewees highlighted aspects of environmental protection, health and taste, as well as social aspects as motives for purchasing common organic products. The ethical aspect played a important role for consumers which may be due to the fact that the consumers surveyed generally rejected farm animal husbandry because of their vegan lifestyle. The results correspond to those of previous studies. They showed that a person's own health was the most important incentive for buying organic food, followed by ethical reasons, environmental aspects and taste. Social aspects also played a role (AERTSENS et al., 2009; ALVENSLEBEN, 2001; CHINNICI et al., 2002; HUGHNER et al., 2007; VERMA, 2015)

Biocyclic-vegan foods are organic products which are produced following the biocyclic-vegan guidelines which adhere to the principles of organic farming. Accordingly, similar purchasing motives can be identified for these foods as for other organic products, including efforts to avoid environmental problems and the desire to eat healthily.

5.2 Perceived Added Value of Biocyclic-Vegan Production

Firstly, the consistent exclusion of livestock in the whole supply chain can be defined as the unique selling proposition of biocyclic-vegan food. This aspect has been highlighted several times by the consumers and experts. This results in an animal-ethical added value to organic food, in which animal products are used in production and fertilisation. It should not be forgotten that the animal welfare aspect is a purchasing motive for organic products, but this consumer need is often not sufficiently covered, since abuses occur in organic animal husbandry as well as in conventional husbandry (BONDE and SØRENSEN, 2004; BRINKMANN and WINCKLER, 2005; RAHMANN et al., 2005; SIMONEIT et al., 2012). The standards in organic- and conventional husbandry are different and the organic husbandry is tighter policed and legally regulated. There are annual inspections and spot inspections all across Europe.

Second, environmental aspects play a major role too. The interviewees, especially the experts, concretise this added value of environmental aspects in the reduction or avoidance of greenhouse emissions and the pollution of soil and water by over fertilisation. There are numerous studies that support the interviewees' statements regarding the negative effects of livestock farming and the use of animal inputs on the environment (EHUI et al., 1998; UNTERSCHULTZ and JEFFREY, 2001; STEINFELD, 2010; MENZI et al., 2010; MINASE et al., 2015). Thirdly, the closed-loop approach can be seen as an important added value to organic products. In organic farming, animal fertiliser is often purchased from external sources, including conventional farming, as other studies have shown (MÖLLER and SCHULTHEIß, 2014; DEUMLICH et al., 2016). This is prohibited in biocyclic-vegan agriculture; instead the use of plant-based compost plays an important role. Its capacity to increase soil fertility and biological activity of the soil is proven (RIWANDI et al., 2014; HÄGE et al., 1996; SCHERER et al., 2008). The entire exclusion of animal inputs also adds health value to biocyclic-vegan foods in comparison to other organic products. The interviewees describe this in terms of preventing the contamination of food by hormones and drugs as well as resistant germs. This finding is consistent with the literature which reports that transfer of veterinary medicinal products into the environment and the plants is possible (KUMAR et al., 2005; MARTI et al., 2013).

5.3 Purchasing Behaviour

First, it can be said that the main motives for buying biocyclic-vegan foods are ethics, health and environment, which coincide with the motives for choosing a vegan lifestyle (GRUBE, 2009). According to JANSSEN et al. (2016) the ethical aspect comes first, even if several motives usually come together. The majority of respondents also put the ethical aspect first as a motive for buying biocyclic-vegan food. Accordingly, experts and consumers identified vegan consumers as the main target group for biocyclic-vegan foods, as the complete exclusion of farm animals has the highest relevance for them. At the same time, it is quite conceivable that biocyclic-vegan products could be of interest to other buyer groups. The motives to follow a flexitarian diet are mainly health and ethical aspects (RAPHAELY and MARINOVA, 2014). Because of that, flexitarians might be interested in biocyclic-vegan

food products which fulfil these needs. Moreover, earlier studies found out that a vegan diet has the lowest environmental impact. (BARONI et al., 2007) Therefore, consumers who place high value on ecological aspects might consider biocyclic-vegan products when purchasing groceries.

Both experts and consumers specified the same purchase barriers. The price is an aspect that can lead to non-purchase, especially in connection with the non-recognition of the added value of the products (PADEL and FOSTER, 2005). Another reason to avoid purchasing biocyclic-vegan products could be the rejection of a vegan diet. One explanation for the rejection could be neophobia (LOGUE, 2004). Moreover, some consumers have the opinion that a vegan diet is absurd, as eating animals is appropriate (JOY, 2011).

5.4 Marketing Mix

Respondents rated product labelling positively using the biocyclic-vegan label. Other studies have also considered the labelling of foods to communicate certain quality, as well as product characteristics demanded by consumers (CASWELL and PADBERG, 1992; MCCLUSKEY and LAUREIRO, 2013).

However, further communication measures are necessary, as biocyclic-vegan agriculture is at a very early stage of the product lifecycle and the consequences of the exclusion of livestock are not yet known by everyone. Accordingly, clarification of biocyclic-vegan agriculture is required through effective communication. In addition to printed media, lectures and information at the point of sale can help, and consumers and experts also highlighted the internet and social media. HOPP et al. (2017) reported that the internet is the most important information source for vegan nutrition. Besides communication, the distribution of the products is necessary to reach consumers.

The interviewees consider direct sales, i.e. through farm shops and weekly markets, as well as organic supermarkets, to be credible and trustworthy. With regard to the ecological purchasing motives for biocyclic-vegan products, a look at the preferences of organic buyers is interesting. Intensive organic buyers (at least 50% of their food is organic) are the core target group for organic products. They prefer to purchase in specialised organic shops (SPILLER et al., 2005).

If one wants to reach a broader range of consumers, then other distribution channels, like supermarkets and discounters, have to be considered. In fact, more than 50% of annual organic sales are generated through discounters (BALZ, 2018). Moreover, the experts reported the internet to be a distribution channel. Vegans do not have a preference for a place of purchase (HOPP et al., 2017). However, people on a restricted diet in particular are reported to purchase food through the internet (GRUBE, 2009; LAIKO, 2017). Consumers who follow a vegan diet can be counted as consumers with a restricted diet as they exclude a lot of products from their diet and therefore their choice is limited.

6 Conclusion

In this study, the main motives (health, ethical and environmental aspects, and taste) for purchasing organic food that were reported are consistent with results of previous studies. Moreover, we discovered what consumers and experts consider to be the advantages (e.g. ethical, environmental and health reasons) and disadvantages (nutrition cycle, image of traditional farming and health aspects, such as vitamin B12) of stock-free agriculture. The main purchasing motives (to support the idea, ethical and environmental motives) and barriers (price, lack of knowledge and rejection of a vegan lifestyle) of biocyclic-vegan products were examined and the potential target groups (vegan consumers, vegetarians, flexitarians and consumers who purchase organic food) identified. The added value (exclusion of livestock from the whole production chain) of biocyclic-vegan products was stated and potential distribution channels (direct sales such as farm shops, organic shops, and internet sales) were named, while discussing if the image of discounters could be detrimental to biocyclic-vegan products.

This study was of an explorative nature as little research has been carried out on biocyclic-vegan agriculture. Therefore, this study gives first insights into the topic and can be built on. The presented results are not representative of the population of consumers in Germany, which is a characteristic of qualitative studies. Moreover, it is possible that an interviewer effect took place. The results provide ideas for further research concerning organic vegan agriculture, especially biocyclic-vegan agriculture. It would be interesting to conduct more in-depth interviews with a larger sample size to find out if theoretical saturation is given. As biocyclic-vegan products might be interesting for other consumers it would be advisable to conduct research of a flexitarian sample. Moreover, a quantitative study of consumers concerning biocyclic-vegan agriculture would be interesting.

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