# "Wholegrain" - From a Food Law Perspective\*

Requirements of the lawful Use of the Term "wholegrain"

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"Wholegrain" as a technical term is a human invention. Amongst food professionals, wholegrain foods have several connotations – surely the most important quality being their nutritional and health advantages over products made with superfine flour. However, mankind has not yet come up with a legally binding definition of this expression. Hence it is disputed even amongst specialists what type of product may be called "wholegrain", especially with respect to a recombination of grain constituents. Whilst a European expert consortium has proposed criteria which would suit the industry's practical purposes as well as consumer demands for healthy food, some German experts argue in favour of a more traditional concept purportedly rooting deeper in nature and more in line with consumer perception. Accordingly the use of the term "wholegrain" would be misleading for the marketing of certain bakery and pastry products for final consumers. A new consumer poll has now discovered current consumer perception regarding "wholegrain" in Germany. Can the results of the poll contribute to resolving the issue whether "wholegrain" may be recombined from different lots or must be produced from an identical lot?

## I. Background

"Wholegrain" has been in issue for some time amongst specialists<sup>1</sup>. According to a recent publication<sup>2</sup>, a representative of the renowned German Max Rubner Institute is reported to have "defined" the term wholegrain products at the 16<sup>th</sup> Grain Food Meeting in Detmold. Thus, it was not allowed to remove anything from or add anything to a wholegrain milling lot pursuant to the German Industry Standard 10355; the so called "identity principle" was applicable (that is to say that only grain from one and the same bag could be milled to "wholegrain"). The addition of milling products from other lots made the use of the name wholegrain "inadmissible" and was facing "contradiction amongst consumers". Wholegrain was "largely natural, composed according to nature's blueprint". "Mixed products in wholegrain equivalent composition" deviating from the Industry Standard could thus not be marketed as "wholegrain".

This is contrary to the "European wholegrain definition" as proposed by the HEALTHGRAIN Consortium in May 2010<sup>3</sup> which essentially demands that the starchy endosperm, germ and bran of "wholegrain" "must be present in the same relative proportions as they exist in the intact kernel" in the original grain so that a "temporary separation of wholegrain constituents during processing for later recombination is acceptable". Regarding recombination this definition corresponds with various other

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<sup>1</sup> Cf. e.g. Miller Jones, Cereal Chemistry 2010, 150–154 with comprehensive literature references.

<sup>2</sup> AGF, Getreidetechnologie 2010, 72, 82-84.

<sup>3</sup> Poutanen et al., http://lund2010.healthgrain.org/webfm\_send/100 as per 19.9.2010; the significance of the Healthgrain project has also been recognised by the German Max Rubner Institute, cf. AGF, Getreidetechnologie 2008, 260, 261.

national and international interpretations<sup>4</sup>. It shall therefore be investigated here briefly whether the considerations regarding an "identity principle" recently endorsed at the Grain Food Meeting in Detmold withstand an examination under food law aspects or whether a recombination of constituents is irrelevant for the use of the term "wholegrain".

## II. Facts

Wholegrain products are made from grain – as the name implies. One has to know in this context that grain fields – in spite of all the progress of industrially shaped food production – are still exposed to all the influences of nature and the environment. That is to say inter alia that grain does not grow genuinely sorted in fields and can thus not be harvested homogeneously; nor is it free from environmental contaminations and pollutions which can be different depending on local circumstances, climate and harvest. This is particularly true for European production areas where fields are comparatively small and often closer to populated areas than e.g. in the United States of America.

Furthermore, grain is harvested with huge combines in Europe, sold by numerous farmers to wholesalers, stored in silos and subsequently supplied to grain processing food businesses in miscellaneous amounts at different times, especially to mills. It is customary there to thoroughly clean the kernels, especially to remove inedible parts such as the husk and hull, which is also necessary under food safety aspects. The bran, germ and endosperm are regularly separated at least partly prior to the milling process. That makes sense because the outer part of the kernels, the bran, can be encumbered with aflatoxins and mykotoxins, but also with heavy metals which of course must not get into the food chain.

#### III. Issue

It is contested in practice whether milled grain constituents from different lots may be brought together in such a way that the final product corresponds to the whole grain in its composition or whether wholegrain has to come from a single lot. Supporters of the rather more traditional "identity principle" apparently take the view that a milling product which is not derived from an identical lot has no "wholegrain" quality which is why the designation "wholegrain" could not be used for products consisting of a recombination or mixture of milling products from different lots. The justification of this assumption shall be examined hereinafter from a food law perspective. This question is of particular importance also under traceability aspects because a later analysis of a wholegrain product cannot show whether the raw material stems from a single lot or from several lots.

# **IV. Legal Basis**

Starting point for the assessment of the question at issue is the food law ban to mislead. "Without prejudice to more specific provisions of food law, the labelling, advertising and presentation of food ... and the information which is made available about them through whatever medium, shall not mislead consumers." That is the fundamental rule of Article 16 of Regulation (EC) No. 178/2002 on general principles and requirements of food law. Even before this Regulation entered into force, there was a corresponding ban on deception for food in Article 2 of Labelling Directive 79/112/EEC; it is now regulated in Article 2 para. 1 lit. a of Labelling Directive 2000/13/EC. Accordingly, "the labelling and methods used must not be such as could mislead the purchaser to a material degree".

This rule has been implemented into the national laws of all Member States in the European Union, in Germany in Sec. 11 para. 1 of the Feed and Food Act. It is on the basis of these provisions on the food law ban to mislead that competent food supervisory authorities as well as courts decide whether names under which products are sold are lawful or not.

<sup>4</sup> a) Health Canada, http://www.hc-sc.gc.ca/fn-an/nutrition/wholegrain-entiers-eng.php as per 19.9.2010;

b) AACC International (previously known as American Association of Cereal Chemists), http://www.aaccnet.org/definitions/wholegrain.asp as per 19.9.2010;

c) Official Austrian Guidelines (Österreichisches Lebensmittelbuch), Codex Chapter IV/B20, 1.6.1.;

d) Dutch Draft Flour and Bread Decision to the "Warenwet" of 15.9.1997, Art. 16;

e) UK Institute of Grocery Distribution, 2007 (cited by Miller Jones, cf. footnote 1, at page 151);

f) Food Standards Australia and New Zealand, 2005 (cited by Miller Jones, cf. footnote 1, at page 152)

g) Codex Alimentarius regarding "whole maize", Codex Standard 154–1985, "2. Description".

The yardstick for the assessment of this issue according to the relevant case law of the European Court of Justice is the observant, circumspect and well-informed average consumer<sup>5</sup>. In essence any designation will amount to a deception if this consumer's perception of the term at issue deviates from reality. The question must thus be what is the relevant consumer perception of "wholegrain" and does it deviate from the true product characteristics in a material way?

#### V. Examination

# 1. Compulsory and "customary" Designations

Food business operators labelling or advertising their products have relatively little problems insofar where they can use compulsory designations. If a food conforms to the relevant labelling provisions, an unlawful deception is generally deemed impossible<sup>6</sup>. However, there are no statutory provisions on wholegrain.

The use of designations which are described as "customary" in Guidelines of the German Food Codex Commission cannot normally be objected to as misleading<sup>7</sup>. Amongst the "general assessment criteria" of the applicable Guideline for Bread and Pastry<sup>8</sup> belongs the following passage:

"Wholegrain products as well as wholegrain flour and wholegrain grits contain the complete constituents of the cleaned grains including the germ. However, the kernels can be liberated from their outer layers".

Still, the Guideline does not mention the issue of "identity". That raises the further question, what applies to foodstuffs which do not have a "regulated" characterisation by law or guidelines?

## 2. Designation "wholegrain"

Regarding an "identity principle", the designation "wholegrain" is neither regulated in European or German laws nor described in guidelines. In the absence of such a "definition", consumer perception has to be determined for the assessment of potential dangers of deception<sup>9</sup>. One can rely on different sources in Germany in this respect.

## 3. Consumer Perception

#### a. Literature

If one refers to the relevant German literature, one can find the following criteria which wholegrain products are supposed to meet:

- *"The whole grain"* has to be used in their production<sup>10</sup>,
- they have to contain "the complete constituents of the grains including the germ"<sup>11</sup> and
- they stand out for "a significantly higher content" of nutrients<sup>12</sup>.

Accordingly, wholegrain flour has to contain *"all constituents of the grain in ground form in natural proportions*"<sup>13</sup>. This corresponds with the above mentioned criteria of the Guideline but says nothing about the "identity" of the grain.

#### b. German Industry Standard 10355

If one undertakes an in-depth research, one can turn up a further source of consumer perception which is apparently the basis of the quoted passages from literature. This is the already mentioned German Industry Standard (DIN) 10355 "milling products". According to this standard, wholegrain flour and wholegrain grits have

"to contain the complete constituents of the cleaned grains, including the germ".

- 10 Brockhaus Ernährung,  $2^{nd}$  ed. 2004, S. 668.
- 11 Hahn, Lexikon Lebensmittelrecht, May 2010, "Vollkornmehl".
- 12 Brockhaus loc. cit.; Dr. Oetker, Lebensmittellexikon, 4<sup>th</sup> ed. 2004, page 851.
- 13 Dr. Oetker loc. cit.; also Lexikon der Ernährung, 2002, vol. 3 page 418; this corresponds with the above mentioned international definitions, (cf. footnotes 3 and 4); cf. also Miller Jones, loc. cit. (footnote 1).

<sup>5</sup> Cf. ECJ cases C-210/96 – Gut Springenheide and C-465/98 – Adolf Darbo; endorsed also by German courts, cf. merely Federal Court of Appeal (BGH) ZLR 2000, 375, 379 – L-Carnitin and ZLR 2004, 618, 626 – Sportlernahrung II.

<sup>6</sup> Cf. Meyer/Streinz, LFGB BasisVO – Auszüge –, 2007, Sec. 11 LFGB marginal 66.

<sup>7</sup> Cf. Federal Administrative Tribunal (BVerwG), ZLR 1988, 556, 562 with case note by Zipfel.

<sup>8</sup> Deutsche Lebensmittelbuchkommission, Leitsätze für Feine Backwaren, http://www.bmelv.de/cae/servlet/contentblob/379758/ publicationFile/22120/LeitsaetzeFeineBackwaren.pdf as per 19.9.2010.

<sup>9</sup> Cf. Zipfel/Rathke, Lebensmittelrecht, C 102, § 11 LFGB marginal 57 ff.

However, contrary to the traditional interpretation this standard does not mention "identity" either. It has to be noted in this context in any event that the Standard is not legally binding, and even where it is observed uniformly by food business operators, it can only lead to a congruent custom of the trade. In other words: If all suppliers of wholegrain products in the food industry comply to the criteria of the German Industry Standard 10355, a corresponding consumer perception can develop in time at least amongst specialist circles.

Thus, one can summarise: On the basis of the Standard and literature, wholegrain has to contain the whole constituents of cleaned grains and – thereby – show a higher nutrient content as opposed to a comparable superfine flour. Additional qualities of wholegrain products, e.g. an "identity principle", cannot be found in the sources mentioned.

#### c. Consumer Poll

Still, consumer perception can be identified more closely by a consumer poll<sup>14</sup>. Such a survey on actual consumer expectations regarding wholegrain products has recently published by GfK Markt-forschung<sup>15</sup>. This well known pollster has interviewed a representative number of consumers with regard to their general connotations concerning wholegrain flour, its qualities and production process.

#### aa. General Criteria

The poll could determine as a general result that most consumers have no particular ideas about wholegrain. If they have any views, they believe it is healthy, especially because of the nutrients contained. Those who can make something of the term "wholegrain flour" mostly know that the whole grain is milled. Insofar, the results of the consumer poll coincide with the cited literature and the German Industry Standard 10355.

Accordingly, one can conclude by way of an interim result at this stage already: A flour milled from the whole grain may be termed "wholegrain"

in principle. The use of this designation corresponds with consumer expectations and is thus not misleading within the meaning of Article 16 of Regulation (EC) No. 178/2002, Article 2 of Directive 2000/13/EC or its national implementation, respectively.

#### bb. "Identity Principle"

Interestingly, the consumer poll also mentions the aspect regarding the production process which is contained neither in the quoted literature nor in the Industry Standard, namely the question of "identity". In the semi-structured interview, not a single of almost 2,000 consumers stated the expectation that wholegrain flour had to be milled from a single grain delivery or grain lot. Although approximately 22 % of those interviewed agreed with the pre-formulated statement "whole grain flour should be milled from a single grain lot", this expectation was relevant when purchasing wholegrain flour only for 11% of those interviewed. In other words: For the overwhelming majority of consumers, the concept of "identity" is insignificant with respect to "wholegrain". They essentially expect a healthy product from the whole grain without the grain having to stem from an individual lot.

## VI. Assessment

The result of the poll is certainly consistent with reality insofar. That is because grain does not grow in defined amounts but is supplied by different producers, regularly stored as an unsorted bulk good and does not appear in nature in "lots". On the contrary: The "lot" is an invention of human beings and thus subject to their - more or less arbitrary - determination. It is therefore completely irrelevant also as to the nutritional and physiological quality of wholegrain flour whether it was milled from wholegrain of an individual or of several lots. At least with respect to the legal concept of deception, a product containing wholegrain constituents with a high nutrient content from different lots offered under the designation "wholegrain" could not be objected to. Furthermore, it would also correspond with "nature's blueprint" in the same way as a comparable product from an individual lot - not to mention that such blueprints are irrelevant for a legal assessment and obviously have not had any significance for the consumers polled.

<sup>14</sup> Cf. Meyer/Streinz loc. cit. marginal 36; Wehlau, LFGB, 2010, Sec. 11 marginal 29; Zipfel/Rathke loc. cit. marginal 69; Dannecker et al., LFGB, July 2010, Sec. 11 marginal 27 ff.

<sup>15</sup> Hilbinger, Lebensmitteltechnik 9-10/2010, 38-39.

Observant, circumspect and well-informed average consumers also know that food is largely manufactured industrially in modern times. The idea of a "rattling mill at a murmuring brook" with a small section grinding of flour bag by bag can thus not be decisive for consumer opinion of milling products today. This perception conforms with the results of the poll - accordingly nutrition and health related aspects of "wholegrain" are clearly central for consumers. Only these aspects are decisive for the decision to purchase. Comparable considerations are also available with a view to other food. Regarding "whole milk", no one demands lot identity; the milk of different cows is of course recombined, mixed and standardised - a deviating consumer perception is unknown.

#### VII. Result

It can thus be concluded as a result: Products manufactured from the "complete constituents of cleaned grains including the germ" may be designated as "wholegrain". Quantitative proportions of wholegrain products have to essentially correspond with those of the grain from which they have been milled. A lot identity within the meaning of a man made "identity principle", however, is not decisive from a food law perspective. According to the expectation of consumers as identified by a consumer poll, such an "identity" is legally irrelevant. As a consequence, recombined products which have been (dis)qualified as "mixed products in wholegrain equivalent composition" may be lawfully placed on the market under the designation "wholegrain". No relevant consumer deception can be caused thereby.