The Regulation Overkill: Food Information*

New labelling and nutrition information legislation to follow the Claims Regulation

Moritz Hagenmeyer**

Food manufacturers are not to be envied: In the middle of the Claims Regulation's transitional period the Commission is threatening them with a proposal for a new Food Information Regulation. No health claim has been authorised so far, the planned Community list of permitted health claims is not yet available, nor have any nutrition profiles been established up to now, and still essential labelling is meant to undergo additional changes. The planned regulation shall replace the current Labelling and Nutrition Labelling Directives. Its most striking feature is the introduction of compulsory nutrition information in a new format. The author sketches the background of the proposed legislation, portrays its main practical issues concentrating on nutrition information, deals with potential consequences for food labelling practice and puts the regulation in perspective relating to current food law.

I. Introduction

"Overkill", the word captioning this article, is a term from the cold war; it describes a nuclear power's capacity to destroy an enemy more than once¹. To shoot a mouse with a ballistic missile would be an illustrative example. Has European food law reached the overkill stage? A closer look at the planned Regulation on the provision of food information to consumers (2008/0028 COD – hereinafter Food Information Regulation or FIR)² together with its potential impacts shall help to answer this question. Its main issues for food labelling practice shall be presented together with an initial assessment of their potential consequences for food manufacturers. For the purpose of answering the overkill question, the proposed regulation will also be put into perspective against the background of the recent Regulation on Nutrition and Health Claims (EC) No. 1924/2006 (hereinafter Claims Regulation or NHCR)³.

II. The background of the proposal and the legislators' intentions

1. The legislators' intentions

The legislators' goals are clear and undisguised; they can be found in the Explanatory Memorandum introducing the draft as well as in the altogether 54 recitals⁴. The Commission in Brussels is apparently worried about the increasing numbers of overweight and obese Europeans; the relevant officials believe this problem is largely due to the consumption of "bad" or "wrong" food. Thus they

^{*} This publication is loosely based on a presentation delivered by the author at the FiCCE 2008 Conference (supported by IUFoST, International Union of Food Science & Technology) in Warsaw on 23 April 2008.

^{**} Dr. Moritz Hagenmeyer is a Partner of the renowned German food law firm KROHN Rechtsanwälte in Hamburg, Germany (www.krohnlegal.de).

¹ Cf. http://en.wikipedia.org/wiki/Overkill.

² Brussels 30.1.2008 – COM (2008) 40 final; now available in all Community languages on http://ec.europa.eu/food/labellingnutrition/foodlabelling/proposed_legislation_en.htm.

³ OJ L 12/3 of 18.1.2007.

⁴ Cf. also the links "Press Release (IP/08/112)", "Questions and Answers (MEMO/08/64)" and "Citizen's Summary" on http://ec.europa.eu/food/lobellingnutrition/foodlabelling/pro posed_legislation_en.htm.

would like to educate the public to eat a healthy diet. Their preferred means of targeting this goal are allegedly simple legislative measures – in spite of the open question whether additional legal provisions will make consumers slimmer and healthier. The Food Information Regulation can serve as a typical example to show this approach.

2. The background of current food labelling law

As is well known Labelling Directive $2000/13/EC^5$, itself a renovation of its almost three decades old predecessor Directive 79/112/EEC⁶ (the "mother of all labelling directives"⁷), has been amended a number of times, most essentially by Directive 2003/89/ EC⁸ with respect to the labelling of certain ingredients potentially causing allergies. It has also been complemented with respect to the labelling of foodstuffs containing caffeine or quinine by Directive $2002/67/EC^9$, with respect to foodstuffs containing glycyrrhizinic acid by Directive 2004/77/EC¹⁰ and with respect to the labelling of foodstuffs with added phytosterols by Regulation (EC) No. 608/ 2004¹¹. The Labelling Directive has been implemented into the national laws of all Member States. And in spite of the practical problems that are always involved with applying European law addressing complicated subject matters, the directive works. Allegedly, however, in the legislators' opinion "the evolution of both the food market and consumers' expectations renders its update and modernisation necessary"¹². They suggest this conception particularly with a view to the fact that "the protection of consumers' rights emerged as a specific objective of the European Community^{"13}.

3. The background of current nutrition information law

In contrast to this, Nutrition Labelling Directive 90/496/EEC¹⁴ has hardly been changed at all over the last roughly two decades of its existence. Nonetheless the legislators believe that "the effectiveness of nutrition labelling can be strengthened as a means to support consumers' ability to choose a balanced diet"¹⁵. They even quote initiatives "to encourage the inclusion of nutrition information on the front of the packs"¹⁶ in this context. This is

clearly contrary to the ECJ's ruling in the "Darbo"case, namely that consumers "whose purchasing decisions depend on the composition" of a foodstuff "will first read the list of ingredients" and thus cannot be misled by indications which may be drawn from present compulsory labelling¹⁷. It is therefore apparent from the new legislative approach alone that the Commission is not so much interested in the modernisation of current law, but rather in the education or patronisation of informed and understanding consumers.

4. The legislators' ideas

What is more and unfortunately rather representative of the whole draft Food Information Regulation is the legislators' confession "There was no need for external expertise"¹⁸. This has rightly been called honest and explains a lot indeed¹⁹, but of course it does not justify the draft's shortcomings. It may well be true that consumers "demand more and 'better' information on labels and are interested in clear, simple, comprehensive, standardised and authoritative information"²⁰. Probably if asked, they would also want more cheaper products or free beer, but the legislators would not give either to them. So the paramount point at issue must be: Can food labelling law actually serve as a means of fulfilling all those consumer demands, and even if

- 8 OJ L 308/15 of 25.11.2003; as amended by Directive 2006/142, OJ L 368/110 of 23.12.2006.
- 9 OJ L 191/20 of 19.7.2002.
- 10 OJ L 162/86 of 3.4.2004.
- 11 OJ L 97/44 of 1.4.2004.
- 12 Proposal, page 2, Explanatory Memorandum.
- 13 Proposal, page 2, Explanatory Memorandum.
- 14 OJ L 276/40 of 6.10.1990, as amended by Directive 2003/13/EC, OJ L 333/51 of 20.12.2003 supplementing energy values of "salatrims".
- 15 Proposal, page 2, Explanatory Memorandum.
- 16 Proposal, page 2, Explanatory Memorandum.
- 17 ECJ C-465/98, marginal 22.
- 18 Proposal, page 5, Explanatory Memorandum.
- 19 Schwinge, ZLR 2008, 31, 32 in the very first published knowledgeable and critical – review of the draft.
- 20 Proposal, page 4, Explanatory Memorandum.

⁵ OJ L109/21 of 6.5.2000.

⁶ OJ L 33/1 of 8.2.1979, as amended by Directive 97/4/EC, OJ L 43/21 of 14.2.1997.

⁷ Gorny, EFLR 1998, 373, 377.

so, why should it? The world of food manufacturing has become very complex. That reason alone raises the question whether simplification is still possible on food labels and whether it can be done by introducing ever more compulsory labelling elements. Labels are already so difficult that very few people are able to fully understand them these days²¹. It has long been clarified by academic research and consumer polls that less labelling may well result in more information²². Even the legislators' Food Information Regulation Explanatory Memorandum mentions the fact that "consumers can feel overwhelmed by excessive information^{"23}. But still the draft is far from drawing convincing conclusions from this insight, such as for example abolishing superfluous labelling details. Regrettably, no mention is made of any potential consumers' responsibilities either.

5. The legislators' conception

The legislators claim their planned Food Information Regulation "modernises, simplifies and clarifies the current food labelling scene"²⁴, whatever such a "scene" may be²⁵. Their apparent magic will allegedly "maximise synergies and increase the clarity and consistency of Community rules", it will allegedly "ensure coherence between horizontal and vertical rules" and it will allegedly rationalise, update and clarify compulsory labelling²⁶. Indeed they are not too shy to boast that the merging of subsisting directives "is a powerful simplification method" providing everyone "with a clearer and more streamlined regulatory framework"²⁷. Whether this holds true may be doubted, particularly since directives are suitable to be adapted to national legal systems by way of implementation and thus leave scope for the necessary legislative flexibility of individual member states²⁸. Be that as it may – let us have a look at the main features of the draft regulation.

III. The main issues and consequences of the planned regulation

1. The main issues

The planned Food Information Regulation intends to establish additional compulsory labelling elements, particularly regarding nutrition labelling. In principle all foodstuffs shall be marketed with essential nutrition information. A new format demands the indication of percentages of nutrition reference intakes in a principal field of vision, i.e. essentially on the front of the pack. Furthermore a minimum font size for all labelling elements is envisaged.

2. Food labelling issues

The most important new elements of food labelling are a "clarification of responsibilities ... for the different food business operators", "to improve the legibility of the information provided on the labelling", "information on allergenic ingredients ... for non-prepacked foods" and a conditionally mandatory "labelling of the country of origin"²⁹. Whilst the responsibilities of food manufacturers now envisaged in Art. 8 FIR are largely codified in Art. 17-19 of Regulation (EC) No. 178/2002 already and their interpretation has even been subject of an interesting first EJC case³⁰, the extension of allergen-labelling provisions to unpacked food is rather an issue for retail and catering facilities than for food manufacturers. It is therefore primarily the legibility issue and the origin labelling that require closer inspection.

a. Legibility

Recital 25 FIR demands that "Food labels should be clear and understandable to assist consumers wanting to make better-informed food and dietary choices". However, it remains in the dark whether there are many consumers actually wanting to make a "better-informed" choice – whatever that is – or preferring such choice to rather not buying or consuming food with "unclear" labels or labels they

²¹ Cf. the surprising findings of Nöhle in BLL-Schriftenreihe 126, 43-49; cf. also Schwinge, ZLR 2008, 31, 44.

²² Cf. e.g. Grunert, ZLR 2000, 831, 840-841.

²³ Proposal, page 8, Explanatory Memorandum.

²⁴ Proposal, page 7, Explanatory Memorandum.

²⁵ This is also unclear to Schwinge, ZLR 2008, 31, 32.

²⁶ Proposal, page 7, Explanatory Memorandum.

²⁷ Proposal, page 7, Explanatory Memorandum.

²⁸ Cf. e.g. Streinz, ZLR 2000, 803, 806 and his profound criticism of legislating on general principles by way of regulation rather than directive.

²⁹ Proposal, page 7-8, Explanatory Memorandum.

³⁰ ECJ C-315/05 - "Lidl", reported in EffL 2007, 33.

cannot understand. Neither does it become apparent what level of consumer understanding the draft is based upon in this respect. How many consumers know what a carbohydrate is and should this be explained on food labels? Recital 25 FIR goes on to mention "Studies show that legibility is an important element in maximising the possibility that labelled information can influence its audience and that the small print size is one of the main causes of consumer dissatisfaction with food labels". This is of course doubtful as such, because as is well established few consumers read labels of products they know already, regardless of the legibility of the information. Maybe it is in the interest of manufacturers to present particularly new products with particularly legible information. But this insight does not make it necessary to legislate on legibility beyond present rules which have demanded all over Europe since 1979 that labelling "shall be easy to understand and marked in a conspicuous place in such a way as to be easily visible, clearly legible and indelible" (Art. 13 para. 2 of Directive 2000/13).

Art. 14 para. 1 FIR is now meant to replace this rule with the requirement that "the mandatory particulars ... shall be printed on the package or on the label in characters of a font size of at least 3mm and shall be presented in a way so as to ensure a significant contrast between the print and the background". Whilst admittedly a codified minimum font size will make it easier to decide whether compulsory labelling is "clearly legible"31, it remains questionable whether the 3mm minimum font size criterion can be met particularly on comparatively tiny packages, for example those of food supplements which by law have to come in measured small unit quantities (Art. 2 para (a) of Directive 2002/46/EC) or those of sweets, such as chewing gum. Furthermore it is certainly arbitrary to demand a 3mm minimum font size, as 4mm might be even clearer. Even for medical products the German Federal Court of Appeal decided long ago that a 6didot-point font (i.e. approximately 2.2mm) regularly meets the requirements of clear legibility³².

b. Origin

In conformity with Recital 29 FIR, Art. 9 para 1 lit (i) FIR demands the indication of "the country of origin or place of provenance where failure to indicate this might mislead the consumer to a material degree as to the true country of origin or place of provenance". Immaterial deceptions being excluded this rule invites for legal disputes from the outset. The ensuing clause does not make its interpretation easier; accordingly the indication of origin is necessary: "in particular if the information accompanying the food or the label as a whole would otherwise imply that the food has a different country of origin or place of provenance". Does this apply to English Breakfast Tea, or do consumers still know that such tea is not - yet - grown in England, but in India? And where does a 12-fruit juice originate? Is it the place where the final juice is manufactured or where it is bottled? Or is it the country where the main fruits come from? Or has it perhaps up to 12 countries of origin? Art. 2 para. 3 FIR refers to Customs Code Regulation (EEC) No. 2913/92 in this context, which essentially prefers as "origin" the country of production to the provenance of ingredients. Art. 35 para 3 FIR makes the resulting problem even worse since it establishes "Where a country of origin or the place of provenance of the food is not the same as the one of its primary ingredient(s), the country of origin or place of provenance of those ingredient(s) shall also be given". Accordingly a foodstuff can have as many origins as it can have "primary ingredients", a new term defined in Art. 2 para. 2 lit (o) FIR as "the significant and/or characterising ingredients of a food". Presumably one can even identify those "primary" ingredients of a 12 fruit-juice. But the decisive question still remains: Do consumers actually benefit from the information that the apples originate from South Africa, the oranges from Spain, the bananas from Ecuador, the pears from France, the kiwis from New Zealand and the lemons from Turkey and so on; is this information truly relevant - particularly to a healthy lifestyle?

3. Nutrition information issues

Even more substantial changes are planned with respect to nutrition information. This labelling element is meant to become a "mandatory declaration … for energy, fat, saturates, carbohydrates with specific references to sugars and salt expressed as amounts per 100g or 100ml or per portion in the principal field of vision (front of pack)"; additional-

³¹ Schwinge, ZLR 2008, 31, 40.

³² BGH, ZLR 1989, 161,162; regarding the essential criteria cf. also Schwinge, ZLR 2001, 752-754.

ly "the mandatory elements must also be declared in relation to reference intakes"³³. Both these aspects of nutrition information require a closer examination.

a. Mandatory nutrition declaration

The legislators' difficulties with making nutrition information mandatory in principle become apparent at a first glance from the exemptions to the rule. As before, Art. 28 FIR exempts food supplements and foodstuffs for particular nutritional uses, because they have their own compulsory nutrient information pursuant to Art. 8 of Directive 2002/46/ EC and Art. 4 and Art. 7 para. 3 of Directive 89/398/ EEC respectively, as well as natural mineral waters, because they generally do not contain any amounts of minerals worth mentioning, a fact which consumers shall not be informed about for certain reasons. Now, pursuant to the slightly hidden Art. 17 para. 3 FIR, a nutrition declaration "shall not be mandatory for foods listed in Annex IV". This annex amongst others exempts unprocessed, smoked or matured single ingredient foodstuffs, water, salt, coffee and tea, food in small packaging and privately sold food.

All other foodstuffs shall be marketed with a mandatory nutrition declaration which in accordance with Art. 29 para. 1 FIR comprises "energy value" as well as "the amounts of fat, saturates, carbohydrates with specific references to sugars, and salt". According to Recital 37 FIR the nutrition information shall "appeal to the consumer" and therefore be "simple and easily understood". Although it is known that many consumers neither understand the current four- or even eight-line nutrition table, the replacement shall thus be a five items indication. The mandatory information shall not only be expressed as before "per 100g or per 100ml" pursuant to Art. 31 para. 1 FIR, it may also be expressed "subject to Art. 32 (2) and (3) per portion", the relevant portion pursuant to Art. 32 para. 1 FIR being an amount "as quantified on the label, provided that the number of portions contained in the package is stated". This could well lead to a loss of comparability where manufacturers market different portion sizes, for example 600ml ice cream

packs which can be sold as 20 portions of 30ml, but also as 30 portions of 20ml, the latter scoring considerably lower amounts of energy, sugar and fat per portion.

Pursuant to Art. 34 para. 1 FIR "the mandatory nutrition declaration shall be included in the principal field of vision", a part of the packaging surface defined in Annex I No. 13 FIR as "the field of vision that is most likely to be displayed or visible under normal conditions of sale or use". It is clear from Recital 37 FIR that this is meant to be the "front of pack", although this term is not part of the cogent provision itself, probably because neither on cans nor on bottles can a front usually be identified with certainty. It will therefore be interesting to observe how manufacturers will deal with this issue.

b. Reference intakes

In any event, the mandatory nutrition declaration shall also "be expressed ... as a percentage of the reference intakes set out in Part B of Annex XI" pursuant to Art. 31 para. 3 FIR. This Annex lists the following reference intakes: 8,400kJ (2,000kcal) energy, 70g fat, 20g saturates, 230g carbohydrates, 90g sugars and 6g salt. The values are understood to have been worked out by European scientists upon the food industry's initiative as the daily requirements of (initially English) females without physical activity³⁴. A particular format of the presentation, like the GDA-style suggested by CIAA³⁵, has not yet been prescribed by Art. 34 para. 1 FIR, which merely demands the particulars "shall be presented in a clear format in the following order: energy, fat, saturates, carbohydrates with specific references to sugars, salt". It can be drawn from Recital 39 FIR that this is meant "to enable an assessment of the nutritional properties of a food". Whether consumers are actually able to assess these properties and how they could be put in such a position is of course not regulated in the draft legislation.

4. The consequences

The main consequence of additional compulsory labelling in a minimum font size is patent: There will be more information on food labels than before, especially more numbers, since the mandatory nutrition declaration not only requires the values per 100g or 100ml, but also the indication of

³³ Proposal, page 8-9, Explanatory Memorandum.

³⁴ Cf. http://gda.ciaa.eu/asp/about_gdas/rationale.asp.

³⁵ Cf. http://gda.ciaa.eu/asp/about_gdas/exemple.asp and http://gda.ciaa.eu/asp/about_gdas/styles_welcome.asp.

percentages of reference values, and the information will be printed in bigger letters. Whether consumers will have to go shopping with pocket calculators in the future is a moot point. It is unlikely, however, that substantial parts of the overweight population will essentially change their diets merely because they are being offered more information about nutritional properties of a food. Well informed consumers have always roughly known about the presence of sugars and fat in particular foodstuffs like sweets and chocolate. All others can already obtain the essential information from the compulsory ingredients lists. If those details and the present type of nutrition tables, which are now widely used by manufacturers also voluntarily³⁶, have not been able to avoid the current problem of obesity, how should the new concepts achieve the desired effect?

Certainly food manufacturers will find it even more difficult to design labels conforming to all statutory requirements. Supervisory authorities will be burdened with additional tasks, not least the examination whether multi-origin indications are correct. But does this all really serve consumers, is it modern and streamlined, and even if so, how does consumer health potentially benefit on the whole?

IV. Some comments on current food legislation

Essentially similar to the Food Information Regulation, the Claims Regulation contains restrictive rules on food advertising and labelling³⁷. The core instruments are the establishment of authorisation procedures for health claims and the determination of "scientific" requirements. Comprehensive conditions for the lawful use of claims, including the highly contested "nutrient profiles", are accompanied by detailed advertising bans and compulsory labelling elements. Since neither the planned lists of authorised health claims nor the nutrient profiles have been determined yet, considerable uncertainty presently puzzles manufacturers.

The goals of the Claims Regulation are quite comparable to those of the Food Information Regulation. Pursuant to Recital 9 NHCR mandatory principles on claims are established i.a. in order to "give the consumer the necessary information to make choices in full knowledge of the facts" with respect to nutritional and physiological effects potentially present in a food. What is more, according to the legislators' considerations apparent in Recital 10 NHCR claims "may encourage consumers to make choices which directly influence their total intake of individual nutrients or other substances in a way which would run counter to scientific advice" and this is something consumers should not do, because it is a "potential undesirable effect". Particularly consumers "trying to make healthy choices in the context of a balanced diet" shall thus be protected pursuant to Recital 11 NHCR. Furthermore Recital 16 NHCR demands "it is important that claims on food can be understood by the consumer", and Recital 19 NHCR maintains that in view of "the potential impact" claims "may have on dietary habits and overall nutrient intakes, the consumer should be able to evaluate their nutritional quality". Not least the Community List of permitted claims is meant to be a simplification of present food advertising and marketing law.

Unfortunately, even well educated and understanding consumers cannot be put into the position of properly comprehending the nutritional quality of food merely through an over-complex and bureaucratic regulation of claims. Not even food and nutrition scientists are in full agreement on basic matters such as whether a "low carb" diet is advisable or not. A simple comparison with car driving may serve to put the conceptual flaws of the Claims Regulation into perspective. Everyone in Europe, probably in most parts of the world, wishing to drive a car has to pass a test and obtain a driving licence. Still drivers are not required to know how the power assisted steering or anti-lock braking system mechanisms actually work in detail. So why should these principles not apply to nutrition, why should not consumers have to pass a test whether they understand what they should eat? The reasons are as obvious as the potential consequences. After all, an advertising ban with respect to fast cars, the establishment of "performance profiles" as requirements for car advertising claims or restrictions on fuel consumption claims would

³⁶ Cf. GfK-Studie: Produktvielfalt und -information Entwicklungen und Trends im Lebensmittelangebot; http://www.bll.de/presse/pressemitteilungen/pm_20080415_gfk_ brosch.html.

³⁷ Cf. Hauer, EffL 2006, 355; Loosen, ZLR 2006, 521; Kossdorff, Ernährung/Nutrition 2007, 313; Coppens, EffL 2007, 67; Meisterernst/Haber, WRP 2007, 363 = EffL 2007, 339.

most certainly neither effectively reduce road rage nor significantly increase safety of traffic. Why then should claims or food information regulations be able to achieve measurable results other than additional expenses and "red tape"?

Another aspect merits consideration in this respect. It is the comparatively low quality of the current food legislation process and the ensuing problems. Not only was the Claims Regulation published in the wrong version³⁸ so that the whole regulation had to be completely republished as a corrigendum³⁹. The Commission also felt it necessary to release a guidance document⁴⁰, albeit with "no formal legal status". This is a feeble attempt "to assist the interested stakeholders to better understand and to apply correctly and in a uniform way the Regulation" - e.g. by unconvincingly treating as crucial issues such as the demarcation of nutrition claims on the one hand and health claims on the other. In addition to that, overly complex "implementing rules for applications for authorisation of" disease risk reduction claims were most recently supplemented by way of Regulation (EC) No. 353/ 2008⁴¹. Furthermore the Claims Regulation neither contained a much needed definition of "claims referring to children's development and health"42 nor any pertaining transitional measures, although both of these faults were obvious when this type of claim was slipped into Art. 14 NHCR at the last

- 42 As to which cf. the a.m. guidance document sub. III.2.2.
- 43 OJ L 39/14 of 13.2.2008.

minute. To add insult to injury, the necessary amendment in Regulation (EC) No. 109/2008⁴³ was only published in February 2008 when the transition deadline it implemented, namely 19th January 2008, had already passed. If this is a typical example of European food law in the 21st century, one should better neither "modernise" nor "streamline" current food labelling law. On the contrary: one should not touch it at all for present purposes.

V. Conclusion

So far no scientific evidence has proven that new labelling elements or advertising bans are capable of achieving the legislators' desired effect. After all, no one is forced to eat or drink anything, particularly if they feel insufficiently informed about any characteristics of a food or a beverage. New research rather shows that inadequate education regarding nutrition, exercise and health could be the main cause of unhealthy diets and the potentially ensuing overweight or even obesity; particularly the large scale German KiGGS-Study found that "children are at a higher risk of being overweight or obese if they have a lower socioeconomic status, have a migration background, or have mothers who are also overweight"44. Moreover, to name but one other example, it has also been demonstrated in a recent study that prohibition of snacks leads to their relatively higher consumption by children⁴⁵. Further studies confirming these and similar observations are available.

Nevertheless it seems that legislators are not so much interested in the established facts of life and human nature as in creating new laws – for whatever purposes and regardless of their potential success. In view of the acknowledged findings of nutritionists, behavioural scientists and consumer researchers, but also from a food lawyer's perspective one can thus conclude: Obliging manufacturers by way of the planned Food Information Regulation to label ever more and increasingly complex details as well as excessively restricting food advertising – especially in a bureaucratic and potentially insufficient manner – may rightly be called a legislative "overkill".

³⁸ OJ L404/9 of 30.12.2006.

³⁹ OJ L 12/3 of 18.1.2007.

⁴⁰ Guidance on the implementation of Regulation No. 1924/2006 of 14 December 2007.

⁴¹ OJ L 109/16 of 16.4.2008.

⁴⁴ Kurth/Schaffrath-Rosario, Bundesgesundheitsblatt 2007, 736; abstract also available at http://www.kiggs.de/service/english/Principal_Publication/PhysicalHealth.html.

⁴⁵ Jansen/Mulkens/Jansen, Appetite 2007, 572; available at http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B 6WB2-4NF7Y2P-1&_user=10&_coverDate=11%2F30% 2F2007&_rdoc=4&_fmt=high&_orig=browse&_srch=doc-info (%23toc%236698%232007%23999509996%23673164%23FL A%23display%23Volume)&_cdi=6698&_sort=d&_docanchor= &_ct=27&_acct=C000050221&_version=1&_urlVersion=0&_use rid=10&md5=ec91f4de8b491dd2c445d10a89b705a1.