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Vegan foods: Labelling practice

Marielle Gerke, Meike Janssen

Abstract

Recently, vegan food has gained importance in the German population. For a long time, there was neither a uniform definition nor governmental regulation on the use of the term 'vegan'. It wasn't until April 2016 that the consumerism ministers of the German federal states agreed on a uniform definition of the term. This definition is supposed to function as a temporarily base for evaluation for the official food control, until the European Commission issues standardized regulations. In addition, little is known about the labelling practice of vegan foods.

The aim of the present study was therefore to conduct an inventory of vegan food labels, to analyze the transparency of the standards behind the labels and to evaluate the current practice of vegan food labelling. Data was collected in 24 grocery stores for eleven product categories. The results of the study show there are two main types of vegan food labels: producer labels and third-party labels from independent organizations.

From 108 products analyzed, 79% were labelled with a producer label and only 44% carried a third-party label. In total, 23% of the products were labelled with both types of labels. Whereas the certification and production standards of the third-party labels could easily be found and accessed on the internet, the standards behind most of the producer labels were not transparent. The study concludes that the current practice of labelling vegan food merely with producer labels is partly not consumer-friendly and should be improved to increase transparency.

Keywords: vegan, vegetarian, vegan foods, food labelling, label, consumer protection, food industry

Introduction

In recent years, the vegan diet has become more popular in Germany. So far, there is no reliable data on the exact number of vegan consumers in Germany. According to estimates from 2015, the percentage of vegans among the German population accounted for 1% [1, 2]. Although the exact number of vegans living in Germany cannot be quantified, the trend towards vegan food can also be observed in other areas of society such as the cookbook market, the gastronomic sector and on trade fairs. Whilst there were 67 vegan/ vegetarian cookbooks published in 41 publishing houses in 2010, already in the first three months of 2014 there were 135 vegan/vegetarian cookbooks in 71 publishing houses [3]. According to figures from the Vegetarierbund Deutschland e. V. (VEBU; German Vegetarian Union) in 2013, 75 vegan gastronomic undertakings were counted in medium-sized and big cities in Germany. In January 2015, 122 vegan gastronomic undertakings were listed [4]. In addition, in 2015 there was a variety of seven well-frequented trade fairs exclusively on vegan products [5]. In the meanwhile, also the German Nutrition Society (DGE) has published a position paper on the topic of vegan diet

As part of the vegan-trend, the supply and selection of vegan food in German grocery shops has also grown rapidly [7]. In addition to tofu, the vegan product range encompasses a wide selection of ready-to-eat products, spreads and numerous milk and meat substitute products [8]. The opening of specialized vegan supermarkets such as the chain 'Veganz' and the fact that even German Railways Deutsche Bahn caters for vegan needs in their on-board restaurants can be seen as evidence for an increased demand for vegan products and services [9, 10]. The increased availability of a wide range of vegan food products in German supermarkets and online shops could also be causing an additional increase of people switching to a vegan diet [11].

A clear and unmistakable labelling of vegan food is very important for some consumers. When shopping in

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a supermarket, consumers cannot easily determine or verify whether or not a product is vegan, especially not in the case of processed foods (compared with unprocessed food). The list of ingredients is only of limited help as it is only listing the substances that belong to the ingredients per legal definition. In addition, it is not mandatory to name the animal origin of food colorings and additives in the list of ingredients [12]. According to the EU Food Information Regulation various components of food do not legally belong to the ingredients and therefore do not need to be declared in the ingredients list. These include processing aids, carrier substances, food additives and food enzymes, which do not have technological effects in the final product anymore, and the so-called 'quasi-processing aids' [13].

Due to this lack of clarity vegan food is labelled with producer or third-party labels (uniform, legally binding labels from the government do not exist); however, what stands behind the labels often remains unclear at the point of purchase. At least in April 2016 the consumerism ministers of the German federal states agreed on a uniform definition of the term 'vegan' which is supposed to function as a temporarily base for evaluation for the official food control, until the European Commission issues standardized regulations [14]. According to this definition, food is vegan if it does not contain any products from animal origin and if during all steps of its production and processing no ingredients, processing aids or so-called 'quasi-processing aids' modified or unmodified from animal origin were added. Unintentional contaminations, which could not be avoided despite suitable provisions and compliance of good manufacturing practice, are acceptable [15]. All actors on the German market who use the term 'vegan' have to follow the definition of the consumerism ministers of the states from April 2016. They cannot, as before, just create their own standards and guidelines, with which they define the vegan quality themselves.

In the European Union there is no legally binding definition or regulation of the use of the term 'vegan' [8, 16-18]. Article 36, paragraph 3 b) of the European Food Information Regulation (EU) No. 1169/2011 lays down that the European Commission should issue an implementing act defining the requirements for the voluntary labelling of food suitable for vegans or vegetarians. Until today, this has not happened since there is no deadline for the implementing act and the European Commission first fulfilled other duties from the Regulation with a deadline [8, 19]. Despite numerous initiatives from vegetarian and vegan associations, consumer protection organizations and even the German Bundesrat and the German Federal Government emphasizing the importance of a uniform definition and regulation for the labelling of vegan food, especially in the light of increasing numbers of vegan consumers, a legislative process has not started yet.

Against this background, the present study aimed to inventory the most common labels for vegan food on the German market. Furthermore, the objective was to investigate the transparency of the standards behind the vegan labels and to evaluate the current labelling practice. Finally, recommendations for different actors on the German market for vegan food were made.

Material and methods

Subject of the present study was an inventory of the most common vegan labels on the German food market and an evaluation of the underlying standards and certification guidelines found online. Data was collected in 24 grocery stores in the region of Northern Hesse and Southern Lower Saxony. The sample included all relevant main retail

chains in the region (full-range providers Edeka [2x], Kaufland [1x], Nahkauf [1x], Real [2x], Rewe [2x], Tegut [2x]; discount stores: Aldi [2x], Lidl [1x], Netto [2x], Penny [1x]; organic shops: Alnatura [1x], denns Biomarkt [2x]; owner-managed organic shops [3x]; health food store [2x]).

The current labelling of vegan food was examined by means of eleven product categories. The product categories were chosen in a way that the spectrum of products in the sample was as wide as possible: The selection included food that was classically and clearly vegan (soy drinks and plain tofu), furthermore vegan imitations of products from animal origin (vegan cheese and meat slices) and the third group of foods encompassed products usually also available in a non-vegan version (apple juice, salty spreads, jelly bears, biscuits, margarine, chocolate bars, deep-frozen pizza). Within these three groups those product categories were chosen of which a wide range from various producers on the market existed.

In all stores, an employee of the University of Kassel took pictures of all vegan products out of the eleven categories and recorded all relevant information with the help of a paper-pencil data entry sheet. In case a product was offered in different flavors by the same producer (e.g. tomato spread and pepper spread), only one product was recorded for the sample. In total, the sample consisted of 336 products from the 24 grocery stores. 228 products were duplicates, so the final sample contained 108 products after exclusion of the duplicates.

The recorded vegan labels were differentiated into producer labels and third-party labels. Third-party labels are certified by an independent organization and can occur on products from different producers.

After the compilation of the different labels for vegan food, the second part of the study examined the underlying standards and certification guidelines by means of an indepth internet search. The gathered information about different vegan standards and certification guidelines were then analyzed and compared to identify main differences and similarities.

Results

Labels on vegan food

• Figure 1 shows the recorded labels for vegan food differentiated into producer labels and third-party labels. In total, 79% of the products were labelled with a producer label. Only 44% of the products were labelled with a third-party label. Almost a quarter (23%) of the products carried both types of labels – a producer and a third-party label. Interestingly, more than half of the products (56%) were labelled only with a producer label without an additional third-party label.

The recorded producer labels varied a lot in terms of design and content. The claim 'vegan' was presented on the packaging either in simple lettering, highlighted lettering, as part of the product name or as part of the brand name (◆ Figure 2). Most products were labelled with more than one form of producer label. Strikingly, on 49% of the products with a producer label, the vegan claim had the color green. On 26% of the products, a leaf symbol was used for the vegan claim.

Among the 48 products with a third-party label, the label of the European Vegetarian Union, the international umbrella organization of European vegetarian associations, was the most common with 60% as can be seen in ◆ Figure 3. The so-called V-label is assigned on a national level by the country organization - in the case of Germany it is the VEBU. The label of the Vegan Society, the so-called vegan-flower, was the second most common with 38%. The label of the Vegane Gesellschaft Deutschland e. V. (Vegan Society Germany) was

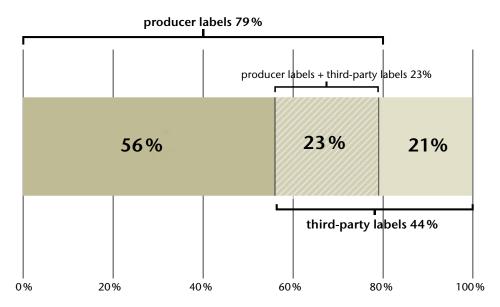


Fig. 1: Distribution of the two vegan-label types (n = 108) [own depiction]

only found on one product (veganplus-label).

Standards and certification guidelines for vegan-labelling

In the second part of the study, the underlying standards and certification guidelines of each label were examined by means of an in-depth internet search. A summary and comparison of the standards and certification guidelines of the three third-party labels as found on the internet is presented in ◆ Table 1. In case no information was found regarding a certain criterion on the homepage of the third-party organization, this was marked with 'no information' (n. i.) in ◆ Table 1.

On the base of the information found on the internet a minimum standard that all three organizations had in common was the exclusion of ingredients and processing aids of animal origin. One main difference between the standards of the three organizations was that according to the information given on the internet products with a veganplus-label from the Vegan Society Germany have to be produced in a separate production unit and have to be free of any contamination. On the contrary under the V-label of the European Vegetarian Union and the vegan-flower of the Vegan Society contaminations shall be avoided or reduced but may generally exist. Regarding other criteria such as packaging and animal testing the transparency of the information available on the internet varied. Additionally, on the internet no further information was found on the general process, quantity and depth of the controlling systems. Only the European Vegetarian Union respectively the VEBU stated that they reserve the right to randomly perform controls in the factories or on the product itself.

Regarding the recorded producer labels for vegan food, it was explored whether or not information about the underlying standards and certification guidelines could be found on the producers' homepages. This was done for those 18 brands that occurred more than once in the sample. Out of these 18 brands, seven brands also used one of the three thirdparty labels in addition to their own producer label. Interestingly, only four of these seven brands referred to the third-party label or its certification organization on their homepages. Out of those brands only

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Fig. 2: Distribution of the two vegan-label types (selected examples) [own depiction]

labelled with a producer label, five brands provided general information on the meaning of the vegan quality of their products on their homepage (Table 2). The exclusion of ingredients from animal origin could be identified as the minimum standard all five brands had in common from what was presented on the internet. Only two of the five brands provided information as detailed as the information given by the certification organizations of the third-party labels, as they were also giving information about the use of processing aids from animal origin, tolerance for animal traces in the product, the mandatory use of a separate production unit or the packaging. The homepages of the other three brands provided only information about the use of ingredients from animal origin. Surprisingly, for six brands with producer labels for vegan food, the homepages contained absolutely no information about the meaning and underlying standards of the vegan quality of their products

Discussion

Even though the vegan-trend can be observed in various different areas of society and on the food market, there is currently no legally binding definition or regulation on the use of the term 'vegan' in Europe [8], [16-18]. In April 2016 at least on German national level the consumerism ministers agreed on a uniform definition of the term 'vegan' [15]. The results of the present study show that there are big differences in the underlying standards and certification guidelines behind the different labels as presented on the internet.

Less than half of the products in the sample were labelled with a thirdparty label. The label of the European Vegetarian Union was the most common followed by the label of the Vegan Society. The relatively new label of the Vegan Society Germany was only found once. The minimum standard guaranteed by all three organizations presented on the internet is the absence of ingredients and processing aids from animal origin.

The standards regarding production units and tolerance for contamination varied between the three organizations. Information regarding animal testing and packaging was only found on the homepage of one of the three organizations. There was a lack of information regarding the implementation of the control system on the homepages of all three organizations. Otherwise the standards of all three independent organizations were documented in detail on the internet and were easily to be found.

The standards behind the producer labels, by contrast, were rarely documented in detail on the producer's

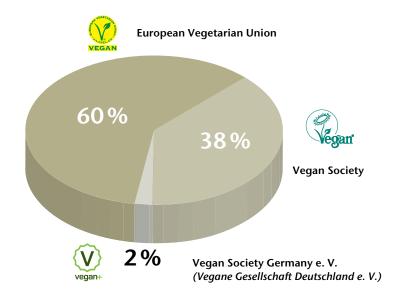


Fig. 3: Distribution of the third-party labels of the three independent organizations (n = 48) [own depiction]

| | VEGAN | Vegan | (V) vegan₊ | |
|--|---------------------------|-----------------|--------------------------------|--|
| Standards | European Vegetarian Union | Vegan Society | Vegan Society Germany e. V. | |
| use of ingredients of animal origin | not permissible | not permissible | not permissible | |
| use of processing aids of animal origin | not permissible | not permissible | not permissible | |
| tolerance for animal traces in the product | yes | yes | no | |
| mandatory use of a separate production unit | no | no | yes | |
| animal testing | n. i. | not permissible | n. i. | |
| regulations are also valid for the packaging | n. i. | n. i. | yes | |
| certification guidelines | | | | |
| validation | 12 months | 12-24 months | n. i. | |
| fees | vary | vary | n. i. | |
| inspections | randomly | n. i. | n. i. | |
| certification per product | yes | yes | n. i. | |

Tab. 1: Standards and certification guidelines of the third-party vegan-labels presented on the internet [own compilation] n. i. = no information

homepages. This practice is questionable since more than half of the products were labelled only with a producer label for vegan food. Currently on the market there is a small number of third-party labels with relatively transparent standards and certification guidelines in opposite to a bigger number of producer labels with mainly untransparent meanings. From a consumers' perspective, the transparency of the standards and certification guidelines behind all labels should be improved.

The food attribute 'vegan' can refer to the so-called product quality as well as the process quality of food. For example, the absence of ingredients from animal origin is part of the product quality and can be verified by analyzing the product with laboratory methods. The absence of processing aids from animal origin or the refusal of animal testing, by contrast, are part of the

process quality and cannot be proven in a laboratory once the product is purchased. Usually, consumers can neither prove the vegan product quality nor the vegan process quality when purchasing or consuming a product. Consumers have to rely on their trust that a product labelled as vegan is truly vegan. That is why it is of utmost importance that producers and retailers of vegan food create the enterprise's communication as transparent and as credible as possible, revealing their definition of vegan standards. This is even more crucial since consumers generally tend to be skeptical about the food industry's communication strategies [20-22].

From studies on other food attributes it is known that consumers have more trust in third-party labels than in producer labels [20, 22]. Against this background, the current labelling practice of many vegan food producers seems problematic since a considerably big number of the products in the sample were labelled with a producer label which did not have a transparent meaning. This labelling practice of vegan food has to be criticized in its function for consumer orientation.

Limitations

In the present study, data was only collected in grocery stores in the region of Northern Hesse and Southern Lower Saxony. In addition, only eleven product categories were investigated, not the entire range of all vegan products. The results can therefore not be generalized to the whole of Germany and to all product categories. However, due to the large variety of vegan producers in the sample, it can be assumed that the results provide a good insight into the labelling practice of vegan foods.

| Standards | no/not permissible (number of brands) | yes/permissible (number of brands) | no information (number of brands) |
|--|--|---------------------------------------|--------------------------------------|
| use of ingredients of animal origin | 5 | - | 6 |
| use of processing aids of animal origin | 2 | - | 9 |
| tolerance for animal traces in the product | - | 2 | 9 |
| mandatory use of a separate production unit | 1 | - | 10 |
| animal testing | - | - | 11 |
| regulations are also valid for the packaging | - | 1 | 10 |

Tab. 2: Availability of information on the internet about standards for vegan food of brands only labelled with a producer label (11 brands) [own compilation]

Conclusions

Due to the large variety of vegan labels and the lack of transparency, the consumer protection agency of Hamburg as well as other vegan associations and political actors already pleaded for the introduction of a legally binding definition and regulation of the use of the term 'vegan' [23]. The definition should be narrow enough to meet consumers' expectations of vegan food but at the same time, the definition should be practicable so that the variety of products eligible for being labelled as vegan is not limited unnecessarily [24]. The vegan-definition issued by the consumerism ministers in April 2016 is mainly meeting those requirements.

Nevertheless, from a consumer's perspective the transparency of the vegan-labels and their underlying standards should be improved and information provided on the internet should be made more easily accessible for the consumers. To increase credibility, producers of vegan food should certify their products with third-party labels. Additionally, it is recommendable that in the near future the European Commission should achieve an agreement on a legally binding definition and issue uniform regulations on the use of the term 'vegan'.

Conflict of Interest

The authors declare no conflict of interest.

BSc Marielle Gerke Dr. Meike Janssen

University of Kassel Faculty of Organic Agricultural Sciences Department of Agricultural and Food Marketing Steinstr. 19, 37213 Witzenhausen

E-Mail: m.janssen@uni-kassel.de

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