

Understanding local producers' expectations from a tool assisting in the provision of information on food labels

A case study among local jam producers

MSc thesis in Food Quality Management



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Executive summary

Mistakes made in the provision of information on food labels are still a common issue. Since the main function of information on food labels is to provide a basis for consumers to make informed choices and to make safe use of food, labelling mistakes can easily be considered misleading. Labelling mistakes were also very common on local food products in the Netherlands. There are currently two tools available free of cost, that could assist food producers in the provision of information on the label (so-called ‘labelling tools’). A ‘labelling tool’ can thus act as an intermediate between the labelling legislation and the food business operator who is responsible for this information. It is unknown what local producers expect from such a tool and if these tools meet their expectations. Thus, the aim of this research was to understand local producers’ expectations from a tool assisting in the provision of information on food labels, focusing on small and/or micro scale jam producers. In order to gain a sufficient background in the legal labelling requirements of locally produced jam, a theoretical study of the applicable law was performed. It was assessed which information is mandatory to add to the label of locally produced jam and which information may be added voluntarily. Against this background, the existing tools were evaluated theoretically. Since the empirical study included an evaluation of the two existing ‘labelling tools’, it was also studied which criteria should be taken into account when evaluating such a tool. Subsequently, the empirical study was performed in which local small/micro jam producers were interviewed in order to understand their requirements for a ‘labelling tool’. The tools were evaluated based on statements derived from the main criteria ‘Quality of content’, ‘Usefulness’ and ‘Ease of use’, alongside an overall judgement of the tool. From the overall judgement of the tools, it could be concluded that they were deemed quite helpful. Although, it became clear that the tools did not live up to the expectations of the local jam producers. The producers unanimously agreed that the tools were lacking information and were thus incomplete, which was also found in the theoretical evaluation of the tools. Therefore, they would like a ‘labelling tool’ with complete and more detailed information. Most of the respondents were also in favor of a digitalized tool. However, on the exact functioning of digital tool itself, there were different expectations. Some other aspects that were preferred in such a tool were aid with the calculations for the nutrition declaration and the use of simple language. From the research certain insights were gained on the perception of existing ‘labelling tools’ of local small/micro jam producers, along with their expectations and requirements of such a tool. These insights can be useful in the development of a ‘labelling tool’ that meets expectations of its prospective users, which will ultimately lead to an improvement of information on food labels.

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Table of Contents

Executive summary	2
Acknowledgements	3
List of tables and figures	7
Tables	7
Figures	7
List of abbreviations.....	8
1 Introduction.....	10
1.1 Background	10
1.1.1 Labelling of local food.....	10
1.1.2 Legal framework for food labelling.....	11
1.1.3 Labelling issues in the Netherlands	12
1.1.4 Problem statement	12
1.2 Demarcation	13
1.2.1 Defining concepts	13
1.2.2 Focus of the research	13
1.3 Research aim	14
1.4 Research questions	15
1.5 Research approach.....	15
1.6 Structure of the report.....	15
2 Literature review	16
2.1 Legal framework for jam	16
2.1.1 Defining ‘jam’ and ‘extra jam’	16
2.1.2 Ingredients	17
2.2 Mandatory information	19
2.2.1 Name of the food	19
2.2.2 List of ingredients	19
2.2.3 Ingredients or processing aids causing allergies or intolerances.....	20
2.2.4 Quantitative indication of ingredients.....	21
2.2.5 Net quantity of the food	22
2.2.6 Date of minimum durability or use by date	22
2.2.7 Special storage conditions and/or conditions of use	23

2.2.8 Name and address of the food business operator	23
2.2.9 Country of origin or place of provenance	24
2.2.10 Instructions for use.....	24
2.2.11 Alcoholic strength.....	24
2.2.12 Nutrition declaration	25
2.2.13 Additional mandatory information	25
2.3 Presentation of mandatory food information	26
2.3.1 Font size	26
2.3.2 Presentation of information in the field of vision.....	27
2.3.3 Language requirements	27
2.4 Omission of certain mandatory particulars	27
2.5 Voluntary information	28
2.5.1 General requirements	28
2.5.2 Additions to the nutrition declaration	28
2.5.3 Nutrition and health claims	30
2.5.4 Quality schemes for agricultural products and foodstuffs	33
2.5.5 Organic production	34
2.6 Evaluation process of an instructional tool.....	36
3 Research methodology	38
3.1 Labelling tools.....	38
3.1.1 Tool 1	38
3.1.2 Tool 2	40
3.2 Approaching local small/micro jam producers	41
3.3 Interviews.....	41
3.3.1 Interview setup	41
3.3.2 Data collection.....	45
3.4 Data analysis	45
4 Results and discussion.....	46
4.1 Background of the respondent and company	46
4.1.1 Experience respondent and company	46
4.1.2 Distribution and sales of products	46
4.2 Branch organizations for local food products	48

4.3 Definitions of jam.....	49
4.4 Labelling and legislation.....	49
4.4.1 Labelling process and sources of information utilized	49
4.4.2 Assessment of information on the label.....	50
4.4.3 Familiarity with legal requirements of jam and labelling of foods	51
4.5 Labelling tools.....	52
4.5.1 Perceived helpfulness and familiarity of labelling tools.....	52
4.5.2 Initial expectations of a labelling tool.....	52
4.5.3 Evaluation of Tool 1	53
4.5.4 Evaluation of Tool 2	56
4.5.5 Comparison of Tool 1 and Tool 2	58
4.5.6 Improvement points for the labelling tools	59
5 Conclusions, limitations and recommendations	61
5.1 Conclusions.....	61
5.2 Roadmap for the development of a new ‘labelling tool’	62
5.3 Limitations of the research.....	63
5.4 Recommendations for further research.....	64
6 Evaluation of the research	65
6.1 Evaluation of the research process	65
6.2 Evaluation of the research methodology	66
6.3 Role of the researcher	66
References	68
Annex I Substances or products causing allergies or intolerances	71
Annex II Expression and presentation of nutrition declaration	72
Annex III Letter sent to jam producers	73
Annex IV Answer sheets	74
Answers by respondent 1 interviewed on 30-01-2019.....	74
Answers by respondent 2 interviewed on 05-02-2019.....	81
Answers by respondent 3 interviewed on 06-02-2019.....	90
Answers by respondent 4 interviewed on 07-02-2019.....	97
Answers by respondent 5 interviewed on 12-02-2019.....	105

List of tables and figures

Tables

Table 1 Defining SMEs (European Commission, 2018c)	13
Table 2 List of additional ingredients	18
Table 3 Criteria for evaluation of an instructional tool.....	37
Table 4 Statements for the evaluation of the ‘labelling tools’	44
Table 5 Background respondent and company.....	46
Table 6 Other products manufactured by the companies	46
Table 7 Type of locations where products are sold and means of distribution	47
Table 8 Branch organizations and their benefits	48
Table 9 Definitions of jam given by the respondents	49
Table 10 Labelling process and information sources for legal labelling requirements	50
Table 11 Self-assessment of information on the label	51
Table 12 The respondents’ motivations on helpfulness of a labelling tool.....	52
Table 13 Initial expectations of a labelling tool	53
Table 14 The respondents’ ratings of the Quality of content of Tool 1	54
Table 15 The respondents’ ratings of the Usefulness of Tool 1	55
Table 16 The respondents’ ratings of the Ease of use of Tool 1	55
Table 17 The respondents’ overall ratings of Tool 1	56
Table 18 The respondents’ ratings of the Quality of content of Tool 2	56
Table 19 The respondents’ ratings of the Usefulness of Tool 2	57
Table 20 The respondents’ ratings of the Ease of use of Tool 2	58
Table 21 The respondents’ overall ratings of Tool 2	58
Table 22 Side to side comparison of the average scores of Tool 1 and Tool 2	59
Table 23 Additional requirements for a labelling tool.....	59

Figures

Figure 1 Defining the font size and x-height (adapted from Annex IV FIC)	27
Figure 2 Example of community logo for organic production	35
Figure 3 Tool 1: Business card sized booklet consisting of 4 pages of information on labelling ..	39
Figure 4 Tool 2: Business card sized clear plastic tool to measure the height of letters on the label	40

List of abbreviations

Abbreviation	Description
BES	Besluit Etikettering van Levensmiddelen BES of 10 October 2010
EU	European Union
FIC	Regulation (EU) No 1169/2011 of the European parliament and of the Council of 25 October 2011 on the provision of food information to consumers
GFL	Regulation (EC) No 178/2002 of the European Parliament and of the Council of 28 January 2002 laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety
LTO	Land- en Tuinbouworganisatie
NHCR	Regulation (EC) No 1924/2006 of the European parliament and of the Council of 20 December 2006 on nutrition and health claims made on food
NVWA	Nederlandse Voedsel- en Waren Autoriteit
ORG	Council Regulation (EC) No 834/2007 of 28 June 2007 on organic production and labelling of organic products and repealing Regulation (EEC) No 2092/91
PDO	Protected Designations of Origin
PGI	Protected Geographical Indications
QSI	Regulation (EU) No 1151/2012 of the European Parliament and of the Council of 21 November 2012 on quality schemes for agricultural products and foodstuffs
QUID	Quantitative ingredients declaration
SPN	Stichting Streekeigen Producten Nederland
TSG	Traditional Specialties Guaranteed
UCC	Regulation (EU) No 952/2013 of the European Parliament and of the Council of 9 October 2013 laying down the Union Customs Code
VVP	Warenwetbesluit Verduurzaamde Vruchtenproducten 2002 of 20 August 2002

Abbreviation	Description
WIL	Warenwetbesluit Informatie Levensmiddelen of 3 April 2013
ZLTO	Zuidelijke Land- en Tuinbouworganisatie

1 Introduction

1.1 Background

In many countries, especially in developed countries like the U.S.A., Australia, the U.K., Finland and Canada, consumers' preference towards local food is increasing (Darby et al., 2008; Cranfield, 2012; Autio et al., 2013; Memery et al., 2015; Mugera et al., 2017). In most cases this trend is also translated into consumers' willingness to pay a premium for products containing a 'locally produced' attribute whether fresh or processed (Hu et al., 2012; Mugera et al., 2017).

From research, various reasons were identified for consumers' perceptions and willingness to pay for local food, including increased environmental awareness, where shorter supply chains are perceived as more sustainable. Furthermore, transparency and traceability of shorter supply chains was also appreciated due to food safety concerns (Autio et al., 2013). Another important reason for consumers to prefer local food, was supporting local food producers as part of social embeddedness (Darby et al., 2008; Cranfield et al., 2012; Hu et al., 2012; Autio et al., 2013; Memery et al., 2015; Mugera et al., 2017). Local food was also perceived as more authentic and associated with artisanal production (Autio et al., 2013). Lastly, intrinsic product properties, like freshness and taste of local food, were also identified as reasons for consumers' preference towards local food (Darby et al., 2008; Cranfield et al., 2012; Memery et al., 2015; Mugera et al., 2017)

There is no unambiguous definition of 'local food' and different authors have used different definitions. Some are based on geographical distance between producer and consumer (e.g. using 10 or 30 miles as a limit), while others define local food based on a certain state or region(s). Apart from these definitions, consumers also have their own perception of the concept and the distance the food travels from producer to consumer was found to be significant (Hu et al., 2012; Autio et al., 2013; Memery et al., 2015).

In the Netherlands there are many local food products available. These are marketed directly to consumers at farmer's shops, or sold in different locations, including supermarkets, markets, specialty stores, restaurants and the internet. In a consumer study, it was found that most Dutch consumers have a positive attitude towards local food products and would like to purchase more of these foods. On average, consumers were also willing to pay a premium for local food products up till 8%. Finally, it was concluded that there is room for growth in the market potential of local foods (Vijn et al., 2013).

1.1.1 Labelling of local food

Labels are used to differentiate a food product and provide information to consumers. Using a brand or logo on a food label to indicate local production has become common practice to promote such products (Mugera et al., 2017). Governments in some countries have taken initiatives to brand local food products to motivate consumers to buy local, e.g. 'State Proud' logo in the U.S.A. and 'Buy West Eat West' logo in Australia (Hu et al., 2012; Mugera et al., 2017). In the Netherlands, the Ministry of Agriculture, Nature and Food Quality assigned this task to 'Stichting Streekeigen Producten Nederland' (SPN), which then set up the independent national scheme 'Erkend Streekproduct' for local food products (Lubberding, 2011).

In consumers' decision-making process search, experience and credence attributes play a role. Unlike search attributes that can be obtained by assessing the product prior to purchase and experience attributes, which are acquired after consumption, credence attributes are harder to determine. Therefore, these attributes (e.g. production system characteristics, origin) can be communicated through labelling to influence consumers' purchase decisions (Gao et al., 2010; Mugera et al., 2017).

1.1.2 Legal framework for food labelling

Currently, food labelling requirements for countries in the European Union (EU), including the Netherlands, are laid down in Regulation (EU) No 1169/2011 of the European parliament and of the Council of 25 October 2011 on the provision of food information to consumers [FIC]. From the information on the label, consumers should be able to make informed choices and make safe use of food, thereby protecting their interests and health as stated in Article 3(1) FIC. Moreover, this information should not be misleading in any way (Article 7 FIC). Article 8 FIC clearly states that it is the responsibility of the food business operator under whose name the food is marketed to ensure proper provision of food information. The list of mandatory particulars is given in Article 9(1), namely (a) name of the food, (b) list of ingredients, (c) any ingredient or processing aid causing allergies or intolerances still present in the food, (d) quantity of certain ingredients or categories of ingredients, (e) net quantity of the food, (f) date of minimum durability or the use by date, (g) special storage conditions and/or conditions of use, (h) name and address of the food business operator, (i) country of origin or place of provenance, (j) instructions for use where it would be unclear in absence of such instructions, (k) actual alcoholic strength for beverages containing more than 1,2% by volume alcohol and (l) nutrition declaration. However, in certain cases derogations to mandatory indication of these particulars may apply as explained further in this Regulation, including in Article 16 and Article 19 FIC.

Apart from mandatory information, some producers also place additional information (e.g. claims) on the label as a marketing strategy. Voluntary food information may be added to the label, only when certain requirements are met as stated in Article 36(2) and Article 37 FIC. Certain voluntary information is regulated, namely for the use of nutrition and health claims, the legal framework can be found in Regulation (EC) No 1924/2006 of the European parliament and of the Council of 20 December 2006 on nutrition and health claims made on food [NHCR]. Furthermore, quality schemes for the protection of designations of origin, geographical indications and traditional specialties guaranteed are laid down in Regulation (EU) No 1151/2012 of the European Parliament and of the Council of 21 November 2012 on quality schemes for agricultural products and foodstuffs [QSI]. Finally, the provisions to use indications to organic production are laid down in Council Regulation (EC) No 834/2007 of 28 June 2007 on organic production and labelling of organic products and repealing Regulation (EEC) No 2092/91 [ORG]. Other voluntary information, however, is for the most part not explicitly regulated, e.g. private standards concerning self-regulation (Bremmers & van der Meulen, 2014).

1.1.3 Labelling issues in the Netherlands

In the Netherlands, adherence of food labels to legislation is monitored by the Dutch Food Safety Authority ('Nederlandse Voedsel- en Waren Autoriteit' - NVWA). Labelling issues, including indication of allergens, fraud, misleading information and claims, are investigated by the NVWA. Priority is given to proper indication of allergens as incorrect information may pose a high risk to health (NVWA, n.d.). In 2017, the NVWA tested 250 different food products based on their ingredient list of which 80 of the products (32%) did not pass the test and were considered misleading. The NVWA also checked the labels of follow-on formula, a product consumed by a vulnerable population, of which only 68% had no labelling mistakes. Claims were also made e.g. 'easily digestible' which was unclear and held no scientific substantiation (NVWA, 2018a). During inspection on nutrition and health claims of products and websites of 36 companies offering foods for weight-loss diets, 21 companies violated nutrition claims and 28 companies violated health claims. Additionally, more than half (53%) of the companies made one or more mistakes regarding mandatory labelling requirements (NVWA, 2018b).

In 2012, a labelling expert studied labels of 70 local food products from 6 provinces on their adherence to legislation¹. The type of food products studied were meat, dairy, bakery and conserved foods. It was concluded that many of these products were labelled incorrectly and only 9 had no mistakes. Many mistakes were made in the ingredient list (34%), date of minimum durability (26%), address of the food business operator (23%), nutrition declaration (21%), declaration of additives (11%) and nutrition claims (11%) (Hetenieuweetiketteren.nl, 2012).

To get an indication of the current situation of the information on local food labels, 25 labels of local food products were studied on their adherence to legislation. This was done as a preliminary study in September 2018. The products were randomly chosen in a farm shop and included, among other things, jams, candies, cake mix, pasta, sauces, honey and juice. On 20 of the labels, obvious mistakes could be traced, as certain aspects could not be verified (e.g. requirement of the nutrition declaration or whether the indicated values were indeed correct). Moreover, 17 of these labels had more than one mistake. Mistakes in the list of ingredients were most common, namely missing quantitative indication of ingredients, no emphasis on allergens, incorrect order and missing categories of ingredients. Followed by missing nutrition declarations, mistakes in the indication of net quantity and minimum durability date, and missing address of the food business operator. Other mistakes included misrepresentation of information or incomplete claims. Additionally, language requirements were not met on one of the labels. Thus, it can be concluded that a considerable amount of the Dutch local food labels does not meet legal labelling requirements.

1.1.4 Problem statement

Anno 2019, many food labels in the Netherlands still contain incorrect or incomplete information, in the form of wrong representation of mandatory or voluntary information (NVWA, 2018a, 2018b), which was also found to be the case with local food products. Apart from being misleading, these mistakes may also pose a food safety risk, particularly to vulnerable groups.

¹ It should be noted that in 2012 the current legislation for food labelling, Regulation (EU) No 1169/2011, was still in a transitional period.

Food labels are monitored by the NWWA (NWWA, n.d.) and ensuring proper food information is the responsibility of the food business operator under whose name the food is marketed (Article 8 FIC). There are some tools easily available to assist food producers in the provision of information on the label ('labelling tools') based on Regulation 1169/2011 that are free of cost, namely by Etiketteren.nl and Hetnieweetiketteren.nl (Etiketteren.nl, n.d; Hetnieweetiketteren.nl, n.d). As the information on food labels should meet legal labelling requirements, such a labelling tool can act as an intermediate between these legal requirements and the food business operator, who is ultimately responsible for this information. However, it is unknown what local producers expect from such a tool and if these tools meet their expectations. Thus, leading to the following overall research question.

Overall research question

Which expectations do local producers have from a tool assisting in the provision of information on food labels?

1.2 Demarcation

1.2.1 Defining concepts

In the Netherlands, local food products originate from different regions in the country, varying from provinces to smaller or larger geographical areas. Therefore, the following definition, derived from SPN, will be used in this study (Erkendstreekproduct, 2018):

"Local food refers to food from a specific region of which the raw materials originate and in which processing takes place as well. Which means that locality is defined on the basis of geographical distance. Thus, local food is regional food, but the size of the region may vary."

The definition of label that will be used is the legal definition, namely "*label means any tag, brand, mark, pictorial or other descriptive matter, written, printed, stencilled, marked, embossed or impressed on, or attached to the packaging or container of food*" (Article 2(2)(i) FIC).

1.2.2 Focus of the research

Relevance of small-scale producers

The majority (99%) of all businesses in the EU comprise of small and medium-sized enterprises (SMEs). SMEs can further be classified into micro, small and medium-sized enterprises. In Table 1 below, the conditions, namely staff headcount and turnover or balance sheet total, are given for each category (European Commission, 2018c).

Table 1 Defining SMEs (European Commission, 2018c)

Company category	Staff headcount	Turnover	or	Balance sheet total
Micro	< 10	≤ EUR 2 million	≤ EUR 2 million	
Small	< 50	≤ EUR 10 million	≤ EUR 10 million	
Medium	< 250	≤ EUR 50 million	≤ EUR 43 million	

Most local food products are manufactured by small-scale producers (Autio et al., 2013; Mugera et al., 2017). It is known that small-scale producers' days are fairly occupied with day-to-day activities. There is no designated staff available for activities that need more long-term planning (e.g. labelling) compared to larger companies that have qualified staff to do so. Apart from lack of time and expertise, small-scale producers often also lack finances (Taylor, 2001). Noteworthy, is that since 2011 there has been an increasing number of food companies with less than 10 employees (i.e. micro-scale) in the Netherlands (FNLI, 2017). Therefore, the focus of this research will be on local small and micro-scale producers for whom proper labelling is likely an even greater challenge.

Type of food product

The research will focus on food products that are processed and prepacked as these products should carry food information on the package or label (Article 12(2) FIC). The type food product chosen for this research is jam, manufactured from fruit pulp and/or purée within the scope of Warenwetbesluit Verduurzaamde Vruchtenproducten 2002 of 20 August 2002 [VVP]. In the preliminary study it was found that a large assortment of locally produced jams is available. Jams are furthermore variable food products, as they can contain one or different mixtures of fruit, alcohol and even allergens (e.g. nuts).

1.3 Research aim

This research aims at understanding local small and/or micro-scale jam producers' expectations from a tool assisting in the provision of information on food labels. This will be achieved by initially performing a theoretical study of the applicable law, as this forms an integral part of a content of the 'labelling tool'. Moreover, criteria necessary to evaluate such a tool will be studied. By means of the literature study, the labelling tools can be evaluated both theoretically and practically. Subsequently, an empirical study will be performed by conducting interviews with local small and/or micro-scale producers of jam to evaluate two existing 'labelling tools' and understanding their requirements. With the acquired information, recommendations can be made for the development of a labelling tool which meets the expectations of local producers and can thus be used to improve the information on food labels.

1.4 Research questions

To support the overall research question, within the scope of the demarcated subject, the following specific research questions can be formulated:

1. Which mandatory information should be added on the label of locally produced jam in accordance with current legislation?
2. Which voluntary information may be added on the label of locally produced jam in accordance with current legislation?
3. Which criteria must be taken into account when evaluating a ‘labelling tool’?
4. To what extent do current ‘labelling tools’ contain accurate and complete information regarding legal labelling requirements?
5. To what extent are current ‘labelling tools’ deemed helpful by local jam producers?
6. Which requirements do local jam producers have of a ‘labelling tool’?

1.5 Research approach

The research can be divided into four stages, namely the appreciation phase, the analysis phase, the assessment phase and lastly, the evaluation phase. The research will commence with the appreciation phase in which the research proposal will be written and an in-depth literature review will be performed. In this phase the first three specific research questions will be answered. Subsequently, in the analysis phase, the research methodology will be set up. In this phase the fourth specific research question will be answered and the interview questions for the small and micro-scale jam producers will be drafted. In this phase the interviews will be conducted as well. Hereafter, in the assessment phase, data will be processed and the final two research questions will be answered. Furthermore, conclusions will be drawn and recommendations will be made. Finally, in the evaluation phase, the report and research will be critically reflected upon.

1.6 Structure of the report

The remainder of the thesis is structured as follows. Chapter 2 offers a review of the relevant literature, namely the applicable law and the evaluation process of an instructional tool. In Chapter 3 the methodology of the empirical study is presented, alongside a theoretical evaluation of the ‘labelling tools’. Next, the results of the study are reported and discussed in Chapter 4. In Chapter 5 conclusions are drawn based on the results of the study. Furthermore, the limitations of the study are addressed and recommendations for further research are made. Chapter 6, the final segment of the report, consists of a reflection on the research process, the methodology and the role of the researcher.

2 Literature review

By means of the literature review, specific research questions 1, 2 and 3 will be answered. The literature review will commence with the legal framework that applies to jam, followed by mandatory and voluntary labelling requirements. Finally, the criteria necessary to evaluate a ‘labelling tool’ will be presented which will further be applied during the evaluations in the empirical study. Hence, with the literature review, a theoretical background for the empirical study is established.

2.1 Legal framework for jam

Within the EU, the legal framework for jam is laid down in Council Directive 2001/113/EC of 20 December 2001, relating to fruit jams, jellies and marmalades and sweetened chestnut purée intended for human consumption. This is one of the few food products for which vertical legislation (i.e. legislation on the composition of the food product) exists (van der Meulen, 2014). The directive is implemented in the Dutch national law in Warenwetbesluit Verduurzaamde Vruchtenproducten 2002 [VVP].

2.1.1 Defining ‘jam’ and ‘extra jam’

‘Jam’ is defined as a mixture, brought to a suitable gelled consistency, of sugars, the pulp and/or purée of one or more kinds of fruit and water. Citrus jam, however, may be made from the whole fruit, cut into strips and/or sliced (Article 1(1)(g) VVP). As a general rule, at least 350 g of pulp and/or purée must be used to manufacture 1000 g of finished product. Specific requirements apply to the following fruits. Per 1000 g of finished product not less than the indicated amounts must be used to manufacture the ‘jam’ or ‘confituur’ (Article 4 VVP):

- 250 g for redcurrants, rowanberries, sea-buckthorns, blackcurrants, rosehips and quinces;
- 150 g for ginger;
- 160 g for cashew apples;
- 60 g for passion fruit.

‘Extra jam’ is a mixture, brought to a suitable gelled consistency, of sugars, the unconcentrated pulp of one or more kinds of fruit and water. However, rosehip extra jam and seedless raspberry, blackberry, blackcurrant, blueberry and redcurrant extra jam may be obtained entirely or in part from unconcentrated purée of the respective fruits. Moreover, citrus extra jam may be obtained from the whole fruit, cut into strips and/or sliced (Article 1(1)(h) VVP). As a general rule, at least 450 g of pulp must be used to manufacture 1000 g of finished product. Specific requirements apply to the following fruits. Per 1000 g of finished product not less than the indicated amounts must be used to manufacture the ‘extra jam’ or ‘extra confituur’ (Article 5 VVP):

- 350 g for redcurrants, rowanberries, sea-buckthorns, blackcurrants, rosehips and quinces;
- 250 g for ginger;
- 230 g for cashew apples;
- 80 g for passion fruit.

Both ‘jam’ and ‘extra jam’ are required to have a soluble dry matter content of at least 55%², as determined by a refractometer (Article 13 VVP). Products exempted from this rule, are described in Article 1 of Warenwetregeling vrijstelling jam met verlaagd suikergehalte of 1 October 2010; namely, products indicated as ‘jam with low sugars’ in which sugars are reduced by at least 30% and are not replaced by sweeteners.

2.1.2 Ingredients

Fruits

The fruits used to manufacture ‘jam or ‘extra jam’ shall be fresh, in good condition and free from deterioration. They shall contain all essential constituents and are adequately ripe and used after cleaning, removal of blemishes, topping and tailing. Furthermore tomatoes, the edible parts of rhubarb stalks, carrots, sweet potatoes, cucumbers, pumpkins, melons, watermelons and ginger are considered to be fruit as well (Article 1(1)(b) VVP). Ginger is defined as the edible root of the ginger plant in a fresh or preserved state which may be dried or preserved in syrup (Article 1(1)(a) VVP).

Mixtures of fruit

When fruits are mixed, the minimum contents for different types of fruit mentioned previously must be proportionally reduced (Article 11 VVP). However, in the manufacturing of ‘extra jam’ certain fruits may not be used mixed with others. This applies to apples, pears, clingstone plums, melons, watermelons, grapes, pumpkins, cucumbers and tomatoes (Article 8 VVP).

Treatments

Jam and extra jam may only be manufactured with fruits, pulp and purée which have undergone the following treatments (Article 3 VVP):

- Heated, chilled or frozen;
- Freeze-dried, in which apricots and plums used to manufacture ‘jam’ may be dried by other means;
- Concentrated, to the extent that is technically possible;
- Use of Sulphur dioxide (E 220) or its salts (E 221, E 222, E 223, E 224, E 226 and E 227) as an aid in manufacturing, provided that the maximum Sulphur-dioxide content laid down in Part E of Annex II of Regulation (EC) No 1333/2008 of the European Parliament and of the Council Of 16 December 2008 on Food Additives is not exceeded. However, this treatment is not for manufacturing ‘extra jam’;
- Use of brine to preserve citrus peel.

² In Annex I(II) of Directive 2001/113/EC, it is stated that these products must have a soluble dry matter content of at least 60%. The reduction of the solubale dry mattter content to minimally 55% is in accordance with Article 2 of Besluit van 11 mei 2017, houdende wijziging van het Warenwetbesluit Gereserveerde aanduidingen, het Warenwetbesluit Verduurzaamde vruchtenproducten 2002 en het Warenwetbesluit bestuurlijke boeten in verband met de aanduidingen van limonade, bier en verduurzaamde vruchtenproducten en de Warenwetregeling caseïne en caseïnaten 2016. Thus, making it a legal exception to the rule in Directive 2001/113/EC.

Sugars

The sugars authorized to use are (Article 1(1)(f) VVP):

- Sugars as defined in Warenwetbesluit suikers of 8 April 2003;
- Fructose syrup;
- Sugars extracted from fruit;
- Brown sugar.

Additional ingredients

Only the additional ingredients listed hereafter in Table 2 may be added to ‘jam’ and/or ‘extra jam’ (Article 12 VVP; Annex VVP).

Table 2 List of additional ingredients

Ingredient	Jam	Extra jam
Honey	x	x
Fruit juice	x	-
Citrus fruit juice	(manufactured from other types of fruit)	(manufactured from other types of fruit)
Red fruit juices	(manufactured only of rosehips, strawberries, raspberries, gooseberries, redcurrants, plums and rhubarb)	(manufactured only of rosehips, strawberries, raspberries, gooseberries, redcurrants, plums and rhubarb)
Red beetroot juice	(manufactured only from strawberries, raspberries, gooseberries, redcurrants and plums)	-
Edible oils and fats as anti-foaming agents	x	x
Liquid pectin	x	x
Citrus peel	x	x
Leaves of <i>Pelargonium odoratissimum</i>	(manufactured only from quince)	(manufactured only from quince)
Spirits, wine and liqueur wine	x	x
Nuts	x	x
Aromatic herbs and spices	x	x
Vanilla and vanilla extracts	x	x
Vanilline	x	x

2.2 Mandatory information

In this section, the mandatory particulars as described in Article 9(1) FIC are explained in more detail and in relation to the food product. Furthermore, the relevant national provisions for food labelling in the Netherlands as laid down in Besluit Etikettering van Levensmiddelen BES of 10 October 2010 [BES] and Warenwetbesluit Informatie Levensmiddelen of 3 April 2013 [WIL] are described as well.

2.2.1 Name of the food

For ‘jam’ and ‘extra jam’ the name of the food shall be its legal name, as these are prescribed within the EU and Member State (Article 2(2)(n) FIC; Article 17(1) FIC). The names ‘jam’ or ‘confituur’ and ‘extra jam’ or ‘extra confituur’ may only be used to refer to the respective products, ‘jam’ (Article 14 VVP) or ‘extra jam’ (Article 15 VVP) in accordance with legal provisions.

The name should further be supplemented with an indication of the fruit or fruits used, in descending order of weight. When products are manufactured from three or more fruits, the indication of the fruits used may be replaced by the words ‘mixed fruit’ or a similar wording, or by the number of fruits used (Article 21 VVP).

2.2.2 List of ingredients

Ingredients are defined in Article 2(2)(f) FIC as “*any substance or product, including flavorings, food additives and food enzymes, and any constituent of a compound ingredient³, used in the manufacture or preparation of a food and still present in the finished product, even if in an altered form; residues shall not be considered as ‘ingredients’*”.

Requirements for the list of ingredients are that it should have a suitable heading, which includes the word ‘ingredients’. Moreover, it includes all ingredients of the food in descending order of weight as recorded at the time of their use in manufacturing the food (Article 18(1) FIC), in which a weight tolerance of relatively 10% is allowed (Article 6(1) BES). By way of derogation, only where the residual content of Sulphur dioxide is more than 10 mg/kg, it shall be added to the list of ingredients (Article 24 VVP).

Where it is applicable, ingredients shall be indicated by their specific name. Detailed indications and designations of ingredients are laid down in Annex VII of FIC (Article 18(4) FIC).

For certain foods the list of ingredients may be omitted. However, this does not apply to jam and similar fruit products (Article 19(1) FIC).

In Article 20 FIC the constituents of the food that are not required to be included in the list of ingredients are stated:

- (a) “The constituents of an ingredient which have been temporarily separated during the manufacturing process and later reintroduced but not in excess of their original proportions;

³ ‘Compound ingredient’ means an ingredient that is itself the product of more than one ingredient (Article 2(2)(h) FIC).

- (b) Food additives and food enzymes: (i) whose presence in a given food is solely due to the fact that they were contained in one or more ingredients of that food, in accordance with the carry-over principle referred to in points (a) and (b) of Article 18(1) of Regulation (EC) No 1333/2008, provided that they serve no technological function in the finished product; or (ii) which are used as processing aids;
- (c) Carriers and substances which are not food additives but are used in the same way and with the same purpose as carriers, and which are used in the quantities strictly necessary;
- (d) Substances which are not food additives but are used in the same way and with the same purpose as processing aids and are still present in the finished product, even if in an altered form;
- (e) Water: (i) where the water is used during the manufacturing process solely for the reconstitution of an ingredient used in concentrated or dehydrated form; or (ii) in the case of a liquid medium which is not normally consumed.”

2.2.3 Ingredients or processing aids causing allergies or intolerances

Ingredients or processing aids listed in Annex I or products derived thereof causing allergies or intolerances used to manufacture a food and still present in the final product, even in altered form should be indicated (Article 9(1)(c) FIC). From this list, only nuts may be added to ‘jam’ and ‘extra jam’ (Article 12 VVP; Annex VVP). The following nuts are included: almonds (*Amygdalus communis* L.), hazelnuts (*Corylus avellana*), walnuts (*Juglans regia*), cashews (*Anacardium occidentale*), pecan nuts (*Carya illinoinensis* (Wangenh.) K. Koch), Brazil nuts (*Bertholletia excelsa*), pistachio nuts (*Pistacia vera*), macadamia or Queensland nuts (*Macadamia ternifolia*), and products thereof (Annex II(8) FIC). Furthermore, when fruits, pulp or purée intended to manufacture ‘jam’ are treated with Sulphur dioxide or its salts and the concentration exceeds 10 mg/kg (determined as total SO₂) in the final product, it has to be indicated as well (Article 3 VVP; Annex II(12) FIC).

Substances causing allergies or intolerances present in the food shall be indicated in the list of ingredients, having a clear reference to the name of the substance as listed in Annex II FIC (Article 21(1)(a) FIC). Furthermore, emphasis shall be made on the name of the substance by using a format that clearly distinguishes it from the rest of the list of ingredients. This can be achieved by e.g. font, style or background color (Article 21(1)(b) FIC).

To assist businesses in properly indicating the presence of certain substances causing allergies or intolerances a Commission Notice on this subject was published. It is explained more in detail which information has to be emphasized. In cases where the name of an ingredient contains several separate words, it is sufficient to only emphasize the word that corresponds to the substance as listed in Annex I (e.g. ‘MILK powder’). And in cases where the name of an ingredient is a single word containing the name of a substance listed in Annex I, it is sufficient to emphasize only that part of the name of the ingredient (e.g. ‘MELKpoeder’). Given that a compound ingredient contains substances causing allergies or intolerances as listed in Annex I, these have to be emphasized in the list of ingredients. Moreover, allergen information cannot be repeated voluntarily (European Commission, 2017a).

In case of absence of a list of ingredients, substances causing allergies or intolerances shall be indicated by using the word ‘contains’ followed by the name of the substance. For each ingredient or processing causing allergies or intolerances it shall be made clear from which substance they are derived, even if they originate from a single substance of the list. In cases where the name of the food clearly refers to the substance causing allergies or intolerances, it is not required to indicate these substances (Article 21(1) FIC). However, when the food provides a list of ingredients (whether mandatory or voluntary), the allergen present in that food has to be emphasized in the list of ingredients (European Commission, 2017a).

When nuts are added to ‘jam’ or ‘extra jam’, the name of specific type, as previously listed, has to be indicated in the list of ingredients. Ingredients or processing aids derived from these nuts, which are present in the final product, need to be indicated in the list of ingredients with a clear reference to the specific name of the nut e.g. flavorings (almond) (European Commission, 2017a).

2.2.4 Quantitative indication of ingredients

In Article 22(1) FIC it is stated when the indication of the quantity of an ingredient or category of ingredients used in the manufacture or preparation of a food shall be required. This is the case when the ingredient or category of ingredients concerned (a) appears in the name of the food or is usually associated with that name by the consumer, (b) is emphasized on the labelling by words, pictures or graphics, or (c) is essential to characterize a food and to distinguish it from other products with which it might be confused because of its name or appearance (Article 22(1) FIC).

The quantitative indication of an ingredient or category of ingredients shall be expressed as a percentage, corresponding to its quantity at the time of use. It shall furthermore be indicated next to the name of the food or in the list of ingredients associated with the ingredient or category of ingredients concerned (Annex VIII(3) FIC). For jams produced with two or more fruits which are emphasized on the label by words or graphics, or individually mentioned in the name of the food, the quantity or percentage of those ingredients has to be indicated (European Commission, 2017b).

Specifically, for ‘jam’ and ‘extra jam’ labelling shall also indicate the fruit content using the wording ‘prepared with ... g of fruit per 100 g’, after deduction of the weight of water used in preparing the aqueous extracts, if appropriate (Article 23(1)(a) VVP). Moreover, the total sugar content using the wording ‘total sugar content ... g per 100 g’, shall be indicated as well. This value shall be determined for the finished product by a refractometer at 20 °C, with a tolerance of ± 3 refractometric degrees (Article 23(1)(b) VVP). However, in Article 23(2) VVP it is stated that the total sugar content need not to be indicated when a nutrition declaration is given in accordance with Articles 30 to 35 of FIC. Both of these indications shall be presented in the same field of vision as the name of the food (Article 23(3) VVP).

Cases in which the quantitative indication is not required, include:

- Ingredients or category of ingredients which are used in small quantities for the purposes of flavoring (Annex VIII(1)(a)(iii) FIC);

- Ingredients or category of ingredients which appear in the name of the food, but do not determine the choice of the consumer in the country of marketing, as variation in quantity is not essential to characterize or distinguish the food (Annex VIII(1)(a)(iv) FIC);
- Fruit, vegetables or mushrooms, which do not predominate in terms of weight and are used in a mixture as ingredients, likely in varying proportions. This also applies to mixtures of spices and herbs which do not predominate by weight (Annex VIII(1)(c) FIC);
- Ingredients or category of ingredients covered by the indication ‘with sweetener(s)’ or ‘with sugar(s) and sweetener(s)’ if that indication accompanies the name of the food (Annex VIII(2)(a) FIC);
- Any added vitamin and mineral if that substance is subject to a nutrition declaration (Annex VIII(2)(b) FIC).

Certain presentations on the label should not be considered as to require the quantitative ingredients declaration, including in following cases (European Commission, 2017b):

- When a pictorial representation is given in the form of a serving suggestion, provided the nature of this presentation is made clear and the food nor any of its ingredients is emphasized;
- When a pictorial representation represents all the food ingredients, in which no particular ingredient is emphasized.

Further detailed information regarding the quantitative indication of ingredients can be found in Annex VIII FIC and Commission Notice on the application of the principle of quantitative ingredients declaration (European Commission, 2017b).

2.2.5 Net quantity of the food

The net quantity of a food shall be expressed as appropriate, in units of volume for liquid products or in units of mass in the case of other products. The units used for ‘jam’ and similar fruit products will thus be units of mass, namely kilograms, grams, gallons or ounces, conventional abbreviations of which can also be used (Article 23(1) FIC; Article 11(1)(b) BES).

2.2.6 Date of minimum durability or use by date

The ‘date of minimum durability of a food’ is defined in Article 2(2)(r) FIC as “*the date until which the food retains its specific properties when properly stored*”.

The ‘use by’ date is only applied for products which are highly perishable from a microbiological point of view and likely to pose a threat to human health after a short period (Article 24(1) FIC). Since this is not the case for jam and similar preserved fruit products, the date of minimum durability can be applied.

The format to indicate the date of minimum durability is given in Annex X FIC. The date shall be preceded by the wording (Annex X(1)(a) FIC):

- ‘Best before …’ when the date includes an indication of the day;
- ‘Best before end …’ in other cases.

These indications shall be accompanied by the date itself or a reference to where the date is given on the labelling (Annex X(1)(b) FIC).

The format of the date shall include the day, the month and possibly, the year in that order and in uncoded form (Annex X(1)(c) FIC). The format shall be as follows (Article 16(4) BES):

- (a) The day shall be indicated with a number consisting of two digits;
- (b) The month shall be indicated with its name, the conventional abbreviation, or with a number consisting of two digits; and
- (c) The year shall be indicated with a number in full form or with a number consisting of the last two digits of that year.

Depending on the shelf-life of the food, exceptions apply. For foods (Annex X(1)(c) FIC):

- With a shelf-life of maximum 3 months: an indication of the day and the month is sufficient;
- With a shelf-life of more than 3 months but not maximum 18 months: an indication of the month and year is sufficient;
- With a shelf-life of more than 18 months: an indication of the year is sufficient.

2.2.7 Special storage conditions and/or conditions of use

In Article 25(1) FIC it is stated that special storage conditions and/or conditions of use shall be indicated when necessary for the food. Furthermore, the storage conditions and/or time limit for consumption shall be indicated where appropriate; this to enable proper storage or use of the food after opening of the package (Article 25(2) FIC). For foods with a date of minimum durability, if required, a description of the storage conditions shall be indicated after this date (Annex X(1)(b) FIC).

2.2.8 Name and address of the food business operator

The name or business name and address of the food business operator have to be indicated on the label or package of the food (Article 9(1)(h) FIC). The following definitions from Regulation (EC) No 178/2002 of the European Parliament and of the Council of 28 January 2002 laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety [GFL] apply, namely (Article 3):

- (3) ‘Food business operator’ “means the natural or legal persons responsible for ensuring that the requirements of food law are met within the food business under their control”;
- (2) ‘Food business’ “means any undertaking, whether for profit or not and whether public or private, carrying out any of the activities related to any stage of production, processing and distribution of food”.

Moreover, Article 19 BES states that for legal persons, the address may be substituted with the place of establishment.

2.2.9 Country of origin or place of provenance

In Article 60 of Regulation (EU) No 952/2013 of the European Parliament and of the Council of 9 October 2013 laying down the Union Customs Code [UCC] it is stated how goods acquire their origin. In case of a food, if the food completely obtained in a single country or territory, it shall be regarded as having its origin in that country or territory (Article 60(1) UCC). If more than one country or territory are involved in production, the country or territory in which the product underwent its last, substantial, economically-justified processing or working will be deemed as its origin (Article (60(2) UCC).

The place of ‘place of provenance’ is defined in Article 2(2)(g) FIC as “*any place where a food is indicated to come from, and that is not the ‘country of origin’*”.

It is furthermore stated that the name, business name or address of the food business operator on the label shall not represent an indication of the ‘country of origin’ or ‘place of provenance’ (Article 2(2)(g) FIC).

In Article 26(2)(a) FIC states that it is mandatory to indicate the country of origin or place of provenance, where absence of this information may mislead the consumer as to what the true country of origin or place of provenance of the food is. Particularly, when information on the label, as a whole would imply that the food has a different country of origin or place of provenance (Article 26(2)(a) FIC). In cases where country of origin or the place of provenance given are not the same as that of its primary ingredient the (a) the country of origin or place of provenance of the primary ingredient⁴ concerned shall also be given or (b) the country of origin or place of provenance of the primary ingredient shall be indicated as being different to that of the food (Article 26(3) FIC).

2.2.10 Instructions for use

Instructions for use shall be indicated in cases where it would be difficult to make appropriate use of the food without these instructions (Article 9(1)(j) FIC). They shall therefore be indicated in such manner to enable appropriate use of the food (Article 27(1) FIC).

2.2.11 Alcoholic strength

The actual alcoholic strength of beverages containing more than 1,2% by volume alcohol must be indicated as stated in Article 9(1)(k) FIC. However, in the case of jam this is not mandatory as it is not a beverage, though alcoholic beverages, namely spirits, wine and liqueur wine may be added to jam (Article 12 VVP). If the added alcoholic beverage meets the requirements of Article 22(1) FIC as explained in Section 2.2.4, the specific rules for quantitative indication of ingredients must be followed.

⁴ ‘Primary ingredient’ means an ingredient or ingredients of a food that represent more than 50 % of that food or which are usually associated with the name of the food by the consumer and for which in most cases a quantitative indication is required (Article 2(2)(q) FIC).

2.2.12 Nutrition declaration

The mandatory nutrition declaration shall include all of the following particulars (Article 30(1) FIC):

- Energy value;
- The amounts of fat, saturates, carbohydrate, sugars, protein and salt.

Calculation of the energy value shall be done using the conversion factors given in Annex XIV FIC (Article 31(1) FIC). The energy value and the amounts of nutrients indicated in the nutrition declaration shall be those of the food when sold (Article 31(3) FIC). The presented values shall, depending on the case, be based on (Article 31(4) FIC):

- (a) An analysis of the food by the manufacturer;
- (b) A calculation from the known or actual average values of the ingredients used; or
- (c) A calculation from generally established and accepted data.

The measurement units to express the energy value and amount of nutrients are given in Annex III (Article 32(1) FIC). Moreover, expression of these values will be per 100 g or per 100 ml of the food (Article 32(2) FIC). The energy value and nutrients are to be presented in a clear format, where appropriate, in the order presented in Annex III (Article 34(1) FIC). If there is enough space the nutrition declaration must be presented in a tabular format with the numbers aligned. In case there is not enough space available, in a linear format may be applied (Article 34(2) FIC).

Foods exempted from a mandatory nutrition declaration are presented in Annex V FIC (Article 16(3) FIC). Applicable to locally produced jams are the following cases:

- Food with packaging or in containers where the largest surface area is less than 25 cm² (Annex V(18) FIC);
- Food, including handcrafted or artisanal food, directly supplied by the manufacturer of small quantities of products to the final consumer or to local retail establishments directly supplying the final consumer (Annex V(19) FIC)⁵.

2.2.13 Additional mandatory information

Besides the particulars listed in Article 9(1) FIC, additional mandatory particulars for specific types or categories of foods are laid down in Annex III FIC (Article 10(1) FIC). When justified in accordance with Article 39 FIC, Member States may adopt additional mandatory particulars. In the Netherlands, indication of production batch and use of packaging gas, where appropriate, are also mandatory to indicate (Article 5(1) BES).

⁵ The NWWA defines artisanal producers as companies that mainly derive their turnover from direct sales to the consumer (i.e. through own stores or direct delivery). Pre-packaged products sold by these companies are exempted from the mandatory nutrition declaration (even if they are supplied to third parties), when the supply to third parties does not account for more than 50% of the total turnover (KNS, 2017; NBC, 2017).

Production batch

The production batch⁶ is defined in Article 1(1)(i) BES as “*a collection of sales units of a food which have been produced, manufactured or packaged under virtually identical circumstances, and the size of which has been determined by the relevant trader.*”

The production batch shall be indicated by a numeric code as conventionally used or prescribed in the country of origin (Article 22(1) BES). In the Netherlands the letter ‘L’ shall precede this code, unless it can easily be distinguished from other information on the label (Article 4(1) WIL). Article 4(3) WIL states that this information shall be presented on (a) the packaging or label or (b) the container, and in absence hereof on relevant trade documents. It is the responsibility of the food business operators (i.e. producer, manufacturer, packer or first trader in the EU) to determine and add this information to the food in question (Article 4(4) WIL). By way of derogation, this code does not have to be indicated where the ‘date of minimum durability’ or ‘use by date’ are presented clearly in the correct order, consisting of at least the day and month or where the largest surface area of the packaging or container is less than 10 cm² (Article 5(a) and (d) WIL).

Use of packaging gas

When the shelf-life of foods is prolonged using packaging gases, authorized by law, this shall be indicated by the words ‘packed under protective atmosphere’ (Article 23 BES). Though not limited, this technique is mainly utilized for meat and fish products, fresh produce, bakery products and cheese (Floros & Matsos, 2005).

2.3 Presentation of mandatory food information

Mandatory food information must be presented in a space where it is clearly visible, legible, and where appropriate, indelible. It shall furthermore not be concealed or overshadowed by any intervening material (Article 13(1) FIC). Moreover, the mandatory particulars are to be indicated in words and numbers (Article 9(2) FIC).

2.3.1 Font size

The mandatory particulars on the package or label of a food product shall be printed to be clearly legible with a font size where the x-height is minimally 1,2 mm. However, to certain foods specific Union provisions may apply (Article 13(2) FIC). The font size and x-height are defined in Figure 1, where capital letters and numbers must be equivalent to the letter ‘A’ in the word ‘Appendix’ (European Commission, 2018a).

⁶ Information regarding batch identification has to be provided at all stages of the supply chain for traceability and not only on the final product. Therefore, it is not included in the mandatory particulars of Article 9(1) FIC (Bremmers & van der Meulen, 2014).



Figure 1 Defining the font size and x-height (adapted from Annex IV FIC)

When the largest surface area of packaging or containers is less than 80 cm², the x-height of the font size shall at least be 0,9 mm (Article 13(3) FIC).

2.3.2 Presentation of information in the field of vision

The ‘field of vision’ is defined in Article 2(2)(k) FIC as “*all the surfaces of a package that can be read from a single viewing point*”.

The name and net quantity of the food, and where applicable actual alcoholic strength must appear in the same field of vision (Article 13(5) FIC). This however does not apply in cases described in Article 16(1) and (2) FIC as mentioned in Section 2.4 (Article 13(6) FIC). The fruit and total sugar content shall furthermore be indicated in the same field of vision as the name of the food (Article 23(3) VVP).

2.3.3 Language requirements

Mandatory food information has to be presented in a language that is easily understood by the consumers of the Member States where a food is marketed (Article 15(1) FIC). Thus, in the Netherlands this information must appear at least in Dutch (Article 3 WIL).

2.4 Omission of certain mandatory particulars

Certain mandatory particulars may be omitted in the following situations:

- When glass bottles meant for reuse are indelibly marked and therefore bear no label, ring or collar, indication of only the following particulars is mandatory: name of the food, substances (as listed in Annex I) present in the food causing allergies or intolerances, net quantity of the food, date of minimum durability or use by date and nutrition declaration (Article 16(1) FIC);
- When the largest surface area of packaging of the food or the container is less than 10 cm², indication of only the following particulars is mandatory: name of the food, substances (as listed in Annex I) present in the food causing allergies or intolerances, net quantity of the food and date of minimum durability or use by date. The list of ingredients shall be made available otherwise or upon request of the consumer (Article 16(2) FIC);
- For products listed in Annex V FIC, the nutrition declaration shall not be mandatory (Article 16(3) FIC). Cases applicable to locally produced jam are mentioned in Section 2.2.12.

2.5 Voluntary information

In this section, publicly regulated information which may be added to the label but is not mandatory (i.e. voluntary information) is described. Other food information (e.g. self-regulated private schemes) are not taken into consideration and is beyond the scope of this study.

2.5.1 General requirements

Voluntary food information may additionally be added to the label when they meet requirements as stated in Article 36(2) FIC, namely (a) shall not mislead the consumer, (b) shall not be confusing and (c) where appropriate be based on relevant scientific data. Voluntary food information shall furthermore not hamper with the space for mandatory information (Article 37 FIC).

2.5.2 Additions to the nutrition declaration

Declaration of additional nutrients

The basic nutritional declaration may also be supplemented with additional information. Namely, one or more of the following nutrients may be indicated (Article 30(2) FIC):

- (a) Mono-unsaturates;
- (b) Polyunsaturates;
- (c) Polyols;
- (d) Starch;
- (e) Fibre;
- (f) Any of the vitamins or minerals present in significant amounts as defined in Part A of Annex XIII FIC.

These additional nutrients shall be presented in the same field of vision as the mandatory nutrition declaration and shall also follow the same format and order as given in Annex III (Article 34(1) and (2) FIC).

Salt

A statement indicating that the salt content is exclusively due to the presence of naturally occurring sodium may be added adjacent to the nutrition declaration on foods to which no salt was added (Article 30(1) FIC).

Negligible amounts of energy or nutrients

When the energy value or the amount of certain nutrients is negligible, the nutrition declaration for the nutrient may be replaced by a statement such as ‘Contains negligible amount of ...’ adjacent to the nutrition declaration when present (Article 34(5) FIC).

Reference intake

When vitamins and minerals are provided in the nutrition declaration, they shall be expressed (Article 32(3) FIC):

- Per 100 g or per 100 ml; and

- As a percentage of the reference intakes, which are given in Annex XIII Part A(1) FIC, per 100 g or per 100 ml.

The energy value and amounts of nutrients may additionally be expressed as a percentage of the reference intakes, set out in Annex XIII in Part B FIC, per 100 g or per 100 ml (Article 32(4) FIC). If this information is provided, an additional statement shall be added adjacent to it: ‘Reference intake of an average adult (8400 kJ/2000 kcal)’ (Article 32(5) FIC). This statement must only be indicated when the nutrition information is expressed as a percentage of the reference intakes on the basis of 100 g or 100 ml. It is possible to use the acronym RI for Reference Intake on food labels when it is explained in full form (European Commission, 2018a).

Expression per portion or consumption unit

In addition to the forms of expression per 100 g or per 100 ml for energy value and nutrients, and for vitamins and minerals, as referred to in Article 34(2) and (3) FIC, these values may be expressed per portion and/or per consumption unit. This expression may also be used in addition to or instead of the expression per 100 g or per 100 ml for reference intakes as referred to in Article 34(4) FIC. It is required that the portion or consumption unit is simple to recognize for the consumer, the portion or the unit used is quantified on the label and the number of portions or units contained in the package is stated (Article 33(1) FIC). Furthermore, the portion or consumption unit used shall be indicated adjacent to the nutrition declaration (Article 33(4) FIC).

When symbols or pictograms are used to describe the portion or consumption unit, they shall be easy to understand for the consumer and not misleading. Indication of slight variations in the number of consumption units or portions in a product can be achieved by use of appropriate symbols before the number of portion or consumption units (European Commission, 2018a).

Repeated information

When the mandatory nutrition declaration as defined in Section 2.2.12 is provided, some of this information may be repeated in one of the following formats (Article 30(3) FIC):

- (a) Energy value; or
- (b) Energy value, and the amount of fat, saturates, sugars and salt.

This repeated information shall appear in the ‘principal field of vision’ (Article 34(3)(a) FIC). The former is defined as “*the field of vision of a package which is most likely to be seen at first glance by the consumer at the time of purchase and that enables the consumer to immediately identify a product in terms of its character or nature and, if applicable, its brand name. If a package has several identical principal fields of vision, the principal field of vision is the one chosen by the food business operator*” (Article 2(2)(l) FIC). Commonly, ‘the principal field of vision’ is also known as the ‘front of the pack’. Furthermore, the font size of the repeated information shall comply with the provisions on minimum font size as stated in Article 13(2) FIC (Article 34(3)(b) FIC). In Article 34(3) FIC it is also stated that voluntary additions to the nutrition declaration may be presented in a different format than the mandatory information.

When the following nutrition information is repeated: ‘energy value, and the amount of fat, saturates, sugars and salt’ as explained in Article 30(3)(b), the expression per portion or consumption unit alone can be used to indicate the amount of nutrients and/or the percentage of the reference intakes. Contrary to Article 32(2) FIC, which states that the amount of nutrients shall be expressed per 100 g or per 100 ml. However, the energy value shall be expressed both per 100 g or per 100 ml and per portion or consumption unit (Article 33(2) FIC).

Additional forms of expression and presentation

Besides the forms of expression and presentation for energy value and nutrients explained before, other means of expression and/or presentation using graphics or symbols may be used additionally when the following requirements are met (Article 35(1) FIC):

- (a) They are based on proper and scientifically valid consumer research and are not misleading;
- (b) They are developed after consultation with a broad range of stakeholder groups;
- (c) Their objective is to increase consumer understanding of the contribution or importance of the food to the energy and nutrition content of a diet;
- (d) They are supported by scientifically valid evidence of the average consumer understanding these forms of expression or presentation;
- (e) Concerning other forms of expression, they are based on either the reference intakes stated in Annex XIII FIC, or in absence hereof, on generally accepted scientific advice regarding intakes of energy or nutrients;
- (f) They are objective and non-discriminatory; and
- (g) Their usage does not form obstacles in the free movement of goods.

2.5.3 Nutrition and health claims

Nutrition and health claims made on food and communicated through labelling are harmonized in Regulation 1924/2006 (Article 1(1) and (2) NHCR). From this Regulation the following definitions are useful:

- ‘Claim’ is defined in Article 2(2)(1) NHCR as “*any message or representation, which is not mandatory under Community or national legislation, including pictorial, graphic or symbolic representation, in any form, which states, suggests or implies that a food has particular characteristics*”;
- ‘Nutrition claim’ is defined in Article 2(2)(4) NHCR as “*any claim which states, suggests or implies that a food has particular beneficial nutritional properties due to (a) the energy it provides, provides at a reduced or increased rate, or does not provide; and/or (b) the nutrients or other substances⁷ it contains, contains in reduced or increased proportions, or does not contain*”.

⁷ ‘Other substance’ means a substance other than a nutrient that has a nutritional or physiological effect (Article 2(2)(3) NHCR).

- ‘Health claim’ is defined in Article 2(2)(5) NHCR as “*any claim that states, suggests or implies that a relationship exists between a food category, a food or one of its constituents and health*”.

Conditions for the use of nutrition and health claims

For the use of nutrition and health claims in labelling, conditions apply which have to be met as stated in Article 3 NHCR; namely they shall not:

- (a) Be false, ambiguous or misleading;
- (b) Result in uncertainty regarding safety and/or the nutritional adequacy of other foods;
- (c) Support or disregard condone excess consumption of a food;
- (d) State or indicate that a balanced varied diet cannot provide adequate amounts of nutrients.
However, exceptions exist for nutrients that cannot be supplied by a balanced varied diet;
- (e) Refer to changes in functions of the body which could cause or utilize fear in the consumer, either by text or graphics.

As stated in Article 4(1) NHCR, nutrient profiles were to be established, by the European Commission, for food or certain categories of food in order to bear a nutrition or health claim by 19 January 2009. However, these have not been established yet (European Commission, n.d.b).

Other general requirements which have to be met for the use of nutrition and health claims are stated in Article 5 NHCR, namely:

- The claim made for a nutrient or other substance is proven to have a beneficial nutritional or physiological effect, established by generally accepted scientific evidence (Article 5(1)(a) NHCR);
- The final product will contain a significant amount of the nutrient or other substance for which the claim is made, as defined in the EU, or in absence of such legislation, an amount that will result in the nutritional or physiological effect claimed, as established by generally accepted scientific evidence (Article 5(1)(b)(i) NHCR);
- The nutrient or other substance for which the claim is made is absent or is present in a reduced amount that will result in the nutritional or physiological effect claimed, as established by generally accepted scientific evidence (Article 5(1)(b)(ii) NHCR);
- Where relevant, the nutrient or other substance for which the claim is made is present in a form that is available to be utilized by the body (Article 5(1)(c) NHCR);
- The amount consumed of product containing the nutrient or other substance for which the claim is made provides a significant quantity of the latter as defined in the EU, or in absence of such legislation, a significant amount that will result in the nutritional or physiological effect claimed, as established by generally accepted scientific evidence (Article 5(1)(d) NHCR);
- The claims have to meet the specific conditions set for nutrition and health claims as stated in respectively Chapter III or Chapter IV NHCR (Article 5(1)(e) NHCR);
- The average consumer can be expected to understand the beneficial effects as expressed in the nutrition or health claim (Article 5(2) NHCR);

- The claims shall refer to a food ready for consumption in accordance with the manufacturer's instructions (Article 5(3) NHCR).

Mandatory declarations on the label

When foods have a trade mark, brand name or fancy name on the labelling or advertising that can be considered a nutrition or health claim, this may be used without undergoing the authorization procedures provided for in this Regulation. However, this information has to be accompanied by a related nutrition or health claim in the labelling or advertising in accordance with this Regulation. (Article 1(3) NHCR).

For products bearing a nutrition or health claim it is mandatory to include a nutrition declaration as explained in Section 2.2.12. If such claims are made for the additional nutrients referred to in Article 30(2) FIC, the quantities shall be indicated in accordance with Articles 31 to 34 FIC. When the nutrient or other substance for which a nutrition or a health claim has been made is not part of the nutrition declaration, its quantity must be labelled in the same field of vision as the nutrition declaration. Expression of these quantities shall be in conformity with Articles 31 to 33 FIC (Article 7 NHCR).

Specific conditions for nutrition claims

Only nutrition claims listed in the Annex of NHCR and which are in accordance with this Regulation may be used (Article 8(1) NHCR). Amendments to the Annex may be adopted after a regulatory procedure (Article 8(2) NHCR); the most recent amendments can be found in Commission Regulation (EU) No 1047/2012 of 8 November 2012 amending Regulation (EC) No 1924/2006 with regard to the list of nutrition claims.

Only for foods falling within the same category, taking into account a range of foods of that category, comparative nutrition claims can be made. The comparative claim shall state differences in the amount of nutrient and/or the energy value for the same quantity of food (Article 9(1) NHCR). In this comparison, the composition of the food concerned shall be compared to a range of foods of the same category, which cannot bear such claim due to their composition, including foods of other brands (Article 9(2) NHCR).

Specific conditions for health claims

Only health claims which comply with the general and specific requirements, are authorized in accordance with this Regulation and included in the Community register of authorized claims are allowed to be used (Article 10(1) NHCR). Health claims may not suggest that a human disease is treated, cured or prevented by any food (Article 7(3) FIC; Bremmers & van der Meulen, 2014). Furthermore, health claims are only permitted in labelling when accompanied with the following information (Article 10(2) NHCR):

- (a) A declaration pointing out the importance of a varied and balanced diet and a healthy lifestyle;
- (b) The amount of food and consumption patterns necessary to acquire the claimed beneficial effect;

- (c) Where appropriate, a declaration addressed to people who should avoid consumption of the food; and
- (d) A proper warning for foods that are likely to present a health risk when consumed in excess amounts.

When referring to general, non-specific benefits of a nutrient or food for overall good health or health-related well-being, a specific health claim included in the Community register has to be included as well (Article 10(3) NHCR).

Certain types of health claims are prohibited, namely (Article 12 NHCR):

- (a) Claims implying that health could be influenced by not consuming the food;
- (b) Claims referring to the rate or amount of weight loss; and
- (c) Claims making recommendations to individual doctors or health professionals and other associations (not referred to in Article 11 NHCR).

Health claims referring to reduction of disease risk and children's development and health have to be authorized in accordance with this Regulation to be included in the Community register (Article 14(1) NHCR). Other types of health claims in certain cases which are indicated in the Community register, may be made without undergoing these authorization procedures provided for in this Regulation, as explained in Article 13 (1) NHCR.

Community register

A Community register of nutrition and health claims made on food is established and maintained by the European Commission as stated in Article 20(1) NHCR. This register can be found online and includes among others, the claim (type), conditions/restrictions for use and where applicable, reasons for non-authorization (European Commission, 2016).

2.5.4 Quality schemes for agricultural products and foodstuffs

The quality schemes established in Regulation 1151/2012 have as objective to set the basis for the identification and, where appropriate, protection of names and terms that indicate or describe agricultural products possessing certain value-adding characteristics, or value-adding attributes due to the farming or processing methods used in their production, or the place of their production or marketing (Article 1(2) QSI). Agricultural products intended for human consumption, as described in Annex I of this Regulation and Annex I of the Treaty on the Functioning of the European Union [TFEU], fall within its scope (Article 2(1) QSI); jam does not fall within the scope of this Regulation (Annex I TFEU).

Lists of registered names of protected designations of origin (PDO), protected geographical indications (PGI) or traditional specialties guaranteed (TSG) can be found in online databases; in this case the database of food and agricultural products applies. For the Netherlands, these products are mainly in the category of cheeses and jam or similar fruit preserves are not included in this list (European Commission, n.d.a). Thus, these indications or associated symbols can currently not be used in labelling of the latter (Article 12(3) QSI). However, applications can be made to register

new names, where they meet the product specifications of a certain quality scheme (Article 8 QSI; Article 20 QSI).

2.5.5 Organic production

Indications referring to organic production

In order to use indications referring to organic production in labelling or advertising, the food product has to comply with provisions set out in Regulation 834/2007. Terms which may be used to indicate organic production within the EU are given in the Annex of this Regulation (e.g. ‘biologisch’ in Dutch). Furthermore, their derivatives or diminutives, like ‘bio’ or ‘eco’, may be used separately or combined (Article 23(1) ORG; Annex ORG). However, information presented in labelling or advertising which may mislead the consumer by suggesting organic production of either a product or its ingredients where this is not the case, is prohibited (Article 23(2) ORG). Moreover, products containing GMOs⁸, consisting of GMOs or produced from GMOs cannot bear terms indicating organic production in labelling or advertising (Article 23(3) ORG).

Concerning processed food products, terms indicating organic production may be used in different manners when the given requirements are met (Article 23(4) ORG):

- (a) In the sales description, where (i) the food is produced in accordance with general rules on the production of processed food set out in Article 19 ORG; (ii) minimally 95 % of its ingredients (by weight) of agricultural origin are organic;
- (b) In the list of ingredients, when the food is produced in accordance with Article 19(1), 19(2)(a), 19(2)(b) and 19(2)(d) ORG;
- (c) In the list of ingredients and in the same field of vision as the sales description, when (i) the main ingredient is a product of hunting or fishing; (ii) it consists of other ingredients of agricultural origin which are all organic; (iii) the food is produced in accordance with Article 19(1), 19(2)(a), 19(2)(b) and 19(2)(d).

In the cases of points (b) and (c) mentioned above, references to organic production shall only be made to in association with the organic ingredients. Moreover, within the list of ingredients it shall be indicated which ingredients are organic and an indication of the total percentage of organic ingredients as a ratio of all ingredients of agricultural origin shall be given as well. These terms and the percentage shall furthermore be presented the same color, size and font as the other indications in the list of ingredients (Article 23 ORG).

⁸ ‘GMO’ stands for genetically modified organism. It is defined in Article 2(2) of Directive 2001/18/EC of the European Parliament And Of The Council on the deliberate release into the environment of genetically modified organisms and repealing Council Directive 90/220/EEC of 12 March 2001 as: “an organism, with the exception of human beings, in which the genetic material has been altered in a way that does not occur naturally by mating and/or natural recombination”.

Compulsory indications

When terms indicating organic production are used, certain other information shall also be compulsory to indicate on packaging or on the label of prepacked food, namely (Article 24(1) ORG):

- (a) The code number of the control authority or control body which performed control tasks, consisting of the ISO code of the country where the controls took place, link with organic production (e.g. BIO) and a reference number of maximum three digits (European Commission, 2018b); and
- (b) The Community logo (Figure 2). However, the Community logo is not mandatory for products from countries outside the EU. Moreover, it is also not applicable to in-conversion products (i.e. produced during the transition from non-organic to organic) and products described in Article 24(4)(b) and (c) ORG (Article 25(1) ORG).



Figure 2 Example of community logo for organic production also known as 'Euro-leaf' (European Commission, 2018b)

When the Community logo is applied, the place where the raw agricultural materials, of which the product consists, have been farmed shall also be indicated in the same field of vision as the logo. This shall be presented in one of the following formats (Article 24(1)(c) ORG):

- ‘EU Agriculture’, where all raw agricultural materials have been farmed in the EU;
- ‘non-EU Agriculture’, where all raw agricultural materials have been farmed in countries outside the EU (third countries); or
- ‘EU/non-EU Agriculture’, where the raw agricultural materials partly have been farmed in the EU and partly in a third country.

In cases where all raw agricultural materials, of which the product consists, have been farmed in a certain country, the abovementioned indications ‘EU’ or ‘non-EU’ may be replaced or supplemented by that country. Quantities of ingredients that do not exceed 2% of the total quantity by weight of raw materials of agricultural origin may be disregarded for the ‘EU’ or ‘non-EU’ indications. These indications shall furthermore not be presented in a color, size and font which is more prominent than the sales description of the product (Article 24(1) ORG). The aforementioned indications shall be presented in a space where they are clearly visible, legible and indelible (Article 24(2) ORG).

Organic production logos

Apart from the Community logo, national and private logos may be used in the labelling and advertising of food products which meet the requirements laid down this Regulation (Article 25(2) ORG).

2.6 Evaluation process of an instructional tool

A ‘labelling tool’ which will assist producers in the provision of information on food labels can be regarded as an instructional tool, as such a tool facilitates the learning process by providing information necessary to obtain certain knowledge and skills (Campbell, 1999). In this section, evaluation criteria shall be established to evaluate the aid offered by an instructional tool. An instructional tool can be deemed helpful when the user’s needs are addressed, and the learning objective is met (Laitenberger & Dreyer, 1998; Campbell, 1999). The relevant evaluation criteria found, can be divided into three main categories, namely ‘Quality of content’, ‘Usefulness’ and ‘Ease of use’ (Laitenberger & Dreyer, 1998; Campbell, 1999; Ontario Ministry of Training, Colleges and Universities, 2011).

Quality of content

Quality of the content of the tool can be described as the functional and technical requirements of the information presented in the tool which have to be met to address the needs of the target group or user (Ontario Ministry of Training, Colleges and Universities, 2011).

Usefulness

Besides meeting functional and technical requirements, usage of the tool also depends on the extent to which one believes it will help them to do a better job i.e. ‘perceived usefulness’ of a tool. Perceived usefulness can be defined as “*the degree to which a person believes that using a particular system would enhance his or her job performance*” (Laitenberger & Dreyer, 1998 as cited in Davis, 1989).

Ease of use

Another important factor is ‘perceived ease of use’, which can be defined as “*the degree to which a person believes that using a particular system would be free of effort*”. If the tool is believed to be too difficult to use, the benefits can be overshadowed by the effort necessary to operate the tool (Laitenberger & Dreyer, 1998 as cited in Davis, 1989).

In Table 3, the criteria for evaluation of an instructional tool adapted from Laitenberger & Dreyer (1998), Campbell (1999) and Ontario Ministry of Training, Colleges and Universities (2011) are presented, alongside the sub-criteria and their implications.

Table 3 Criteria for evaluation of an instructional tool

Criteria	Sub-criteria	Implication
Quality of content	<i>Format</i>	The tool has an appropriate format and layout
	<i>Relevancy</i>	The information presented in the tool is relevant
	<i>Accuracy</i>	The information presented in the tool is adequately elaborated upon
	<i>Appropriateness</i>	The information in the tool meets the needs of the target user group
Usefulness	<i>Time</i>	Using the tool would enable faster accomplishment of tasks
	<i>Effectiveness</i>	Using the tool would lead to a favorable outcome
	<i>Makes task easier</i>	Using the tool would make the task easier
Ease of use	<i>Job performance</i>	Using the tool would improve job performance
	<i>Easy to learn</i>	It is easy to learn how to operate the tool
	<i>Level of difficulty</i>	The tool is clear and understandable
	<i>Skillfulness</i>	It is easy to remember how to perform tasks using the tool

After determining the evaluation criteria, the evaluation tools should be selected and ultimately the evaluation conducted. After the evaluation, plus points can be identified and recommendations can be made for further improvements (Branch, 2009).

3 Research methodology

In the first part of this chapter, two existing ‘labelling tools’ by Etiketteren.nl and Hetnieweetiketteren.nl are described and theoretically evaluated, based on the legal labelling requirements, thereby answering the fourth specific research question. Since ‘labelling tools’ are supposed to act as an intermediate between the labelling legislation and the food business operator, they should not only contain proper information regarding legal labelling requirements but should also meet expectations of its users. Therefore, these tools were also practically evaluated by prospective users. The remainder of this chapter comprises the methodology of the empirical study. The aim of the empirical study was to evaluate the existing ‘labelling tools’ and assess to what extent they are deemed helpful by local small and micro jam producers. Furthermore, it was aimed to get more insight into which requirements these local jam producers have for such a tool, which will assist them in the provision of information on food labels. By means of the empirical study, specific research questions 5 and 6 were answered.

3.1 Labelling tools

The two ‘labelling tools’ by Etiketteren.nl and Hetnieweetiketteren.nl were ordered via their websites: Etiketteren.nl and Hetnieweetiketteren.nl. The first tool is named ‘Check uw etiket’ and the second tool ‘Etiketmeter’, hereafter referred to as Tool 1 and Tool 2, respectively. In the following Sections 3.1.1 and 3.1.2, the ‘labelling tools’ are theoretically analyzed based on the legal labelling requirements as described in Section 2.2 – 2.5 of the literature review. The information presented in the tool was compared with the legal labelling requirements and verified on accuracy and completeness.

3.1.1 Tool 1

Description of Tool 1

Tool 1 (Figure 3) is a tool to help in applying Regulation 1169/2011. It contains the list of mandatory particulars, mandatory allergens, an example of the nutrition declaration table, and minimum height of letters (Etiketteren.nl, n.d.).

Theoretical evaluation of the information in Tool 1

Considering the information in Tool 1, the following remarks can be made:

- The name of the food can be its legal name. In the absence thereof, its customary name, or, in absence thereof, a descriptive name of the food (Article 17(1) FIC). This is not explained in the tool;
- For the list of ingredients, QUID and allergens are added in between brackets, indicating that these should be added in the list of ingredients where applicable (Article 22(1) FIC; Article 9(1)(c) FIC). However, no further explanation of QUID, which stands for quantitative ingredients declaration, is given (European Commission, 2017b). The mandatory allergens are listed, but it is not explained how to indicate these or the QUID in the list of ingredients (Article 21(1)(b) FIC; Annex VIII(3) FIC). Furthermore, there is no information on how to properly indicate the list of ingredients on the label (Article 18(1) FIC).



Figure 3 Tool 1: Business card sized booklet consisting of 4 pages of information on labelling

Remarks on the information in Tool 1 (continued):

- The net quantity of the food should be indicated in units of volume for liquid products or in units of mass in the case of other products, where it is allowed to use conventional abbreviations (Article 23(1) FIC; Article 11(1)(b) BES). This is not elaborated upon in the tool;
- For the ‘date of minimum durability’ or ‘use by date’, the abbreviations ‘THT/TGT’ are added as well. However, using these abbreviated forms is already considered a mistake (NVWA, 2018a). Moreover, it is not explained when the ‘date of minimum durability’ or ‘use by date’ are applicable (Article 24(1) FIC);
- In Article 25(1) FIC it is stated that special storage conditions and/or conditions of use shall be indicated when necessary for the food, though this is not explained in the tool.
- Regarding the country of origin or place of provenance and instructions for use it is not further elaborated in which cases it is necessary to indicate these (Article 26(2)(a) FIC; Article 9(1)(j) FIC);
- Alongside the alcoholic strength, ‘>1,2%’ is indicated in between brackets. Though, it is not mentioned that this indication is meant for beverages (Article 9(1)(k) FIC);
- The last mandatory particular, namely the nutrition declaration is explained with an example, though apart from the tabular format, a linear format may be applied in case of lack of space (Article 34(2) FIC) which is not mentioned;

- The additional mandatory particulars applicable in the Netherlands, namely indication of production batch and use of packaging gas (Article 5(1) BES), where appropriate, are not present in the list;
- Regarding presentation of information on the label, it is indicated that the name of the food, net quantity and alcoholic strength should be in the same field of vision. Though there are some exceptions to this rule, as explained in Article 16(1) and (2) FIC which are not mentioned;
- There is also an explanation regarding which letter height to use with an example, alongside a visual representation of what is meant by the x-height. When the largest surface area of packaging or containers is less than (<) 80 cm², the x-height of the font size should at least be 0,9 mm (Article 13(3) FIC), thus when it is *equal to* or more (\geq) than 80 cm² the x-height shall be minimally 1,2 mm. The latter is indicated as only more than 80 cm²;
- Finally, there is a disclaimer stating that the tool is not complete and that for further information the labelling specialists at Etiketteren.nl can be approached.

To summarize, Tool 1 does contain the basic list of mandatory particulars and, to some extent, information regarding presentation. However, when using the tool more questions would arise, namely in which cases certain information needs to be added and how this information should properly be indicated. Moreover, there are also some minor mistakes and missing information. Thus, using only this tool, would not result in a label with correctly presented information. Finally, the tool does not provide the user with any information regarding the use of voluntary information.

3.1.2 Tool 2

Description of Tool 2

Tool 2 (Figure 4) is a tool to check whether the letter height on the label meets the requirements on the minimum height (Hetnieuweetiketteren.nl, n.d.).



Figure 4 Tool 2: Business card sized clear plastic tool to measure the height of letters on the label

Theoretical evaluation of the information in Tool 2

Considering the information in Tool 2, the following remarks can be made:

- The tool only helps with determining the letter height, namely measuring the x-height which is visually explained;
- It is furthermore explained when the minimal x-height should be 1,2 mm or 0,9 mm based on the largest surface area of the packaging (Article 13(3) FIC).

To summarize, Tool 2 can only be used to verify whether the letter height on the label meets legal requirements, as explained in its description. The aspect of letter height is explained correctly and is also made practical with this tool. However, since all additional information regarding labelling is not present, using only this tool would not result in a label with correctly presented information. Finally, the tool does not provide the user with any information regarding the use of voluntary information.

3.2 Approaching local small/micro jam producers

Dutch small/micro jam producers were identified through the website of SPN (erkendstreekproduct.nl), from jam labels from the preliminary study, through the website regioproduct.nl, and finally through some respondents. The criterion that had to be met was that they were small or micro enterprises, as defined in Table 1, based on the number of employees, and that they produced jam under their own brand and/or name, thus making them responsible for the information on the label. The producers (14) were approached by sending them an email in which the aim of study was explained and their cooperation was requested (Appendix III). This was followed by a phone call. Upon receiving a positive reply, a meeting was scheduled for the interview. Ultimately, 5 local jam producers agreed to participate in the study.

3.3 Interviews

3.3.1 Interview setup

The interview started by giving the respondent an introduction to the study and explaining the objective of the interview (O’Leary, 2004). Hereafter, the interview was divided into five stages.

I. General questions regarding respondent and company

Initially, general questions regarding the respondent and company were asked to get an indication about the background of the respondent and company.

1. How long have you been working in the company?
2. What is your position in the company?
3. How many employees does your company have?

4. For how long has your company been producing jam?
5. Does your company produce any other products?
If yes,
Which?
6. Where are your products sold (distribution)?
7. Is your company part of a branch organization for local food products?
If yes,
Which?
Which benefits does this provide to your company and products?

II. Questions regarding the labelling process and legislation

Hereafter, questions regarding the labelling process and legislation were asked, to understand how it is currently decided which information is added to their jam label and to get an indication about the respondent's familiarity and knowledge level regarding legislation applicable to jam and food labelling. As the latter will ultimately affect their perception of the 'labelling tools', particularly the information presented in the tool.

8. How do you define jam (ingredients)?
9. Can you elaborate on the current labelling process?
10. If '**yes**' at **Question 7**, is the branch organization for local food products involved in the labelling process?
If yes,
Can you elaborate about their role?
If no,
Would you expect aid with labelling?
11. Which (other) sources of information have you used for legal requirements regarding food labelling?
12. Do you think that the information on the label of your jam adheres to legislation?
Why?
13. Are you familiar with legal product specifications that apply to jam?
If yes,
Can you elaborate?
14. Are you familiar with legal food labelling requirements?
If yes,
Can you elaborate?

III. Questions regarding labelling tools

Subsequently, the respondent was asked whether they would perceive a ‘labelling tool’ as helpful, to verify whether it is indeed relevant to develop a new tool in the future. Furthermore, familiarity and initial expectations of a ‘labelling tool’ were assessed.

15. Do you think a tool assisting to decide which information should/could be on the label ('labelling tool') will be helpful?

Why?

16. Do you know any ‘labelling tools’?

If yes,

Which?

Have you ever used a ‘labelling tool’?

If yes,

Which?

How was your experience?

Were your expectations met?

If no,

What would you expect from such a ‘labelling tool’?

IV. Evaluation of the two labelling tools

Then, an evaluation of the two ‘labelling tools’ was conducted using a 7-point Likert scale with statements based on the evaluation criteria from Table 3. By utilizing such a Likert scale, the respondents’ attitude towards the statements could be measured in a nuanced manner. The respondent was given some time to familiarize with Tool 1, alongside a sheet with its description as stated on the website and the objective of a labelling tool in this study (i.e. to assist in the provision of information on food labels). They were also given a sheet with the statements and the meaning of each score on the Likert scale (1 = Strongly disagree; 2 = Disagree; 3 = Somewhat disagree; 4 = Neither agree nor disagree; 5 = Somewhat agree; 6 = Agree; 7 = Strongly agree). Then the respondent was asked to place themselves in the situation where they had to verify the information on the label of their jam. Hereafter, they were asked to rate the statement based on their perception and motivate their answers. The statements are given in the Table 4. Afterwards, the same procedure was repeated for Tool 2.

17. Evaluation of Tool 1

18. Evaluation of Tool 2

Table 4 Statements for the evaluation of the ‘labelling tools’

Topic	Statement
Quality of content	The tool has an appropriate format and layout
	The information presented in the tool is relevant for my product(s)
	The information presented in the tool is adequately elaborated upon for my product(s)
Usefulness	The tool would adequately help me with the provision of information on the labels of my product(s)
	Using the tool would enable faster provision of information on the labels of my product(s)
	Using the tool would lead to a label with correctly presented information
	Using the tool would make the provision of information on the labels of my product(s) easier
Ease of use	Using the tool would enable me to do a better job at the provision of information on the labels of my product(s)
	It is easy to learn how to operate the tool
	The tool is clear and understandable
Overall judgment	It would be easy to remember how to use the tool
	I would use this tool in the future
	The tool was helpful
	The tool met my expectations

V. Finalizing questions

Lastly, the respondents were asked if they had any other suggestions and requirements for a ‘labelling tool’ after the evaluation of the two existing tools. The respondent was also asked if they had any other remarks or wanted to clarify any answers (O’Leary, 2004).

19. Do you have any other suggestions or requirements for a ‘labelling tool’ to meet your expectations?

If yes,

Which?

20. Do you have any final remarks?

21. Would you like to clarify any answers?

At the end of the interview, the respondent was thanked for their time and cooperation. It was also asked if the possibility exists to contact him/her in case of further questions or clarifications (O’Leary, 2004).

3.3.2 Data collection

Data was collected by means of face-to-face semi-structured interviews. The interview questions and statements, as presented in the previous section, were translated into Dutch to cater to the local producers.

Avoiding measurement errors

Since questions were used as the research instrument for the empirical study, the ‘Questions to avoid’ as described by O’Leary (2004) were taken into consideration when formulating the interview questions. Furthermore, the following interview tips were used as well (O’Leary, 2004):

- Starting with simple questions;
- Asking strategic questions;
- Keeping the conversation flowing by probing;
- Keeping track of the interview;
- Maintaining the role of an objective interviewer;
- Properly rounding up the interview.

Note-taking was performed in a structured manner by utilizing printed answer sheets in which the respondents’ answers were filled in as they were speaking. To assure no answers were missed, the responses were also documented by audio recordings with permission of the respondents (O’Leary, 2004). The answers per interview are given in Annex IV.

3.4 Data analysis

The data collected through the interviews was both qualitative and quantitative. Using the raw qualitative data (Annex IV), results were presented in the form of summary tables per topic in Chapter 4. The quantitative data collected during the evaluation of the labelling tools was inserted in an Excel spreadsheet, in which the averages scores were calculated as well. The 7-point Likert scale was divided into three sections: 1-3 (red), 4 (yellow) and 5-7 (green) to classify the ratings to low, medium and high respectively. Finally, in order support the quantitative data from the evaluations it was combined with the qualitative data (i.e. motivations).

4 Results and discussion

4.1 Background of the respondent and company

4.1.1 Experience respondent and company

As presented in Table 5, the respondents had varying amounts of working experience in their companies ranging from 2,5 to 48 years. Moreover, all of the respondents were either owner or co-owner of their respective businesses. Based on the number of people working in the company, four companies could be defined as micro enterprises and one company as a small enterprise (European Commission, 2018c). Furthermore, the companies had varying amounts of experience in jam production as well, ranging from 2,5 to 30 years. In the Netherlands, there has been a growing trend in the number of micro-scale food companies since 2011 (FNLI, 2017) and when considering Respondent 5, the company can be considered as part of this trend.

Table 5 Background respondent and company

	Working experience in the company	Position in the company	Total number of people working in the company	Company's experience in jam production
<i>Respondent 1</i>	48 years	Co-owner	2	30 years
<i>Respondent 2</i>	9 years	Owner	1	15 years
<i>Respondent 3</i>	31 years	Co-owner	4	20 years
<i>Respondent 4</i>	10 years	Owner	14	23 years
<i>Respondent 5</i>	2,5 years	Owner	1	2,5 years

As presented in Table 6, all companies manufactured other food products apart from jam, including other fruit products. This indicates that the producers ought to have wider knowledge about food labelling requirements, apart from those applicable to jam.

Table 6 Other products manufactured by the companies

	Other products manufactured by the company
<i>Respondent 1</i>	Honey, liqueur, plum port and chutney
<i>Respondent 2</i>	Egg liqueur, chutneys and juices
<i>Respondent 3</i>	Cranberry products (e.g. jelly, chutney), applesauce, candied pears and soup
<i>Respondent 4</i>	Egg liqueur, mustard, fruit syrups, different types of sauces and chutneys
<i>Respondent 5</i>	Juices, applesauce and candied pears

4.1.2 Distribution and sales of products

Generally, local food products are available in different locations (Vijn et al., 2013). Locations such as local food stores, farm shops, cheese farms and bakeries were found to be quite common among the respondents who had a distribution channel. Distribution was done through different means, namely two of the respondents did distribution themselves, one also used wholesale alongside their own distribution and one of the companies sold their products to the branch organization for local food products, which further distributed their products. Noteworthy is that

only the small enterprise distributed their products through wholesale. Since one of the respondents only sold their products in their own shop, they did not have a distribution channel. All the type of locations, where the products are sold by the respondents, and their means of distribution are presented in Table 7.

Table 7 Type of locations where products are sold and means of distribution

	Type of locations where the products are sold	Means of distribution of products
<i>Respondent 1</i>	<ul style="list-style-type: none"> ▪ Food stores (larger quantities) ▪ Home (very small quantities) 	Products are sold to the branch organization, who further distributes the products to food stores
<i>Respondent 2</i>	<ul style="list-style-type: none"> ▪ (Care) bakeries ▪ Local food stores ▪ Cheese farms ▪ ± 5 times a year at the local market in Woerden ▪ Occasionally at events/fairs 	The distribution of products is done by the company itself
<i>Respondent 3</i>	<ul style="list-style-type: none"> ▪ Farm shops (own and others) 	The distribution of products is done by the company itself
<i>Respondent 4</i>	<ul style="list-style-type: none"> ▪ Butchers ▪ Bakeries ▪ Campsites ▪ Cheese farms ▪ Specialty stores ▪ Greengrocers ▪ Local food stores 	The distribution of products is partly done by the company itself and also via wholesale
<i>Respondent 5</i>	<ul style="list-style-type: none"> ▪ Own store 	No distribution of products

Depending on the distribution of the local food products, the nutrition declaration may not be mandatory as explained in Section 2.2.12 (Annex V(19) FIC). However, this is only applicable where producers mainly derive their turnover through direct sales to the consumer (i.e. through own stores or direct delivery) and where the supply to third parties does not account for more than 50% of the total turnover (KNS, 2017; NBC, 2017). Considering the results, it is likely that only products from Respondent 5 would fall into this category.

4.2 Branch organizations for local food products

Out of the five respondents, four were part of branch organizations for local food products as presented in Table 8. Marketing of products was most commonly mentioned among the respondents as a benefit of membership to the branch organizations.

Table 8 Branch organizations and their benefits

Branch organization	Benefits for company and products
Groene Hart	<ul style="list-style-type: none">▪ Distribution of products▪ Marketing of products
Erkend Veluws Streekproduct	<ul style="list-style-type: none">▪ Marketing of products
Zeker Zeeuws (only for certain products produced in Zeeland with local raw materials)	<ul style="list-style-type: none">▪ None
Regioproduct.nl	<ul style="list-style-type: none">▪ Initially some marketing▪ Currently findability on their website

The branch organizations ‘Groene Hart’, ‘Erkend Veluws Streekproduct’ and ‘Zeker Zeeuws’ are affiliated with ‘Stichting Streekeigen Producten Nederland’ (SPN). Members of these organizations can only use the SPN logo and/or their own regional logo when specified production characteristics are met (Erkendstreekproduct, 2019). Unlike Regioproduct.nl, which maps out information about food producers and products from different provinces and regions in the Netherlands on their website (RegioProduct, 2019), which was also mentioned by Respondent 5.

Role in labelling

Only one respondent mentioned that they received a labelling guide for food products through the branch organization, which was through ‘Groene Hart’ and SPN. The respondent furthermore indicated that every two years checks are performed by these organizations to verify whether specifications, including labelling specifications are met. Another respondent stated that since the certification by the branch organization, in this case ‘Zeker Zeeuws’, is based on the raw materials and recipe, the verification only includes a check of proper usage of the regional logo and clear indications of the origin of the ingredients on the label. The respondents who were members of ‘Erkend Veluws Streekproduct’ and regioproduct.nl did not expect any aid with labelling from these organizations.

The results point to that the branch organizations have different levels of involvement with the local producers and their products. Moreover, even with the organizations affiliated with SPN, there is no harmonization in their role in food labelling.

4.3 Definitions of jam

Legally ‘jam’ is defined as a mixture, brought to a suitable gelled consistency, of sugars, the pulp and/or purée of one or more kinds of fruit and water. Citrus jam, however, may be made from the whole fruit, cut into strips and/or sliced (Article 1(1)(g) VVP). The respondents defined jam in their own words as presented in Table 9.

Table 9 Definitions of jam given by the respondents

Definitions of jam	
<i>Respondent 1</i>	“A lot of fruit and not too much sugar, however enough for a long shelf life. Pectin is also added to the jam and sometimes apple juice (naturally contains a lot of pectin). I apply a ratio of 50% fruit and 50% sugar for the jams.”
<i>Respondent 2</i>	“More than 60% fruit, where I use pieces of fruit and not purée. I also use the gelling sugar special (semi-sweet). I aim for less sugar in the jam, but of course within the legal framework. I try to buy fruit from small growers who grow old-fashioned varieties with a different taste.”
<i>Respondent 3</i>	“Pure fruit, that has been grown and harvested by us (“A-Quality”) and is also not chemically treated, to which gelling sugar is added.”
<i>Respondent 4</i>	“Gel of fruits, sugar, pectin and acid. Furthermore, we make various types of jam, e.g. with/without added sugar, organic or conventional.”
<i>Respondent 5</i>	“It is a basic jam in terms of ingredients. For the thickening I use pectin (vegetable) instead of gelatin, which makes the jam a bit thinner. It also makes the jam more accessible to a wider audience. Furthermore, I also try to use less sugar, so that you really taste the fruit.”

All respondents mentioned the use of fruit, which is an essential ingredient of jam. Noteworthy is that Respondent 2 mentioned that the pulp (pieces of fruit) is used instead of purée. However, both pulp and purée can be used in the manufacturing of ‘jam’. For ‘extra jam’ however, only the unconcentrated pulp of fruits may be used; with some exceptions to certain berries (Article 1(1)(h) VVP). Furthermore, Respondent 3 mentioned that ‘A-Quality’ fruits are used in the jam. The fruits used in ‘jam’ or ‘extra jam’ indeed have to meet certain quality requirements as described in Article 1(1)(b) VVP. Moreover, to achieve the gelled consistency, pectin or gelling sugar were utilized in the production process. Three of the respondents also stated that they do not want to use too much sugar, though it should be taken into consideration that a product can only be named ‘jam’ or ‘extra jam’ when a soluble dry matter content of at least 55% is achieved (Article 13 VVP).

4.4 Labelling and legislation

4.4.1 Labelling process and sources of information utilized

In Table 10 the labelling process is presented, alongside the sources of information utilized for legal labelling requirements. In all cases, the producers themselves decided which information should be on the label. Though in some cases, the label designer or printing company also decided

on some elements as the letter height. It should be noted that the letter height also has to comply with legal requirements (Article 13(2) and (3) FIC).

Various sources of information regarding legal labelling requirements were utilized by the respondents, ranging from a labelling guide by the branch organization to educational meetings organized by different agricultural organizations or self-search on the internet.

Table 10 Labelling process and information sources for legal labelling requirements

	Labelling process	Sources of information for legal labelling requirements
<i>Respondent 1</i>	<ul style="list-style-type: none"> ▪ Information decided by the producer ▪ Information sent to label designer who determines the letter height ▪ Approval of the label by the producer ▪ Sent to the printing company 	<ul style="list-style-type: none"> ▪ Labelling guide from 'Groene Hart' and SPN ▪ For honey: 'Bijenvereniging' ▪ For alcoholic beverages: the distillery
<i>Respondent 2</i>	<ul style="list-style-type: none"> ▪ Information decided by the producer ▪ Label design made by the producer ▪ Sent to the printing company 	<ul style="list-style-type: none"> ▪ Educational meetings by ZLTO (Zuidelijke Land- en Tuinbouworganisatie) ▪ Website NVWA
<i>Respondent 3</i>	<ul style="list-style-type: none"> ▪ Information decided by the producer ▪ Information sent to label designer who determines the size of the label ▪ Sent to the printing company who determines the letter height based on legal requirements 	<ul style="list-style-type: none"> ▪ Self-search on the internet (e.g. calorietabel.nl for the nutritional declaration) ▪ Folders from LTO (Land- en Tuinbouworganisatie) ▪ Educational meetings by LTO ▪ Educational meeting by 'Toer de Boer op'
<i>Respondent 4</i>	<ul style="list-style-type: none"> ▪ Information decided by the producer 	<ul style="list-style-type: none"> ▪ Background in food technology ▪ Legal documents
<i>Respondent 5</i>	<ul style="list-style-type: none"> ▪ Information decided by the producer ▪ Labels printed by the producer 	<ul style="list-style-type: none"> ▪ Self-search on the internet

4.4.2 Assessment of information on the label

When asked if the respondents believe that their label adheres to legislation, three respondents believed that their label indeed met labelling requirements, whereas two respondents knew that information on their labels was incomplete. However, while believing that their labels comply with legislation, Respondent 3 indicated uncertainty regarding values in the nutritional declaration and Respondent 4 admitted that it could occur that their labels have incomplete information when these are small in size. More detailed information is given in Table 11.

Table 11 Self-assessment of information on the label

Information on the label adheres to legislation		Remarks
<i>Respondent 1</i>	Yes	“Because I use the labelling guide from ‘Groene Hart’ and SPN. SPN also performs checks every 2 years. I have never received a complaint about the label.”
<i>Respondent 2</i>	No	“Gelling powder is a compound ingredient that I have not further elaborated on in the ingredient list. Moreover, the nutritional value is also not on the label.”
<i>Respondent 3</i>	Yes	“Though I am unsure of the values in the nutrition declaration. They are based on calculations and not on product tests.”
<i>Respondent 4</i>	Yes	“Because the letter height, nutritional value, name of the company etc. are checked. If mistakes are made, it can be due to the size of the label. If the label is small, it could happen that the information is not complete. I think most of our labels are reasonably complete.”
<i>Respondent 5</i>	No	“Because the rules are much sharper. There should be more information on the label and in a different format. I know that there are more requirements.”

Apart from Respondent 1, the information on the jam labels was analyzed. Also on the labels of the respondents who believed that their label was indeed correct, mistakes could be found e.g. presentation of information in the field of vision (product name and net quantity not in the same field of vision), no indication of the name and address the producer (only the website was indicated) and no indication of total sugar content per 100 g.

4.4.3 Familiarity with legal requirements of jam and labelling of foods

Apart from Respondent 5, the respondents all claimed to be familiar with the legal product specifications applicable to jam. Respondent 3 mentioned reading when a product can be named ‘jam’ and Respondent 4 also mentioned reading the VVP in which product specification for jam are given. The other respondents did not give much further explanation. Finally, all respondents claimed to be familiar with legal labelling requirements, mainly through the different information sources as presented in Table 10.

The previous results from Sections 4.4.2 and 4.4.3 suggest that the respondents indeed have some knowledge of the legal requirements applicable to jam and food labelling. Not very in-depth though, as their food labels did not completely meet labelling requirements, nor did most of them elaborate on the questions about legislation. Ultimately, the familiarity and knowledge level of the

respondents of legal requirements of jam and labelling will affect their perception of the two ‘labelling tools’ during the evaluation.

4.5 Labelling tools

4.5.1 Perceived helpfulness and familiarity of labelling tools

All respondents agreed that a tool assisting in deciding which information should/could be on the label would be helpful and their motivations are presented in Table 12. However, Respondent 1 was uncertain regarding the usefulness of another tool as they were already satisfied with the labelling guide from ‘Groene Hart’ and SPN. Furthermore, Respondent 3 mentioned that a labelling tool, might be helpful, but they had already figured out everything by now. The other respondents stated that a labelling tool would give more clarity, confirmation whether information on the label is correct, and make labelling information more accessible, thereby indicating that it would be relevant to develop a new ‘labelling tool’.

Table 12 The respondents’ motivations on helpfulness of a labelling tool

Motivation why a labelling tool would be helpful	
<i>Respondent 1</i>	“I already use the labelling guide from Groene Hart and SPN. I am uncertain whether another tool will be useful, for me it is important to meet their standards.”
<i>Respondent 2</i>	“It is especially helpful for small producers. Often, they are primarily fruit producers and produce jam as a hobby. A simple checklist would be helpful for clarity.”
<i>Respondent 3</i>	“It might be helpful. It is a bit late, because now I have already figured out everything.”
<i>Respondent 4</i>	“I think that it is very handy because it gives some confirmation, whether the information on the label is correct.”
<i>Respondent 5</i>	“This way labelling information is made much more accessible, without having to go into the legislation. My production is also very small-scale, so you do not want to spend a lot of time on it. Then I would also be prepared to make adjustments my label.”

Apart from Respondent 1, the other respondents stated that they were not familiar with any labelling tools. However, during the evaluation it turned out that Respondent 4 was familiar with Tool 2. None of the other respondents were further familiar with Tool 1 or Tool 2. This conveys that even though Tool 1 and 2 are easily available and free, they are quite unknown among the local producers.

4.5.2 Initial expectations of a labelling tool

Varying responses were found when the respondents were asked what they would expect from a labelling tool (Table 13). Respondent 1, while already using a labelling guide did not know what to expect from a labelling tool. Furthermore, other respondents stated that they would like to be able to verify the information on their label with the tool. Respondent 2 also mentioned, expecting

easy language and references to regulations in the tool. Respondents 4 and 5 mentioned that they would like a digital tool with input of information, where Respondent 4 wanted an input of recipe and product specifications and Respondent 5 would like an input of information which is currently on the label.

Table 13 Initial expectations of a labelling tool

Expectations from a ‘labelling tool’	
<i>Respondent 1</i>	“I don’t know what to expect.”
<i>Respondent 2</i>	“A simple list of information of what should and could be on the label. Also explained in simple language, of course correctly. Furthermore, added references to the regulations to deepen my understanding further.”
<i>Respondent 3</i>	“A tool with which I can check whether the information on the label is correct. For example, to check whether the calculations in the nutrition declaration are correct.”
<i>Respondent 4</i>	“A system in which I can fill in (1) the recipe, then (2) the product specifications, which partly comes from the recipe with some additions (e.g. cross-allergens), with an output of (3) the label. Because it is all quantitative data. Basically, a PIM (product information management) system. Something like that exists e.g. Eclarion but it is expensive.”
<i>Respondent 5</i>	“A clear digital tool in which I can fill in the information that I already have on the label and then see which information is missing or too much. I would also like a visual representation of the label in the tool.”

4.5.3 Evaluation of Tool 1

In Table 14 the respondents’ scores for each statement regarding ‘Quality of content’ of Tool 1 are given, alongside the average score per statement. Four respondents (somewhat) agreed that the format and layout of the tool were appropriate. One respondent, however, disagreed and felt that it could have been better, as it is not easy to measure the letter height using this tool. Furthermore, all respondents (somewhat) agreed that the information presented in the tool was relevant for their product(s). However, there were remarks about the information being too much or incomplete for a product like jam or meat. Regarding the information presented in the tool being adequately elaborated upon for their product(s), four respondents (somewhat) agreed, while one respondent somewhat disagreed. It was mentioned that particular indications, which have to be added to the jam label (e.g. amount of fruit used), cannot be found in this tool. Finally, all respondents (somewhat) agreed that the tool would adequately help them with the provision of information, though some respondents stated that there is definitely some information missing.

When considering the average scores per statement, these vary between 5 and 6, giving the ‘Quality of content’ of Tool 1, as a whole, an average score of 5. This is mainly due to the fact that certain information in the tool is missing and is thus incomplete, which was also found in the theoretical evaluation of Tool 1.

Table 14 The respondents' ratings of the Quality of content of Tool 1

Quality of content	Scores given by respondents					Average score
	1	2	3	4	5	
The tool has an appropriate format and layout	6	5	6	3	6	5
The information presented in the tool is relevant for my product(s)	5	6	6	5	6	6
The information presented in the tool is adequately elaborated upon for my product(s)	5	5	6	3	6	5
The tool would adequately help me with the provision of information on the labels of my product(s)	5	6	6	5	5	5

In Table 15 the respondents' scores for each statement regarding 'Usefulness' of Tool 1 are presented, alongside the average score per statement. Three respondents (somewhat) agreed that using the tool, would enable faster provision of information on labels, while two respondents disagreed. One stated that they were already using a labelling guide and the other claimed that they were already aware of labelling requirements and using this tool would thus not make provision of information on labels any faster. Varying responses, from 'neither agree nor disagree' to 'strongly agree' were found whether using the tool would lead to a label with correctly presented information. Some respondents felt that they would still have to look up certain information as this was not present in the tool, while others felt that using this tool would result in a correct label. Four respondents (somewhat) agreed that the task of provision of information on labels would be easier using this tool, one respondent disagreed as they already use a labelling guide. Four respondents (somewhat) agreed that they would be able to do a better job at provision of information on the labels when using this tool, while one respondent neither agreed nor disagreed with this statement. The respondent explained that they had already properly made a label, making the tool unnecessary. Moreover, certain information was missing in the tool, though it could suffice as a small checklist.

When considering the average scores per statement, these vary between 4 and 5, giving the 'Usefulness' of Tool 1, as a whole, an average score of 5. This is due to the fact that certain information in the tool is missing making it incomplete, which was also found in the theoretical evaluation. Furthermore, certain respondents felt that they were already aware of labelling requirements, making the tool less useful to them.

Table 15 The respondents' ratings of the Usefulness of Tool 1

Usefulness	Scores given by respondents					Average score
	1	2	3	4	5	
Using the tool would enable faster provision of information on the labels of my product(s)	2	6	6	2	5	4
Using the tool would lead to a label with correctly presented information	5	7	6	4	5	5
Using the tool would make the provision of information on the labels of my product(s) easier	2	6	6	5	6	5
Using the tool would enable me to do a better job at the provision of information on the labels of my product(s)	5	6	6	4	6	5

In Table 16 the respondents' scores for each statement regarding 'Ease of use' of Tool 1 are presented, alongside the average score per statement. For all of the statements for 'Ease of use', the respondents (strongly) agreed upon. Leading to an average of 6 for 'Ease of use', as a whole, indicating that Tool 1 is easy to use.

Table 16 The respondents' ratings of the Ease of use of Tool 1

Ease of use	Scores given by respondents					Average score
	1	2	3	4	5	
It is easy to learn how to operate the tool	6	6	6	7	6	6
The tool is clear and understandable	6	6	6	7	6	6
It would be easy to remember how to use the tool	6	6	6	6	6	6

In Table 17 the respondents' scores for each statement for the overall judgement of Tool 1 are presented, alongside the average score per statement. All respondents (somewhat) agreed that they would use the tool in the future, as it is indeed a small checklist, giving it an average score of 6. Furthermore, all respondents (somewhat) agreed that the tool was helpful, as it was clear and would suffice as a small checklist, giving it an average score of 6. Two respondents felt that the tool indeed (somewhat) met their expectations, whereas two other respondents neither agreed nor disagreed with this statement. One of these respondents did not know what to expect from a labelling tool and the other felt they would rather have a digital tool with a visual representation of the label. One respondent felt that the tool did not meet their expectations, as they would like a tool with more information in a digital format. Ultimately, the tool received an average score of 4 for meeting the expectations of the respondents.

Table 17 The respondents' overall ratings of Tool 1

Overall judgement	Scores given by respondents					Average score
	1	2	3	4	5	
I would use this tool in the future	5	6	6	5	6	6
The tool was helpful	6	6	6	5	5	6
The tool met my expectations	4	6	5	2	4	4

4.5.4 Evaluation of Tool 2

In Table 18 the respondents' scores for each statement regarding 'Quality of content' of Tool 2 are presented, alongside the average score per statement. Four respondents (somewhat/strongly) agreed that the format and layout of the tool were appropriate, quoting that it would be easy to measure letter height using this tool. One respondent however, felt that only the letter height can be measured, making the tool very incomplete. Furthermore, all respondents (somewhat/strongly) agreed that the information presented in the tool was relevant for their product(s). Regarding the information presented in the tool being adequately elaborated upon for their product(s), four respondents (somewhat) agreed, while one respondent disagreed. It was mentioned again that the information in the tool was incomplete. Finally, two respondents (strongly) agreed that the tool would adequately help them with the provision of information, while three respondents (somewhat) disagreed with this statement, reasoning that the tool will merely help with verifying the letter height on their labels.

When looking at the average scores per statement, these vary between 4 and 6, giving the 'Quality of content' of Tool 2, as a whole, an average score of 5. This is mainly due to the fact that certain information in the tool is missing and is thus incomplete, which was also found in the theoretical evaluation of Tool 2.

Table 18 The respondents' ratings of the Quality of content of Tool 2

Quality of content	Scores given by respondents					Average score
	1	2	3	4	5	
The tool has an appropriate format and layout	5	7	2	6	6	5
The information presented in the tool is relevant for my product(s)	6	7	6	5	6	6
The information presented in the tool is adequately elaborated upon for my product(s)	6	6	2	5	6	5
The tool would adequately help me with the provision of information on the labels of my product(s)	6	7	2	2	3	4

In Table 19 the respondents' scores for each statement regarding 'Usefulness' of Tool 2 are given, alongside the average score per statement. Four respondents disagreed that using the tool, would

enable faster provision of information on labels, quoting that the information is incomplete and does not really help with the provision of information, thus they would still have to look further. Another respondent mentioned that they are not directly involved in determining the letter height as it is done by a designer. Three respondents (somewhat) disagreed that using the tool would lead to a label with correctly presented information, as the letter height is only one aspect. Varying responses, from disagree to strongly agree were found, whether the task of provision of information on labels would be easier using this tool. Two respondents neither agreed nor disagreed with this statement as they were unsure or felt that it only helps with the letter height. One respondent felt that the letter height is determined by the printing company and another mentioned that it is only a check of one aspect of labelling. With regard to being able to do a better job at provision of information on the labels when using this tool, varying responses were given as well. One respondent was unsure and another mentioned that it would only partly help and therefore, neither agreed nor disagreed with this statement. While two other respondents disagreed with this statement, mentioning that the tool only helps with the aspect of letter height.

When looking at the average scores per statement, these vary between 3 and 4, giving the ‘Usefulness’ of Tool 2, as a whole, an average score of 4. This is due to the fact that the tool merely assists in checking the letter height and all additional labelling information is missing in the tool, making it incomplete, which was also found in the theoretical evaluation. Furthermore, some respondents felt that they were not directly involved in this aspect of labelling, making the tool less useful to them.

Table 19 The respondents’ ratings of the Usefulness of Tool 2

Usefulness	Scores given by respondents					Average score
	1	2*	3	4	5	
Using the tool would enable faster provision of information on the labels of my product(s)	2	7	2	2	2	3
Using the tool would lead to a label with correctly presented information	6	7	2	3	3	4
Using the tool would make the provision of information on the labels of my product(s) easier	4	7	2	4	3	4
Using the tool would enable me to do a better job at the provision of information on the labels of my product(s)	4	7	2	4	2	4

*Respondent 2 mentioned that the tool is very useful in all aspects to measure only letter height, and therefore gave high scores. Thus, Tool 2 was more evaluated by its description rather than as a labelling tool.

In Table 20 the respondents’ scores for each statement regarding ‘Ease of use’ of Tool 2 are presented, alongside the average score per statement. For all of the statements for ‘Ease of use’, the respondents (strongly) agreed upon, resulting in an average of 6 for ‘Ease of use’, as a whole, indicating that Tool 2 is easy to use.

Table 20 The respondents' ratings of the Ease of use of Tool 2

Ease of use	Scores given by respondents					Average score
	1	2	3	4	5	
It is easy to learn how to operate the tool	6	7	6	6	6	6
The tool is clear and understandable	6	6	6	6	6	6
It would be easy to remember how to use the tool	5	7	6	6	6	6

In Table 21 the respondents' scores for each statement for the overall judgement of Tool 2 are presented, alongside the average score per statement. Three respondents (somewhat/strongly) agreed that they would use the tool in the future, as a quick check of the letter height on the label. Two respondents, however, disagreed, as one mentioned that the task of checking the letter height is done by the designer and the other felt that the tool was incomplete, giving perceived future usage an average score of 4. About the same applies for the statement whether the tool was helpful, which has an average score of 5. Four respondents mentioned that the tool did (somewhat/strongly) not meet their expectations, as the information in the tool is incomplete. While another respondent neither agreed nor disagreed, as they did not know what to expect from a labelling tool. Ultimately, the tool received an average score of 2 for meeting the expectations of the respondents.

Table 21 The respondents' overall ratings of Tool 2

Overall judgement	Scores given by respondents					Average score
	1	2	3	4	5	
I would use this tool in the future	2	7	2	6	5	4
The tool was helpful	2	7	2	6	6	5
The tool met my expectations	4	3	2	1	2	2

4.5.5 Comparison of Tool 1 and Tool 2

In Table 22 a side to side comparison of the average scores of Tool 1 and Tool 2 is presented. Although, the average values may not always give an accurate representation of all the respondents, it does give an indication about the general perception of the different aspects of the tools. For 'Quality of content' both tools have an average score of 5, which is due to incomplete information in both of the tools. Even though Tool 2 encompasses less information than Tool 1, they both scored 5, which could be due to different perceptions of the quality of content by the respondents. Regarding 'Usefulness', Tool 1 scored only slightly higher than Tool 2, which could be explained by the perception of Tool 2 as being highly useful by Respondent 2. The lower score of Tool 2 is likely due to lack of information and certain respondents' lack of involvement in determining the letter height. Moreover, both tools were perceived as easy to use, with average scores of 6 for 'Ease of use'. For 'Future usage' of the tools, Tool 1 scored 6, as respondents would use it as a small checklist, whereas Tool 2 scored 4, as the task of checking letter height was not done by all respondents and others deemed the tool incomplete. With regard to 'Helpfulness' of the tools, Tool 1 scored 6, whereas Tool 2 scored 5, for the same reasons as for

‘Future usage’. Regarding meeting expectations of the respondents, Tool 1 scored 4, due to lack of information and preference of a digital format by certain respondents. Tool 2 scored 2, due to lack of information in the tool.

Table 22 Side to side comparison of the average scores of Tool 1 and Tool 2

Criteria and overall judgements	Average scores	
	Tool 1	Tool 2
Quality of content	5	5
Usefulness	5	4
Ease of use	6	6
Future usage	6	4
Helpfulness	6	5
Expectations met	4	2

Apart from the respondents’ reasoning for their scores, their perception was also affected by their knowledge level of legal labelling requirements. As previously mentioned, it was suggested that they did not have an in-depth knowledge of these requirements. Moreover, most of the respondents were also not familiar with any ‘labelling tools’. This could explain why the tools, in particular Tool 2, still scored well even though it was found in the theoretical evaluation that the information in the tools is incomplete. However, it should be noted that the manufacturers of the two ‘labelling tools’ do not claim that these are complete. Moreover, the tools are merely based on Regulation 1169/2011, not considering the Dutch labelling requirements as described in BES and WIL or foods to which vertical legislation applies. Additionally, there are also no references to voluntary information that may be added to the label. Hence, the existing tools are not proper ‘labelling tools’, as they would only partially help the producers with food labelling.

4.5.6 Improvement points for the labelling tools

The respondents evaluated two labelling tools based on different statements, which should be agreed upon by users to deem such a tool as helpful (Laitenberger & Dreyer, 1998; Campbell, 1999). Apart from the aspects that were liked in the tools, the aspects that could be improved or included in a new tool to meet the requirements and expectations of the respondents are presented in Table 23.

Table 23 Additional requirements for a labelling tool

Criteria	Improvement points (number of respondents)
Quality of content	<ul style="list-style-type: none"> ▪ Complete /more detailed information (5) ▪ Digital format (4) <ul style="list-style-type: none"> ○ Ability to print (1) ○ Input of recipe and product specifications and output of label; product information management system (1) ○ Input of current information of the label and output of missing or unnecessary information, alongside a visual representation of the label (1) ▪ Ability verify whether the information on the label is correct (2) ▪ A4 paper format (1)

	<ul style="list-style-type: none"> ▪ Categorization of different types of food (1) ▪ Good legibility (1) ▪ References to relevant legislation or websites (1)
Usefulness	<ul style="list-style-type: none"> ▪ Complete /more detailed information (5) ▪ Help with calculations for the nutrition declaration (3) ▪ Examples on how to properly present information on the labels (1)
Ease of use	<ul style="list-style-type: none"> ▪ Simple language (1)

Even though the respondents indicated different improvement points for a labelling tool, all would like a tool with complete and more detailed information in order to improve the ‘Quality of content’. Most respondents were also in favor of a digital format, with their own specifications. However, if the tool is digital and could be printed as well, it could cater to more users. Respondents also would like the tool to enable them to verify the current information on the label. Other points mentioned were: categorization of different types of food, good legibility, and references to relevant legislation or websites. To make the tool more useful, complete and more detailed information, and help with calculations for the nutrition declaration were required by the respondents. Furthermore, one of the respondents also mentioned that inclusion of examples of labels, with properly presented information, were preferred. Finally, one respondent mentioned the need for use of simple language in the tool to make the tool easier to use.

5 Conclusions, limitations and recommendations

5.1 Conclusions

The main function of information on food labels is to provide a basis for consumers to make informed choices and to make safe use of food. However, mistakes made in the provision of information on food labels are still quite common. This was found to be the case among local food products as well. Currently, two tools are available free of cost that can assist food producers in the provision of information on the label ('labelling tools'). It is unknown, however, what local producers expect from such a tool and if these tools meet their expectations. Thus, the aim of this research was to understand local producers' expectations from a tool assisting in the provision of information on food labels, focusing on small and/or micro-scale jam producers.

Prior to the practical evaluation by the local jam producers, the information in the two 'labelling tools' was theoretically evaluated based on the legal labelling requirements described in the literature review. It was found that Tool 1 only contained a list of mandatory particulars as described in Regulation 1169/2011 and some information regarding presentation. There were also some minor mistakes present. Tool 2 on the other hand merely offered aid with determining the letter height. Therefore, it can be concluded that both tools did not contain complete information regarding food labelling and would only partially help the food producer, whereas one of the tools may even lead to labelling mistakes due to inaccurate information.

Even though the respondents were mostly not familiar with any 'labelling tools', the concept of a tool assisting in deciding which information should/could be on the label was received well by all of the respondents. As mistakes could be traced on all of the respondents' labels that were studied, it can be concluded that there is indeed something wrong in the process of labelling, whether this is due to uncertainty or ambiguity regarding legal food labelling requirements or even due to unwillingness to adequately present all required information on the label. Thus, the use of a 'labelling' tool could indeed be helpful to reduce mistakes made in food labelling.

The tools were evaluated by the local jam producers based on the main criteria found to evaluate such an instructional tool, namely 'Quality of content', 'Usefulness' and 'Ease of use'. These criteria, alongside their sub-criteria and an overall judgement in the form of statements, were utilized in the evaluation of the two tools (Table 4). Considering the overall judgment of the 'labelling tools' (Table 22), it was found that both tools were deemed quite helpful by the respondents, with Tool 1 scoring a bit higher than Tool 2 in this respect. Furthermore, the respondents were also likely to use Tool 1 in the future. However, regarding future usage of Tool 2, the results were inconclusive. Even though the two labelling tools were deemed rather useful and some respondents were likely to use these tools in the future, it can be concluded that the tools did not really meet their expectations. This was particularly the case for Tool 2, as it only helps the food producers with determining the letter height on the label. Ultimately, both tools were found to be lacking information, which was the main reason leading to the tools not really meeting the expectations of the local small/micro jam producers.

Apart from requiring complete and more detailed information in a ‘labelling tool’, it was found that most of the respondents were also in favor of a digitalized tool. However, regarding the functioning of digital tool itself there were different expectations, making their requirements on this exact aspect inconclusive. Moreover, to make the tool more useful, the respondents would like aid with the calculations for the nutrition declaration as well. Lastly, the use of simple language was required to make the tool easier to use.

Overall, it can be concluded that some insights were gained into what local small/micro jam producers expect from a tool assisting in the provision of information on food labels. These insights can be useful in the development of a ‘labelling tool’, which meets the expectations of its prospective users, ultimately leading to an improvement of information on food labels.

5.2 Roadmap for the development of a new ‘labelling tool’

From the insights gained in this study, the following steps could be followed in the development of a new ‘labelling tool’ which contains proper legal information and meets the expectations of the local producers. In order to be deemed helpful, such an instructional tool should meet the needs of the prospective users (Laitenberger & Dreyer, 1998; Campbell, 1999), thus the tool should score well on all three evaluation criteria. Ultimately, the ‘labelling tool’ should act as an intermediate between legal labelling requirements and the food business operator who is ultimately responsible for this information.

Starting with the ‘Quality of content’ and ‘Usefulness’, the respondents required complete and more detailed information about food labelling, thus the information presented in the tool should be based on the legal labelling requirements, taking into account Regulation 1169/2011, the Dutch law (BES and WIL) and foods to which vertical legislation applies. Moreover, publicly regulated voluntary information should be included in the tool as well, namely the general requirements applicable to voluntary information and additions to the nutrition declaration as laid down in Regulation 1169/2011. Furthermore, conditions for the use of nutrition and health claims (Regulation 1924/2006), quality schemes (PDO, PGI and TSG) for agricultural products and foodstuffs (Regulation 1151/2012) and indications to organic production (Regulation 834/2007) should be included as well. Whenever changes occur to these legal documents, the content of the tool should be updated timely as well. Since the tool will be based on publicly regulated labelling requirements, a disadvantage may be that when companies are part of a private scheme (e.g. local food schemes) these specific requirements will not be included in the tool.

Considering the format of the tool, most respondents were in favor of a digital tool. A digital tool, however, can be programmed to function in different ways. Thus, a layout should be chosen in which the evaluation criteria are met. Apart from basing the content on current legislation, the tool should also be easy to use by presenting the legal information in simple language. Furthermore, it would be a good suggestion to start with a categorization of foods to find out whether vertical legislation or any other particular requirements apply to the food. In this way, the users are not flooded with information that may not be applicable to their food product(s). By using the tool, the producers should be guided to make correct decisions, which could be presented in a checklist

with questions and a box that can be ticked, using decision tables where a lot of exceptions apply (if-then rules) or by using a flowchart model with simple ‘yes’ or ‘no’ questions (Campbell, 1999). However, a digital tool may not cater to all prospective users as some would still like to have a physical tool on paper. Therefore, if the tool has an option to print the guidelines as well, it could cater to a wider audience.

To make the tool more ‘Useful’, many respondents required help with calculations for the nutrition declaration. Therefore, the tool could include a database of generally established and accepted nutritional data on which these calculations can be based as stated in Article 31(4)(c) FIC. At the end of the decision-making process, the user should be left with a summary of which information should/could be added to the label, making it easier to verify current information. In this verification process a visual representation of the information on the label was also found to be useful. Finally, the new tool should be practically tested by prospective users who subsequently fill out an evaluation sheet. Utilizing their feedback, the tool can be further improved to meet their expectations (Laitenberger & Dreyer, 1998). Once the tool scores well on all criteria, the tool can be made available to food producers. In this phase, it is essential to properly launch and promote the tool among its prospective users to increase familiarity (e.g. through branch organizations), as is was found in this study that the local producers were not very familiar with ‘labelling tools’. Thus, by increasing familiarity of a proper ‘labelling tool’, more producers will be likely to include the use of this tool in their labelling process, which will then ultimately lead to an improvement of information on food labels.

5.3 Limitations of the research

Measurement validity

There was no literature found on the evaluation of ‘labelling tools’, therefore the criteria derived to evaluate the tools were based on those of an instructional tool in general. Furthermore, the empirical data was gathered through face-to-face interviews. Therefore, measurement validity was dependent on the extent to which the respondents were able or willing to answer the questions and the skills of the interviewer. Furthermore, the research instrument were the interview questions. Therefore, measurement is also affected by the quality of these questions. The questions regarding legislation were quite direct, thus the respondents’ answers may have been biased. The evaluation on the other hand was based on existing criteria, making it more reliable.

External validity

Considering the nature of the sample, the study focused only on local small and/or micro-scale jam producers. Moreover, the respondents were selected by non-random handpicked or snowball sampling. Finally, the number of respondents ($n=5$) interviewed was quite small. Due to the small sample size, all responses were taken into account and outliers were not excluded. All these aspects lead to a reduction in external validity, making the conclusions drawn less or not applicable to populations with different characteristics.

5.4 Recommendations for further research

After conducting this study some recommendations for further research can be made:

- Interviewing more food producers, from other sectors as well. The focus of this study was on local small/micro jam producers, though mistakes made in labelling are a much broader issue. Therefore, also understanding the needs of other food producers and including their requirements in a ‘labelling tool’ would ultimately lead to a better tool;
- For the interview questions regarding legislation, indicators should be identified to properly assess the knowledge level of the respondents;
- Prior to evaluating the tool, the respondents should use the tool in practice, instead of only judging by visual perception, thus making their responses more reliable;
- Considering that the respondents leaned more towards a digital tool, it should be taken into account that the evaluated tools were quite simple in setup and therefore also scored high in the aspect of ‘Ease of use’. Thus, when developing an interactive digital tool, it should be taken into account that their requirements are met, and the tool is still easy to use;
- Even though only one respondent mentioned the categorization of different food products, it would be worthy to include this in the tool. Particularly, since products like meat or alcoholic beverages have quite different specifications;
- If possible, developing a tool with a flexible format (e.g. ability to print) to cater to more users;
- Once the ‘labelling tool’ is developed, it should be tested by prospective users, consequently evaluated by these users, and then improved.

6 Evaluation of the research

6.1 Evaluation of the research process

Appreciation phase (Chapter 1 & 2)

At the start of the appreciation phase, I looked up and read relevant literature on local food products. Furthermore, it was verified whether mistakes in labelling are still a common issue in general and with local food products in particular. Consequently, keeping the background in mind, the scope of the study was demarcated and the aim, research questions and research approach were written in the research proposal. Afterwards, the research proposal was improved with feedback from the supervisors and peers and was done in about 5 weeks' time. Simultaneously and afterwards, I continued with the literature study which overall took much longer than planned. The first part (i.e. legal part) was done after 5 weeks. In the course of writing the legal part, I gained deeper understanding of food labelling legislation for a food having legal product specifications, namely jam. There are many requirements and exceptions which need to be taken into consideration, as not doing so can easily lead to labelling mistakes. Due to the fact that some labelling tools already exist free of cost, there were some doubts on my side on which part of the research to focus, namely on the issues the small jam producers face with labelling or on the development of a 'labelling tool'. After seeing what these tools encompass, it was decided to focus on the latter. Though, as a preliminary research to the development of such a tool, which also included an evaluation of the currently available 'labelling tools'. Therefore, to write the second part of the literature review, I had to look up literature on that topic as well, which shifted the time schedule quite a bit. There were also some difficulties on finding literature on the evaluation of such a tool at first. However, it was necessary to understand the evaluation process of an instructional tool as the evaluation was a critical part of the interviews performed later, in order to answer the overall research question. Overall, there were quite some uncertainties in this phase, consequently leading to the next phase starting later.

Analysis phase (Chapter 3 & 4)

Since there was less time available, part of the research methodology was written during the second phase of the literature study and it was completed shortly after the second phase was done. For data collection in the empirical study, 14 individual local small/micro jam producers and 3 branch organizations for local food products were approached via email and telephone. Ultimately, only 5 producers were willing to cooperate in the study, leading to a positive response rate of 36% for the individual producers. Even after explaining the aim of the study by telephone, many of the producers stated that they were too busy to spend an hour on an interview, which is a very typical characteristic of small businesses, as they are mainly focused on production. Due to the shift in the time schedule, there was less time available to perform the interviews which were done in a span of 3 weeks instead of 4 to 5 weeks as initially planned. Though, it is doubtful whether I would be able to have more respondents in a longer time as they were getting more difficult to identify and kept refusing to take part in the study. One positive aspect about the shift in the time schedule is that the interviews were done in January and February instead of November and December, which are very busy months for these local producers as they are popular for making Christmas packages.

This could have led to less respondents being able to take part in the study. Conducting the interviews was a new experience for me, therefore I tried to follow the tips as listed in Section 3.3.2. Fortunately, the respondents were nice and rather open during the interviews. Mostly, I was able to gain the data that I was aiming for, thus making the interviews overall a pleasant experience. After each interview, the raw data per interview was filled in the answer sheets in the Annex, using the handwritten notes and recordings to assure that the data is properly recorded. Immediately after conducting the last interview, I started with the data analysis and organizing the data in tables to get a clear overview. For each of the tables a description was given. Furthermore, the quantitative data was analyzed using Microsoft Excel. To analyze the data gained for the evaluations of the ‘labelling tools’, the qualitative and quantitative data were combined. To adapt to the time schedule, the data analysis was performed in a much shorter period of time.

Assessment phase (Chapter 5)

Based on the results of the study a conclusion was indeed drawn on what local small/micro producers of jam expect from a labelling tool. Though due to the fact that the sample was very specific, the conclusions drawn are not very generalizable, which is also explained in Section 5.2. However, some insights were gained into the local small/micro jam producers’ perceptions of current labelling tools and what they would like in such a tool, filling in part of the data gap on that topic. From these insights a roadmap could also be proposed for the development of a new ‘labelling tool’ and further recommendations for research could be made.

6.2 Evaluation of the research methodology

When looking at the research methodology, it can be concluded that performing an in-depth literature study of the legal labelling requirements was very useful, to serve as an adequate background to theoretically and practically evaluate the ‘labelling tools’. Moreover, the evaluation criteria in the form of statements did gain insight into the perception of the two ‘labelling tools’. However, certain aspects in the research methodology could be improved, including contacting respondents more in advance to obtain a higher response rate. Furthermore, it would be better to let the respondents actually use the ‘labelling tool’ in practice, prior to the evaluation to create more realistic circumstances. In the current research the respondents judged the tool only by visual perception, as they only had a look at it before the evaluation.

6.3 Role of the researcher

For me the topic of locally produced foods was quite new, thus initially the research started with an orientation process. To get a better idea, I performed a literature search and read papers about local food in different countries. I also visited a local farm shop with my first supervisor. Once, I had a pretty clear overview of what I wanted to study, I could write the research proposal. With the skills obtained in the courses ‘Food Quality Management Research Principles I and II’ this process was made easier.

Subsequently, I performed the literature study, where I had to look up the relevant legislation and consider how it is applicable in my case of locally produced jam, in which the background of the course ‘Food Law’ was very useful. By performing this literature review, I got a more in-depth understanding of the legal aspects of labelling a product to which vertical legislation applies, in this case jam. The number requirements, exceptions and possible omissions make it clearer as to why so many errors are made on food labels. A proper understanding of the legal requirements is necessary to produce a label with correctly presented information. Furthermore, I gained knowledge on which criteria should be taken into account when evaluating an instructional tool. Since this was an important part of the research, I could have gone more in-depth in describing the sub-criteria. As explained in Section 6.1, there were some uncertainties in this phase, leading to a shift in the time schedule.

Keeping the literature in mind, the research methodology was set up. In this phase the knowledge gained in the course ‘Research Design and Research Methods’ was quite useful. For the data collection, the producers were all approached via email. Though, it is noteworthy that I only received one response via email. Luckily, the phone numbers were easily found on the websites of the companies, so I could call to confirm whether they would like to take part in the study or not. Thus, I learned that it is very important to have a proactive attitude. I further learned how to conduct face-to-face interviews. Since it was a new experience for me, I tried to follow the interview tips and maintain the role of the objective interviewer for the duration of the interview. I also adapted my initial interview questions to make them more understandable for the respondents. It was nice that I was able to do the interviews in Dutch, as it was definitely easier for the respondents to speak in their native language. Subsequently, for the data analysis it was essential to properly organize the obtained data to get a clear overview. Indeed, it was required to be analytical in this part.

When writing the conclusions, it was important to go back to the aim of the study and research questions. In the conclusions, I tried to focus on these aspects and keep it brief. In this phase, I learned it was important to have a clear overview of the study and ensure that it is coherent.

Overall aspects that I learned were important in doing the research, were keeping track of the progress of the research by comparing it with the research planning and then adapting it to the time schedule. As a researcher it is important to have a curious attitude and to try to learn from all the uncertainties along the way. Furthermore, it is also essential to keep a certain level of determination and enthusiasm along the process and keep in mind that you should improve the report each time you work on it. Thus, you can have an end product that you are proud of.

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Annex I Substances or products causing allergies or intolerances

The complete list of substances or products causing allergies or intolerances is given below (Annex II FIC):

1. **Cereals containing gluten**, namely: wheat (such as spelt and khorasan wheat), rye, barley, oats or their hybridised strains, and products thereof, except:
 - (a) wheat-based glucose syrups including dextrose;
 - (b) wheat-based maltodextrins;
 - (c) glucose syrups based on barley;
 - (d) cereals used for making alcoholic distillates including ethyl alcohol of agricultural origin;
2. **Crustaceans** and products thereof;
3. **Eggs** and products thereof;
4. **Fish** and products thereof, **except**:
 - (a) fish gelatin used as carrier for vitamin or carotenoid preparations;
 - (b) fish gelatin or Isinglass used as fining agent in beer and wine;
5. **Peanuts** and products thereof;
6. **Soybeans** and products thereof, **except**:
 - (a) fully refined soybean oil and fat;
 - (b) natural mixed tocopherols (E306), natural D-alpha tocopherol, natural D- alpha tocopherol acetate, and natural D-alpha tocopherol succinate from soybean sources;
 - (c) vegetable oils derived phytosterols and phytosterol esters from soybean sources;
 - (d) plant stanol ester produced from vegetable oil sterols from soybean sources;
7. **Milk** and products thereof (including lactose), **except**:
 - (a) whey used for making alcoholic distillates including ethyl alcohol of agricultural origin;
 - (b) lactitol;
8. **Nuts**, namely: almonds (*Amygdalus communis* L.), hazelnuts (*Corylus avellana*), walnuts (*Juglans regia*), cashews (*Anacardium occidentale*), pecan nuts (*Carya illinoiensis* (Wangen.) K. Koch), Brazil nuts (*Bertholletia excelsa*), pistachio nuts (*Pistacia vera*), macadamia or Queensland nuts (*Macadamia ternifolia*), and products thereof, **except** for nuts used for making alcoholic distillates including ethyl alcohol of agricultural origin;
9. **Celery** and products thereof;
10. **Mustard** and products thereof;
11. **Sesame seeds** and products thereof;
12. **Sulphur dioxide and sulphites** at concentrations of **more than 10 mg/kg or 10 mg/litre** in terms of the total SO₂ which are to be calculated for products as proposed ready for consumption or as reconstituted according to the instructions of the manufacturers;
13. **Lupin** and products thereof;
14. **Molluscs** and products thereof.

Annex II Expression and presentation of nutrition declaration

Units of measurement to be used in the nutrition declaration for energy value are kilojoules (kJ) and kilocalories (kcal). For the nutrients, units of mass, namely grams (g), milligrams (mg) or micrograms (μg) can be used. The order and presentation, as appropriate, shall be as follows (Annex XV FIC):

energy	kJ/kcal
fat	g
of which	
— saturates,	g
— mono-unsaturates,	g
— polyunsaturates,	g
carbohydrate	g
of which	
— sugars,	g
— polyols,	g
— starch,	g
fibre	g
protein	g
salt	g
vitamins and minerals	the units specified in point 1 of Part A of Annex XIII

Annex III Letter sent to jam producers

Geachte [heer/mevrouw],

Ik ben student Food Quality Management aan de Wageningen Universiteit. Momenteel ben ik bezig met een onderzoek naar hulpmiddelen bij het verstrekken van informatie op etiketten van levensmiddelen.

Het doel is om de wensen van kleine producenten te begrijpen, zodat vanuit de universiteit een gratis etiketteringshulpmiddel ontwikkeld kan worden, welke voldoet aan de verwachtingen van de kleine producent. Hierbij ben ik opzoek naar kleine/micro jam producenten die mij te woord willen staan voor een interview van ongeveer een uur. Het interview zal gericht zijn op het etiketteren van jam en een evaluatie van twee etiketteringshulpmiddelen, welke momenteel gratis beschikbaar zijn vanuit etiketteringsconsultancies als deel van hun marketingsstrategie. Door uw medewerking te verlenen aan dit onderzoek zal u een waardevolle bijdrage leveren aan de ontwikkeling van een gratis etiketteringshulpmiddel en zodoende verbetering van informatie op etiketten van levensmiddelen.

Informatie die u verstrekt tijdens dit interview, zal slechts voor het onderzoeksverslag gebruikt worden in anonieme vorm. Om mijn onderzoek te voltooien heb ik uw medewerking nodig en ik kijk graag uit naar uw reactie.

Bij voorbaat dank voor uw medewerking.

Met vriendelijke groet,

Shruti Adhin

Annex IV Answer sheets

Answers by respondent 1 interviewed on 30-01-2019

General questions regarding respondent and company

Vraag	Antwoord
1. Al hoe lang bent u werkzaam bij het bedrijf?	48 jaar.
2. Wat is uw positie binnen het bedrijf?	Mede-eigenaar.
3. Hoe veel werknemers telt uw bedrijf?	Eigenaars (2); geen werknemers.
4. Al hoe lang produceert uw bedrijf jam?	30 jaar.
5. Produceert uw bedrijf ook andere producten? Zo ja, -Welke?	Ja, honing, likeur, pruimenport en chutney.
6. Waar worden uw producten verkocht (distributie)?	Grote verkoop aan de coöperatie (Groene Hart) die verkopen het verder aan winkels etc. en kleine verkoop aan huis.
7. Is uw bedrijf lid van een branche organisatie voor streekproducten/ lokale producten? Zo ja, -Welke? -Welke voordelen biedt dit aan uw bedrijf en producten?	Ja, Groene Hart. Afzet van producten (distributie), reclame voor producten (marketing).

Questions regarding the labelling process and legislation

8. Hoe definieert u jam (ingrediënten)?	Veel fruit en niet teveel suiker, wel genoeg voor een lange houdbaarheid. Er wordt ook pectine aan de jam toegevoegd en
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	soms appelsap (bevat van nature veel pectine). Ik pas een verhouding van 50% fruit en 50% suiker toe voor de jams.
9. Kunt u het huidige etiketteringsproces toelichten?	Vanuit Groene Hart krijg ik een handleiding met richtlijnen wat op het etiket moet staan. Er wordt dan per product bepaald welke informatie en foto op het etiket komen. Daarna wordt een mooi ontwerp gemaakt door een grafisch ontwerper, welke dan wordt goedgekeurd door mij en vervolgens gedrukt.
10. Zo <u>ja</u> bij vraag 7, is de branche organisatie voor streekproducten/lokale producten betrokken bij het etiketteringsproces? Zo <u>ja</u> , -Kunt u mij wat meer vertellen over hun rol?	Ja, Groene Hart biedt de handleiding voor het etiketteren. Groene Hart is aangesloten bij de stichting Streekeigen Producten Nederland (SPN) die elke 2 jaar controleert of wordt voldaan aan hun normen, waaronder etiketteringsnormen.
Zo <u>nee</u> , -Verwacht u hulp met etikettering?	Niet van toepassing..
11. Welke (andere) informatiebronnen heeft u gebruikt voor wettelijke voorschriften met betrekking tot de etikettering van levensmiddelen?	Voor mijn honing de Bijenvereniging en mijn alcoholische dranken de destilleerderij.
12. Denkt u dat de informatie op het etiket van uw jam aan de wetgeving voldoet? Waarom?	Ja, omdat ik gebruik maak van de etiketteringshandleiding van Groene Hart en SPN. Ook wordt er door SPN een elke 2 jaar een controle gedaan. Ik heb ook nooit een klacht ontvangen over het etiket.
13. Bent u bekend met de wettelijke productspecificaties die op jam van toepassing zijn? Zo <u>ja</u> , -Kunt u mij hierover wat meer vertellen?	Ja, ik ben er wel bekend mee.
14. Bent u bekend met de wettelijke etiketteringsvoorschriften voor levensmiddelen? Zo <u>ja</u> , - Kunt u mij hierover wat meer vertellen?	Ja, door de etiketteringshandleiding van Groene Hart. Als iets veranderd dan geven ze het door.

Questions regarding labelling tools

<p>15. Denkt u dat een middel die helpt bij het beslissen welke informatie op het etiket moet/ kan staan nuttig zal zijn? Waarom?</p>	<p>Ja, omdat ik nu al gebruik maak van de handleiding van Groene Hart en SPN. Ik ben onzeker of een ander hulpmiddel handig zal zijn, voor mij is het belangrijk om aan hun normen te voldoen.</p>
<p>16. Bent u bekend met etiketteringshulpmiddelen? Zo <u>ja</u>, -Welke? Heeft u ooit zo een hulpmiddel gebruikt? Zo <u>ja</u>, -Welke? -Hoe was uw ervaring? -Voldeed het hulpmiddel aan uw verwachtingen? Zo <u>nee</u>, Wat zou u verwachten van een etiketteringshulpmiddel?</p>	<p>Ja, De etiketteringshandleiding van Groene Hart en SPN. Ja, De etiketteringshandleiding van Groene Hart en SPN. Ik vind het handig en gemakkelijk om te gebruiken. Ook reden tot lidmaatschap voor mij. Ja, voorziet mij voldoende van informatie wat betreft etiketteren. Niet van toepassing.</p>

Evaluation of the two labelling tools

17. Evaluation of Tool 1

Kwaliteit van de inhoud	Sterk mee oneens	Oneens	Enigzins mee oneens	Eens noch oneens	Enigzins mee eens	Eens	Sterk mee eens	Motivatie
Het hulpmiddel heeft een geschikte opmaak en indeling	1	2	3	4	5	6	7	Ziet er goed uit in de eerste indruk, lijkt of alles erop staat.
De informatie in het hulpmiddel is relevant voor mijn product(en)	1	2	3	4	5	6	7	Er is heel veel informatie in, wat nogal verwarringd is. Ik weet er soms geen raad mee. Als alles op het etiket moet staan dan is het wel erg veel. Bijvoorbeeld een aantal items in de voedingswaardetabel zet ik er nooit op (vetten, eiwitten en zout). Het is dus deels wel relevant.
De informatie in het hulpmiddel is adequaat uitgewerkt voor mijn product(en)	1	2	3	4	5	6	7	Indicatie van hoeveelheid suiker en fruit voor jam kan ik hier niet terugvinden (alleen de suikers in de voedingswaardetabel). Ik had dat wel gewild. Andere informatie komt wel voor erin.
Het hulpmiddel zou mij voldoende kunnen bijstaan bij het verstrekken van informatie op de etiketten van mijn product(en)	1	2	3	4	5	6	7	Het helpt me wel wat op weg, maar niet helemaal. Bepaalde informatie heb ik niet nodig voor jam (e.g. land van oorsprong), maar andere informatie mist weer (e.g. hoeveelheid fruit). Andere informatie kan ik wel gebruiken zoals de naam producent, gewicht, allergenen en houdbaarheid die inderdaad op mijn etiket moeten staan.
Bruikbaarheid								
Het gebruik van het hulpmiddel zou zorgen voor een snellere informatieverstrekking op	1	2	3	4	5	6	7	Ik heb de etiketteringshandleiding al vanuit Groene Hart en SPN, dus zou het etiketteren niet sneller gaan.

de etiketten van mijn product(en)								
Het gebruik van het hulpmiddel zou leiden tot een etiket met correct gepresenteerde informatie	1	2	3	4		6	7	Als het wordt aangevuld met wat informatie dan zou dat leiden tot een correct etiket.
Het gebruik van het hulpmiddel zou het verstrekken van informatie op etiketten van mijn product(en) eenvoudiger maken	1		3	4	5	6	7	Ik heb de etiketteringshandleiding al vanuit Groene Hart en SPN, dus zou het etiketteren niet eenvoudiger worden.
Het gebruik van het hulpmiddel zou ertoe leiden dat ik het verstrekken van informatie op de etiketten van mijn product(en) beter kan verrichten	1	2	3	4		6	7	Het is niet verkeerd om nog een extra hulpmiddel te hebben.
Gebruiksgemak								
Het is gemakkelijk om te leren hoe het hulpmiddel werkt	1	2	3	4	5		7	Ik begrijp wel hoe ik het zou moeten gebruiken.
Het hulpmiddel is duidelijk en begrijpelijk	1	2	3	4	5		7	Het is wel goed te begrijpen.
Het zou gemakkelijk zijn om te onthouden hoe het hulpmiddel werkt	1	2	3	4	5		7	Ik zou kunnen onthouden hoe ik ermee moet werken.
Algemene beoordeling								
Ik zou dit hulpmiddel in de toekomst gebruiken	1	2	3	4		6	7	Ik wordt voldoende geïnformeerd door Groene Hart en SPN. Ik heb ook niet zoveel producten. Van mijn producten ben ik wel

								op de hoogte. Maar ik zou het misschien in de toekomst wel gebruiken.
Het hulpmiddel was nuttig	1	2	3	4	5	6	7	Het is wel handig en niet verloren.
Het hulpmiddel voldeed aan mijn verwachtingen	1	2	3	4	5	6	7	Ik wist niet wat ik moest verwachten. Maar het voegt niet echt iets toe.

18. Evaluation of Tool 2

Kwaliteit van de inhoud	Sterk mee oneens	Oneens	Enigzins mee oneens	Eens noch oneens	Enigzins mee eens	Eens	Sterk mee eens	Motivatie
Het hulpmiddel heeft een geschikte opmaak en indeling	1	2	3	4	5	6	7	Sommige letters zijn wel klein. Iedereen moet het gemakkelijk kunnen lezen.
De informatie in het hulpmiddel is relevant voor mijn product(en)	1	2	3	4	5	6	7	Het is wel relevant en te gebruiken voor mijn producten.
De informatie in het hulpmiddel is adequaat uitgewerkt voor mijn product(en)	1	2	3	4	5	6	7	De informatie is wel goed om de letterhoogte te bepalen.
Het hulpmiddel zou mij voldoende kunnen bijstaan bij het verstrekken van informatie op de etiketten van mijn product(en)	1	2	3	4	5	6	7	Het is goed om na te gaan of de letters groot genoeg zijn.
Bruikbaarheid								

Het gebruik van het hulpmiddel zou zorgen voor een snellere informatieverstrekking op de etiketten van mijn product(en)	1	2	3	4	5	6	7	Nu wordt het door de grafisch ontwerper digitaal gemeten, en die bepaalt de letterhoogte. Het zou dus niet sneller gaan met dit hulpmiddel.
Het gebruik van het hulpmiddel zou leiden tot een etiket met correct gepresenteerde informatie	1	2	3	4	5	6	7	Als ik het zou uitproberen zou ik wel kunnen nagaan of de letterhoogte klopt.
Het gebruik van het hulpmiddel zou het verstrekken van informatie op etiketten van mijn product(en) eenvoudiger maken	1	2	3	4	5	6	7	Dat weet ik niet, omdat ik het niet heb uitgeprobeerd.
Het gebruik van het hulpmiddel zou ertoe leiden dat ik het verstrekken van informatie op de etiketten van mijn product(en) beter kan verrichten	1	2	3	4	5	6	7	Dat weet ik niet, misschien wel als ik het zou hebben uitgeprobeerd. Ik ben wel tevreden met het huidige etiketteringsproces.
Gebruiksgemak								
Het is gemakkelijk om te leren hoe het hulpmiddel werkt	1	2	3	4	5	6	7	Ik denk dat ik wel ermee zou kunnen werken als ik het zou uitproberen.
Het hulpmiddel is duidelijk en begrijpelijk	1	2	3	4	5	6	7	Wel duidelijk en begrijpelijk.

Het zou gemakkelijk zijn om te onthouden hoe het hulpmiddel werkt	1	2	3	4	5	6	7	Het zou niet moeilijk zijn maar ook niet echt gemakkelijk. Ik weet niet wat het voor mij gemakkelijk zou maken om te onthouden.
Algemene beoordeling								
Ik zou dit hulpmiddel in de toekomst gebruiken	1	2	3	4	5	6	7	Ik zou het niet gebruiken omdat ik de etiketten niet zelf maak. De ontwerper gaat digitaal na wat past op een etiket en ik keur het goed.
Het hulpmiddel was nuttig	1	2	3	4	5	6	7	Niet nuttig voor mij, misschien wel voor degene die het etiket ontwerpt.
Het hulpmiddel voldeed aan mijn verwachtingen	1	2	3	4	5	6	7	Ik wist niet wat ik moest verwachten.

Finalizing questions

19. Heeft u nog andere aanbevelingen of vereisten voor een etiketteringshulpmiddel om aan uw verwachtingen te voldoen? Zo ja, welke	Ja, het zou handig zijn als er een verdeling was naar verschillende categorieën van levensmiddelen en dan gedetailleerder. Een digitale vorm zou ook handig zijn. Degenen die het op papier willen, kunnen het dan uitprinten.
20. Heeft u nog wat opmerkingen?	Geen.
21. Zou u bepaalde antwoorden nader willen toelichten?	Nee.

Answers by respondent 2 interviewed on 05-02-2019

Vraag	Antwoord
1. Al hoe lang bent u werkzaam bij het bedrijf?	9 jaar.

2. Wat is uw positie binnen het bedrijf?	Eigenaar.
3. Hoe veel werknemers telt uw bedrijf?	Eénpersoonsbedrijf (1); geen werknemers.
4. Al hoe lang produceert uw bedrijf jam?	Al ruim 15 jaar. Het begon als een hobby bij mijn moeder op de boerderij en groeide langzaam uit tot neventak. Nu heb ik het bedrijf overgenomen en zit ik slechts in de verwerking.
5. Produceert uw bedrijf ook andere producten? <u>Zo ja,</u> -Welke?	Ja, boerenadvocaat (eierenproduct), chutneys en sappen.
6. Waar worden uw producten verkocht (distributie)?	In (zorg)bakkerijen, landwinkels en op kaasboerderijen. De levering doe ik zelf. Ongeveer 5 keer per jaar sta ik ook op de streekmarkt in Woerden. Soms zijn er andere evenementen/fairs waar ik mijn producten ook verkoop.
7. Is uw bedrijf lid van een branche organisatie voor streekproducten/ lokale producten? <u>Zo ja,</u> -Welke? -Welke voordelen biedt dit aan uw bedrijf en producten?	Nee. Niet van toepassing.

Questions regarding the labelling process and legislation

8. Hoe definieert u jam (ingrediënten)?	Ruim 60% fruit, waarbij ik stukjes fruit gebruik en geen puree. Verder gebruik ik de geleisuiker speciaal (halfzoete). Ik streef naar minder suikers in de jam, maar dit natuurlijk binnen het wettelijke kader. Ik probeer vruchten van kleine telers in te kopen die vaker ouderwetse rassen telen met een andere smaak.
9. Kunt u het huidige etiketteringsproces toelichten?	Ik heb bij het ZLTO (Zuidelijke Land- en Tuinbouworganisatie) workshops gevolgd voor de vormgeving van het etiket en ook voor de veranderingen in de wetgeving m.b.t. etiketteren van

	levensmiddelen. Verder heb ik ook op de website van NVWA gezocht welke informatie minimaal op het etiket moet staan. Welke informatie op het etiket komt te staan, bepaal ik dus zelf.
10. Zo <u>ja</u> bij vraag 7, is de branche organisatie voor streekproducten/lokale producten betrokken bij het etiketteringsproces? Zo <u>ja</u> , -Kunt u mij wat meer vertellen over hun rol? Zo <u>nee</u> , -Verwacht u hulp met etikettering?	Niet van toepassing.
11. Welke (andere) informatiebronnen heeft u gebruikt voor wettelijke voorschriften met betrekking tot de etikettering van levensmiddelen?	Geen.
12. Denkt u dat de informatie op het etiket van uw jam aan de wetgeving voldoet? Waarom?	Nee, geleipoeder is namelijk een samengesteld ingrediënt die ik niet verder heb toegelicht in de ingrediëntenlijst. En de voedingswaarde staat ook niet op het etiket.
13. Bent u bekend met de wettelijke productspecificaties die op jam van toepassing zijn? Zo <u>ja</u> , -Kunt u mij hierover wat meer vertellen?	Ja, ik heb deze nagezocht bij de NVWA en ook een aantal documenten gelezen.
14. Bent u bekend met de wettelijke etiketteringsvoorschriften voor levensmiddelen? Zo <u>ja</u> , - Kunt u mij hierover wat meer vertellen?	Ja, ook via de NVWA ben ik meer te weten gekomen over de etiketteringsvoorschriften. De allergenen in mijn producten zoals, walnoten en eieren, heb ik dik laten drukken op het etiket om te voldoen aan de wetgeving.

Questions regarding labelling tools

15. Denkt u dat een middel die helpt bij het beslissen welke informatie op het etiket moet/ kan staan nuttig zal zijn? Waarom?	Ja, vooral voor kleine producenten is het nuttig. Vaak zijn ze in de eerste plaats fruitproducenten en dan produceren ze jam als hobby. Een simpele checklist zou wel handig zijn voor eenduidigheid.
16. Bent u bekend met etiketteringshulpmiddelen? <u>Zo ja,</u> -Welke? Heeft u ooit zo een hulpmiddel gebruikt? <u>Zo ja,</u> -Welke? -Hoe was uw ervaring? -Voldeed het hulpmiddel aan uw verwachtingen? <u>Zo nee,</u> Wat zou u verwachten van een etiketteringshulpmiddel?	Nee, ik zou ook niet weten waar ik die moet vinden. Nee. Een simpele lijst met informatie wat op het etiket moet en mag. Ook in simpele taal uitgelegd, natuurlijk wel correct. Verder ook verwijzingen naar de regelgeving om verder te verdiepen.

Evaluation of the two labelling tools

17. Evaluation of Tool 1

Kwaliteit van de inhoud	Sterk mee oneens	Oneens	Enigzins mee oneens	Eens noch oneens	Enigzins mee eens	Eens	Sterk mee eens	Motivatie
Het hulpmiddel heeft een geschikte opmaak en indeling	1	2	3	4	5	6	7	Het visitekaart model kan gemakkelijk kwijtraken. Het is meer te gebruiken als snelle check. Zo iets heb je niet echt 'on-the-go' nodig, dus een A4 formaat wat ik in mijn map kan opslaan zou beter zijn. De indeling verder vind ik wel goed.
De informatie in het hulpmiddel is relevant voor mijn product(en)	1	2	3	4	5	6	7	De informatie is wel relevant. Een doorverwijzing naar relevante Nederlandse wetgeving mist wel of een link naar websites van de NVWA waar ik meer informatie kan vinden.
De informatie in het hulpmiddel is adequaat uitgewerkt voor mijn product(en)	1	2	3	4	5	6	7	Niet helemaal, want in welk geval ik mijn product jam mag noemen en wanneer niet, kan ik hier niet terugvinden.
Het hulpmiddel zou mij voldoende kunnen bijstaan bij het verstrekken van informatie op de etiketten van mijn product(en)	1	2	3	4	5	6	7	Het is voor mij meer een eerste check. Ik ben wat kritischer en bepaalde informatie kan ik hier niet terugvinden.
Bruikbaarheid								
Het gebruik van het hulpmiddel zou zorgen voor een snellere informatieverstrekking op	1	2	3	4	5	6	7	Dan hoeft ik niet allerlei websites te doorzoeken, vergelijken en moeilijke teksten te lezen. Informatie zou dan te vinden zijn op één plek en overzichtelijk.

de etiketten van mijn product(en)								
Het gebruik van het hulpmiddel zou leiden tot een etiket met correct gepresenteerde informatie	1	2	3	4	5	6		
Het gebruik van het hulpmiddel zou het verstrekken van informatie op etiketten van mijn product(en) eenvoudiger maken	1	2	3	4	5		7	Doordat de informatie overzichtelijk bij elkaar is kan ik beter nagaan of alles klopt om mijn etiket. Ik kan dan ook de kwaliteit leveren die van mij wordt verwacht.
Het gebruik van het hulpmiddel zou ertoe leiden dat ik het verstrekken van informatie op de etiketten mijn product(en) beter kan verrichten	1	2	3	4	5		7	Ik zou het etiketteren wel beter kunnen verrichten, natuurlijk zou je bij wijzingen van de wetgeving wel een update moeten krijgen.
Gebruiksgemak								
Het is gemakkelijk om te leren hoe het hulpmiddel werkt	1	2	3	4	5		7	Het is wel gemakkelijk te leren. Maar een doorverwijzing naar hoe ik de voedingswaarde moet bepalen mis ik wel. Moet dat via een laboratorium of met behulp van een erkende lijst?
Het hulpmiddel is duidelijk en begrijpelijk	1	2	3	4	5		7	Het hulpmiddel is goed te begrijpen.
Het zou gemakkelijk zijn om te onthouden hoe het hulpmiddel werkt	1	2	3	4	5		7	Het is gemakkelijk te onthouden hoe het hulpmiddel werkt
Algemene beoordeling								

Ik zou dit hulpmiddel in de toekomst gebruiken	1	2	3	4	5	6	7	Met wat doorverwijzingen naar toelichtende tekst, die praktisch en ook niet te ingewikkeld is, zou het beter zijn.
Het hulpmiddel was nuttig	1	2	3	4	5	6	7	Het hulpmiddel was wel nuttig, als een soort gadget voor de kleine producent.
Het hulpmiddel voldeed aan mijn verwachtingen	1	2	3	4	5	6	7	De informatie is weergegeven in een notendop. Het fungeert als een samenvatting om na te gaan of de informatie klopt.

18. Evaluation of Tool 2

Kwaliteit van de inhoud	Sterk mee oneens	Oneens	Enigzins mee oneens	Eens noch oneens	Enigzins mee eens	Eens	Sterk mee eens	Motivatie
Het hulpmiddel heeft een geschikte opmaak en indeling	1	2	3	4	5	6	7	Heel mooie opmaak en indeling.
De informatie in het hulpmiddel is relevant voor mijn product(en)	1	2	3	4	5	6	7	Heel relevant om de letterhoogte te meten.
De informatie in het hulpmiddel is adequaat uitgewerkt voor mijn product(en)	1	2	3	4	5	6	7	Het is goed uitgewerkt voor het meten van de letterhoogte. Het is visueel weergegeven wat ermee wordt bedoeld. En ik kan ook de hoogte van de letters op mijn etiket meten.
Het hulpmiddel zou mij voldoende kunnen bijstaan bij het verstrekken van informatie op de etiketten van mijn product(en)	1	2	3	4	5	6	7	Voor het gedeelte van de letterhoogte is het wel heel praktisch als een soort gadget. De overige informatie mist overigens wel.

Bruikbaarheid								
Het gebruik van het hulpmiddel zou zorgen voor een snellere informatieverstrekking op de etiketten van mijn product(en)	1	2	3	4	5	6	7	Slechts voor het bepalen van de letterhoogte.
Het gebruik van het hulpmiddel zou leiden tot een etiket met correct gepresenteerde informatie	1	2	3	4	5	6	7	Slechts voor het bepalen van de letterhoogte.
Het gebruik van het hulpmiddel zou het verstrekken van informatie op etiketten van mijn product(en) envoudiger maken	1	2	3	4	5	6	7	Slechts voor het bepalen van de letterhoogte.
Het gebruik van het hulpmiddel zou ertoe leiden dat ik het verstrekken van informatie op de etiketten van mijn product(en) beter kan verrichten	1	2	3	4	5	6	7	Slechts voor het bepalen van de letterhoogte.
Gebruiksgemak								
Het is gemakkelijk om te leren hoe het hulpmiddel werkt	1	2	3	4	5	6	7	Het is wel gemakkelijk te leren hoe het hulpmiddel werkt.

Het hulpmiddel is duidelijk en begrijpelijk	1	2	3	4	5	6	7	Door middel van voorbeelden wordt het wel duidelijker gemaakt.
Het zou gemakkelijk zijn om te onthouden hoe het hulpmiddel werkt	1	2	3	4	5	6	7	Het zou gemakkelijk zijn om te onthouden hoe dit hulpmiddel werkt.
Algemene beoordeling								
Ik zou dit hulpmiddel in de toekomst gebruiken	1	2	3	4	5	6	7	Om de letterhoogte op mijn etiket na te gaan.
Het hulpmiddel was nuttig	1	2	3	4	5	6	7	Het is heel nuttig voor het nagaan van de letterhoogte, andere dingen kan ik niet nagaan. Maar het bepalen van de letterhoogte is wel een belangrijk onderdeel.
Het hulpmiddel voldeed aan mijn verwachtingen	1	2	3	4	5	6	7	Wat elementaire informatie mist. Dit zou al opgelost kunnen worden met een doorverwijzing naar een document van de NVWA bijvoorbeeld. Voor het nagaan van de letterhoogte vind ik het wel heel goed.

Finalizing questions

19. Heeft u nog andere aanbevelingen of vereisten voor een etiketteringshulpmiddel om aan uw verwachtingen te voldoen? Zo ja, welke	Ja, de informatie samengevat op een A4, zodat ik het gemakkelijk kan opslaan in een map of bestand. Ook verwijzing naar relevante regelgeving om verder in te verdiepen. Het zou ook handig zijn als zo een samenvatting in simpele taal op de website van de NVWA staat, aangezien zij ook de controle autoriteit zijn.
20. Heeft u nog wat opmerkingen?	Het zou beter zijn dat regelgeving niet zo complex zou zijn voor de kleine producent.
21. Zou u bepaalde antwoorden nader willen toelichten?	Nee.

Answers by respondent 3 interviewed on 06-02-2019

Vraag	Antwoord
1. Al hoe lang bent u werkzaam bij het bedrijf?	31 jaar.
2. Wat is uw positie binnen het bedrijf?	Mede-eigenaar.
3. Hoe veel werknemers telt uw bedrijf?	Familiebedrijf: eigenaars (2) en zonen (2); geen andere werknemers.
4. Al hoe lang produceert uw bedrijf jam?	Ongeveer 20 jaar.
5. Produceert uw bedrijf ook andere producten? Zo ja, -Welke?	Ja, verschillende cranberry producten (w.o. gele, chutney), appelmoes, peren in de pot en soep.
6. Waar worden uw producten verkocht (distributie)?	In boerderijwinkels en in de eigen boerderijwinkel. Ik sta heel soms ook op een markt. De distributie doe ik zelf.
7. Is uw bedrijf lid van een branche organisatie voor streekproducten/ lokale producten? Zo ja, -Welke?	Ja, Erkend Veluws Streekproduct en Stichting Streekeigenproducten Nederland (SPN).
-Welke voordelen biedt dit aan uw bedrijf en producten?	Promotie van de producten door Erkend Veluws Streekproduct met zodoende betere afzet.

Questions regarding the labelling process and legislation

8. Hoe definieert u jam (ingrediënten)?	Puur fruit, welke zelf is geteeld en geoogst (A kwaliteit), en ook onbespoten, waaraan geleisuiker wordt toegevoegd. Naast de cranberry jam produceer ik ook nog 12 andere soorten vruchtenjams.
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9. Kunt u het huidige etiketteringsproces toelichten?	<p>Via het internet ben ik nagegaan welke informatie op het etiket moet. Via de LTO (Land- en Tuinbouworganisatie) heb ik brochures met de minimale eisen doorgekregen toen de wetgeving veranderde. Verder hebben ze toen ook voorlichtingsavonden georganiseerd. Ook de vereniging van plattelandsondernemers ‘Toer de Boer op’ hield een voorlichtingsavond bij de veranderingen in de etiketteringswetgeving. Er was ook een andere instantie die dergelijke informatie opstuurde in brochures waarvan ik de naam ben vergeten.</p> <p>De informatie op het etiket wordt door het bedrijf bepaald en wordt vervolgens opgestuurd naar de ontwerper, die de grootte van het etiket bepaald en ten slotte de drukker, die de letterhoogte volgens de regels in de wetgeving bepaald.</p>
<p>10. Zo <u>ja</u> bij vraag 7, is de branche organisatie voor streekproducten/lokale producten betrokken bij het etiketteringsproces?</p> <p>Zo <u>ja</u>,</p> <p>-Kunt u mij wat meer vertellen over hun rol?</p> <p>Zo <u>nee</u>,</p> <p>-Verwacht u hulp met etikettering?</p>	<p>Nee, niet betrokken bij het etiketteren en , daar heb ik ook niet om gevraagd.</p> <p>Nee.</p>
11. Welke (andere) informatiebronnen heeft u gebruikt voor wettelijke voorschriften met betrekking tot de etikettering van levensmiddelen?	Geen.
<p>12. Denkt u dat de informatie op het etiket van uw jam aan de wetgeving voldoet?</p> <p>Waarom?</p>	Ja, ik denk het wel, maar ik ben niet zeker over de waarden in de voedingswaardeverklaring. Ze zijn namelijk gebaseerd op berekeningen en niet op metingen van het product zelf.

<p>13. Bent u bekend met de wettelijke productspecificaties die op jam van toepassing zijn?</p> <p>Zo <u>ja</u>,</p> <p>-Kunt u mij hierover wat meer vertellen?</p>	Ja, ik heb gelezen over wanneer het product 'jam' genoemd kan worden en wanneer niet.
<p>14. Bent u bekend met de wettelijke etiketteringsvoorschriften voor levensmiddelen?</p> <p>Zo <u>ja</u>,</p> <p>- Kunt u mij hierover wat meer vertellen?</p>	Ja, via het internet en informatiebrochures heb ik informatie gelezen over de vereisten bij het etiketteren. Voor het bepalen van de voedingswaarde heb ik informatie via de website calorietabel.nl gevonden.

Questions regarding labelling tools

<p>15. Denkt u dat een middel die helpt bij het beslissen welke informatie op het etiket moet/ kan staan nuttig zal zijn?</p> <p>Waarom?</p>	Ja, het zou misschien wel nuttig kunnen zijn. Het is wel een beetje aan de late kant want nu heb ik alles al uitgezocht.
<p>16. Bent u bekend met etiketteringshulpmiddelen?</p> <p>Zo <u>ja</u>,</p> <p>-Welke?</p> <p>Heeft u ooit zo een hulpmiddel gebruikt?</p> <p>Zo <u>ja</u>,</p> <p>-Welke?</p> <p>-Hoe was uw ervaring?</p> <p>-Voldeed het hulpmiddel aan uw verwachtingen?</p> <p>Zo <u>nee</u>,</p> <p>Wat zou u verwachten van een etiketteringshulpmiddel?</p>	<p>Nee.</p> <p>Nee.</p> <p>Een hulpmiddel waarmee ik kan nagaan of de informatie op het etiket klopt. Bijvoorbeeld om na te gaan of de berekeningen in de voedingswaardeverklaring goed zijn.</p>

Evaluation of the two labelling tools

17. Evaluation of Tool 1

Kwaliteit van de inhoud	Sterk mee oneens	Oneens	Enigzins mee oneens	Eens noch oneens	Enigzins mee eens	Eens	Sterk mee eens	Motivatie
Het hulpmiddel heeft een geschikte opmaak en indeling	1	2	3	4	5	6	7	Het hulpmiddel heeft een goede indeling, het is overzichtelijk. Ik kan zien waar het om gaat. Het formaat van een visitekaartje vind ik wel handig.
De informatie in het hulpmiddel is relevant voor mijn product(en)	1	2	3	4	5	6	7	De informatie is grotendeels wel relevant.
De informatie in het hulpmiddel is adequaat uitgewerkt voor mijn product(en)	1	2	3	4	5	6	7	De informatie is goed uitgewerkt, er staat genoeg in. Het is duidelijk waar het om gaat.
Het hulpmiddel zou mij voldoende kunnen bijstaan bij het verstrekken van informatie op de etiketten van mijn product(en)	1	2	3	4	5	6	7	Het hulpmiddel zou me goed kunnen helpen.
Bruikbaarheid								
Het gebruik van het hulpmiddel zou zorgen voor een snellere informatieverstrekking op de etiketten van mijn product(en)	1	2	3	4	5	6	7	Gebruik van het hulpmiddel zou het etiketteren wel sneller maken.

Het gebruik van het hulpmiddel zou leiden tot een etiket met correct gepresenteerde informatie	1	2	3	4	5	6	7	Gebruik van het hulpmiddel zou wel leiden tot een goed etiket.
Het gebruik van het hulpmiddel zou het verstrekken van informatie op etiketten van mijn product(en) eenvoudiger maken	1	2	3	4	5	6	7	Het zou eenvoudiger zijn, want dan hoef ik niet allerlei bronnen te raadplegen en kan ik alle informatie op één plek vinden.
Het gebruik van het hulpmiddel zou ertoe leiden dat ik het verstrekken van informatie op de etiketten van mijn product(en) beter kan verrichten	1	2	3	4	5	6	7	Ik kan hieruit wel informatie halen, waardoor ik het etiketteren beter zou kunnen verrichten (e.g. hoogte van de letters).
Gebruiksgemak								
Het is gemakkelijk om te leren hoe het hulpmiddel werkt	1	2	3	4	5	6	7	Het hulpmiddel is simpel opgezet.
Het hulpmiddel is duidelijk en begrijpelijk	1	2	3	4	5	6	7	Het hulpmiddel is heel duidelijk en begrijpelijk.
Het zou gemakkelijk zijn om te onthouden hoe het hulpmiddel werkt	1	2	3	4	5	6	7	Het hulpmiddel spreekt voor zich, dus ik zou niet vergeten hoe ik ermee moet werken.
Algemene beoordeling								
Ik zou dit hulpmiddel in de toekomst gebruiken	1	2	3	4	5	6	7	Ik zou het wel gebruiken in de toekomst.
Het hulpmiddel was nuttig	1	2	3	4	5	6	7	Het hulpmiddel is wel nuttig, want in het verleden heb ik verschillende bronnen geraadpleegd en hier is alles bij elkaar.

Het hulpmiddel voldeed aan mijn verwachtingen	1	2	3	4	5	6	7	Ik had wat meer uitleg voor het maken van de voedingswaardeverklaring gewild.
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18. Evaluation of Tool 2

Kwaliteit van de inhoud	Sterk mee oneens	Oneens	Enigzins mee oneens	Eens noch oneens	Enigzins mee eens	Eens	Sterk mee eens	Motivatie
Het hulpmiddel heeft een geschikte opmaak en indeling	1	2	3	4	5	6	7	Het hulpmiddel is helemaal niet compleet. Hiermee kan ik alleen de letterhoogte nagaan, die ik wel kan meten door het plastic. Het formaat is wel handig.
De informatie in het hulpmiddel is relevant voor mijn product(en)	1	2	3	4	5	6	7	Wat erop staat is wel relevant voor mijn producten.
De informatie in het hulpmiddel is adequaat uitgewerkt voor mijn product(en)	1	2	3	4	5	6	7	Het is niet compleet en dus ook niet adequaat uitgewerkt.
Het hulpmiddel zou mij voldoende kunnen bijstaan bij het vertrekken van informatie op de etiketten van mijn product(en)	1	2	3	4	5	6	7	Het is niet compleet en zou mij alleen helpen bij het bepalen van de letterhoogte.
Bruikbaarheid								
Het gebruik van het hulpmiddel zou zorgen voor een snellere informatieverstrekking op de etiketten van mijn product(en)	1	2	3	4	5	6	7	Maar een klein deel van de informatie staat erop. Ik zou dus toch verder moeten zoeken naar de overige etiketteringsvereisten en dan gaat dat niet sneller.

Het gebruik van het hulpmiddel zou leiden tot een etiket met correct gepresenteerde informatie	1	2	3	4	5	6	7	Het hulpmiddel is niet compleet.
Het gebruik van het hulpmiddel zou het verstrekken van informatie op etiketten van mijn product(en) eenvoudiger maken	1	2	3	4	5	6	7	Het helpt niet bij het verstrekken van informatie wat wij als producent juist moeten doen. De drukker bepaald verder de letterhoogte volgens de wetgeving.
Het gebruik van het hulpmiddel zou ertoe leiden dat ik het verstrekken van informatie op de etiketten van mijn product(en) beter kan verrichten	1	2	3	4	5	6	7	Het hulpmiddel is niet compleet, dus zou het niet zorgen ervoor dat ik het etiketteren beter kan verrichten.
Gebruiksgemak								
Het is gemakkelijk om te leren hoe het hulpmiddel werkt	1	2	3	4	5	6	7	Ik zou er wel mee kunnen werken. Er is niet zoveel aan.
Het hulpmiddel is duidelijk en begrijpelijk	1	2	3	4	5	6	7	Het hulpmiddel is duidelijk en begrijpelijk.
Het zou gemakkelijk zijn om te onthouden hoe het hulpmiddel werkt	1	2	3	4	5	6	7	Wel gemakkelijk om te onthouden hoe met het hulpmiddel te werken.
Algemene beoordeling								
Ik zou dit hulpmiddel in de toekomst gebruiken	1	2	3	4	5	6	7	Het hulpmiddel is niet compleet.
Het hulpmiddel was nuttig	1	2	3	4	5	6	7	Alleen voor het bepalen van de letterhoogte.

Het hulpmiddel voldeed aan mijn verwachtingen	1	2	3	4	5	6	7	Het hulpmiddel valt heel erg tegen. Het zou completer moeten zijn en dus meer informatie moeten bevatten dan alleen de letterhoogte.
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Finalizing questions

19. Heeft u nog andere aanbevelingen of vereisten voor een etiketteringshulpmiddel om aan uw verwachtingen te voldoen? Zo ja, welke	Een klein formaat (kaartje) vindt ik wel handig. Een digitale vorm (app) zou ook wel handig zijn.
20. Heeft u nog wat opmerkingen?	Geen.
21. Zou u bepaalde antwoorden nader willen toelichten?	Nee.

Answers by respondent 4 interviewed on 07-02-2019

General questions regarding respondent and company

Vraag	Antwoord
1. Al hoe lang bent u werkzaam bij het bedrijf?	10 jaar.
2. Wat is uw positie binnen het bedrijf?	Eigenaar.
3. Hoe veel werknemers telt uw bedrijf?	14 in mensen totaal werkzaam.
4. Al hoe lang produceert uw bedrijf jam?	23 jaar (sinds 1995)
5. Produceert uw bedrijf ook andere producten? Zo ja, -Welke?	Ja, eierenlikeur, mosterd, vruchtsiropen, verschillende typen sauzen en chutneys.
6. Waar worden uw producten verkocht (distributie)?	Slagerijen, bakkerijen, campings, kaasboerderijen, speciaalzaken, groentewinkels en landwinkels. De distributie wordt zelf gedaan en ook via de groothandel.

<p>7. Is uw bedrijf lid van een branche organisatie voor streekproducten/ lokale producten?</p> <p>Zo ja, -Welke? -Welke voordelen biedt dit aan uw bedrijf en producten?</p>	<p>Ja, het Zeker Zeeuws streekmerk voor een lijn van producten die met Zeeuwse grondstoffen in Zeeland worden vervaardigd.</p> <p>Geen.</p>
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Questions regarding the labelling process and legislation

<p>8. Hoe definieert u jam (ingrediënten)?</p>	<p>Gelei van vruchten, suiker, pectine en zuur. Verder maken we verschillende typen jam e.g. met/zonder toegevoegde suiker, biologisch, conventioneel en van ongeveer 20 verschillende vruchten.</p>
<p>9. Kunt u het huidige etiketteringsproces toelichten?</p>	<p>Ik bepaal de informatie zelf. Ik heb zelf een achtergrond in levensmiddelentechnologie. Wat op het etiket moet staan zijn o.a. de ingrediëntendeklaratie, productbenaming, inhoud, batchcode en houdbaarheidsdatum. Uit ervaring weet ik wat ik wel of niet en hoe moet aangeven volgens de wetgeving in bijvoorbeeld de ingrediëntendeklaratie.</p>
<p>10. Zo ja bij vraag 7, is de branche organisatie voor streekproducten/lokale producten betrokken bij het etiketteringsproces?</p> <p>Zo ja, -Kunt u mij wat meer vertellen over hun rol?</p> <p>Zo nee, -Verwacht u hulp met etikettering?</p>	<p>Ja, het etiket wordt wel gecontroleerd om na te gaan of het keurmerk correct is geplaatst en of de oorsprong van de ingrediënten duidelijk is. Hun certificering is gebaseerd op de grondstoffen die worden gebruikt en de receptuur.</p> <p>Niet van toepassing.</p>

11. Welke (andere) informatiebronnen heeft u gebruikt voor wettelijke voorschriften met betrekking tot de etikettering van levensmiddelen?	Ik heb ook wetgeving geraadpleegd in het verleden.
12. Denkt u dat de informatie op het etiket van uw jam aan de wetgeving voldoet? Waarom?	Ja, omdat de letterhoogte, voedingswaarde, naam van het bedrijf etc. wel wordt gecheckt. Als er fouten gemaakt zijn kan het komen door de grootte van het etiket. Wanneer het etiket klein is zou het kunnen voorkomen dat de informatie niet helemaal volledig is. Ik denk dat de meeste van onze etiketten wel redelijk volledig zijn.
13. Bent u bekend met de wettelijke productspecificaties die op jam van toepassing zijn? Zo ja, -Kunt u mij hierover wat meer vertellen?	Ja, het jam besluit. Dat het brixgehalte minimaal 60% moet zijn voor een 'jam'. De hoeveelheid vruchten nodig om het product 'extra confituur' te noemen. Wat gebruikt mag worden als suikervervangers.
14. Bent u bekend met de wettelijke etiketteringsvoorschriften voor levensmiddelen? Zo ja, - Kunt u mij hierover wat meer vertellen?	Ja, ik ben er min of meer wel bekend mee. Het is in de laatste jaren wel veranderd (e.g. lettergrootte en voedingswaarde), maar niet voor elk product. De voedingswaarde was een belangrijk nieuw onderdeel voor kleine bedrijven, maar ik maak gebruik van een calculatiemodel waardoor het niet zo moeilijk is.

Questions regarding labelling tools

15. Denkt u dat een middel die helpt bij het beslissen welke informatie op het etiket moet/ kan staan nuttig zal zijn? Waarom?	Ja, dat lijkt me heel erg handig omdat het een stukje bevestiging geeft of de informatie op het etiket correct is.
16. Bent u bekend met etiketteringshulpmiddelen? Zo ja, -Welke?	Nee* (bij de evaluatie bleek dat de respondent wel bekend was met Tool 2).

<p>Heeft u ooit zo een hulpmiddel gebruikt?</p> <p>Zo <u>ja</u>,</p> <p>-Welke?</p> <p>-Hoe was uw ervaring?</p> <p>-Voldeed het hulpmiddel aan uw verwachtingen?</p> <p>Zo <u>nee</u>,</p> <p>Wat zou u verwachten van een etiketteringshulpmiddel?</p>	<p>Nee.</p> <p>Een systeem waarin ik de (1) receptuur kan invullen, (2) vervolgens de productspecificaties, die deels voortkomt uit de receptuur met nog wat aanvullingen (e.g. kruisallergenen), waaruit dan (3) het etiket voortkomt. Want het is allemaal kwantitatieve data. Kortom een PIM (product information management) systeem. Zoiets bestaat wel al e.g. Eclarion, maar is wel duur.</p>
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Evaluation of the two labelling tools

17. Evaluation of Tool 1

Kwaliteit van de inhoud	Sterk mee oneens	Oneens	Enigzins mee oneens	Eens noch oneens	Enigzins mee eens	Eens	Sterk mee eens	Motivatie
Het hulpmiddel heeft een geschikte opmaak en indeling	1	2	3	4	5	6	7	Het is onhandig om de letterhoogte te meten.
De informatie in het hulpmiddel is relevant voor mijn product(en)	1	2	3	4	5	6	7	De informatie is wel relevant, maar niet compleet. Voor vlees bijvoorbeeld zou ik verder moeten gaan zoeken naar informatie.
De informatie in het hulpmiddel is adequaat	1	2	3	4	5	6	7	Wat ik voor jam moet aangeven, de hoeveelheid fruit en suiker kan ik niet terugvinden.

uitgewerkt voor mijn product(en)								
Het hulpmiddel zou mij voldoende kunnen bijstaan bij het verstrekken van informatie op de etiketten van mijn product(en)	1	2	3	4	5	6	7	Heel wat aanvullende informatie mist (e.g. bij ‘indien van toepassing’ weet je niet in welk geval wel of niet).
Bruikbaarheid								
Het gebruik van het hulpmiddel zou zorgen voor een snellere informatieverstrekking op de etiketten van mijn product(en)	1	2	3	4	5	6	7	Aangezien ik al op de hoogte ben, voegt het hulpmiddel weinig toe. Is meer iets voor de startende ondernemer.
Het gebruik van het hulpmiddel zou leiden tot een etiket met correct gepresenteerde informatie	1	2	3	4	5	6	7	Enigszins wel en anderzijds niet.
Het gebruik van het hulpmiddel zou het verstrekken van informatie op etiketten van mijn product(en) eenvoudiger maken	1	2	3	4	5	6	7	Het gebruik van het hulpmiddel zou het wel wat eenvoudiger maken, want dan zie je wat je op het etiket moet zetten.
Het gebruik van het hulpmiddel zou ertoe leiden dat ik het verstrekken van informatie op de etiketten van mijn product(en) beter kan verrichten	1	2	3	4	5	6	7	Als je het etiket al goed hebt gemaakt is het overbodig en bepaalde informatie mist. Overigens fungeert het wel als een kleine checklist.

Gebruiksgemak							
Het is gemakkelijk om te leren hoe het hulpmiddel werkt	1	2	3	4	5	6	7
Het hulpmiddel is duidelijk en begrijpelijk	1	2	3	4	5	6	7
Het zou gemakkelijk zijn om te onthouden hoe het hulpmiddel werkt	1	2	3	4	5	6	7
Algemene beoordeling							
Ik zou dit hulpmiddel in de toekomst gebruiken	1	2	3	4	5	6	7
Het hulpmiddel was nuttig	1	2	3	4	5	6	7
Het hulpmiddel voldeed aan mijn verwachtingen	1	2	3	4	5	6	7

18. Evaluation of Tool 2

Kwaliteit van de inhoud	Sterk mee oneens	Oneens	Enigzins mee oneens	Eens noch oneens	Enigzins mee eens	Eens	Sterk mee eens	Motivatie
Het hulpmiddel heeft een geschikte opmaak en indeling	1	2	3	4	5	6	7	Het hulpmiddel heeft wel een geschikte opmaak en indeling.
De informatie in het hulpmiddel is relevant voor mijn product(en)	1	2	3	4	5	6	7	Het hulpmiddel is wel ideaal voor het bepalen van de letterhoogte, maar helpt verder niet.

De informatie in het hulpmiddel is adequaat uitgewerkt voor mijn product(en)	1	2	3	4	5	6	7	Het gedeelte van de letterhoogte is wel goed uitgewerkt.
Het hulpmiddel zou mij voldoende kunnen bijstaan bij het verstrekken van informatie op de etiketten van mijn product(en)	1	2	3	4	5	6	7	Voor het meten van de letterhoogte staat het hulpmiddel mij wel goed bij. Ik kan het gewoon over het etiket heen schuiven. Maar de overige informatie komt er niet op voor.
Bruikbaarheid								
Het gebruik van het hulpmiddel zou zorgen voor een snellere informatieverstrekking op de etiketten van mijn product(en)	1	2	3	4	5	6	7	Dat is al goed uitgezocht, dus zou het niet sneller gaan met dit hulpmiddel.
Het gebruik van het hulpmiddel zou leiden tot een etiket met correct gepresenteerde informatie	1	2	3	4	5	6	7	Het hulpmiddel helpt wel met de letterhoogte maar niet met de rest.
Het gebruik van het hulpmiddel zou het verstrekken van informatie op etiketten van mijn product(en) eenvoudiger maken	1	2	3	4	5	6	7	Het hulpmiddel helpt wel met de letterhoogte, maar niet helemaal met het etiketteren.
Het gebruik van het hulpmiddel zou ertoe leiden dat ik het verstrekken van informatie op de etiketten van mijn	1	2	3	4	5	6	7	Enerzijds wel als het gaat om de letterhoogte, anderzijds weer niet. Als de letterhoogte al is gedefinieerd is hoofdje zoets niet te gebruiken. Misschien is het wel handig voor de hele kleinschalige producent.

product(en) better kan verrichten								
Gebruiksgemak								
Het is gemakkelijk om te leren hoe het hulpmiddel werkt	1	2	3	4	5		7	Het hulpmiddel is simpel.
Het hulpmiddel is duidelijk en begrijpelijk	1	2	3	4	5		7	Het hulpmiddel is heel helder en duidelijk.
Het zou gemakkelijk zijn om te onthouden hoe het hulpmiddel werkt	1	2	3	4	5		7	Het is wel gemakkelijk te onthouden hoe met het hulpmiddel te werken.
Algemene beoordeling								
Ik zou dit hulpmiddel in de toekomst gebruiken	1	2	3	4	5		7	Voor een snelle check van de letterhoogte op het etiket wel.
Het hulpmiddel was nuttig	1	2	3	4	5		7	Voor een snelle check van de letterhoogte op het etiket is het hulpmiddel wel nuttig.
Het hulpmiddel voldeed aan mijn verwachtingen	1	2	3	4	5		7	De informatie in het hulpmiddel is helemaal niet compleet en helpt slechts met de letterhoogte.

Finalizing questions

19. Heeft u nog andere aanbevelingen of vereisten voor een etiketteringshulpmiddel om aan uw verwachtingen te voldoen? Zo ja, welke	Ja, een digitaal systeem waarin de receptuur en productspecificaties kan worden ingevuld en waaruit de informatie die op het etiket moet uit voorkomt. Dat is namelijk de basis voor het etiket.
20. Heeft u nog wat opmerkingen?	Geen.
21. Zou u bepaalde antwoorden nader willen toelichten?	Nee.

Answers by respondent 5 interviewed on 12-02-2019

General questions regarding respondent and company

Vraag	Antwoord
1. Al hoe lang bent u werkzaam bij het bedrijf?	2,5 jaar.
2. Wat is uw positie binnen het bedrijf?	Eigenaar.
3. Hoe veel werknemers telt uw bedrijf?	Eénpersoonsbedrijf (1); geen werknemers.
4. Al hoe lang produceert uw bedrijf jam?	2,5 jaar (geopend op 3 september 2016).
5. Produceert uw bedrijf ook andere producten? Zo ja, -Welke?	Ja, sappen, appelmoes en stoofpeertjes.
6. Waar worden uw producten verkocht (distributie)?	Alleen in de eigen winkel. Verder geen distributie.
7. Is uw bedrijf lid van een branche organisatie voor streekproducten/ lokale producten? Zo ja, -Welke? -Welke voordelen biedt dit aan uw bedrijf en producten?	Ja, wel aangemeld bij Regioproduct, welke een platform is dat kleinschalige voedselproducenten in kaart brengt. In het begin wat promotie, maar op lange termijn meer de vindbaarheid op de website.

Questions regarding the labelling process and legislation

8. Hoe definieert u jam (ingrediënten)?	Het is een basis jam qua ingrediënten. Voor de verdikking gebruik ik pectine (plantaardig) i.p.v. gelatine waardoor de jam wat dunner is. Ook maakt het de jam toegankelijker voor een
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	breder publiek. Verder probeer ik ook wat minder suiker te gebruiken, zodat je de vrucht echt proeft.
9. Kunt u het huidige etiketteringsproces toelichten?	Het gaat bij mij om het informeren van de consument. Ik heb in het verleden over de etiketteringsvereisten gelezen op het internet, maar verder geen voorbeelden gezocht en uit eigen ervaring het etiket opgesteld. De informatie die ik erop plaats zijn de naam, houdbaarheidsdatum (productiedatum + 1 jaar), ingrediënten, ons adres, inhoud en dat het potje in de glasbak kan. Voor mijn sappen, maak ik gebruik van de standaarden van het bedrijf die de sappen perst. De etiketten worden door mij gedrukt.
10. Zo <u>ja</u> bij vraag 7, is de branche organisatie voor streekproducten/lokale producten betrokken bij het etiketteringsproces? Zo <u>ja</u> , -Kunt u mij wat meer vertellen over hun rol?	
Zo <u>nee</u> , -Verwacht u hulp met etikettering?	Nee. Nee, ik verwacht dat niet van Regioproduct. Het zou wel fijn zijn als er zo een organisatie was die de informatie m.b.t. etiketteren wat toegankelijker maakt, want daar zou ik wel gebruik van maken.
11. Welke (andere) informatiebronnen heeft u gebruikt voor wettelijke voorschriften met betrekking tot de etikettering van levensmiddelen?	Geen.
12. Denkt u dat de informatie op het etiket van uw jam aan de wetgeving voldoet? Waarom?	Nee, omdat de regels veel scherper zijn. Er zou meer informatie op het etiket moeten staan en een andere indeling. Ik weet dat er meer vereisten zijn.

<p>13. Bent u bekend met de wettelijke productspecificaties die op jam van toepassing zijn? <u>Zo ja</u>, -Kunt u mij hierover wat meer vertellen?</p>	<p>Nee.</p>
<p>14. Bent u bekend met de wettelijke etiketteringsvoorschriften voor levensmiddelen? <u>Zo ja</u>, - Kunt u mij hierover wat meer vertellen?</p>	<p>Ja, ik heb me wel eens in verdiept, maar heb er recent niet zoveel tijd aan besteed. Ik ben niet bekend met de huidige status.</p>

Questions regarding labelling tools

<p>15. Denkt u dat een middel die helpt bij het beslissen welke informatie op het etiket moet/ kan staan nuttig zal zijn? Waarom?</p>	<p>Ja, natuurlijk omdat zodoende de informatie m.b.t. etiketteren veel toegankelijker wordt gemaakt, zonder dat je je hoeft te verdiepen in de wetgeving. Mijn productie is ook heel kleinschalig, dus wil je er niet zoveel werk aan hebben. Ik zou dan ook bereid zijn om mijn etiket aan te passen.</p>
<p>16. Bent u bekend met etiketteringshulpmiddelen? <u>Zo ja</u>, -Welke? Heeft u ooit zo een hulpmiddel gebruikt? <u>Zo ja</u>, -Welke? -Hoe was uw ervaring? -Voldeed het hulpmiddel aan uw verwachtingen?</p>	<p>Nee.</p> <p>Nee.</p>

Zo nee, Wat zou u verwachten van een etiketteringshulpmiddel?	Een overzichtelijk digitaal systeem (e.g. app) waarin je kan invullen welke informatie je al hebt en kan nagaan welke informatie mist of juist overbodig is. Ook zou ik een visuele weergave van het etiket willen daarbij.
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Evaluation of the two labelling tools

17. Evaluation of Tool 1

Kwaliteit van de inhoud	Sterk mee oneens	Oneens	Enigzins mee oneens	Eens noch oneens	Enigzins mee eens	Eens	Sterk mee eens	Motivatie
Het hulpmiddel heeft een geschikte opmaak en indeling	1	2	3	4	5	6	7	Het hulpmiddel is heel overzichtelijk. Het is klein dus gemakkelijk op te slaan en mee te nemen. Alles staat er zo een beetje op wat op het etiket moet.
De informatie in het hulpmiddel is relevant voor mijn product(en)	1	2	3	4	5	6	7	Ik zou de informatie wel kunnen gebruiken voor mijn producten.
De informatie in het hulpmiddel is adequaat uitgewerkt voor mijn product(en)	1	2	3	4	5	6	7	Als alle informatie op het etiket moet is het wel heel veel, zelfs te veel. Als al deze informatie op mijn jam etiket zou staan denk ik wel dat dat er meer dan voldoende informatie op staat. Dus ik denk dat het voor mijn producten wel goed genoeg is uitgewerkt.
Het hulpmiddel zou mij voldoende kunnen bijstaan bij het verstrekken van informatie op de etiketten van mijn product(en)	1	2	3	4	5	6	7	De informatie in het hulpmiddel zou wel wat gedetailleerder kunnen met een voorbeeld van de indeling op het etiket (presentatie). Of waarbij je heel gemakkelijk de voedingswaarde kunt uitrekenen.
Bruikbaarheid								

Het gebruik van het hulpmiddel zou zorgen voor een snellere informatieverstrekking op de etiketten van mijn product(en)	1	2	3	4	5	6	7	Je hebt dan wel iets bij de hand en dan hoef je niet echt verder te zoeken op websites. Maar je moet er toch nog aan de slag mee.
Het gebruik van het hulpmiddel zou leiden tot een etiket met correct gepresenteerde informatie	1	2	3	4	5	6	7	Enigszins wel, maar het geeft geen bevestiging. Je moet toch nog zelf verder nagaan of alles daadwerkelijk klopt op het etiket.
Het gebruik van het hulpmiddel zou het verstrekken van informatie op etiketten van mijn product(en) eenvoudiger maken	1	2	3	4	5	6	7	Het zou wel eenvoudiger zijn, want dan kan je een lijstje naast het etiket houden wat er allemaal op moet.
Het gebruik van het hulpmiddel zou ertoe leiden dat ik het verstrekken van informatie op de etiketten van mijn product(en) beter kan verrichten	1	2	3	4	5	6	7	Ik zou het etiketteren wel beter kunnen verrichten met dit hulpmiddel. Op mijn etiket zou ik dan wat meer informatie kunnen verwerken.
Gebruiksgemak								
Het is gemakkelijk om te leren hoe het hulpmiddel werkt	1	2	3	4	5	6	7	Redelijk voor zichzelf sprekend.
Het hulpmiddel is duidelijk en begrijpelijk	1	2	3	4	5	6	7	Het hulpmiddel is duidelijk en begrijpelijk.
Het zou gemakkelijk zijn om te onthouden hoe het hulpmiddel werkt	1	2	3	4	5	6	7	Alles staat erop vermeld, dus het is wel gemakkelijk te onthouden hoe het hulpmiddel werkt.

Algemene beoordeling								
Ik zou dit hulpmiddel in de toekomst gebruiken	1	2	3	4	5	6	7	Als er geen andere tool is zou ik dit hulpmiddel wel gebruiken.
Het hulpmiddel was nuttig	1	2	3	4	5	6	7	Ik denk wel dat het hulpmiddel enigszins nuttig is.
Het hulpmiddel voldeed aan mijn verwachtingen	1	2	3	4	5	6	7	Ik zou liever iets digitaals gewild, waarbij ik het etiket kan zien met de indeling en het berekenen van de voedingswaarde.

18. Evaluation of Tool 2

Kwaliteit van de inhoud	Sterk mee oneens	Oneens	Enigzins mee oneens	Eens noch oneens	Enigzins mee eens	Eens	Sterk mee eens	Motivatie
Het hulpmiddel heeft een geschikte opmaak en indeling	1	2	3	4	5	6	7	Doordat het hulpmiddel transparant is, kan je de letterhoogte mee meten. Het is ook klein, dus gemakkelijk te bewaren en mee te nemen.
De informatie in het hulpmiddel is relevant voor mijn product(en)	1	2	3	4	5	6	7	Alles over de letterhoogte is uitgelegd, welke ik ook moet bepalen.
De informatie in het hulpmiddel is adequaat uitgewerkt voor mijn product(en)	1	2	3	4	5	6	7	Wat betreft de letterhoogte is het goed genoeg uitgewerkt.
Het hulpmiddel zou mij voldoende kunnen bijstaan bij het verstrekken van informatie	1	2	3	4	5	6	7	Het hulpmiddel helpt alleen met één onderdeel van het etiketteren (de letterhoogte).

op de etiketten van mijn product(en)								
Bruikbaarheid								
Het gebruik van het hulpmiddel zou zorgen voor een snellere informatieverstrekking op de etiketten van mijn product(en)	1	2	3	4	5	6	7	Het hulpmiddel zou niet zorgen voor een snellere informatieverstrekking, omdat het niet helpt bij het verstrekken van informatie.
Het gebruik van het hulpmiddel zou leiden tot een etiket met correct gepresenteerde informatie	1	2	3	4	5	6	7	Niet zo zeer, want het is meer een check van één onderdeel (de letterhoogte).
Het gebruik van het hulpmiddel zou het verstrekken van informatie op etiketten van mijn product(en) eenvoudiger maken	1	2	3	4	5	6	7	Niet echt, want het is een check van de letterhoogte alleen.
Het gebruik van het hulpmiddel zou ertoe leiden dat ik het verstrekken van informatie op de etiketten van mijn product(en) beter kan verrichten	1	2	3	4	5	6	7	Ik zou het verstrekken van informatie niet beter kunnen verrichten door gebruik van dit hulpmiddel, want het helpt alleen met de letterhoogte.
Gebruiksgemak								
Het is gemakkelijk om te leren hoe het hulpmiddel werkt	1	2	3	4	5	6	7	Ik denk wel dat het gemakkelijk te leren is hoe ik met dit hulpmiddel moet werken.
Het hulpmiddel is duidelijk en begrijpelijk	1	2	3	4	5	6	7	Het hulpmiddel is overzichtelijk. Ik weet waarvoor ik het moet gebruiken en is ook gebruikersvriendelijk.

Het zou gemakkelijk zijn om te onthouden hoe het hulpmiddel werkt	1	2	3	4	5	6	7	Het zou gemakkelijk zijn om te onthouden hoe dit hulpmiddel werkt. Alleen erbij pakken en meten.
Algemene beoordeling								
Ik zou dit hulpmiddel in de toekomst gebruiken	1	2	3	4	5	6	7	Als er geen andere tool beschikbaar is zou ik het wel gebruiken voor het meten van de letterhoogte.
Het hulpmiddel was nuttig	1	2	3	4	5	6	7	Het hulpmiddel kan wel nuttig zijn.
Het hulpmiddel voldeed aan mijn verwachtingen	1	2	3	4	5	6	7	Het hulpmiddel is niet compleet, er is weinig informatie op waardoor je toch verder moet gaan zoeken naar de overige informatie.

Finalizing questions

19. Heeft u nog andere aanbevelingen of vereisten voor een etiketteringshulpmiddel om aan uw verwachtingen te voldoen? Zo ja, welke	Ja, een tool waarin ook de letterhoogte digitaal bepaald kan worden. Ook tips hoe je het etiket zo duidelijk mogelijk kan neerzetten voor de consument. Ik zou graag een werkbare digitale tool willen.
20. Heeft u nog wat opmerkingen?	Geen.
21. Zou u bepaalde antwoorden nader willen toelichten?	Ja, ik heb wel behoefte aan een werkbare digitale tool.