

Berries, Seeds and Hypes : Comparing Dutch Superfood Labels with European and Dutch Law



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26 May 2016

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Cover photo:

All of the superfoods—goji berries, chia seeds, and hemp seeds—used in this paper.

(Meijer).

Executive summary

A healthy lifestyle with healthy food are two ambitions many people cherish. In recent years, the process and components of attaining perfect health have received greater attention. New products regularly appear on the market with claims of supporting or achieving a healthy lifestyle. One of these product lines is called ‘superfoods’. Superfoods are edibles and on the package one can find information of their extremely healthy properties or benefits. Scrutiny of those food labels, however, reveals that a consumer cannot know for certain what aspects are reliable.

First this paper describes, analyses, and evaluates what superfoods are, next it researches the European and Dutch legislation that govern their food labels and food claims, and will conclude by stating if Dutch store-brand products act in accordance with those regulations. It employs three complimentary methods: desk research, an interview, and field research. A field test compares the store-brand labels and packages, Albert Heijn, Jumbo, and Aldi, of three superfoods, goji berries, chia seeds, and hemp seeds. Analysing the results of this field research, together with information from the other two methods, determines if the food labels and food claims comply with current law.

This paper concludes that, while all of the labels studied do conform to legal guidelines, not all the food claims present on packages act in accordance with existing legislation. Aldi-brand superfood packages are free of problematic food claims, but two claims found on Jumbo-brand items and one statement present on Albert Heijn-brand superfoods contradict EU law.

On the basis of this research, one can predict that the frequency of misleading labels on hyped food products will increase in the near future. As a result, consumers will be misled and producers will include more vague claims of nutritional value on their products. To promote consumer fairness, this paper advocates for the use of honest labels—without any food claims—on products that are part of a food hype.

List of Abbreviations

ALA: α -Linolenic acid (alpha-Linolenic acid)

DHA: Docosahexaenoic acid

EFSA: European Food Safety Authority

EC: European Commission

EPA: Eicosapentaenoic acid

FDA: Food and Drug Administration

GMOs: Genetically Modified Organisms

ORAC: Oxygen Radical Absorbance Capacity

RDA: Recommended Daily Allowance

NVWA: Nederlandse Voedsel en Warenautoriteit/Dutch Food Safety Authority

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A special thank you

To my very special supervisor, Isabel Düsterhöft: without you I would have fallen apart.

To my mother, who was just there.

To my acupuncturist, Janice, who helped me when my energy was gone.

And to everyone who contributed to this research by sharing their knowledge, thoughts, and ideas.

1. Introduction

The desire to be healthier and fit is currently widespread. Individuals adopt various strategies to attain a state of a perfect health, such as through diets, lifestyle changes, or altering practises of consumption. Aware of the potential for commercial gain, many new products arrive on the market with claims of enhancing a consumer's health or body. One of the notable hypes at the moment is the product line of so-called 'superfoods'. According to Health.com, a popular website about food-related health topics, superfoods are nutrient powerhouses and people who eat superfoods are healthier and skinnier than those who forego the products (Health.com, 2015). Commercially packaged superfood products typically involve claims about promoting extreme health and weight loss. In turn, one of the most striking aspects of superfoods is the incorrect labelling involved. According to the Dutch non-profit consumer protection group Consumentenbond, producers of superfoods do not adhere strictly to guidelines for food labels. The Consumentenbond published an investigation about superfood labelling in their June 2014 health guide. The results revealed misleading and incorrectly formulated labels (Camelbeeck, 2014). The European Union establishes guidelines for food labels and food claims. All EU member states must implement and enforce these rubrics through national legislation. Unfortunately, the mislabelling of superfoods still occurs. According to the Consumentenbond, information that appears is sometimes exaggerated and carefully selected for persuasion. For instance, the amount of minerals or vitamins reported is increased tremendously, sometimes by a factor of 400 (Consumentenbond, 2014). European Union legislation mandates standardised label information on products; however, implementation does not always follow in the way that it should.

The term superfood is a marketing appellation for foods that purportedly improve one's health as a result of the ingredients contained or benefits derived (Voedingscentrum, 2015). Superfoods are natural foods, and these products contain relatively high amounts of nutrients or antioxidants. Whereas typical foods offer two or three special health benefits, superfoods may supply up to twelve special health benefits. Their uniqueness stems from the circumstance that they are dense sources of minerals, vitamins, amino acids, and antioxidants (Nutrilifeonline.nl, 2014). When measuring levels of antioxidants in foods, the Oxygen Radical Absorbance Capacity (ORAC) scale is used. For example, blueberries are fruits that traditionally contain an enormous amount of antioxidants. Blueberries have, on average, 2,400 ORAC units per 100 grams (Boekhorst, 2014). A few examples of the superfoods now popular include acai berries, goji berries, chia seeds, quinoa, Chlorella, raw cacao beans, hemp seeds, coconut oil, and Inca berries.

The past fifteen years reflect a clear amplification of superfood availability in the Netherlands and Dutch popular knowledge about them. In 2001, Patty Harpenau, a life coach and author of books about success, diets, and food, published the first book about superfoods in the Netherlands. Her book, *Superfood!*, is not about the superfoods popular at this moment, but about general foods she finds beneficial and healthy. Oatmeal and broccoli, for instance, are some of the most important items that

she calls ‘superfoods’ in her text (Harpenau, 2001). Years after *Superfood!* passed from public attention, the diet-and-lifestyle market met a product noticeably absent in Harpenau’s text: quinoa. Officially, quinoa is a pseudo cereal, although, most people think that quinoa is a cereal. It looks like a cereal, however, Quinoa is related to spinach and beetroot, therefore, it is a vegetable and not a grain. Quinoa originally comes from the Andes Mountains in South America. The Incas ate this crop because it is an inexpensive food source because it is not labour intensive. After finding quinoa popular, the Netherlands then encountered acai berries. Acai berries grow in the rainforests of South America. Most of the superfoods popular today are native to the middle and southern regions of the Americas. Once acai berries became pervasive, all other superfood products mentioned above found their way to Dutch speciality stores, such as organic grocery stores. Expanding from speciality shops, superfoods began to appear on supermarket shelves in 2012. Finally, non-food outlets also began to sell superfoods in the past few years. The availability of different superfoods in various stores—with different price tags—reflects a rapid development in the Netherlands.

Superfoods are enormously popular, because living a healthy life is a priority for many people today. One of the maladies of urbanised life in the Netherlands and in the rest of the Western world results from what people eat. Western eaters consume ample calories but not enough nutrients (Boekhorst, 2014). What most Western consumers eat is food that contains too much fat and salt. Therefore, claims found on superfood labels of the contents being rich in minerals and antioxidants promote a consumer logic whereupon the addition of superfoods to a diet results in an overall increase of nutrients (Boekhorst, 2014). According to the research of 24women, a website for women about health, fashion, travel and lifestyles, superfoods gain popularity daily. In the Netherlands, one out of three women now consume a superfood on a daily basis, yet 89% of the women who participated in the study did not use these products in 2012 (Gezondheidsnet, 2014). According to the same study, the idea that superfoods contribute to health when added to one’s daily diet provides the main rationale for their use and some individuals also use superfoods to increase energy levels. Ralf Hartemink, programme director of Food Technology at Wageningen University, reports that the effects of superfoods are not scientifically proven (Hoogland, 2013). Regardless of scientific evidence, the popularity of superfoods increases nonetheless (Gezondheidsnet, 2014). Superfood labels, here, might account for the apparent contradiction between evidence and perception. If all the labels claim that superfoods are healthy, why would one not eat them?

1.2. Research structure

The central question of this paper connects independent research on food legislation and labels with the current superfoods food hype. Sub-questions will help answer the central question. This research divides European and Dutch legislation on food claims and food labels. The central question of this research is:

Are Dutch supermarkets acting in accordance with European and Dutch legislation when they label and package their store-brand superfoods?

The sub-questions of this research are:

- 1. What are superfoods?**
- 2. How have superfoods developed over the past decade?**
- 3. Why are superfoods so popular at the moment?**
- 4. What is the EU Novel Food legislation?**
- 5. What is the European legislation on food labels?**
- 6. What is the European legislation on food claims?**
- 7. What is the Dutch legislation on food labels?**
- 8. What is the Dutch legislation on food claims?**
- 9. Supermarket Superfoods label test on Albert Heijn, Jumbo, Aldi superfoods**
 - **What are the differences between each brand's labels?**
 - **What are the food claims?**
 - **To what extent does each label accord with European legislation on food labels?**
 - **To what extent does each label accord with Dutch legislation on food labels?**

This paper progressively attends to the above questions in the following way.

Succeeding this introductory chapter, which explains what superfoods are and how they developed over time, this paper performs a literature review. It first addresses the EU's law on Novel Food. Following that, the sub-questions about European and Dutch food legislation are divided by topic. Research describing the European legislation on food labels precedes an examination of the relevant Dutch legislation. Similarly, investigations of EU and Dutch regulation on food claims follow (here, guidelines for labels regarding the particular uses of 'contains' and 'rich in' are closely scrutinised).

Next, the methodology chapter will present an overview of the research methods employed in this paper's research. A combination of desk research, an interview, and field research comprise this exploration. The field research involved examines how the store-brand superfood labels of three supermarkets—Albert Heijn, Jumbo, and Aldi—comply with European and Dutch law. The methodology chapter further elucidates this investigation.

Chapter Four will analyse the results of the field research using the theoretical knowledge from the literature review in Chapter Two. The analysis involves comparing the different labels and presenting results.

Chapter Five will evaluate the findings of the labels researched in this study to determine the extents to which each complied with the pertinent European and Dutch legislation.

Finally, the Conclusion will summarise research outcomes as well as propose future recommendations.

2. Literature Review

In order to answer the central research question, this paper must first establish theory to support its examination. This chapter reviews literature pertinent to an analysis of superfood labels and claims. It first explains the legislative history of the EU's Novel Food regulations, and then describes the rationales for food label regulations at the European and Dutch levels, respectively. Finally, the chapter explores the theoretical bases for laws concerning food claims at both European and Dutch levels, respectively.

2.1. Novel Food Legislation

Superfoods are not new products. Rather, their perceived newness results from marketers promoting fresh and unique uses for them, which contributes to their status as a current food hype. It is important, however, to understand that certain guidelines and legislations regulate new products entering the market. According to T. Van Rooij, member of the Dutch Working Group on health claims, most superfoods arrive from the United States of America. Every ten years a new food hype emerges with berries, seeds, and fruits from Asia and South America (Rooij, 2014). Different guidelines apply to the import of food in the USA than in the European Union. When a company in the USA discovers something new and can demonstrate the health and safety of that product, it can be imported; however, the risk and responsibility falls on the company that imported the product. The USA's Food and Drug Administration (FDA) only checks the products for adverse health effects after transportation (Rooij, 2014). In the EU, the Novel Food act stipulates that only products available in a member state before May 1997 may be re-marketed without a prior safety assessment (Rooij, 2014). If a company wants to import or produce a totally new product, the company must provide a comprehensive scientific report that demonstrates its safety. Proving the safety of a new product is expensive and takes time, which is why, according to T. Van Rooij, there are not many new food products in Europe that postdate 1997. The superfoods goji and acai berries, for example, already enjoyed availability in Europe before May 1997 (Rooij, 2014). As stated before, their perceived newness is the result of smart marketers.

2.2. Food labels

In order to understand the relationship between superfoods and food labels, this section explains the status of EU- and Dutch-level legislation on food labels. According to the European Parliament, consumers in the EU must have the right to obtain reliable information on food labels. Therefore, the EU implemented certain regulations on food labels since 2012 (PDC, 2015). In particular, the new regulation (EU) No.1169/2011 mandates that labels provide information about food to consumers, and took effect on 13 December 2014. Another requirement, for labels to supply information about a food's nutritional value, took effect on 13 December 2015 (PDC, 2015).

2.2.1. European legislation on food labels

In July 2011, the European Parliament approved new rules for food labels. In September 2011, the Council of Ministers agreed with those rules (European Commission, 2015).

According to current EU regulations, labels have to contain the nutritional information and the various substances in a food product. This information on the label must be expressed in units per 100 mg or per 100 ml for each portion. Details about the recommended daily allowance (RDA) may supplement that information. Furthermore, labels must be legible, not misleading, and should contain relevant information upon which consumers can base their choices. Since September 2011, food labels indicate a product's amount of certain ingredients that the EU determined as obesity contributors. The ingredients in question include:

- Total fat
- Saturated fat
- Trans fat
- Carbohydrates
- Sugar
- Protein
- Salt

Each ingredient has a different purpose for the body. Saturated fats are vegetable fatty acids, which are found in nuts, seeds, and oil (Hartstichting.nl, 2015). Carbohydrates are sugars and starch; they deliver energy to the body. Carbohydrates are present mainly in cereals, legumes, and potatoes (Voedingscentrum.nl, 2015). Protein is a substance one's body needs to build muscle tissue (Vitamins.nl, 2015). For certain foods, such as meat products (e.g. beef, poultry, pork, sheep, and goat), fresh fruit, vegetables, and products like honey and olive oil, it is important that the country of origin is mentioned on the food label (PDC, 2015). The reason why these ingredients must be explained on the labels is because an excessive intake of these ingredients may contribute to obesity.

To curb consumer misinformation and encourage safety, the new EU labelling law came into force 13 December 2014. The European Union updated regulations on food labels to create more uniformity among member states. Highlights of those changes for all food labels include: the introduction of minimum font sizes for mandatory information, the obligatory and prominent mention of any allergens contained, and the compulsory listing of any manufactured nanomaterials involved. The Parliament also agreed that labels ought to disclose a primary ingredient's country of origin as well as the date of freezing for meat or fishery products. If transportation involved freezing a food item and then thawing it for final sale, labels must indicate that the item is 'defrosted', too (Ondernemersplein, 2015). While drafting the regulations, the European Parliament determined that a customer's ability to assess ingredients quickly and legibly—for allergens, alterations to physical

structure, or nanoparticulates found in additives, flavourings, pesticides, etc.—reaffirms her or his right to reliable information and promotes health and safety standards for all. By implementing new rules to eliminate discrepancies between how a product appears and a label describing its contents, the European Parliament wishes to protect consumers against deception (European Parliament News, 2015).

2.2.2. The Dutch legislation on food labels

The Nederlandse Voedsel en Warenautoriteit (NVWA, ‘Dutch Food Safety Authority’) is an agency that ensures food and animal safety from raw materials to dining. The NVWA is the authority in the Netherlands that verifies compliance with and respect of the food-related health and safety laws outlined by the Dutch Food and Commodities Act. Derived from EU acts, the Dutch Food and Commodities Act states the requirements for food products and labels; therefore, the NVWA monitors production and preparation hygiene, food packing, livestock welfare and distribution, and the veracity of label information within Dutch borders (Rijksoverheid, 2015).

According to both the Dutch Food and Commodities Act and EU legislation, food labels must contain the following information for the customer:

- E-numbers
- The origin of the country or place
- The nutritional value
- GMOs
- Allergens

Outlined through EU legislation, E-numbers are codes for additives that, among other attributes, preserve, stabilise, thicken, or colour a food product. Because EU states trade extensively amongst themselves as well as with the rest of the world, identifying the country of origin or place from which a product came is also necessary. Mandated nutritional values help indicate the nutritional ingredients and energy value of a product, such as protein, vitamin, mineral, and fibre amounts. Genetically Modified Organisms (GMOs) alter the properties of a product’s bacteria, plants, or yeast by using different genes, and must be mentioned on the label if the product contains more than 0.9% GMOs (Voedingscentrum, 2015). The Dutch statute on labelling allergens, such as peanuts, nuts, glutens, or lactose, compliments EU law. National legislation on food labels in the Netherlands clearly parallels EU regulation, and demonstrates a successful instance of the uniformity the EU wishes to instil.

2.3. Food claims

This section explains the status of both EU- and Dutch-level legislation on food claims.

A food claim is a declaration about the quality of a food product. Distinct from nutritional value statements, which numerically express amounts of certain ingredients in a product, health claims

on food packages announce the health benefits from ingesting the product. Health claims are subject to regulations and must be substantiated properly (Voedingscentrum, 2015).

There are three different food claims:

- Generic claims
- Disease risk-reduction claims
- Child development claims

Generic claims are general assertions about a product, and they may only appear on a label when derived from the European Food Safety Authority's (EFSA) approved list of generic claims (e.g. calcium improves bone strength) (Voedingscentrum, 2015). Disease risk-restriction claims encompass assertions of a product's, or an ingredient in the product, ability to reduce a particular risk factor for a disease. No labels may claim to cure a disease. The example 'plant sterols in margarine lower one's cholesterol level' is allowed because it says something related to disease risk factors (NVWA, 2012). Child development claims relate to the growth and maturation of children (e.g. calcium is the key to skeletal development and for the normal growth of children) (Voedingscentrum, 2015).

The terminology of food claims often demonstrates the location of overlapping tensions between commerce and government. A product that bills itself as 'light', for example, falls under Dutch and EU legislation, and requires a manufacturer to explain the meaning of 'light' within the context of the item in question. If related to sugar, guidelines allow the tag 'light' if and only if a comparable product contains 30 per cent more sugar than the 'light' product. In general, a manufacturer may only employ language approved by the EFSA (e.g. less energy, less fat, or less sugar), and must also explain the claim with measurements (NVWA, 2010). As with the frequent claim 'no added sugar', if the food product naturally contains sugars it has to add the phrase 'this product contains naturally occurring sugars' on the label. According to NVWA research in 2010, many labels still exclude required information, and 'no added sugar' frequently appears without its supplemental details. Manufacturers cheat the most with 'no added sugar', which makes the product seem healthier on the label and misleads consumers (NVWA, 2010). Enforcement of laws represents a continuous struggle.

2.3.1. The European legislation on food claims

The EU published the new law on food claims on 25 May 2012. It lists 222 approved claims, and, therefore, determines the permissibility of assertions about health benefits on food packages, websites, or in brochures. Prior to its implementation, interested industries could, until early 2008, submit their assertions to the European Commission for later vetting by the EFSA; as it were, the Commission forwarded 4,000 such claims to the Authority (NVWA, 2012). The EFSA, as the official European scientific agency for food safety, validates and codifies health statements labelled on goods. After

scientific scrutiny, the EFSA approved ten per cent of the claims submitted, and the Authority then published study-based substantiations for both the permitted and the rejected claims (Vitals, 2014). From 14 December 2012, the new law prohibits all of the previously rejected claims as well as any unevaluated claims post-dating 2008 from appearing on labels. New claims can be submitted to the EFSA, upon request by the European Commission, at any time. The EFSA will respond within six months if the claim is permitted or not.

Most of the rejected health claims related to disease prevention, which the EFSA found scientifically specious. For example, one such claim asserted that drinking cow's milk helped develop and maintain dental health (European commission, 2013. Page 57. Article 13 (1)). Another declared that one's bodily resistance would increase after ingesting yoghurt products containing probiotics (Voedingscentrum, 2015). The EFSA denies medical claims for foods without scientific proof. It also spurned other label assertions that lacked quantifiability, such as 'this product gives you a lot of energy' or 'this product is good for your health'. According to the European Commission, producers cannot imply that using a product can cure an illness, provide treatment for a disease, or prevent sickness.

2.3.2. The Dutch legislation on food claims

This paper finds Dutch legislation on food claims indistinguishable from EU rules, since the EFSA ultimately governs Dutch products. The NVWA enforces EU regulations within the Netherlands by controlling, observing, and investigating claims on food products (NVWA, 2015).

2.4. Conclusion Literature Review

This section addressed the ways that EU and Dutch legislation on food labels and food claims align. Since 2012, the EU enacted new regulations on food labels, and created more uniformity among member states (PDC, 2015). In the Netherlands, the NVWA safeguard compliance of this law as an extension of the Dutch Food and Commodities Act.

At first glance, 'superfood' is a marketing term for food good for one's health. Since superfoods are natural products and are not new, legal protections like the EU's Novel Food law, the EFSA, and the NVWA ensure the safety and validity of their resale in the Netherlands (Rooij, 2014).

3. Methodology

This chapter describes the research methods used in this paper. It discusses and justifies the three forms employed—desk research, an interview, and field research—before addressing the links between them. Ethical considerations and research limitations conclude the chapter.

3.1. Desk research

Desk research involves gathering data and information already available on this topic from literature and the Internet (Academy of European Studies and Communication Management, 2015-2016). An informative thesis requires reliable information, and desk research constitutes a key qualitative method to obtain general and specific knowledge on superfoods. This paper uses both English and Dutch (academic) sources about superfoods to support its Introduction and Literature Review. Internet articles constitute a main source of information, because superfood is a relatively new topic and not many relevant books exist. Because anybody can upload ideas and information to the Internet, this paper draws upon sources from well-known companies and governmental institutions to ensure reliability. One crucial source is the website of ‘Het Voedingscentrum’, an authority for consumers that applies scientifically proven and independent information for a healthier life and food choices (Voedingscentrum, 2015).

The desk research involved with this paper also incorporates other sources. Two key articles are the superfoods label test from the Consumentenbond’s *Gezondheidsgids* magazine (Camelbeeck, 2014) and Rooij’s piece about the legislation of superfoods (Rooij, 2014). Journalism from *Volkskrant* and *Trouw*—two newspapers not driven by sales or sensation, with good reputations in the Netherlands—help understand the superfoods hype. Information about laws and governance come from the website of the European Commission as well as portals for the Dutch government. Poring over a wide array of existing literature represents a crucial aspect of desk research, and ensures a thoughtful articulation of the current state of superfoods.

3.2. Interview

An interview is a conversation between two people about a topic, where the thoughts of the interviewee are important for gathering information (Academy of European Studies and Communication Management, 2015-2016). Whereas a questionnaire or survey can impersonally gather the opinion(s) or characteristics of a broad target group, an interview engages a topic and an authority much deeper. This paper favours the interview method, because the central and sub-questions require more detailed and tailored information to answer them.

This paper interviews the dietician Mrs. F. van Dooren, who works at a private practice in the Netherlands and who is familiar with superfoods. A dietician is a specialist of food and health, which is a reason to prefer the interview method with one. F. van Dooren could explain best, from the operating position of dieticians, what superfoods are and how dieticians think about the promotion of

superfoods in supermarkets. She also knows the development history of superfoods and why they are so popular at this moment. Interviewing this specialist about particular products and the superfood hype proved more illuminating than some sources on the Internet, because she spoke from her own findings and knowledge.

The interview took place after writing the Literature Review chapter, because prior research was required in order to ask pertinent questions.

The interview occurred via email. Van Dooren discussed the questions posed with her two colleagues as well. Although the interview therefore reflects the opinions of three different people, the questions were discussed in a private manner, which raises the chance that the information collected actually disclosed more information than would have been possible from a one-on-one interview. After emailing the questions, a phone meeting between the author and Van Dooren discussed the answers, obtained missing information, and clarified uncertainties.

A transcript of the interview is found in the appendices.

3.3. Field research

Field research offers the possibility to acquire information independently, and represents information unobtainable from libraries, computers, and books (Academy of European Studies and Communication Management, 2015-2016). Field research is crucial to this paper, because it links reported and official information with on-the-ground observations of how supermarkets implement European and Dutch legislation. Asking if the labels of supermarket's store-brands superfoods comply with the law motivates this approach. Field research represents a quantitative method, because the information gathered is then compared.

The field research for this paper compares the labels of three different store-brand superfoods, chia seeds, goji berries, and hemp seeds, from three different supermarkets in the Netherlands, Albert Heijn, Jumbo, and Aldi. Which supermarkets claim what about food, and what kind of food values do their superfoods contain? The field research appraises label differences by looking at what they claim to contain and offer. Afterward, that information is compared against EU and Dutch guidelines to assess the extent to which these three supermarkets comply with those rules. Connecting the information from the Literature Review with this field research gives coordinates for what to research, if the labels comply, and when a food claim is legitimate or not.

The three supermarkets are chosen deliberately. Two are regional Dutch companies selling higher-end goods and one is a major international company selling conventional products. According to Allerecords.nl, Albert Heijn and Jumbo are the two largest supermarkets in the Netherlands: Jumbo has 548 stores in the country and Albert Heijn has 940 stores, along with 30 in Belgium, seven in Germany, and one on Curacao (Allerecords.nl, 2015). Since these two supermarkets are direct competitors, choosing them gives a good indication of how each might achieve superiority through labels on their store brands. Testing Aldi's brand of superfoods in addition to them offers a

comparison with a popular low-budget supermarket that is present in the Netherlands but not specifically tailored towards a Dutch market. Field testing three supermarkets generates better results than one or two, because more data is acquired and differences are more visible. All three supermarkets are all located in Breda for validation of the research results based on equality in customers.

Details on food label information, food package claims, and labelling differences across the brands are gathered during the field research. The products for the Supermarket Superfoods test are chia seeds, goji berries, and hemp seeds. Each is a store-brand product (e.g. Jumbo's house brand of chia seeds) in order to verify if the supermarkets' labels comply with the regulations previously explained. All of the findings from compared labels are explained in Chapter 4, and tables of those organized findings are found in the appendices of this paper.

3.4. Links between used methods

Desk research is the method used to discover general knowledge about the topic, such as relevant regulations on foods and a background of superfoods. That information provides material for the interview, which more deeply explores the topic pursuant to this paper's sub-questions, and for the field research, which evaluates real-world superfood labels based on criteria amassed from the other two research methods. By not favouring current academic research, expert testimony, or a selective probe alone, this three-pronged methodology promotes analysis of the central research question through a cooperation of approaches.

3.5. Ethical Considerations

Several ethical considerations guide the methodology and execution of this paper. Throughout the desk research process and the literature review composition, the author locates information properly, abstains from plagiarism, and provides clear references for the ideas and publications of other authors. Further, the author should introduce herself when finding a participant for an interview. A possible interviewee must be informed about the research and participate voluntarily. Limitations on the information an interviewee provides—such as attribution, any personal details, or the audience reach—must be agreed upon beforehand and attested by signing the informed consent form, which is attached with this paper. Because of these ethical aspects the quality of this paper can be ensured and with that the integrity of the university.

3.6. Limitations

The author confronted a few limitations throughout this paper that shape the scope and methodology of the research project. First, the author is a student, which restricted expenditures involved and restrained the use of professional tools to conduct professional research. Second, the author selected a narrow research question that compares a small medley of product attributes and supermarkets. As a result, other interesting aspects of legislation, labelling, and supermarket compliance are excluded.

Third, the category of superfoods is broader than the three products investigated, which constrains the deduction of larger conclusions. Access to well-known companies exhibits a final barrier. Attempted contact with the NVWA and Voedingscentrum did not materialise, since both of these institutions did not have the time, money, and people to share their knowledge with the author. Although these enumerated limitations affect the latitude of the research involved in this thesis, the methodology and investigation realized undeniably enables scholarly insight into the legality, health, and rhetoric of popular consumed food products in a specific European market.

4. Findings

This chapter catalogues and explains the attributes that the Supermarket Superfoods test collected on Albert Heijn-, Jumbo-, and Aldi-brand chia seeds, goji berries, and hemp seeds. Both Albert Heijn and Aldi retail these products under their own brand's name, while Jumbo retails these products under its house brand 'Marc O'Deli', Jumbo is responsible for the packages of these products. All the tables created to realize these findings are found in the Appendices of this research.

4.1. About the products

This first part of this section inventories the product information found on the labels of all nine superfoods. It then compares them by addressing a standardised set of attributes for each label: the name, expiry date and tenability, the portion amounts by which calories or nutritional values are calculated, the name and address of the producer, E-numbers contained, and legibility.

Each subsection in this chapter and the next chapter first provides product information about the chia seeds. All three supermarkets chose 'Chiazaad' or 'Chia zaad' to name the seeds, which are two ways to spell them in the Dutch language. Second, although every supermarket included an expiry date on the package and a similar explanation on how to keep the product tenable, only Aldi added that the seeds have a limited shelf life opening the container. Third, all three supermarkets based seed portions on 100 grams, and Albert Heijn and Aldi chose to add an extra portion description for 10 grams. Fourth, all the labels displayed the name and address of the producer. Fifth, none of the chia seeds used for this test involved E-numbers. Finally, the author confirms that the labels can be read clearly.

Goji berries in all three supermarkets were marked, in Dutch, as 'Goji bessen'. Every supermarket displayed an expiry date and a description on maintaining the product's tenability, Aldi, again, clarified the product's limited shelf life after opening. All three supermarkets grounded consumption values on portions of 100 grams, but Albert Heijn added one for 10 grams and Aldi added a description for 25 grams. All three supermarket labels showed the name and address of the goji berry producers, none contained E-numbers, and all were readable.

The supermarkets chose 'Hennep zaad' or 'Hennepzaad' to label their brand of hemp seeds. All three showed an expiry date and similar explanations on how to keep the product tenable, with Aldi mentioning the seeds' shelf life after unsealing the package. Although Albert Heijn and Aldi included portion descriptions for 10 grams, all three brands chose portions of 100 grams for nutrition vales. Hemp seed packages all had their respective producer's name and address, none contained E-numbers, and all labels were legible.

Tables that support the above information are found in the appendices of this research.

4.2. Allergy information

The supermarket test also sought allergy information for each label. All nine labels mentioned the nut and peanut allergy potential from consuming the product. Albert Heijn stated that the products were produced in a factory where peanuts and nuts are processed. Jumbo and Aldi stated that the products might contain traces of peanuts, nuts, and sesame.

The relevant table for this information is found in the appendices of this research.

4.3. Food Values

This section describes the food values declared on each of the labels. It compares nine aspects for each superfood, based on a standard 100-gram portion present on all nine labels: calories, fat, saturated fat, carbohydrates, sugar, fibre, proteins, salt and vitamins.

The first aspect is calories. The chia seeds from Jumbo contain 456 kcal, have 460 kcal from Albert Heijn, and provide 462 kcal from Aldi. Jumbo-brand goji berries contain 308 kcal, and both Albert Heijn's and Aldi's offer 310 kcal per 100 grams. Both Jumbo- and Aldi-brand hemp seeds contain 619 kcal, while Albert Heijn's have 620 kcal.

Second is the amount of fat each product yields per 100 grams. Jumbo's chia seeds contain 33.7g, and Albert Heijn's and Aldi's have 34g. Goji berries from Jumbo contain 3.1g, while the berries deliver 3.0g from Albert Heijn and Aldi. Jumbo-brand hemp seeds contain 53.2 grams of fat, and seeds from Albert Heijn and Aldi both have 53g.

Saturated fat acids are the third aspect. Saturated fat acids are vegetable fatty acids found in nuts, seeds, and oil (Hartstichting.nl, 2015). One hundred grams of chia seeds from either Jumbo or Aldi contain 3.9g of saturated fat, and the equivalent amount of Albert Heijn-brand seeds have 4.0g. For the goji berries, all of the packages yield 0.7g of saturated fat. Hemp seeds from Albert Heijn and Aldi contain 6.0g, and Jumbo's contain 6.1g.

Fourth, carbohydrate amounts are gathered. Carbohydrates, found mainly in cereals, legumes, and potatoes, are sugars and starch that deliver energy to the body (Voedingscentrum.nl, 2015). All the packages of chia seeds contain the same amount of carbohydrates: 0.5g for every 100g. Albert Heijn and Aldi claim to have 51g of carbohydrates in every portion of their goji berries, but, noticeably, Jumbo declares that its brand contains 60.4 grams. Hemp seeds from Jumbo and Aldi contain 2.8g of carbohydrates, while Albert Heijn-brand contains 3.0g.

Sugar amounts constitute the fifth aspect. All of the packages of chia seeds contain 0.5g. Albert Heijn's and Aldi's goji berries deliver 51g; Jumbo's contain 53.1g of sugar. Hemp seeds from Jumbo give 2.0g, Aldi's contain 2.8g, and Albert Heijn's provide 3.0g.

Sixth is the amount of fibre in each product. Fibres do not have any nutritional value, but they are good for the body and give a sense fullness that helps with weight management (Voedingscentrum, 2015). All of the chia seed packages contain 35g of fibre, and all of the goji berry containers have 15g.

Hemp seeds from Albert Heijn supply 1.5g of fibre, seeds from Aldi contain 1.7g, and Jumbo's hemp seeds give 3.6 grams of fibre per 100 grams.

Proteins, which a body requires to build muscle tissue, are the seventh attribute (Vitamins.nl, 2015). One hundred grams of Jumbo's chia seeds yield 20g of protein, and Albert Heijn's and Aldi's contain 21g. The package of Jumbo's goji berries contains 12.5g, while berries from Albert Heijn and Aldi have 13g. Hemp seeds from Albert Heijn and Aldi contain 31g of protein; hemp seeds from Jumbo have 31.3g in each portion.

Eighth is the quantity of salt for each superfood. While Albert Heijn-brand chia seeds claim to be free from salt, Jumbo's and Aldi's seeds report having 0.01g for each 100g. Labels for goji berries state salt amounts of either 1.6g or 1.63g. Hemp seeds from Jumbo and Aldi contain less than 0.01g, while seeds from Albert Heijn contain 0.4g. According to Albert Heijn's label, the salt in all of its products only come from naturally occurring sodium.

Finally, types of vitamins are recorded from each package. Entirely absent from labels on hemp and chia seeds in all stores, only Albert Heijn-brand goji berries claim to supply any vitamins. Its package states that the berries within contain 148mg of Vitamin C, which, according to the supermarket, is 185% of the RDA. Further, Albert Heijn reports that those same berries contain 5.0mg of Vitamin E, which purportedly constitutes 41% of the RDA. Neither Jumbo nor Aldi claim that their brands of goji berries contain any vitamins.

The relevant tables for the above information are found in the appendices of this research.

4.4. Food claims

Food claims are rhetorical expressions on a package that suggest or state that a product's contents offer beneficial nutritional features (see Section 1.4). In this study, all nine store-brand superfood containers relay one or more of the following claims: that the food is high in fibre, a source of protein, contains vitamins and antioxidants, or that it supplies omega-3 and/or omega-6 fatty acids. Notably, these claims feature on the front of a store's product, and are separate from standard labels on the back that enumerate nutritional values. This section compares each store's claims for the three superfood types tested.

Claims about chia seeds are largely inconsistent. Jumbo- and Aldi-brand seeds advertise high fibre content, while Albert Heijn-brand seeds do not. Similarly, Jumbo and Aldi claim their chia seeds are a source of protein, but Albert Heijn abstains from this announcement. All three supermarkets uniformly publicise the omega-3 contents in their chia seeds, which represents the only claim common among the different store-brand packages.

Second, packages of goji berries sharply contrast. Jumbo and Aldi claim that their berries are high in fibre, however, Albert Heijn refrains from that assurance. Albert Heijn proclaims that its berries contain vitamins and antioxidants, yet Jumbo's and Aldi's packages do not. Finally, Jumbo is the only supermarket to promote its goji berries as a source of protein.

The third superfood, hemp seeds, exhibits the greatest diversity of food claims among the brands. While Albert Heijn and Jumbo advertise high-fibre hemp seeds, Aldi does not. Further, Albert Heijn is the only supermarket to promote its seeds as a source of protein, Jumbo alone announces the omega-3 and omega-6 attributes of its brand, and packages of hemp seeds promoting omega-6 only are exclusive to Aldi.

The relevant tables for the above information are found in the appendices of this research.

5. Discussion

This chapter analyses the central and sub-questions of this paper. It creates a conversation among the field research from Chapter 4, the interview mentioned in Chapter 3, and the information covered in Chapter 2. Extending the distinction between food labels and food claims addressed earlier helps to partition this analysis, because it underscores the label-versus-package distinction acknowledged in this paper's central question. What follows a response to the question of label compliance is an extended analysis of food claims promoted on the packages of each of the three superfoods tested.

5.1. Superfood label compliance

Based on the results of the Supermarket Superfoods test conducted, Dutch supermarkets do indeed act in accordance with label regulations articulated by national and EU law. The store-brand superfood labels legibly present all of the information required, such as: amounts of fat, saturated fat, trans fat, carbohydrates, sugars, protein, and salt; the names and addresses of the producers; the items' expiry dates; any E-numbers or allergens present in their ingredients; and the commodities' nutritional values per 100-gram portions. Since this study finds no missing information, it reasons that labels on Dutch store-brand superfoods comply with relevant regulations.

5.2. Superfood packages and food claims

In contrast to label compliance, asking if Dutch supermarkets act in accordance with current regulations on food claims when they package their store-brand superfoods requires more nuanced analysis.

As noted, the epithet 'superfoods' is a marketing term for foods that claim to improve one's health as a result of the ingredients contained or benefits derived (Voedingscentrum, 2015). According to F. Van Dooren, the dietician interviewed, superfoods are popular in the Netherlands because people connect diet with being healthy: eating foods advertised as healthy is a simple vehicle for attaining health, and 'An easy way is an attractive way' (Dooren, 2015). Van Dooren does not support the current superfoods hype, abstains from consuming them herself, and refrains from promoting superfoods to her clients. The promotion of these products is unfair to a consumer, she argues, because the packages mislead one into thinking that superfoods add nutritional value to one's health (Dooren, 2015). The food claims marketed on a Dutch store-brand's superfood, therefore, constitute a need for finer analysis.

The Supermarket Superfoods test revealed that package fronts stress different food claims: high fibre, source of protein, contains vitamins and antioxidants, or contains omega-3 and/or omega-6. The following sections analyse these food claims against existing EU and Dutch law by taking up each superfood individually.

5.2.1. Chia seeds

The chia seeds observed involve three claims: high fibre, source of protein, and omega-3. According to the EU, packages of food that claim to be 'high in fibre' must have a fibre content of either 6g for every 100g or 3g in 100 calories. Any claim of a food as 'a source of protein' may only appear on a package if 20% or more of its energy comes from protein. Finally, advertising a product's omega-3 attributes triggers legal regulations if the phrasing uses either 'a source of' or 'rich in' omega-3. In this case the omega-3 content must either measure 0.3g of alpha-Linolenic acids (ALA) for every 100 grams or have a minimum of 40 milligrams Eicosapentaenoic acid (EPA) and Docosahexaenoic acid (DHA).

Jumbo and Aldi both advertise their products as high-fibre chia seeds. Because both store-brand seeds have a fibre content of 35 grams out of 100 grams, these claims act in accordance with legislation on food claims.

Jumbo and Aldi also both claim their seeds as a source of protein. Jumbo's protein totals 20.8% and Aldi's accounts for 21%, which is 0.8% and 1% more than legally required for such a claim, respectively.

All of the store-brand chia seeds promote omega-3 values. None incorporate the qualifier 'source of' or 'rich in', which exempts the stores from legal regulations. Albert Heijn and Aldi specify that their seeds contain 20.3g of omega-3 ALA, which is a legitimate claim. However, Jumbo's package simply states a count of 20.5g of omega-3 acids with no clarification of the omega-3 acid measured. This claim is not legitimate because the package fails to explain this information. Importantly, the three packages refrain from attaching any health claim to their indication of omega-3 presence. The EU forbids statements about omega-3 or 6 in combination with a health claim because of the absence of scientific evidence surrounding any relation. Products are allowed to indicate 'contains omega-3', which confirms that the three supermarkets here act in accordance with existing law.

In total, all of the official food claims about chia seeds act in accordance with EU and Dutch law. The claims about fibre and protein on the packages of chia seeds are legitimate, and although the claim 'contains omega-3' does not contradict legislation, it is a form of misleading the customer because it adds a sense of nutritional value to the product. And one who is unknown in the world of superfoods might think these nutritional values are very important for the health.

5.2.2. Goji berries

Store-brand goji berries included the claim of vitamins, high fibre, and source of protein. The previous section details guidelines on protein and fibre claims. According to the EU, vitamin claims must demonstrate the minimal amount of vitamins established in Regulation 432/2012 of 16 May 2012.

Albert Heijn states that its goji berries contain vitamins and antioxidants. Specifically, the package claims to include vitamin C (185%, or 148 mg of the RDA) and vitamin E (41%, or 5.0 mg of

the RDA), but does not promote the berries as a ‘source of’ or ‘rich in’ those vitamins. Bypassing this language means that Albert Heijn also avoids the EU’s threshold on such statements: a product ‘rich in’ vitamin C must contain 200 mg of the vitamin, which makes Albert Heijn’s 148 mg a form of misleading the customer since it adds nutritional value to the product.

Jumbo- and Aldi-brand goji berries claim to be high in fibre. Both packages had a fibre content of 15g per 100g, which abides by European legislation on food claims.

Only Jumbo markets its berries as a source of protein. Its brand contains 12.5g of protein, which does not represent 20% of the energy of the product. An absence of clarification about the protein, such as what kind, in comparison with the total energy within the product renders this a health claim in contravention of EU law.

The stores’ packages of goji berries largely concord with regulations on food claims. However, Albert Heijn’s claim about vitamins—while legal—implies a feature about the product that would otherwise breach EU guidelines. Additionally, Jumbo’s advertisement of its berries as a ‘source of protein’ on the package falls short of the 20%-energy threshold rule. Not all of the goji berry packages, therefore, act in accordance with current legislation on food claims.

5.2.3. Hemp seeds

Food claims on hemp seed packages involved ‘high fibre’, ‘source of protein’, as well as omega-3 and omega-6.

Albert Heijn’s and Jumbo’s packages both claim the contents as high-fibre seeds, while Aldi’s do not. The two Dutch brands’ fibre contents are lower than the required 6 grams: Albert Heijn’s is 1.5g per 100g, and Jumbo’s is 3.6g. Both of these store-brand hemp seeds violate EU guidelines on food claims as a result.

Only Albert Heijn-brand packages of hemp seeds promise to be a source of protein. Given that its protein content is 31g, which surpasses the required 20%-energy tenant, this product comfortably accords with existing regulations.

Recall that none of the store-brand packages designate that their hemp seeds are a ‘source of’ or are ‘rich in’ omega-3 or omega-6. Jumbo’s careful preference for the phrase ‘contains omega-3 and omega-6’ (alongside Aldi’s use of ‘contains omega-6’) sidesteps relevant regulations on food claims. However, these particular phrases found on the packages represent a form of misleading the customer, since it adds nutritional value to the product out of context.

Overall, store-brand packages of hemp seeds exhibit notable problems about food claims. The claims of high-fibre seeds from Albert Heijn and Jumbo are both illegitimate, because neither of the superfoods contains the minimum 6 grams of fibre. Although Albert Heijn’s packages correctly profess the seeds as a source of protein, Jumbo’s contention that its brand ‘contains omega-3 and omega-6’ as well as Aldi’s claim to ‘contain omega-6’ represent dubious marketing. While this is particular rhetoric about omega-3 and/or omega-6, it is not in contradiction with European legislation

on food claims; it demonstrates how enterprising food claims put pressure on coherent and meaningful policy. Hemp seeds, as this paper discovers, are a somewhat troublesome product when inquiring about the extent to which Dutch supermarkets act in accordance with existing regulations on food claims.

5.3. Conclusion discussion

Although all of the store-brand food labels are correct according to the existing regulations, this paper demonstrates that, when it comes to package claims, Dutch supermarkets occasionally disobey—or employ creative phrasings to avoid running afoul of—legal directives on such food claims. Here, three food claims fall outside EU regulations: Jumbo's protein-source advertisement about its goji berries, and Albert Heijn's and Jumbo's promotions of high-fibre hemp seeds. As argued above, Jumbo's and Aldi's hemp seed package claims about omega-3 and/or omega-6 are legitimate, but marginally so. Therefore, if calculating the extent to which each of the store's three superfoods acted in accordance with European and Dutch legislation, Jumbo-brand packages score lowest, with two strikes, Albert Heijn-brand items are in the middle, with one strike, and Aldi-brands rate the best, receiving zero strikes. But this conclusion requires qualification: all nine store-brand labels—based on nine categories of required information—comply with current law, and six of the nine packages make food claims within the bounds of recent law. The succinct, and substantially evidenced, answer to this paper's central question is 'yes'; however, stray issues prevent an unmitigated response. Can the food claims present on the packages of superfoods be seen as the truth or as deception?

6. Conclusion

The previous chapters strove to systematically tackle the central question of this paper, ‘Are Dutch supermarkets acting in accordance with European and Dutch legislation when they label and package their store-brand superfoods?’ The Literature Review, in Chapter 2, established relevant information about superfoods: the Novel Food legislation, to which they pertain, and the EU and Dutch laws on food labels and food claims that regulate them. Chapter 3 described the three-pronged methodology used. Chapter 4 detailed the Supermarket Superfoods test field research, covering the attributes of the three superfoods documented and compared. Final analysis, which integrated all of the self-discovered knowledge and nuanced the core research question, is discussed in Chapter 5. All of these steps were taken to answer the central and sub-questions of this paper.

Dutch supermarkets are acting in accordance with European and Dutch legislation when they label their store-brand superfoods, but not when they package those superfoods. Although the food labels complied with the law, food claims did not uniformly follow suit. This outcome, resulting from misinformation and misrepresentative information, corroborates the author’s assertion that consumers are being misled by superfood packages. Because of these package claims, a consumer is more likely to buy the product.

A question remains: can the food claims presented on the packages of superfoods be seen as the truth or as deception? Of course, these food claims are not founded on nothing; however, the way food claims imply extra nutritional values means that a consumer is more likely to purchase them. In this case, not all the customers of superfoods understand the food claims on the packages. The claims can be sometimes vague and the use of acid and omega names are incomprehensible. Sometimes consumers must be protected from sales and marketing rhetoric, especially when it comes to products that claim to be healthy and are part of a hype. Advocating for honest consumer information for superfood products like these might favour the abolition of food claims, since they are complicit in a current food hype and mislead consumer choice. Without extra food claims on the front of superfood packages a consumer would be protected, and she or he could make a choice without unfair persuasion.

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Appendices

Tables of Supermarket Superfoods test findings

About the products

Product information	Albert Heijn	Jumbo	Aldi
Chia seeds			
Name	Chia zaad*	Chiazaad*	Chia zaad*
Expiry date on the package?	Yes	Yes	Yes
How do you keep the product tenable?	Keep cool, dark and dry.	Keep cool and dry.	Keep cool, dark and dry. After opening a limited shelf life.
Portions	Per 100 grams / per 10 grams	Per 100 grams	Per 100 grams / per 10 grams
Name and address of producer	Albert Heijn B. V. Provincialeweg 11 1506 MA Zaandam	Marc O'Deli Postbus 43464 2504 AL Den Haag	Take One Postbus 11029 3004 EA Rotterdam
E-numbers	None	None	None
Can you read the label properly?	Yes	Yes	Yes

*Used the Dutch naming from the packages.

Product information	Albert Heijn	Jumbo	Aldi
Goji berries			
Name	Goji bessen*	Goji bessen*	Goji bessen*
Expiry date on the package?	Yes	Yes	Yes
How do you keep the product tenable?	Keep cool dark and dry.	Keep cool and dry.	Keep cool dark and dry. After opening a limited shelf life.
Portions	Per 100 grams / per 10 grams	Per 100 grams	Per 100 grams / per 25 grams
Name and address of producer	Albert Heijn B. V. Provincialeweg 11 1506 MA Zaandam	Marc O'Deli Postbus 43464 2504 AL Den Haag	Take One Postbus 11029 3004 EA Rotterdam

E-numbers	None	None	None
Can you read the label properly?	Yes	Yes	Yes

*Used the Dutch naming from the packages

Product information Hemp seeds	Albert Heijn	Jumbo	Aldi
Name	Hennep zaad*	Hennepzaad*	Hennep zaad*
Expiry date on the package?	Yes	Yes	Yes
How do you keep the product tenable?	Keep cool dark and dry.	Keep cool and dry.	Keep cool dark and dry. After opening a limited shelf life.
Portions	Per 100 grams / per 10 grams	Per 100 grams	Per 100 grams / per 10 grams
Name and address of producer	Albert Heijn B. V. Provincialeweg 11 1506 MA Zaandam	Marc O'Deli Postbus 43464 2504 AL Den Haag	Take One Postbus 11029 3004 EA Rotterdam
E-numbers	None	None	None
Can you read the label properly?	Yes	Yes	Yes

*Used the Dutch naming from the packages

Allergy information

Allergy information	Albert Heijn	Jumbo	Aldi
Chia seeds	Produced in a factory where peanuts and nuts are processed.	May contain traces of peanuts, nuts and sesame.	May contain traces of peanuts, tree nuts and sesame.
Goji berries	Produced in a factory where peanuts and nuts are processed.	May contain traces of peanuts, nuts and sesame.	May contain traces of peanuts, nuts and sesame.
Hemp seeds	Produced in a factory where peanuts and nuts are processed.	May contain traces of peanuts, nuts and sesame.	May contain traces of peanuts, nuts and sesame.

Food values

Calories per 100 grams	Albert Heijn	Jumbo	Aldi
Chia seeds	460 kcal	456 kcal	462 kcal
Goji berries	310 kcal	308 kcal	310 kcal
Hemp seeds	620 kcal	619 kcal	619 kcal

Fat per 100 grams	Albert Heijn	Jumbo	Aldi
Chia seeds	34 grams	33.7 grams	34 grams
Goji berries	3.0 grams	3.1 grams	3.0 grams
Hemp seeds	53 grams	53.2 grams	53 grams

Fat per 100 grams of which saturated fat acids	Albert Heijn	Jumbo	Aldi
Chia seeds	4.0 grams	3.9 grams	3.9 grams
Goji berries	0.7 grams	0.7 grams	0.7 grams
Hemp seeds	6.0 grams	6.1 grams	6.0 grams

Carbohydrates per 100 grams	Albert Heijn	Jumbo	Aldi
Chia seeds	0.5 grams	0.5 grams	0.5 grams
Goji berries	51 grams	60.4 grams	51 grams
Hemp seeds	3.0 grams	2.8 grams	2.8 grams

Carbohydrates per 100 grams of which sugars	Albert Heijn	Jumbo	Aldi
Chia seeds	0.5 grams	0.5 grams	0.5 grams
Goji berries	51 grams	53.1 grams	51 grams
Hemp seeds	3.0 grams	2.0 grams	2.8 grams

Fibres per 100 grams	Albert Heijn	Jumbo	Aldi
Chia seeds	35 grams	35 grams	35 grams
Goji berries	15 grams	15 grams	15 grams

Hemp seeds	1.5 grams	3.6 grams	1.7 grams
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Proteins per 100 grams	Albert Heijn	Jumbo	Aldi
Chia seeds	21 grams	20.8 grams	21 grams
Goji berries	13 grams	12.5 grams	13 grams
Hemp seeds	31 grams	31.3 grams	31 grams

Salt per 100 grams	Albert Heijn	Jumbo	Aldi
Chia seeds	0 grams	<0.01 gram	0.01 grams
Goji berries	1.6 grams*	1.63 grams	1.6 grams
Hemp seeds	0.4 grams*	<0.01 gram	<0.01 gram

*According to the packages from Albert Heijn, the salt only comes from naturally occurring sodium.

Vitamins	Albert Heijn	Jumbo	Aldi
Chia seeds	None	None	None
Goji berries	Vitamin C, 148 mg, 185% of the Recommended Daily Allowance (RDA). Vitamin E, 5.0 mg, 41% of the Recommended Daily Allowance (RDA).	None	None
Hemp seeds	None	None	None

Food claims

Food claims	Albert Heijn	Jumbo	Aldi
Chia seeds			
High fibre	No	Yes	Yes
Source of protein	No	Yes	Yes
Contains omega-3*	Yes	Yes	Yes

Food claims	Albert Heijn	Jumbo	Aldi
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Goji berries			
Contains vitamins and antioxidants	Yes	No	No
High fibre	No	Yes	Yes
Source of protein	No	Yes	No

Food claims	Albert Heijn	Jumbo	Aldi
Hemp seeds			
High fibre	Yes	Yes	No
Source of protein	Yes	No	No
Contains omega-3	No	Yes	No
Contains omega-6*	No	Yes	Yes

Interview

My name is Charlotte Meijer and I attend The Hague University of Applied Science. I am doing research for my final thesis and the aim of this thesis is to describe and to evaluate superfood labels and claims for legal compliance. There is a division between the European and the Dutch levels of legislation. Research involves a Supermarket Superfoods comparison test of store-brand chia seeds, goji berries, and hemp seeds from Albert Heijn, Jumbo, and Aldi. The main question the project aims to answer is if Dutch supermarkets act in accordance with European and Dutch legislation when they label and package their store-brand superfoods. For my research I have chosen to compare the food labels of three different supermarkets. The products that I have chosen are all labelled as Superfoods. This includes Goji berries, Chia seeds and Hemp seeds. The reason why I have chosen these products is because, at the moment, these products are part of the Superfood hype in The Netherlands and these products claim very often to be healthy and good for you. I have done extensive research about the legislation and what Superfoods are; however, I think it is important for my research to know what a specialist thinks. Your help is to reinforce my research and to write a good recommendation for the next food hype with regard to food labelling.

You can be sure that all the information you want to share, will be dealt with great confidentiality. Personal data will not be shared with anybody and for the answers you will give the confidentiality is guaranteed.

I want to thank you in advance for your time and sharing your knowledge with me.

Kind regards,

Charlotte Meijer

Questions about superfoods and their development according to a dietician:

Q1. What does the term superfoods mean to you and what are Superfoods according to you?

In my opinion, there is no such thing as Superfoods. I would use the term Superfoods for products that are actually healthy for you, however, when I think about Superfoods I am not thinking about the rows of quinoa and goji berries on the shelves at the supermarket. The Superfoods you are using often claim that they are extreme healthy, however, I do not believe that.

Q2. Why are superfoods popular at this moment?

I noticed, from the work I do, that people often choose for simple and uncomplicated. If there is an easy way to eat healthy and to become healthy, for example by eating a handful of berries, a person will choose that way. An easy way is an attractive way.

Q3. What was the previous hype before quinoa and goji berries dominated the shelves at the supermarkets and what kind of hype was that?

Functional foods. For this hype the main purpose was to eat products that had added substances which were good for your body. For example, the producers added extra fibres to bread so the product was better for your gut.

Q4. What is the opinion of dieticians when it comes to the superfood hype?

Personally, I find the superfood hype not credible. How can one berry ensure you of a health life and body? In my opinion that is not even possible. I think there is much more needed to create a healthy life. A varied diet is much more important. If you follow a varied diet your body will get much more nutrients which have a better effect on your body than berries.

Q5. Do you use superfoods, for example, goji berries, chia seeds, or hemp seeds, in your daily practice?

No. In our practice we do not promote the use of superfoods and we do not make our clients buy these expensive products because we do not believe they add a positive nutrient value to the health of our clients. I also do not eat them myself. I have tried them; however, I just do not believe that these products add any value to your health.

Q6. What is the opinion of dieticians when it comes to the promotion of superfoods at the supermarkets?

Personally, I do not think it is fair. These products claim much more than they can deliver. Not every consumers knows everything about food and what is good and not. Promoting these products in this way is actually misleading the consumer. The package claims, for example, to be healthy and a source of antioxidants, however, what does the consumer knows?

Questions about legislation and food labels:

Q7. What are the differences between the European and the Dutch legislation when it comes to food labels?

This is something we cannot answer. We do know a lot of food and nutritional values; however, we are not able to answer a question as this one because in our work we do not have anything to do with the European legislation. We do keep the Dutch legislation close to see what the new legislation is and

what is different than before. Or which products no longer can be used, however, that is something for the NVWA.

Q8. What does the Netherlands have to say when it comes to the legislation on food labels?

The Netherlands has strict rules when it comes to food labels. Everything can be found in the Commodities Act. I am not sure, nor my colleagues, if these rules are only decided by the Netherlands. Most of these rules also count for other countries.

Question about the future:

Q9. What will be the new food hype and what should be changed on the labels?

At this moment we go to the gluten-free food. And for the future, I would appreciate if the consumer would be treated differently. We must get rid of food claims for products as these. Maybe there should be a ban for food claims for products like these. Consumers will not be misled anymore and maybe everybody will eat conform to the healthy standard without these hypes.

Informed Consent Form

Informed Consent Form

Informed Consent Form

1. Title of the project: Are the Dutch supermarkets acting in accordance with the European and Dutch legislation with regard to the food labels of the supermarkets home brand of Super foods?
2. Project Description: During this project, the student does research to the legislation of food labels. There is a division between two different levels, the European and the Dutch level of legislation. The student created a Supermarket Super food test among the Albert Heijn, Jumbo and Aldi to compare the different labels of the following products: Chia seeds, Goji berries and Hennep seeds. The main question of this research that has to be answered is if the supermarkets acting in accordance with the European and Dutch legislation with regard to the food labels.

If you agree to take part in this study please read the following statement and sign this form.

I am 16 years of age or older.

I can confirm that I have read and understood the description and aims of this research. The researcher has answered all the questions that I had to my satisfaction.

I agree to the audio recording of my interview with the researcher.

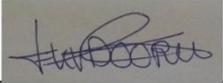
I understand that the researcher offers me the following guarantees:

All information will be treated in the strictest confidence. My name will not be used in the study unless I give permission for it.

Recordings will be accessible only by the researcher. Unless otherwise agreed, anonymity will be ensured at all times. Pseudonyms will be used in the transcriptions.

I can ask for the recording to be stopped at any time and anything to be deleted from it.

I consent to take part in the research on the basis of the guarantees outlined above.

Signed:  Date: 21-12-2015

Student Ethics Form

European Studies

Student Ethics Form

Your name: Charlotte Meijer

Supervisor: Isabel Düsterhöft

Instructions/checklist

Before completing this form you should read the APA Ethics Code (<http://www.apa.org/ethics/code/index.aspx>). If you are planning research with human subjects you should also look at the sample consent form available in the Final Project and Dissertation Guide.

- a. Read section 3 that your supervisor will have to sign. Make sure that you cover all these issues in section 1.
- b. Complete sections 1 and, if you are using human subjects, section 2, of this form, and sign it.
- c. Ask your project supervisor to read these sections (and the draft consent form if you have one) and sign the form.
- d. Append this signed form as an appendix to your dissertation.

Section 1. Project Outline (to be completed by student)

(i) Title of Project: Berries, Seeds and Hypes : Comparing Dutch Superfood Labels with European and Dutch Law.

(ii) Aims of project: The aim of this thesis is to describe and to evaluate superfood labels and claims for legal compliance. There is a division between the European and the Dutch levels of legislation. Research involves a Supermarket Superfoods comparison test of store-brand chia seeds, goji berries, and hemp seeds from Albert Heijn, Jumbo, and Aldi. The main question the project aims to answer is if Dutch supermarkets act in accordance with European and Dutch legislation when they label and package their store-brand superfoods.

(iii) Will you involve other people in your project – e.g. via formal or informal interviews, group discussions, questionnaires, internet surveys etc. (Note: if you are using data that has already been collected by another researcher – e.g. recordings or transcripts of

conversations given to you by your supervisor, you should answer 'NO' to this question.)

YES

If no: you should now sign the statement below and return the form to your supervisor. You have completed this form.

This project is not designed to include research with human subjects. I understand that I do not have ethical clearance to interview people (formally or informally) about the topic of my research, to carry out Internet research (e.g. on chat rooms or discussion boards) or in any other way to use people as subjects in my research.

Student's signature _____ - date _____

If yes: you should complete the rest of this form.

Section 2 Complete this section only if you answered YES to question (iii) above.

(i) What will the participants have to do? (v. brief outline of procedure): The participants are going to answer questions via email that the author is going to design, based on the various topics this project explores. The openness of the participants is appreciated, because the opinion of a specialist is a guarantee of reliable information and will serve as a high standard of information.

(ii) What sort of people will the participants be and how will they be recruited? The target group for interviews is specialists in the field of food and health. Dieticians are a good choice because they work daily with food and health. The dieticians are recruited via the Internet, and, during a telephone meeting, will be informed of the aim of this project. After the email questions, the participants were able to complete their responses in a private setting.

(iii) What sort of stimuli or materials will your participants be exposed to, tick the appropriate boxes and then state what they are in the space below?

Questionnaires[] ; Pictures[] ; Sounds [] ; Words[X]; Other[] . The interview is going to be send via email. After discussing the questions with the colleagues, the answers and the informed consent form are going to be returned. All of the questions are open questions and mainly asked personal opinions on the various topics of this project.

(iv) Consent: Informed consent must be obtained for all participants before they take part in your

project. Either verbally or by means of an informed consent form you should state what participants will be doing, drawing attention to anything they could conceivably object to subsequently. You should also state how they can withdraw from the study at any time and the measures you are taking to ensure the confidentiality of data. A standard informed consent form is available in the Dissertation Manual.

(vi) What procedures will you follow in order to guarantee the confidentiality of participants'

data? First, the aim of this project is going to be explained during the first telephone meeting. Second, participants are going to be informed that personal data would not be distributed. The confidentiality is going to be guaranteed by the introduction of the interview questions that are going to be sent to the interviewee. The personal information of the interviewee is going to be protected by the author by not distributing this information. The interviewee can be anonymous if one requires.

Student's signature: **date:**

Supervisor's signature (if satisfied with the proposed procedures): **date:**