Organic-PLUS - grant agreement No [774340]

Pathways to phase-out contentious inputs from organic agriculture in Europe

Deliverable 2.2

Survey on Public Opinion in Europe regarding contentious inputs - a report.

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1 CONTENT

EXECUTIVE SUMMARY

This report provides results from an on-line survey in seven European countries: France, Germany, Italy, Norway, Poland, Spain and the United Kingdom (UK). The main aim of the survey has been to gain more knowledge about consumer concerns of contentious inputs in organic agriculture which align with an overall aim of the Organic-PLUS project to involve citizens in the process of designing phase-out scenarios and the policy discussion on the development of the organic and sustainable farming sector in Europe.

The data material consists of more than 15,000 respondents evenly distributed on the participating countries. Besides questions about phasing out of contentious inputs the questionnaire covered issues related to consumption and purchases of food with emphasis on organic food. The survey also contained questions about use and recognition of organic food labels and issues of trust in different food system actors.

In the analyses we have put most emphasis on comparison between the participating countries. The countries represent in all a total of 70 % of all EU inhabitants. However, based on previous European studies, there are great variations in food culture and food governance across Europe, thus, a generic European food consumer does not exist. For this reason it is more fruitful to discuss food consumption in relation to the national variations in food culture, trust in food and food system governance. Regarding the phasing out of contentious inputs we especially wanted to focus on the frequent organic consumers, anticipating that they might have different and stronger opinions about the phasing out of contentious inputs than consumers in general.

Previous research has especially pointed to that there exists a north-south division in Europe when it comes to how consumers relate to food issues. First, there are important differences in the food provisioning system in Europe with a highly concentrated food retail sector in Northern Europe, meaning that consumers mainly provide their food in Hyper- and supermarkets controlled by a few large retail chains. This tendency in retail concentration is present in southern and eastern European countries as well, however, here consumers to a greater extent also provide their food from more traditional food markets and independent food outlets. There are also differences in the extent to which people eat their meals outside of home or not. This division is also true for the consciousness about quality of food, where consumers in southern European countries often have a greater knowledge and awareness related to the quality of food and food production, while Northern European consumers tend to be more aware of ethical issues (fair trade and animal welfare). Northern European consumers also have a greater trust in the food system than in the south where issues of food safety are more pertinent.

In line with previous research, the report shows that there are great variations in how people in different parts of Europe relate to food and agriculture, and especially organic food. We find differences in modes of food provisioning both regarding ordinary and organic food shopping, differences in organic food consumption, use of food labels as well as differences in trust in food between countries.

We believe these differences also impact on knowledge and awareness of issues such as use of contentious inputs in organic agriculture. Especially we find that frequent organic consumers place high importance on phasing out contentious inputs, they want stricter regulations and are also more willing to pay for organic products that are produced without the use of contentious inputs.

1. INTRODUCTION AND OBJECTIVE

One overall aim of the Organic-PLUS project is to phase out contentious inputs and thereby help develop an organic food system more true to organic and sustainable principles. In line with the multi-actor approach of the project this report provides results from an on-line survey in seven European countries to gain a deeper understanding of consumer concerns of contentious inputs in organic agriculture. Food culture and food consumption show great variations across countries and regions of Europe. This also holds for organic food consumption. Thus, the report also map the differences in organic food consumption across the participating countries regarding perceptions as well as consumption of organic food products. Besides the national differences the report also look into the importance of selected social background variables on perceptions and use of organic food among consumers in the participating countries. Previous research establish that women more than men buy organic food products and also are more concerned about meat consumption, climate and environmental issues (Austgulen, 2016).

The Organic-PLUS project aims at going beyond the state of art not only by surveying the contentious inputs already included in the project, but also by questioning the overall pathway for sustainable development of organic food systems. Thus, by this survey we also aim at finding out what are the contentious inputs to consumers, are they the same as in the inputs researched in the Organic-PLUS project or are other issues more important to them? The report gives a detailed new understanding of organic consumers in the seven participating countries with great differences in food cultures and consumption of organic food. Thus, the knowledge gained through this survey is vital for the design of phase-out scenarios and the policy discussion on the development of the organic and sustainable farming sector in Europe.

We have conducted a cross-national population survey in France, Germany, Italy, Norway, Poland, Spain and the UK which represents 70.4% of all EU consumers (excluding Norway).

The sample size is minimum 2000 respondents in each country stratified to be nationally representative in terms of age, gender and place of residence. The survey contains standard socioeconomic background questions and specific questions on opinions about organic food and contentious inputs in organic farming, specifically formulated to get beyond general conventions and to be relevant for the development of organic standards.

1.1 BACKGROUND

In this report we have especially emphasised the comparative perspective when analysing consumers use, perceptions and knowledge of organic food. Previous studies of food consumers show that references to *the European consumer* are misleading (Halkier et al., 2007) because food consumption is effected by national and contextual factors such as differences in food culture, political and organisational factors (governance) of the food sector as well as the general level of trust in European countries (Halkier et al., 2007; Kjærnes, Harvey, & Warde, 2007).. We believe these differences also have importance when studying European consumers' perceptions of phasing out contentious inputs in organic agriculture; what type of inputs that are of most importance to phase out and what measures to be used. In the following section we will give a brief overview of the research on organic food consumption, which has predominantly focused on who are the organic consumers, their motivations and willingness to pay for organic food. Reviews of the literature show that less focus has been on consumers perceptions on the methods and regulations in organic agriculture as such and their views on further development of the organic sector.

Several studies are carried out that approach consumption of organic food from different perspectives. Not all of these are necessary carried out solely in a European context, however, in some of the review articles general results are found that to a great extent apply the European context. Here we will briefly look upon studies reflecting characteristics of organic consumers, motives to buy and reasons not to buy as well as willingness to pay.

Who is the organic consumer?

Yiridoe et al. (2005) find that the literature describes a frequent organic consumer to be a woman. This is because in most households, women do the most of the shopping and are also more knowledgeable about food issues such as healthy eating and food safety compared to men. Previous studies also find that women tend to be more engaged in ethical and political consumerism, than men (Austgulen 2015). Further, Yiridoe et al. found that frequent buyers of organic food tend to be younger than the average food consumer. Organic buyers tend to have high education. However it is difficult to say some certain about income. Another review by Aertsens et al. (2009) also found that women buy more organic food than men do. In addition, households with children buy more organic food than households without children. The review found that studies are unclear about whether younger people buys more organic food than older people do. This review conclude that education does not seem to influence the level of organic food consumption.

In a general overview of organic food consumers Hughner et al. (2007) found seven motives for why consumers buy organic food:

- It is healthier. Of especially importance is a wish to avoid pesticides that are perceived to be found in conventional food.
- Tastes better.
- Environmental concern. Organic food production uses less chemicals and pesticides and therefore consumers perceive them as environmental friendlier.
- Concern over food safety. Food scares linked to conventional food may turn consumers to organic food.
- Concern over animal welfare.
- Supports local economy and helps to sustain traditional cooking. Some studies find that consumers buy organic because they would like to support the local economy. Such consumers believe that organic food is produced at small, local and family owned farms. Such farms represent the idyllic picture the lay consumers may have of a farm.
- Reminiscent of the past and fashionable. One study found that some organic consumers bought such food because it is nostalgic, and tastes like food from the past. In addition, organic food is expensive which also leave an impression that it is fashionable. A similar motive that consumption of organic food gives consumers a positive self-image and identity were also found in a review by Aertsens et al. (2009) among others together with a curiosity towards trying out new products.

Of equal importance are the reasons why consumers do not buy organic. Hughner et al. lists the following reasons:

- Reflection of high prices.
- Lack of availability.
- Scepticism of certification boards and organic labels. Some European studies have found a mistrust in the labelling institutions.
- Insufficient marketing.
- Satisfaction with current conventional food.
- Cosmetic defects.

Willingness to pay

In general, the review of Yiridoe et al. (2005) found that most consumers can maximum allow a price premium of 10-20%. If the premium is above that range, demand will decrease rapidly. There does not seem to be a clear pattern among the studies when it comes to determining the size of the price premium and consumers' willingness to pay for organic food in general. This may be due to the fact of different research methods.

2 DATA AND METHODS

2.1 SURVEY

2.1.1 Questionnaire

The survey questionnaire was developed by SIFO in cooperation with the Organic+ coordinator at Coventry University and the participating partners from each of the countries included in the survey[1]. The content of the questionnaire were especially informed by a series of focus groups held in Norway, the UK and Italy during October 2018 – February 2019. The aim of the focus groups was to get a deeper insight into how organic food and agriculture is perceived by different groups of consumers (ordinary consumers and more dedicated organic consumers) as well as their knowledge about organic agriculture and their thoughts about the use of – and phasing out of – contentious inputs.

The Organic-PLUS partners especially helped with formulating questions about contentious inputs together with checking the language and testing the questionnaire before it was launched in the participating countries.

2.1.2 Survey sampling method

Kantar Norway conducted the data collection for SIFO in all the seven European countries. The target group was the general population in Norway, France, UK, Spain, Poland, Italy and Germany. The general population has been sampled using Kantars access panels in each country. The survey has been conducted using an online survey approach.

All countries surveyed were deemed extremely suitable for online panel surveying: France, Germany, Italy, Norway, Poland, Spain and UK.

In Norway, GallupPanelet is TNS Gallup's access panel for surveys. The panel consists of approximately 46 000 individuals who regularly respond to surveys. The GallupPanelet is put together in terms of representativeness, and the aim is for the GallupPanelet to be a Norway in miniature, reflecting the entire population of the country. In Norway, the survey has been sent out via email to a representative sample of the panel.

Outside of Norway, Kantar used the Lightspeed GMI-panels that reach more than four million research panel members. Internationally, Lightspeed sends respondents generic survey invitations with limited information about the survey. Generally, the survey invitation emails notify the respondent of an opportunity to share his/her opinions and, if applicable, informs him/her of the opportunity to earn MySurvey Reward Points, GTM MarketPoints and/or entries into Prize Draws. The invitation instructs the respondent to log-on to MySurvey.com or GlobalTestMarket.com to access the survey. As the survey invitations are generic (i.e. a reminder to access MySurvey.com and check for new surveys), the response rates cannot be calculated, except for Norway.

[1] See acknowledgement at the end of the report

Table 1: Response, Norwegian panel.

Status	Number of respondents
Emails sent	4.750
No contact	2.529
Contact	2.221
Drop out:	
Incomplete	149
Do not wish to participate - self screening	0
Survey closed	0
Technical error	0
Interviews	2.072

The response rate in Norway was 47%, which is a quite normal response rate. 4750 emails were sent in order to achieve 2221 complete and incomplete responses to the survey. In total, 2072 completes were achieved. In the international panels, the respondents are reminded to access a list of available surveys. There are no specific emails sent. The number of incompletes is broadly in line with the achievement in the Norwegian survey, see table 2.

Table 2: Completed surveys

	Complete interview	Incomplete interview	Closed- over quota
Norway	2072	149	0
France	2311	111	198
UK	2301	248	120
Spain	2246	166	4723
Poland	2258	162	203
Italy	2262	87	1148
Germany	2312	123	126
TOTAL	15762	1046	6518

2.1.3 Description of key background variables in the sample

SIFO drafted the survey questionnaire with the input from partners in each of the seven countries, which was adjusted, translated and programmed by Kantar. The questionnaire consisted of 38 questions on consumer habits, specially related to organic consumption, use and recognition of organic food labels and views on phasing out of contentious inputs. The main survey was sent to all countries except Poland on the 7th of June 2019. The Polish questionnaire was issued on the 17th of June. The interviewing time was approximately 15 minutes in all countries.

Table 3: Country sample size

Country	Freq.	Percent	Cum.
Norway	2072	13.15	13.15
France	2309	14.66	27.81
UK	2299	14.59	42.40
Spain	2245	14.25	56.65
Poland	2257	14.33	70.98
Italy	2261	14.35	85.33
Germany	2311	14.67	100.00

Gender

The gender distribution seems to be in line with an expected 50-50 distribution, however the women are in a majority in all of the surveyed countries. This should come as no surprise since food is a topic more related to women. The distributions of each country specific sample are given in Table 4. Statistical analysis of the distribution shows that no country is significantly different than the overall distribution of 52.53 % women and 47.47 % men, see Table 4.

Table 4: Gender distribution per country

	Country							
female	**Norway**	**France**	**UK**	**Spain**	**Poland**	**Italy**	**Germany**	**Total**
Men	1019	1098	1114	1021	1058	1094	1065	7469
	49.18	47.61	48.50	45.58	46.92	48.43	46.20	47.47
Women	1053	1208	1183	1219	1197	1165	1240	8265
	50.82	52.39	51.50	54.42	53.08	51.57	53.80	52.53
Total	2072	2306	2297	2240	2255	2259	2305	15734
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Pearson chi2(6) = 9.2186 Pr = 0.162
First row has *frequencies* and second row has *column percentages*

Age

Histograms for age distributions for each country is shown in figure 1. There are also some irregularities, for instance the sudden increase in sampled individual older than 49 in Spain and 35-year-old in Poland.

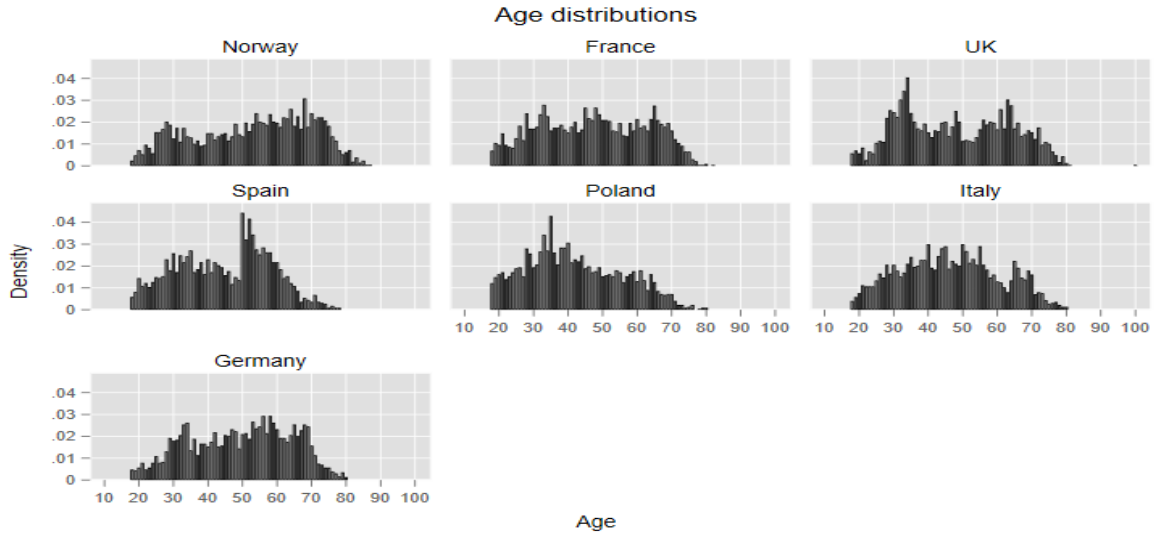

Figure 1: Age distributions by country

Education

There are somewhat large differences in the level of education in each country specific sample. In Poland there are many with long university degrees, and in Germany more than 50 % has vocational education. In Germany many technical educations are considered vocational, in other European countries these educations would be associated with a university or college degree. This probably explains the large group of vocational educated individuals in Germany. In Poland and Norway there is an oversampling from individuals with long university or college degrees. This is a common error that occurs when doing sample when using online surveys that people with high education and income are overrepresented in online samples.

Table 5 Education per country (sample)

Highest completed education	Country							
	Norway	**France**	**UK**	**Spain**	**Poland**	**Italy**	**Germany**	**Total**
No school	2	3	17	3	3	5	5	38
	0.10	*0.13*	*0.74*	*0.13*	*0.13*	*0.22*	*0.22*	*0.24*
Primary school	62	27	20	55	24	49	57	294
	3.13	*1.17*	*0.87*	*2.45*	*1.06*	*2.17*	*2.47*	*1.88*
Secondary school	313	487	722	416	861	709	403	3911
	15.81	*21.09*	*31.40*	*18.53*	*38.15*	*31.36*	*17.44*	*24.97*
Vocational college	330	649	529	635	208	667	1175	4193
	16.67	*28.11*	*23.01*	*28.29*	*9.22*	*29.50*	*50.84*	*26.77*
University Bachelor	658	703	633	775	314	477	281	3841
	33.23	*30.45*	*27.53*	*34.52*	*13.91*	*21.10*	*12.16*	*24.52*
University Master or higher	574	397	350	332	819	325	335	3132
	28.99	*17.19*	*15.22*	*14.79*	*36.29*	*14.37*	*14.50*	*20.00*
Do not wish to answer	8	33	18	20	17	25	34	155
	0.40	*1.43*	*0.78*	*0.89*	*0.75*	*1.11*	*1.47*	*0.99*
Other	33	10	10	9	11	4	21	98
	1.67	*0.43*	*0.43*	*0.40*	*0.49*	*0.18*	*0.91*	*0.63*
Total	1980	2309	2299	2245	2257	2261	2311	15662
	100.00	*100.00*	*100.00*	*100.00*	*100.00*	*100.00*	*100.00*	*100.00*

Pearson chi2(42) = 2.4e+03 Pr = 0.000

First row has *frequencies* and second row has *column percentages*

Income

The income distribution differs substantially between countries. However, the income group definitions are not comparable between countries. Income group definitions are given in table in appendix, chapter 8.1.

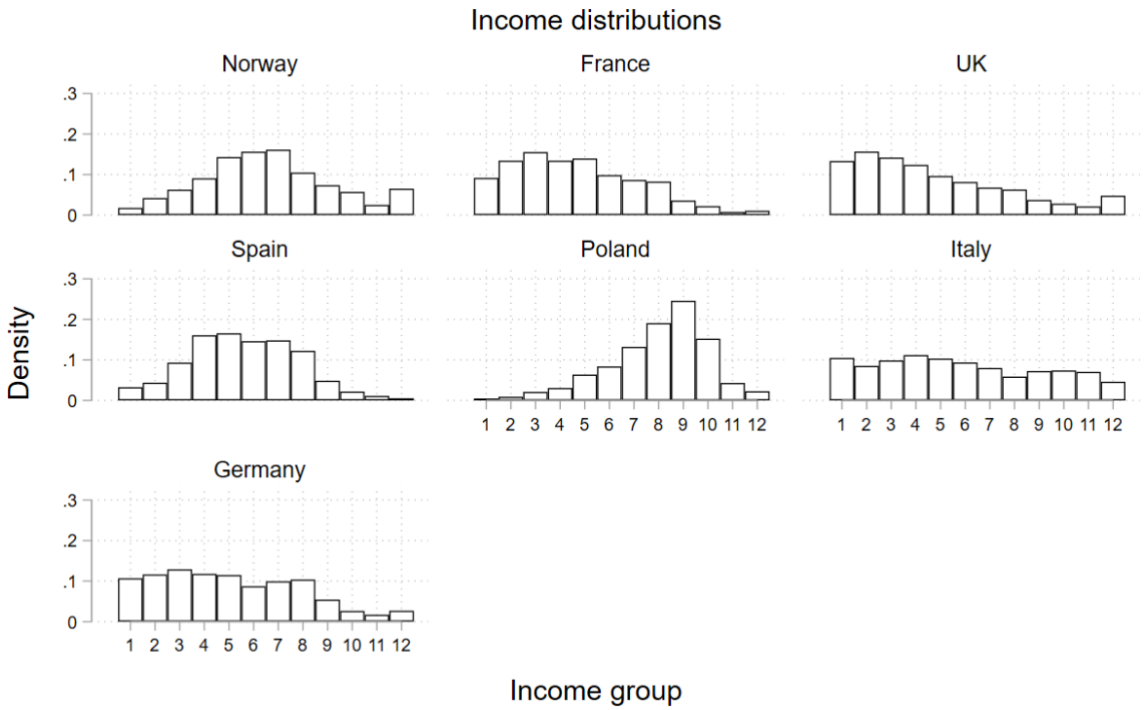

Figure 2: Income group distribution in sample by country

Living area

The place where people live may have effect on food habits and experiences with organic food and agriculture, thus this is an important background variable to include. The alternatives were centre of a big city, suburb of big city, in a small city, in a small town or in the countryside. The sample results are given in table 6. The respondents were to a larger extent recruited from a small city or town in Germany, Italy and UK than the other countries. In Spain and Poland a relatively large share were recruited form a big city.

Table 6: Living area

	Country							
Do you live in:	**Norway**	**France**	**UK**	**Spain**	**Poland**	**Italy**	**Germany**	**Total**
Centre of big city	405	424	472	1011	852	547	591	4302
	19.55	*18.36*	*20.53*	*45.03*	*37.75*	*24.19*	*25.57*	*27.31*
Suburb of big city	339	303	574	337	288	343	355	2539
	16.36	*13.12*	*24.97*	*15.01*	*12.76*	*15.17*	*15.36*	*16.12*
Small city	607	687	439	615	702	879	759	4688
	29.30	*29.75*	*19.10*	*27.39*	*31.10*	*38.88*	*32.84*	*29.76*
In a small town	396	511	724	254	143	365	409	2802
	19.11	*22.13*	*31.49*	*11.31*	*6.34*	*16.14*	*17.70*	*17.79*
Countryside	325	384	90	28	272	127	197	1423
	15.69	*16.63*	*3.91*	*1.25*	*12.05*	*5.62*	*8.52*	*9.03*
Total	2072	2309	2299	2245	2257	2261	2311	15754
	100.00	*100.00*	*100.00*	*100.00*	*100.00*	*100.00*	*100.00*	*100.00*

Pearson chi2(24) = 1.8e+03 Pr = 0.000
First row has *frequencies* and second row has *column percentages*

Responsibility for buying food

Most of the respondents state that they are responsible for buying food in their household and just a small share state that they have no responsibility (Table 7). This means that the sample in general has experience with purchases of food which is important considering that a large part of the survey cover questions about food purchase and food consumption. We also see that both among women and men a majority in most countries state that they are mainly responsible. However, women to a greater extent than men tend to answer that they are mainly responsible, while men to a greater extent answer "co-responsible". This is in line with previous studies emphasizing that women have a greater responsibility for food purchases than men (Brusdal 2013).

Table 7: To what extent are you responsible for shopping household?

Responsible for shopping in household	Country							
	Norway	**France**	**UK**	**Spain**	**Poland**	**Italy**	**Germany**	**Total**
Mainly responsible	1167	1634	1664	1496	1475	1502	1609	10547
	56.32	*70.77*	*72.38*	*66.64*	*65.35*	*66.43*	*69.62*	*66.95*
Co-responsible	861	621	585	707	745	730	649	4898
	41.55	*26.89*	*25.45*	*31.49*	*33.01*	*32.29*	*28.08*	*31.09*
Not responsible	44	54	50	42	37	29	53	309
	2.12	*2.34*	*2.17*	*1.87*	*1.64*	*1.28*	*2.29*	*1.96*
Total	2072	2309	2299	2245	2257	2261	2311	15754
	100.00	*100.00*	*100.00*	*100.00*	*100.00*	*100.00*	*100.00*	*100.00*

First row has *frequencies* and second row has *column percentages*

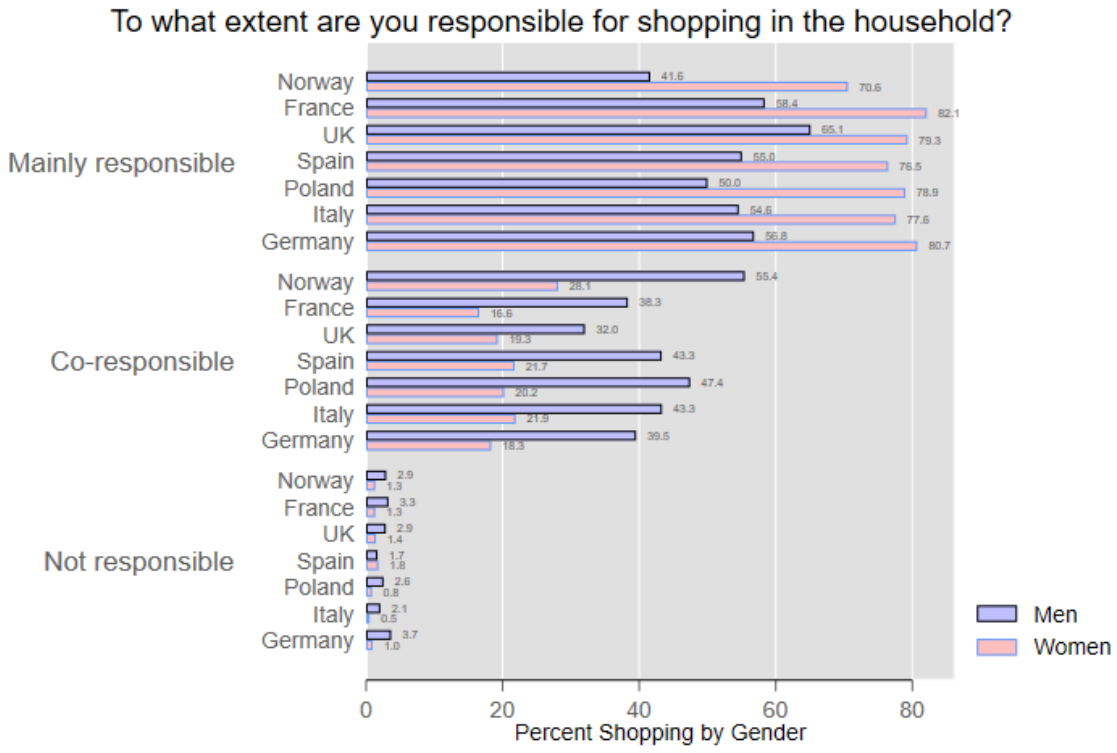

Figure 3: Responsible for buying food in household. Gender

2.2 CONCLUSION ABOUT METHODS

In this report we use two different research methods in order to study European consumers' interest and perceptions of organic food in general and about contentious inputs in special. By conducting both focus groups and survey we claim that our finding are both reliable and valid, as research results should be.

Our findings are reliable because we have done many observations, i.e. four focus groups and a survey in seven countries. For both methods we have used standard recommended methods in social sciences.

Our findings are also valid, i.e. we claim that we measure what we intent to measure. For example we are interested in contentious inputs, and both the focus groups and the survey had many questions about that.

In social sciences, inner validity and generalisability are important. The first term refers to whether the scientist can conclude correct about cause and effect. We do not claim to study a cause and effect relationship, only whether if there seems to be a (statistical) relationship between two measures.

The second term, generalisability, is whether we can generalise the result to a population. In our sense the population is the whole population in the European Economic Area. We have only done our study in seven European countries, not all, so we might have difficulties by generalizing to all the relevant countries, but having done our study in seven countries is quite impressive. The countries included cover more than 70 percent of the EU population.

To conclude about our methodology, we claim that we have done our best to study the topic. We have been using state of the art methods when constructing the questionnaire and recruiting respondents given the time and money available.

3 ORGANIC FOOD CONSUMPTION

In general, across Europe, distribution of organic food seems to have followed a dual trend – with growth in organic market shares in the hyper/supermarkets parallel with an increased interest in and provisioning though alternative distributions channels. Such trends are found in several of the countries surveyed in the present study, with minor variations.

For example, in Italy, this dual trend in development in the organic food market has been described, with organic food initially was primarily distributed through small speciality stores of cooperatives (Santucci et al, 1999, Compagnoni et al. 2000) followed by a steady growth in distribution through supermarkets since the beginning of the 1990. In 2000, market shares in supermarkets were reported to exceed that of specialized organic shops (Pinton 2001). The domestic market has been characterised by strong traditions regarding regional produce and regional gastronomic traditions that are held in high esteem.

According to data from the Nomisma Consumer Survey in 2017, the number of consumers buying organic food has been growing steadily the last years, and 60% were reported to be buying organic food once a week (Zanoli 2018). On the question of where they bought organic food, 65% answered supermarkets, 14% specialised shops, and 19% through direct sales (Zanoli, 2018). The structure of the Italian organic food market is reported to be gradually changing, with more business coming through hyper-/supermarkets (Zanoli, 2018). Among the respondents who bought organic food, 76% placed high importance on Italian origin, 70% on eco-friendly/sustainable packaging, and 49% on vegetarian ingredients (Zucconi 2017).

The Spanish organic market is smaller than average for the European Union, but it has grown steadily in the last five years. This emerging organic market has a per capita consumption for organic products of EUR 20 (2011), and a market share of around 1 % (https://www.organic-europe.net/country-info/country-info-spain/country-report.html). A large proportion of the organic production – mainly fruits, vegetables, wine and oil – is sold in other EU countries. A significant volume of processed organic products is also imported.

The UK organic market has increased rapidly since the mid-1990s and major supermarket chains have played a very significant role in the development.

Around 1.5% of the total UK food and drink market is organic (Soil Association 2019, p.8). Organic food in the UK is seen as being 'ever more relevant to more people', in a market with 'constant innovation coming from the growing number of businesses and brands' (Soil Association 2019, p.3). Across all sales channels, the UK organic market is growing – for the seventh year in a row. Overall, sales have increased by 5.3%, and for Soil Association Certification licensees, there was an increase by 9% in sale, well ahead of market growth (Soil Association 2019, p.6). Home delivery of organic food, through online and box schemes accounts for 14% of all sales and is reported to be growing fastest, at 14.2% (Soil Association 2019, p.4). Supermarket sales of organic (excluding discounters) increased by 3.3% (Source: Nielsen Scantrack Total Coverage Food and Drink in supermarkets and convenience stores reported in Soil Association 2019, p.4). Supermarkets have a 65.8% share of sales, a reduction from 67% in 2017 (Soil Association 2019, p.4).

With regard to independent retailers, increasing sales by 6.2% is reported for 2018. New independent retailers and wider ranges from wholesalers have improved the choice of organic products in these channels (Soil Association 2019, p.4). Foodservice and eating out are regarded as emerging channels for organic food. Sales in organic into foodservices have risen by 7.8% - helped by spend through Food For Life award holders, despite cuts in public spending budgets, according to the Soil association (Soil Association 2019, p.4). There was an increase in demand from high street restaurants in response to diners looking for sustainable options. More outlets are reported to be signing up to the Organic Served Here award, making organic more accessible on menus across the country (Soil Association 2019, p.6).

According to the 2018 Eating Out survey conducted by the Soil Association, half of people would be more likely to choose a restaurant that highlights ethical or sustainable credentials (Soil Association 2019, p. 15). Over two in five (43%) think a restaurant or café will be better than others if they see organic on the menu or drink list. The survey also indicated that demand for organic in eating out isn't being met at popular family attractions (Soil Association 2019, p. 15).

The following three trends are highlighted changes in shopping habits in the latest market report by the Soil Association (Soil Association 2019, p.9):

1) Online ranges of organic offer a much wider choice of products

2) The UK organic market continues to be dominated by three main supermarkets – but discounters, like Aldi and Lidl, are now driving sales in the sector. Over 1.5 million new households shopped in Aldi or Lidl in the last year, and these chains are stocking more organic products.

3) As more consumers shop locally and often, the independent organic retail sector is flourishing. These sales channels, offering specialist knowledge and innovative products, may be particularly appealing to consumers who don't want to buy traditional choices.

The food market in Norway is dominated by a few, large retailers, and alternative distribution channels have been slow to develop (Terragni et al. 2009). In recent years, however, there has been considerable growth and diversity in short food supply chains, such as community supported agriculture and REKO-rings, many of which mostly (or exclusively) distribute organically produced food. However, the total market share of organic food has remained on a level of about 2% of the total food market for several years (Landbruksdirektoratet 2019).

The main volume of organic food in Norway is sold through supermarkets and reached a total of 2 816 million NOK in 2018 which is about 82% of the market. Sales through other market channels amounted to 498 million NOK with a market share of 18%. HORECA is the most important sales channels besides ordinary retail with a total sale of 261 million NOK in 2018 (Landbruksdirektoratet 2019).

In France, the organic market more than doubled between 2007 and 2012 (https://www.organic-europe.net/country-info/france/country-report.html). Market channels for organic food are general retailers (45.6 %), specialised organic retailers (34.1 %), small shops, such as bakeries and butchers (4.4 %), direct sales (11.8 %), catering (4.0 %). Top-selling products include dry grocery products, canned fruit and vegetables, and oils (21.2 % of the organic market, EUR 848 million), milk, dairy products and eggs (20.5 %, EUR 822 million), and fruit and vegetables (16.5 %, EUR 661 million). (https://www.organic-europe.net/country-info/france/country-report.html).

In France, the organic market share of all retail sales was 2.4% in 2012 (Schaack et al. 2014).

Sales of organic food has grown steadily in France from 1999 to 2017, with an increase in organic sales of 18% in supermarkets and 12% in specialist organic stores in the first half of 2017 compared with 2016 (Arnaud, 2018). Large and medium sized supermarkets is the largest distribution channels measured in sales (Euros), followed by specialist organic distribution, while direct sales, artisanal sales and restaurants account for a smaller part of the organic food market (Arnaud, 2018). According to data from Agence BIO CSA research 2017, 15% consumed organic food daily in 2016 (a rise from 10% in 2015); 7 of 10 consumed organic food at least once a month, while 9 of 10 had eaten organic food over the last twelve months (Arnaud, 2018).

According to data collected during 2014 in a large cohort study of French Adults (the NutriNet-Santé Cohort Study), less than 12% of the respondents reported never consuming organic food over the past year, with a lower percentage among women (8.4%) than among men (14.7%) (Baudry et al. 2015). According to a report released in 2015 by the French Organic Agency 62% of French consumers claim to consume organic food at least once a month (cited in Baudry et al. 2015).

Baudry et al. conclude from the French NutriNet-Santé Cohort Study that organic food consumers constitute a very large and heterogenous group. However, individuals with higher level of education, higher level of physical activity and following a vegetarian or vegan diet had a higher contribution of organic food in their diet compared to their counterparts. The relative share of organic food in the diet was also higher among participants living in rural areas than those living in urban areas. For some food groups, organic food consumption was not marginal in the diet of the study population, and in particular organic fruits and vegetables were integral components in the diet; organic eggs were quite widely consumed, while lesser quantities of organic meat products were consumed (Baudry et al. 2015).

The share of organic food sales in the total turnover for food products in Germany increased from EUR 1.48 billion in 1997 to approximately EUR 7.04 billion in 2012 (excluding restaurants and catering).[2] This accounted for 3.7 % of the food market. Experts believe that organic farming still has considerable growth potential. Top-selling products are vegetables, including potatoes (EUR 561.7 million, 8.2 % of the total market); bread and bakery products (EUR 459.3 million, 5.9 % of the total market); and fruit (EUR 389.2, 6.5 % of the total market).

With regard to market channels, approximately 50 % of organic products are sold through general retailers, 31.4 % through organic retailers and 18.5 % through other channels.

Germany is not only the largest market for organic products in Europe, but also one of its largest organic producers. However in 2009/10 organic imports accounted for between 2 % and 95 % – depending on the product – all of which could have been produced domestically. (https://www.organic-europe.net/country-info/germany/country-report.html).

The German market for organic food has increased during the last years, with a growth of nearly 6% in total market share from 2016 to 2017 (Schaack, 2018). In 2016, the organic share of the total food market was 5.1-5.2%. The most important sales channel for organic food is supermarkets, followed by natural food stores, while other sales channels (such as specialty stores, farmers' markets and online shops) account for a smaller part. Organic shared of household purchases of fresh products are largest for eggs, followed by drinking milk, vegetable oils, vegetables and fruit (Schaack, 2018).

According to data from the German National Nutrition Survey II, altruistic arguments are found to be strong motivations influencing consumer attitude towards and purchasing behaviour of organic food in Germany (Bravo 2013). This study also found that convenience issues as well as price were remained important barriers to increase organic food consumption. This study further found that consumers who were motivated by regional aspects and food specialties tended to show more positive attitudes toward organic food and buy it more frequently.

They also found a higher frequency of organic food consumption associated with small households, women, older people, those with higher social status, and living in South of Germany (Bravo 2013). In Poland, the market for organic products has growing slowly but continuously; organic products has become available also in conventional shops and supermarkets, rather than just in specialised small organic shops. Market channels include are specialised organic shops, supermarkets, covered markets, direct sales to consumers and internet shops (https://www.organic-europe.net/country-info/poland/country-report.html).

According to a Polish survey conducted in 2007 about consumers' motives to buy and beliefs about organic food, Polish consumers conceptualize organic food referring to aspects such as healthiness and safety (Zakowska-Biemans (2011). The share of consumers who declared to buy organic food was 21.6 percent out of the total sample. Healthiness, safety and elimination of undesired, negatively connoted components like "chemicals" were found to be the most important attributes associated with organic food in this study. The ranking of attributes related to organic food indicated that credence attributes like

[2] https://www.organic-europe.net/country-info/germany/country-report.html

ethical production and animal welfare were less pronounced among Polish consumers (Zakowska-Biemans (2011).

The study classified respondents into clusters, and fund higher frequencies of organic food consumption in the two clusters 'traditionalist (25.5%) ' and 'conscious' (28.7%) (Zakowska-Biemans 2011). 'Traditionalists' are reported to value organic food for naturalness often conceptualized as 'lack of additives', and for resembling food 'as it used to be', and they were less inclined to use convenience foods. A higher share of consumers with very low income was found in this group.

'Conscious consumers' are seen as consumers searching for quality labels and concerned with information on organic origin included on the label, and this group was also less price sensitive than consumers in any other segment.

This study further highlighted the importance of improving the availability and accessibility of organic products, as more than 10 percent of respondents said that they don't buy organic food because it is not available in shops where they do their food shopping. Just 4 per cent of respondents agreed with the statement that they do not trust organic food and taste of organic food was perceived by 2 percent as a barrier to buy organic products. No statistically significant differences in socio-demographic characteristic of respondents were found with regard to perception of barriers to buy organic food (Zakowska-Biemans (2011).

According to a representative survey carried out in Poland in 2014, the most important characteristics of organic food as perceived by Polish consumers are healthiness and high quality. The perceived authenticity of organic food depends on its natural taste, product quality, labelling, in particular having a European quality sign, as well as the retailer type and a separate exposition place in the points of purchase. The principal motives for buying organic food was found to be healthiness, ecological character of the product, food safety considerations, superior taste, and quality assurance.

The most important barriers were found to be high price, low consumer awareness, low availability of organic products, short expiry dates and low visibility in the shop (Bryla 2016).

According to the self-reported frequency of organic food purchases, over 85% of participants declared buying organic food - in varying frequencies; 7.0% 'very often', 23.8% 'rather often', 37.6% reported 'average frequency' and 16.7% said they purchased organic food rather seldom (Bryla 2016). Fruit and vegetables as well as honey were the most frequently bought organic products.

3.1 RESPONDENTS' USE OF ORGANIC FOOD

One of the main goals of the survey is to measure the extent of organic food consumption within the national populations. This was measured by self-reported organic food consumption by the respondents.

In the Survey data as a whole, frequent organic food consumption ('daily' or '4-6 times a week') was reported by 16% of the respondents. However, differences between countries appeared. In France and Italy, close to 22% of respondents reported frequent organic consumption, with a slightly higher share reporting daily organic food consumption in France (9%) compared with Italy (7%). Germany and UK follow with 18% (17.6) and 17% (17.2) reporting frequent organic food consumption, while this number is slightly lower in Poland (15%) and Spain (13%) and considerably lower in Norway (8%).

Moderate organic food consumption ('2-3 times a week' or 'once a week') was reported by 22% to 43% of respondents, with Norway and UK in the lowest range (22-23%) and Poland and Italy at 43%.

Low or no organic consumption ('1-3 times a month', 'less than monthly' or 'never') was reported by the highest percentage in Norway and UK (both 51%) and by the lowest percentage in Italy (31%).

Interestingly, UK has a high share of participants reporting to be eating organic food 'daily' (8%) while also having the highest share reporting 'never' to be eating organic food (25%), indicating a high degree of diversity within the country.

In Norway, quite a large share of respondents answered 'don't know' to the question about organic food consumption. This may reflect lower familiarity with the organic label(s) compared with the other countries, or lower use of labels when shopping for food. This result is in line with the finding of a large percentage of respondents in Norway (86%) answering 'no' to the question about looking for organic food label(s) or not when shopping, reported in Table 14. In France and Italy, in contrary, a low percentage (around 4%) answered 'don't know' to organic food consumption, and many (46% and 44% respectively) reported to be looking for organic food label(s) when shopping for food.

Table 8: Thinking about eating habits in your household over the last month, how often did you eat organic food?

How often do you eat organic food (last month)?	Country							
	Norway	France	UK	Spain	Poland	Italy	Germany	Total
Daily	81	213	188	102	117	159	155	1015
	3.91	*9.22*	*8.18*	*4.54*	*5.18*	*7.03*	*6.71*	*6.44*
4-6 times a week	86	286	208	190	217	336	251	1574
	4.15	*12.39*	*9.05*	*8.46*	*9.61*	*14.86*	*10.86*	*9.99*
2-3 times a week	208	496	327	531	524	611	517	3214
	10.04	*21.48*	*14.22*	*23.65*	*23.22*	*27.02*	*22.37*	*20.40*
Once a week	254	323	198	314	438	368	360	2255
	12.26	*13.99*	*8.61*	*13.99*	*19.41*	*16.28*	*15.58*	*14.31*
1-3 times a month	303	257	170	275	302	272	241	1820
	14.62	*11.13*	*7.39*	*12.25*	*13.38*	*12.03*	*10.43*	*11.55*
Less than monthly	479	301	428	379	266	253	306	2412
	23.12	*13.04*	*18.62*	*16.88*	*11.79*	*11.19*	*13.24*	*15.31*
Never	279	328	572	293	192	171	318	2153
	13.47	*14.21*	*24.88*	*13.05*	*8.51*	*7.56*	*13.76*	*13.67*
Don't know	382	105	208	161	201	91	163	1311
	18.44	*4.55*	*9.05*	*7.17*	*8.91*	*4.02*	*7.05*	*8.32*
Total	2072	2309	2299	2245	2257	2261	2311	15754
	100.00	*100.00*	*100.00*	*100.00*	*100.00*	*100.00*	*100.00*	*100.00*

First row has *frequencies* and second row has *column percentages*

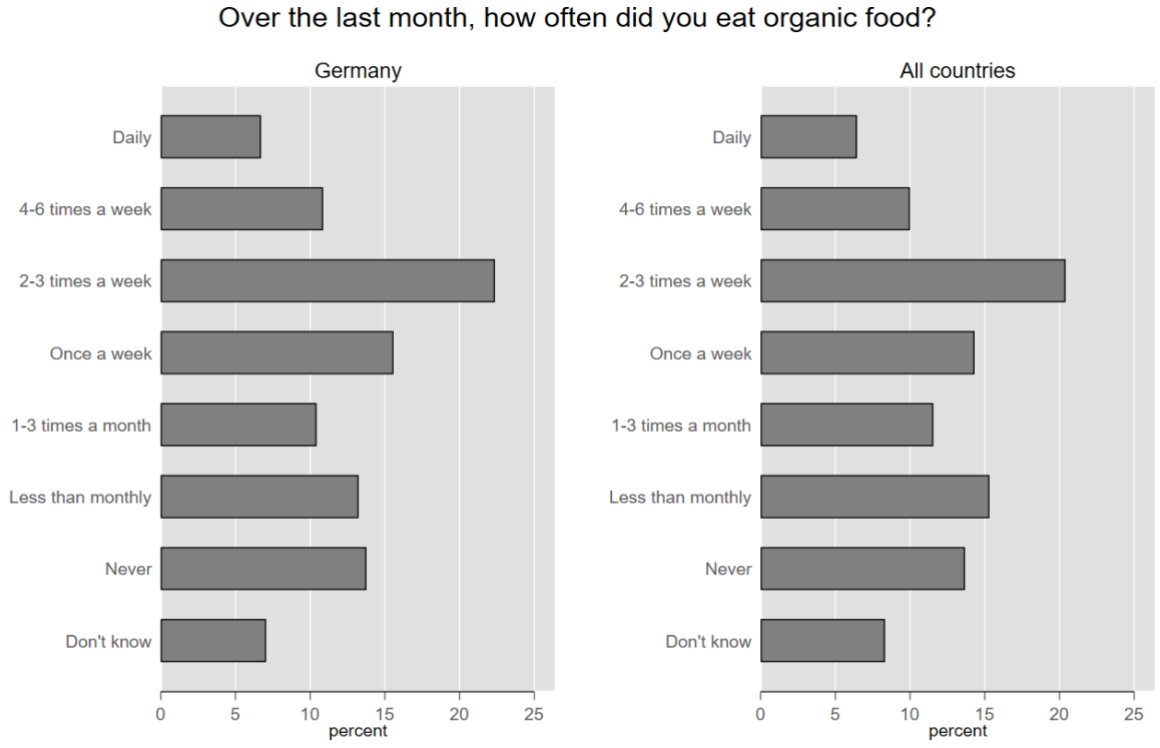

Figure 4 Thinking about eating habits in your household over the last month, how often did you eat organic food? All countries and Germany

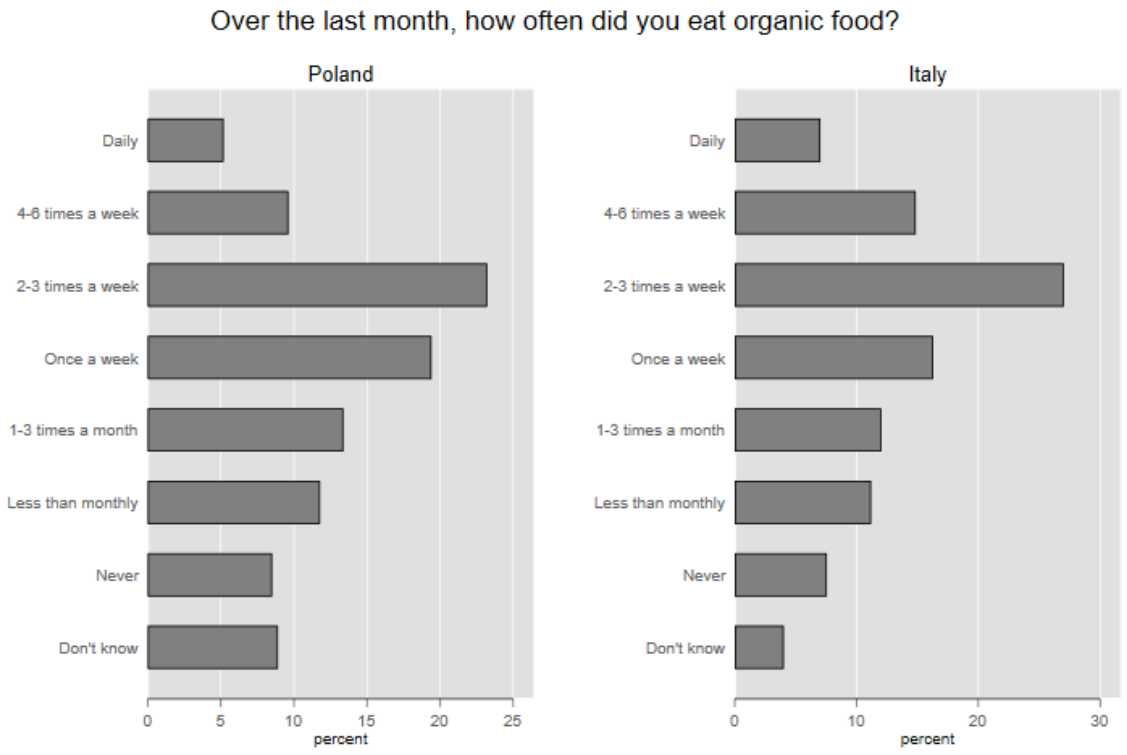

Figure 5 Thinking about eating habits in your household over the last month, how often did you eat organic food? Poland and Italy

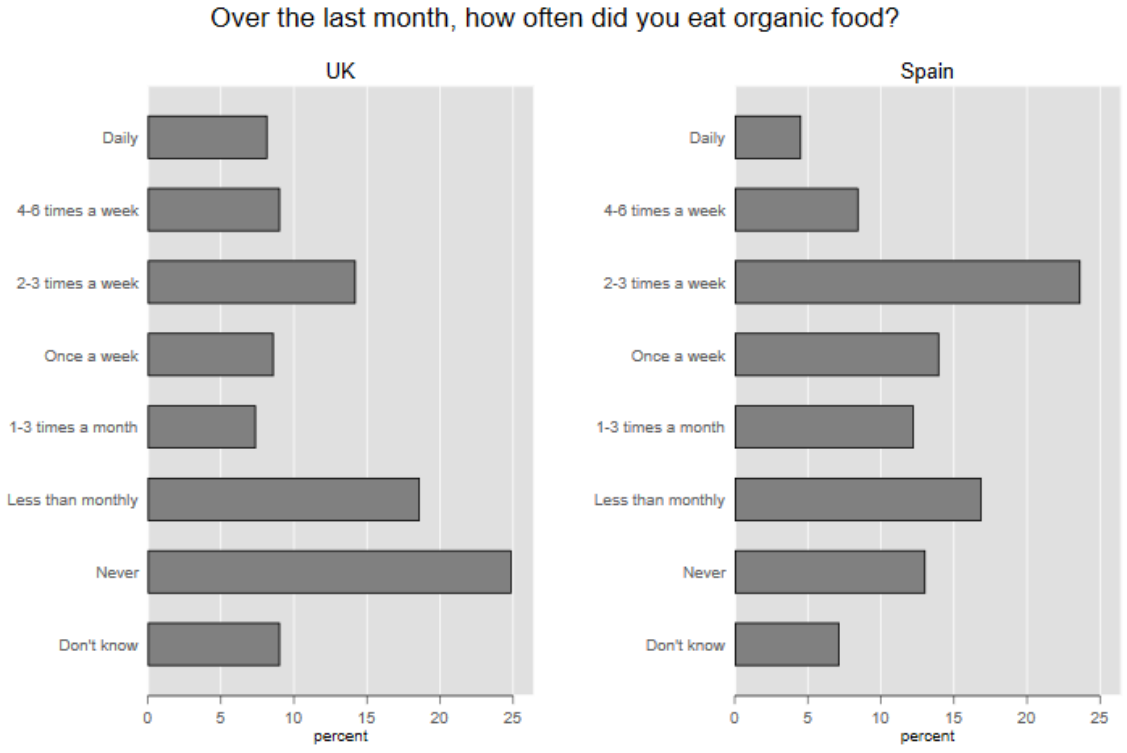

Figure 6 Thinking about eating habits in your household over the last month, how often did you eat organic food? UK and Spain

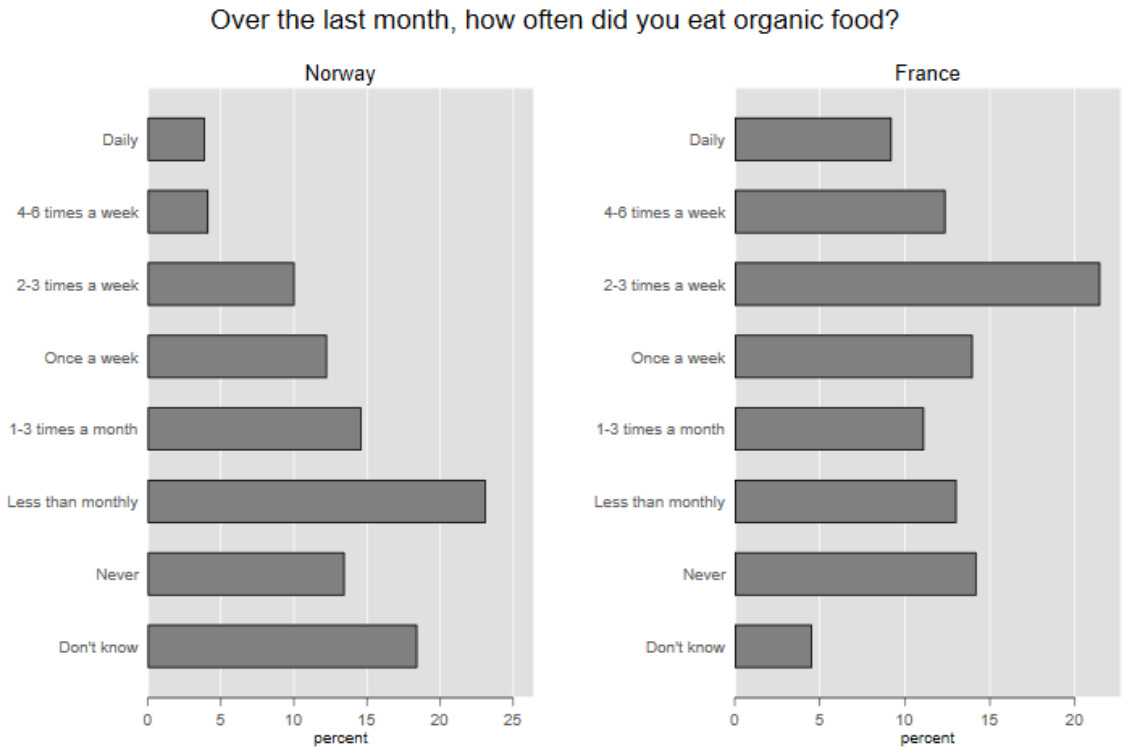

Figure 7 Thinking about eating habits in your household over the last month, how often did you eat organic food? Norway and France

3.1.1 Organic food consumption – gender, age, education and living area

In this section we have explored the association between organic food consumption and background variables such as, gender, age, education and living area. Having organic food consumption the last month as the dependent variable, a multinomial logistic regression was fitted given the following independent variables: highest level of education obtained, gender, country, age and living area. Estimated percentages for organic food consumption are given in Figures 8 – 10.

Definitions for organic food consumption are as follows; 'frequent' consumption indicate people eating organic food more than four times a week ('daily' or '4-6 times a week'), 'moderate' consumption include those who eat organic food 1 – 3 times a week and ('2-3 times a week' or 'once a week'), 'low or no' organic consumption include those who eat organic food less than weekly ('1-3 times a month', 'less than monthly' or 'never').[3]

[3] In the figures the y-axis is always probability, for instance in figure we see in the upper left pane how the probability for a given individual reports frequent organic food consumption changes between countries and gender (zoom in for higher resolution). The vertical bar lines are confidence interval, indicate the variability in the data. In instances where there are non-overlapping confidence intervals, there is statistically significant differences. For example, in the upper left panel we see a significant difference between men and women in the UK, and there are significant differences between those with university education and those with vocational education or high school.

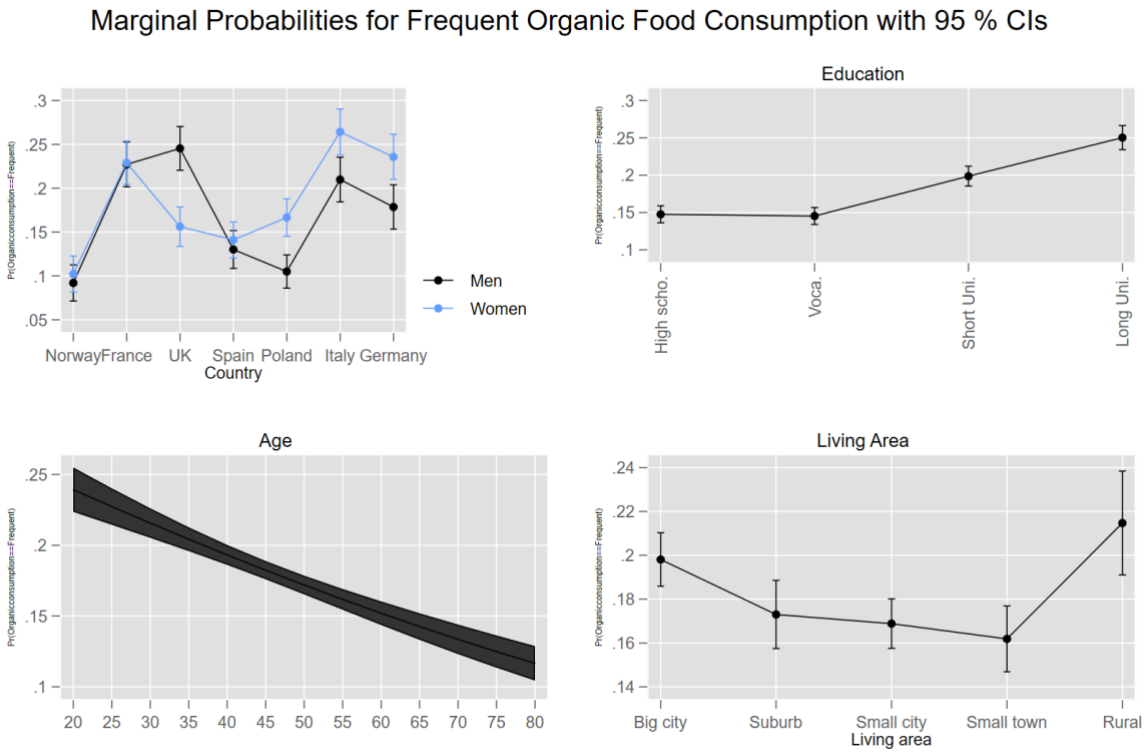

Figure 8: Consumption of organic food. Frequent organic food consumption. Country/gender; Education; Age and Living Area

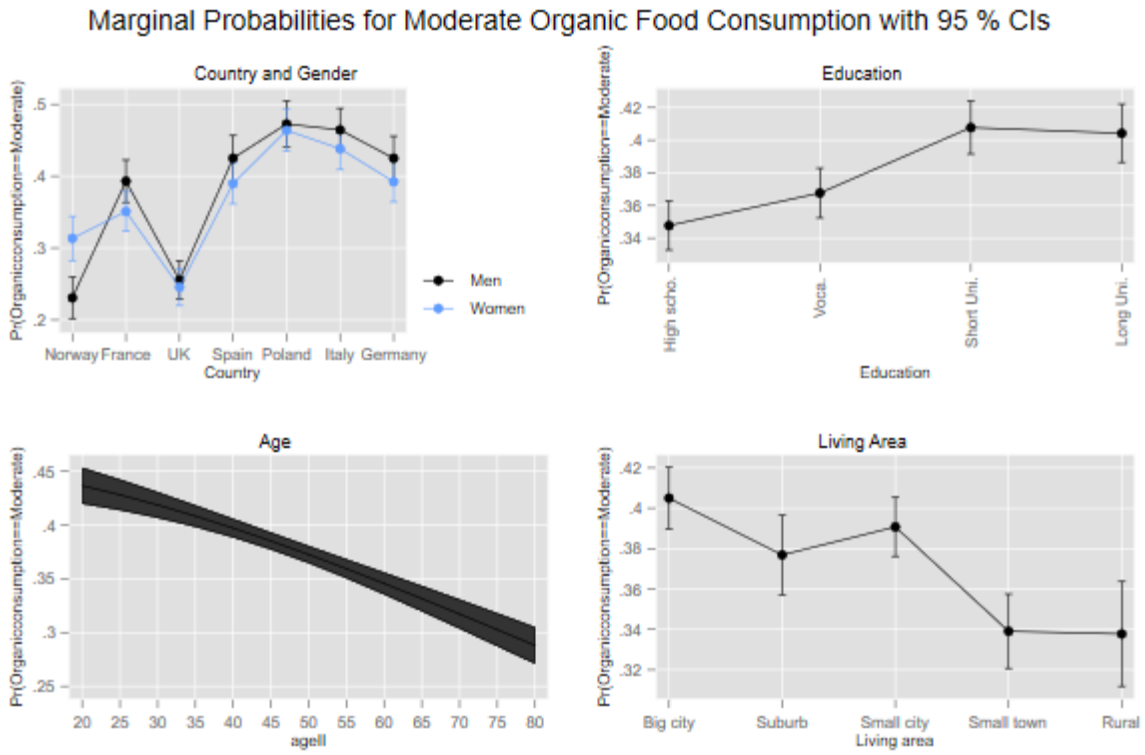

Figure 9: Consumption of organic food. Moderate organic food consumption. Country/gender; Education; Age and Living Area

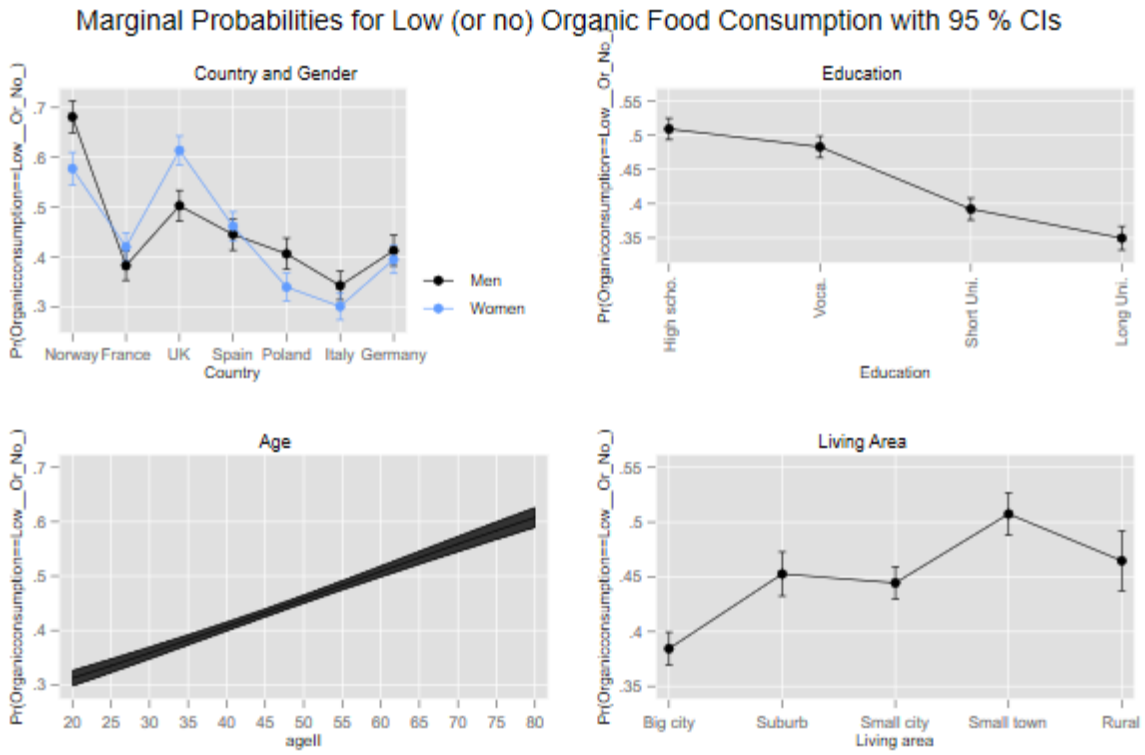

Figure 10: Consumption of organic food. Low or no organic food consumption. Country/gender; Education; Age and Living Area.

Figure 8 (country, men/women) shows that the frequency of organic consumption varies significantly between countries.

Among survey respondents in total, slightly more women (17%) than men (15%) were frequent organic consumers. Differences between men and women varied between countries, from practically no difference in Norway, France and Spain, to higher probabilities for women in Poland, Italy and Germany – and conversely, higher probability for men to be frequent organic consumers in UK (Figure 8).

With regard to education, the highest percentage of frequent organic food consumption was found among respondents having completed university education compared with those with vocational education or high school as the highest level of obtained education (Figure 8).

Differences in organic food consumption were quite apparent with regard to age, with the highest percentage of being a frequent organic food consumer among the youngest respondents.

With regard to living area, differences in organic food consumption are not very distinct (as confidence intervals are largely overlapping). However, there is a slightly higher percentage of frequent organic food consumption among respondents living in rural areas (close to 22%) and big cities (20%) compared with respondents living a small town or a small city (Figure 8 Living area).

However, even though the highest percentage for frequent organic food consumption was found among participants living in rural areas, the most common category with regard to organic food consumption was 'low or no' consumption (about 44% - see figure 10 'Living area, low or no organic consumption).

3.2 SHOPPING FOR FOOD

The results concerning 'shopping for organic food' to a certain degree reflect the main patterns in the different countries with regard to the distribution between different sales channels (Figure 11 and Figure 12), but there are also some differences.

A considerably lower share of organic food is bought in 'large superstores or hypermarkets compared with food in general. (In total, for all countries: 25% bought 'a major part' of organic food in large superstores or hypermarkets, while this number was 44% for food in general). Norway is a special case in this respect, since there are few supermarkets large enough to qualify as hypermarkets, while a much larger share (51%) report to buy 'a major part' of their food in general at supermarkets in Norway. France is the country with the highest share of food – both organic and in general – that is bought in superstores or hypermarkets (55% buys 'a major part' of food in general, and 31% buys a major part of organic food in such stores).

The share who reports to buy 'a major part' of their food in a specialty shop is highest in Spain (19%), followed by Poland (17%), Italy (14%) and Germany (12%). These numbers are higher when it comes to 'a major part' of organic food purchases: Spain and Poland (about 20%), Italy (17%), Germany (14%), France (12%) and UK (11%). In Norway, this number is low (5%) even though it is almost doubled compared with food in general.

With regard to shopping from the internet, UK is the country with the highest share of consumers who report to be buying some or a major part of food in general in this way, and also organic food. With regard to food markets, Poland is the country with the highest share of consumer buying some or a major part of food there.

Food markets are an important channel for organic food in most of the surveyed countries, but plays a very minor role (with regard to volume) in Norway, where only about 8% buys some or a major part of their organic food in this way. In Poland as much as 48% buys some or a major part of their organic food at food markets, while this number is 34-35% in France, Italy and Germany.

Buying directly from the producer is also a more important channel for organic food compared with food in general across all countries, accounting for the highest shares in Poland and Italy (close to 40% buying ' major part' or more of organic food directly from producers), followed by Germany, France and Spain.

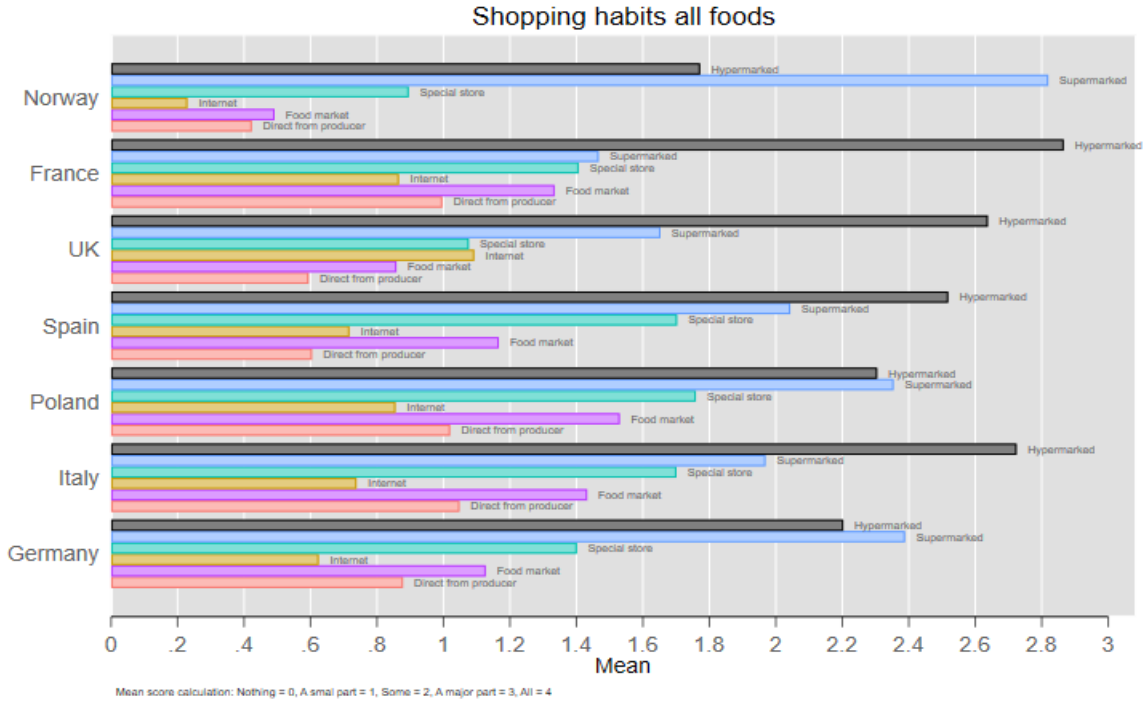

Figure 11: Thinking about the last 12 months, how often did you shop for food in the following food shops / "markets"? Mean scores (all food4)

4 Observations: Norway N = 2072, France N = 2311, UK N = 2301, Spain N = 2246, Poland N = 2258, Italy N 2262, Germany N = 2312

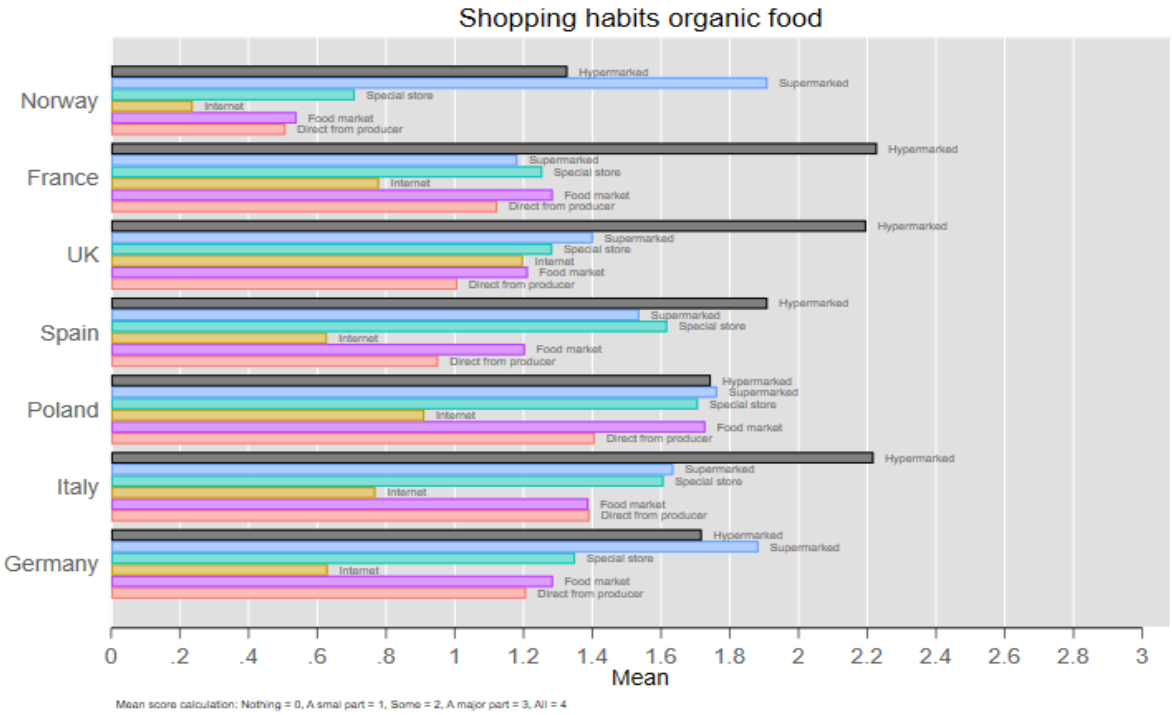

Figure 12 During the last 12 months, how much of your households total organic food consumption did you buy / source from the following shops / markets? Mean score (organic food). N = 12,2905:

3.3 EAT OUT AND TAKE AWAY

With regard to frequency of eating out or eating take away meals, there are considerable differences between the countries studied. The UK figures on top with the highest share of participants most frequently eating out as well as eating take away meals, while this is more seldom in Norway, Spain, Germany – and quite low in France, Poland and Italy. Germany has the highest share of respondents reporting 'never' to eat take away and is followed quite closely by France.

3.3.1 Eat out

Overall, over 80% of respondents report to be eating out to some extent, and it is most common to do so 1-3 times a month (Figure 13 All countries, eating out) Almost 25% say that they 'never' ask for organic food when eating out, while about 22% answer that organic is usually not an option (Figure 13 all countries, ask for organic). Around 12% report that they 'always' ask for organic when eating out.

UK is the country with the highest share of participants reporting to be asking for organic food 'always' when eating out – the only country in the survey where this figure reaches above 20%. UK also figures slightly higher than the average for the highest frequencies of eating out ('daily' and '4-6 times a week').

Between 10 and 20% report to be asking for organic food 'always' when eating out in Poland, Spain, Italy and France, while in Norway and Germany, less than 10% ask for organic food when eating out.

Norway is the country with the lowest frequency of respondents asking for organic when eating out; almost half of the respondents say that they 'never' ask for organic food when eating out, and less than 5% answer that they 'always' do so. In general, the frequency of eating out is lower in Norway compared with the other countries in the survey.

5 Norway: N = 1, 411; France: N = 1,876; UK: N = 1,519; Spain: N = 1,791; Poland: N = 1,864; Italy: N = 1,999; Germany: N = 1,830

Spain stands out with the lowest percentage reporting 'never' to ask for organic food when eating out (around 7%), but at the same time the percentage who answers that organic food is 'usually not an option' is higher (>30%) than the average of 20%.

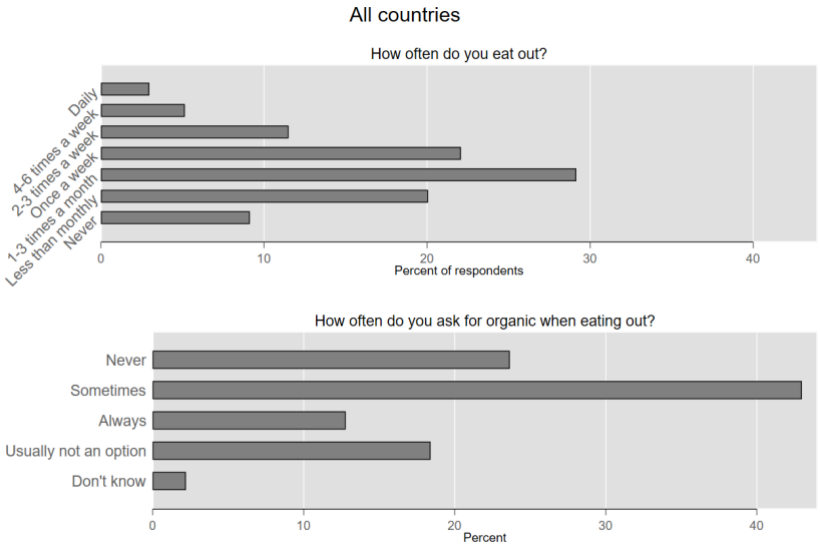

Figure 13: Frequency of eating out and looking for organic food when eating out. Total sample.

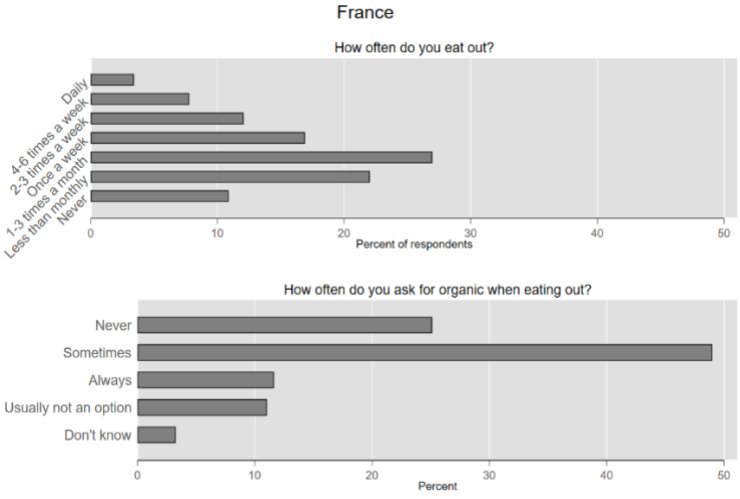

Figure 14 Frequency of eating out and looking for organic food when eating out. France

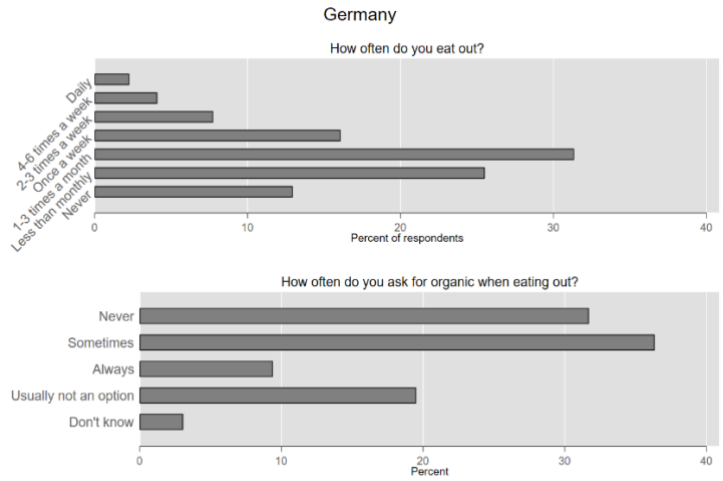

Figure 15: Frequency of eating out and looking for organic food when eating out. Germany

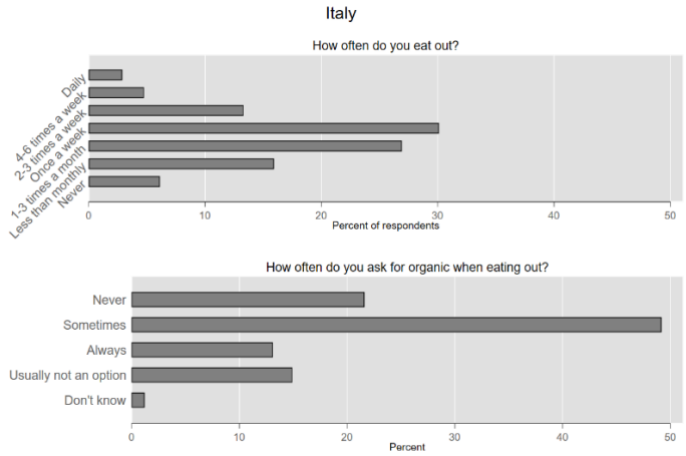

Figure 16: Frequency of eating out and looking for organic food when eating out. Italy

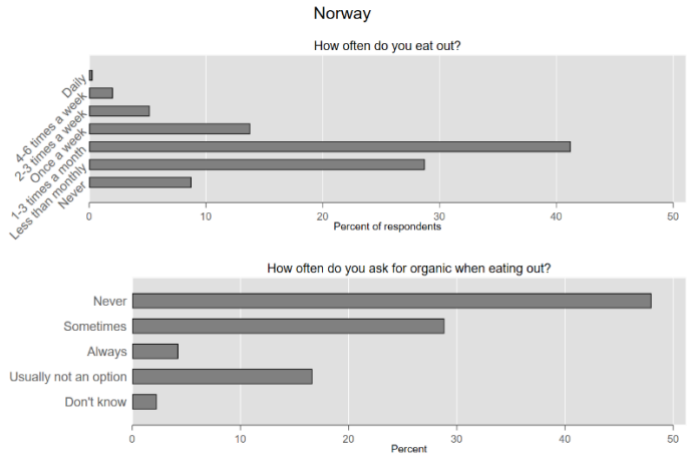

Figure 17: Frequency of eating out and looking for organic food when eating out. Italy

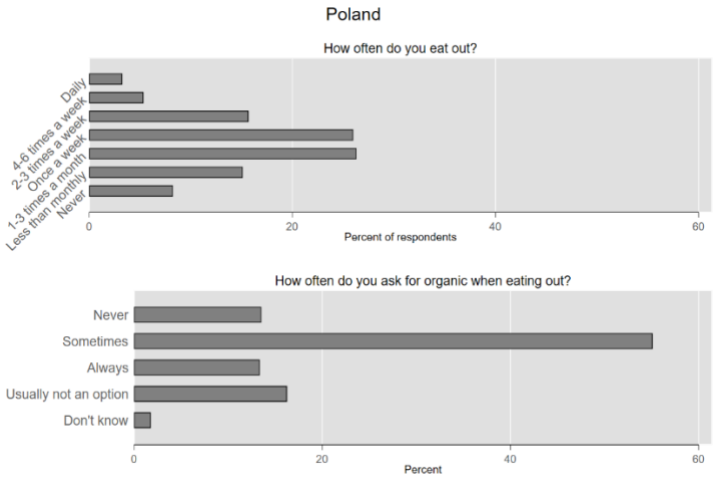

Figure 18 Frequency of eating out and looking for organic food when eating out. Italy

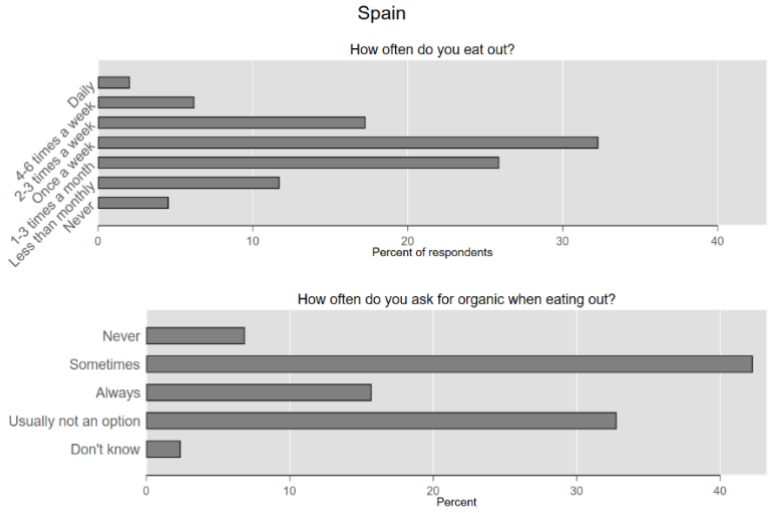

Figure 19 Frequency of eating out and looking for organic food when eating out. Italy

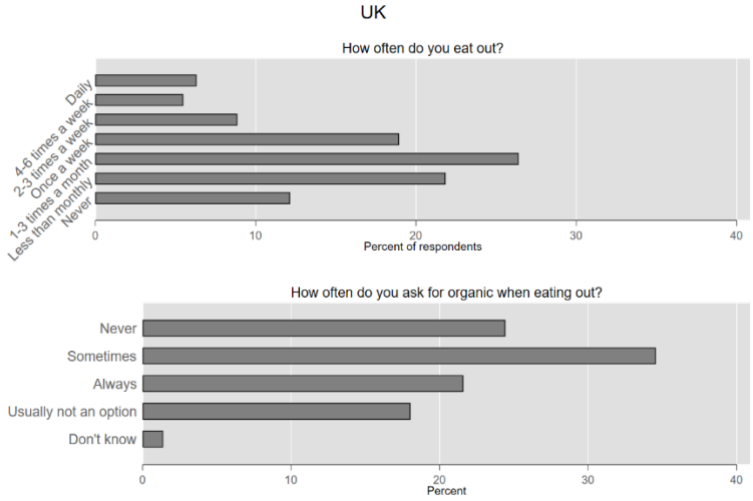

Figure 20: Frequency of eating out and looking for organic food when eating out. Italy

3.3.2 Take away

Overall, about 75% of respondents report to eat take away to some extent (Figure 21 All countries, eat take away), but over 40% of these 'never' ask for organic food when ordering take away, and 20% answers that organic is usually not an option when ordering take away (Figure 21, all countries, ask for organic).

Germany and France are the countries with the highest percentages reporting 'never' to eat take away (40% and around 34% respectively), with Norway following with almost 30% saying they never eat take away meals. In these countries, asking for organic food when ordering take away meals are also quite low: Around 70% in Norway, close to 50% in Germany, and over 45% in France say that they 'never' ask for organic food when ordering take away.

As for eating out, Spain stands out with a high percentage of respondents answering that 'organic is usually not an option' when ordering take away (close to 35%).

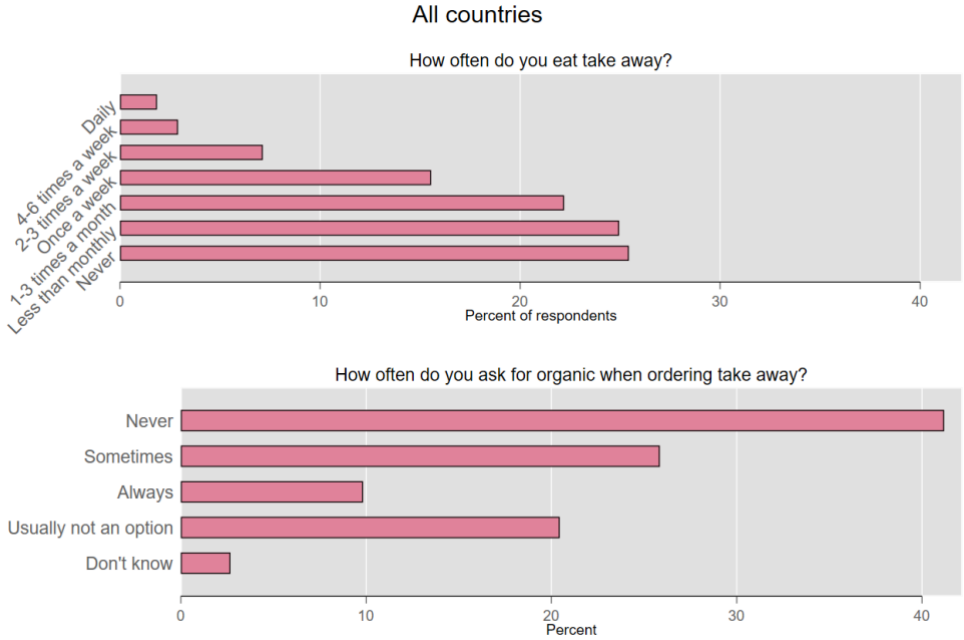

Figure 21: Frequency of eating take away meals and asking for organic food when ordering take away? All countries

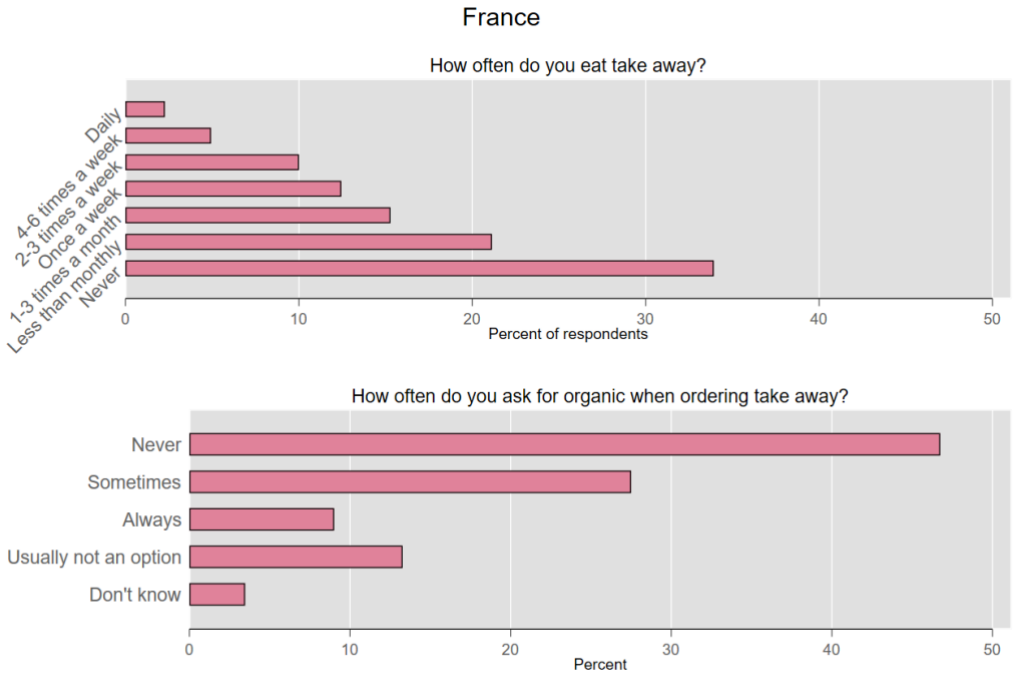

Figure 22: Frequency of eating take away meals and asking for organic food when ordering take away?

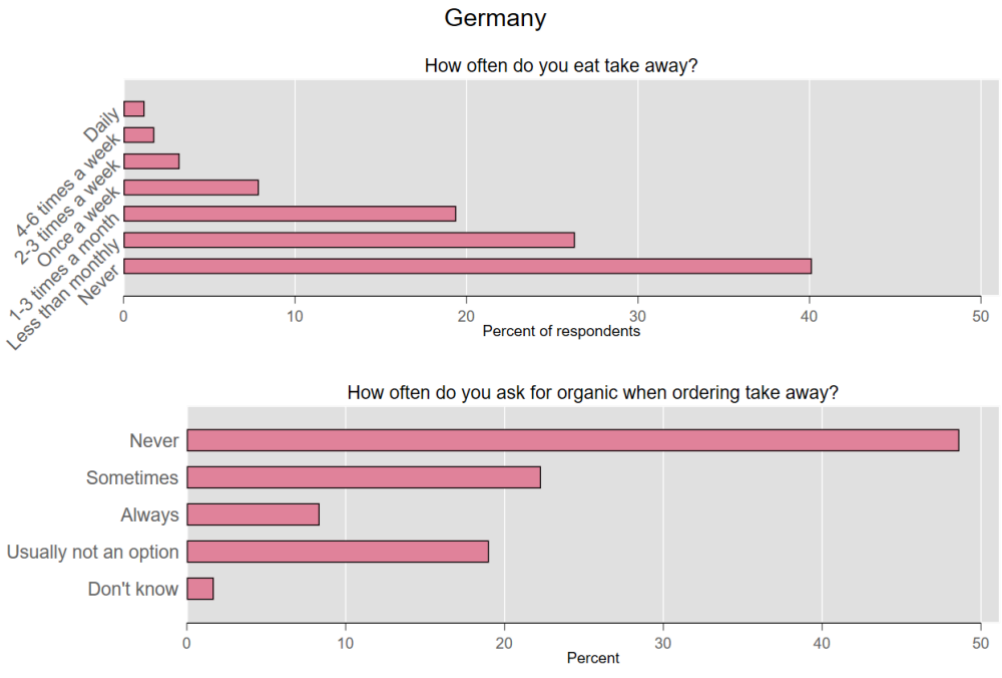

Figure 23: Frequency of eating take away meals and asking for organic food when ordering take away?

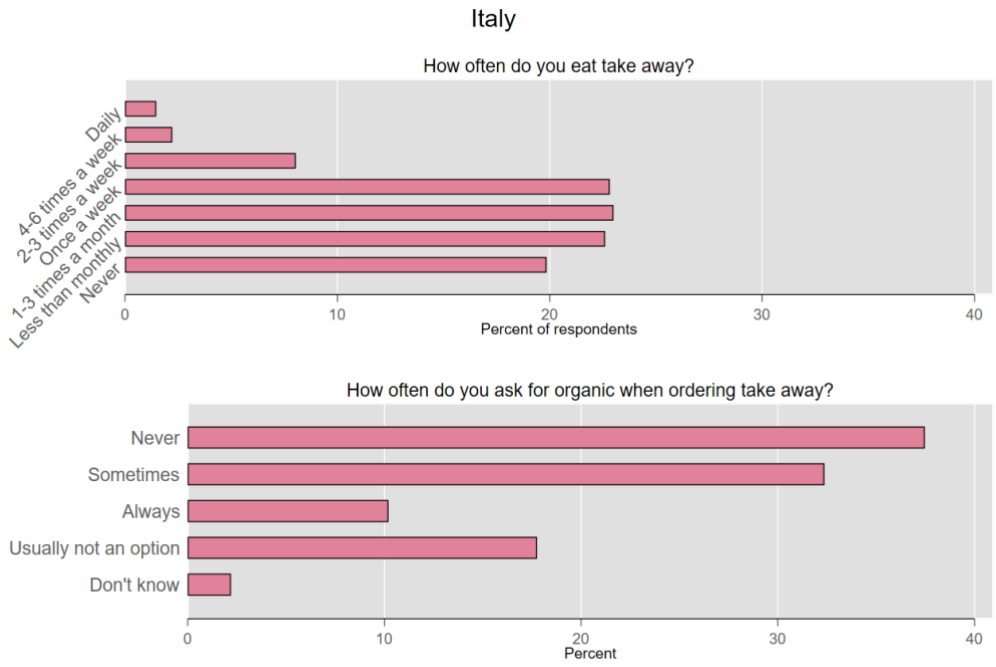

Figure 24: Frequency of eating take away meals and asking for organic food when ordering take away? Italy

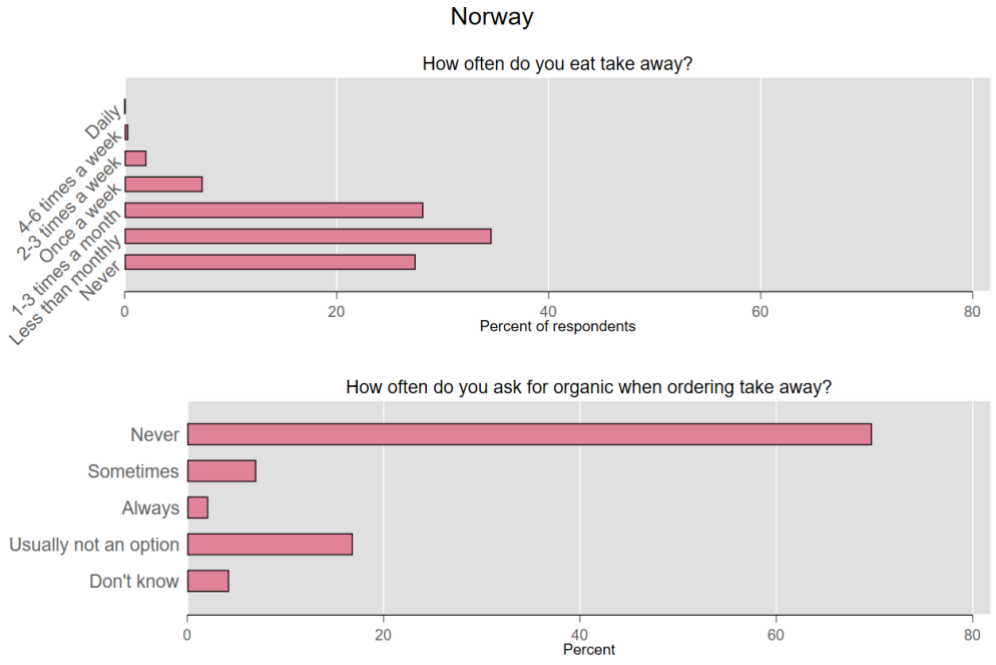

Figure 25: Frequency of eating take away meals and asking for organic food when ordering take away? Norway

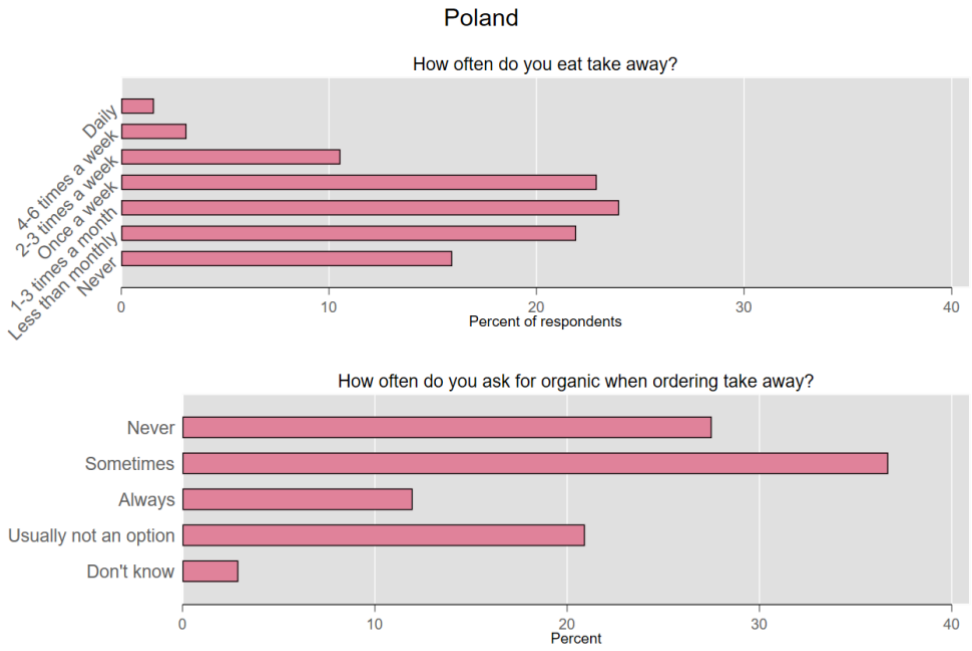

Figure 26: Frequency of eating take away meals and asking for organic food when ordering take away? Poland

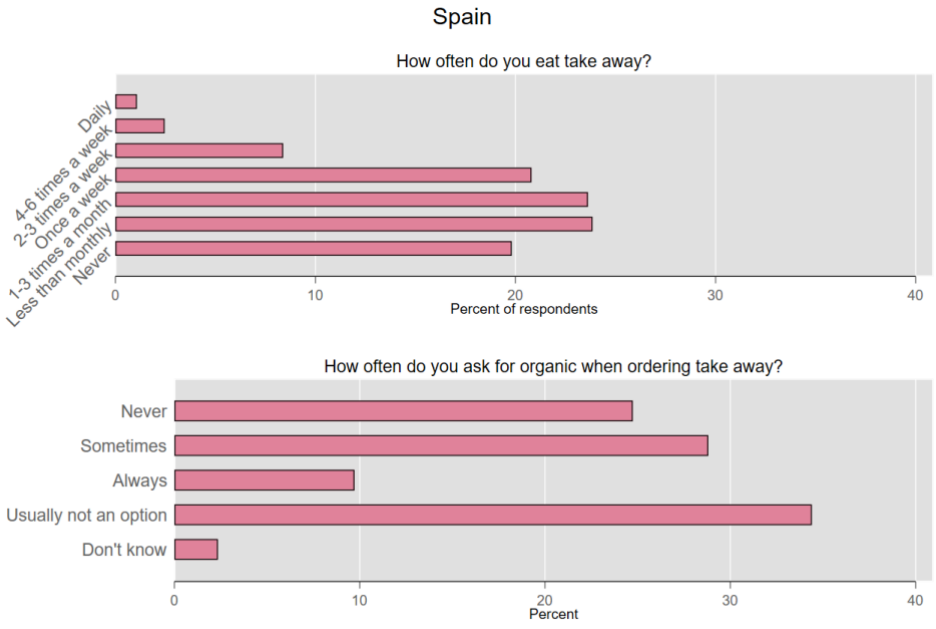

Figure 27: Frequency of eating take away meals and asking for organic food when ordering take away? Spain

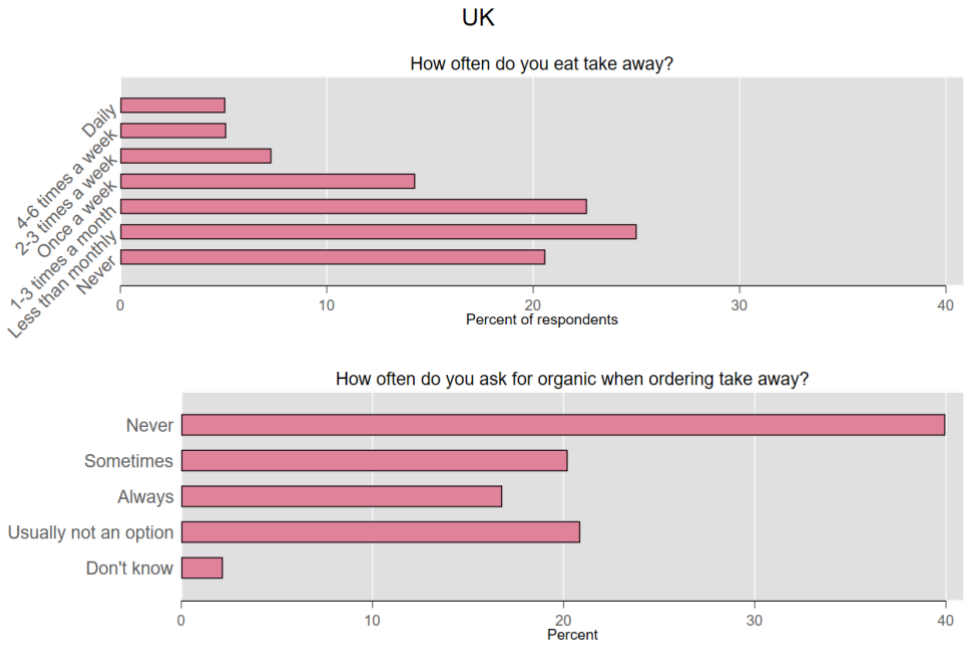

Figure 28: Frequency of eating take away meals and asking for organic food when ordering take away? The UK.

Developing the possibilities for choosing organic food in other context than eating home-made meals at home, may be important in order to increase consumption of organic food, and eventually practices of sustainability associated with it (if any). In the UK, the food service sector and eating out are seen as emerging new channels for organic food (Soil Association, 2019), and it may be potential for developing such channels further in other European countries as well with regard to increased organic food consumption.

3.4 LABELS

As we will come back to in section 4.2. consumers consider labels and logos in general as important sources of information when shopping for food. In this section we will look into the extent consumers in the different countries make use of the organic labels when buying food. Where appropriate, we have also included other product labels such as fair trade, labels of origin and animal welfare labels in order to see to what extent consumers consider other ethical and social issues when buying food. We also wanted to measure to what extent consumers recognize the organic labels or if these are mixed up with the other types of labels included in the survey.

In Table 9 we have listed the labels included in this study. The list includes both organic and other labels based on different types of "quality schemes" (fair trade, origin, animal welfare). EU as well as national authorities in several European countries have developed labelling schemes for organic food. These schemes are based on the EU regulations for organic food production. The EU-Eco-regulation was implemented as early as 1992 while an EU-wide label was first issued in 2002. In 2010 a new organic label was implemented mandatory in all EU countries[6] (under Council regulation (EC) No 834/2007 and Commission Regulation (EC) No 889/2008) (Hartmann et al., 2018). Also national organic labels such as the Debio label in Norway, the Bio-Siegel in Germany and the AB (Agriculture Biologique) label in France

[6] https://en.wikipedia.org/wiki/Organic_certification#Private_organic_certification

fulfils the EU regulations for organic food and were the certification process is overseen by a public institute. In Germany the Organic Farming Act (OLG) pools specific executive functions in German organic farming, and has stricter requirements than EU legislation on organic farming. The Organic Farming Act was promulgated in the Federal Law Gazette on 15 July 2002. (https://www.organic-europe.net/country-info/germany/country-report.html). In Spain, there is no national logo for organic products, but in all the regions with semi-public or public control bodies, a common logo is used (with the name of the region). In regions without public control bodies, the logos of the private control bodies are used. EU legislation on organic farming and other regulations apply. In some regions (Aragon, Andalucía, Castilla-La Mancha), private control bodies are authorised to control organic producers and processors. In the other regions, semi-public (sector representatives and administrations) or public administrations are responsible for the implementation of EU legislation. In Poland, organic farming is subject to both the EU legislation and the Polish act on organic farming of 25 June 2009, which introduced a certification system. The EU organic logo is used.

In Italy and the UK there is no governmental organic label, however, non-governmental organisations have developed their own labelling schemes that also are based on, or in accordance with, the EU regulation, and often with some additional standards. The Soil Association is the largest certification body in the UK, licensing over 70% of organic food on sale in the UK, 'working both nationally and internationally to offer a range of organic and sustainable certification schemes across food, farming, catering, beauty and wellbeing, textiles and forestry' (Soil Association 2019, p.30). With regard to guarantee of higher animal welfare standards, the RSPCA's farm animal welfare assurance scheme is the only farm assurance scheme in the UK dedicated solely to improving farm animal welfare.[7]

In the survey we also included the UK organic labels issued by the Soil Association and the Organic Food Federation, Naturland and Bioland in Germany, Nature & Progres in France and ICEA in Italy.

Most widespread of the private labels, that also is international, is the Demeter label for bio-dynamic agriculture. The label has a long history, especially in Germany, however, present in all the countries included in the study.

Included in the study is also the label from Fairtrade International (FLO) and the EU Protected designation of origin label that both are present in all countries. In addition we included national origin labels in Norway (Nyt Norge), the UK (Red Tractor), Germany (Regional Fenster) and France (Origine France Garantie). The quality label Label Rouge were included in France due to animal welfare standards included in this label, and finally, animal welfare labels were also included in the UK (RSPCA), Germany (Tierwohl) and Norway (Dyrevernalliansen).

From the list of labels included in the survey we see that the number of labels vary between countries. We believe this reflect the importance of labels in the food market in the different countries. Four of the labels are present in all the countries (EU-organic label, Demeter, Fair Trade and the Protected designation of origin label) (Table 9):

[7] https://www.berspcaassured.org.uk/about-us

Table 9: Labels included in the survey

Country	Label	Name	Description
All countries		*EU organic label*	*The EU organic label.*
		Bio-Dynamic	*Demeter label for bio-dynamic agriculture.*
		Protected designation	*Protected designation of origin (The blue label is the Norwegian counterpart to PDO)*
		Fair trade	*The label from Fairtraid International (FLO)*
Norway		*National organic label*	*Debio National organic label*
Germany		*National organic label*	*Bio-Siegel*
France		*National organic label*	*Agriculture Biologique*
Spain		*Regional organic label*	*Present in several Spanish regions*
Norway		*Other organic label*	*The Norwegian Demeter label for Bio-Dynamic agriculture.*
UK		*Other organic label*	*The organic certification label from the Soil Association Charity*
Germany		*Other organic label*	*Naturland*
France		*Other organic label*	*Nature & Progres*
Italy		*Other organic label*	*ICEA/Certificato Biologico*
UK		*Other organic logos*	*Organic Food Federation*
Germany		*Other organic logos*	*Bioland*
Norway		*Origin label*	*Nyt Norge*
UK		*Origin label*	*Assured Food Standard (Red Tractor)*
Germany		*Origin label*	*Regional Fenster*
France		*Origin label*	*Origine France Garantie*
Norway		*Animal Welfare*	*Dyrevernalliansen*
UK		*Animal Welfare*	*RSPCA*
Germany		*Animal Welfare*	*Tierwohl*
France		*Animal Welfare*	*Label Rouge*

3.4.1 Use of labels across countries

Four of the labels included in the study were present in all countries including the EU label and the Demeter label that give an opportunity to compare the use of organic labels with other types of quality labels (Fairtrade and PDO). Previous studies have shown that there are great variations in the use of labels between countries and also differences between the use and recognition of different types (organic, origin, animal welfare) (Hartmann et al., 2018; Eurobarometer 2018). In the tables below, we see how many of the respondents look for certain labels in different countries.

Table 10: Product labels can be an important source of information when shopping for food. To what extent do you take the following labels into account when you do your grocery shopping?

EU organic label	**Country**							
	Norway	**France**	**UK**	**Spain**	**Poland**	**Italy**	**Germany**	**Total**
Never	693	341	521	310	272	245	395	2777
	33.43	*14.80*	*22.79*	*13.84*	*12.06*	*10.84*	*17.17*	*17.67*
Almost Never	253	262	213	255	218	205	280	1687
	12.22	*11.36*	*9.33*	*11.39*	*9.69*	*9.08*	*12.17*	*10.73*
Sometimes	272	678	333	633	826	643	760	4144
	13.12	*29.44*	*14.59*	*28.22*	*36.64*	*28.43*	*33.01*	*26.37*
Almost every time	77	378	196	346	390	506	356	2248
	3.71	*16.41*	*8.59*	*15.43*	*17.28*	*22.38*	*15.46*	*14.30*
Every time	25	256	138	160	151	317	130	1178
	1.19	*11.14*	*6.06*	*7.14*	*6.71*	*14.00*	*5.65*	*7.49*
Don't recognize label	637	290	773	449	295	290	273	3008
	30.73	*12.61*	*33.85*	*20.02*	*13.09*	*12.82*	*11.88*	*19.14*
Do not know	116	98	109	89	102	56	107	676
	5.59	*4.24*	*4.79*	*3.95*	*4.53*	*2.46*	*4.66*	*4.30*
Total	2072	2302	2285	2242	2255	2261	2302	15719
	100.00	*100.00*	*100.00*	*100.00*	*100.00*	*100.00*	*100.00*	*100.00*

First row has *frequencies* and second row has *column percentages*

The table show that respondents in Italy (14 percent) followed by France (11 percent) most frequent state that they *always* look for the EU organic label when shopping. Equally, Italy scores highest (22 percent) also among those who answer that they *almost every time* look for this label. Only 1 percent of the Norwegian respondents say they always look for the EU organic label and 3,7 percent almost every time. The low percentage in Norway may be due to the fact that Norway is not a member of EU, and the label is maybe not promoted as much as in EU countries. The label is present on several imported food products in Norway, but the Norwegian consumers are probably more familiar with the national Debio label (see section 3.4.3). This is further stated by the fact that as much as 30 percent of the Norwegian respondents do not recognize the label. However, the EU label is even less recognized in the UK. Here as much as one third (34 percent) state that they do not recognize the label. This figure is 19 percent for the total sample. Almost 18 percent in the total sample say they never use the label. Again Norway score highest (33 percent) followed by the UK.

Table 11: Product labels can be an important source of information when shopping for food. To what extent do you take the following labels into account when you do your grocery shopping?

Demeter	Country							
	Norway	France	UK	Spain	Poland	Italy	Germany	Total
Never	786	674	645	508	522	553	583	4272
	37.93	*29.29*	*28.25*	*22.65*	*23.16*	*24.46*	*25.33*	*27.18*
Almost Never	184	224	146	311	322	322	338	1847
	8.90	*9.75*	*6.37*	*13.86*	*14.28*	*14.23*	*14.67*	*11.75*
Sometimes	103	231	183	314	398	355	596	2181
	4.95	*10.05*	*8.01*	*14.01*	*17.65*	*15.72*	*25.91*	*13.87*
Almost every time	31	103	178	146	162	170	218	1007
	1.49	*4.45*	*7.79*	*6.50*	*7.18*	*7.53*	*9.46*	*6.41*
Every time	15	88	139	789	65	91	117	595
	0.74	*3.82*	*6.09*	*3.51*	*2.88*	*4.04*	*5.09*	*3.78*
Don't recognize label	827	875	892	804	654	690	350	5091
	39.92	*38.01*	*39.06*	*35.84*	*29.00*	*30.52*	*15.19*	*32.39*
Do not know	126	106	101	81	132	79	100	726
	6.08	*4.62*	*4.42*	*3.63*	*5.85*	*3.51*	*4.35*	*4.62*
Total	2072	2302	2285	2242	2255	2261	2302	15719
	100.00	*100.00*	*100.00*	*100.00*	*100.00*	*100.00*	*100.00*	*100.00*

First row has *frequencies* and second row has *column percentages*

Almost one third of the sample do not recognize the Demeter label and as much as 39 percent in Norway and the UK as well as 38 percent of the French respondents are not aware of the label. In the total sample only four and six percent respectively say that they look for the label every time or almost every time. 14 percent in the total sample state that they sometimes take the Demeter label into account while in Germany this figure is 26 percent followed by 18 percent in Poland. 27 percent in the total sample state that they never look for the Demeter label, while 38 percent of the Norwegian respondents answer the same.

Table 12: Product labels can be an important source of information when shopping for food. To what extent do you take the following labels into account when you do your grocery shopping?

Protected designation of origin	Country							
	Norway	France	UK	Spain	Poland	Italy	Germany	Total
Never	688	312	535	288	354	241	496	2913
	33.21	13.53	23.40	12.84	15.71	10.64	21.53	18.53
Almost Never	250	274	228	245	293	225	405	1920
	12.08	11.90	9.98	10.93	12.98	9.97	17.57	12.22
Sometimes	200	760	306	713	728	648	385	3740
	9.63	33.00	13.41	31.82	32.29	28.64	16.72	23.79
Almost every time	53	428	204	419	256	562	172	2094
	2.57	18.59	8.91	18.69	11.34	24.87	7.47	13.32
Every time	24	205	111	154	99	259	103	955
	1.15	8.89	4.88	6.88	4.40	11.44	4.48	6.08
Don't recognize label	748	250	807	362	421	267	630	3485
	36.11	10.86	35.31	16.12	18.65	11.82	27.38	22.17
Do not know	109	74	94	61	104	59	112	613
	5.25	3.23	4.11	2.72	4.62	2.61	4.86	3.90
Total	2072	2302	2285	2242	2255	2261	2302	15719
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

First row has *frequencies* and second row has *column percentages*

Respondents in Italy (11 percent every time and 25 percent almost every time) followed by France (9 and 19 percent) to a greater extent than in other countries take the PDO label into consideration when grocery shopping. In the other end more than 35 percent of the respondents in Norway and the UK do not recognize the label and respectively 33 and 23 percent never look for the label in these countries. France and Italy are among the countries with most products certified with this label compared with countries like Poland and Norway with a relatively small number of PDO-products.

Table 13: Product labels can be an important source of information when shopping for food. To what extent do you take the following labels into account when you do your grocery shopping?

Fair trade 	Country							
	Norway	France	UK	Spain	Poland	Italy	Germany	Total
Never	404	504	259	444	386	435	317	2748
	19.48	*21.87*	*11.32*	*19.80*	*17.13*	*19.22*	*13.77*	*17.48*
Almost Never	307	348	257	311	330	324	245	2123
	14.80	*15.11*	*11.27*	*13.88*	*14.65*	*14.35*	*10.66*	*13.51*
Sometimes	862	508	905	412	590	458	916	4651
	41.59	*22.09*	*39.62*	*18.35*	*26.18*	*20.23*	*39.79*	*29.59*
Almost every time	235	199	459	191	247	286	433	2051
	11.36	*8.63*	*20.10*	*8.53*	*10.97*	*12.66*	*18.81*	*13.05*
Every time	72	104	271	81	98	109	206	942
	3.48	*4.54*	*11.87*	*3.63*	*4.33*	*4.82*	*8.95*	*5.99*
Don't recognize label	112	545	56	724	468	575	74	2555
	5.42	*23.70*	*2.43*	*32.28*	*20.75*	*25.45*	*3.23*	*16.25*
Do not know	81	93	77	79	135	74	110	650
	3.89	*4.06*	*3.39*	*3.52*	*5.99*	*3.26*	*4.79*	*4.13*
Total	2072	2302	2285	2242	2255	2261	2302	15719
	100.00	*100.00*	*100.00*	*100.00*	*100.00*	*100.00*	*100.00*	*100.00*

First row has *frequencies* and second row has *column percentages*

Of the total sample six percent answer that they look for the Fair Trade label every time when shopping and 13 percent say that they look for the label almost every time. Consumers in the UK are more inclined (respectively 12 and 20 percent) to look for Fair Trade products than in the other countries. Also in Germany a fair share (9 and 19 percent) frequently look for Fair Trade labelled products. Almost one third of the Spanish respondents state that they do not recognise the label while only 2 percent of the UK respondents answer the same. 17 percent of the total sample say they never look for this label while in France 22 percent answer the same. 19 percent in Norway, Spain and Italy also do not look for the Fair Trade label. The results show that there is a greater awareness of the Fair trade label in UK and Germany while in Spain, Italy and France the recognition and use is much lower.

Table 14: Look for any organic label when shopping

	Country							
	Norway	France	UK	Spain	Poland	Italy	Germany	Total
No	1791	1254	1792	1571	1714	1274	1411	10807
	86.43	*54.46*	*78.45*	*70.07*	*76.01*	*56.33*	*61.29*	*68.75*
Yes	281	1048	492	671	541	987	891	4912
	13.57	*45.54*	*21.55*	*29.93*	*23.99*	*43.67*	*38.71*	*31.25*
Total	2072	2302	2285	2242	2255	2261	2302	15719
	100.00	*100.00*	*100.00*	*100.00*	*100.00*	*100.00*	*100.00*	*100.00*

First row has *frequencies* and second row has *column percentages*

The table shows the frequency of taking into account one or more of the organic labels every- or almost every time going grocery shopping. The labels included are the EU-organic label, Demeter (Bio-dynamic)

label, National Organic labels and other national and private labels included in the survey (see the list in Table 9 above). The table shows that more than 30 percent of the respondents in general frequently look for an organic label when shopping. Consumers in France (45 percent), Italy (44 percent) followed by Germany (39 percent) to a greater extent look for organic labels. In the other end we find the Norwegian consumers (14 percent) followed by the UK (22 percent) and Polish (24 percent) consumers. These findings are in line with the results in section 3.1.1 about organic food consumption. Italian and French consumers are more frequent organic consumer while the UK and Norwegian respondents report to consume less frequent.

3.4.2 Knowledge and recognition of organic labels

In the following question we wanted to measure respondents' knowledge of organic food labels. The respondents were presented a picture with the food labels included in the survey relevant for each country (see table 9 above). The number of labels vary between the countries with in total nine labels in Germany, eight labels in France, Norway and the UK, five labels in Italy and Spain and only four labels in Poland. The selection of labels reflect that food labels are more present in some European countries than others, and especially in the northern European countries like France, Germany, Norway and the UK different types of labels are more commonly used on food products.

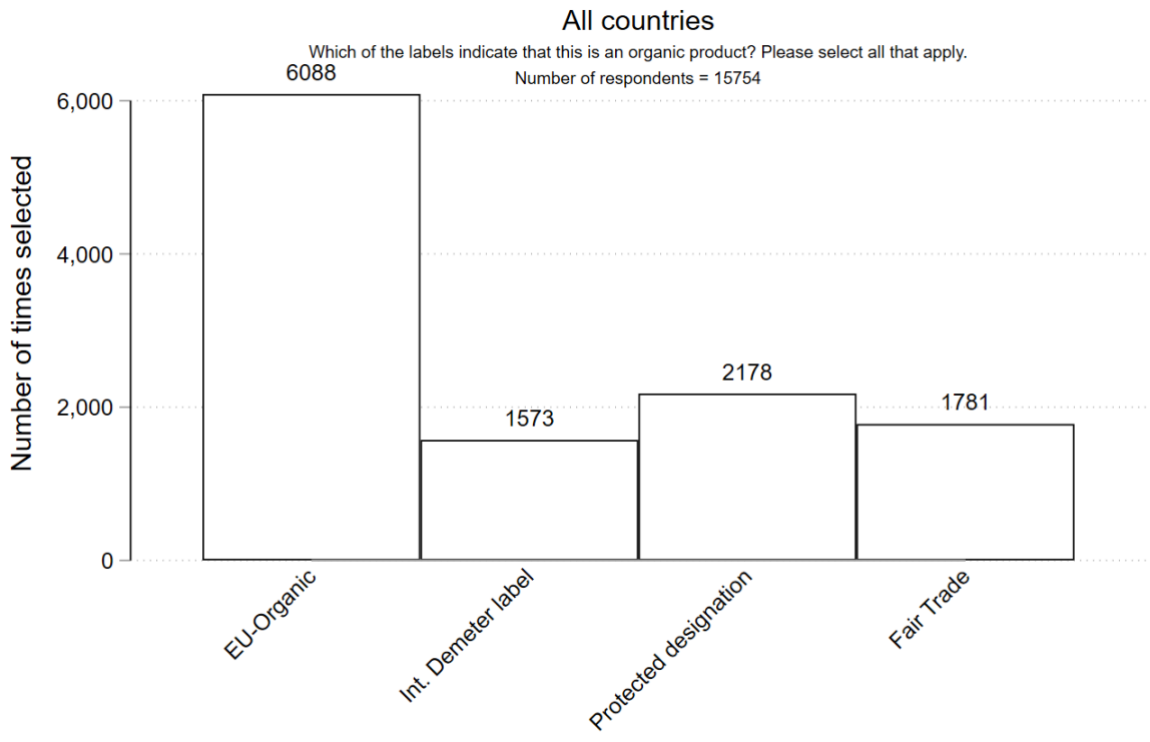

Figure 29: Which of the labels indicate that this is an organic product? Please select all that apply. All countries

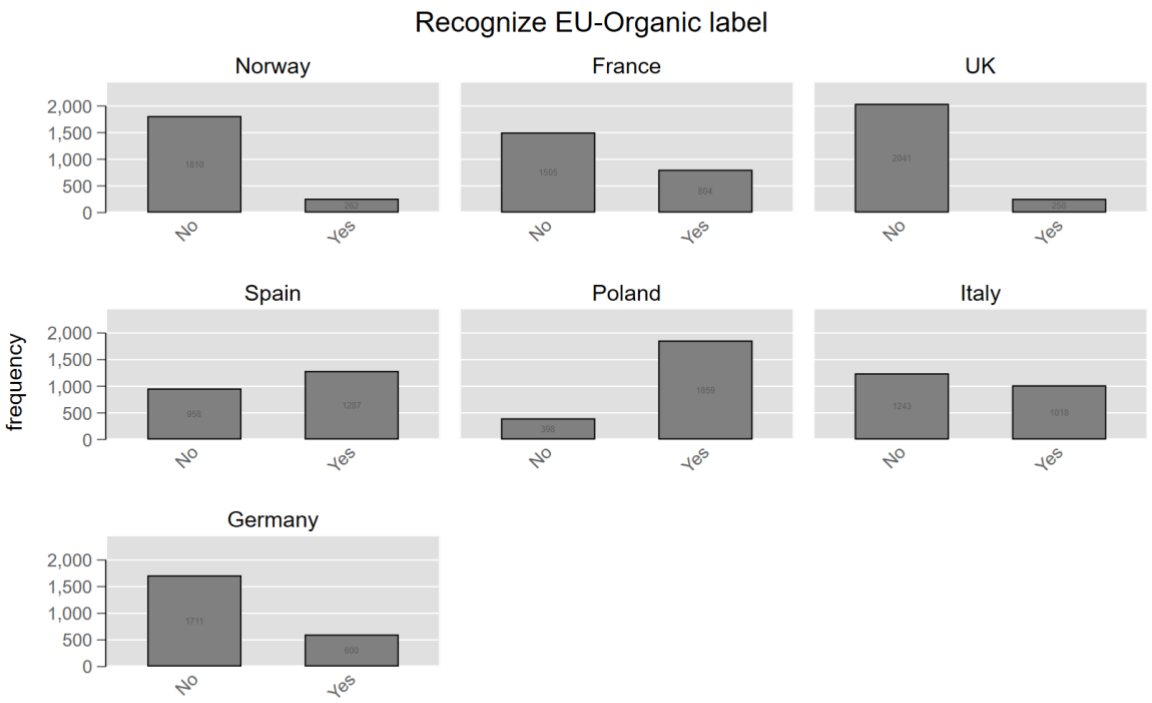

Figure 30: Which of the labels indicate that this is an organic product? Please select all that apply. Recognition of the EU organic label

In total 39 percent of the respondents recognised the EU organic label (Figure30). The Polish respondents to a greater extent than in the other countries recognized the label as organic. Also a majority in Spain and Italy recognised the label while much fewer in the UK and Norway were familiar with the logo.

The general result is higher than in previous European studies. In a recent Special Eurobarometer 473 (European Commission 2018) 27 percent stated that they recognized the EU organic logo (all EU member countries included)[8]. Hartman et al. 2018 found that about a third of the respondents recognised the EU organic label.[9] The results is in line with the referred studies with low levels of recognition in the UK (Eurobarometer 2018 and Hartman et al. 2018) and Norway (Hartmann et al., 2018).

The results show that in countries with few alternatives to the EU label such as in Poland, Italy and Spain the recognition is higher than in the countries with a magnitude of different organic labels and other labels. This is in line with a previous Norwegian study of food labelling pointing to the fact that consumers may be confused by the magnitude of food labels (Heidenstrøm, Jacobsen, & Borgen, 2011). In Poland the EU-label is the only public organic label, thus, to some extent has the same function as national labels in other countries. The method used may also have effect on the result because the number of labels differed between the countries.

[8] The wording of the question in the Eurobarometer was as follows: Which of the logos are you aware of? (Multiple Answers Possible) Logos Shown: Organic Farming; Fairtrade; Protected
Designation Of Origin; Protected Geographical Indication Traditional Specialty Guaranteed.
[9] In the survey of Hartman et al., (2018) respondents saw one label at the time and were asked "Do you recognize this label"

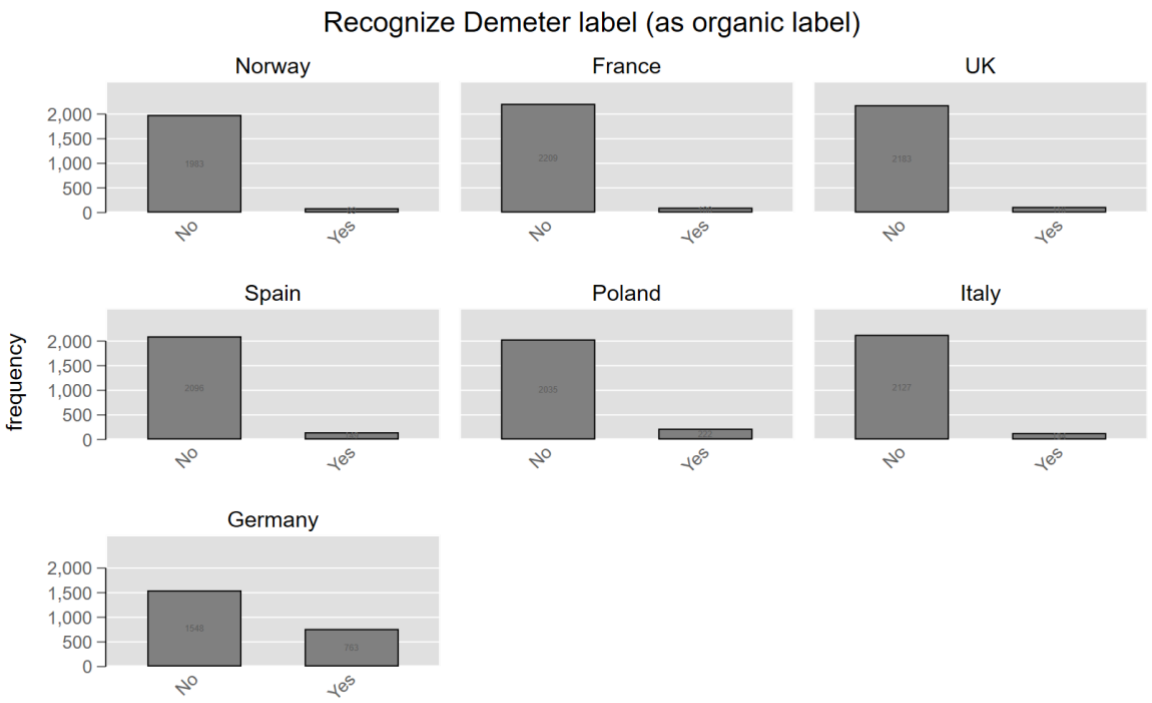

Figure 31: Which of the labels indicate that this is an organic product? Please select all that apply. Recognition of the Demeter label

The Demeter label is not highly recognized by the respondents in general (Figure 31) In Germany the Demeter label was recognized by 33 percent which is higher than the EU-label. This reflect that Germany is one of the countries with a long history of bio-dynamic agriculture and a relatively large share of bio-dynamic products are also present in the market.[10]

3.4.3 Use and recognition of food labels – by country

Respondents were shown pictures of labels (organic and other) present in each country and asked to select the labels that indicate an organic food product. The number of labels varied between countries according to the number of organic and other food labels related to origin, fair trade and animal welfare. In this section we will discuss the recognition of labels in each of the participating countries.

3.4.3.1 France

Several organic labels are present in France. Besides the EU organic label we have the National organic label Agriculture Biologique (AB), Nature Progres and Demeter. In the survey the EU Protected designation of origin label (PDO), Fair Trade was included together with the Label Rouge label that is perceived as having higher standards especially on animal welfare. From the figure we see that more than 90 percent of the French respondents recognized the AB-label as an organic food label. 35 percent recognized the EU-organic label while very few recognised Nature Progres (7%) and Demeter (4%) as organic labels. 14% believed that Label Rouge is an organic food label which is not surprising considering that it is associated with higher quality and animal welfare standards.

[10] https://en.wikipedia.org/wiki/Organic_certification#Private_organic_certification

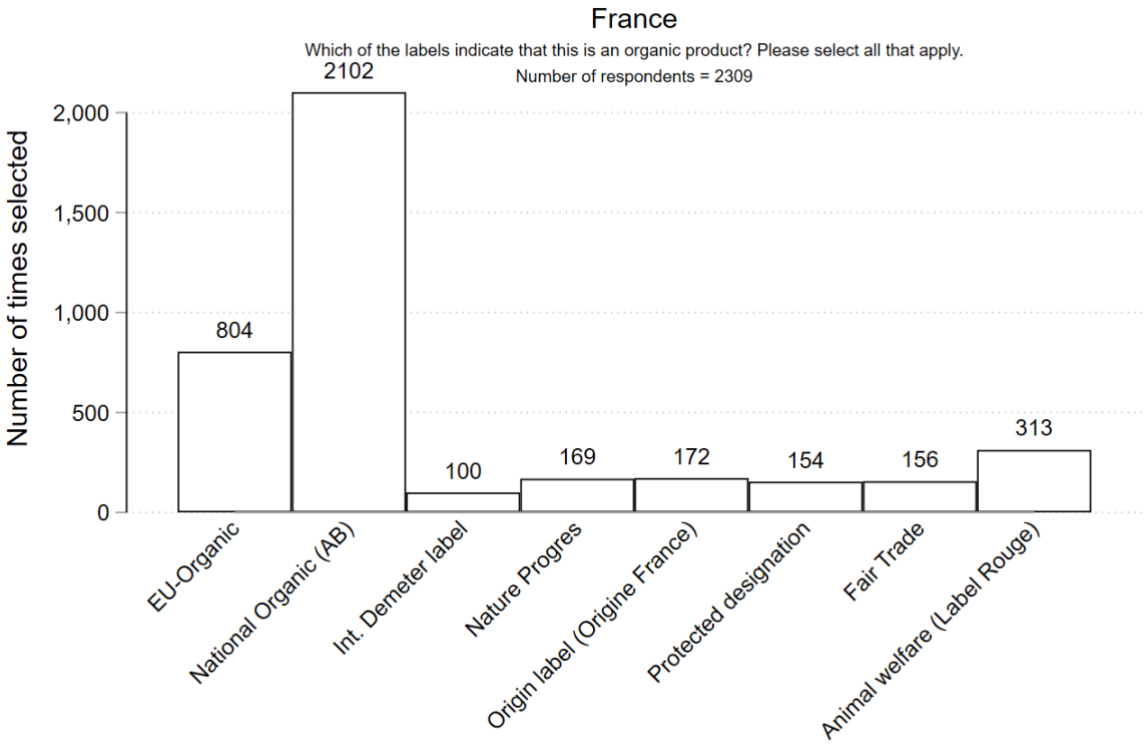

Figure 32: Which of the labels indicate that this is an organic product? Please select all that apply. France

3.4.3.2 Germany

Germany is marked by a high number of food labels including several organic labels and some of them with a long history in the food market. Nine labels were included in the survey and besides the EU label also the Bio-Siegel, Demeter, Naturland and Bioland organic food labels were included. The PDO-label, Fair Trade and finally the animal welfare label Tierwohl were also included. The figure show that as for the French national label, the Bio-Siegel, were recognized by over 90 percent of the respondents. Also Bioland scored high (72 percent) followed by Naturland (34 percent) and Demeter (33 percent), while the EU organic label was least recognised with 26 percent of the respondents selected that label. The Germans seem well informed of the content of the organic labels, especially Bioland and Naturland. The fact that few respondents selected the non-organic labels may also be an effect of the fact that these labels, except for the Fair Trade label, in general are less used and thus known among German consumers. Of the non-organic labels Fair Trade was selected the most (12 percent) which may have to do with the fact that Fair Trade products often also are organically produced. Several products may contain more than one type of certification label and both organic and Fair Trade labels may occur on the same product.

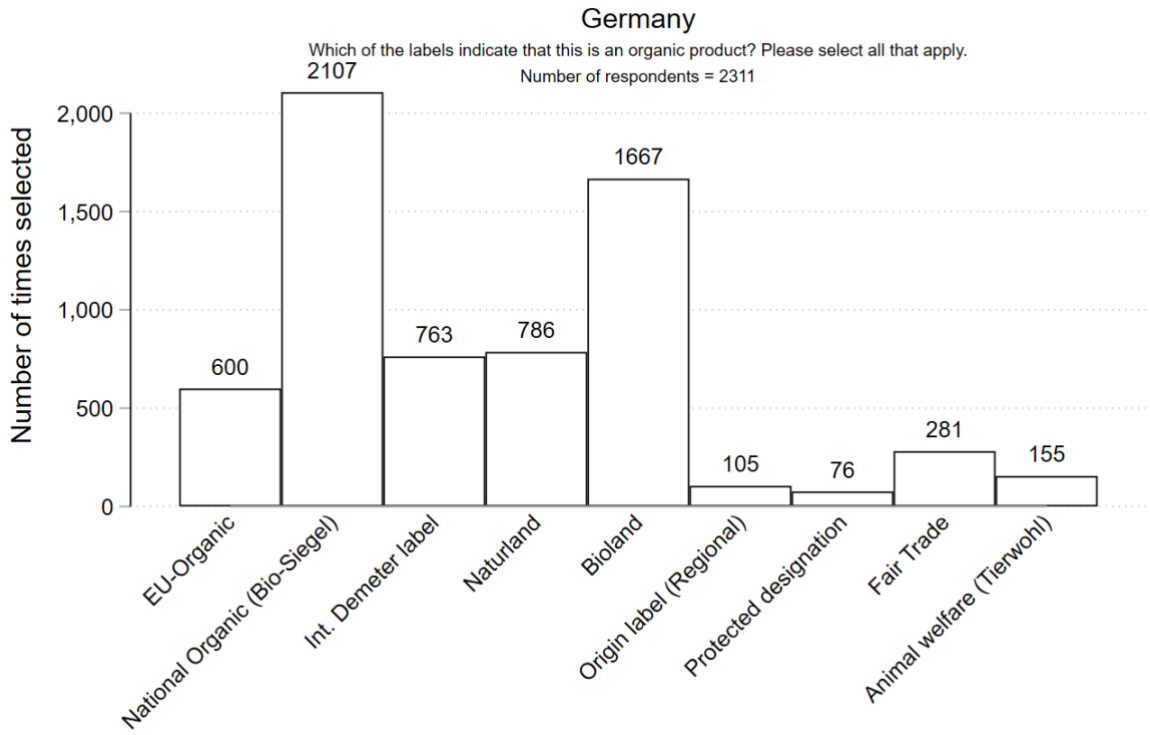

Figure 33: Which of the labels indicate that this is an organic product? Please select all that apply. Germany

3.4.3.3 Italy

In Italy less "official" organic labels are present in the market. For this study we picked the ICEA (Certificato Biologico) label as representative of a private organic label together with the Demeter and EU organic label. In addition the PDO and Fair Trade labels were included as in the other participating countries. We see that more than 80 percent recognise the ICEA/Certificato Biologico label while 45 percent also select the EU organic label which is significantly higher than in several other of the participating countries. From table 10 we saw that the Italian respondents to a greater extent than in other countries took this label into account when grocery shopping. Even though the ICEA/Certificato Biologico label were more widely recognised we can see from the data material that the respondents more often look for the EU-label (36% look frequent for the EU-label while 29 percent frequently look for ICEA). It is perhaps easier to recognise the ICEA label as organic because the logo explicitly state that it is a "Certificato Bilogico", while the EU-logo only shows a green leaf. A quite large share (more than 20 percent) selected the PDO-label as an organic label while only 6 percent recognised Demeter as organic. The PDO label is more widely used in Italy than in most other European countries (see table 12) and PDO products may also be organically produced and have both types of labels. This may explain the relatively high number selecting PDO as organic. The limited share selecting Demeter is in line with the previous findings that it is very little used, and 30 percent of the Italian respondents explicitly say they do not recognise the Demeter label (table 11)

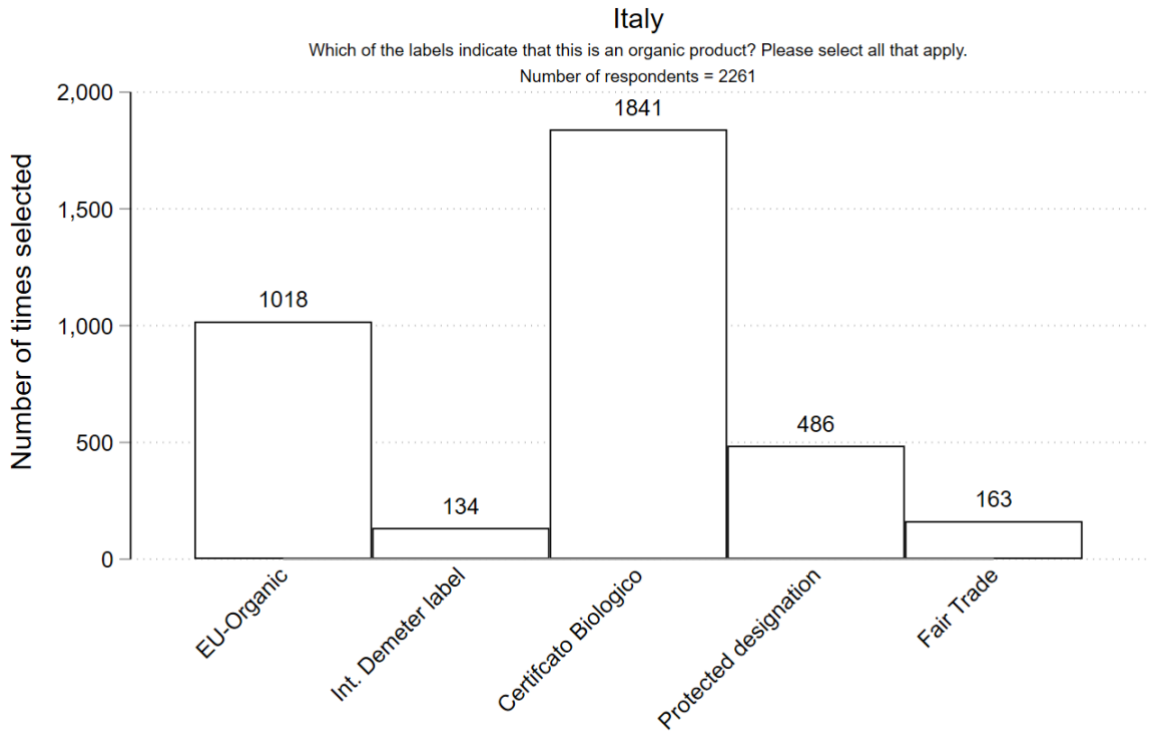

Figure 34: Which of the labels indicate that this is an organic product? Please select all that apply. Italy

3.4.3.4 Norway

In Norway eight labels were displayed where of the official Norwegian organic label Debio along with two versions of the Demeter label (the "international" and the Norwegian version which is often displayed together with the Debio label marking that the product is certified both according to the Debio-regulation and the bio-dynamic standards). In addition the "Nyt Norge" logo were displayed that is a label marking Norwegian origin. Finally, the Norwegian version of the PDO label, the Fair Trade label and one animal welfare label were included. The animal welfare label is quite new and are present on very few products so far. The Debio label was recognised by 87 percent of the respondents while only 13 percent selected the EU organic logo. This is in line with the findings above that very few of the Norwegian consumers look for or recognise the EU label (see table 10). The Norwegian version of the Demeter label where recognised more often than the "international", however as few as 8 and 4 percent respectively picked out these two logos. Demeter products are not highly visible in the Norwegian market but the higher recognition of the Norwegian version may be explained due to more products that are labelled with this logo and that it is linked to the official Debio-logo. Very few selected the non-organic labels, however, as much as 12 percent thought that the national origin label "Nyt Norge" represented organic food. In general there is a high recognition of "Nyt Norge" and the label is present on a high number of products and a wide range of product categories.

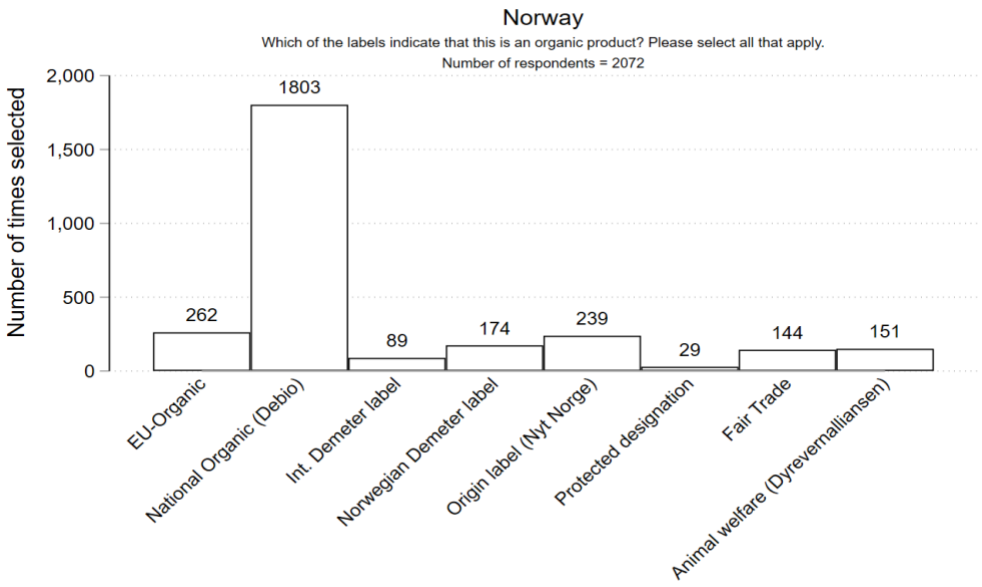

Figure 35: Which of the labels indicate that this is an organic product? Please select all that apply. Norway

3.4.3.5 Poland

Only four labels were included in the survey: EU-label, Demeter, PDO and Fair Trade. The EU-label were recognised by as much as and that is the highest among the participating countries and may be explained by the fact that there is no national organic food labels in Poland, except for the Demeter label. The Demeter label was only recognised by 2 percent of the respondents and was little used by the Polish consumers (see Table 11). As much as on out of four believed that the PDO-label is organic and one out of five also picked Fair Trade as organic. These label are not widely used and about 20 percent stated that they do not recognise these labels (see Table 12 & 13).

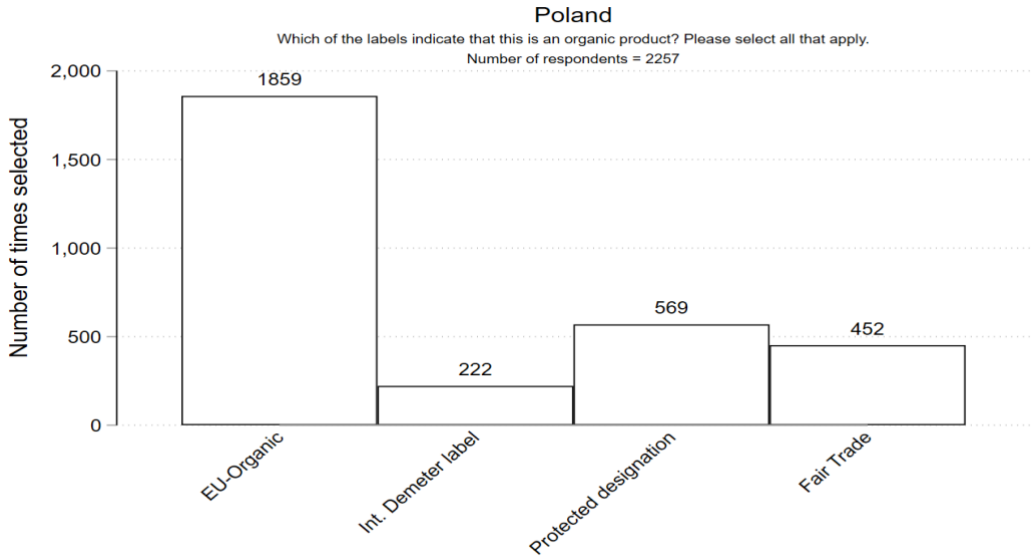

Figure 36: Which of the labels indicate that this is an organic product? Please select all that apply. Poland

3.4.3.6 Spain

Besides the EU-label we included the most common label present in all the regions with semi-public or public control bodies, were a common logo is used, however with some adaption and with the name of the region. The Demeter label were also included together with the PDO and Fair Trade labels. The regional organic food label were recognised by 64 percent and the EU-label was identified by of the Spanish respondents. Only seven percent picked out the Demeter logo indicating that this is not very common in the Spanish market. However, as much as 29 percent meant that the PDO label also indicate an organic food product. As in Italy and France, this may be due the fact that the label is relatively well known (Table 12) and used and that also some PDO products also are organically produced.

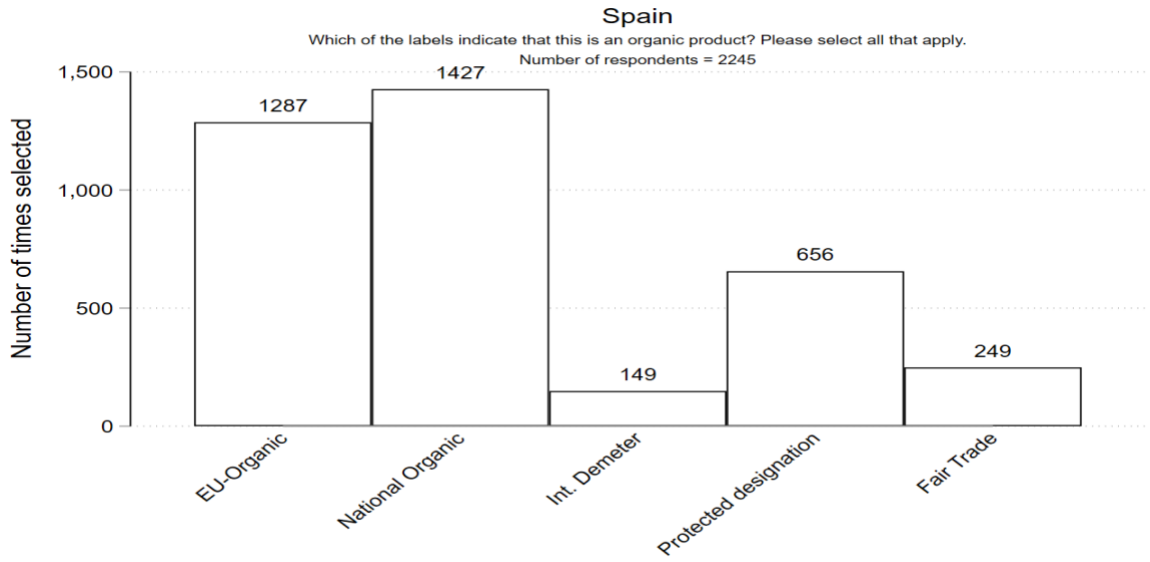

Figure 37: Which of the labels indicate that this is an organic product? Please select all that apply. Spain

3.4.3.7 The UK

Eight different labels were included in the UK survey. Besides the EU organic label three of the private organic labels were present: Soil Association, Organic Food Federation (OFF) and Demeter. In addition the Red Tractor label (national origin), PDO, Fair Trade and the animal welfare label RSPCA were included.

In all 77 percent of the respondents recognised the Organic Food Federation and 54 percent also picked out the Soil Association logo. Some of the difference between the two labels might be that "organic" is explicitly mentioned at the logo from OFF. The EU organic label was only recognised by 11 percent which is the lowest share of all countries. The Demeter label is also little known and only 5 percent picked this out. Both the Fair Trade and Red Tractor logos were to a greater extent recognised as being organic. These labels are much more used by the British consumers than the organic labels. About one in three say they look for Fair Trade and Red tractor label products while only one in five of the British respondents state that they look for the organic logos (Soil association and Organic Food Federation). While just a few respondents say they do not recognise the Red tractor (7 percent) or Fair Trad (3 percent) as much as 19 percent do not recognise the Soil association logo and 25 percent are not familiar with the label from OFF. More than one in five look for the animal welfare (RSPCA) label while and almost the same number state that they do not recognise the RSPCA label .

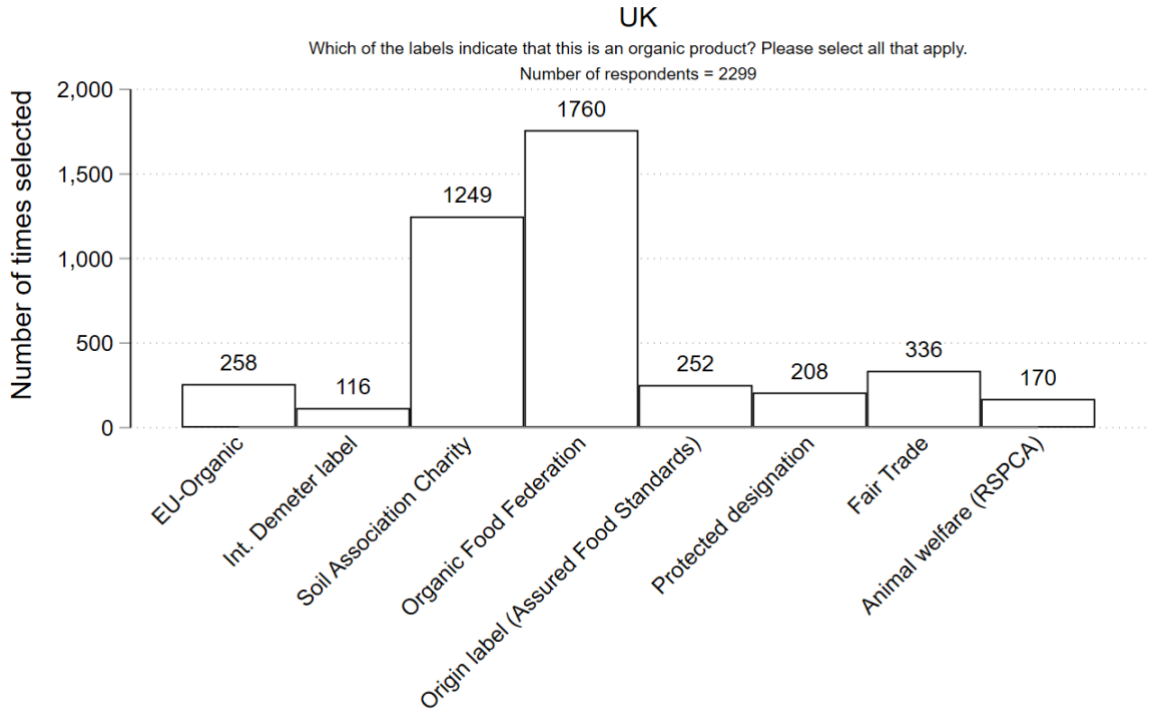

Figure 38: Which of the labels indicate that this is an organic product? Please select all that apply.

3.4.3.8 Summary

The national organic labels (public or private) were to a greater extent than the EU-label recognised by the respondents in all countries (except Poland). There may be several explanations to this. First, the design of the EU-label may be a disadvantage because the logo gives the consumers little associations or references to organic agriculture/food. This was one of the findings from the study by Hartmann et al (2018; 2019) that also suggested to make adjustments to the logo. Second, the national organic labels communicate on the native languages (some of the logos are marked with words such as biologic, ecologic, nature or organic). Third the EU-logo is relatively new compared to most of the national labels. This is especially true in the German market were for instance the Demeter label, which generally in Europe is little known, is recognised and used by far more consumers than the EU-label. Bio-Dynamic agriculture and the Demeter logo has a long history in Germany. A final explanation may be that there are fewer products marked with EU-label than several of the other national labels in the respective countries, thus, consumers are less exposed to the EU-label, than the national labels.

In some of the countries for the PDO and to some extent for the Fair Trade logo a significant share of the respondents believed these logos represented organic food products. This might be explained by the fact that some of PDOs and Fair Trade products also are organically produced. Another explanation is that consumers miss information about the content of the labels which will be further discussed in section 4.1.2.

4 PERCEPTIONS, INFORMATION AND TRUST

4.1 RESPONDENTS' PERCEPTIONS OF ORGANIC FOOD

Previous studies have focused on motives for buying or not buying organic food (Aertsens, Verbeke, Mondelaers, & Van Huylenbroeck, 2009; Yiridoe, Bonti-Ankomah, & Martin, 2005). In the first section of this chapter (4.1.1) we have asked more generally how consumers perceive organic food and to what extent they believe organic food are better for issues such as health, environment, animal welfare, soil health etc. In the second section (4.1.2) the statements are more negatively framed and they also to a larger extent capture potential barriers for not buying organic food. The negative statements focuses on issues such as high price, poor quality, little availability, distrust in the organic labels etc.

4.1.1 Positive statements

The respondents were asked to rank the different statements on organic food on a scale from 1-5 were 1 was completely disagree to 5 fully agree. In all nine statements were included in the questionnaire:

Organic food is:

Is better for my own and my family's health
Is better for the environment
Is better for animal welfare
Is better for the health of the farmer
Has better taste and quality
Is better for the climate
Is better for soil health
Is a way to support local food production
Is better for insects and biodiversity

In general all nine statements were positive valued by the respondents with some internal variations and variations between countries (Figure 39). For three of the environmental issues (Is better for the environment, Is better for insects and biodiversity, Is better for soil health) more than 65 percent of the respondents agreed or fully agreed. More than 63 percent of the respondents agreed/fully agreed that organic food is better for own health and for animal welfare, while 61 percent think it is good for the climate and a way to support local food production. Nearly 58 percent agreed/fully agreed that organic food is better for the health of the farmer. Lowest ranked was the statement that organic food has better taste and quality that were agreed/fully agreed by 55 percent of the respondents. A significant share, around 10 percent for all statements, answered don't know / no opinion on this question.

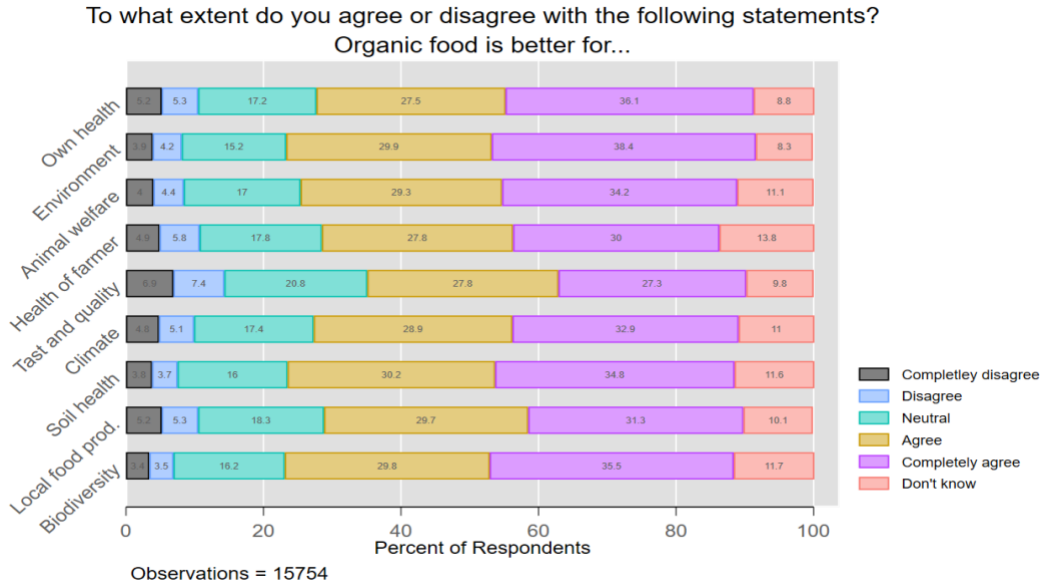

Figure 39: To what extent do you agree or disagree with the following statements? Organic food is better for… All countries

4.1.1.1 Norway

The Norwegian respondents differ from the rest of the countries in several respects. The scores on agree/fully agree are lowest on all nine statements and the Norwegians to a greater extent answered don't know/no opinion on all statements, than respondents in the other countries. Many refrained from answering especially on the statements on farmers' health (28 percent) and soil health (25).The highest score in the Norwegian material is attributed to the statement about biodiversity were nearly 58 percent agreed/fully agreed. Also environment (50), climate (45) and animal welfare (44) received relatively high scores. In the other end of the scale is the statement that organic food has better taste and quality. Only 29 percent agreed/fully agreed to the statement, while 24 percent was neutral to this statement. The Norwegian sample also differ from the rest of the countries regarding view on the extent that organic food is better for own health and the farmers' health. In Norway only 36 and 37 percent respectively agree/fully agree to these statements, while the figures are 63 and 58 percent for the total sample.

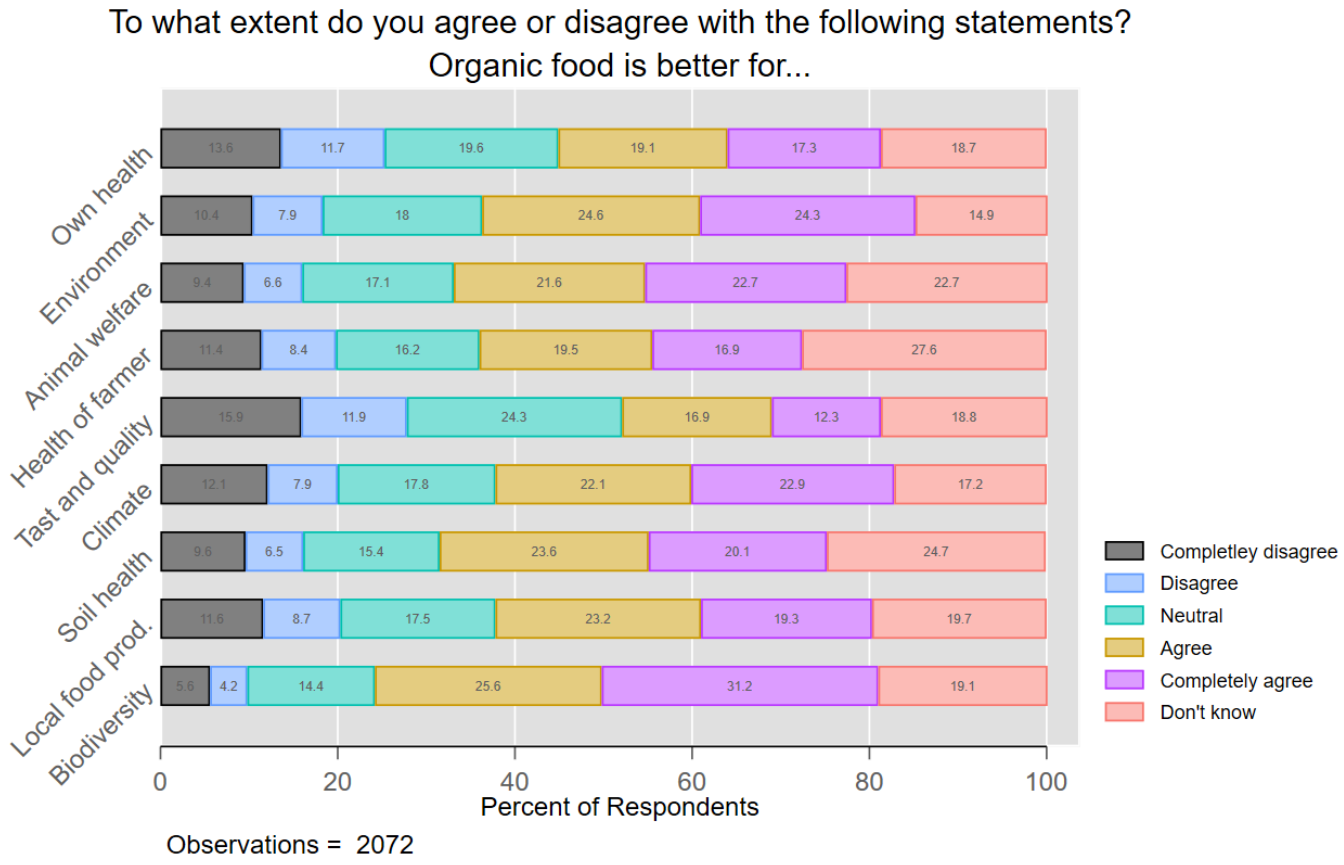

Figure 40: To what extent do you agree or disagree with the following statements? Organic food is better for…(Norway)

4.1.1.2 France

The French respondents back up several of the statements and especially the statements about environment, bio diversity, soil health and health of farmer have a score of more than 70 percent agree/fully agree which is far above the scores in the total survey sample. Also the statement that organic food is better for one's own and family's health score as high as 69 percent. Taste and quality received the lowest score, however, still 59 percent agree/fully agree to the statement. It is worth noting that second lowest rated was animal welfare with 64 percent of the respondents agreed/fully agreed to this statement and with a relatively high share of 10 percent of the respondents answered don't know/no opinion.

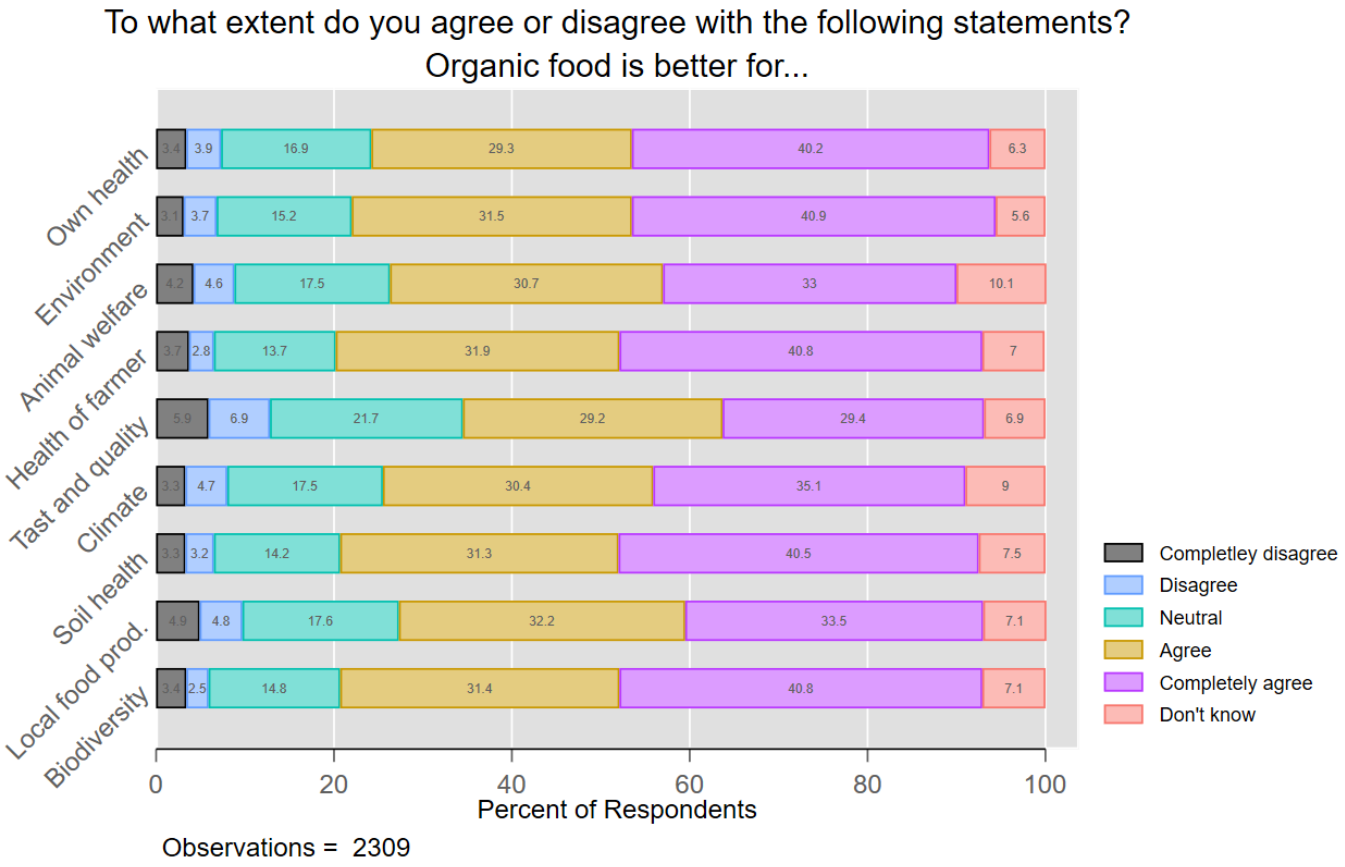

Figure 41: To what extent do you agree or disagree with the following statements? Organic food is better for…(France)

4.1.1.3 Germany

The German sample has a lower score on agree/fully agree on most statements compared to the total sample. Highest scores are found on the statements related to environment (65), soil health (64) and biodiversity (63) as well as animal welfare (63). Also the statement regarding own and family health were supported by more than 60 percent of the respondents, while 50 percent regarded organic food to be better for the farmers' health which was the lowest score among the German respondents. The statement about taste and quality scored second lowest with support from 51 percent of the respondents. Also in the German sample a relatively high share of nearly 12 percent answered don't know / now opinion to the statement about farmers' health.

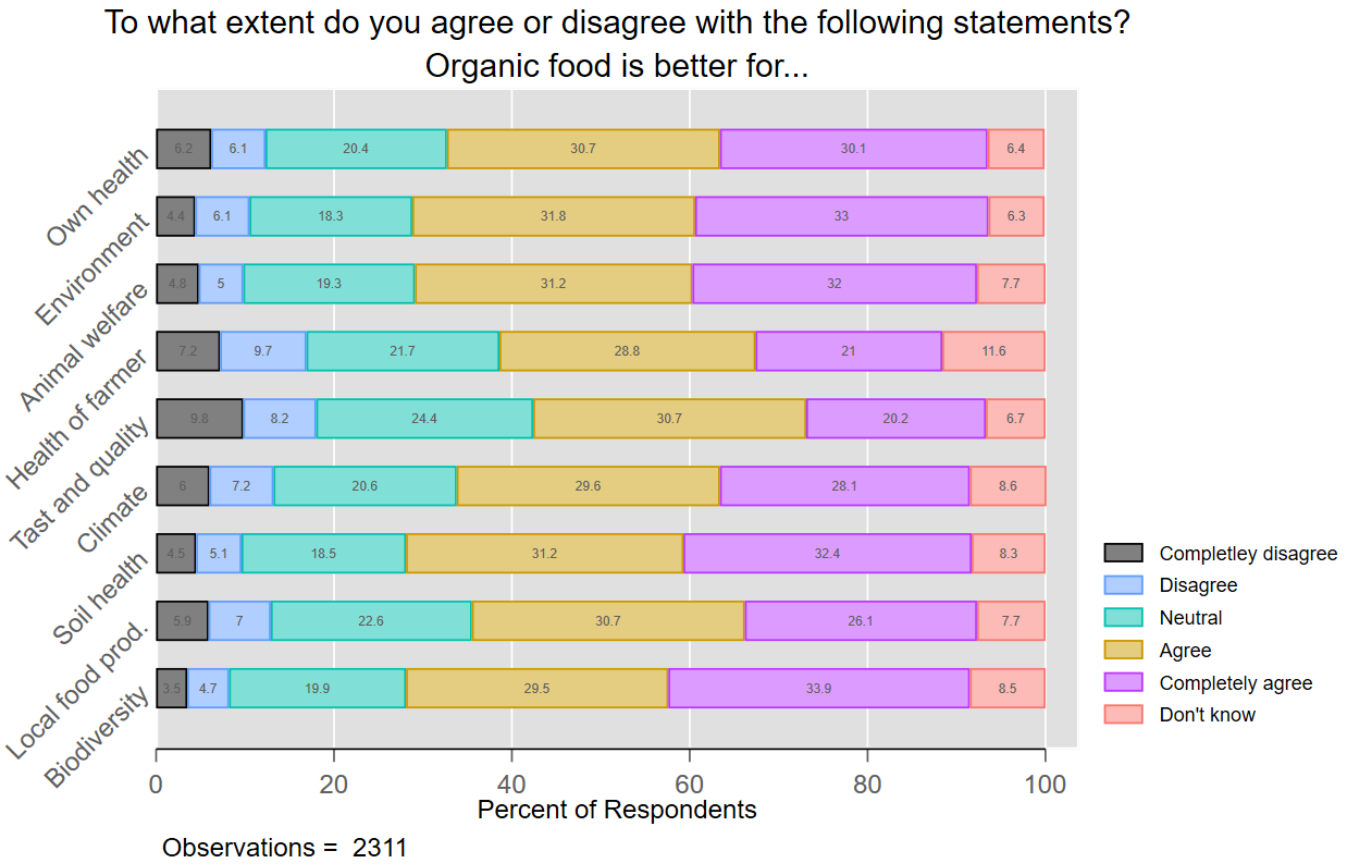

Figure 42: To what extent do you agree or disagree with the following statements? Organic food is better for…(Germany)

4.1.1.4 Italy

Similar to the French sample, the Italian respondents in general to a greater degree than the total sample agreed/fully agreed to the nine statements. Especially, environment, biodiversity, soil health and climate are supported by more than 70 percent of the Italian sample. Also as much as 73 percent agreed/fully agreed to the statement that organic food is better for one own and the family's health, and that is significantly higher than in the total sample (63.6 percent). Taste and quality gained the lowest support among the Italian consumers, however, still as much as 62 percent answered that they agreed/fully agreed to the statement.

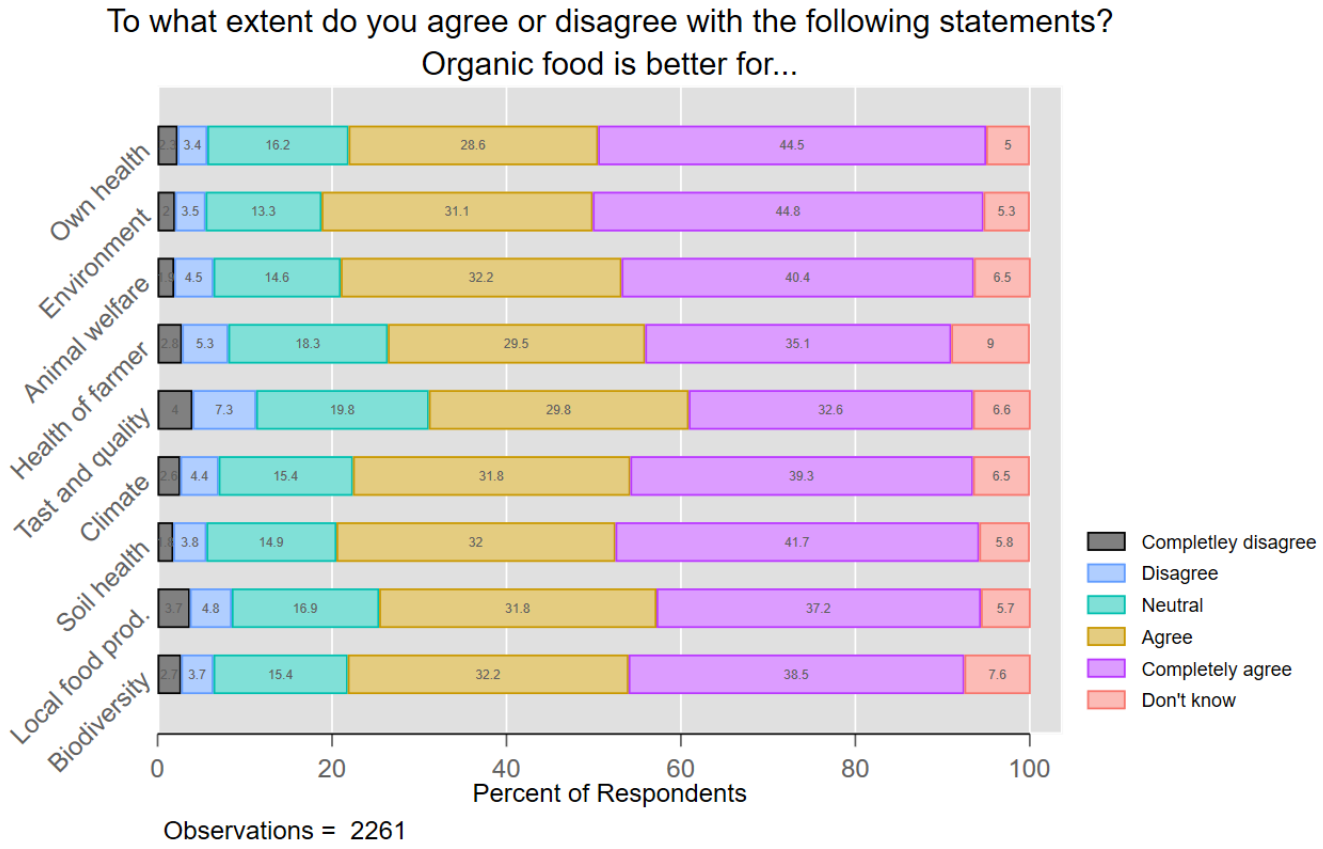

Figure 43: To what extent do you agree or disagree with the following statements? Organic food is better for…(Italy)

4.1.1.5 Poland

Similar to the Italian and French respondents the Polish participants scored higher than the total sample on the statements on organic food. Also similar to the Italians they emphasised the health aspect, and as much as 76 percent agreed / fully agreed to the statement that organic food is better for "my own and the family's health". Other aspects especially supported by the polish respondents were environment (75 percent), animal welfare (71 percent), local food production, soil health and climate all 70 percent. Health of the farmer (66 percent) and biodiversity (67 percent) where the aspects that were least supported and also with the highest numbers of don't know / no opinion (11-12 percent).

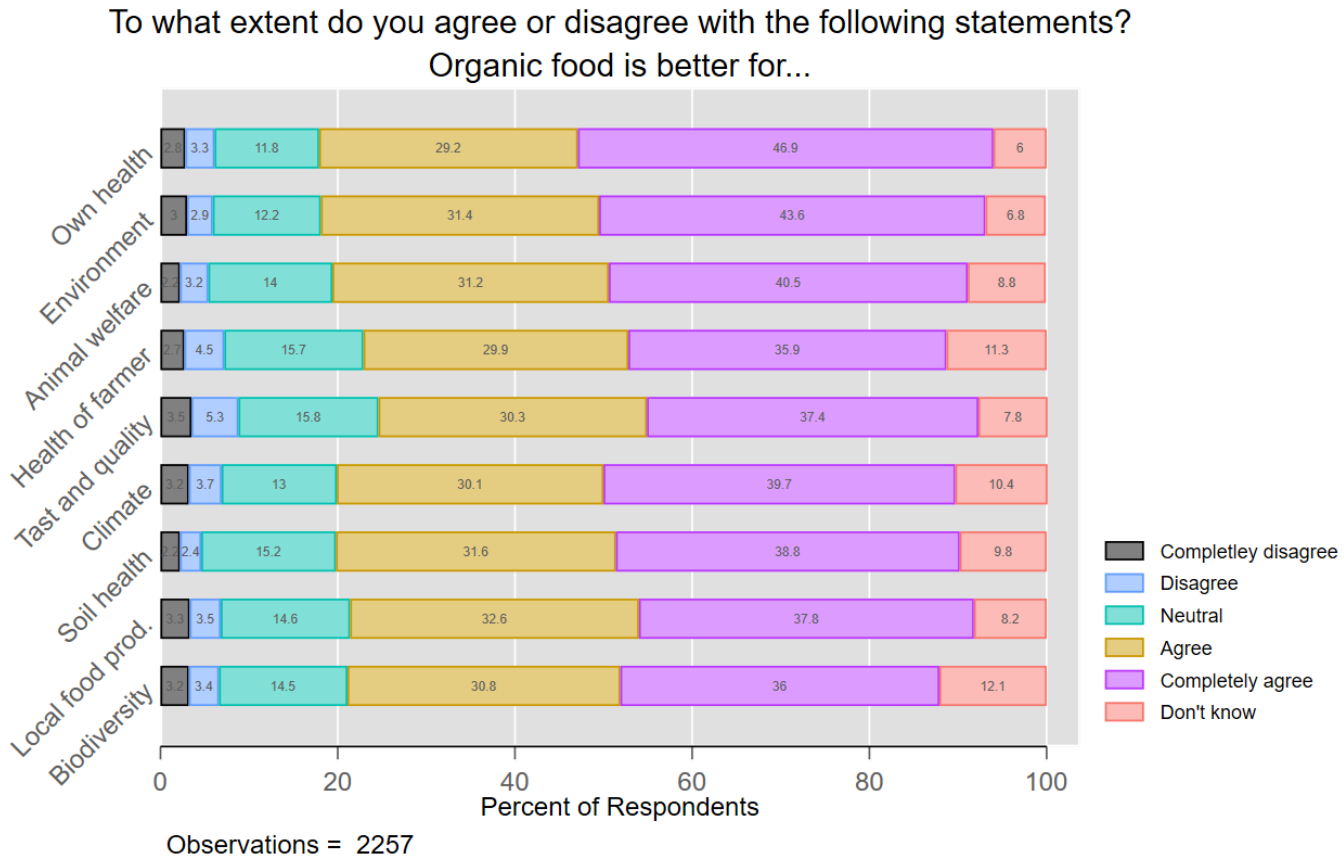

Figure 44: To what extent do you agree or disagree with the following statements? Organic food is better for…(Poland)

4.1.1.6 Spain

In all 77 percent of the Spanish respondents agreed / fully agreed to the statement that organic food is better for the environment. This was followed by the statement about own and family's health that was supported by 73 percent. As much as 71 percent of the Spanish respondents agreed/fully agreed that organic food is a way to support local food production and is better for soil health and animal welfare. The Spanish sample resemble the Polish and Italian respondents especially with respect to emphasising the benefits for health. In the lower end we found health of farmer (65 percent), biodiversity (66 percent) as well as taste and quality (67 percent). Between 10 and 11 percent answered don't know/no opinion on the statements about farmers' health and biodiversity. However all statements were viewed significantly more positive in the Spanish- than in the total sample.

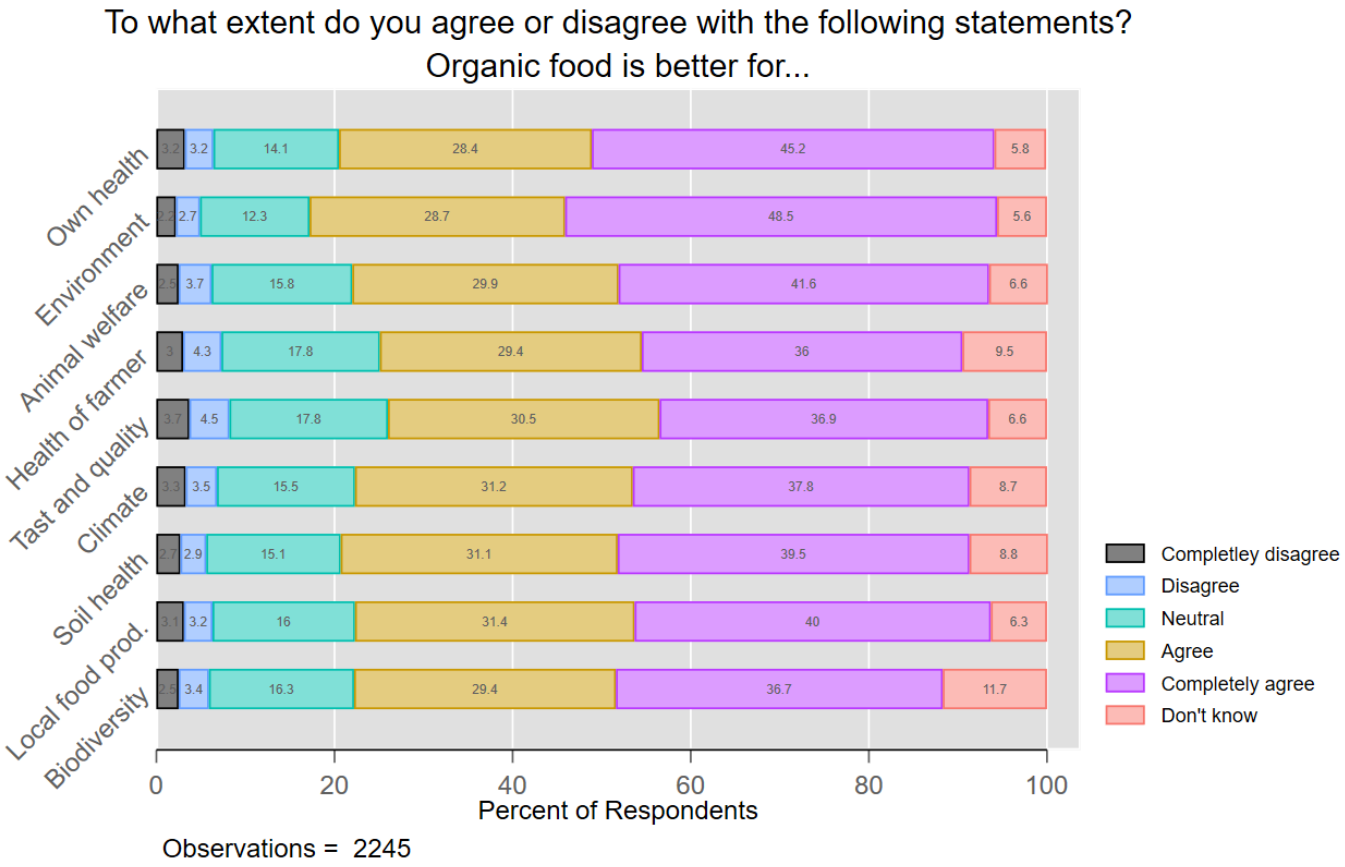

Figure 45: To what extent do you agree or disagree with the following statements? Organic food is better for…(Spain)

4.1.1.7 The UK

The answers of the UK respondents to a strong degree resemble the other countries, however on average they have a lower score on all statements. Together with the Norwegian sample the UK respondents have the highest scores on don't know / no opinion which is in the range from 14 percent in the lower end (own health) to the relatively high score of 22 percent for health of farmer. 63 percent of the respondents agree/fully agree to the statement that organic food is better for the environment and 60 percent agree that it is better for biodiversity and soil health. 56 percent agree that organic food is better for animal welfare. Least supported by the UK respondents are taste and quality (47 percent) and health of farmer (48 percent).

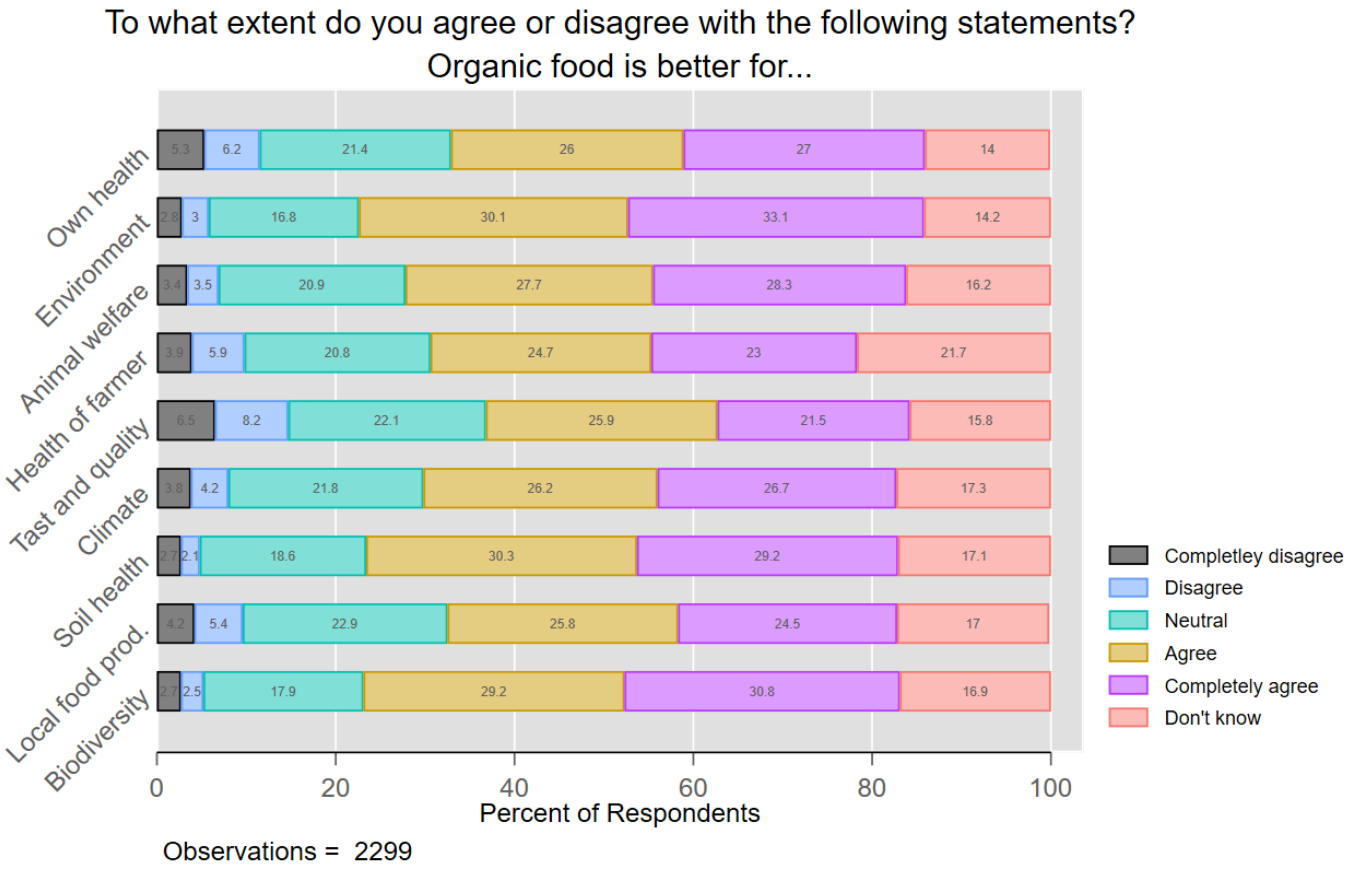

Figure 46: To what extent do you agree or disagree with the following statements? Organic food is better for…(UK)

4.1.1.8 Summary

Not surprisingly we found a general positive and strong support for organic food in all countries. This may be due to a bias towards "positive answering" by the participants. However, more interesting is the fact that we find great differences between the seven countries. The countries to north-west seem to follow another trend in consumers perceptions of organic food, than the rest of the European countries. Respondents in France and especially in Italy, Spain and Poland to a greater extent tend to agree and fully agree on the statements, than the Norwegian and to some extent the UK respondents that express a more moderate support to the statements.

Looking at single statements we find great variations between the countries. Especially, the statement about organic food and contribution to one's own and family's health significantly differ between the countries with as much as over 70 percent of respondents in Poland, Spain and Italy supporting this compared to the Norwegian respondents where only 37 percent agree/fully agree to the statement. Especially the Polish results accords with previous national studies (Zakowska-Biemans 2011; Bryla 2016). Food safety and nutritional issues have been more prominent in many European countries (Halkier et al, 2007; Kjærnes et al,. 2007) with a lower trust in food in general, and organic food might then to a greater extent be seen as a guarantee of safe food. While in Norway, a general trust in the national agriculture and a perception that there in general are little differences between organic and conventional food (Vittersø & Tangeland, 2015).

4.1.2 Negative statements

As for the positive statements, the respondents were asked to rank the different "negative" statements on organic food on a scale from 1-5 were 1 was completely disagree to 5 fully agree. In all seven statements were included in the questionnaire:

- Where I shop, I rarely find organic alternatives
- Organic food is too expensive
- I lack information about organically produced food
- I do not trust that products labelled as organic actually are produced according to organic standards
- I do not see the benefits of organically produced food
- Organically produced foods are of poor quality
- I do not think that organic standards are strict enough

Compared to the positive statements there were greater variations between the statements as to whether the respondents agreed or not (Figure 47). In the total sample 69 percent of the respondents agreed / fully agreed to the statement that organic food is too expensive. This was followed by the statements on lack of trust in the labels and lack of information with 42 percent. These findings are in line with previous studies on organic food (Hughner, McDonagh, Prothero, Shultz, & Stanton, 2007). 41 percent supported the statement that organic standards are not strict enough. However, as much as 17 percent answered don't know/no opinion on this issue. 30 percent saw availability of organic food as a barrier, while 29 percent did not see the benefits of organically produced food. 18 percent thought organic food were of poor quality and only 6 percent fully agreed to this statement which is contrary to findings in previous studies (Hughner et al., 2007).

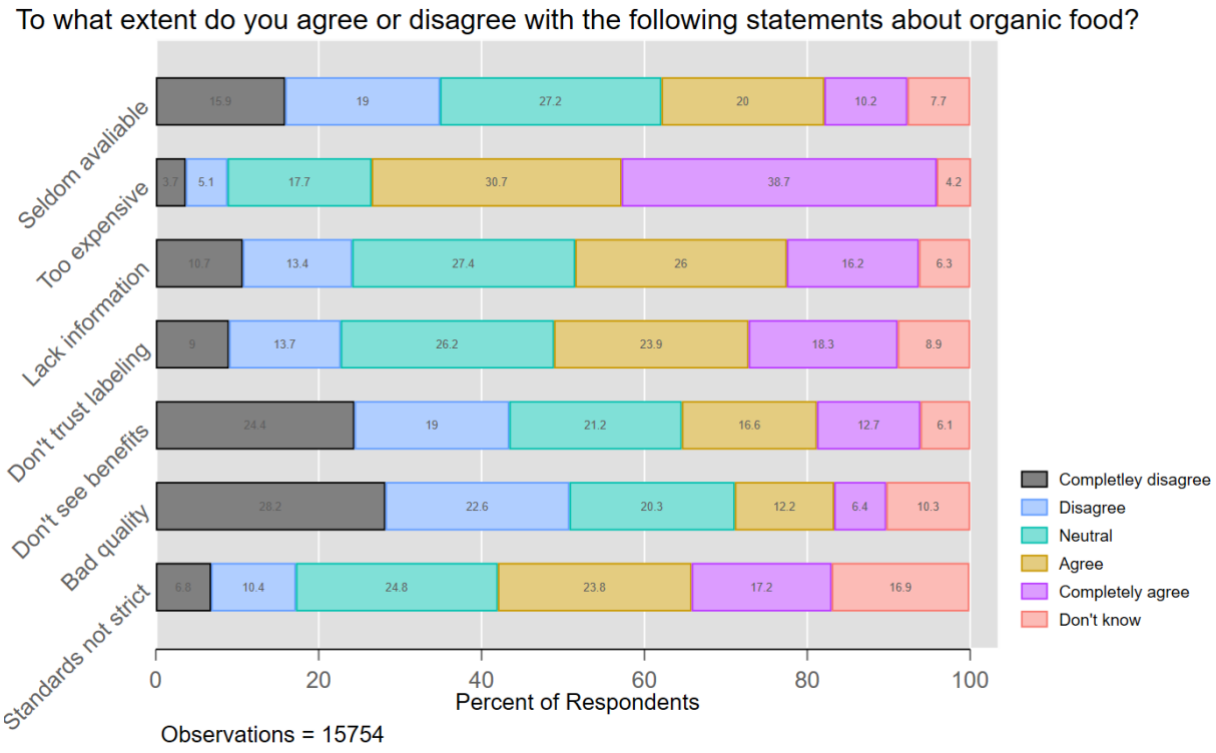

Figure 47: To what extent do you agree or disagree with the following statements? Total sample.

4.1.2.1 Norway

Price stood out as the main barrier in the Norwegian sample with 60 percent of the respondents agreed (agreed/fully agreed) to the statement that organic food is too expensive. However, this is significantly

lower than in the overall sample (69 percent). Only 17 percent supported the statement that organic food is of poor quality and 19 percent meant that they rarely find organic alternatives. 21 percent supported the statement that organic standards are not strict enough, however, as much as 40 percent answered don't know/no opinion to this statement. In general a relatively high share among the Norwegian respondents (from about 10 – 20 percent) have no opinion on either of the other six issues as well. This may be due to the fact that a large proportion of the Norwegian respondents state that they seldom or never buy organic food (Figure 48) in addition to the fact that it is demanding to ask ordinary consumers their opinion on a complex issue such as labelling standards.

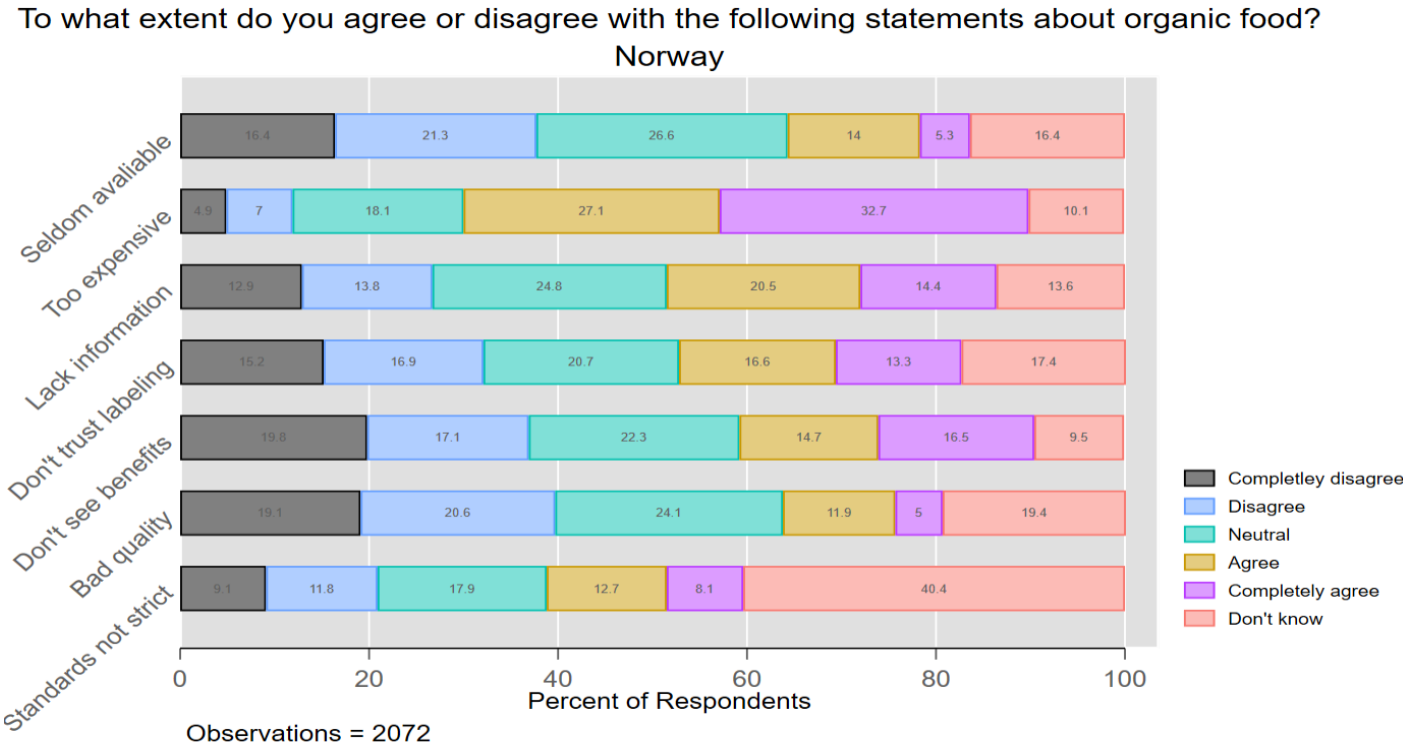

Figure 48: To what extent do you agree or disagree with the following statements? Norway.

4.1.2.2 France

Also among the French respondents price was seen as the main barrier and almost 74 percent agreed that organic food is too expensive. Contrary to the Norwegian sample 53 percent of the French consumers agree that organic standards are not strict enough. As much as 10 percent answered don't know / no opinion reflecting that this is a complex question. The suspicion to standards and labelling schemes were also underlined by the fact that 47 percent answered that they do not trust the organic labels while only 19 percent disagreed to the statement that they do not trust that products labelled as organic actually are produced according to organic standards As much as 55 percent of the French respondents disagreed (disagree/completely disagree) to the statement that organic food is of poor quality and 53 percent disagreed that they seldom see organic alternatives where they shop. Only 22 percent agreed to this statement. More than 30 percent agreed that they do not see any benefits with organic food, while 44 percent disagreed to this.

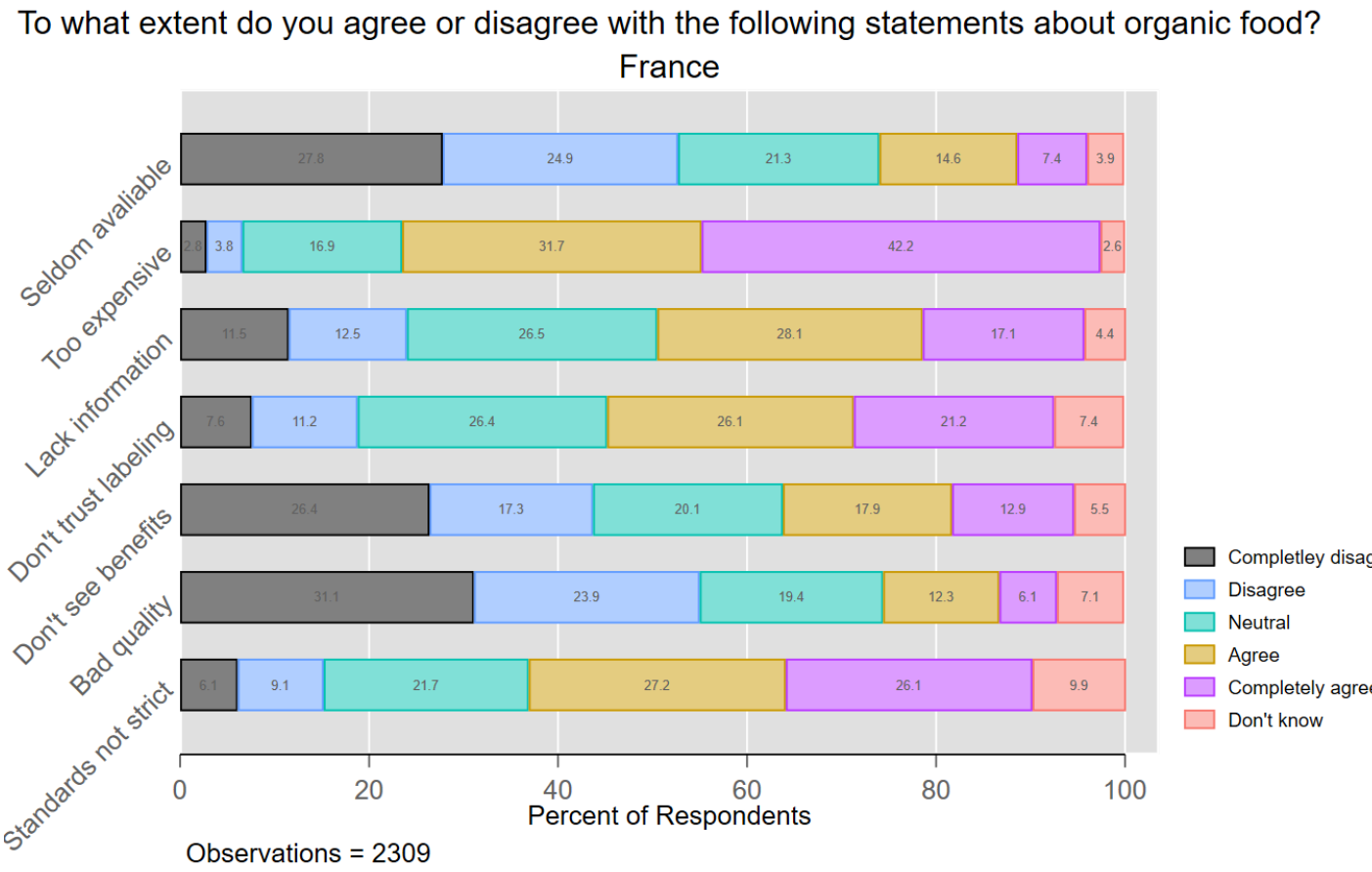

Figure 49: To what extent do you agree or disagree with the following statements? France.

4.1.2.3 Germany

Also the German respondents agreed that high price is the main barrier (62 percent) followed by trust in the organic standards (50 percent) and labels (48 percent). Disregarding the negative attitudes towards prices and the labelling system, organic food is valued positive on the other statements and especially German consumers do not support the statement that organic food has poor quality. 18 percent agree to this statement while as much as 55 percent disagree. Availability is not perceived as an important barrier with only 22 percent agreeing on that statement and as much as 52 percent of the respondents disagree.

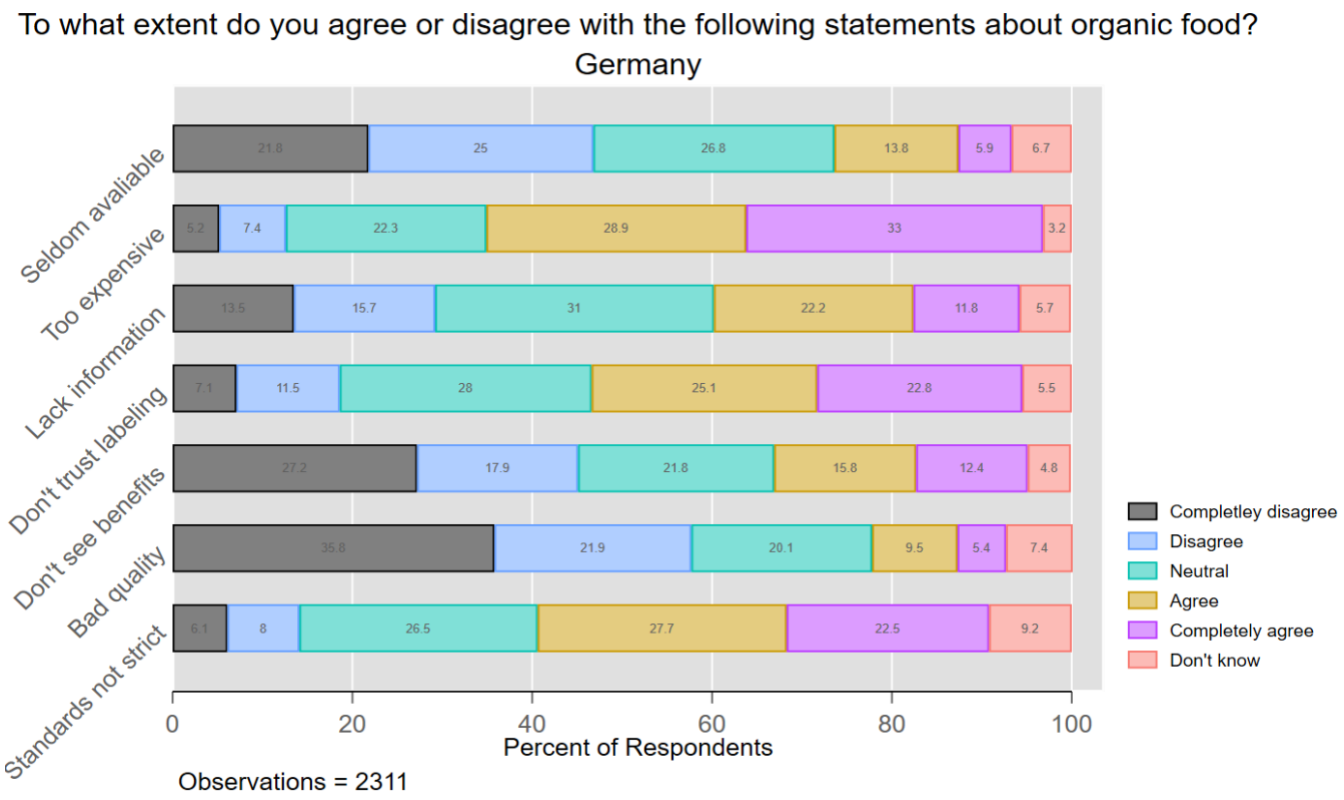

Figure 50: To what extent do you agree or disagree with the following statements? Germany.

4.1.2.4 Italy

Again price is found as the main barrier followed by the statements about organic standards (50 percent) and organic labels (48 percent). Only 15 percent agreed that organic food is of poor quality (57 percent disagree) and 31 percent stated that they rarely find organic alternatives. 28 percent stated that they do not see any benefits with organic food while 45 percent disagreed to this. In all this underline the impression of a positive attitude towards organic food among Italian consumers.

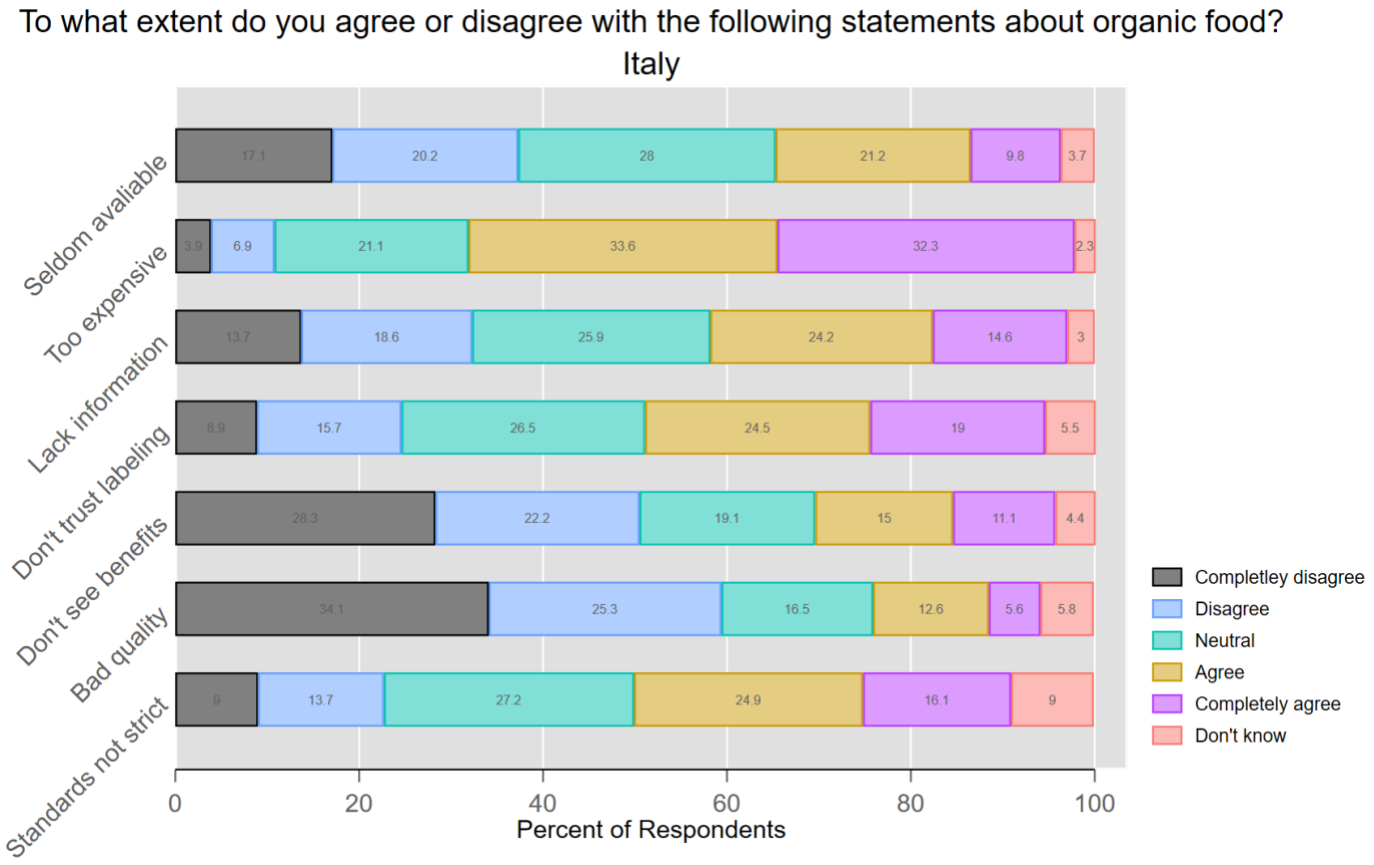

Figure 51: To what extent do you agree or disagree with the following statements? Italy.

4.1.2.5 Poland

Also in Poland most respondents agree that high price is a barrier (72 percent). Contrary to the other countries both lack of information (51 percent) and little availability (43 percent) were perceived as major barriers. Also critical to standards (43 percent) and distrust in labels (42 percent) scored relatively high. Relatively few agreed to the statements that organic food is of poor quality (23 percent) and has no benefits (24 percent). As much as 48 percent of the Polish respondents disagreed to this statement which reflect a similar positive attitude also found especially in several of the other countries.

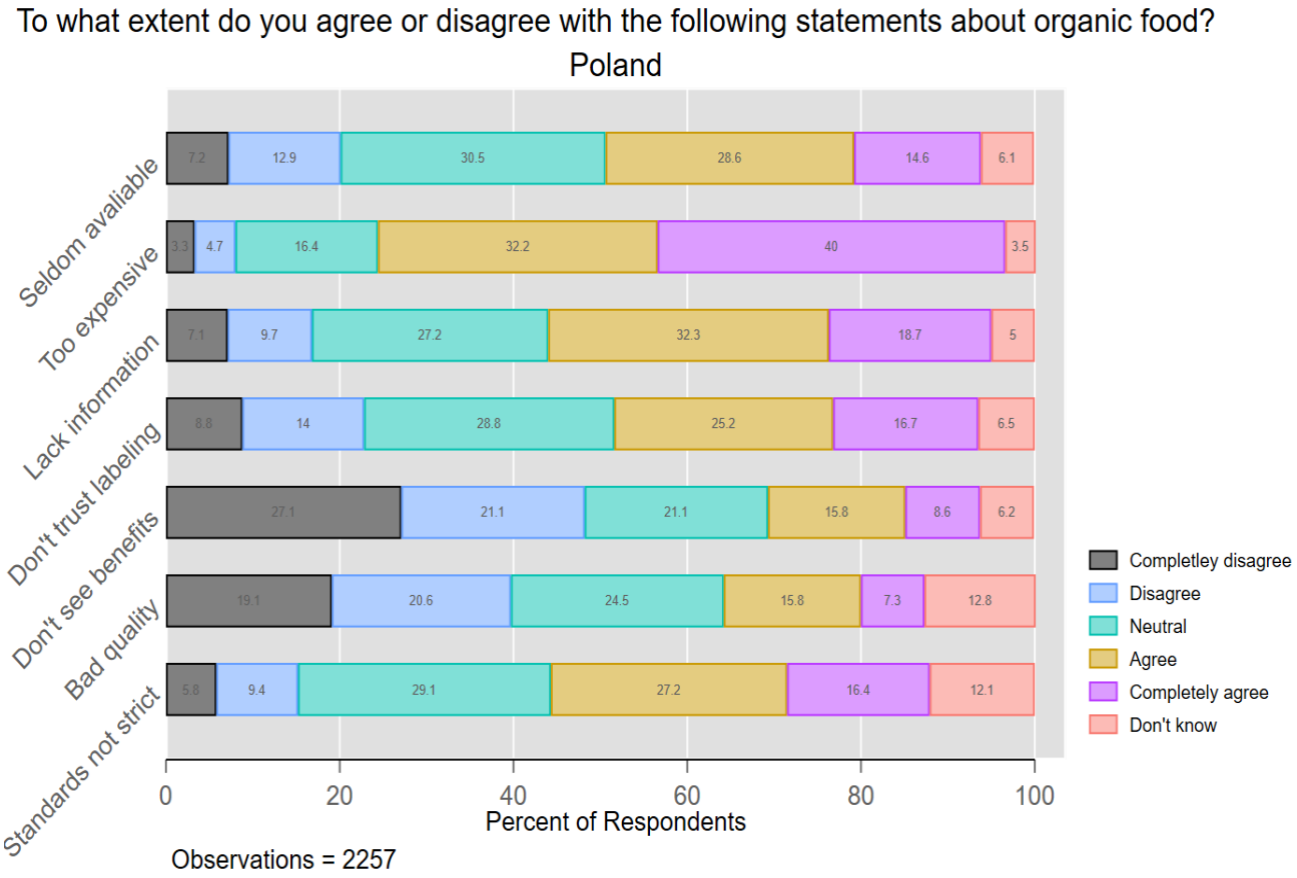

Figure 52: To what extent do you agree or disagree with the following statements? Poland

4.1.2.6 Spain

As much as 75 percent of the Spanish respondents state that organic food is too expensive. Distrust in the organic food labelling (46 percent) and scepticism about the strictness of organic standards (44 percent) also score relatively high. However, 13 percent did not have an opinion on organic standards. A significant share of the respondents also express that they lack information about organic food (44 percent) and more than one third (37 percent) say that they rarely see organic food were they shop. Statements about poor quality (15 percent) and no benefits of organic food got little support from the Spanish respondents.

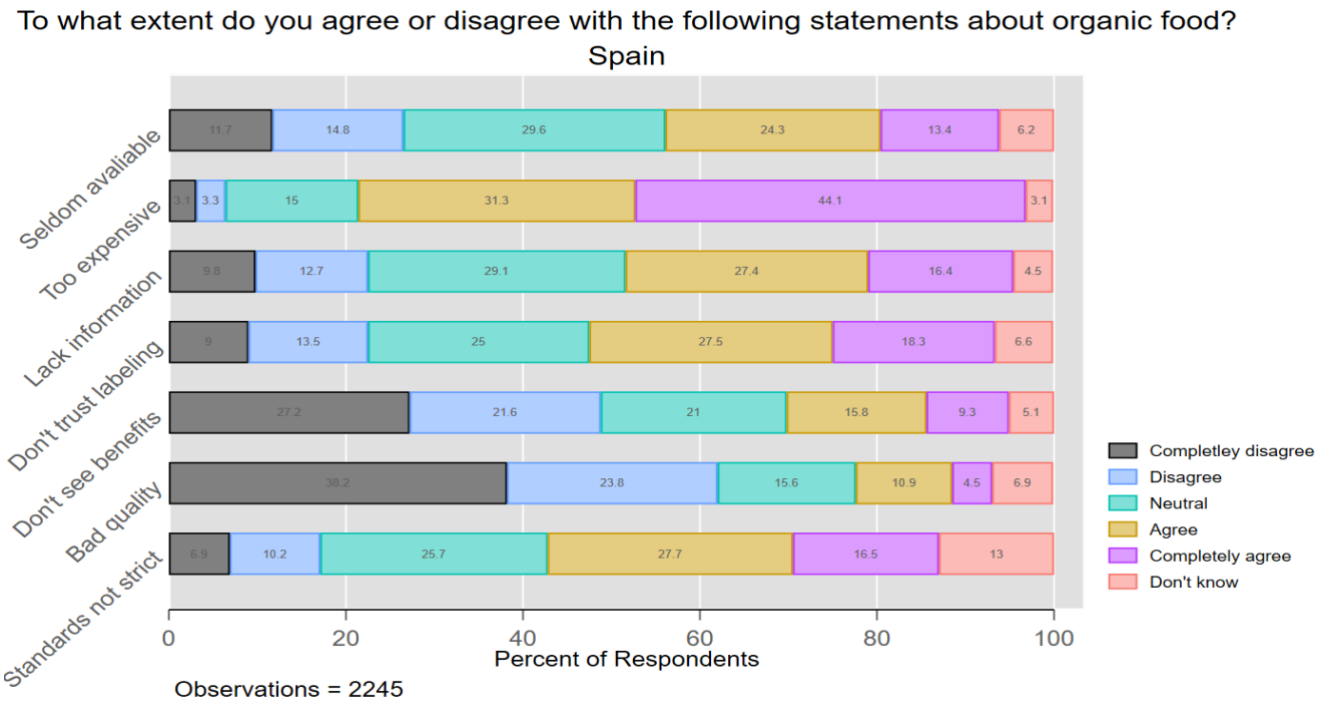

Figure 53: To what extent do you agree or disagree with the following statements? Spain

4.1.2.7 The UK

As for all countries also the UK respondents most strongly agree to price of organic food as the main barrier (75 percent). Lack of information is rated as the second most important barrier (47 percent). A relatively high share (39 percent) express that they don't see any benefits from buying organic food, while 31 percent disagree to this. 38 percent answer that they do not trust the organic labels while 32 percent think that the standards are not strict enough. Here as much as 27 percent answer don't know/no opinion which may reflect that a large share seldom by organic food or they find the issue too complex to give an answer. More than one in four (28 percent) say that they rarely see organic alternatives where they shop. As for the other countries, poor quality is not seen as barrier to most respondents. 22 percent agree that organic foods are of poor quality, 41 percent disagree to this while 14 percent answer don't know/no opinion.

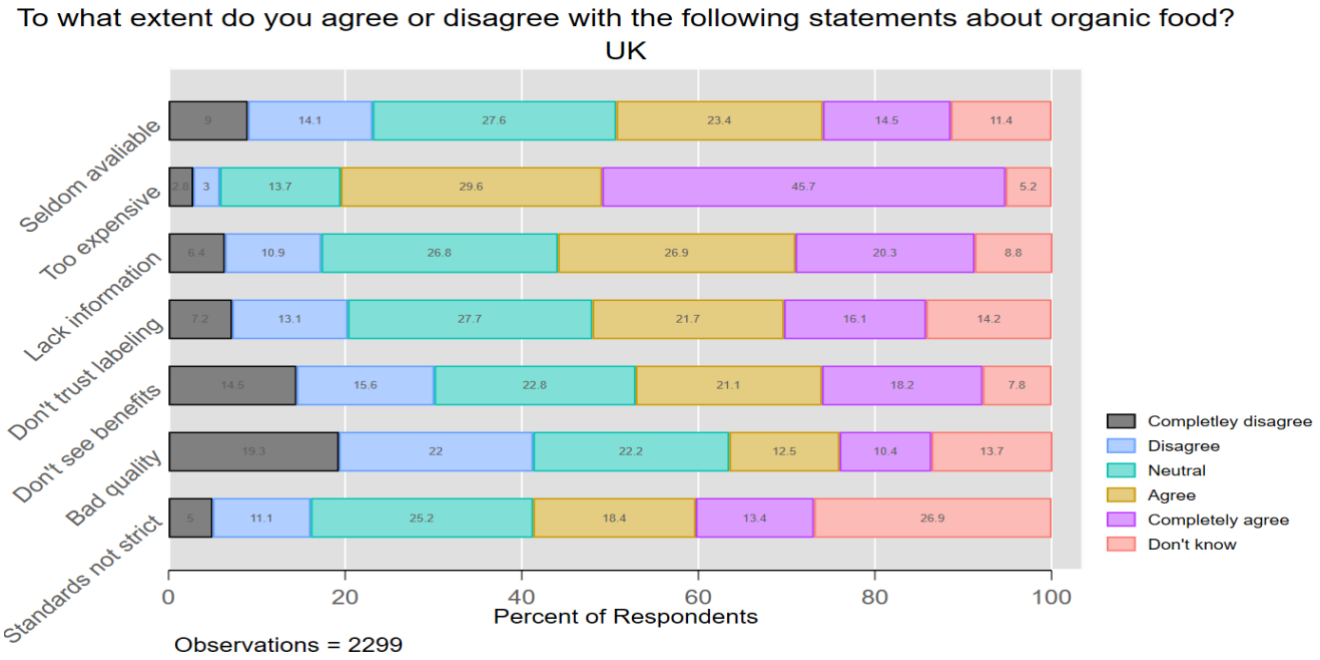

Figure 54: To what extent do you agree or disagree with the following statements? UK.

4.1.2.8 Summary

Price is perceived as the most important barrier in all the participating countries. This is not surprising taking into account that consumers in general are conscious about the price on food products. Organic food is normally more expensive than they conventional counterparts. Trust in the labelling of organic food and scepticism towards the organic food standards stand out as important barriers in many countries, and especially expressed by respondents in southern European countries and Poland. This accords with previous studies (Hartmann et al., 2018). The variation in trust that we observe between north and south is also found in previous studies (Halkier et al., 2007; Kjærnes et al., 2007). Halkier et al., for instance, found that southern European countries were marked by a contestation between food system actors on responsibilities on issues such as food safety and nutrition and this will be further discussed in section 4.3. The findings are also in line with a recent study on food labelling by Hartman et al., (Hartmann et al., 2018) pointing to a general distrust in the labelling, as well as a study by Vittersø et al. 2019 (Vittersø et al., 2019) that found that among conscious consumers (especially in France and Italy) a distrust in EU organic label acted as one of the motives for participating in short food supply chain initiatives.

We do not find any support for the statement that organic foods are of poor quality. On the contrary relatively high shares in all countries either disagree or completely disagree to this statement. Especially, in southern European countries, but also in Germany

4.2 SOURCES OF INFORMATION

Labels are seen as an important (political) measure to distinguish organic food products in the market and as such a source of information for the consumer. However, as discussed in section 3.4 organic food labels are to a varying degree used and recognised by European consumers. It is, thus, important to map other sources of information that consumers use in order to discuss different ways and channels for communication and information.

In the survey we asked the following question: *Considering the following sources of information about food, which of them do you usually use? Mark up to three most important*. The options were:

- Personal information from producers / farmers and growers
- TV and newspaper (paper or online)
- Information on the product such as ingredients and best before date
- Friends and family
- Information on the product such as labels and logos
- Advertisements /commercials
- Information from staff in the shop
- Websites on specific issues
- Other sources
- No special sources
- Don't know

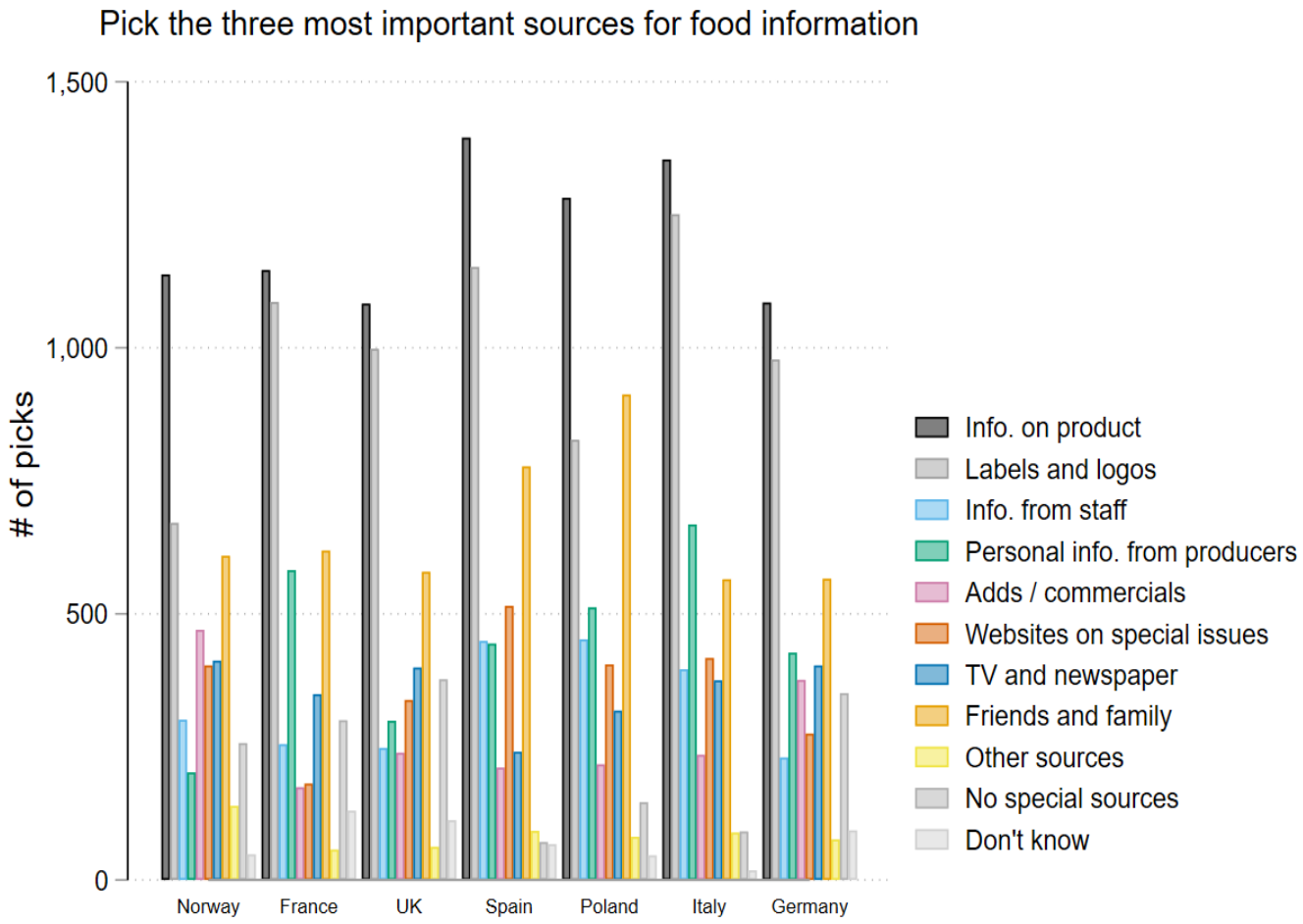

Figure 55: Considering the following sources of information about food, which of them do you usually use? Mark up to three most important.

The figure shows that the most important source of information is the product itself, meaning what is displayed on the packaging on the product. Second most important is labels and logos, thus, consumers seem to a great extent to rely on the impersonal communication via information on the products. Further the more personal communication within the close network of family and friends as well as direct from producers are valued as important. Here the Italian and French and to some extent the Polish respondents use direct communication with producers, while family and friends are particularly important in Poland and Spain. Advertisements and commercials are not widely viewed as important, except from Norway. Information from the staff in the retail store is more important in Poland, Spain and Italy than in the other countries. This may have to do with difference in retail structure with a more concentrated retail structure in the north-western countries round super- and hypermarkets, suggesting that the communication with the staff is less here than in smaller, local retail outlets.

4.3 TRUST

Consumers' perceptions of trust related to organic food products, may relate to the way these food products are provisioned, as well as the organic production methods as such. Such associations between ways of food provisioning and perceptions of organic food products are described in previous comparative European studies, e.g. Vittersø et al. (2019). Furthermore, general levels of trust in public authorities and market actors in different countries and regions have an influence on consumer perceptions of trust related to food (Kjærnes et al. 2007).

It is common when considering trust relations to distinguish between relations based on personal interaction and trust in impersonal organisation or systems. Trust based on networks and personal relations is often called 'familiarity', while impersonal and generalized trust in institutionalized procedures or systems is called 'confidence' (Kjærnes et al. 2007). In a previous comparative European study, Kjærnes et al. (2007) describe how different types of trust have manifested themselves within distinctive national configurations. They found associations between trust in food and general levels of trust in public authorities and market actors, and described various types of triangular relations between food system actors and that these levels of trust differ distinctly between European countries (Kjærnes et al. 2007). Norway was characterised by high levels of stability and trust in other people and political institutions. The strong belief in the safety of Norwegian food was found to be largely a matter of generalised confidence where public authorities are trusted to manage and regulate corporate actors in whom consumers have much more limited faith. In Italy, trust as familiarity was prominent – i.e. a strong reliance on networks and personal relations. Considerable dislocation and disruption of its traditional provisioning system, conflict between European, national and regional state authorities, and consumers torn between alternative lifestyles of tradition and modernity were found to characterise Italy (Kjærnes et al. 2007) (p. 182).

In the Strength2Food study reported in Vittersø et al. (2019), impact of different organisational models in various short food supply chains on consumers' perceptions of trust is discussed.

One observation made in that study was that although the scores on trust were high for all cases, those in the lower end of the scale included more market-types of cases, while the cases organised as cooperatives, solidarity groups and box-schemes were all in the high-end of the scores. These results could indicate that the cases in which there was a high degree of direct contact, solidarity and shared values (as e.g. involvement by membership, shared risk, participation in work tasks etc. could imply) relations of familiarity were more likely to be established. These traits seemed to be associated with the highest levels of trust. Although similar traits may also be present in the market-oriented cases, they may perhaps not be developed to the same extent (Vittersø et al. 2019, p. 14).

In the present survey, trust in different food system actors was explored with the following question: Imagining that there is a food scandal concerning salmonella in organic chicken in your country. Do you think that the following would tell you the whole truth, only tell part of the truth or would give misleading information?

Results shows that respondents tend to trust certain types of food system actors more than others, and that trust in various actors largely follows a similar pattern across participating countries:

Independent experts and consumer organisations achieved the highest scores, followed by public food authorities and organic labelling bodies, while politicians, supermarket chains and processing industry were the least trusted actors (Figure 56).

In terms of variations between countries, Norway stands out as the country where respondents have the highest levels of trust across all types of food system actors. This is in line with the previous findings by Kjærnes et al. (Kjærnes 2007). Spain, Italy, Poland, Germany and France all appear in the lower ranges of trust – with some variations with regard to specific actors. In UK, trust in supermarket chains is particularly high – almost at the same level as in Norway. This is also in line with previous findings and the prominent role of supermarkets in the organic food market in the UK, with special brands associated with accountability and good quality (ref?). In UK, trust in farmers' organisations, consumer organisations, public food authorities and independent experts is also quite high.

Contrary to UK, trust in supermarket chains is quite low in Poland. According to the survey conducted by Bryla et al. (2016), food safety considerations are among important motivations for Polish consumers for buying organic food, and they tend to perceive organic food as arousing more trust, being of better quality, being subject to more strict controls, and being produced in a more traditional way (Bryla 2016).

The presence – or lack of - regional identity with regard to food quality and provenance, with related regionally based labels used on organic food, may have had a bearing on the results regarding trust. Italy, Spain and Germany are among the surveyed countries with strong regional identities, which could imply that a larger share of organic consumers relate more directly to locally based actors. It can be useful to distinguish between dis-embedded and embedded trust regimes (Sassatelli, 2001); the former being more predominant in freer markets, and the latter a resource which can be mobilised in contexts where remnants of 'traditional' agricultural production and supply can still be found (such as in Italy and Poland). The building of more direct, embedded relations of trust may thus be more relevant than for instance the use of more generic organic food labels.

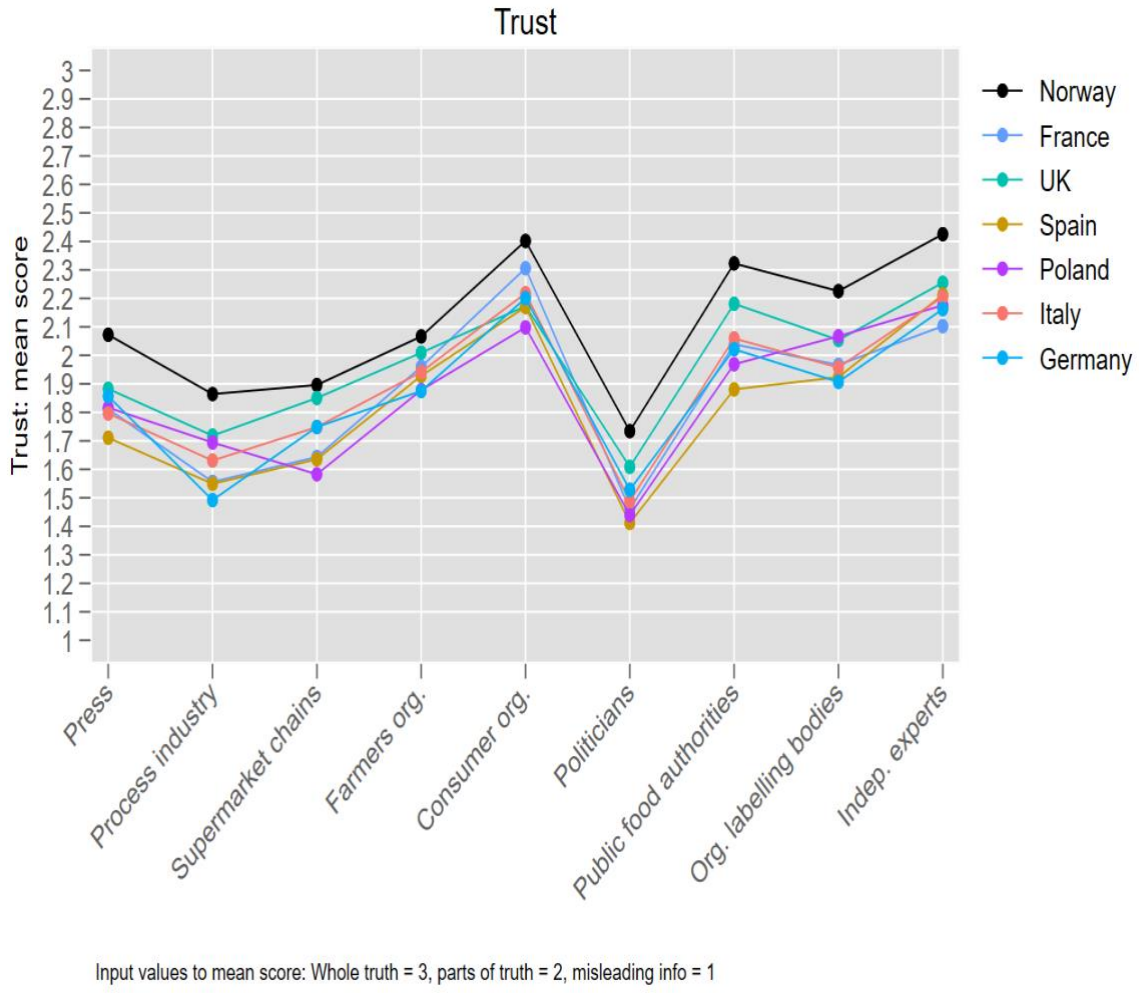

Figure 56: Imagining that there is a food scandal concerning salmonella in [u]organic chicken[/u]. Do you think that the following would tell you the whole truth, only tell part of the truth or would give misleading information?

5 CONTENTIOUS INPUTS

One main aim of the Organic-PLUS project is to provide specific technical solutions to minimise or phase-out contentious inputs in organic agriculture. These include alternatives to copper and mineral oils for plant protection, alternatives to synthetic vitamins, pro-vitamins and antibiotics in animal husbandry and the replacement of straw and manure from non-organic farms. The project also looks at production methods free of any input from animal sources to provide vegan organic foods, as well as alternatives to peat growing media and plastic mulches in organic horticulture.

However, the Organic-PLUS project also aim at examining other important sustainability issues including issues high on the political agenda as well as focused in the general public discourse. Thus, in the survey we have included a wider range of sustainability issues in order to measure consumers' awareness of sustainability in (organic) food production beyond the main inputs focused in the project. These additional issues include the use of fossil fuel (carbon footprint), transportation (food miles), plastic packaging, small-scale production, as well as seasonal and local sourcing of food and feed.

5.1 CONTENTIOUS INPUTS IN ORDER OF IMPORTANCE

In the survey we asked the respondents to consider the importance of in all 14 different contentious inputs. The question were accompanied by a text asking the respondents to consider different inputs and means of production in order to make organic farming more sustainable

The respondents were given the following text and asked to rank a series of statements on a scale from not important, some importance to very important: "*Organic food is produced according to high environmental and animal welfare standards. However, there may be room for stricter regulations of certain inputs and means of production in order to make organic farming more sustainable. Do you have any opinion on the importance of the following considerations in order to improve organic food production?":*

- *Avoid using mineral oils (paraffin) in plant protection (avoid mineral oil).*
- *Do not allow the use of straw from non-organic farms as bedding materials (avoid non-organic straw)*
- *Reduce the transport distance of food (reduce transportation)*
- *Avoid plastic food packaging (avoid plastic packaging)*
- *Reduce the use of antibiotics in animal husbandry (reduced antibiotics)*
- *No synthetic vitamins should be added to the feed (no synthetic vitamins)*
- *Organic products should be seasonal (organic food seasonal)*
- *Provide vegan organic foods, free of any input from animal sources (Provide vegan organic food)*
- *All animal feed should be locally sourced (Animal feed locally sourced)*
- *Organic farms should be small scale (Organic farms -> small)*
- *Avoid using peat as a growing media for plants (e.g. in glasshouse production) (avoid peat)*
- *Avoid using plastic during growing (e.g. as cover to reduce weeds) (avoid plastic (production))*
- *Avoid using copper fungicides in plant protection (avoid copper)*
- *Reduce the use of fossil fuels during production (Reduce fossil fuel)*

For the respondents to rank the different issues is a challenging task because we must assume that most people have limited knowledge of organic food production. However, we believe that the results may be seen as an indicator on consumer awareness and that their priorities regarding sustainability issues must be interpreted in the light of the common discourse in the respective countries on sustainable (and healthy) food production and consumption. From the results above we have seen that there are great differences between European countries in the extent consumers consume organic food, how they value and trust organic food and different food system actors. We also anticipate that the answers will reflect the respondents experience with organic food, such that frequent organic users are more engaged in issues regarding organic food production and finally.

In the analyses we have divided the data material in two groups. One group consists of frequent organic consumers, that is those who answered that they eat organic food more than four times a week (see section 3.1). We may assume that these respondents are more dedicated to organic food and have a greater experience and knowledge of organic food production.

In Figure 57 the issues are ranked from high to low in mean importance in all countries. Mean score is bounded between 0 and 2. To the right in the figure we find the percentage of respondents who answered no opinion / don't know.

Figure 57 shows that reduction in the use of antibiotics is the main concern among the respondents followed by plastic packaging and copper. Besides reduction in antibiotics several of the other inputs that are focused in the Organic-PLUS project are highly prioritized by the respondents such as to avoid copper and mineral oils as well as no use of synthetic vitamins. Other "Organic-PLUS inputs" such as avoid plastic in production, avoid peat as growth medium, provide organic vegan foods and avoid non-organic straw were placed lower on the list by the European respondents.

Next after reduction of antibiotic, avoid the use of plastic packaging was found as most important by the respondents. Reduce transportation, seasonal organic food and reduction in the use of fossil fuel were ranked in the middle while local sourcing of feed (ranked no 10) and small scale production (ranked no 13) were in the lower end of the scale.

There is a significant difference between the frequent organic consumers and the other respondents on several of the issues. Over all the frequent organic consumers prioritise all issues more than other respondents. Strongest agreement is among inputs that are ranked as the most important such as reduce antibiotics, avoid copper and no synthetic vitamins. For less prioritized inputs such as avoid non-organic straw, avoid peat, organic feed should be locally sourced and provide vegan organic foods, the differences between the two groups are larger.

To several of the statements a significant share of the respondents answered either 'No opinion' or 'Don't know'. This may reflect the initial assumption that there are little knowledge and awareness among consumers on these issues. Due to the complexity of these issues we cannot expect consumers to have a clear view on all these claims. The figure shows that the inputs that were ranked lowest have the highest scores on "No opinion / Don't know". This may reflect that there are little awareness on issues such as the use of peat and non-organic straw as well as provide vegan organic foods, free of any input from animal sources among European consumers. Also, a relatively high share of the respondents expressed no opinion / don't know to the statement that organic farms should be small scale.

Frequent organic consumers to a lesser extent answer "no opinion / don't know' on all statements indicating that this group may has more experience and, thus, is more aware of issues related to organic food production.

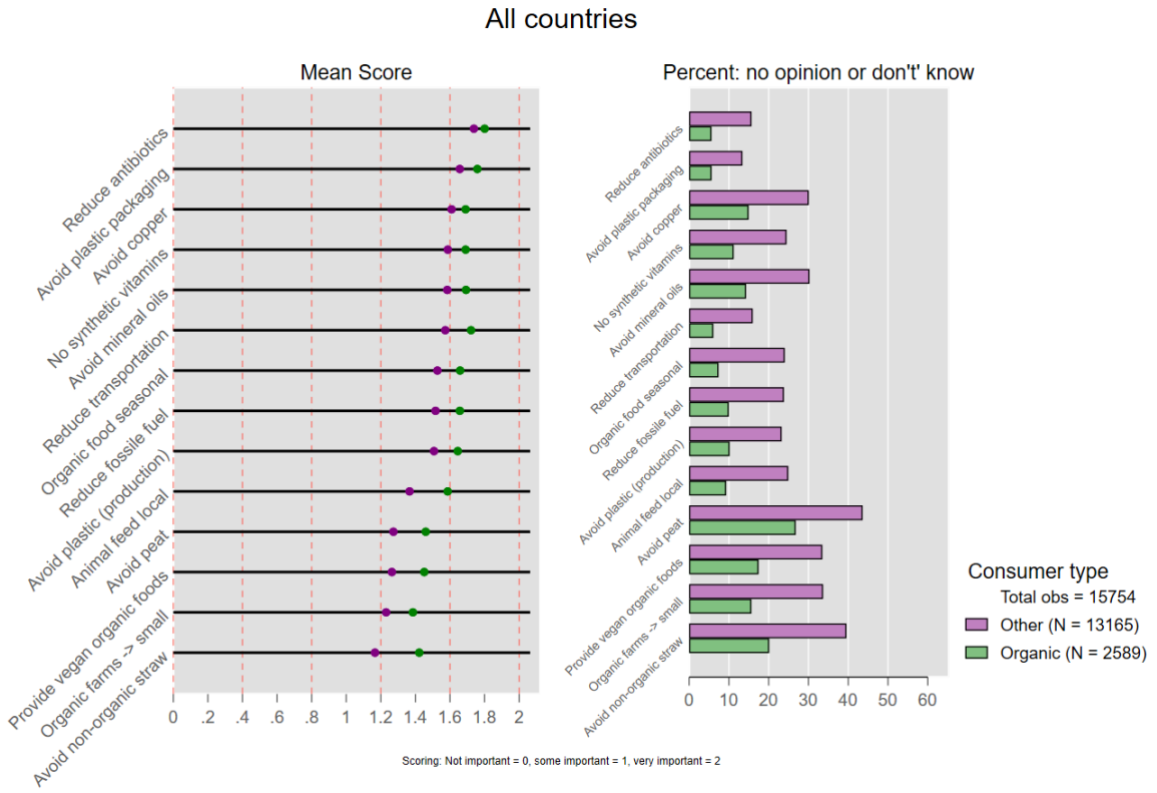

Figure 57: Improve organic food production - all countries

5.1.1 Contentious inputs in each country

To reduce antibiotics is highest ranked in all countries except Spain and UK (see Figures 58 – 64). In these countries avoid plastic packaging score highest. Avoid copper is ranked as the second most important input to phase out in Spain while this is less emphasised in Italy (ranked 8) and France (ranked 6). The statement "Organic food should be seasonal" is ranked second in both France and Italy, while this has an overall ranking as no. 7 and only no. 9 in Norway and UK. No synthetic vitamins is in fourth place in the overall ranking, while in Norway only ranked as no. 7 and no. 6 in Germany.

The Norwegian respondents differ from the other countries regarding average scores on most of the statements. Only four (five) statements scores more than 1.5 compared to nine for all countries in total. In the other end of the scale Norway also stand out as an exception from the other countries. Three of the statements have lower than 1.0 in average score, meaning that these issues are seen to have minor or no importance for improvement of organic production. In all of the other countries all statements score higher than 1.0.

As mentioned above a significant share of the respondents either answered "no opinion" or "don't know" on most of the statements. The Norwegian respondents, followed by the UK, to a greater extent than in the other countries, tended to refrain from giving their view on the different statements by either answering "don't know" or "no opinion". On four of the statements more than 50 percent of the Norwegian respondents answered "don't know"/"no opinion".[11] More generally it reflect that these

[11] «Avoid using copper fungicides in plant protection»; «Avoid using peat as a growing media for plants (e.g. in glasshouse production)», «Avoid non-organic straw as bedding material»; «Provide vegan organic foods, free of any input from animal sources (e.g. animal manure)»

issues are not very well known among consumers in Norway.[12] Copper is one of the contentious inputs with evident differences between countries. Almost 52 percent of the Norwegian respondents answered "don't know"/"no opinion" on this statement compared to 14 percent in Spain and France. While 66 percent of the Spanish respondents thought this was a very important issue, 31 percent in Norway thought the same. These differences may reflect that copper is hardly used in Norwegian (organic) agriculture, while this more commonly used as an input in Spanish organic agriculture, thus, also probably more widely discussed.

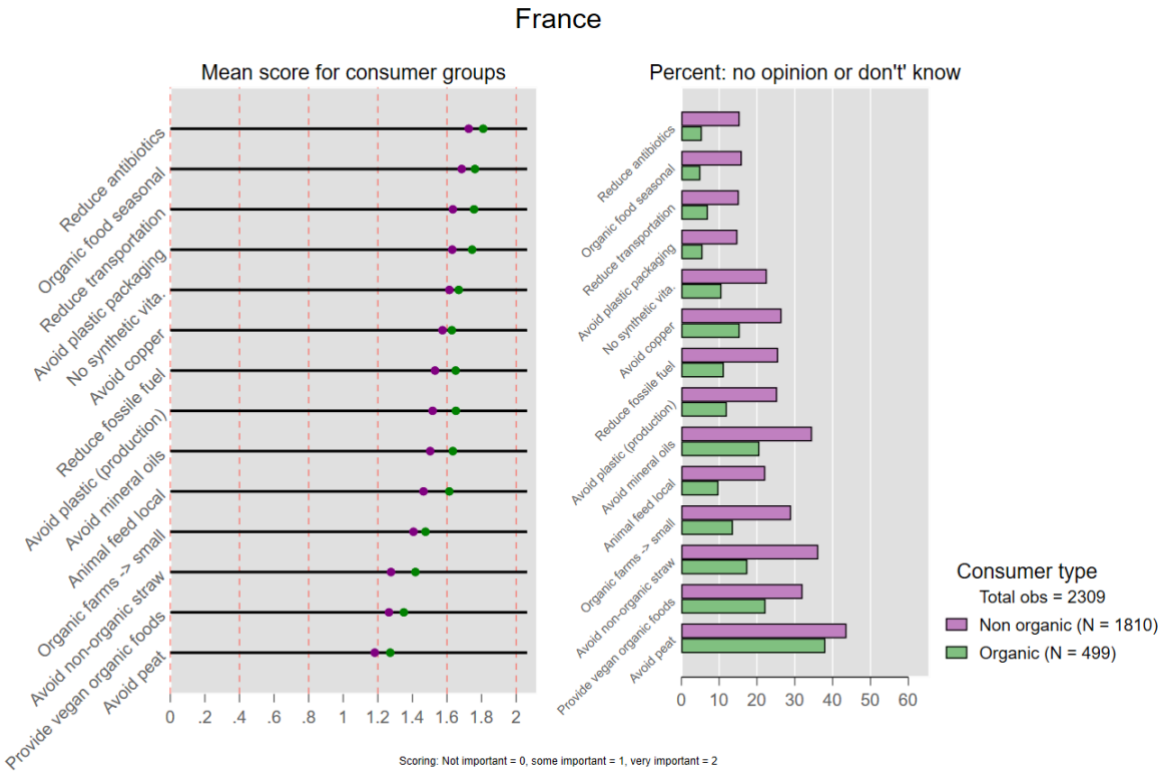

Figure 58: Improve organic food production - France

[12] These differences could be that "don't know" is a more widely used answering category in Norwegian surveys than in other countries

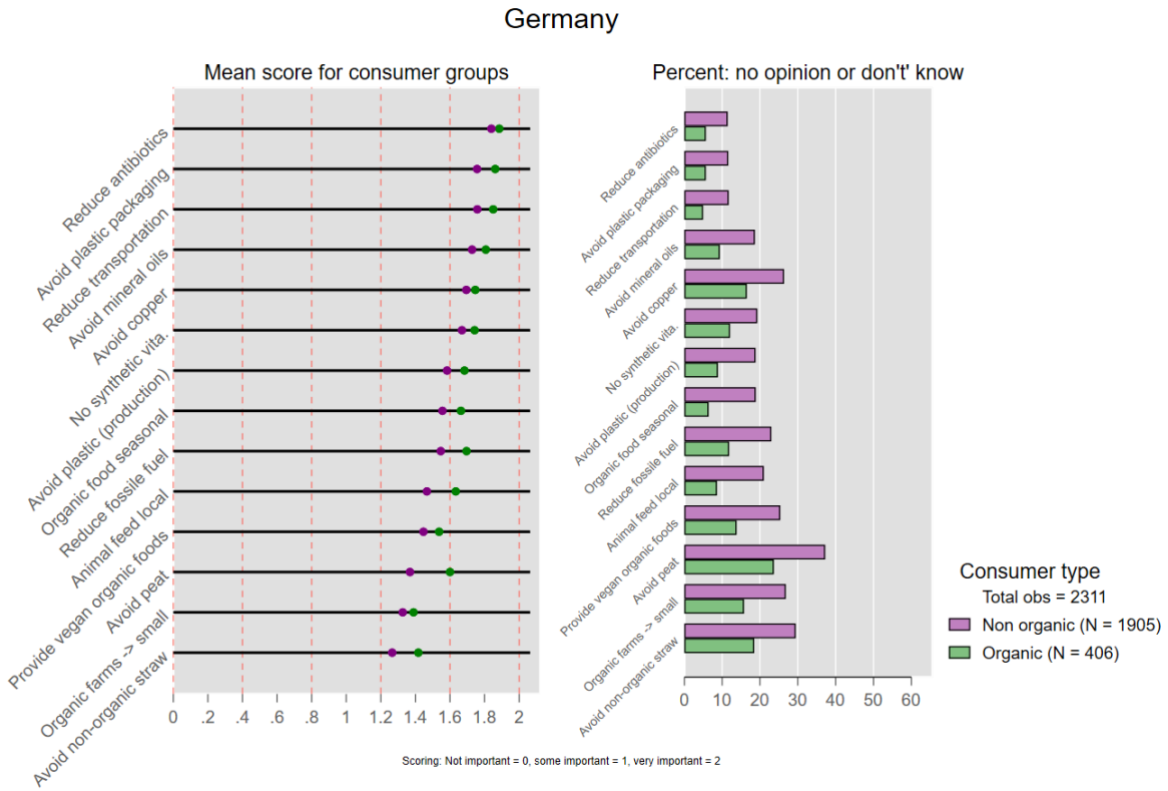

Figure 59: Improve organic food production - Germany

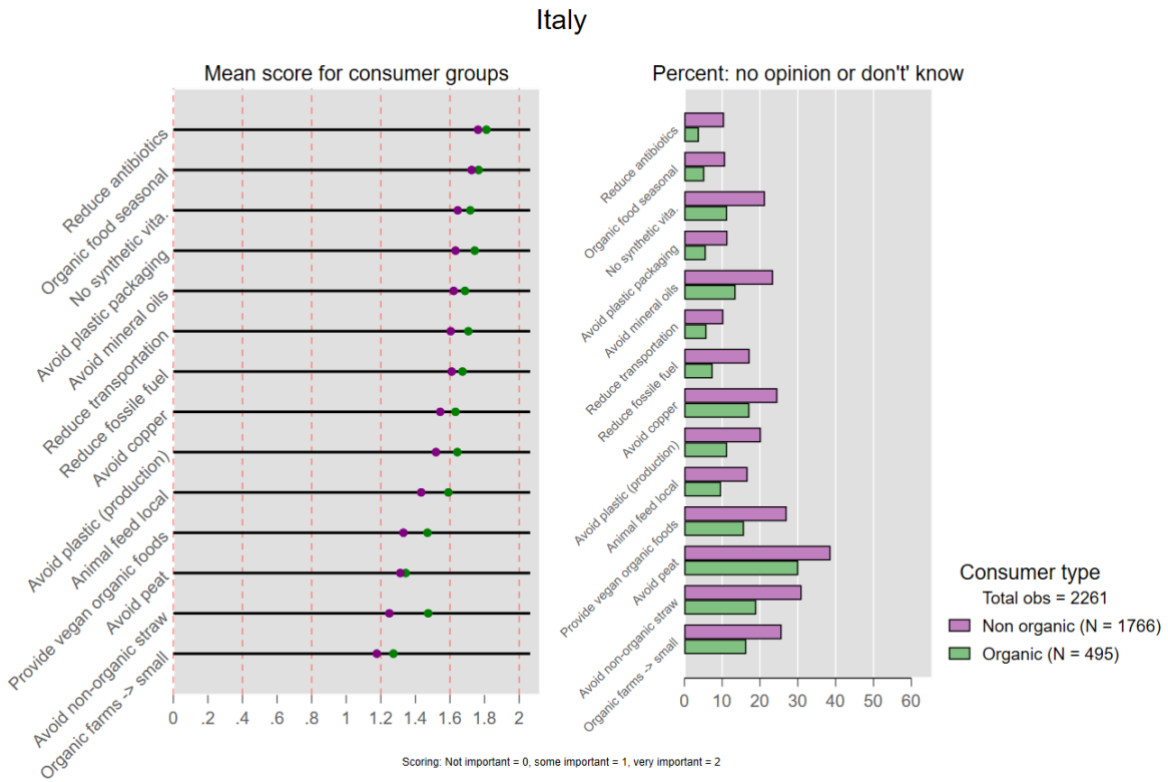

Figure 60: Improve organic food production - Italy

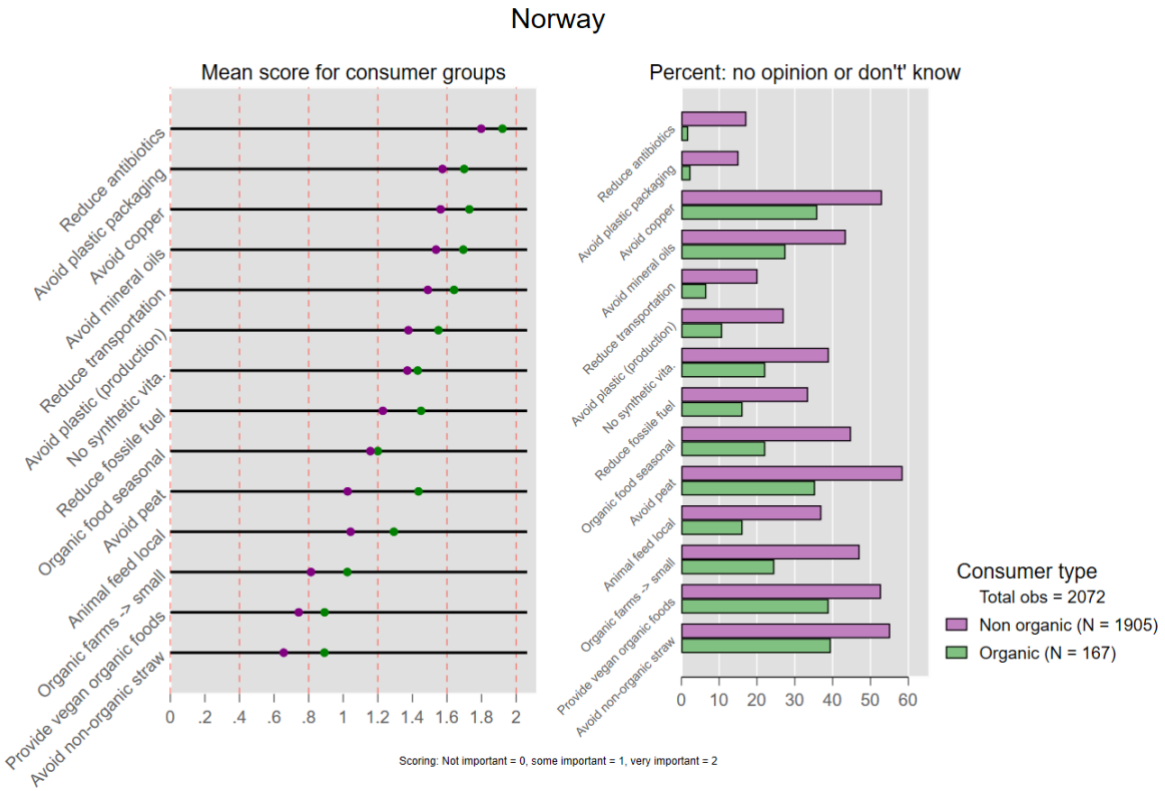

Figure 61: Improve organic food production - Norway

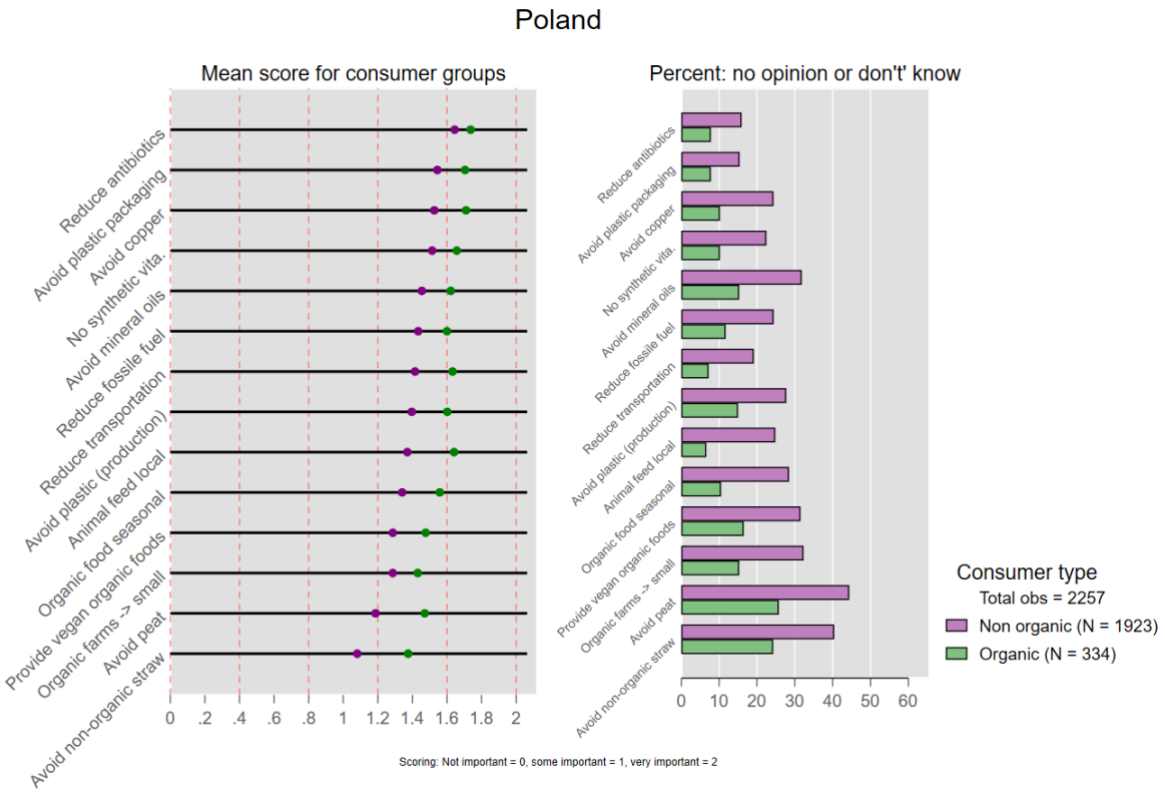

Figure 62: Improve organic food production - Poland

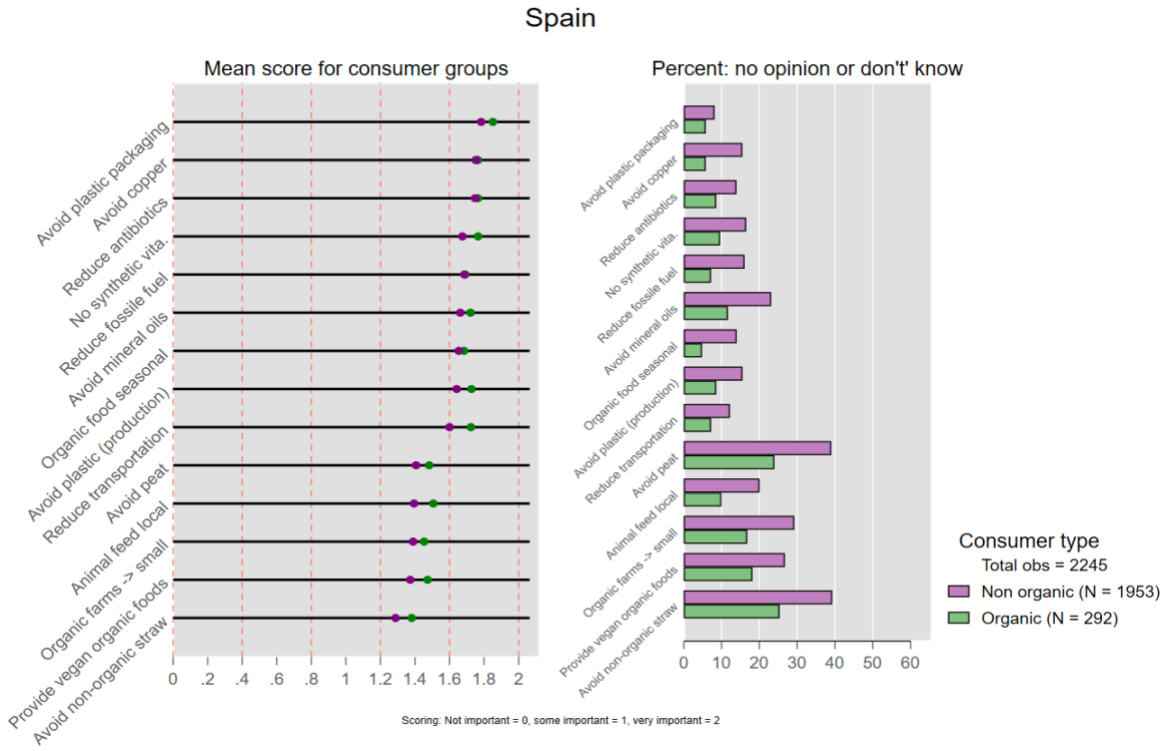

Figure 63: Improve organic food production – Spain

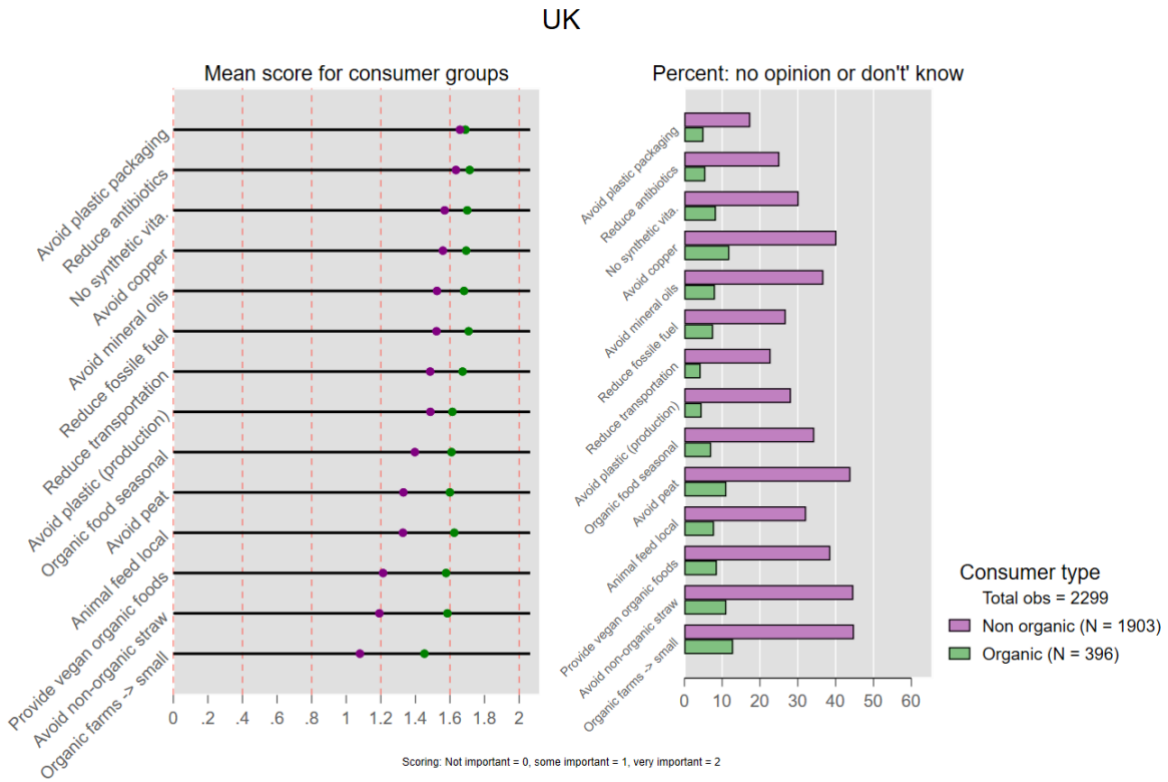

Figure 64: Improve organic food production - United Kingdom

5.1.2 The three most important issue

After considering the importance of different contentious inputs and other issues related to improvement of organic agriculture, the respondents were asked to choose the top three most important considerations from the list below.

- *Avoid using plastic during growing (e.g. as cover to reduce weeds)*
- *Avoid using copper fungicides in plant protection*
- *Avoid using mineral oils (paraffin) in plant protection*
- *Reduce the use of antibiotics in animal husbandry*
- *Do not allow the use of straw from non-organic farms as bedding materials*
- *Avoid using peat as a growing media for plants (e.g. in glasshouse production)*
- *Provide vegan organic foods, free of any input from animal sources (e.g. animal manure)*
- *No synthetic vitamins should be added to the feed*

This list was shorter than in the first round and contained only eight of the contentious inputs that are included in the Organic-PLUS project (Figure 65):

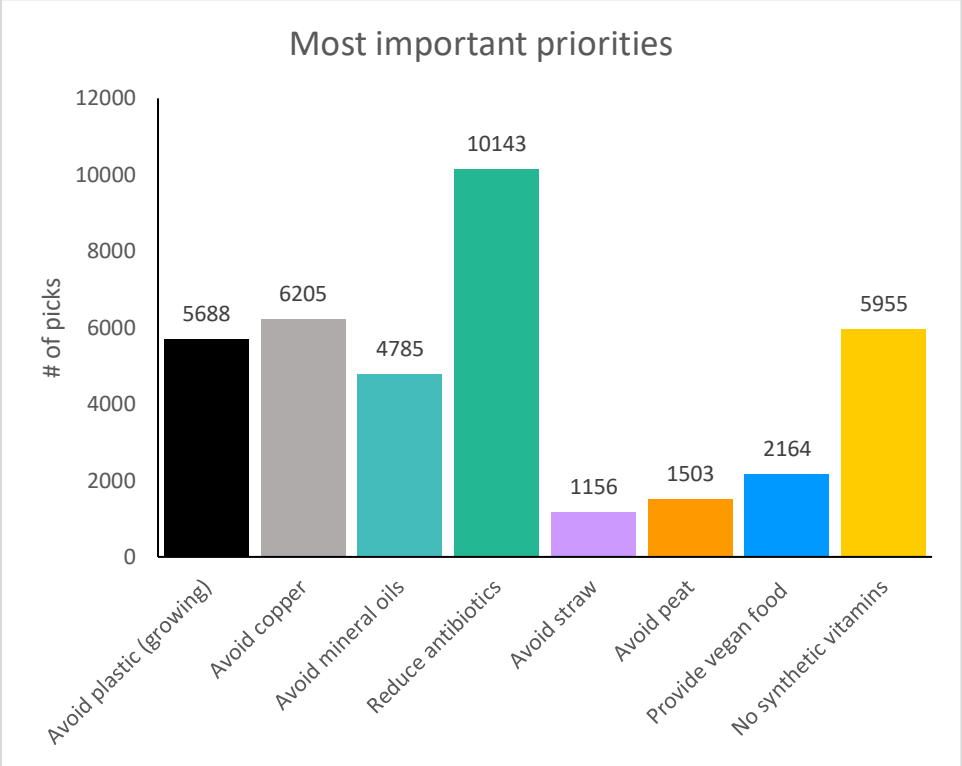

Figure 65: The most important considerations

Avoiding antibiotics is clearly the most important issue according to the survey respondents. Next after reduce antibiotics the respondents prioritise avoid using copper, no synthetic vitamins added to the feed and avoid plastic during growing. The least important is to avoid the use of straw from non-organic farms, followed by avoid using peat as a growing media and provide vegan food free of any inputs from animal sources.

5.1.2.1 The three most important contentious inputs by country

Figure 66 show that reduce the use of antibiotics is chosen as one of the three most important issues in all the seven countries. In Spain avoid using copper is almost as important and this is the second most important also in Poland. No synthetic vitamins in animal feed is second highest ranked in France and Italy and at a third place in Poland while in Norway this is only ranked fifth. Avoid plastic during growing

is ranked second in Norway and the UK. In the other countries this input is ranked at fourth and fifth place.

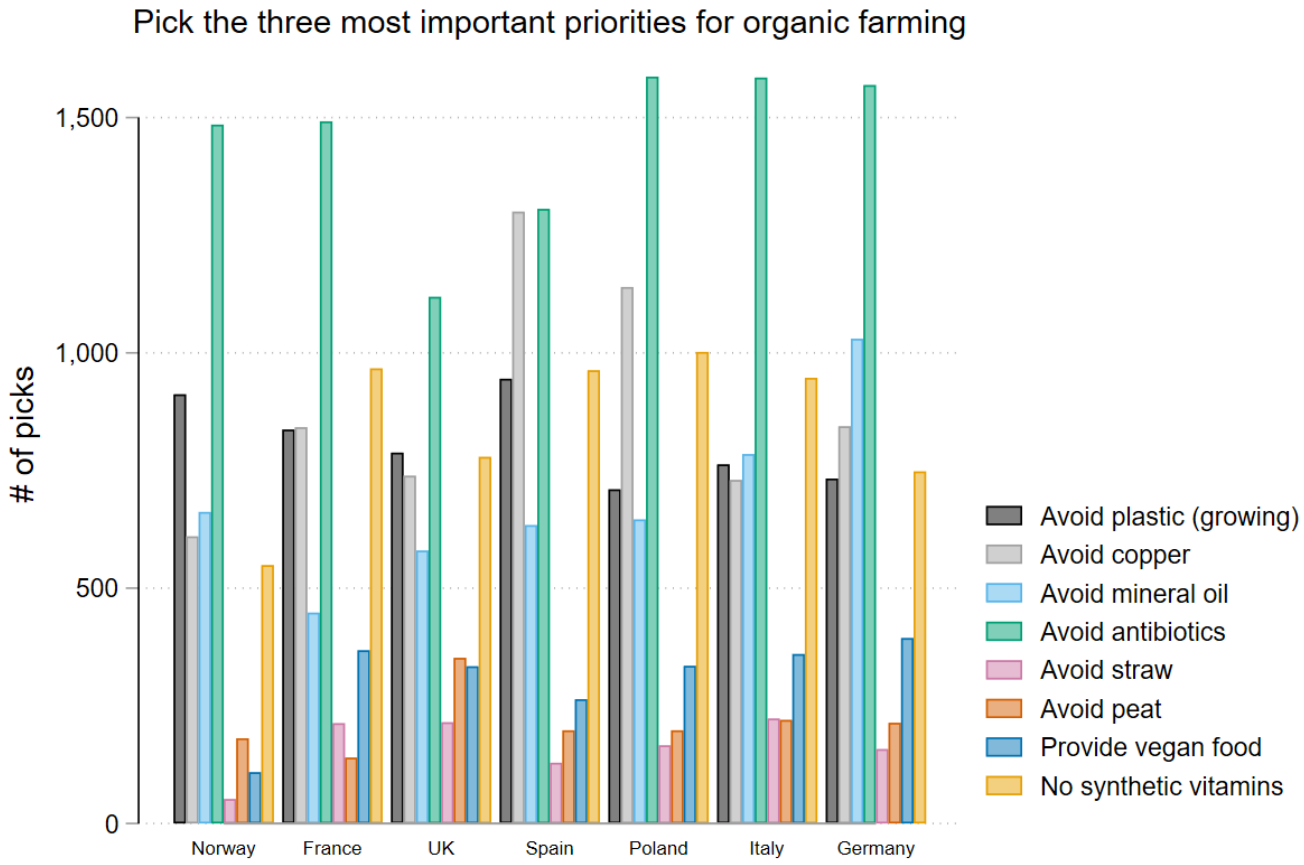

Figure 66: Three most important - by country

5.1.2.2 Summary

It is a clear ranking between contentious inputs that the respondents think is important to phase out and not. There is also a relatively high consensus between countries although with some variations. Of the eight contentious inputs in Organic-PLUS five stood out as more important than the others; antibiotics, copper, synthetic vitamins, plastic as cover, followed by avoid mineral oils. The three least important issues was avoiding conventional straw as bedding material, peat as a growing media and providing vegan food. Of the other six sustainability issues included in the survey (plastic packaging, transportation, seasonal organic food, local feed, small scale farming, fossil fuel) reduce plastic packaging and transportation as well as seasonal food and reduce fossil fuel was seen as important issues.

To reduce the use of antibiotics in animal husbandry is overall seen as the most important issues and scored highest in five out of seven countries. Some of the sustainability issues other than the contentious inputs focused in Organic-PLUS were also highly emphasised, and especially avoid plastic food packaging. This was highest ranked in both Spain and the UK. The results seem to reflect the environmental discourse with plastic pollution of the oceans high on the agenda, and in several countries measures are taken to reduce and phase out the use of plastic in many areas. Reduce the transportation of food as well as use of fossil fuels were seen as important which seem to reflect the general climate discourse. We also find some interesting variations between countries especially on the issue that organic food should be seasonal. Here there is a clearly division between countries such as France and Italy which rank this second highest next to antibiotics, while in countries such as the UK and Norway this issue is far lower on

the list. This mirror the findings that local and regional food is much more prominent in France and Italy than in northern European countries (see for instance the use of local labels (Table 12) and contact with local producers (Figure 55).

5.2 REGULATING ANTIBIOTICS, COPPER AND PLASTIC

In this section we go deeper into consumers' perceptions of how contentious inputs could be better regulated. We chose three inputs that we considered important; antibiotics, copper and plastic, and asked the respondents to consider how strong they believe that the regulations should be. Due to the complexity of these issues, an introductory text were given to each of the three inputs.

5.2.1 Antibiotics

Question about antibiotic use:
The overuse of antibiotics in both humans and animals is a problem. If health problems are detected in an animal, organic farmers mainly use alternatives to antibiotics such as phytotherapy, aromatherapy and homeopathy. However, when these treatments do not work, farmers can use antibiotics, b. Considering these issues, should organic farming: Ban antibiotics, allow use, but stricter regulated than today, continue with the same use as today, relax the regulations around antibiotics.

Figure 67 shows that in all countries the respondents favour that it should be stricter regulations than today, with as much as nearly 60 percent in Spain and Norway and 45 percent in Germany at the lower end. It is also some support for banning the use of antibiotics, especially in Poland (40 percent), Italy (33 percent), Germany (32 percent) and France (29 percent). In Norway banning was only supported by 6 percent of the respondents followed by the UK (17 percent) and Spain (22 percent). Interestingly, the Norwegians score highest on those who would allow the same use as today (20 percent) followed by the UK (17 percent), while in Poland and Italy only 6 percent would allow this. We are cautious to interpret these results, however, from section 5.1 we saw that Norwegian respondent to a much greater extent than the other European countries trusted the food system actors including the public authorities and organic labelling bodies. The figure also show that relatively high share answer don't know and most prominently in the UK (18 percent) followed by Norway and France (both 13 percent). This again reflect that these questions are complex and demand insight to issues that many consumers have little knowledge about.

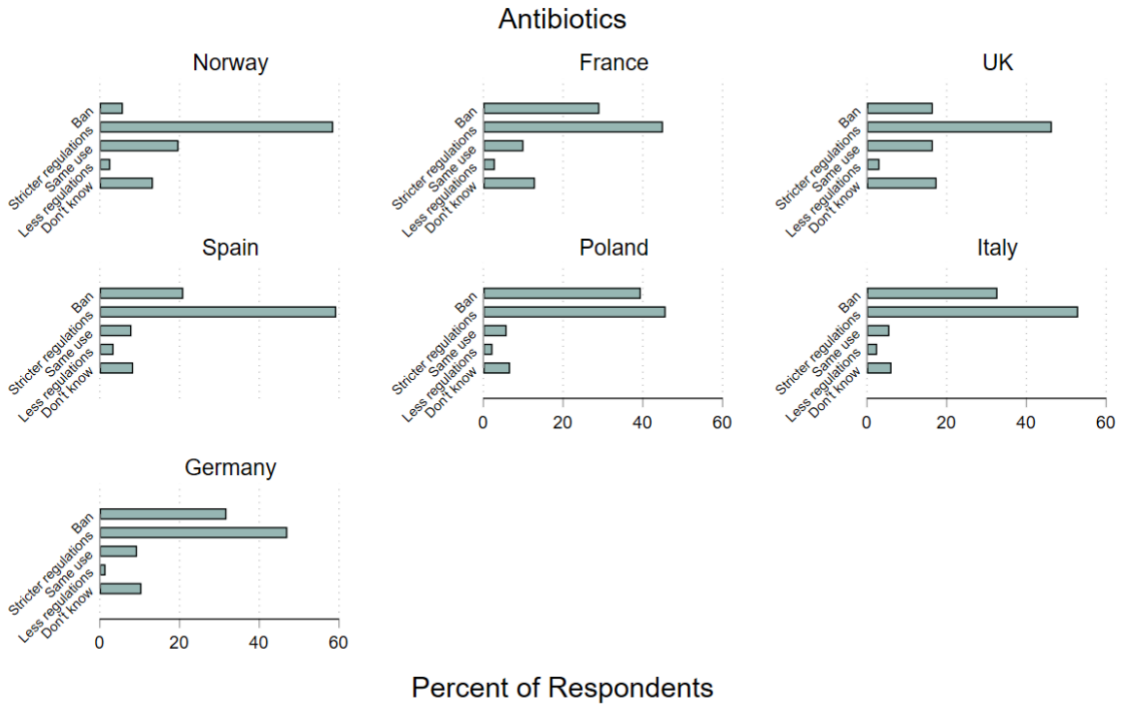

Figure 67: Regulation of antibiotics by country.

5.2.2 Copper

Question about copper use:
Copper is a natural element. In high concentrations it can be toxic for life in water and soil. Copper is used in limited quantity in organic farming to control fungal diseases such as downy mildew in potatoes and fruit. There are alternative methods to control fungal diseases, but they are less effective. Considering these issues, should organic farming: Ban copper, allow use, but stricter regulated than today, continue with the same use as today, relax the regulations around copper.

Figure 68 shows that in all countries respondents are in favour of stricter regulations on the use of copper. Especially, the respondents in Italy and Spain more than 50 percent support this solution. As much as one third of the Polish respondents want to ban the use of copper and also one in four in Germany, France, Italy and Spain are in favour of stop the use of copper. Norwegians and the UK respondents are less inclined to ban use of copper and here more respondents than in the other countries (17 and 16 percent respectively) think that one can continue with the same use as today. However, as much as 17 percent of the total sample answer "don't know" to this question, and again the Norwegian (28 percent) and UK (22 percent) respondents are those with the highest scores. This may reflect the fact that copper is less used as an input in these countries, while in southern European countries the use of copper to a greater extent are viewed as an environmental/food safety issue.

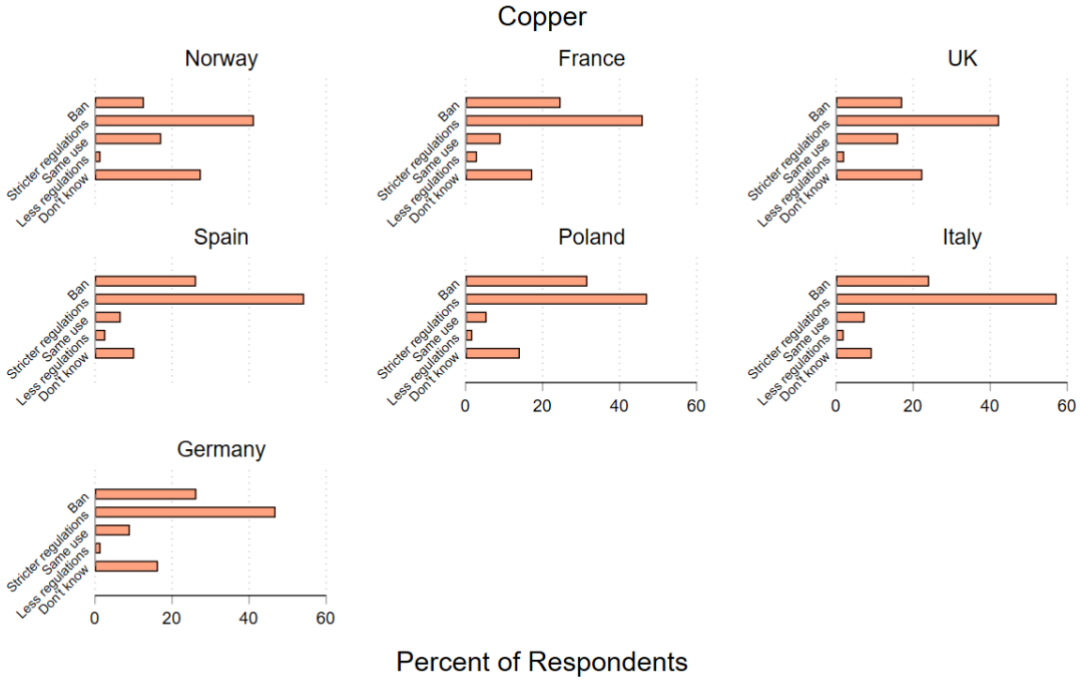

Figure 68: Regulation of copper by country

5.2.3 Plastic

Question about plastic use:
In both organic and conventional agriculture thin plastic films are often used as an alternative to synthetic herbicides to prevent weeds from growing. These plastics are fossil-fuel based, difficult to recycle and can break down into micro-plastics, which can pollute the soil, oceans and drinking water. Alternatives to using plastic include; hand weeding, mechanical tools or using biodegradable plastics. Considering these issues, should organic farming: Ban plastic, allow use, but stricter regulated than today, continue with the same use as today, relax the regulations around plastic.

Figure 69 shows that in general respondents think plastic as cover should be banned than having stricter regulations. Over or close to 50 percent support a ban inn all countries except for Norway where 40 percent favour a ban while 42 percent want stronger restrictions on use. A small percentage in all countries think that the use of plastic can continue as now. 10 percent of the total sample answer "don't know" with the highest percentage in UK (13 percent) and France (12 percent).

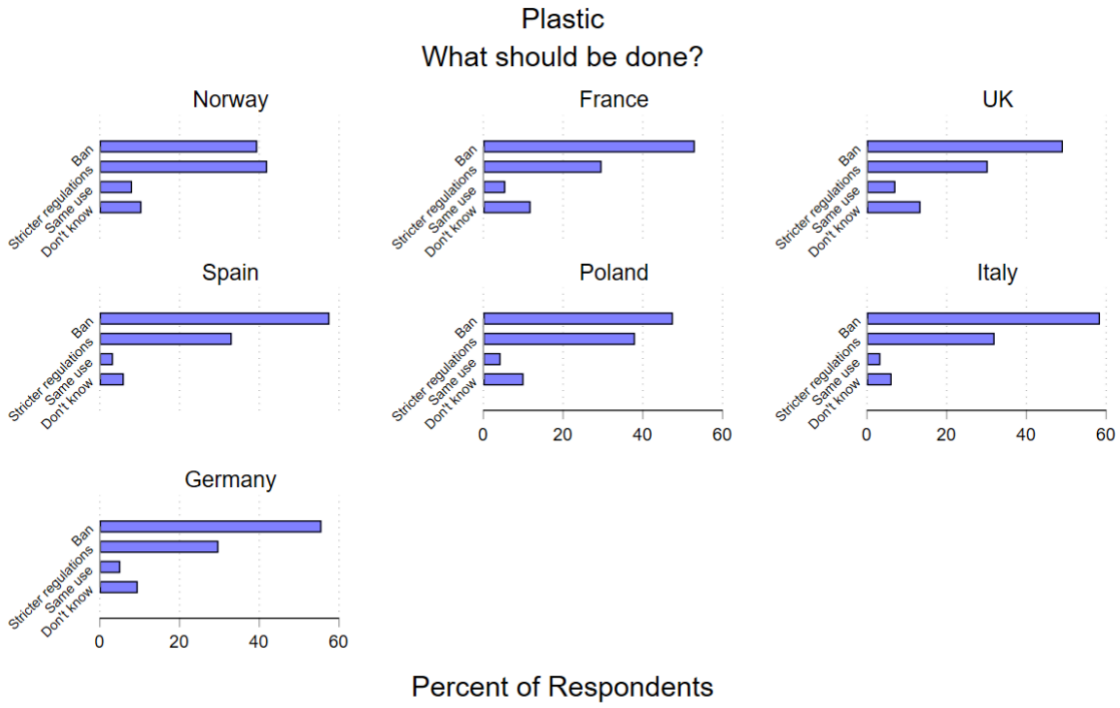

Figure 69: Regulation of plastics by country

5.2.4 Summary

Of the three contentious inputs studied here, avoid using plastic during growing (e.g. as cover to reduce weeds) was the issue with strongest support among respondents to phase out. In all 51 percent meant that plastic should be banned while 25 and 23 percent supported a ban on respectively use of antibiotics and copper. This may be interpreted either that alternatives to plastic are more easily available than for antibiotics and copper, or that plastic is perceived as a more urgent matter to solve than overuse of antibiotics and copper. Regarding antibiotics a total ban also seem drastic, especially if one already follows a restrictive policy on the use. The same dilemmas between ban and restrictive use are found for copper. Especially, in the southern European countries where the use is more widespread and the alternatives seem less effective, to ban the use may seem drastic. In spite of this, one in four in Spain, Italy and France want to ban the use of copper. As we have noticed for several questions about organic agriculture a noticeable share of the respondents answers "don.t know", in this case especially on the issue of copper (17 percent).

5.3 WILLINGNESS TO PAY

More sustainable production practices may be seen as a quality attribute to organic food products, thus, consumers might be willing to pay more for these products. Organic products have normally a higher price than their conventional counterparts, thus, it is not obvious that consumers are willing to pay an additional price. Previous research signal that most consumers can maximum allow a price premium of 10-20% on organic food product (Yiridoe et al., 2005). The results in section 4.1. also revealed that consumers see high price as the most important barrier against purchasing organic food products.

Figure 70 show that the willingness to pay more for stricter controls of antibiotics is highest in Italy (52%) followed by Poland (47%) and Germany (45%). France has the lowest number (32%). We also see that it is a great number of respondents that-answer "don't know" (28%), indicating the hypothetical character of

the question. Spanish (35%) and Polish (32%) have the highest number of respondents answering "don't know".

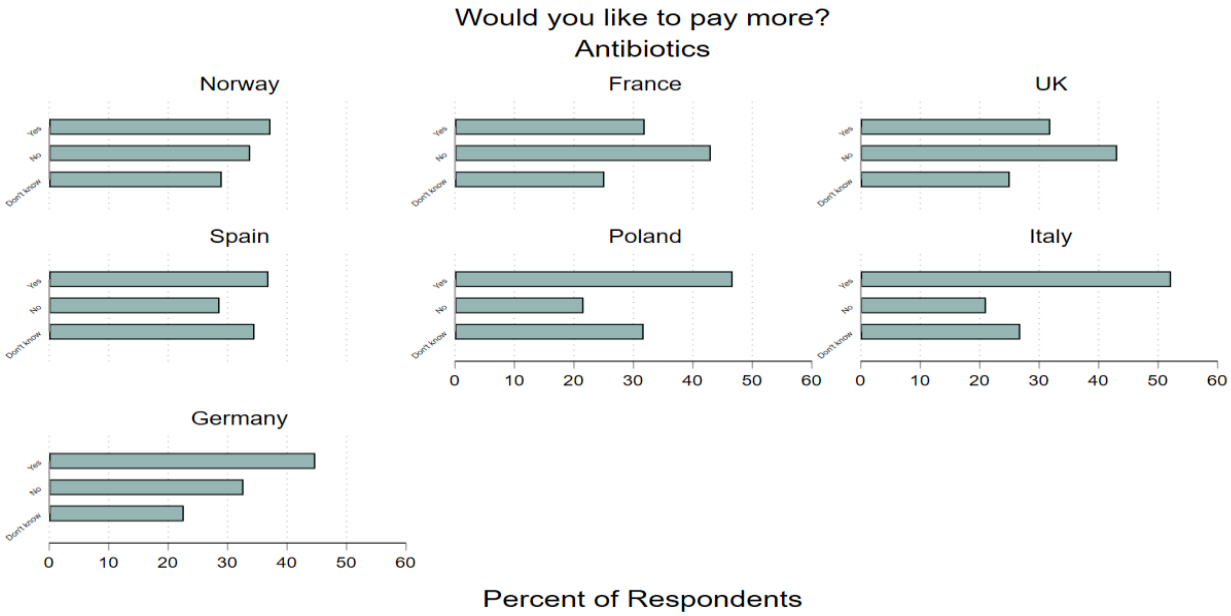

Figure 70: If placing stricter controls on the use of antibiotics increased the price of organic food, would you be willing to pay more? All countries

Figure 71shows that the Italians (47%) also are most willing to pay more for stricter control on the use of copper and again followed by Poland (40%) and Germany (38%). The willingness to pay for stricter control on Copper is overall less than for antibiotics. We also find that a great share of the respondents answered "don't know" (30%), especially in Poland (36%), Norway (35%) and Spain (32%).

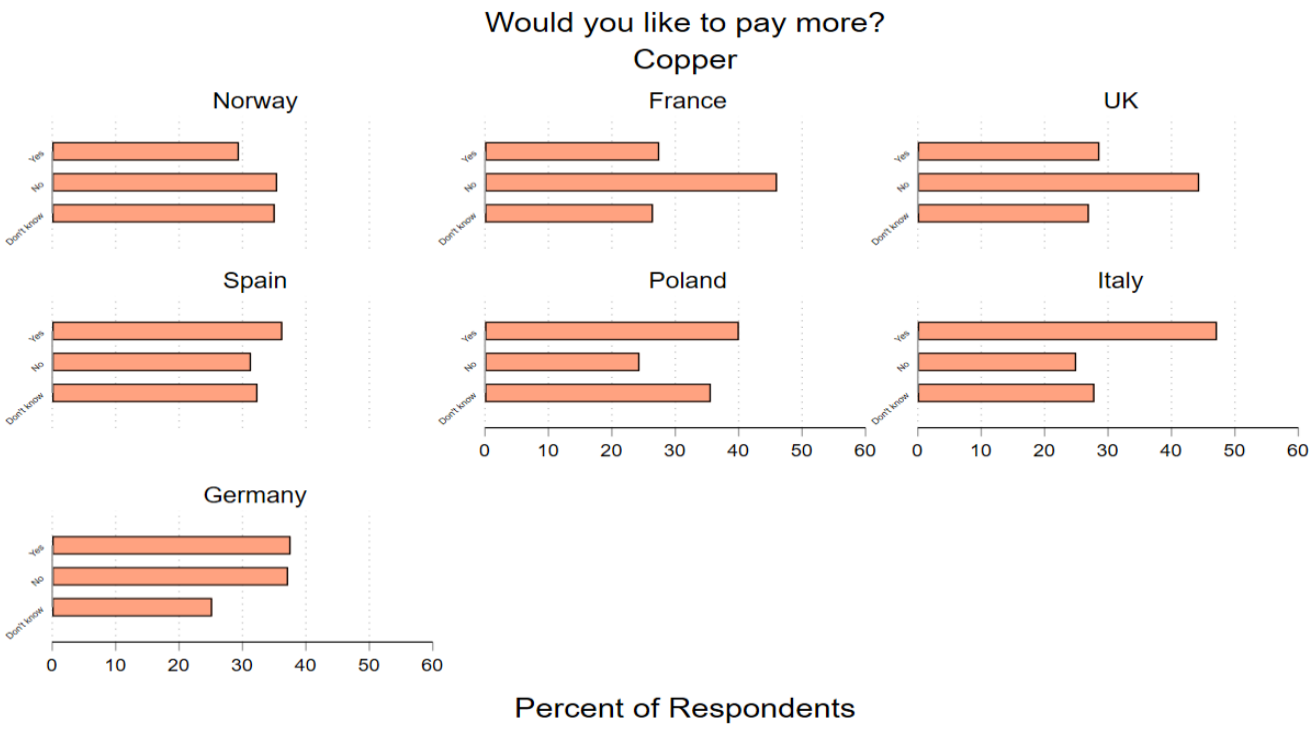

Figure 71: If placing stricter controls on the use of copper increased the price of organic food, would you be willing to pay more? All countries.

Figure 72 shows that also for plastic the Italians are more willing to pay (51%) followed by the Spanish (45%) and Norwegian (45%) respondents. The French respondents are those least willing to pay more (49%) as for antibiotics (32%) and copper (46%) as well. Overall 23 % state that they don't know if they are willing to pay more for stricter control on the use of plastics, and here the Polish respondents score highest with 32%.

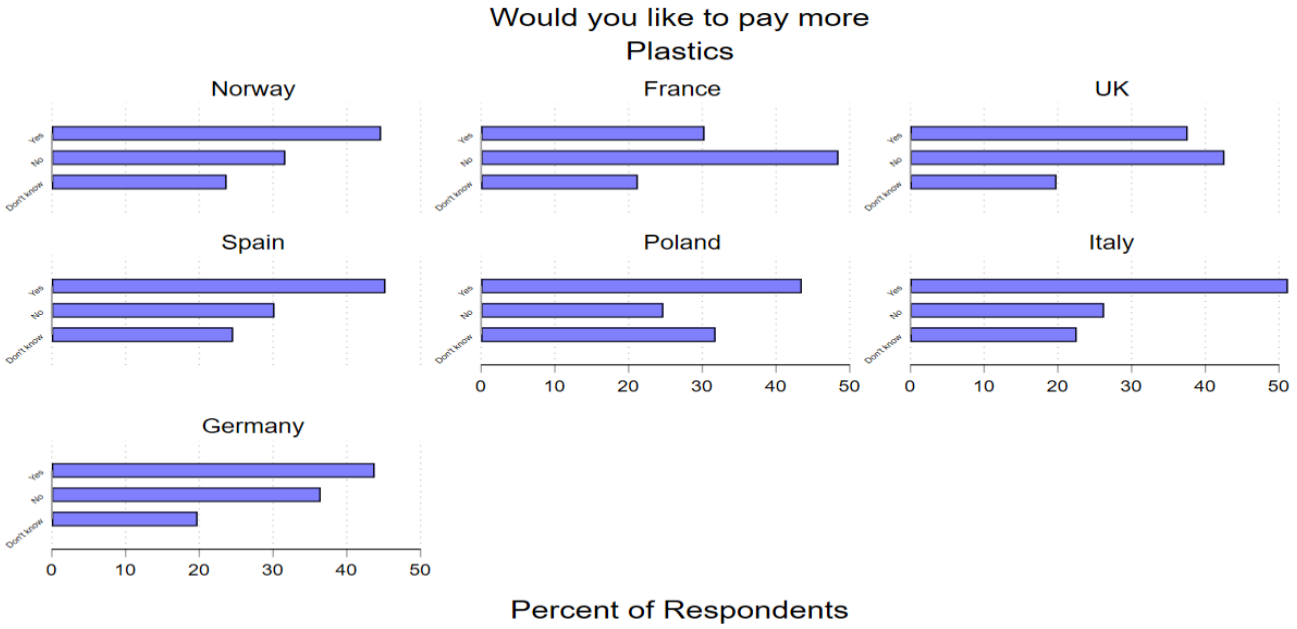

Figure 72: If placing stricter controls on the use of plastics increased the price of organic food would you be willing to pay more? All countries

5.4 ORGANIC CONSUMERS

Frequent organic consumers (i.e. eat organic more than 4 times a week) have more experience with organic food and, thus, also might be more conscious and knowledgeable about the contentious issues. In Table15 we cross tabulate how often one eats organic food, and view on what should be done about antibiotics in organic production.

Table 15: Organic consumption and regulating contentious input. Antibiotics

	How often do you eat organic food (last month)?								
	Daily	**4-6 times a week**	**2-3 times a week**	**Once a week**	**1-3 times a month**	**Less than monthly**	**Never**	**Don't know**	**Total**
Ban	354	499	862	601	374	508	428	197	3822
	35.76	*30.44*	*26.53*	*26.25*	*20.12*	*21.65*	*20.64*	*14.97*	*24.25*
Stricter regulation	428	865	1806	1224	1110	1218	829	616	8097
	43.33	*52.83*	*55.62*	*53.42*	*59.66*	*51.98*	*39.99*	*46.74*	*51.37*
Same use	133	190	322	272	203	282	236	118	1755
	13.43	*11.59*	*9.90*	*11.87*	*10.90*	*12.05*	*11.40*	*8.93*	*11.14*
Less regulation	30	38	119	70	51	48	63	20	438
	3.04	*2.31*	*3.65*	*3.06*	*2.72*	*2.03*	*3.03*	*1.50*	*2.78*
Don't know	44	46	140	124	123	288	517	367	1649
	4.44	*2.83*	*4.31*	*5.40*	*6.60*	*12.29*	*24.94*	*27.86*	*10.46*
Total	989	1638	3248	2291	1860	2344	2074	1319	15762
	100.00	*100.00*	*100.00*	*100.00*	*100.00*	*100.00*	*100.00*	*100.00*	*100.00*

First row has *frequencies* and second row has *column percentages*

From the table we see that more than 30 % of the respondents who eats organic food more than 3 times a week (frequent consumers) thinks that antibiotics should be banned compare to about 26 % of the respondents who eat 1 to 3 times a week (moderate consumers). Among those who eat less than once a week or newer (low or no) about 20 percent think that antibiotics should be banned. The number of respondents that answer "don't know" is significantly higher among the Low or no users than among the moderate and frequent users of organic food.

Table 16: Organic consumption and regulating contentious input. Copper

	How often do you eat organic food (last month)?								
	Daily	**4-6 times a week**	**2-3 times a week**	**Once a week**	**1-3 times a month**	**Less than monthly**	**Never**	**Don't know**	**Total**
Ban	331	472	722	531	393	491	426	194	3560
	33.43	*28.81*	*22.23*	*23.19*	*21.12*	*20.96*	*20.54*	*14.72*	*22.58*
Stricter regulation	450	842	1813	1169	1010	1122	725	490	7620
	45.47	*51.42*	*55.83*	*51.05*	*54.27*	*47.86*	*34.96*	*37.15*	*48.35*
Same use	113	156	319	231	187	248	232	156	1642
	11.38	*9.53*	*9.81*	*10.07*	*10.04*	*10.60*	*11.21*	*11.87*	*10.42*
Less regulations	17	71	95	49	44	40	42	18	375
	1.69	*4.34*	*2.91*	*2.14*	*2.36*	*1.71*	*2.02*	*1.34*	*2.38*
Don't know	79	97	299	310	227	442	649	461	2565
	8.03	*5.90*	*9.22*	*13.55*	*12.21*	*18.88*	*31.28*	*34.93*	*16.27*
Total	989	1638	3248	2291	1860	2344	2074	1319	15762
	100.00	*100.00*	*100.00*	*100.00*	*100.00*	*100.00*	*100.00*	*100.00*	*100.00*

First row has *frequencies* and second row has *column percentages*

We see the same tendency for regulation of copper use. The frequent organic consumers are more inclined to ban the use of copper, than the moderate and low or no organic consumers. A significant share

of the moderate, but especially the low or no organic consumers (19 – 31%) answer "don't know" on this issue.

Table 17: Organic consumption and regulating contentious inputs. Plastic cover use.

	How often do you eat organic food (last month)?								
	Daily	**4-6 times a week**	**2-3 times a week**	**Once a week**	**1-3 times a month**	**Less than monthly**	**Never**	**Don't know**	**Total**
Ban	662	962	1777	1189	915	1151	897	543	8096
	67.23	*58.73*	*55.03*	*51.90*	*49.41*	*49.12*	*43.51*	*41.16*	*51.50*
Stricter regulations	235	551	1141	842	708	789	549	431	5247
	23.83	*33.61*	*35.34*	*36.77*	*38.27*	*33.66*	*26.65*	*32.69*	*33.38*
Same use	48	74	119	121	102	157	186	64	872
	4.87	*4.54*	*3.70*	*5.28*	*5.49*	*6.71*	*9.04*	*4.86*	*5.55*
Don't know	40	51	192	139	127	246	429	281	1504
	4.06	*3.12*	*5.93*	*6.05*	*6.84*	*10.51*	*20.79*	*21.29*	*9.57*
Total	985	1.638	3229	2291	1851	2344	2062	1319	15719
	100.00	*100.00*	*100.00*	*100.00*	*100.00*	*100.00*	*100.00*	*100.00*	*100.00*

First row has *frequencies* and second row has *column percentages*

Again, we see that the frequent organic consumers are more eager to ban the use of plastic compared to the other consumers. As much as 2/3 of those who eat organic food on a daily basis want to ban the use of plastics. We see that in all categories a high percentage are in favour of banning plastic. Still about 20 percent of the no users say that they "don't know".

5.4.1 Consumption of organic food and willingness to pay

To explore if organic food consumption is associated with higher willingness to pay, we have run a logistic regression to control for a range of background variables[13] which also may affect the willingness to pay. Figures 73 -75 all show that the frequent organic consumers have a great willingness to pay more for stricter controls with the use on all three contentious inputs. There is a tendency that the willingness to pay descend with the frequency of eating organic food, such that in order to reach the more moderate and infrequent organic consumers, the question of price level seem to be of vital importance.

[13] The list of background variables are in appendix.

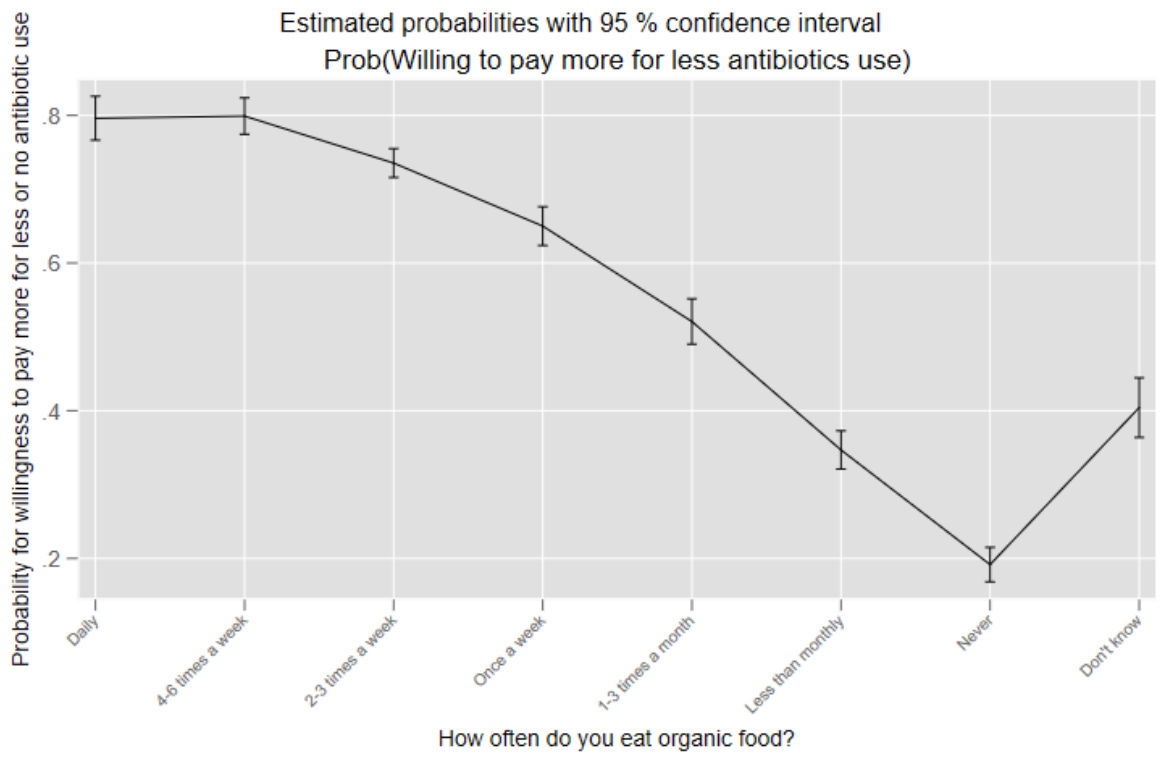

Figure 73: Organic food consumption and willingness to pay. Antibiotics.

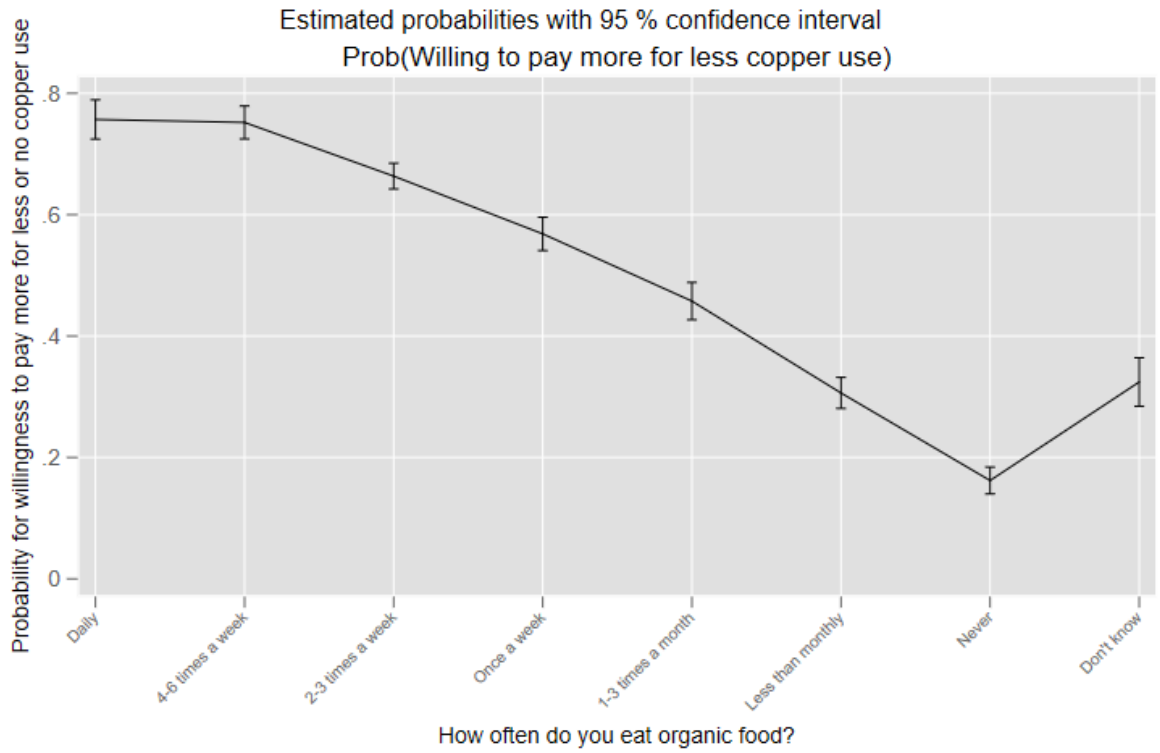

Figure 74: Organic food consumption and willingness to pay. Copper.

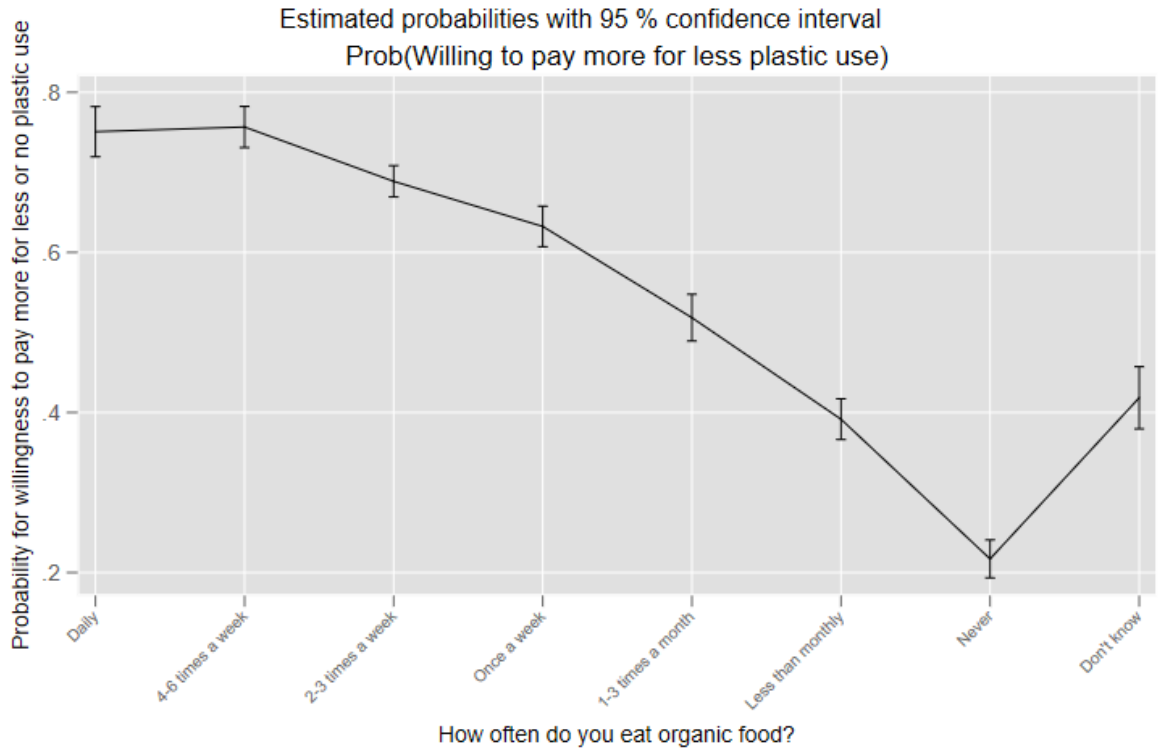

Figure 75: Organic food consumption and willingness to pay. Plastics

6 SUMMARY AND CONCLUSION

In this study we have asked a representative sample of respondents in seven European countries about their views on eight different contentious inputs in organic agriculture that are central to the Organic-PLUS project. In addition to the Organic-PLUS inputs we added six other sustainability issues to broaden the scope of the study. We have mapped food habits, especially related to organic food consumption, use and knowledge of organic food labels as well as trust in different food system actors relevant for organic food production and consumption.

Based on the experiences from the initial focus groups we anticipated that consumers have little knowledge about organic food production. However, the focus groups also showed that there were great differences in knowledge between dedicated and ordinary consumers. Thus, we believed these differences also would be reflected in the answers given in the survey. Based on previous comparative European food studies we also anticipated that regional and national differences in food culture, food system governance and general trust in food system authorities would be reflected in consumers' use and perceptions of organic food and awareness to issues related to organic agriculture. We anticipated a division between northern and southern European countries. Poland as an eastern European country made an extra dimension to the comparative analyses.

We started the analyses with a broad mapping of organic food consumption and singled out three categories of organic consumers: frequent, moderate and low/no organic consumers. The comparative analyses of organic food consumption, use and recognition of food labels, perceptions of organic food and trust in food system actors showed interesting similarities and differences between the seven countries.

Broadly speaking the analyses confirmed the anticipated differences between the north-western countries and the southern countries. This may be characterised with what may seem as a greater awareness or engagement with food issues among the southern European consumers compared to the northern Europeans. The Italian and French consumers to a greater extent state that they eat organic food frequently ('daily' or '4-6 times a week') and also look for organic labels more often when shopping food. In the other end of the scale we find the UK with a high percentage stating that they never eat organic food and Norway with an especially low share of consumers that eat organic food frequently and a high share of consumers with low or no organic food consumption. The UK and Norwegian consumers also more moderately agreed to positive statements about organic food and a larger share of the respondents in these countries, in general, had a tendency to refrain from answering and responding "don't know"/"no opinion". A greater share of consumers in southern European countries as well as Poland provided more of their food, and in particular their organic food, from other channels than ordinary hyper- or supermarkets. Thus, in these countries consumers have a greater experience with purchasing food in smaller food outlets and direct from producer. The UK respondents stand out from the other countries especially with a higher use of internet for food purchases and also a higher frequency of eating out.

The retail market is highly centralised in northern Europe while still alternative distribution channels prevail in countries like Italy, Spain and Poland and with France and Germany in the middle also with quite diversified channels for food provisioning.

This is perhaps also reflected in the responses on questions about information channels where consumers in Italy and France to a greater extent use personal information from producers while respondents in Poland and Spain to great extent rely on the close networks of family and friends. When it comes to trust in food system actors, Norwegian consumers show a greater trust in all food system actors. This is in line with Kjærnes et al. (2007) that found associations between trust in food and general levels of trust in public authorities and market actors and where levels of trust differ distinctly between European countries (Kjærnes et al. 2007). Norway was characterised by high levels of stability and trust in other people and political institutions. The strong belief in the safety of Norwegian food was found to be largely a matter of generalised confidence where public authorities are trusted to manage and regulate corporate actors in

whom consumers have much more limited faith. In Italy, trust as familiarity was prominent – i.e. a strong reliance on networks and personal relations. Thus, organic food may not be perceived as important as an alternative to conventional food in Norway and UK because of the general trust, while in countries like Poland and Italy organic food to a greater extent are associated with healthier, better quality food.

These findings may have implications for how we interpret the results of the questions regarding the contentious inputs. Because of the generalised trust in the northern European countries, and especially in Norway, contestation over food system issues may be lower than in southern and eastern Europe.

There were a rather strong consensus on the importance of many of the contentious inputs, such as the importance of reducing the use of antibiotics and reducing plastic packaging. Except for plastic packaging, among the other sustainability issues not included in the Organic-PLUS project, it was some differences between the countries. Especially, Italy and France gave second highest priority to the statement that organic food should be seasonal. Indicating that organic food should be local and not sourced and transported from far away. This is a contrary view to the market orientation (often directed at exports) that is widespread also when it comes to discussions about further growth of organic agriculture, and it spurs the idea about an intertwined development of a natural embedded food production (organic) coupled with a locally and socially embedded distribution and food provisioning.

The questions on how to regulate the contentious inputs reflect to some extent consumers' trust in the food system in different countries. A stronger weight are put on strengthening the regulations and even banning the use of antibiotics, copper and plastic in countries like Italy, Poland, France and Spain, This might be interpreted as a distrust in the present system and that regulations have to be strict to safeguard a healthy and sustainable food production. In the UK and Norway it was less emphasis on banning the use of the contentious inputs. However, these countries also had the highest share of respondents answering don't know on these questions.

Answering don't know may imply that one lack knowledge or interest in the issues asked in the survey. Some of the issues are more contentious in particular countries, such as copper. However, experience with organic food seem to call for a greater awareness and engagement for these issues. We found that the frequent organic consumers gave more importance to all the contentious issues, they also expressed to have stricter regulations and not least they were more willing to pay extra for organic products if there are put more restrictions on the use of antibiotics, copper and plastic.

This study finds that European consumers, when asked, express that it is important to reduce and phase out the use of several of the contentious inputs included in the Organic-PLUS project. However, they give more importance to especially antibiotics, copper, synthetic vitamins, plastic cover and mineral oils than to provide vegan organic foods, free of any input from animal sources, to phase out the use of straw from non-organic farms as bedding materials, as well as the use of peat as a growing media for plants. Other issues such as the use of plastic packaging, seasonal production, transportation and use of fossil fuel in production were also highly prioritized by the respondents. A relatively large share of the respondents answered "don't know" on many of the questions indicating that these issues for many consumers are complex and difficult and hard to give a qualified answer to. However, for the Organic-PLUS project the work with finding alternatives to the contentious inputs are supported by the respondents in this study and even broaden the scope towards other sustainability issues such as climate change.

6.1 ACKNOWLEDGEMENT

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8 APPENDIX

8.1 INCOME DEFINITIONS

The income variable is defined differently for different countries.

	Income group definition						
Income group	**France**	**Germany**	**Italy**	**Norway**	**Poland**	**Spain**	**UK**
1	< 1000 €	< 1000 €	< €600	< 10,000 kr	<500 zl.	< 300 €	< 1000 £
2	1001 - 1500 €	1001 - 1500 €	€601 - €900	10,000-19,9999 kr	501 -1000 zl.	301 - 500 €	1001 - 1500 £
3	1501 - 2000 €	1501 - 2000 €	€901- €1200	20,000-24,9999 kr	1001 - 1500 zl	501 - 1.000 €	1501 - 2000 £
4	2001 - 2500 €	2001 - 2500 €	€1201 - €1500	25,000-29,9999 kr	1501 - 2000 zl.	1001 - 1.500 €	2001 - 2500 £
5	2501 - 3000 €	2501 - 3000 €	€1501 - €1800	30,000-39,9999 kr	2001 - 2500 zl.	1501 - 2.000 €	2501 - 3000 £
6	3001 - 3500 €	3001 - 3500 €	€1801 - €2100	40,000-49,9999 kr	2501 - 3000 zl.	2001 - 2.500 €	3001 - 3500 £
7	3501 - 4000 €	3501 - 4000 €	€2101 - €2400	50,000-59,9999 kr	3001 - 4000 zl.	2501 - 3.000 €	3501 - 4000 £
8	4001 - 5000 €	4001 - 5000 €	€2401 - €2700	60,000-69,9999 kr	4001 - 5000 zl.	3001 - 4.000 €	4001 - 5000£
9	5001 - 6000 €	5001 - 6000 €	€2701 - €3000	70,000-79,9999 kr	5001 - 7500 zl.	4001 - 5000 €	5001 - 6000 £
10	6001 - 7000 €	6001 - 7000 €	€3001 - €3500	80,000-89,9999 kr	7501 - 10000 zl	5001 - 6000 €	6001 - 7000 £
11	7001 - 8000 €	7001 - 8000 €	€3501 - €4500	90,000-99,9999 kr	10001-15000 zl	6001 - 8000 €	7001 - 8000 £
12	> 8.000 €	> 8.000 €	€4501 - €6000	>100,000 kr	> 15000 zl	> 8.000 €	> 8.000 £

Income per country (sample)

Income group	**Country**							
	Norway	**France**	**UK**	**Spain**	**Poland**	**Italy**	**Germany**	**Total**
1	29	198	279	67	10	207	228	1018
	1.77	9.14	13.35	3.26	0.48	10.50	10.70	7.20
2	69	291	328	90	19	168	248	1213
	4.20	13.43	15.69	4.38	0.91	8.52	11.64	8.58
3	103	337	296	192	44	195	275	1442
	6.27	15.55	14.16	9.33	2.11	9.89	12.91	10.20
4	149	291	259	331	64	221	251	1566
	9.07	13.43	12.39	16.09	3.07	11.21	11.78	11.07
5	235	303	201	340	133	203	245	1660
	14.31	13.98	9.62	16.53	6.38	10.29	11.50	11.74
6	257	214	171	301	175	185	186	1489
	15.65	9.88	8.18	14.63	8.39	9.38	8.73	10.53
7	265	188	142	305	276	158	211	1545
	16.14	8.68	6.79	14.83	13.23	8.01	9.91	10.92
8	172	179	132	252	398	116	221	1470
	10.48	8.26	6.32	12.25	19.08	5.88	10.38	10.39
9	121	78	78	100	513	143	116	1149
	7.37	3.60	3.73	4.86	24.59	7.25	5.45	8.12
10	94	48	59	45	318	146	56	766
	5.72	2.22	2.82	2.19	15.24	7.40	2.63	5.42
11	41	17	45	23	90	139	36	391
	2.50	0.78	2.15	1.12	4.31	7.05	1.69	2.76
12	107	23	100	11	46	91	57	435
	6.52	1.06	4.78	0.53	2.21	4.61	2.68	3.08
Total	1642	2167	2090	2057	2086	1972	2130	14144
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

First row has *frequencies* and second row has *column percentages*

8.2 BACKGROUND VARIABLES LOGISTIC REGRESSION

Variable	Comment
Country	Country of residence of respondent
Income	Grouped in 12 groups (see table)
Gender	Male or female
Education	Highest completed education
Number of children	Children under 18 in household (15 in Norway)
Grow food for own consumption	
Meat eating habits	If a respondent eats meat or have other meat eating habits
Age group	Age of respondents group in four groups
Work situation	Employed, retired etc.

8.3 TABLES

Table 18: Shopping for food (First row has *frequencies* and second row has *column percentages)*

Shop at large superstore/hypermarket	**Country**							
	Norway	**France**	**UK**	**Spain**	**Poland**	**Italy**	**Germany**	**Total**
Nothing	271	79	158	120	92	43	223	986
	13.36	*3.50*	*7.02*	*5.44*	*4.14*	*1.93*	*9.87*	*6.38*
A small part	578	134	225	263	321	239	348	2108
	28.49	*5.94*	*10.00*	*11.93*	*14.45*	*10.71*	*15.41*	*13.64*
Some	517	272	264	385	686	513	438	3075
	25.48	12.06	11.73	17.47	30.89	22.98	19.39	19.90
A major part	512	1240	1179	1166	948	904	872	6821
	25.23	54.96	52.40	52.90	42.68	40.50	38.60	44.15
All	81	482	387	230	107	511	169	1967
	3.99	21.37	17.20	10.44	4.82	22.89	7.48	12.73
Not relevant	52	42	26	31	51	18	184	404
	2.56	1.86	1.16	1.41	2.30	0.81	8.15	2.61
Don't know	18	7	11	9	16	4	25	90
	0.89	0.31	0.49	0.41	0.72	0.18	1.11	0.58
Total	2029	2256	2250	2204	2221	2232	2259	15451
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Shop at supermarket	**Country**							
	Norway	**France**	**UK**	**Spain**	**Poland**	**Italy**	**Germany**	**Total**
Nothing	26	386	269	165	40	120	113	1119
	1.28	17.11	11.96	7.49	1.80	5.38	5.00	7.24
A small part	141	587	806	445	310	693	304	3286
	6.95	26.02	35.82	20.19	13.96	31.05	13.46	21.27
Some	403	550	608	783	777	701	562	4384
	19.86	24.38	27.02	35.53	34.98	31.41	24.88	28.37
A major part	1036	248	369	657	957	471	965	4703
	51.06	10.99	16.40	29.81	43.09	21.10	42.72	30.44
All	401	66	112	106	104	197	199	1185
	19.76	2.93	4.98	4.81	4.68	8.83	8.81	7.67
Not relevant	9	391	72	39	18	43	92	664
	0.44	17.33	3.20	1.77	0.81	1.93	4.07	4.30
Don't know	13	28	14	9	15	7	24	110
	0.64	1.24	0.62	0.41	0.68	0.31	1.06	0.71
Total	2029	2256	2250	2204	2221	2232	2259	15451
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Specialty shops	Country							
	Norway	France	UK	Spain	Poland	Italy	Germany	Total
Nothing	693	383	810	270	158	220	429	2963
	34.15	16.98	36.00	12.25	7.11	9.86	18.99	19.18
A small part	795	600	661	601	655	814	681	4807
	39.18	26.60	29.38	27.27	29.49	36.47	30.15	31.11
Some	350	614	347	782	859	656	559	4167
	17.25	27.22	15.42	35.48	38.68	29.39	24.75	26.97
A major part	57	175	164	409	368	307	263	1743
	2.81	7.76	7.29	18.56	16.57	13.75	11.64	11.28
All	10	54	98	52	50	152	46	462
	0.49	2.39	4.36	2.36	2.25	6.81	2.04	2.99
Not relevant	108	406	153	81	103	73	254	1178
	5.32	18.00	6.80	3.68	4.64	3.27	11.24	7.62
Don't know	16	24	17	9	28	10	27	131
	0.79	1.06	0.76	0.41	1.26	0.45	1.20	0.85
Total	2029	2256	2250	2204	2221	2232	2259	15451
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Shop from the Internet	Country							
	Norway	France	UK	Spain	Poland	Italy	Germany	Total
Nothing	1618	879	1088	1257	921	1149	1122	8034
	79.74	38.96	48.36	57.03	41.47	51.48	49.67	52.00
A small part	128	235	276	280	412	387	197	1915
	6.31	10.42	12.27	12.70	18.55	17.34	8.72	12.39
Some	70	208	236	232	273	199	164	1382
	3.45	9.22	10.49	10.53	12.29	8.92	7.26	8.94
A major part	32	158	349	158	134	123	105	1059
	1.58	7.00	15.51	7.17	6.03	5.51	4.65	6.85
All	16	50	115	50	41	67	45	384
	0.79	2.22	5.11	2.27	1.85	3.00	1.99	2.49
Not relevant	152	685	168	206	396	290	596	2493
	7.49	30.36	7.47	9.35	17.83	12.99	26.38	16.13
Don't know	13	41	18	21	44	17	30	184
	0.64	1.82	0.80	0.95	1.98	0.76	1.33	1.19
Total	2029	2256	2250	2204	2221	2232	2259	15451
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Shop from food markets	Country							
	Norway	France	UK	Spain	Poland	Italy	Germany	Total
Nothing	1172	442	1113	691	293	423	665	4799
	57.76	19.59	49.47	31.35	13.19	18.95	29.44	31.06
A small part	556	643	473	600	745	816	563	4396
	27.40	28.50	21.02	27.22	33.54	36.56	24.92	28.45
Some	143	537	196	513	680	546	378	2993
	7.05	23.80	8.71	23.28	30.62	24.46	16.73	19.37
A major part	20	152	139	179	256	222	169	1137
	0.99	6.74	6.18	8.12	11.53	9.95	7.48	7.36
All	8	73	117	53	60	117	61	489
	0.39	3.24	5.20	2.40	2.70	5.24	2.70	3.16
Not relevant	111	384	189	151	160	93	392	1480
	5.47	17.02	8.40	6.85	7.20	4.17	17.35	9.58
Don't know	19	25	23	17	27	15	31	157
	0.94	1.11	1.02	0.77	1.22	0.67	1.37	1.02
Total	2029	2256	2250	2204	2221	2232	2259	15451
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Shop directly from the food producer	Country							
	Norway	France	UK	Spain	Poland	Italy	Germany	Total
Nothing	1348	749	1454	1318	814	796	878	7357
	66.44	33.20	64.62	59.80	36.65	35.66	38.87	47.62
A small part	349	426	196	277	480	673	418	2819
	17.20	18.88	8.71	12.57	21.61	30.15	18.50	18.24
Some	181	325	140	220	326	324	278	1794
	8.92	14.41	6.22	9.98	14.68	14.52	12.31	11.61
A major part	27	116	114	102	162	144	135	800
	1.33	5.14	5.07	4.63	7.29	6.45	5.98	5.18
All	4	62	92	40	67	94	39	398
	0.20	2.75	4.09	1.81	3.02	4.21	1.73	2.58
Not relevant	107	535	230	216	327	180	480	2075
	5.27	23.71	10.22	9.80	14.72	8.06	21.25	13.43
Don't know	13	43	24	31	45	21	31	208
	0.64	1.91	1.07	1.41	2.03	0.94	1.37	1.35
Total	2029	2256	2250	2204	2221	2232	2259	15451
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Shopping for organic food

Large supermarkets and og hypermarkets	Country							
	Norway	France	UK	Spain	Poland	Italy	Germany	Total
Nothing	396	214	188	357	329	157	355	1996
	28.18	11.52	12.30	19.89	17.53	7.84	19.00	16.18
A small part	325	341	306	330	464	430	419	2615
	23.11	18.35	20.08	18.37	24.69	21.42	22.43	21.19
Some	250	412	229	341	461	530	396	262
	17.78	22.13	15.02	19.02	24.58	26.43	21.21	21.24
A major part	223	587	397	516	427	562	385	3097
	15.84	31.54	26.03	28.75	22.72	28.03	20.64	25.10
All	57	245	304	186	118	282	144	1336
	4.09	13.18	19.91	10.36	6.27	14.04	7.71	10.83
Not relevant	104	43	38	425	52	24	134	439
	7.43	2.32	2.50	2.37	2.79	1.18	7.20	3.56
Don't know	503	18	64	223	27	21	34	236
	3.58	0.95	4.16	1.24	1.42	1.06	1.81	1.91
Total	14106	1860	1526	1794	1878	2006	1868	12339
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

First row has *frequencies* and second row has *column percentages*

Shopping for organic food

Small supermarkets and shops	Country							
	Norway	France	UK	Spain	Poland	Italy	Germany	Total
Nothing	208	587	422	434	280	335	231	2498
	14.77	31.58	27.68	24.20	14.92	16.71	12.35	20.24
A small part	282	391	327	372	438	630	500	2939
	20.06	21.04	21.44	20.71	23.30	31.38	26.75	23.82
Some	326	376	351	508	693	532	473	3259
	23.19	20.20	23.00	28.31	36.90	26.51	25.32	26.41
A major part	319	194	211	308	340	338	394	2103
	22.72	10.43	13.81	17.14	18.09	16.83	21.11	17.05
All	144	64	92	94	65	108	152	720
	10.27	3.44	6.05	5.25	3.48	5.39	8.12	5.84
Not relevant	73	206	68	51	36	47	91	572
	5.19	11.09	4.43	2.83	1.92	2.36	4.86	4.63

Don't know	53	41	55	28	26	17	28	248
	3.80	2.21	3.58	1.56	1.39	0.83	1.49	2.01
Total	1406	1860	1526	1794	1878	2006	1868	12339
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

First row has *frequencies* and second row has *column percentages*

Shopping for organic food

Specialty stores	**Country**							
	Norway	**France**	**UK**	**Spain**	**Poland**	**Italy**	**Germany**	**Total**
Nothing	701	575	513	427	365	423	543	3547
	49.83	30.93	33.64	23.78	19.44	21.08	29.05	28.74
A small part	260	331	272	330	406	519	330	2448
	18.48	17.78	17.83	18.37	21.64	25.87	17.67	19.84
Some	182	402	277	496	541	485	409	2793
	12.96	21.63	18.15	27.64	28.83	24.19	21.90	22.64
A major part	69	230	173	364	375	333	261	1806
	4.89	12.38	11.35	20.29	19.95	16.62	14.00	14.64
All	11	52	99	77	78	143	77	537
	0.79	2.81	6.51	4.29	4.17	7.12	4.12	4.36
Not relevant	132	219	132	72	67	76	215	913
	9.41	11.76	8.63	4.00	3.56	3.80	11.51	7.40
Don't know	51	51	60	29	45	27	33	295
	3.63	2.72	3.90	1.64	2.41	1.32	1.75	2.39
Total	1406	1860	1526	1794	1878	2006	1868	12339
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

First row has *frequencies* and second row has *column percentages*

Shopping for organic food

Internet	**Country**							
	Norway	**France**	**UK**	**Spain**	**Poland**	**Italy**	**Germany**	**Total**
Nothing	1036	869	641	1146	914	1111	946	6663
	73.66	46.72	41.99	63.89	48.68	55.38	50.64	54.00
A small part	99	161	197	172	211	237	118	1195
	7.04	8.65	12.88	9.60	11.25	11.79	6.34	9.68
Some	51	170	167	154	253	177	162	1134
	3.60	9.16	10.94	8.59	13.45	8.84	8.68	9.19
A major part	31	141	188	103	152	139	124	877
	2.21	7.56	12.29	5.76	8.08	6.92	6.61	7.10
All	12	69	114	56	41	70	52	413
	0.87	3.71	7.48	3.10	2.16	3.49	2.76	3.35
Not relevant	136	399	173	133	252	243	439	1776
	9.71	21.46	11.35	7.40	13.44	12.11	23.51	14.39
Don't know	41	51	47	30	55	29	27	281
	2.92	2.74	3.05	1.67	2.93	1.47	1.46	2.27
Total	1406	1860	1526	1794	1878	2006	1868	12339
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

First row has *frequencies* and second row has *column percentages*

Shopping for organic food

Direct from producer	Country							
	Norway	France	UK	Spain	Poland	Italy	Germany	Total
Nothing	880	646	699	876	621	623	571	4917
	62.61	34.73	45.81	48.84	33.08	31.06	30.55	39.85
A small part	182	326	193	254	321	432	331	2039
	12.94	17.51	12.64	14.18	17.09	21.52	17.72	16.52
Some	128	300	157	242	361	386	288	1863
	9.14	16.15	10.30	13.47	19.23	19.26	15.41	15.10
A major part	41	185	141	173	276	264	275	1355
	2.93	9.93	9.25	9.64	14.69	13.17	14.70	10.98
All	15	68	91	85	95	126	76	555
	1.07	3.64	5.99	4.71	5.04	6.29	4.04	4.50
Not relevant	116	297	196	121	151	141	298	1319
	8.26	15.95	12.86	6.73	8.02	7.04	15.94	10.69
Don't know	43	39	48	44	54	33	30	291
	3.05	2.09	3.16	2.43	2.85	1.67	1.63	2.36
Total	1496	1860	1526	1794	1878	2006	1868	12339
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

First row has *frequencies* and second row has *column percentages*

Shopping for organic food

Food markets	Country							
	Norway	France	UK	Spain	Poland	Italy	Germany	Total
Nothing	812	498	561	666	390	560	560	4047
	57.74	26.78	36.75	37.12	20.76	27.90	29.99	32.80
A small part	243	412	255	338	384	519	348	2500
	17.31	22.16	16.73	18.83	20.47	25.87	18.65	20.27
Some	134	430	211	359	504	436	374	2447
	9.50	23.12	13.80	20.00	26.85	21.72	20.01	19.83
A major part	37	203	162	231	391	254	283	1561
	2.65	10.93	10.59	12.87	20.84	12.66	15.15	12.65
All	15	71	126	64	94	100	51	522
	1.09	3.83	8.26	3.57	5.00	4.99	2.75	4.23
Not relevant	123	203	157	105	78	111	213	989
	8.72	10.91	10.31	5.84	4.14	5.52	11.41	8.02
Don't know	42	42	54	32	36	27	38	272
	2.99	2.27	3.56	1.78	1.94	1.33	2.04	2.20
Total	1406	1860	1526	1794	1878	2006	1868	12339
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

First row has *frequencies* and second row has *column percentages*