Organic-PLUS - grant agreement No [774340]

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

Deliverable 2.3: Version 2.0

Hybrid Citizen and Farmer Forum Report -

Using Hybrid Citizen and Farmer Forums to develop a transdisciplinary approach to Contentious Inputs in Organic Agriculture (formerly 'Citizen Jury Report')

Originally entitled 'Citizen Jury Report' and name changed to 'Hybrid Citizen and Farmer Forum Report' to reflect the inclusion of farmers in the engagement processes. This work is using Hybrid Citizen and Farmer Forums (HFs) to develop a transdisciplinary approach to Contentious Inputs in Organic Agriculture in the UK, Italy and Norway

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1. Executive summary

Using Hybrid Citizen and Farmer Forums to develop a transdisciplinary approach to Contentious Inputs in Organic Agriculture in the UK, Italy and Norway

Authors: *Adrian Evans, Rosa van Kesteren, Gunnar Vittersø, Hanne Torjusen, Fernando Pellegrini, Elisa Lorenzetti, Judith Conroy and Ulrich Schmutz*

Introduction: This report forms part of the social-scientific research and output of the Organic-PLUS project**.** The Organic-PLUS project is a 4.5 year international, multi-disciplinary EU Horizon 2020 project that investigates and seeks to find alternatives to contentious inputs in Organic Agriculture. In addition to natural scientific research across a whole range of contentious inputs to Organic Agriculture (e.g., antibiotic use, copper use, the use of plastic mulches) the project was equally committed to engaging with a range of stakeholders and consumers/citizens to develop a genuinely two-way science-society dialogue about both the use of contentious inputs in Organic agriculture and more generally the future of certified Organic food and farming.
Hybrid forums (HFs) were one of the many mechanisms that were employed within the project to understand and incorporate the views and concerns of practitioners and broader publics. Developing a deeper understanding of the pros and cons of Organic food and agriculture, as well as identifying which contentious issues are the most significant, and how they should be dealt with, are complex issues which require social, ethical, political and economic knowledge in addition to natural scientific insights. The Organic-PLUS hybrid forums contributed to this transdisciplinary approach by providing an arena for famers and consumers in the UK, Italy and Norway to express their own views about what is and is not contentious within Organic agriculture and to enter into a dialogue with natural scientific experts about the best ways to deal with these issues and to further develop Organic food and agriculture. These HFs took place over the course of several weeks, which provided ample opportunity for shared learning and dialogue.

Aims: The aim of the hybrid forums (HFs) was to facilitate science-society dialogue about contentious inputs/issues in Organic farming and to feedback these findings to scientists working on the project, policy makers and members of the public.

Methodology: Three HFs were set up in the UK, Italy and Norway. Each HF consisted of a mixture of consumer and farmer participants (10 consumers and 3 famers in Norway; 9 consumers and 5 farmers in the UK; 9 consumers and 5 farmers in Italy). In the UK and Italy participants were recruited online through Facebook groups and in Norway participants were selected through connections with local groups and through snowballing methods. Across all countries participants were selected to achieve a variation in age and gender amongst consumers and a spread of different farm types and sizes amongst farmers. The HFs met for six two-hour sessions in the UK and for four two-hour sessions in Norway and Italy.
Throughout the sessions participants engaged in a range of different activities to co-produce knowledge, these included:

- Engaging with and questioning leading expert presenters (including plant and soil scientists, horticulturalists, modellers, organic certifiers)
- Co-designing resources, such as factsheets, implementation strategies and ranking criteria for model builders
- Voting on issues such as ranking contentious inputs in organic farming and identifying the most important criteria for assessing the sustainability of Organic systems

- Focused sessions dedicated to 'deep dives' into key topics such as the use of plastic mulches, farmer well-being and 'localising' Organic food

Key Findings:

- Gaining knowledge about contentious inputs tended to assert the importance of addressing these issues in both organic and non-organic (conventional) agriculture. This could indicate that, if done in a careful and considered way, opening-up some of the contentious details of Organic farming to broader public scrutiny could, in the long term, increase the credibility of Organic assurance and promote broader sustainable purchasing behaviours.
- Instead of introducing new Organic labels to address contentious inputs (e.g., Organic-PLUS or copper-free Organic), there was support for improving the standards of currently existing Organic labels.
- Improving and expanding Organic agriculture entails focusing on the sustainability of the whole system beyond the substitution of particular inputs at the farm level. When asked what they thought the problems were around Organic agriculture, the participants were focused much more on the whole picture of production rather than on isolated on farm inputs. For example, participants were concerned about the well-being of Organic farmers, the use of plastics in food packaging and the importance of shortening food chains.
- Participants expressed a deep-seated need to improve the economics of Organic food. Participants in the UK stressed the importance of improving the affordability of Organic food for consumers and participants from all three countries were united on their concern about the economic precarity of sustainable producers (particularly small-scale) and that any improvements in Organic standards which make compliance harder for farmers must also be coupled with measures to increase their financial stability.
- Improving awareness among consumers was a substantial focus of discussion in all the groups, with participants from every country independently advocating that greater attention should be given to sustainable agriculture as part of formal schooling.
- During the sessions a range of additional contentious issues in Organic farming were raised. In the UK these included: damaging tilling techniques, animal welfare and a lack of consideration of GHG emissions. In Italy these included: having inadequate measures to fight against invasive species, a lack of trust in the certification system (especially with regards to the authenticity of imported Organic foods) and perceptions that on-farm inspections are often inadequate. In Norway these included: concerns about the rigidity of Organic certification and concerns about the yields of Organic farms and whether they could provide enough food to feed a growing global population.
- In general, HF participants were very supportive of the models that researchers in Organic-PLUS had been developing and utilising to assess changes in *on-farm* sustainability in the context of using alternatives to contentious inputs. However, participants also highlighted additional measures that they would have liked to see incorporated (or given more priority) within the models, these included food waste, worker rights/wellbeing, economic sustainability, environmental costs of manufacture, efficiency/efficacy, biodiversity, clearer indicators of pollution and measures of animal happiness.

Recommendations:

1. Organic certifying bodies should be open and transparent about the contentious issues that they face and the measures that they are taking to continually improve standards. This will help to improve public debate more generally about sustainable agriculture. This information sharing will have to be conducted in a careful and considered manner, placing contentious inputs in Organic agriculture in the broader context of the state of agriculture more generally.
2. Efforts to improve standards in Organic agriculture should go beyond the farm to consider the importance of the whole Organic food supply chain and to address issues such as local and seasonal food provisioning, sustainable packaging and farmer well-being.
3. Ensuring the wellbeing of Organic farmers, especially small-scale Organic farmers, should be central to efforts to support and expand Organic agriculture in Europe
4. Policy makers should further recognise Organic farming as a key route to sustainability and adopt appropriate measures to promote and financially subsidise Organic farming.
5. Additional, in-depth qualitative research is needed with a range of stakeholders, members of the public and especially farmers, to gain further insights into contentious inputs/issues in Organic agriculture and the barriers to adopting alternatives.
6. Models that aim to measure on-farm sustainability or LCA analyses that compare the sustainability of different agricultural inputs should include measures of biodiversity.
7. Encourage greater dialogue and collaboration between Organic and conventional farmers. Many of the findings of Organic-PLUS research and the HF dialogues also have high relevance to the conventional sector.

2. Introduction

In advanced technological societies there is a risk that important debates can be restricted to the realm of experts and decisions can be taken without broader public scrutiny. However, there is a growing realisation that science alone cannot cope with the types of complex, uncertain and ethically/politically laden problems that we face in the 21st century and there is an increased appreciation of the value of alternative knowledges – lay knowledges, practitioner knowledges, embodied knowledges, local knowledges, spiritual knowledges - in contributing to decision making processes, helping to shape new forms of hybrid science and informing policy decisions.

In response to these challenges there has been a call from within the social sciences and especially within SSK (The Sociology of Scientific Knowledge) and STS (Science and Technology Studies) to develop new forms of public engagement, public participation and knowledge making. Two particularly influential approaches to engaging citizens in science-society dialogue include Latour's (2004) notion of a 'parliament of things' and Callon's (2009) notion of 'hybrid forums'.

In his book 'Politics of Nature', Latour argues that rather than scientists presenting undisputed facts about a singular and knowable nature; we should instead listen to a plurality of different 'spokespeople' – scientists, poets, artists, indigenous people, farmers. We should also challenge scientists to speak openly about the complexities and uncertainties within their work and to bring these uncertainties into the public arena, so that they can be debated and discussed.

Callon takes a similar approach and contends that the current model of a detached science that secludes itself in laboratories and then exports its findings onto the world is no longer sustainable and instead we require new approaches to science in which scientists work closely with a range of stakeholders and citizens to open-up their endeavours to broader public scrutiny and accountability. Callon coined the term 'hybrid forums' to illustrate these types of heterogeneous groups of scientists, practitioners, stakeholders and laypeople. He contends that these types of hybrid forums provide a powerful means for 'bringing science back into democracy'.

Within the Organic-PLUS project we organised and facilitated 3 hybrid forums (HFs) in the UK, Italy and Norway. These forums provided an arena for farmers and consumers to express their own views and concerns about the key issues facing Organic agriculture and to begin a dialogue with natural scientists and other contributors with technical and academic expertise (both from within O-PLUS and beyond). These HFs involved multiple meetings (4-6) over an extended period to allow time for the dialogue to develop. We believe that there are several potential benefits of using HFs to develop a transdisciplinary approach to understanding and finding alternatives to contentious inputs in Organic agriculture. These include:

- Going beyond the initial scope of the OPLUS project to jointly identify key areas of shared concern (e.g., the importance of farmer well-being and local organic food)
- Adding to the way experts frame technical issues around organic farming (e.g., moving from a narrow focus on input substitution at the farm level to a whole food chain approach)

- Complementing technical expertise on modelling the environmental impacts of organic farming (e.g., questioning the types of measures that are included and not included in LCAs, such as biodiversity)
- Co-producing resources (e.g., Factsheets about plastic mulches from a small farmer perspective)
- Jointly developing implementation strategies for improving Organic food systems that take into account expert and stakeholder views

The HFs were undertaken in the UK, Norway and Italy. These countries were selected to provide a geographical spread from both Northern and Southern Europe and to provide insights across countries with very different Organic markets.

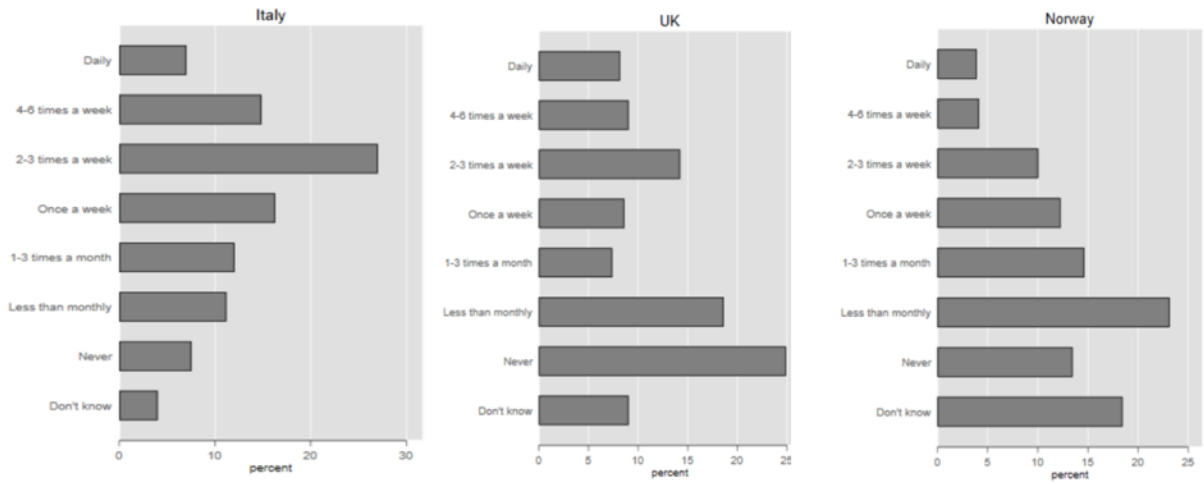

Figure 2.1 Thinking about eating habits in your household over the last month, how often did you eat organic food? (Vitterso et al., 2019, 19-21)

Looking at figure 2.1, one can see that Italian consumers tended to consume Organic foods more frequently than their counterparts in the UK and Norway. Furthermore, in the UK almost 25% of consumers stated that they had not consumed any Organic food in the past month prior to being surveyed. In addition to these differences in the relative popularity of Organic foods, there are also important differences in the retail structures and avenues to market for Organic foods across these countries. In the UK and Norway the food retail sector is dominated by a small number of large supermarkets, in contrast in Italy and especially Southern Italy there are a greater number of small independent retailers supplying food. This retail structure also shapes the provisioning of Organic foods, with the majority of Organic foods being sold through supermarkets in the UK and Norway compared with Italy. However, there is some evidence to suggest that alternative retailers and routes to market are beginning to gain ground, especially in the UK and that we might have reached 'peak supermarket supply' and this may be the case for non-organic and organic produce.

The nature, size and character of Organic farms, as well as the types of issues that Organic farmers are facing also differ across the study countries. For example, the specific climatic conditions of Norway present specific challenges for small producers trying to conform to blanket regulations formulated to be applicable throughout a broader range of geographical contexts. All these structural social and economic factors help to shape the pre-occupations

and priorities of the HF participants and help to provide us with a broad and varied view of the key contentious issues and inputs in Organic farming across different European contexts.

In the coming sections we outline in more detail the methodology that we adopted for the HFs and the ways in which we recruited participants. We then discuss the key findings from the UK, Norway and Italy, taking each HF exercise in turn ranging from initial broad exercises around what constitutes 'good food' and exploring participants' associations with 'Organic', to more specific exercises about participants' views about contentious inputs/issues within Organic agriculture. Then, in section 7, we discuss the specific contentious issues that were focused on in-depth by each HF, namely plastic mulches in the UK, antibiotics in Italy and soil fertility in Norway. Finally, we conclude by drawing comparisons between the findings across the different countries and by considering how the transdisciplinary approach adopted throughout the Organic-PLUS hybrid forums can help to take us beyond a narrow focus on input substitution to embrace a far broader range of ideas about how to improve Organic agriculture.

3. Methodology

The Organic-PLUS hybrid forums (HFs) were one of the many mechanisms that were employed within the project to understand and incorporate the views and concerns of practitioners and broader publics. Developing a deeper understanding of the pros and cons of Organic food and agriculture, as well as identifying which contentious issues are the most significant and how they should be dealt with, are complex issues which require social, ethical, political and economic knowledge in addition to natural scientific insights. The Organic-PLUS hybrid forums contributed to this transdisciplinary approach by providing an arena for famers and consumers in the UK, Italy and Norway to express their own views about what is and is not contentious within Organic agriculture and to enter into a dialogue with natural scientific experts about the best ways to deal with these issues and to further develop Organic food and agriculture. Crucially, these HFs took place over the course of several weeks, which provided ample opportunity for shared learning and dialogue.

Through a series of discussions, presentations, creative engagement and group exercises, farmers and consumers were encouraged to work together to explore perceptions of Organic agriculture, feed into the Organic-PLUS project and add their voices to the future development of Organic food more broadly. As well as addressing some of the broader debates around the future of organic food and farming, we also worked together to scrutinise some of the more scientific/technical issues and dilemmas that are central to the future development of organic agriculture and yet are often not considered in broader public arenas.

In each country the HFs consisted of 10-15 participants, aiming for a balance of 1/3 farmers and 2/3 consumers. The farmers who participated in each country were all organic in certification or ideals, including at least one animal farmer, different scales of farm and some which took the ideals of organic further (e.g., bio-dynamic/regenerative/small-scale sustainable but not certified). Although not possible to be statistically representative with such a small group, consumers were selected to include diversity in the amount of Organic food consumed, their income level and gender.

A series of 2-hour sessions were held in the UK, Norway and Italy. In the UK we hosted 6 weekly meetings in the early evening (6-8pm). In an aim to flatten the hierarchy of scientific expertise/perspectives over experiential expertise, farmers and citizens were asked to discuss their own perspectives first, before hearing from conventional ‘experts’ and sessions built up from everyday issues toward more complex/technological issues to develop participants’ confidence in their own viewpoints. To encourage participation from a range of backgrounds and levels of existing interest in Organic food, participants were paid £15 per hour for their involvement.

Due to the coronavirus pandemic some of the sessions were moved online, but we still used a range of exercises and props during each session to get at different ways of engaging with/knowing different aspects of food consumption and production. To facilitate different types of engagement the video-conference sessions were augmented using an online whiteboard tool for visual exercises and collaboration within the sessions. Participants were also sent samples of some of the physical inputs that we discussed (e.g., plastic mulches), so they had some direct material contact with what was being talked about. Additionally, between sessions our accompanying ‘Improving organic’ website had a separate password protected area for participants, which included a forum, a space to upload and access content, and the facility to ask questions of the organisers.

As the dialogue progressed, we expected to see certain changes in participants' views and opinions. These changes were tracked by replicating the 'associations with Organic' exercise in session 2 and session 6; conducting short reflective interviews with participants after the final session; and via an in-depth analysis of the form, content and style of participants' contributions (discourse analysis) and the dynamics of the interactions between group members (conversation analysis).
The overall rationale behind the design of the sessions was to begin 'closer to the consumer' with broader framings of 'what is good food' and then to gradually progress towards discussing Organic food and then contentious inputs in organic farming (more generally) – before focusing on more specific details of certain contentious inputs. The final two sessions then related to specific issues around 'modelling' and 'implementation' (see appendix 1 for the full session protocols).

3.1 Recruitment

Norway
The Norwegian HF consisted of 13 participants primarily recruited from the Community Supported Agriculture (CSA) Hadeland Andelslandbruk. The CSA is a collaboration between 3 farms practicing partial to full organic farming and a group of consumers. Six consumers were recruited from the CSA, whereas one was living on one of the participating farms. Three farmers participated while the remaining 4 consumers were recruited through snowball sampling.
The basic inclusion criteria were the same for all three groups: Female/male; age: 25 years and over and the participants were to be responsible for their own household and food purchases. As far as possible we wanted a gender balance, however, male participants were much harder to recruit than females and we ended up with a total of 10 women and 3 men. The demographics were as follows (table 3.1):

Table 3.1: Age and gender of Norwegian participants

Age groups	**Number of participants**
≤ 39 years	3
40-49 years	3
50-59 years	5
≥ 60 years	2
Gender	
Female	10
Male	3

All participants received written information about the study prior to the Hybrid Forum. They were informed about their rights as research participants and provided us with a written consent for participation. Throughout the sessions we either divided the participants in mixed farmers and consumers groups or separated the farmers in one group and consumers from the CSA and outside of the CSA in two other groups. These three subgroups were either mixed together or held separately based on the topic of the discussions. The number of participants varied between the sessions from thirteen people in the first session to eight people in the second (Table 3.2):

Table 3.2: Number of participants in each of the four sessions

Session 1	Session 2	Session 3	Session 4
13	8	12	11

All participants received compensation in the form of gift cards amounting to 500 NOK. Those who participated in three or more sessions received three cards each, and those with only two sessions received two.

Italy and the UK

In Italy and the UK participants were recruited by means of a 5-minute survey distributed via advertising on Facebook and completed by 306 respondents in the UK and 440 in Italy.[1] This recruitment survey included multiple choice demographic (age, gender, income, education level, ethnicity) and frequency of Organic food consumption questions, as well as two open-answer questions: 'What comes to mind when you think about good food?' and 'When you think about food which problems stand out to you?'

Having such a large number of potential participants to choose from enabled the selection of a balanced group of participants covering a good range of regions (figures 3.1 & 3.2), demographic variables and levels of Organic consumption (as well as production types in the case of farmers – see tables 3.3 – 3.6 below). The questions about thoughts around 'good' food and food problems enabled us to cover a spread of these opinions as well as gaining some understanding of how engaged participants were likely to be. The final groups consisted of 9 consumers and 5 farmers in both countries.

Figure 1.1: Regional distribution of Italian participants

Figure 3.2: Geographical distribution of UK participants

1 In the UK participants were offered a chocolate bar to complete the short survey, in Italy the only incentive was the chance to be chosen to participate in the groups and be paid for that in this eventuality.

Table 3.3: UK Consumers

Gender	Age	Ethnicity	Education	Income (£)	Organic	'Good' food	Food problems
Trans female	25-34	White	Low GCSE or equivalent	v. low Less than £15,000	V low	Food prepared well that tastes good, shared with friends. Ingredient quality no issue	Clashing flavours and textures
female	45-54	White	Mid AS/A level or equivalent	v. low Less than £15,000	never	Good quality food, healthy food and well-cooked food	Food that makes you put on weight
female	35-44	White	Low GCSE or equivalent	Mid ¬£25,000 to ¬£34,999	high	Healthy, good vibes, makes me happy, organic , cruelty free	How it was made, if it's in my shops, price
female	55-64	White	v. high postgraduate degree	High ¬£35,000 to ¬£49,999	2-3 wk	Home prepared, traditional, I have been a vegetarian for 30 years, but somehow the image is a roast chicken dinner. Chicken is the cruellest meat.	Eating involves something dying plant or animal. Cheap food means lower welfare standards- dear food means people go hungry.
male	45-54	White	Mid AS/A level or equivalent	mid ¬£20,000 to ¬£24,999	high	Fresh veg and fruit, spices, variety.	Making sure that we get all the nutrients we need to thrive. Feeding everyone without destroying the environment.
female	45-54	White	High Undergraduate degree	High £75,000 to ¬£99,999	2-3 wk	Nutrition and health	Fast food and chemicals
male	25-34	Asian/Asian British	High Undergraduate degree	v. low Less than £15,000	2-3 wk	Something that is not genetically modified and is organic. It's also something which is proven to be in some way nutritious for your body	The biggest problem for me is when food is genetically modified. If food is injected with unwanted substances. I think that's the biggest problem.
male	35-44	White	v. high postgraduate degree	v. high £100,000 or more	High (4 - 6 times a week)	Culture, Evocative Flavours, Interesting and Exciting Combinations and Environment. A total experience.	Preservatives. Processing. Allergies. Cost. Chemicals and contamination.
female	18-24	Asian/Asian British	v. high postgraduate degree	v. low Less than £15,000	v. low	Flavour, value for money	Food waste and carbon emissions associated with it as well as the ethical issues of famine.

Table 3.4: UK Farmers

Gender	Age	Ethnicity	Income (£)	Farm size	Farm type	Environmental measures	Organic consumption	'good' food	Food problems
Male	35-44	White	20-25,000	1350 acres	cereals	Regenerative not organic	V low	Traceability, assured, locally sourced	Lower grade imported produce
Male	35-44	White	25-35,000	40 acres	livestock	Regenerative not organic	Mid	Sustainable, livestock focused, green, extensive and flavour	Overuse of pesticides and medicines in animal health, getting into our food
Male	45-54	White	25-35,000	7 acres + farmer-liaison role	seed potatoes	All Organic	High	nutrient dense sustainable ethical (animal health, conditions of workers)	Soil degradation/ fertility Biodiversity loss Animal welfare in intensive systems Seed variety/ Diversity, GM Fragile, fossil fuel dependent food systems
Male	25-34	White	20-25,000	2 acres	Horticulture	Organic (some) Biodynamic Regenerative Low-input	High	Local, organic, seasonal and grown on undisturbed, biodiverse soil	Poor quality, monoculture, large scale, chemical polluting, lack of education, disconnection, post-war "green revolution"
Female	25-34	White	Less than 15,000	2.5	Horticulture	Organic Regenerative Minimum tillage, cover cropping	High	Organic, Agro-ecological practices, local, short supply chains	Financial viability, market competition, lack of subsidisation for small scale production, consumer awareness

Table 3.5: Italian Consumers

gender	age	ethnicity	Education	Income (€)	Organic	'good' food	Food problems
Female	25 - 34	White	Secondary school	75,000- 99,999	Once a week	Good food - one that completely satisfies the needs of the person, especially according to his age.	Food-related issues are an excessive concern for weight and body shape
Female	35 - 44	White	Postgraduate degree	35,000 - 49,999	2 - 3 times a week	Health, sustainable nutrition, promoting a healthier and greener future	Intensive agriculture, greenhouse gas emissions, food waste
Male	35 - 44	White	Secondary school	20,000 - 24,999	Never	Nutritional quality, flavour, compatibility with my food choices and tastes.	Production processes and the price of quality nutrition.
Female	45 - 54	White	Undergraduate degree	50,000 - 74,999	4 - 6 times a week	Quality ingredients, love in preparation. Plant based nutrition.	Foods which are too refined, of poor quality, and have a high environmental impact.
Male	18 - 24	White	Secondary school	Less than 15,000	Every day	Slow food	Too much added sugar in the foods we eat more and more frequently
Male	35 - 44	White	Postgraduate degree	20,000 - 24,999	1 - 3 times a month	Quality food and / or cooked well and in a sophisticated way. Eat healthily.	Junk food
Male	55 - 64	White	Postgraduate degree	15,000 -19,999	2 - 3 times a week	Healthy raw materials and careful preparation	Distance between places of production and consumption. Relationship between ecosystem and food production. Relationship between agricultural production and landscapes.
Female	45 - 54	White	Secondary school	50,000 - 74,999	Less than once a month	Healthy and quality food. Mediterranean diet	Food waste
Female	55 - 64	White	Postgraduate degree	25,000 -34,999	2 - 3 times a week	Genuine food, made from local and seasonal ingredients, grown / raised in a sustainable way	Excess production / waste, intensive and environmentally unsustainable crops / farming, prices not related to the value of food

Table 3.6: Italian Farmers

Gender	Age	Ethnicity	Income (€)	Farm size	Farm type	Environmental measures	Organic consumption	'good' food	Food problems
Male	35-44	White	Less than 15,000	25ha	Mixed	Organic, biodynamic, regenerative	Everyday	good food comes from organic biodynamic companies or companies that are attentive to those processes of regeneration and fertility of the soil.	Not everyone knows the difference between a food produced by a small organic company and that of the GD. It is evaluated only on price, not quality.
Female	45-54	White	50,000-74,999	30ha	Cereals	Organic	Everyday	A food that has not undergone chemical treatments of any kind	That the real perception of the product is difficult, there is not always culture and in-depth analysis by the consumer
Female	35-44	White	15,000 - 19,999	12ha	Horticulture	Organic	Everyday	Food that is not bad	The presence of toxic substances, the lack of information about what the food itself is, the preparation and above all the ingredients
Male	55-64	White	20,000 - 24,999	18 ha	Horticulture / Mixed	Organic, agro-environmental measures	Everyday	Cultivated organically, favouring the biodiversity of the agroecosystem and local traditions	The risks associated with the various sources of pollution and the inadequacy of institutional sensitivity with respect to environmental protection
Male	25-34	White	Not declared	No data	Olive Oil	Organic	No data	No data	No data

4. UK Results

Rosa van Kesteren, Adrian Evans

Session 1: 'Good' Food

The sessions started broadly by talking about good food in general. *What does good food mean to you? What makes food good?* Together participants created a collage of their associations with good food. Figure 4.1 shows the complete miro board (detailed pictures here) and the labels attached to the pictures are reported in table 4.1. It is clear that good food covered a wide range of considerations, with only 13 of the 46 comments (39%) referring to ethics or sustainability.

Figure 4.1: Good food collage

Ethics	Preperation/ social	Health/ nourishment	Sensory	Other
People paid fairly for their produce / no contract exploitation	Time spent cooking for friends	Micronutrients	Chilli- During the winter, hearty meals which are tomato based are one of my favourites- with lots of topping options: sour cream, cheese etc.	Fresh produce
Grown without chemicals	Sharing	Nutrition	Also, fresh fruit is always a favourite, especially berries, however we try to eat fresh berries only during the summer and frozen during the winter.	Porridge oats bran wheat
Seasonal x 2	Instructions	Soylent	High grade sushi	Fresh
Organic produce x3		Nutritious	Rice	Venison
Sustainable x 2		Fruit veg organic	Tasty x2	Egg
Foraging		Healthy food	9 x favourite fruit and veg varieties	
Traceability		Green	2 x favourite foods - shepherd's pie and steak	
Well produced				
Free range eggs				

Who should ensure good food?

What are the responsibilities of consumers, farmers, retailers & government in ensuring we have good food?

Participants broke into three groups of 4/5 people to note down and discuss their thoughts. The Miro boards each group created are reproduced in figure 4.2 below.

Group 1 (consumers)

Group 2 (consumers)

Group 3 (farmers)

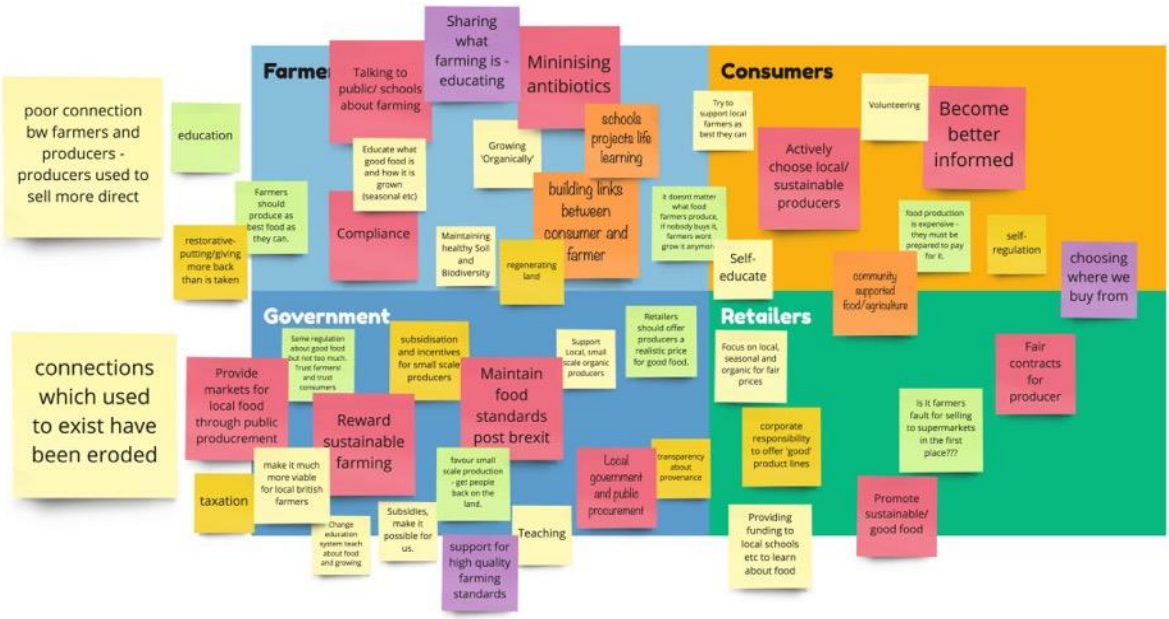

Figure 4.2: responsibilities for good food (miro boards)

The responses of farmers and consumers are contrasted in table 4.2 and summarised below. Even with just over half the number of participants, the farmers generated a higher total number of comments – with consumers contributing just under one response per category (3.7 each) and farmers contributing over 2 (9.4 each). This stemmed from large discrepancies in the categories focusing on the responsibilities of farmers and government, which is perhaps unsurprising as farmers have more experience in these areas.

Responsibilities of farmers: both farmers and consumers mentioned taking care of the people, animals and environment as part of their responses, but farmers had a stronger emphasis on their responsibilities to educate and link up with consumers better.

Responsibilities of consumers: the vast majority of responses saw consumer responsibilities being to choose to buy ethically and to educate themselves to make this possible.

Responsibilities of government: Both groups mentioned regulation setting and enforcing good food standards, providing financial support/relative advantages for small-scale/ethical farmers and

changing the national curriculum to teach about food and growing. Farmers also mentioned opening up access to public procurement as important.

Responsibilities of retailers: Fairness in prices and contracts with farmers was a real thrust of retailer responsibility, as well as changing the produce they stock, responsible marketing and promotion of 'good' food.

Topics discussed

Food price/expenditure was the main topic arising in session one:

"I know… it's expensive for the growers to produce the food – as a customer then I'm trying to buy more Organic stuff in the shops, but you definitely will notice the difference in the prices… and it's quite difficult, I will be honest with you."

"land prices are ridiculous… I want my own farm, but quite simply can't afford to – because it is very expensive to have lower prices to provide for everyone"

"food is now the cheap item whereas accommodation used to be the cheap item but the whole household budget is still under pressure."

"there's plenty of people I work with who earn a decent living and they've got a bit of money to spare, and they still will go cheap, cheap, cheap [with food choices]."

Other topics discussed were:

Quality

"my wife… prefers buying high quality stuff, and yet, when I… made her taste each piece to tell me which one was the high quality one and which one was the no brand nothing… she literally couldn't tell"

"the quality of food can depend on so many things – mostly soil quality – which are things you might not see… usually is quite obvious when you can see good quality vegetables… but there are massive, massive effects that go further than the eye can see"

Branding

"a huge part of this conversation is branding and marketing and local growers don't have that."

"I think… knowing the farm and the connection between the producers and consumers is more important than a certification. As long as you know the truth behind it."

The relationship between Organic and 'good' food

"probably due to the press there has been polarisation – if you're not organic you're obviously a highly intensive farmer. But there's a range of farms range of businesses in the middle. And I think if we could see the centre ground move towards more Organic sustainable principles, that's probably where it [improvements] should lie."

"there's so much more that can be done to regenerate land and take care of soil and animals which isn't encompassed by the Soil Association standards… also… you have large field scale operations that are certified Organic that don't necessarily build soil"

The pervasive influence of retailers in shaping the food market

"this comes from a totally consumer point of view, but essentially… farmers go where the market is, they don't create the market. Therefore they are probably the least responsible for this piece of the equation… marketers are controlling the market and the marketers are mostly linked to the retailers."

"ultimately if products don't sell, if they don't make any money out of it, then they [farmers] are in a downward spiral."

"the only sort of exposure, we get to anything like even vaguely farm related is through the supermarkets telling us this is what's happening and how good we are at doing this and this is how good our farmers are but I've got no idea whether that's true or not."

Table 4.2: Responsibilities for good food – comparison of farmer and consumer

Consumers	Farmers
Farmer responsibilities	
No hormones	Sharing what farming is - educating
Free range	Educate what good food is and how it is grown (seasonal etc)
To ensure even if there is no certification, to try and uphold the values of good food (sustainability, ethical) and make the locals they provide to aware of their work.	Talking to public/ schools about farming
Soil stock, environment, supply chain	Education
Getting the food to the shops fast	Schools projects life learning
Good working practices	Building links between consumer and farmer
Working to guidelines of whatever body or crop they're working with	Poor connection btw farmers and producers - producers used to sell more direct
	It doesn't matter what food farmers produce, if nobody buys it, farmers wont grow it anymore
	Compliance
	Mininising antibiotics
	Growing 'Organically'
	Farmers should produce as best food as they can.
	Restorative- putting/giving more back than is taken
	Maintaining healthy Soil and Biodiversity
	Regenerating land
Consumer responsibilities	
Only buy free range	Self-educate
Plastic free	Become better informed
Consumers have a duty to consider animal welfare in their choices	Volunteering
Within their budget and requirements to try and shop as local, seasonal and plastic free as possible.	Self-regulation
Choosing a product that fits current circumstances and not allowing retailers to use things like loss leaders to price smaller people out of market	Food production is expensive - they must be prepared to pay for it.
Ethical v cheap, knowledge of provenance	Actively choose local/ sustainable producers
Awareness	Try to support local farmers as best they can
Buying good quality foods	Choosing where we buy from
	Community supported food/agriculture
Government responsibilities	
Animal welfare should be regulated and checked	Reward sustainable farming
Baseline regulations… then liability should be opened-up for the corporations	Subsidisation and incentives for small scale producers

Fair to smaller producers, enforcement of environmental rules	Make it much more viable for local British farmers
Fairness to farmers	Subsidies, make it possible for us.
Tax free to help farmers	Taxation
Provide subsidies and provisions for farmers to produce 'good food' as well as consumers to purchase	Some regulation about good food but not too much. Trust farmers! and trust consumers
Not creating legislation to favour larger companies over independent and / or bringing the hammer down on any party that does act in an anti-interest way	Support for high quality farming standards
Well-structured and monitored standards	Maintain food standards post Brexit
Education plays a huge role in determining consumer choices - e.g., children taught about nutrition and cooking	Local government and public procurement
	Provide markets for local food through public procurement
	Connections which used to exist have been eroded
	Support Local, small scale organic producers
	Favour small scale production - get people back on the land.
	Transparency about provenance
	Teaching
	Change education system teach about food and growing
Retailer responsibilities	
Make sure it's only free range like eggs	Focus on local, seasonal and organic for fair prices
Just buy product from local farmers	Fair contracts for producer
Marketers make the market	Retailers should offer producers a realistic price for good food.
Fair contracts	Is it farmers fault for selling to supermarkets in the first place?
Fair prices to quick turnover of stock	Corporate responsibility to offer 'good' product lines
Fair prices	Promote sustainable/good food
Honesty with consumer, sustainability over marketing	Providing funding to local schools etc to learn about food
Transparency in the entire process, fair contracts to all parties, not maximising profits by stepping on the smaller people	

Session 2: All about Organic

Focusing on Organic food in particular: what it is and what might be contentious about it.

Associations with Organic food

Participants wrote associations with Organic food onto virtual sticky notes and added them to the associations of other participants on a collective board (shown in figure 4.5 and tabulated in table 4.3).

Ethical production associations were frequent for both farmers and consumers, but for consumers expense, luxury and health were as common. For farmers expense and health associations were heavily outweighed by ethical production, with working with ecosystems, avoiding chemical use and soil health mentioned particularly frequently.

Outside these broad categories, additional associations included labour intensity, limited choice, simple/real food, taste, naturalness and clever farming. Doubts were raised about the potential for Organic certification to be misleading and the relative carbon footprint of Organic production.

Table 4.3: Associations with Organic food – comparison of farmer and consumer responses compared)

Associations with Organic Food	
Farmers	**Consumers**
Labour intensive	Certified
Expensive	Expensive
More expensive than conventionally produced	More expensive
Focused on middle class at the moment	Costly- more of a luxury than every day, especially with a large family.
Taste better	Taste better but more expensive
Small scale	Bespoke/low volume
Quality	High Quality
Not very big choice in small shops	Not as much choice available
Simplified food	Clean
Healthier? (possibly)	Natural & Healthy
More nutrients, tastier	Nutrition
Healthy	Nutritious
Nutritious	Fruit and veg
Processed in a clean manner	Fruits & Nuts
Beautiful looking crops	More imperfect and natural looking
Real food	No chemicals
Slow (in a good way!)	Fewer or no pesticides or weedkiller
Ethically produced	Environmentally friendly
High animal welfare	Soil
Sustainable	No harmful chemicals
Better for the environment	Pollinators
Encouraging biodiversity	Less intensively farmed
Diverse ecosystems	Better for the environment
Biological processes	No pesticides
Feeding soil not plants	Other chemicals used that are approved?

Healthy soils	No use of pesticides or herbicides
Working in harmony with land	
Right varieties/ breeds for conditions	
Clever farming	
No use of chemicals	
No chemicals	
Using clean material	
Organic certification can be misleading	
Do organic animals have a bigger footprint than conventional systems?	

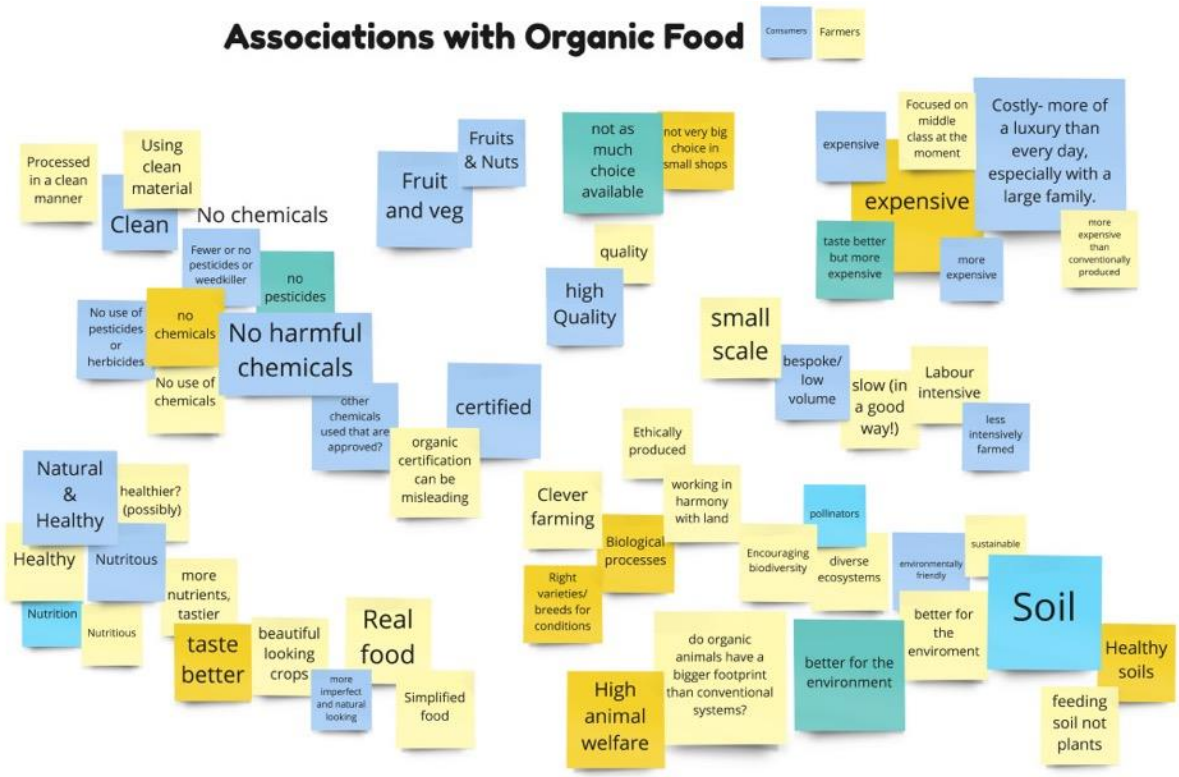

Figure 4.2: Associations with Organic food

Problems with Organic Food

During a similar brainstorming exercise participants shared what they regarded as problems with Organic food. Their responses are shown in figure 4.6 and tabulated in table 4.4.

The problems the consumers were most aware of were the limited selection of products available and the additional expense. These two made up a large majority of the responses. Other problems mentioned were the perception that Organic is for posh/rich people, food miles, conflicting studies and misleading information.

Farmers also mentioned problems of limited choice and expense, but they were more focused on the costs and practical difficulties of certification as well as doubts over how well Organic could assure sustainable provision of food.

Table 4.4: Problems with Organic food – comparison of farmer and consumer responses compared)

Problems with Organic	
Farmers	**Consumers**
Not enough choice in the small shops	Small niche section in supermarkets
Not enough choices during the different seasons	Not as much variety
Expensive	Lack of variety
Price	Only a small range of products
Aimed at a richer demographic	Speciality items such as non-western crops are harder to obtain as organic: 'exotic' fruit and veg.
Cost of running	I like to select the variety of some vegetables - e.g., Picasso potatoes - this is not usually possible
Sometimes higher labour investment	Scarcity
Expensive certification	Not always available
Cost of certification for small producers	Not Easily accessible
Difficult to obtain and maintain certification	Not available everywhere
Maintenance	No Recognised Brand Names
Paperwork	Price
The classification of 'organic' pesticides	Price
Doesn't guarantee local and seasonal	Expensive
Is intensive conventional farming more sustainable than extensive organic farming? Lower footprint? less land??	Expensive
Doesn’t guarantee soil replenishment and recovery	Expensive
Is it actually organic? Derogations to allow chemicals and non organic feedstuffs	Perception that it is for posh/rich people
Derogations causing mistrust	Distance travelled...
Different certification bodies	Conflicting studies
Misleading certification	Misleading information
Sometimes seen as just a brand	
Monoculture scale 'organic' not that different from conventional	
The press/papers often portray organic and conventional as polar opposites - and not what it is a whole range of farms and types between the two	
Markets for some things too small	
Not enough processing facilities for some products	
Some pest/ weed/ disease problems hard to deal with	

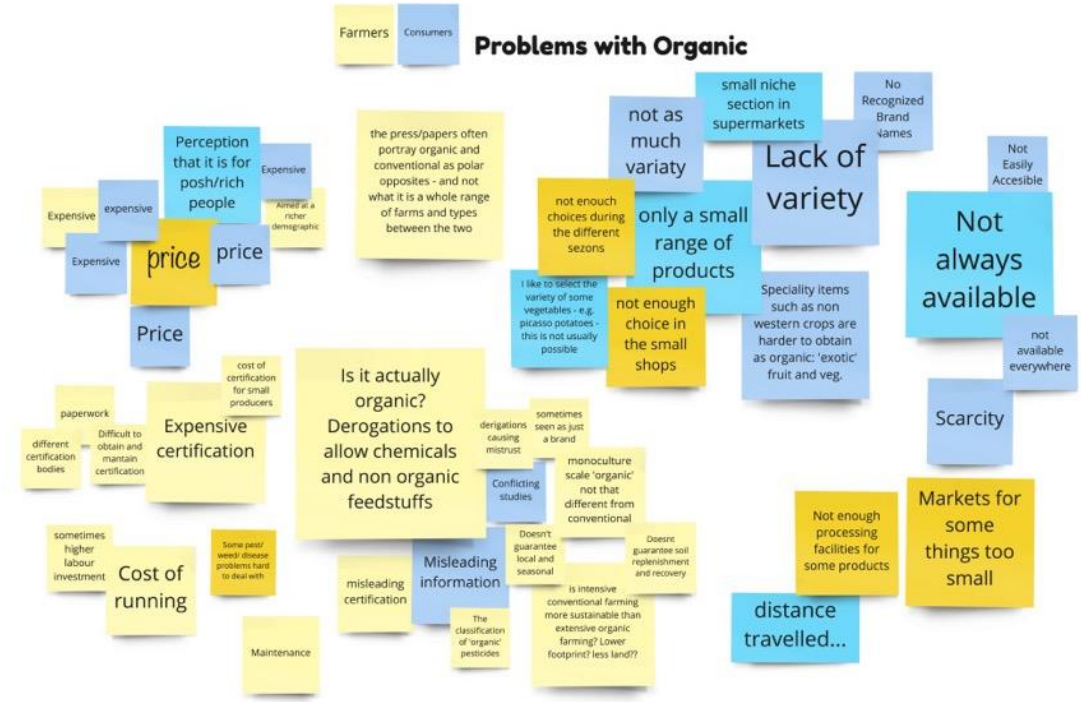

Figure 4.3: Problems with Organic

Focus on Organic PLUS Contentious inputs

After a concise introduction to Organic certification, its key features and differences with conventional farming, participants were presented with the specific contentious inputs which are the focus of the Organic PLUS project and the key contentions raised in the previous WP2 focus groups (first two rows of sticky notes in figure 4.7).

Following a whole group discussion, participants were invited to add any additional contentions to those previously raised in the project – these can be seen in the bottom row of sticky notes in figure 4.7. Finally, this selection of 17 contentions were prioritised through a vote (three votes per participant). These were allocated as shown in figure 4.7.

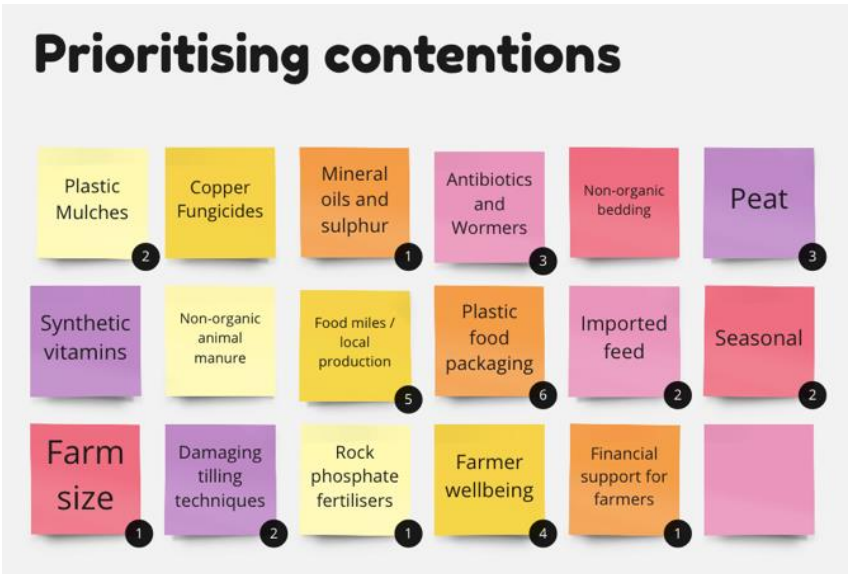

Figure 4.4: Prioritising contentions in Organic farming

Although it gained the most votes in the initial individual vote, plastic packaging lost out in the subsequent discussion and local production and farmer wellbeing came out top when participants

were asked to prioritise among the top three options. These are considered in more detail in session 4.

Topics discussed

Farmer wellbeing

"Lots of small-scale organic farms might have farmers working 70-hour weeks in order to be able to produce and compete, and many people are self-employed and they do it themselves… [overworking because of] the price they can get for their product and the cost of employing additional workers"

"it's a hard job – you're committed to it – it's not an eight to five job, it's whenever the weather's right… there's so many factors to it. You've just got to get it done when you have [to]"

"Farmers well-being, I think it's quite important… because they are producing food for us. We have to look after them… and I think that they should have more support from the government also and other customers."

Is Organic a market opportunity or a broader ideology?

"You can go into Lidl… and get a broccoli, which is Certified Organic… they're still farming at the same scale with the same mechanisms and not necessarily investing in the land as a smaller scale producer might… different versions of Organic all fall under the same umbrella."

"you might have farmers who are just doing normal quite damaging ways and farming, but they see, oh, we can make money from Organic rather than thinking, oh, we need to do things the right way so we can make a profit there. Let's go down that road and cut corners."

Organic vs. small scale local

"you can go into a supermarket and… they will… have organic veg available, but it's come halfway around the world. So that's the downside"
"there's a lot of small farms doing really great things growing really well, but… they could say Organically grown without certification because it's just too much hassle and money to obtain that."

Information confusion about benefits of Organic

"there's a lot of conflicting studies on Organic food… you'll have one paper… say yes, it's worth it, you should have everything Organic. And then literally, maybe three or four pages later, it'll be… it's not worth it. Why are you doing this? Don't spend the money. And it just… adds to the confusion."

Taste

"a healthy, happy plant… is a tasty plant, so just being Organic, not being dowsed in chemicals, makes it tasty. But also things like growing at the right time seasonally and locally… is a massive factor in taste, and taste is also linked to nutrition and health."

Session 3: Plastic Mulches

This session focused on one particular contentious input: plastic mulches.

Initial thoughts about plastic mulches

Consumer discussion: limited knowledge, plastic mulches were problematic but perhaps necessary – can addressing them be as important as reducing plastic packaging?

> *"No, I've never heard of that"*
>
> *"From what we saw last week, there's a lot of regulations and strict guidelines as to what can and can't be used. So, I feel like this is… not exactly something preferable that people really want to do because there are risks like… the micro plastics or whatever, but… [Organic farmers] have to use because we can't use a lot of others that like conventional farming would use"*
>
> *"My perception… was that compared to packaging it's kind of a drop in the ocean…. It's… just an assumption I have come to because… it doesn't seem to have been brought forward as much of an issue in comparison to all the packaging we've got, which is obviously horrendous."*

Farmer discussion: we can't afford alternatives, plastic mulches are really good for clearing resilient weeds, they save labour costs and make farming possible on otherwise prohibitively weedy areas, although they can be hard to apply without specialist machinery.

> *"we've been trying to use less… We had a look at the biodegradable ones, but we couldn't really afford it… it's a really useful way of suppressing with ease and clearing a large area"*
>
> *"we've got a shed specifically for Mypex – we call it the Mypex Cathedral… it's one of these things – we hate it but we couldn't do what we do without it."*
>
> *"plastic mulch… if you don't have a machine to lay it, it's actually really quite hard work. It takes a lot of time. It's also quite difficult to put on correctly without ripping it. And the minute you get a rip then the wind takes it."*

Plastic mulches in Organic farming and the Organic PLUS trials

Participants were shown a video about the Organic PLUS plastic mulch alternative trials at Coventry University (available here: https://youtu.be/Wk9-dhzMrEQ) followed by a live presentation and Q&A with Francis Rayns who is conducting these trials. Topics the group discussed included:

Where the materials for plastic mulch alternatives would come from: *"would that not be quite difficult to ensure that that those materials will fit organic standards? Especially with green waste – it's pretty hard to know where that comes from"*

Potential positive and negative impacts of alternatives: *"the natural loose mulches can affect nutrient status… using grass clippings, for instance… potentially, much higher yields because the nitrogen released from the breakdown of the grass was feeding the crops."*

"Another solution to the problem might just create a new problem until we fully know the impact these… bioplastics have…. long term, plastic might be the more positive solution, because you're saying how the woven ones last 10 years… [that] might be better than the new bioplastics degrading"

A sense that the problem is highly complex: *"I don't think anything comes out as a clear winner, does it – everything has advantages and disadvantages, so I can see why people are using the old plastic… it's just not very easy to come up with, you know, an Organic friendly solution."*

"I think that I continue to hold a very low confidence opinion in my ability to judge anything… I feel like I just don't have enough data. Period."

"we were told a lot of information there, and directly… shown what was better in certain circumstances, but all that could do is… just inform me on those circumstances. There's so much… applicable knowledge that I just don't have"

Creating a farmer-facing factsheet and consumer-facing newspaper article

Participants were divided into two mixed groups. Working on templates on Miro with pre-defined prompts, each group brainstormed content for either a factsheet for farmers or a newspaper article aimed at consumers. After 20 minutes the groups swapped over and added to the other topic for 10 minutes. The notes they added under each prompting question are shown in tables 4.5 & 4.6 below.

Table 4.5: Farmer-facing factsheet about plastic mulches

Why are plastic mulches used in Organic agriculture?		
Save time	Protect harvest	Control weeds
Shorten time to harvest?	Water retention?	
Weed control without need for pesticides	Used to circumvent the need for "traditional" pesticides	Save hand labour, therefore money/costs
What are the alternatives to plastic mulches?		
Organic matter	Burning weeds	Weeding
Film mulches	Corn starch / potato starch	Paper mulches?
Wood chip, hay, straw, green waste compost	Other weed prevention techniques (longer term, less dig)	Smaller scale manageable farms
Growing in a medium other than soil? Soilless substrate?		
Why is the use of plastic mulches contentious?		
Not biodegradable	Still fossil fuel derived	Chemical contamination?
Break down in soil	Concern about microplastics	Looks horrible - aesthetics
Adds to the "overuse of plastics" argument	Not very sustainable, but then is more than nutrient overloading through fertilisers	Constant message that all plastic is bad
What are the limitations of these alternatives?		
Expensive?	Might not prevent slugs!	Transport/ processing
Expense, testing still needed for a lot of types	Need continuous application	Affect nutrient dynamics
Break down, difficult to remove	Need to make sure that the mulches are sourced in a manner that do not compromise organic status	Can be hard/ expensive to apply if you don't have specialist kit
Not reusable	Disposing	

Table 4.6: Consumer-facing newspaper article about plastic mulches

What' the story? Suggest a potential headline..		
Farmers manage weeds without chemicals	No to weeds	No perfect solutions
Can we be plastic free from farm to fork?	Plastic free - An economically viable option?	Environmentally friendly mulch
Shall I take cover?		
Why are plastic mulches used?		
To stop weeds coming through	Manual weeding is too labour intensive and expensive raising the cost of the final product and perhaps reducing its accessibility for everyone	Can be used many times if not damage
To prevent weeds growth	No better alternative for now	Save time for other farm tasks
Efficiency	Is cheaper	
Why should consumers care?		
For future generations	Impact on human health	Yields affect price of goods
cost of their org produce	Efficient farming = more money in your pocket	For environment reasons
To realise how much work goes on behind the scenes	All about sustainability, we should care as it's our future and thus the conscious choices we make/ pressure farmers to make is beneficial for all.	Plastic residues could end up in food or pollute the environment
Things aren't as organic as they appear	Quality of crop affected by potential leaching	Microplastic ending up in the soil
Food may not be fully organic		
How 'Organic' are plastic mulches?		
80%	75%	Can be hard to recycle
Mostly! They avoid chemicals but they have some drawbacks too!	The common definition of organic I feel is seen as no pesticides, but the extent is unknown if the production of these plastics isn't chemical free. But then, where do we draw the line?	How organic are the materials in the mulch?
They can have quite a high carbon footprint	Risk of leaching	
Other ideas/headings		
Can gauze or other similar material be used as an alternative	Other ways of reducing weeds - soil disturbance etc. Mulches aren't only organic option	Current business as usual model so people are hesitant to change?
Can this be linked to farm size? what is manageable?	Where to draw line with loose organic mulch materials?	Organic principles v realistic economic solutions

The abiding sentiment from participants at the end of the session after the presentations and discussions was a heightened sense of the complexity involved and the extent of the challenge of addressing the contentious issues in Organic farming:

“Organic farming’s been around for a while and I think we’ve kind of got to the stage where we’ve solved all the really easy stuff. And we’re just left with all the really difficult, complicated bit and I think that’s just where we are with all of these all of these contentious inputs… there are no straightforward, simple answers.” (farmer)

“you go in, you have your basic framework. And then as you dig deeper, you realise that it just doesn’t apply, it’s just incredibly complex and… there’s no easy answers and it sucks and you’re in this really confusing grey area where every decision has a trade-off. And basically, no one’s going to be happy. And that doesn’t seem like a really good place for easy policy decisions going forward.” (consumer)

Session 4: Local food and farmer wellbeing in Organic farming

At the end of session 2 participants chose local food provision and farmer wellbeing as the key contentions for them within Organic farming. Local food was seen to be important because food traveling a long way seemed contrary to Organic principles and small local sustainable producers might be excluded by the cost of Organic certification. Farmer welfare in Organic was prioritised because of perceptions of long working hours, limited financial support and questions of what assurances were available in times of crisis.

Local food and farmer wellbeing in Organic farming

Participants were given a presentation by Ben Raskin, the Head of Horticulture at the Soil Association around what their approach is to these issues (available here). After the presentation participants were split into three groups to discuss their thoughts (farmers and consumers separated). Main issues raised:

Whether local improves relationship with producers: "we do a lot of our little shopping in the local farm shop. Can't say I've got any kind of relationship with them apart from a financial one" (consumer)

Organic branding: "You associate it with local and associate with community, but I guess it's kind of like a brand… automatically I'd imagine Organic at a farm shop, as opposed to like a supermarket… as a consumer… you imagine one thing, but the reality is quite different" (consumer) "[willingness to pay more] comes down to branding – which is something farmers have historically been terrible at… Psychologically, I'm prepared to pay probably 200% more for what I buy from the wholefoods supermarket than I am from the local newsagent." (consumer)

How food miles being a small percentage of food emissions affected the importance of local food: "surely if we did start flying more from abroad, then surely that would go up?" (farmer) "the food miles being a small proportion doesn't mean we should ignore that – I think it's part of a bigger picture." (consumer) "I was also wondering how seasonality would come into that as well, because obviously eating a pineapple in winter is pretty unnatural." (farmer) "across the organic sector a big contribution to reducing carbon emissions is the not using fertilisers and the embodied energy in producing nitrogen. That's, that's what makes the difference." (farmer) "I think [it means] a lot more emphasis should be placed on things like plastic mulches and what goes into the growth and the production" (consumer)

Supermarket dominance driving down prices: "it's so ingrained in our culture… it's going to take huge cultural change, on the part of the consumer, to change the supermarkets' dominance really." (consumer) "[one solution would be] the Cooperative group… on steroids… Tesco partnering with both customers, who are going to pay a membership fee, and the producers, and taking a lower profit margin." (consumer) "small producers pool their power… rather than competing against one another, realising that if they got together to compete against the big boys they'd have more of a chance." (consumer) "since the pandemic it's been increasingly obvious that the direct link between producer and consumer just seems to work so much better and is easier for farmers to earn the right money." (farmer)

Consumer behaviour change: "if you're going to source locally, by definition, the person or the people you're sourcing your food off, are not going to have everything… so it's encouraging people to take time to appreciate the food more and appreciate the little bit more effort it is going to take" (farmer) "the UK lags behind in how much we're prepared to spend on food…in my life food is one

of the priorities – healthy food, delicious food, is one of the joys of life, but I think I'm the exception rather than the rule… a culture shift from the general public is what is required" (consumer)

The experience of being a sustainable farmer: "this internal battle of like, I have to do this, this is deeply what I need to do, but, oh my god, sometimes it's so painful." (farmer) "it's still touch and go if you're going to start a family on whether you can get by." (farmer) "one year, it can be brilliant, you know, and you can get everything done. And then the other ones… you just can't catch up with yourself" (farmer)

How could Organic be improved in these areas?

Participants chose which issue they would like to focus on and split into two groups, with facilitators and a member of Soil Association staff in each. Both groups created posters in Miro through initial individual sticky note brainstorming around the first three questions and subsequent discussion of the final two questions around what the main barriers to change were and how these could be overcome. The content of these are shown in tables 4.7 & 4.8 below.

This group exercise was followed by a plenary discussion focusing on whether participants still viewed local production and farmer wellbeing as the most important issues within Organic agriculture after considering them in more depth.

During this discussion participants raised a wide range of reasons local food was still crucial to them, including concerns about food security, food miles, equitable trading relationships and the chance for farmers and consumers to feel part of the same community.

> *"the Local thing is only going to get more important, especially next year with them with Brexit and especially as what we saw with the pandemic." (farmer)*
>
> *"so you've put all this effort into the growing, and all these extra restrictions and guidelines and then it comes down to, 'Oh, well, we decided that the carbon from the food miles, it doesn't matter… Seems… not even remotely in line with your overall mission." (consumer)*
>
> *"I do a lot of work with community supported agriculture, and the fact that it is local, the fact that farmers and producers are sharing a community those things are really central to farmer wellbeing. It's partly about fair prices and equitable trading relationships, but it's also about reducing isolation from farmers." (farmer)*

Table 4.7: Local food and Organic agriculture

What is local food?		
Limited to certain foods - whatever CAN be grown	Production to retail = short distance	Any food that has not come a long way
Food produced 'close to home'	Food produced locally- in season, small farmers without the support of mass production	Following local seasons and conditions
What are the benefits of local food?		
Knock on business benefits based on agriculture. i.e., farmer markets /crafts/ coffee shops in 1 area.	Profits go to local farmers rather than supermarket shareholders	Probably less plastic used from local farmers as opposed to shop bought
Healthier, specific to local conditions	Supporting local farmers	Focus is on community and locality
Fresher food	Produce is fresher	Reliable
Lower likelihood of disease transmission around country	Keeps money in the local economy	Plugging money into the local area- small businesses
Links the community	Everyone benefits	Farmer support
Environmentally friendly	Fairer prices for farmers	Less distance for animals to abattoir
Greater connection - empathy - between grower and consumer	More sustainable coming from local farmers	
Why is non-local food a contentious issue for Organic agriculture?		
Conditions for workers (e.g., Moroccan workers producer tomatoes in Spain)	Resources from abroad - e.g., imported tomatoes stripping out water from dry regions	Imports of unsustainable feed ingredients (soya etc)
I have serious doubts many countries Organic standards and inspections are as rigorous as the UK	Organic farmers in the UK may rely on small farms for supply but if large supermarkets can ship in mass produced organic, then local agriculture can be pushed out/ unfair competition.	It is considered a zero-sum game, whereby if local food suppliers win, non-local food suppliers lose, keeping the loser poor.
Cheap imports competing with local producers	Consumers cannot see what the farmers are doing	What are the barriers to increasing local Organic food?
Disconnection between producer and consumer	Carbon footprint of imported food?	Unnecessary transportation?
Less focus on local farmers?		

What are the barriers to increasing local Organic food?	**How could these barriers be overcome?**
1. Start-up costs	- more subsidies - feed in tariffs - public procurement of local food - initial capital/start up grants
2. Supermarket competition	- more stringent competition law - market quotas for larger suppliers - market research for farmers/local producers - obliging supermarkets to by a certain percentage of local food
3. Difficult to find infrastructure at the right scale	- grants or interest free loans for coop infrastructure (necessary for public procurement) - machinery rings (coops) to help supply machinery Planning system to allow infrastructure to be built - grants for community hubs to set up processing/catering facilities

4. Knowledge intensive	- easily accessible training in local colleges - marketing support (to help farmers find the new customers) - more vocational apprenticeships with farmers (for young people)
5. Mismatch between consumer mindset and availability	- education in schools - trips to farms - figure heads (like Jamie Oliver) to promote sustainable food - availability of organic/local food in convenience stores - learn from organic dairy (which seems to distribute produce easily) - community pick up points - better labelling/communication of food origins/production

Table 4.8: Farmer welfare in Organic agriculture

What is wellbeing for an Organic farmer?	
Getting fair prices for food	Not having to work long hours
Anti-Monopoly measures - if need be?	Being able to afford to live
Financial support in ratio to the stricter rules and restrictions that organic farmers follow	Hardship support if a crop goes wrong through no fault of own
Support from community	Farmer cooperation
Not being isolated	Having influence
Mental health	

What would need to change to improve farmer wellbeing in Organic agriculture?	**How could these changes be achieved?**
1. The role of supermarkets (especially in relation to food prices)	- need political will to tackle supermarkets, hard as supermarkets are very influential politically - greater co-operation between smaller producers to lobby government - improving public understanding about the key issues and encouraging consumers to be politically engaged and to change shopping habits - increase direct sales from farmers to consumers (e.g., via the internet)
2. Provide better legal protection for farmers	- self-evident; needs to be through changes in the law - prevent exploitation of potentially vulnerable small-scale food producers - provide the same legal protection for food producers as any other person who is trying to earn a living - ensure good working conditions - protect pay
3. Increase co-operation between farmers	- improving co-operation can help in all sorts of ways - increase economic co-operation to increase market influence - share practical knowledge about farming and business development - share equipment - enhance the role of organisations such as the NFU to get farmers together more and to focus more on small scale producers
4. Reduce unnecessary red tape.	- identify and reduce unnecessary or inefficient bureaucracy
5. Make certification easier	- reduce the cost of certification - reduce the time it takes to become and remain certified

Session 5: Modelling

This session focused on what should be included in models used to assess whether inputs are sustainable. Members of the Organic PLUS modelling team also supported this session.

Sustainability of a food product

What factors do you think are important in determining the sustainability of a food product? Farmers and consumers were separated for initial sticky-note brainstorms on Miro (images shown in figure 4.6 and responses tabulated in table 4.9).

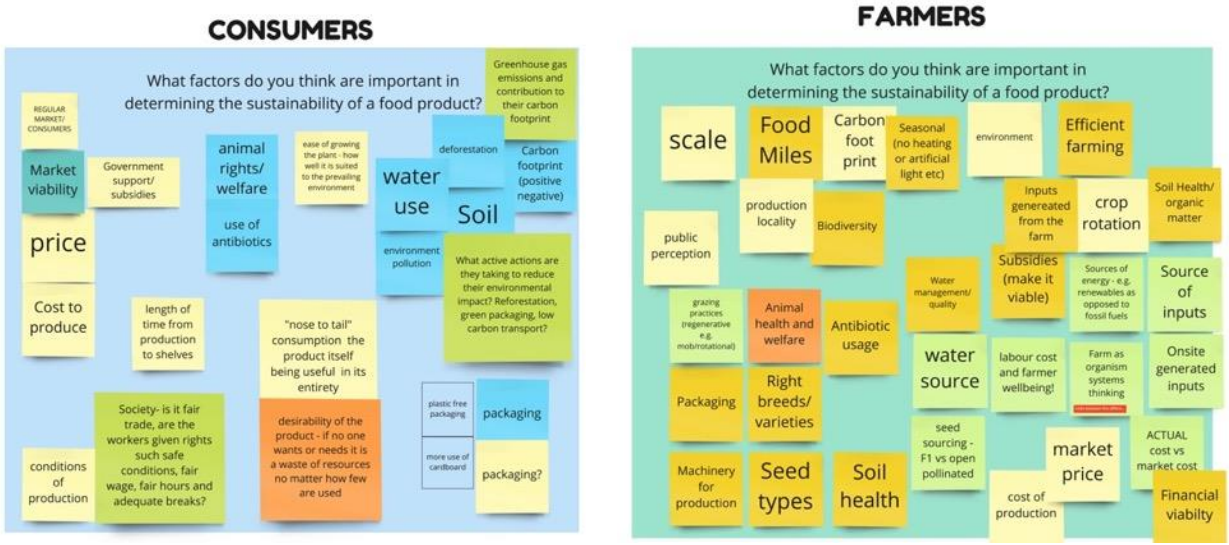

Figure 4.5: Perceptions of what determines food sustainability

As table 4.9 illustrates, there was a lot of congruity between farmers and consumers in the areas of market viability, animal welfare and antibiotics, farmer/worker wellbeing, packaging and carbon footprint. In terms of differences, farmers placed more emphasis on the sourcing of seeds and other inputs, as well as more specific sustainable farming techniques such as crop rotation, not using artificial lights and regenerative grazing practices. Consumers uniquely raised whether people want/need the food product in the first place and how thoroughly they consume it as important sustainability considerations, and a higher proportion of their comments referred to packaging.

Table 4.9: Important factors in determining the sustainability of a food product

What factors do you think are important in determining the sustainability of a food product?	
Farmers	**Consumers**
Packaging	Packaging
Environment	Plastic free packaging
Sources of energy - e.g., renewables as opposed to fossil fuels	What active actions are they taking to reduce their environmental impact? Reforestation, green packaging, low carbon transport?
Carbon footprint	Carbon footprint (positive negative)
Seasonal (no heating or artificial light etc)	Greenhouse gas emissions and contribution to their carbon footprint
Biodiversity	Deforestation
Food Miles	Environment pollution
Production locality	More use of cardboard
Scale	Packaging?
Crop rotation	Conditions of production
Soil health	
Soil Health/ organic matter	Soil
Animal health and welfare	Animal rights/ welfare
Antibiotic usage	Use of antibiotics
Right breeds/ varieties	Ease of growing the plant - how well it is suited to the prevailing environment
Grazing practices (regenerative e.g., mob/rotational)	
Seed sourcing - F1 vs open pollinated	
Seed types	
Water source	Water use
Water management/ quality	
Source of inputs	
Onsite generated inputs	
Inputs generated from the farm	
Machinery for production	
Farm as organism systems thinking	"Nose to tail" consumption the product itself being useful in its entirety
Efficient farming	Desirability of the product - if no one wants or needs it is a waste
Labour cost and farmer wellbeing!	Society - is it fair trade, are the workers given rights such safe conditions, fair wage, fair hours and adequate breaks?
Cost of production	Length of time from production to shelves
Subsidies (make it viable)	Cost to produce
ACTUAL cost vs market cost	Government support/ subsidies
Market price	Price
Financial viability	Market viability.
Public perception	Regular market/consumers

Sustainability on a farm

Figure 4.6: what would you like to monitor on a farm to check it is producing food sustainably?

What factors do you think are important in determining the sustainability of a food product? The whole group was given five minutes to brainstorm answers to this question. Responses are shown in figure 4.9 (with farmers answering on yellow notes and consumers on blue) and table 4.10.

There was large overlap between the types of things farmers and consumers would monitor to check sustainable food production on farms: the supply chain from farm, inputs to the farm, fertiliser use/runoff, animal welfare, the biodiversity/health of non-farmed land (e.g., hedgerows/surrounding environment), condition of soil and water use/quality were all raised by both. The farmers' contributions were often more technical than the consumers, but the most notable difference was the consumers also wanting to measure worker rights/wellbeing and economic sustainability as part of sustainable food production.

Table 4.10: What would you monitor to check if the farm is producing food sustainably?

Thinking specifically about sustainability on a farm - what would you like to monitor to check if the farm is producing food sustainably?	
Farmers	**Consumers**
Seed diversity and development	
Packaging and mulches	
Necessity of farm machinery (overuse? alternatives?)	
Farm transport logistics	Supply chain
Carbon foot-printing/ accounting	
From industrial units' atmospheric ammonia	
P K Mg levels (maintaining or increasing)	
Use of pesticides and fertilisers	Not allowing polluting runoff from fields
Inputs	
Sustainability of inputs	Can I reduce negative inputs
Where feed comes from (farm/local/ imported)	
Levels of purchased feed	Animals not fed crap
Antibiotic use	Animals killed humanely
Animals treated well, with square footage per animal	Animals living well per square footage
Plant/animal health	Animal Welfare Standards
Health of surrounding environment	Active work to rewild partly
Habitats on the farm	Good Maintenance of land i.e., keeping hedgerows in between fields etc
Effect on biodiversity (insects and animals food chains etc)	Biodiversity and populations
Worm counts	
Soil health	Condition of land used
Soil carbon levels	Organic Soil standards
Soil OM levels	Soil quality
Soil Health and soil run-off	Soil health
Water usage/ systems	Water use
Water quality	Water if for example farmer is using rain water
Integrate a scheme	Water usage and water quality on the farm
	Wellbeing of farmer - working conditions okay?
	Worker rights- pay, hours, breaks etc
	Maintenance costs not exceeding price paid for produce
	How much I'll get for my produce
	Costs of everything involved
	Links with supermarkets etc

This exercise was followed by a process of pulling out overarching categories from the group brainstorm – resulting in 8 categories. Participants were then given 8 votes and asked to allocate them to reflect which of the categories they thought were the most important to measure – they could give all of their votes to one, one to each or anything in between. The categories and distribution of votes are shown in table 4.11.

Table 4.11: Categories of sustainability measurements on farm and their prioritisation

Categories created from the brainstorm above:	Votes for each category
Pollution (effluent, etc.)	18
Farmer wellbeing (inc. labour conditions)	18

Inputs (energy, feed, pesticides)	15
Animal welfare	15
Wider environment (biodiversity off-farm)	12
Produce (yield, nutrient content, food waste)	12
Water (use, management, etc.)	11
Soil (carbon, health, etc.)	11

In the subsequent discussion participants focused on the expertise needed to prioritise these areas, the critical importance of all of these aspects and the inadequacy of any sustainability measurement which misses out any one of them:

> *"I probably see soil and water and things like that as probably* the *most important. But I still saw everything as needing to be [voted on] … as everything is really important"*
>
> *"Obviously I haven't got the expertise… to say what's more important"*
>
> *"I went to all these things and said 'So what happens if you take that out? What happens if you take animal welfare out? What happens if you take soil management out? and I ended up with a complete catastrophe in all eight cases and… I can't separate them."*

Adrian Evans then gave a presentation about the RISE methodology being used as part of the Organic PLUS project and the criteria they use to measure on-farm sustainability (available here, https://improvingorganic.files.wordpress.com/2020/12/hcg-5-presentation-on-oplus-models.-ae.pptx). The main point raised was about the similarities with the criteria the group had generated:

> *"it's actually remarkably close to the issues that we've just raised, considering that we came up with that list without any reference to the model. I think it's amazingly close actually"*

Comparing specific inputs: plastic & bioplastic mulches

Which factors should we consider when deciding whether to replace a plastic mulch with a biodegradable mulch?

The first 20 factors shown in figure 4.8 below were drawn from previous insights from the OPLUS project. They were described to participants, who were then each asked to pick one as their most important and explain why. As part of this exercise, participants were also given the opportunity to add additional factors if what they wanted to measure was not on the list. They added 'cost', 'environmental costs of manufacture' and 'efficiency/efficacy' to the pre-selected options.

> *"**micro plastic**… is very important also for us as the customers… we're hearing lots of micro-plastic in the soil and I think the vegetables which are grown in the soil can absorb some of the micro-plastics"*
>
> *"it's got to be **crop yield**… if [it] gives a good crop yield all the other issues, by definition, become smaller"* "crop yield… because it has to be *economic*"
>
> *"**longevity of the mulch**, because if it's not going to last a long time, then you're going to have to buy more anyway – which is obviously going to cost more"*
>
> *"**disposal of the plastic mulch**…especially when it's on a really large scale. It's hard to collect. It's hard to recycle. It rips into bits and blows all around."*

*"to get farmers on board they need to be **suppressing weeds** and if not, then they're not really considered"*

*"I went with **nutrition**… how much the mulches will affect the quality of the crop"*

They were then given 15 votes to allocate among the 23 options to reflect the importance they attributed them (participants could vote for one option multiple times if they thought it particularly important). The distribution of votes generally reflected the preceding discussion, with the exception of climate change, which was one of the more highly weighted factors despite lack of previous mention (figure 4.10).

Figure 4.7: What factors should we consider when deciding whether to replace a plastic mulch with a biodegradable mulch?

Session 6: Implementation

This session focused on what types of intervention participants would like to see to improve Organic farming.

Intervention scenarios

Participants were presented with a range of intervention scenarios one at a time. After each scenario they plotted their opinion of how effective and achievable they thought implementing this type of action would be on graphs on Miro (figures 4.9 - 4.15).

Each participant plotted their position using a sticky note with their names on. These opinion graphs are reproduced below with names removed. The yellow sticky notes designate farmers and the blue consumers. Plotting on the graphs was followed by a short discussion about why participants had placed themselves in particular positions.

Education campaign

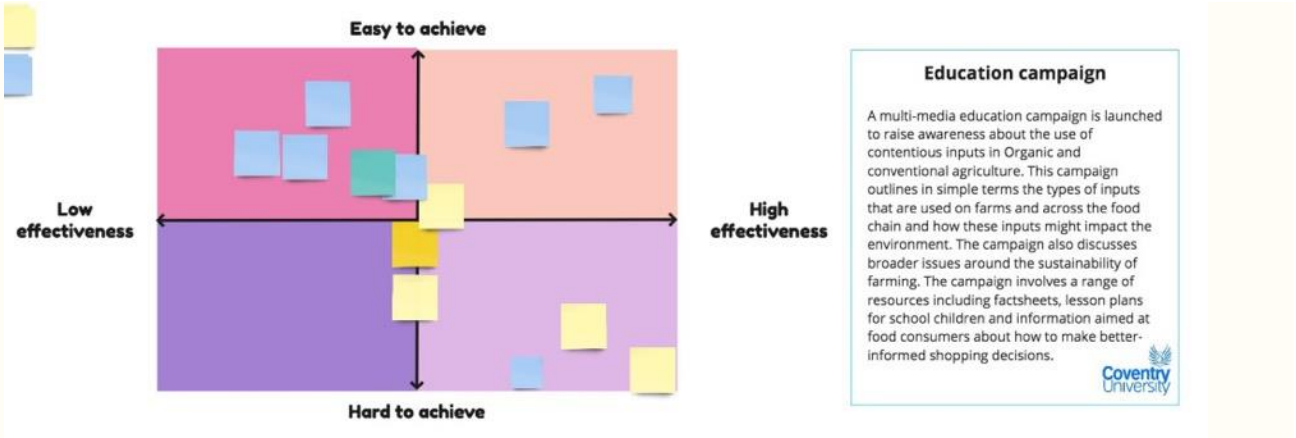

Figure 4.8: Education campaign

There was a noted difference between groups in terms of how easy such an education campaign would be to achieve, with farmers tending to think it would be harder to achieve.

> *"achieving prominence through advertising and education, I think that's quite an effective method… it will be costly but relatively easy... It's about… how much money you want to invest… just like any kind of advertising." (consumer)*

> *"the assumption has been the reason people don't buy Organic food is because they don't understand…. And that is absolutely not been our experience…. understanding the issues and changing your behaviour are two quite separate things." (farmer)*

Labelling

There was an interesting spread of responses around incorporating more sustainability factors into the 'Organic' label – with participants either believing it was relatively easy and ineffective (mostly farmers) or relatively hard to achieve and effective (mostly consumers). Having multiple labels was generally seen as an easier feat but less thought it would be effective. Consumers had different experiences of the usefulness of labels:

> *"the more signs I see the more it will help me to research it, and persuade me to purchase that product" (consumer)*

> *"When you're going shopping, you don't have time to read War and Peace on everything you look at." (consumer)*

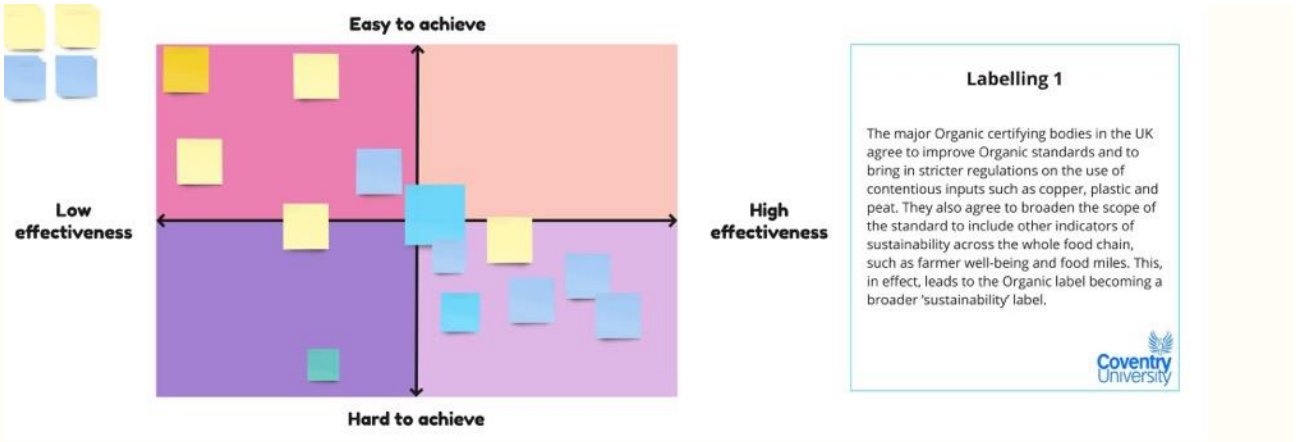

Figure 4.9: Incorporating more sustainability factors into 'Organic' label

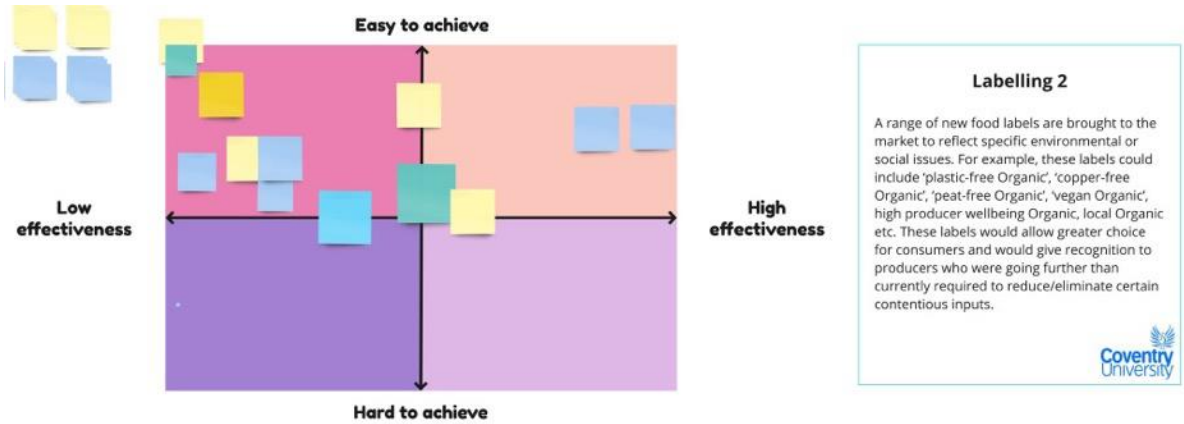

Figure 4.10: Providing a range of labels for different types of Organic

Government regulation

There was substantial agreement among participants that tighter regulations on Organic would likely be hard to achieve, and that changes to the tax and subsidy system would likely be effective.

> *"I've been involved in environmental regulation… and when they bring in that kind of broad scope regulation, it… negatively impacts on the smaller guys because they can't… get set up to deal with all these regulations… [it] isn't as effective as people think it should be" (farmer)*
>
> *"they might be quite difficult to introduce, but… it kind of sets a baseline for everybody – a minimum standard. So you don't have the other issues, because all the people who are in production will have to meet the standards." (consumer)*
>
> *"I can't see with the current government, something like that being put forward and penalising the companies that support them… But in terms of farming, I think that'd be really quite useful." (farmer)*

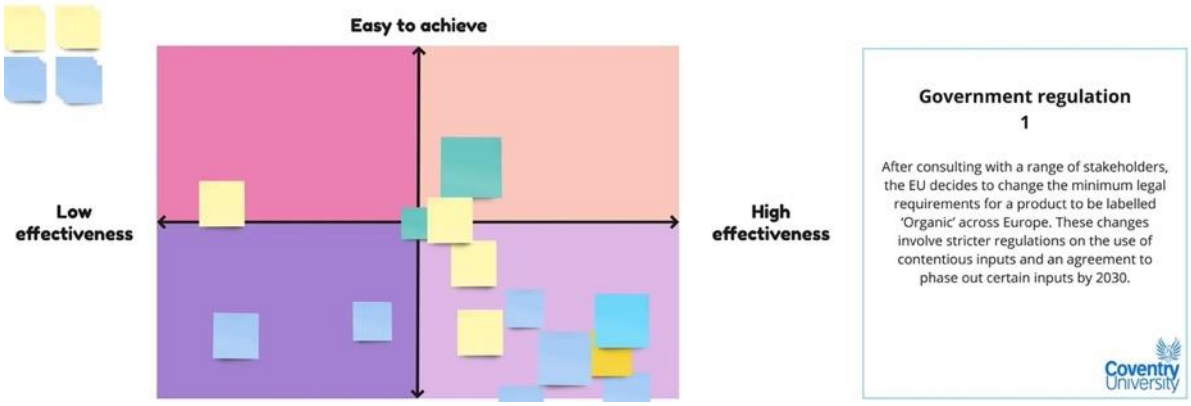

Figure 4.11: Tighter regulations on Organic, including banning some inputs

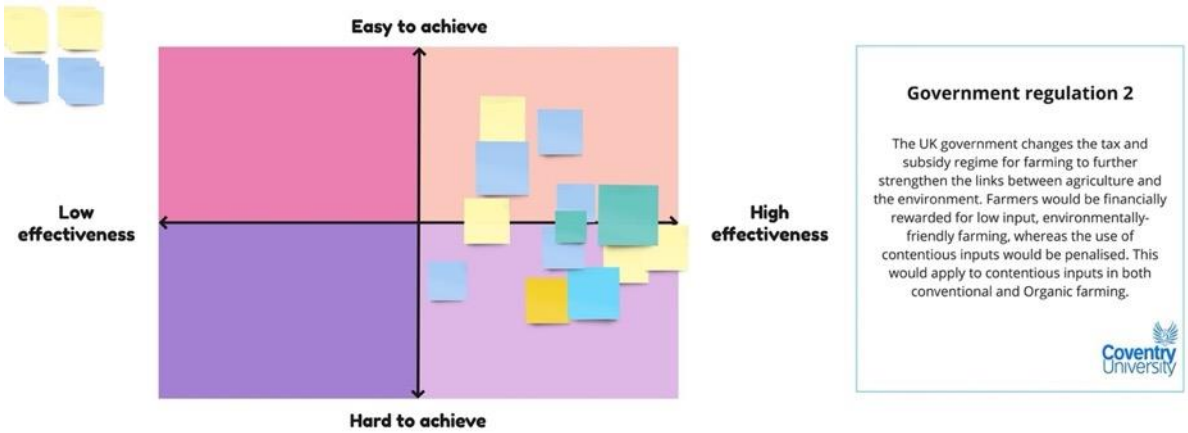

Figure 4.12: Changes to taxes and subsidies to support more environmentally friendly farming (conventional and Organic)

Facilitating improvements at the farm level

Facilitating improvements in production at the farm level was also seen to be relatively effective, though people differed on its achievability. There was a debate between farmers about whether the focus should be on Organic or all farms:

> *"I think people in Organic farming organisations are already going to be wise to that. I think it would be more effective to focus on farms that aren't organic" (farmer)*

> *"I think it can be really easy for the Organic movement to sit on its laurels… and think… we're getting our green waste in and we're not using fossil fuel fertilisers, so we're doing the right thing. And it's so much more complicated than that." (farmer)*

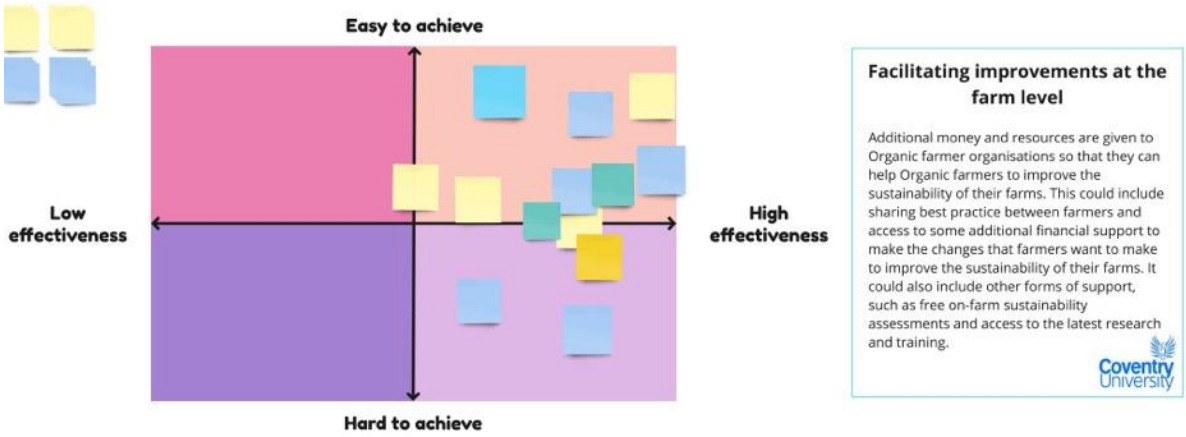

Figure 4.13: Facilitating environmental improvements on-farm

Retailer-led improvement

While the majority of responses were on the effective side, there were some dissenting voices and discussion of the impact of the type of supermarket on effectiveness:

> *"this just sounds like a popularity stunt for the supermarket… [it] would just add more confusion… the inner cynic in me is going, 'No, this is a really bad idea because you're handing over control to the people I don't think should have it.'" (consumer)*

> *"I think it will be more effective in the better supermarkets like Waitrose, Marks and Spencer and Sainsbury's… because people care more about the food that they eat, and it's better quality anyway in those types of supermarkets." (consumer)*

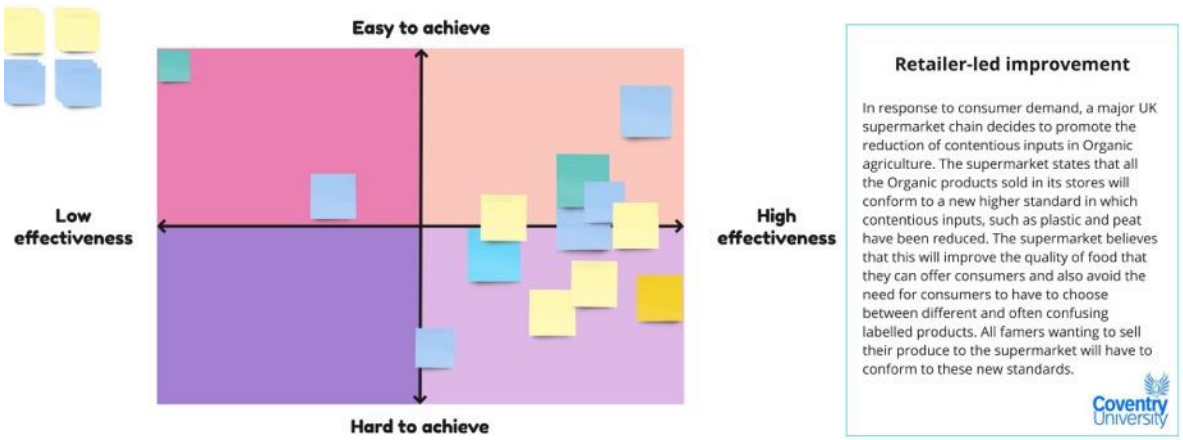

Figure 4.14: Retailer-led reduction of contentious inputs in Organic agriculture

Strategies to address specific contentions

Participants were given 15 minutes in three mixed farmer/consumer breakout groups to design an intervention strategy for how they would improve either: farmer wellbeing, plastic mulch use or local production in Organic farming.

Participants self-facilitated their discussion using an optional miro whiteboard to take notes (figure 4.15). Facilitators were initially present to record the session but then left the room. After 15 minutes the three groups were brought back together to feedback their intervention suggestions.

Figure 4.15: Participant suggestions for improving Organic farmer wellbeing, plastic mulch use and the localness of Organic food

Repeat of session 2 exercises

The exercises from session two were repeated to see if and how participating in these sessions changed participants' perceptions of Organic food and the contentious aspects of it.

Change in associations with Organic Food

Change in consumer associations (table 4.12)

Consumer associations became more nuanced – for instance, the associations with expense were still there, but in the session six exercise they were coupled with understandings and an appreciation of why Organic was more expensive: 'more expensive' became 'More expensive, but due to incredibly strict regulations which invariably increases price.' Additionally, associations around complexity and contentiousness started to come in: Organic is a 'Contentious topic from all sides'; 'Never ending research - not black and white - a lot to consider', 'Many factors involved', 'mis-understood.'

Change in farmer associations (table 4.13)

Farmer responses covered similar themes after session 6 as after session 2 but with a substantially smaller range of sustainability associations (although this might be linked to some respondent fatigue by the end of the final session). The main associations gained after participating in the hybrid forum sessions were 'Complex!' and 'limited consumer knowledge' – indicating some impact of engagement with subject experts and consumer participants.

Change in problems with Organic Food

Change in consumer problems (table 4.14)

While price and availability are still dominant among consumer problems with Organic food, several new problems have been added since the second session around regulation and monitoring, harvest vulnerability, consumer misconceptions and contentious inputs.

Change in farmer problems (table 4.15)

Large change in the emphasis of farmers' problems with Organic – with concerns over scale, the role of multi-national businesses, scale and competition with the 'conventional agriculture industry' prominent, as well as a growing awareness of problems from the consumer side such as limited communication and awareness.

Change in priority contentions (table 4.16)

There were substantial swings in prioritisation toward farmer wellbeing and plastic mulches (+3 votes each) which had both been the subjects of presentations and discussions, as well as toward antibiotics and wormers (+3 votes) which had received no specific treatment. The only other contention which saw a swing of more than +/- 1 vote was 'seasonal' which wasn't seen as a priority by anyone in the session 6 vote.

Non-organic animal manure, non-Organic bedding and synthetic vitamins were not in the top 3 priority areas of any of the UK participants in either vote.

Learnings over the sessions

Both groups talked about how much they had learnt from each other and the session content, with a focus on increased awareness of complexity and under-appreciated contentions in Organic. Consumers reported a wide range of intended changes in Organic purchasing as a result of these changes in awareness: the majority said they were buying or intended to buy more Organic food, most of the others said their habits were unchanged and two participants said they would be more cautious about buying Organic and would probably buy it in a more limited range of circumstances.

"with organic horticulture… there's a much higher labour requirement… but I hadn't I hadn't really linked farmer welfare as an Organic issue before I started on this session." (farmer)

"I think we really misunderstand what it means for something to be Organic and there's a lot of work that goes on behind the scenes… There's so much involved and… nothing's black and white… I… realised how contentious it is and it really took me by surprise… it probably will change my habits and I will probably buy organic products less." (consumer)

"I've certainly been buying more *organic food because… as consumers, you don't really know enough about the background, how food is produced. So now I'm using it as sort of a standard whereby I can judge… the quality of food." (consumer)*

"That it's nice to hear from the farmers end… it opens up conversations … some vegetables we've started buying because we can afford some things *– it's more accessible because we know the effort has gone in to get that certification in the first place." (consumer)*

"you've got people who haven't even known anything about Organic farming or farming in general. But just that communication and respect to each other, has actually opened people's eyes from both sides quite a lot I think." (farmer)

Table 4.12: Change in consumer associations with Organic food

Consumers session 2	Consumers session 6
Certified	Part of a wider philosophical approach to food production
Clean	Clean food and part of a modern customer experience
Natural & Healthy	Nutritious
Nutrition	Healthier food
Nutritious	Food grown in healthier soil
Fruit and veg	Food that tastes better
Taste better but more expensive	It tastes better, animals are treated better
No chemicals	Food grown with no pesticides
Fewer or no pesticides or weedkiller	GM free
Environmentally friendly	Better for the environment/ more sustainable
Soil	Sustainable
No harmful chemicals	More natural
Pollinators	Pesticide free
Less intensively farmed	Grown with certain ethical/welfare standards. Environmentally kind
Better for the environment	Sourced in a proper manner as a whole
No pesticides	Quality is better as it was produced in tighter conditions maybe?
Other chemicals used that are approved?	Perceived as 'posh'
No use of pesticides or herbicides	More expensive, but due to incredibly strict regulations which invariably increases price
Expensive	Expensive to produce expensive to buy because high welfare standards are not cheap. However, these standards may not be affordable for all consumers
More expensive	Financial commitment both from a consumer and farmer end

Costly- more of a luxury than every day, especially with a large family.	Genuine organic is small scale not large companies with shareholders
Bespoke/low volume	Niche area where supermarkets are encroaching local farms selling ability
Not as much choice available	Minimal choice in supermarkets & sourced overseas so not as ethical as local produce
High Quality	Contentious topic from all sides
More imperfect and natural looking	Never ending research - not black and white - a lot to consider
Fruits & Nuts	Many factors involved
	Misunderstood

Table 4.13: Change in farmer associations with Organic food

Farmers session 1	Farmers session 2
Labour intensive	More labour intensive
Expensive	Expensive
More expensive than conventionally produced	Niche
Focused on middle class at the moment	Limited access
Taste better	Local
Small scale	Green
Quality	Sustainability as priority
Not very big choice in small shops	Clever farming
Simplified food	Healthier
Healthier? (possibly)	More nutritious
More nutrients, tastier	Financially viable?
Healthy	Is it a bandwagon that supermarkets have jumped on at the expense of the small grower?
Nutritious	Limited consumer knowledge
Processed in a clean manner	Complex!
Beautiful looking crops	
Real food	
Slow (in a good way!)	
Ethically produced	
High animal welfare	
Sustainable	
Better for the environment	
Encouraging biodiversity	
Diverse ecosystems	
Biological processes	
Feeding soil not plants	
Healthy soils	
Working in harmony with land	
Right varieties/ breeds for conditions	
Clever farming	
No use of chemicals	
No chemicals	
Using clean material	
Organic certification can be misleading	
Do organic animals have a bigger footprint than conventional systems?	

Table 4.14: Change in consumer problems with Organic food

Consumers 1	Consumers 2
Small niche section in supermarkets	Cost to consumer
Not as much variety	More expensive, people want cheap
Lack of variety	Less accessible for those financially not secure
Only a small range of products	People who are poorer have no financial reason to go Organic
Speciality items such as non-western crops are harder to obtain as organic: 'exotic' fruit and veg.	More expensive to buy
I like to select the variety of some vegetables - e.g., Picasso potatoes - this is not usually possible	More expensive as not mass produced
Scarcity	More expensive to grow
Not always available	Difficult to feed large population especially when many are struggling to afford non-organic options which tend to be cheaper
Not Easily Accessible	Privileged access
Not available everywhere	Perceived as 'posh'
No Recognised Brand Names	Not widely available
Price	Not much variety in the smaller supermarkets
Price	Eurocentric products, harder to find organic items from other countries and cultures
Expensive	Less choice than ordinary food
Expensive	Healthy expensive not always there in the shops for customers not a lot of choice in the small shops
Expensive	"Tastes better" is entirely subjective
Perception that it is for posh/rich people	Need to be carefully regulated and monitored - ease of losing certification
Distance travelled...	Harvest more vulnerable?
Conflicting studies	Seen as "the" solution to problems from all angles
Misleading information	Highly misunderstood by consumers as to the behind the scenes
	Issues not understood
	Little understood by majority of consumers
	Some standards or certifying bodies may have different rules than others - inconsistency?
	Too many contentions
	Other undesirable inputs

Table 4.15: Change in farmer problems with Organic food

Farmers 1	Farmers 2
Not enough choice in the small shops	Expensive
Not enough choices during the different seasons	The association with class or hierarchy
Expensive	Parasite control
Price	Labour intensive
Aimed at a richer demographic	Struggles to compete with conventional agri-industry
Cost of running	Supermarkets have taken over. It's almost large scale. Organic sustainable food shouldn't be about multi nationals
Sometimes higher labour investment	A lot of the big money research in agriculture comes from multinationals who don't want to see organic agriculture prevail. By its nature it will damage their business model
Expensive certification	Potentially requires larger area to produce less food? but at what cost?
Cost of certification for small producers	More emphasis on sustainability
Difficult to obtain and maintain certification	Defining 'organic'
Maintenance	Lack of awareness
Paperwork	Consumer knowledge /perceptions limited
The classification of 'organic' pesticides	Lack of communication
Doesn't guarantee local and seasonal	Complex!
Is intensive conventional farming more sustainable than extensive organic farming? Lower footprint? less land??	
Doesn't guarantee soil replenishment and recovery	
Is it actually organic? Derogations to allow chemicals and non-organic feedstuffs	
Derogations causing mistrust	
Different certification bodies	
Misleading certification	
Sometimes seen as just a brand	
Monoculture scale 'organic' not that different from conventional	
The press/papers often portray organic and conventional as polar opposites - and not what it is a whole range of farms and types between the two	
Markets for some things too small	
Not enough processing facilities for some products	
Some pest/ weed/ disease problems hard to deal with	

Table 4.16: Changes in priority contentions

	Votes session 2	Votes session 6
Farmer wellbeing	4	7
Food miles / local production	5	6
Antibiotics and wormers	3	6
Plastic food packaging	6	5
Plastic mulches	2	5
Peat	3	3
Financial support for farmers	1	3
Damaging tilling techniques	2	2
Imported feed	2	1
Rock phosphate fertilisers	1	1
Copper fungicides	0	1
Seasonal	2	0
Mineral oils and sulphur	1	0
Farm size	1	0
Non-organic animal manure	0	0
Non-organic bedding	0	0
Synthetic vitamins	0	0

5. Norway Results

Gunnar Vittersø, Hanne Torjusen and Kristine Dalevoll

Introduction

The Norwegian HF consisted of four sessions that were carried out online on Zoom between November 4th 2020 and February 17th 2021. The sessions lasted between 2 and 2 $^1/_2$ hours and consisted of a mix of group and plenary discussions, brainstorming activities, expert presentations and participants' evaluations including voting sessions on contentious inputs and scenarios. The following themes were discussed:

Session 1: What is good food?
Session 2: Organic food
Session 3: Fertilisers and good soil in organic agriculture
Session 4: Implementation: How to strengthen sustainable (organic) food production

We also wanted the participants' own views on the themes and activities in the sessions and what they have learned from participating in the HF. To this aim we carried out short 5 minute interviews with selected participants and distributed an evaluation questionnaire to all members of the group, in response to which six participants returned an answer.

Session 1: 'Good Food'

Introduction - Topics that emerged during the introductory exercise - "what is important for you about food"?

In the introductory exercise, participants shared stories about what is important for them related to food and they were encouraged to think of a personal story in preparation for the meeting related to for example a particular memory, favourite recipe or kitchen tool or something similar. The topics that emerged in this exercise also gave a hint at conceptualisations of 'good food', which were explored more explicitly later in the session during the first day. A common feature across several of the stories shared was that the food memory was connected to a significant person in their life, such as a grandmother or other family member or friends and also to a place with significant value for them, for example from their childhood or formative years.

Care

In one of the stories, departing from a longer stay in Sudan studying nomadic life some 30 years ago, the participant told us about a gift she received from a woman who had been her host.

> "*When I was about to leave, I received a gift from the widow, Miriam, whom I had lived with for long periods. And the gift was this bag [holds up a small canvas bag in front of the camera on zoom]. This is a canvas bag, not very clean anymore, which she had stitched together with some lilac threads she had found. And this bag contains about 1 kg of the local variety of millet. This was a gift she gave from her heart, intended to keep me alive during the three-four-day long trip home to Norway. I have kept it since, as a reminder of what is important in life*." (FA2)

One participant talked about how he in his childhood learned to appreciate good bread from his mother who used to be called 'the bread queen' – seeking out the good ingredients. (FA1)
Another aspect of care is in recognising the value of the hard work that goes into producing good food. One way of honouring that value, is by not wasting food.

> *"My relation to food – I guess I don't have any special story to tell but I would rather like to raise awareness about self-sufficiency, as I grew up with that. Having to work for food - be it growing and harvesting from the soil, slaughtering rabbits, or other things. I do a lot of fishing in the lake [Randsfjorden], that was the great 'food plate' when we were to provide food for the family when I was a boy. We were many in the household in need of food. So, I really celebrate the importance of self-sufficiency. And as a consequence, there is very little food waste – when you work so hard for your food. And one utilises much more of the animal than you normally would – I use everything. I make a lot of food from parts, which are not commonly used anymore."* (…) "*This has probably made me into the food producer I am today. With deep traditions in food and the kind of up-bringing I have had, learning from 2-3 generations who were living in the same household as me."* (B2)

Directly from nature

The significance of nature – either in regard to where food comes from, or where it is eaten – emerges in several of the stories that were shared. In this quote, a childhood memory of eating 'directly from nature' is central:

> *"When I got the challenge of this exercise, my thoughts went back to one of the first meals I can remember as a child. I have tried to reconstruct it with my family, and it must have been the summer when I was 3 years old. (…) I was visiting the farm where my great grandmother came from, which was now taken over by someone else in the family. I remember a terribly old lady walking around in a 'stakk' [traditional long skirt], and her daughter who was also very old. And these two offered me sugar-peas directly from the plant. That experience must have been pivotal for the young me: To be able to eat sugar peas straight from the plant was Heavenly!"* (B1)

The next example also evolves around harvesting from nature, and provisioning more from one's own cultivation or directly from nature, and less from the food store:

> *"I think that the greatest happiness related to cooking is to be able to prepare food from what I have gathered from nature myself. (…) I like using what I have at hand. Making good food from what I have grown or caught myself. The more seldom I can go to the food store, the better."* (FA1)

She also brought forward a childhood memory.

> *"I thought, when you [refers to another participant] talked about your experiences of food as a child, I thought about one of mine – and that is exactly to harvest mussels in the South of Norway as a child. It's about harvesting yourself, from nature. Whether it is the forest or the sea, it is a great happiness."* (FA1)

Childhood memories from a farm and from harvesting from nature were brought up in several of the shared stories.

> *"Food experiences for me – yes, the first thing that came to mind was growing up on a farm in the South of Norway, with a father who was fond of hunting. It was hare, deer, and moose, and sometimes reindeer up in Setesdal. And the most exciting thing I knew was to catch crabs at night with a torch, boil them, and have a big crab-feast the night after."* (F1)

Social significance of sharing a meal (who is it shared with by being directly present, or related to in terms of 'where it comes from') In the following quote, the importance of the social gathering around a meal is emphasised, as well as an ethic of not wasting food but making sure left-overs are used later. Again – a reference to family and what she has brought with her from childhood is central to the participant.

> *"I have grown up with associating food with social gatherings. Large servings, many around the table, and that nothing should be thrown away. We are not to waste anything." (F3)*

The social and cultural aspects of food are also expressed in the following quote. The social significance goes beyond sharing meals and extends into time spent together in provisioning:

> *"Food is to me… I have prepared some key words, and what is recurrent is that it is community. It is culture and it is unifying. (…) One of the nicest things my wife and I do in the fall is to pick mushrooms. Those few mushroom-picking trips we manage to make are the best for us. To me, food is a point to gather around, and a catalyst for that."* (FA4)

Relational aspects – to a local or familiar place and to people

The significance of sharing a meal was by several of the participants associated with experiencing a joy or pride about where the food came from and providing excitement and appreciation to their friends or family as well.

> *"My food story is very recent - we had some friends visiting last weekend, when we served vegetables from Frosta – Trondheim's kitchen garden – we get vegetables from there every fortnight, and we had gotten meat from a box delivery – and together that became a very nice meal with a salad with kale and pumpkin and so on. It was something exciting and very different from what our guests had eaten before. I could feel satisfaction about using ingredients from close by (…) to be able to cook with ingredients grown near me is an immense satisfaction for me."* (F5)

Connections to landscapes and places were not only related to living-areas but also to places where leisure time is spent, as in the following example, with a second home/cottage as the site of food-provisioning and social gatherings.

> *"A good food experience for me is when I am at the cottage, with friends, and make good food with the things we have picked in the garden. I have a kitchen garden where I like to grow things. My everyday life is mostly at home in the apartment where I live, so the food store is where I get most of my food. But I have this kitchen garden at the cottage where I grow as much as I can. Really because I like to dig in the soil."* (F4)

Food impacts physical and mental wellness

One participant described the strong potential of food to influence his sense of wellness as well as the opposite. In that sense, food holds a significant potential for creating/ increasing wellbeing, but might as well be a source of troubling feelings.

> *"To me, food is very physical/bodily. There is a close connection between what I eat and how I feel that my body is. And this is something that has followed me since I was little. So, when I say that I find that food has been something that has been difficult, I think it is related to the fact that I function very well when I have eaten something I need – then I feel*

well. But if I have eaten something I feel is getting wrong, then it gets really wrong. It is purely physically that I get reactions. But also mentally. These things are connected." (FA4)

The subjectivity related to what it is with food that makes it feel 'good' or 'wrong' to any particular person opens up for a wide range of aspects being of potential importance when it comes to food and well-being. Aspects related to the immediate experience of the food item itself, as well as aspects related to how and where and by whom, under which circumstances, that food is produced may be perceived as relevant for the sentiments and bodily experiences it evokes.
The sentiments towards food of 'significant others' may also be of importance in the formation of one's own relation and sentiments to food. The participant describes how he remembers his own father's expression when presenting him with a whole pig in his childhood, and connects that to how he now feels about food as an adult:

"I am a 'city-boy', so to me it is very exotic to hear about you who have grown up on a farm. (…) But I remember that it arrived half a pig - parted lengthwise - on the kitchen table. I found it very strange and very exciting. And I remember the face of my father then; the joy over that pig. And that is the kind of joy I can feel over food myself today." (FA4)

Animal welfare provides for 'good food'
The importance of high animal welfare was brought up in some of the stories, and in some cases related to how the quality of food was experienced.

"I find that the focus on organic food in this project is exciting. To me, it is the interest in basic foods/ingredients and animal welfare that is close to heart." (F4)

Values expressed in food practices

"Food is strongly related to my value-orientation, and it has always been that way. There is hardly anything that doesn't relate to food for my part. I share many of the reflections already given by others, but if I were to choose only one story, it would be when I was 12-13 years old and decided to become the kind of vegetarian who could eat fish but not meat. My parents thought that was quite all right, because what happened was that they could just make a little more vegetables for the Sunday dinners, as we ate fish for dinner every other day of the week anyway. It took a while before I realised the connection, but it was probably mostly about will and opposition on my part at that point in time." (F2)

"The most exotic fish dinner we ate along the coast of Helgeland is 'old, salted Pollock', or 'red-pollock' as it was called in some places. It was red because it is salted while it still contains blood, so that it becomes fermented. The oldest fish I have eaten was way more than 10 years old. What happens then, is that the fibers begin to stand out like spikes." (F2)

Post-it note session: "What does 'good food' mean to you?"

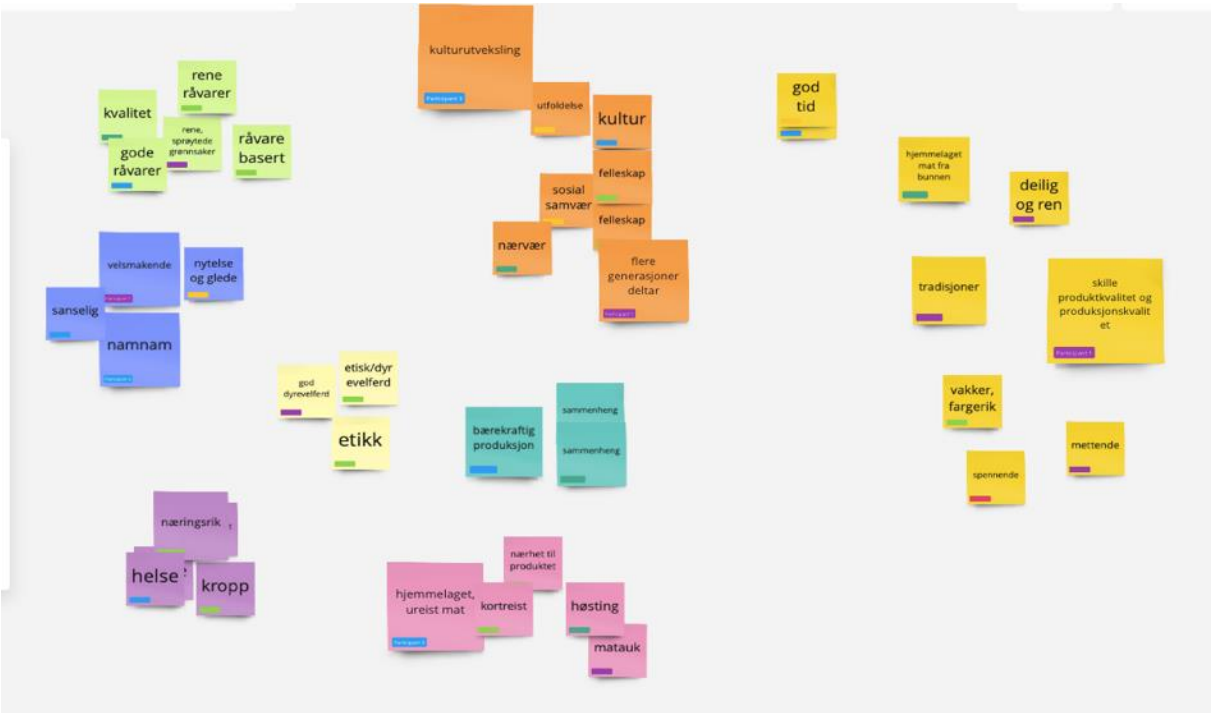

Figure 5.1: Associations with good food

Table 5.1. Associations with good food

Ethics	Preparation/ social	Health/ nourishment	Sensory	Other
Production Quality	Quality	Quality	Food Quality	Self-sufficiency
Animal welfare	Self-harvesting	Pure foods/ ingredients	Good basic foods/ingredients	
Ethics	Home-cooking	Un-sprayed vegetables	Yummy, satisfaction, well-tasting	
Closeness to the product / 'un-travelled' / short distance	Cultural exchange	Nutritious	Enjoyment and joy	
	Traditions	Body/health	Sensory	
	Presence	Presence	Presence	
	Several generations take part		'God tid'/no hurry	'God tid'/no hurry
	Being together		Satiety	
	Self-expression		Beautiful, colourful	
				Exciting

Topics that emerged about 'good food'

Several of the aspects mentioned regarding good food centred around the quality and direct experience of the food products the meals are made from, including taste, freshness, authenticity and healthfulness of ingredients. It was described how it is important that food is pleasing to all the senses, with beautiful colours and good taste.

> *"To me, it is important that it is made from basic ingredients [natural products] - I am very fond of cooking from scratch; that the food products are good, real, and that they are healthy."* (F4)

The healthfulness of food, and how it affects well-being was also emphasised. Food without chemical residues was brought forward as part of this theme.

> *"I wrote health, and what I think about then is both the experience that food can give, but also the nutrients in food, which affect health for better or worse. (…) Health is a wide concept, and there are many elements connected to food which affects health in various ways. I am thinking of bodily as well as mentally."* (F3)

Social aspects and community around food was a further central theme in the dialogue. Community was described as important in several ways:

> *"What I mean by it is family and friends whom I share meals with. I am thinking of the community in making the food, but also eating it."* (F4)

> *"It is funny, because I also wrote 'community', but I meant community in the sense that this is so basic – this is the most common of all: if we don't eat, we die. And we have organised ourselves up through history in order to succeed in this as a community."* (FA4)

> *"It is also a kind of community we share with absolutely every single human being. Animals too, for that part. Something is to be eaten; it is a shared human experience."* (F5)

> *"Self-sufficiency also feeds into community. Those who are lucky enough to be able to come with their mother and father into the strawberry fields. In the '80s, I remember with dread and horror, I was thinking "how is it possible to be this bored?" But it is really a form of community that I am very conscious about now."* (FA4)

The importance of knowing where the food comes from, and a sense of basic satisfaction [and security?] was also brought forward.

> *"What is becoming increasingly important to me, which was perhaps less talked about earlier, as an ordinary consumer in a city, where there was more focus on price and the like, (…) is sustainability, and knowing more about what the food contains. I also feel a kind of undefinable satisfaction related to it – it feels right.*" (F5)

Other ideas around food culture were also discussed:

> *"It is a characteristic of a culture that it has a food culture. That is how I meet the world (…) Food is culture; what happens in the process from basic ingredients to finished meals. And it reflects the kinds of foods one has."* (FA4)

Ideas around excitement and attentiveness and 'presence' were also discussed. The wider experiences related to food was addressed both from the part of the eater and host, and on the part of the farmer; there are 'good' and 'bad' kinds of excitement and alertness. Below is a description of excitement from the perspective of a host and eater:

> *"It [food] is something very mundane, but can also be made into something very exotic. You never know what the result is going to be, and in that there is a form of excitement; whether it is going to be as good as you hoped and thought. I can imagine that there is a lot of excitement in growing food as well, and in making sure something comes out of it."* (F5)

One of the farmers continues:

> *"Yes, this is where I come in! As a producer, I have to say that it is very exciting. Now, we are soon to let the ram into the ewes, and then it is very exciting to see if there is any result of this in the spring. You may actually risk having a ram that doesn't succeed as it is supposed to, and then you don't have as many lambs as you expected. There is an excitement in seeing results. Whether the seeds will sprout in the spring. If there will be frost when you don't expect it to be. There is excitement at all levels. (…) Mostly I find it to be a good excitement. But it can be a bad excitement if for example there is frost and you haven't covered properly. It is so incredibly discouraging to come to a plant which has frozen. But mostly, it is an exciting expectation, which is going to give joy and work."* (B3)

Who should ensure good food?

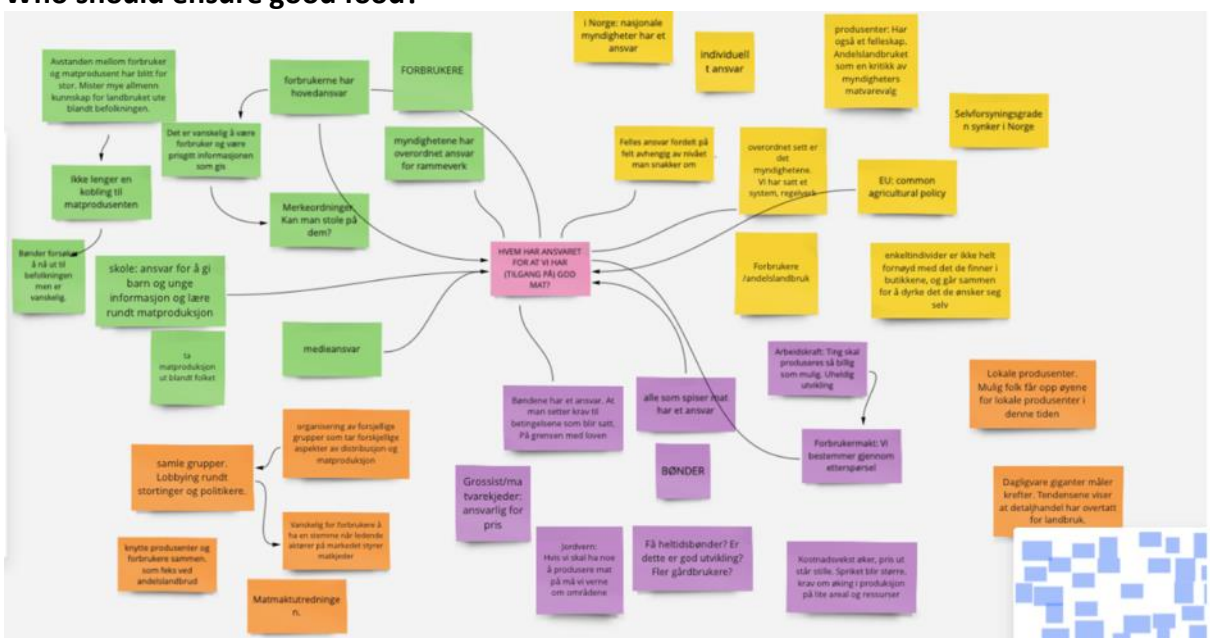

Figure 5.2: Responsibilities for good food (miro boards)

Responsibilities of farmers

A view emerged that farmers carry much of our common responsibility:

"Everyone has responsibility for food. As the system now works, farmers carry much if it." (B1)

A farmer about farmers:

> *"We as farmers have a huge responsibility. But I agree with you that we work under conditions which makes it virtually impossible. I don't think I would have been a farmer if I couldn't farm the way I want. Then I think I would have pulled out of it. It is unbelievable*

that some farmers keep on with production which is unethical, which gives products that contain things which are not desirable for consumers." (B3)

A consumer also discussed the high public visibility of farmers – for good and bad. If someone makes a mistake it could easily reflect on 'farmers' in general as a group. This makes them vulnerable – even though many farmers do great work.

"The farmers are very brave – they become so visible, when a scandal hits, e.g., a critical program on TV (recently about animal welfare on pig farms, undercover documentary). Everyone is doubted, judged collectively, as a single group. But some run their farms very well." (Consumer)

Responsibilities of consumers

In the view of a farmer:

"The consumer has the responsibility for good products being produced. We cannot produce anything that the consumers do not want." (B2)

"When the outer premises make it hard so that we cannot afford to produce proper products, then it ends up with 'volume production' without sufficient time to for example care for the animals. Consumers must ask for such products [produced with care], and avoid the others" (B2)

"As a consumer, it can be difficult to know who to trust." (Consumer)

A consumer about consumers' responsibilities:

"I believe that the consumers have a main responsibility. Responsibility to educate oneself about e.g., organic vs. non-organic. The choices I make have a consequence - for making the 'right' farmers survive." (Consumer)

At the same time, she reflects about the challenges in getting hold of information about what one cares about, and knowing whom to trust:

"I trust the farmers. We get brochures in the boxes [we subscribe to]. But – I just have to trust that what they say is true. I don't check whether it is right or not – and it may be difficult to know how things really are." (Consumer)

Discussion also focused on the challenges of staying informed and responding to information that appears in the mainstream media/public debate. For example, the challenge of staying informed about what labelling and especially Organic labelling means.

"I buy for example only organic eggs – and that is because I have read that it is better for the hen – higher animal welfare. But that is eggs, and because I have read a lot about that recently. But one cannot keep on reading about everything all the time." ('ordinary' consumer)

The same consumer told about how she had changed shopping and eating habits following a program on TV about problems with the wastage of Norwegian sheep meat due to large volumes of stored meat:

"I bought sheep meat [from adult animals] rather than lamb following that film." (Consumer)

Responsibilities of government:
Views expressed by consumers included: The food authorities have responsibility for controlling, providing regulations, and providing the general framework.

> *"It is important to give farmers predictability, regarding regulations that govern the food production."* (Consumer)

> *"The authorities have responsibility for how prices are set. And for the availability to the public."* (Consumer)

> *"[The authorities] have responsibility for the price range of organic vs. conventional food. We don't want to produce only for a wealthy elite, but healthy food for everyone. It is not fair – the large [supermarket] chains make a lot of money – on cheap food. How did it get this way? Something is terribly wrong!"* (Farmer)

> *"The authorities have the responsibility for political management (steering)"* (Consumer)

The role of public education was also mentioned and viewed as an indirect role of government:

> *"School and education – have the responsibility to ensure that children and young people learn something basic about food and food production. In the store – if one for instance sees a fillet of salmon – or another type of processed food – it is not certain that one thinks about the animal of origin – or the plant – or how it is produced."* (Farmer)

Responsibilities of retailers:
Concerns were expressed about the price driven nature of food retail and about the trustworthiness of certification schemes:

> *"It is okay to have some product differentiation some and possibilities for consumer choice but it is a problem that many consumers are so driven by price."*

> *"It is crucial to have some certification systems one can trust – and the discussion showed that there are just a few labels participants trust."*

HF participants also believed that retailers should take responsibility for the items they stock.

> *"The retailers have responsibility for the kinds of products we are offered".* (Consumer)

Topics discussed

Table 5.2: Responsibilities for good food – comparison of farmer and consumer responses

Consumers	Farmers
Farmer responsibilities	
	Main responsibility
Consumer responsibilities	
Making the 'right' farmers survive	Making deliberate choices – not only low price
Educating oneself	
Government responsibilities	
Price setting	
Public education	
Political management - framing	
Retailer responsibilities	
Availability of products	

Session 2: All about Organic

The theme of day two was "Organic food" and the aim of the first part of the day was to give the HF members an introduction to Organic agriculture with specific emphasis on organic certification. The second aim was to learn about contentious inputs in Organic farming in order to have a discussion among the group members about what issues within Organic agriculture they see as important and want to learn more about.

Associations with Organic food

In the first exercise the participants were asked about what they associated with Organic food. They were given 10 minutes to write down their associations in the chat function within Zoom. These associations were then transferred onto virtual sticky notes and grouped on a collective Miro-board.

Figure 5.3 Association with organic

Several associated organic food with a healthier diet, safe and pure food. One of the consumers stated that:

> *"What I was thinking about was that, yes, it was grown in a way that was safe, at least. That it is grown in a way that preserves vitamins and minerals and all this. The way it is grown. At least this is a perception that I have, then."* (Consumer: FA1)

One of the farmers followed up on that and emphasised that the products not only had special qualities and were richer in nutrients compared to conventional foods, but also that they contained less harmful substances.

Towards the middle of the board we grouped associations connected to environmental effects from organic food, for example that these foods are often locally produced (food miles), and that they are produced "on nature's terms. Others stated that organic production is good for the earth/soil. One of the farmers emphasised that organic was both "good for the planet" as well as for the soil itself.

Table 5.3: Associations with Organic food – comparison of farmer and consumer responses

Associations with Organic Food	
Farmers	**Consumers**
Good food	Long shelf life (keeping quality)
Specialty products	Pure food
Good for health	Contribute to a healthy diet
Pure food produced on natural terms	Organic diets are usually characterised by a more diverse vegetable portion and a little less meat – considering the resource use
Holistic mindset	Healthy
Sustainable	May return to old food traditions and food history. Strengthened identity
Maintain smallholdings / Keep smaller farms alive	More local products
Good for the soil	More and more of the organic products are being imported
Engaged producers	Seasonal food
Diverse production	Gives opportunity for greater diversity (products and producers)
Healthy plants	Circularity, recycling of nutrients, waste, resources etc.
Happy animals	Sustainable
Laborious	Laborious
Utilisation of grazing resources	Diversity
	Take care of diversity
	Ethical
	Good for nature and the environment
	The quality of the production is tied to soil- and animal health. Little or no pollution and in accordance with IFOAM's basic principles
	Food produced and certified according to the organic agricultural regulation
	Animal welfare
	More weeds because less use of chemical controls
	Organic pesticides vs. chemical
	Better support of organic producers

Other post-it notes underlined that Organic farming utilises (rangeland) grazing resources that are locally available resources, and that Organic agriculture has higher animal welfare standards ("happy animals"). Several emphasised the holistic mindset behind Organic agriculture, based on the idea of the recycling of resources and that Organic food is sustainable. Sustainability in this context may mean that Organic agriculture is positive in terms of environmental conservation, it contributes to more diversity in production methods, type of products and type of producers. In that respect, Organic production may also be an advantage for small-scale producers. Some emphasised soil health and plant health due to not using fertilisers. On the negative side some of the farmers underlined that organic agriculture may be more demanding regarding the work hours spent, weeds are problematic and there is a lack of support for Organic farming (on a societal level).

Also, one of the consumers regretted that increasingly more imported organic food products are found in the stores:

> *"It is just a sad fact that this is the situation in this country here now. And it's been like this for a while. And that is probably one of the reasons why CSAs are popular now, because it is a way that provides access to organically produced food that we would never find in the stores."* (Consumer FA2)

Problems with Organic Food

As we expected, there were few associations on the negative side in the first round of brainstorming, thus, in the next task the HF-participants were asked to write down what they considered as problematic or challenging about organic agriculture.

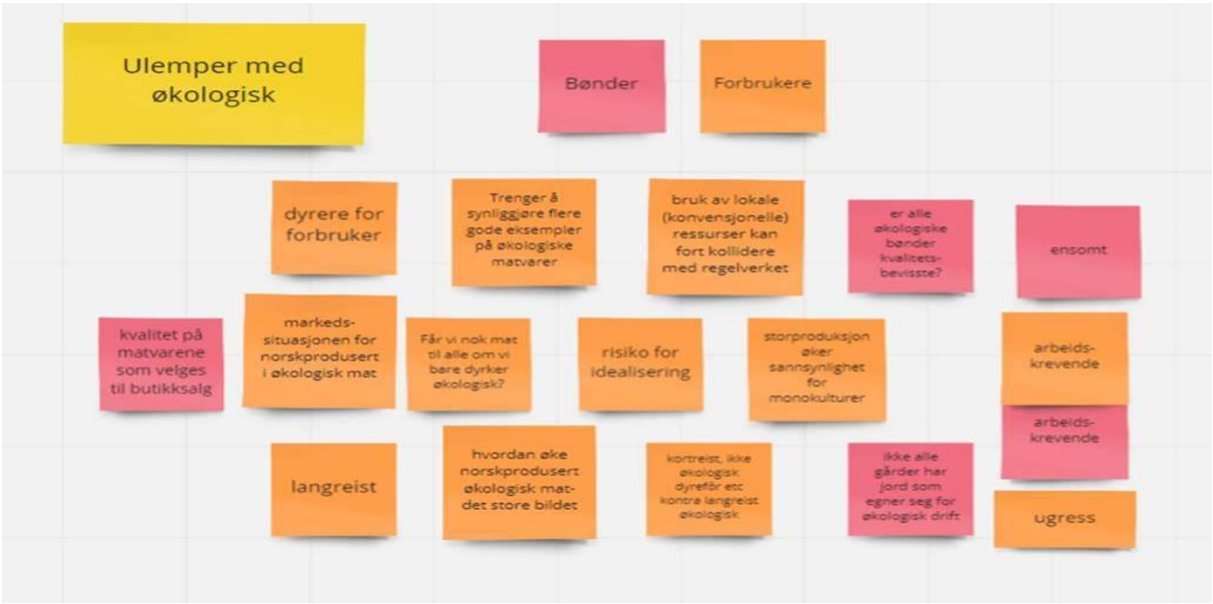

Figure 5.4 Problematic or challenging issues with organic

Some of the issues already mentioned above in the first task were repeated here, such as problems with weeds and that organic farming is more laborious. One of the farmers added to this that you may feel lonely being an organic farmer:

> *"If you are the only one in the village who runs organic it can be a little lonely. The farmers' organisations may not be excellent at taking care of the organic producers necessarily. I hope it has gotten better."* (Farmer, B1)

Another problematic issue mentioned was the question if we get enough food if all farming is organic?

> *"I had a note asking if there is enough food if we only grow organically? Just want to register that there are different opinions on exactly that question. Whether organic farming requires a larger area. It is part of a larger discussion about what we should cultivate, of course. I know very little about it, that's why I ask this question."* (Consumer, FA1)

One of the consumer participants mentioned that organic is more expensive for the consumer. Two notes by a farmer questioned if all organic farmers are conscious enough about food quality and if the quality of the organic products available in the stores are good enough. The market situation

for Norwegian organic food must be improved, and good quality organic products needs to be more visible and handled more consciously in the food stores:

> *"When I think of the organic selection, i.e., all the way down to the organic selection that is in a store, I can sometimes be a little disappointed, perhaps with quality. I think that those who pack the organic goods must be more careful with the quality. I do not know if it is then the farmer or if it is further out in the system that something wrong happens, but I think, for example, that organic carrots, it is not always that they choose such good varieties. I believe that we who operate organically must be very careful about which varieties we choose and make sure that the stores take good care of our products. That you do not get such nets with lemons that are moldy. (…) I think such things are important. Because it somehow has something to do with the reputation of those who operate organically. Potatoes, they can be green in the bag. And I do not know then, whether those who operate organically, whether they are quality-conscious when they sell their products (…)"* (Farmer B3)

Also, the fact that much of the Organic food products and feed stuff in Norway is imported, came up as problematic. Another issue was that Organic regulations may hinder the utilisation of local resources outside the farm that are not certified organic. One of the participants mentioned that in some instances it may be sensible to utilise manure from a neighbouring farm even though it is conventionally driven. Another example is the utilisation of 'third grade' fruit and vegetables from the neighbouring conventional farm as a supplementary feed recourse, which is also not allowed following Organic regulations.

Some of the notes followed up these arguments and pointed to challenges with increasing the national production of Organic food. Related to this was the question of whether all farmlands were suited for organic production?

Table 5.4: Problems with Organic food – comparison of farmer and consumer responses

Problems with Organic	
Farmers	**Consumers**
Quality of food products that are selected for retail sale	More expensive for consumers
Are all organic farmers conscious enough about quality?	(Poor) situation for Norwegian Organically grown food
Not all farms have soil (land) that is suitable for organic.	Long distance
Lonely	There needs to be more visibility of good examples of Organic food products
Laborious	Do we have enough food for all if we only grow Organic food?
	How may we increase the production of Norwegian food - in the broader picture?
	Use of local (conventionally) resources may be in conflict with the regulation
	Risk of idealisation
	Local, non-organic animal feed vs long distance organic
	Volume production increases the probability of mono-culture
	Weeds

	Laborious

Presentation: What does organic certification mean?

After the two brainstorming sessions Børre Solberg from Økologisk Norge (Organic Norway), an NGO especially directed to representing the interests of Organic producers and consumers in Norway, gave a presentation about organic certification. He gave an introduction to the principles behind Organic certification as well as about the different phases in the development of Organic farming both internationally (IFOAM and EU) and within the Norwegian context. He also talked about the different types of labels, especially those concerning Norway (Debio (Ø-label), Demeter etc.) and how they are adapted in accordance with the EU-regulations. The presentation also contained an overview of other Nordic Organic labels and how they work in accordance with the EU-regulations. For instance, both the Danish Ø-label and the Swedish KRAV-label in many areas have more radical or stricter regulations than the EU-label. The presentation finished with a comprehensive overview of the main differences between Organic and conventional farming on issues such as the use of chemical pesticides, artificial fertilisers or limitations to the use of synthetic additives in the processing of Organic food, as well as the special emphasis on good farming practices, animal welfare and biodiversity within Organic farming.

After the presentation, Børre explained that the new EU regulations represent a general sharpening of the rules, and that some of these changes have a special significance for Norway. Both the special natural conditions for agriculture in Norway, as well as differences in traditional agricultural practices between Norway and other countries may in some instances make it difficult to comply with the general EU-regulations. On the other hand, unlike the Swedish KRAV and Danish Ø-label, the Norwegian Debio-label exceeded the 'minimum' requirements in the EU-regulation to a lesser extent.

One of the participants emphasised that it is a dilemma if one should go for a stricter label and thus comply with "strong sustainability" and have a pioneering role or have more soft requirements in the hope of getting more of the conventional farmers on board, thus making it easier for farmers to convert from conventional to organic farming.

Finally, one of the consumers asked if it was suggested to take in soil carbon sequestering as part of the new regulation. Børre answered that this is certainly an issue that his own organisation together with a number of different NGOs and Norwegian authorities are engaged with, however it is not really included in the new regulations. However, Børre emphasised that Organic agriculture will be important in the work on improving soil and carbon sequestering in agriculture in general.

Focus on Organic PLUS Contentious inputs

Presentation: Phasing out contentious inputs in Organic agriculture

Anne-Kristin Løes from NORSØK (Norwegian Centre for Organic Agriculture) gave an overall presentation about contentious inputs in Organic farming and alternatives to these. She is leading work package 5 within Organic-PLUS focusing on alternatives to contentious inputs in soil. Anne-Kristin gave an in-depth overview of the inputs that are part of the research in Organic-PLUS with weight on the challenges these represent within organic farming and the possible solutions. The list of contentious inputs contained: plastic mulches, copper fungicides, mineral oils and sulphur, synthetic vitamins, antibiotics, non-organic straw bedding, peat and non-organic animal manure. In addition, she presented some other issues which arose from the focus groups previously carried out as part of the Organic PLUS project such as: food miles/local food production, plastic food packaging, imported feed, farm size (small scale vs industrialised agriculture), seasonal food and the use of fossil fuels in food production (see also Figure 5.6 below).

Voting session

After the presentation a voting session on contentious inputs was carried out. The HF members were shown an overview of all the contentious inputs which the Organic PLUS project is focusing on. After a round with clarifying questions about the content and meaning behind the different inputs on the miro-board, the HF members were asked to reflect for themselves for five minutes on which they think is most contentious and want to prioritise to phase out, or if there are other issues they think are more important to focus on than those already suggested.

After a short discussion, *hiring foreign workers* in organic horticulture was added to the list. This proposition reflected a much debated subject under the COVID19 crisis about the use of foreign workers, not first and foremost within Organic agriculture, but in Norwegian agriculture in general. The closing of international boarders in Norway created an acute situation with a lack of foreign labour in agriculture as well as in other sectors. In the public debate this was put forward as a food security issue because it revealed a vulnerability in the national preparedness during a crisis.

Figure 5.6: Prioritising contentions in Organic farming

The HF members were then asked to vote for the inputs/issues that they think are the most important to phase out/stop or promote within Organic agriculture. They were given three votes each that they could place on any of the 15 contentious issues. From the figure we can read that reduction in the use of antibiotics, less transportation of food, phasing out the use of fossil fuels in food production and that Organic should be small scale (not industrial agriculture) all got three votes each. Phasing out the use of plastic mulches and peat, reducing the use of plastic packaging and that organic food should be seasonal got two votes, while phasing out the use of copper got one vote from the members. The issues that got votes are to a large extent also the issues that were prioritised by Norwegian respondents in the European survey of consumer opinions about Organic agriculture (Vittersø et al., 2019). The results show that only nine of the issues received votes and no issue got more than three votes, thus it was difficult to make a prioritisation based on the voting results. Given the rather widespread casting of the votes, we realise that the members should have received more votes at their disposition to obtain a clearer picture of what types of issues the participants wanted to focus on.

Topics discussed

The voting session was finalised with a discussion among the members on why they had prioritised certain inputs. The issue of transportation was seen as important, especially regarding Organic produce because these products should be sold as soon as possible in order to keep their freshness and quality. One of the members explained that he/she picked the issues that is most important for the planet (environment) as such, independent of organic or not, thus transportation of food and the use of antibiotics came highest on their list. The "foreign labour" note was rejected by the participants on the grounds of how it was phrased on the note on the voting board. The participants did not think that foreign labour is contentious per se, but that the working conditions for many foreigners, for example low wages, were a contentious issue. The HF members also expressed that some of the issues were difficult to address because one has too little knowledge about these, such as for instance synthetic vitamins. However, one of the farmers pointed out that the presentations had been really helpful:

> *"I would very much like to thank the ones who lectured. There was a lot here I did not know. It was an impossible task to choose."* (Farmer, B3)

The day ended with a discussion about the usefulness of Organic certification and the contentiousness of Organic agriculture as a concept. One of the members had registered that many Norwegian farmers give up producing organically:

> *"And I wonder if it is the regulations that lead to this? Maybe we should open up to have a graduation. Like for example a scale or A, B, C grading. Because I experience that there are many who want to make improvements in the work they do. More and more phase out the use of plastic and copper."*

This was also related to the discussion earlier that a more flexible regulation could lead to more conventional farmers considering converting to Organic farming.

Session 3: "Fertilisers and good soil in Organic agriculture"

Initial thoughts about soil health and fertilisers

The aim of the third day was to learn more about the work within Organic-PLUS and especially about the role of fertilisers and healthy soil in Organic agriculture, and how one can work with these issues within different farming systems. The meeting started with a round among the HF members about their expectations for the day. The round revealed that the participants had expectations about discussing both ethical issues, such as viewing the topic from a global perspective, as well as considering the complexity of the issue of soil and food production. Several of the participants underlined that they had little knowledge about the theme and wanted to learn more:

> *"Yes, then I initially thought about the starting point and the knowledge I have that I feel is somewhat limited. When I was little, I loved soil, especially eating it. And we often hear in the church that we come from soil, and we will become soil. So, this is an interesting topic that is highly relevant from a global perspective. So, I have some high expectations for this." (Consumer, FA3)*

> *"One can never be fully trained about soil." (Farmer, B3)*

> *"It's a topic I do not know much about before. There is a lot new I can learn here." (Consumer, F3)*

Hopefully, these expectations were met by having two external experts, Anne-Krisin Løes and Anders Lerberg Kopstad, to give short half-hour lectures on the topics of the day.

Associations with "good soil"

In this session the farmers and consumers were split into three groups, to have a deeper discussion about the participant's associations with "good soil" and why should we, as either consumers or farmers, care about these issues? The discussions circled around different aspects concerned with the quality of soil. Some of the participants pointed to the quality of the soil as being crucial for what can be grown in particular places and regions:

> *"There are vegetables and grains and other things like flowers. Because it is probably the case in Norway that soil is distributed unfairly and that some areas have good soil (...) I have been told there is a difference in the soil between the Eastern and Western sides of the Randsfjorden (local lake). Just look at the grain from the farmers who enjoy themselves on the East side of the Randsfjord."* (Consumer, FA3).

Another told that early civilisations occurred in areas with good soil, especially where the great rivers were flooded like the Nile in Egypt. Several were aware that good soil must contain the vital nutrients that the plants need to grow, however some also marked that what is good or poor soil may vary dependent on what you grow:

> *"I think about the fact that good soil is so much (…) and that the farmer grows vines on the worst soil. Because the vine should have nothing. It is like a dandelion child who must fight his way forward to have a good result."* (Consumer, FA4)

Also, the fact that good soil is a scarce resource, especially in Norway with little arable land, was considered by the participants. This is also critical because at the same time as there are more and more people on earth, arable land disappears as a result of the degradation of soil for purposes other than food production:

> *"It also takes a very long time to form good soil. I have experienced this when the national road 4 was built and topsoil was removed. There has been a lot of discussion about how many thousands of years it takes to create a layer of good topsoil. And that is an important reason why you have to take care of it. It is not done in an instant to renew it. It's not really a renewable resource, is it?"* (Consumer, F1)

One farmer made a more concrete example of how he/she experienced good soil:

> *"At the agricultural school, we learned about such a 'rolling test'. (…) That you should feel the soil if it is such that it crumbles well in your hand before you start to work the soil. And do not use too heavy machines to preserve the right structure in the soil. When you are going to sow - or fertilise - or whatever you are going to, that you do not press it together. It should be suitably porous, and the seed should be able to germinate down there, so there must not be so many stones that the whole field is covered with stones, but it is advantageous with a little amount, because it gives heat in the soil - so it is very many items to draw in here, I think."* (Farmer).

Finally, one of the consumers mentioned that good soil also had to do with the diversity of bacteria present, which is good for the soil but added that she/he had little knowledge about the issue.

Alternative fertilisers and farming practices contributing to soil health

After the discussion in the three break-out rooms, Anne-Kristin Løes from NORSØK and leader of WP5, gave an introduction to the research within Organic-PLUS on developing new sources/types of fertilisers. Within Organic agriculture, mineral fertilisers are forbidden, while manure from livestock is allowed, including non-Organic manure (as long as it is not sourced from 'factory' farms) as well as bone, blood and feather residues to a certain amount. The challenge with the use of the non-Organic fertilisers, is that they may contain traces of veterinary medicines that one tries to avoid as much as possible within Organic agriculture. It is also an aim to strengthen the use of green manure to meet a demand for vegan-Organic products that may not be produced with inputs stemming from animals.

About the contentious use of fertilisers within organic agriculture

The integrity of Organic agriculture is at stake when depending on non-Organic inputs. For instance, when using the surplus-manure from conventional agriculture, Organic farming contributes to unsustainable agricultural practices that one wants to put an end to. Several alternatives to conventional manure are studied within Organic-PLUS: decomposed residues from food waste, legumes in crop rotation, as well as marine resources such as fishbones and algae.

Anne-Kristin presented the field trials with different types of fertilisers. It showed promising results regarding yields for some of the crops that were included in the trials. Anne-Kristin was followed by Anders Lerberg Kopstad who is running the family farm "Evig grønne enger" (Evergreen Pastures). He told about his farm and how they manage the farm holistically by use of regenerative agricultural practices. After the two presentations the HF members gave their summary from the first breakout groups and had the opportunity to have a dialogue by asking questions and giving feed-back to the presenters (Q&A-session).

Creating a farmer-facing factsheet and consumer-facing newspaper article

The last task of the day was a brainstorming exercise where the participants, based on the two presentations, were asked to come up with inputs to a factsheet aimed for farmers and a newspaper article aimed for the general public concerning what is important to know about fertilisers and good

soil. The researchers had prepared a template in miro with some headings and the HF members were asked to fill in with their suggestions under each of the headings. The farmers started with the factsheet and consumers with the newspaper article. After twenty minutes the groups switched and supplemented the tasks with new suggestions, if they had points to add. The aim was not to have completed the factsheet or article, rather to have the HF members reflect on what they had learnt during the day. The results of the exercise were published on the internal Facebook group and distributed to the members by e-mail after the meeting (see Figures 5.7 and 5.8 and Tables 5.5 and 5.6 below).

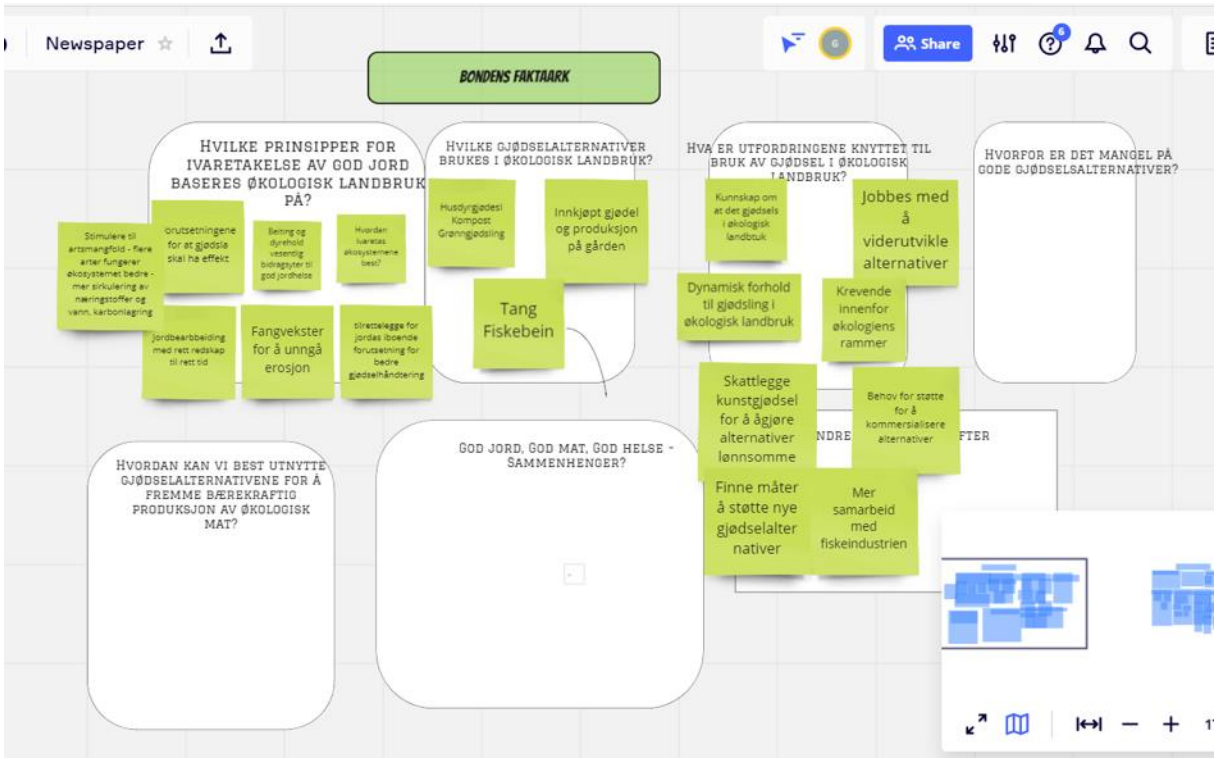

Figure 5.7 Farmer-facing factsheet brainstorming session

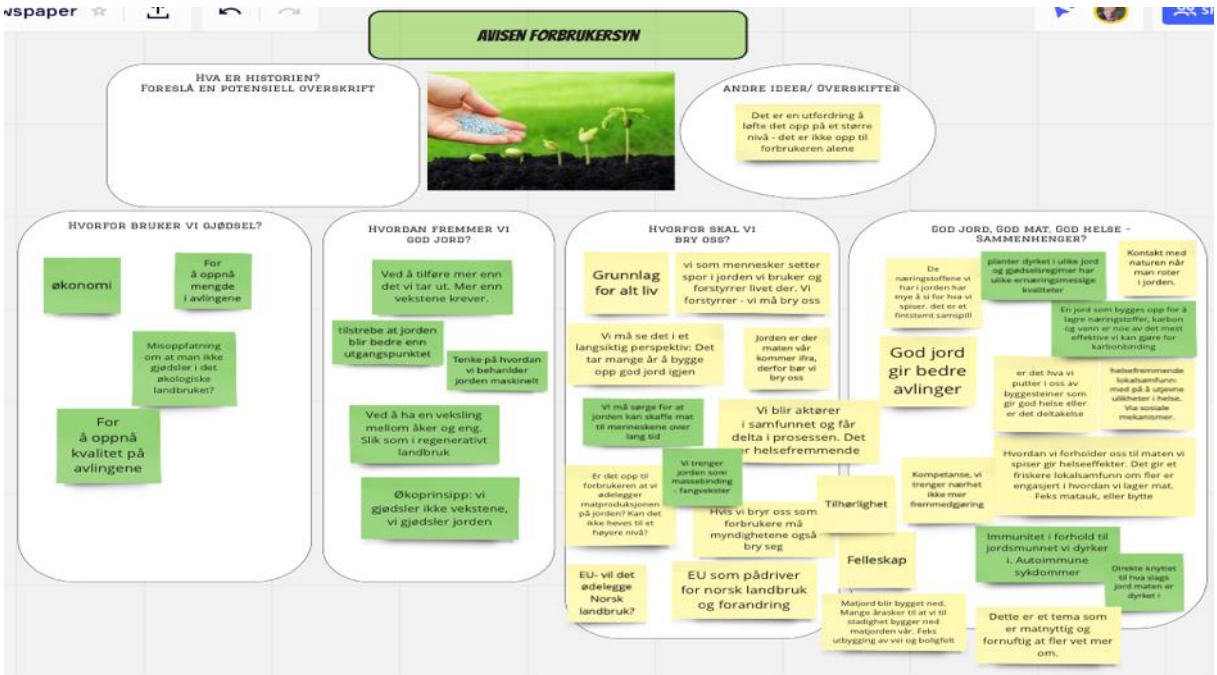

Figure 5.8: Consumer-facing newspaper article brainstorming session

Table 5.5: Farmer-facing factsheet about soil health and fertilisers

What principles for good care of healthy soils does Organic agriculture rest on?		
Tillage with the right machinery at the right time	Facilitate the soil's inherent precondition for better manure handling	How to best take care of ecosystems
Cover crops to avoid erosion	Grazing and animal husbandry are significant contributors to good soil health	Stimulate biodiversity - more species make ecosystems work better
Provides the conditions for fertiliser to have an effect		More circulation of nutrients and water, carbon storage
What type of (alternative) fertilisers are used within organic agriculture?		
Manure, compost, green (plant) fertilisers	Seaweed, fish bones	Manure provided from outside the farm as well as manure from own livestock
What are the challenges regarding the use of fertilisers within Organic agriculture?		
More knowledge about the fact that fertilisers are used in Organic farming	Efforts are being made to develop alternatives	Find ways to support development of new fertilisers
Dynamic relationship to fertilisation in Organic farming	Tax on fertilisers to make alternatives profitable	Need (financial) support to commercialise alternatives
More demanding in Organic farming		More collaboration with the fishing industry

Table 5.6: Consumer-facing newspaper article about soil health and fertilisers

Why do we use fertilisers?		
Misconception that fertilisers are not in use within organic agriculture	Economy	To achieve high yields
To achieve good quality on the produce		
Why should consumers care?		
It is the foundation for all life	We have to make sure that the soil will provide food for humans over a long period of time	EU - will it destroy Norwegian agriculture?
We have to look at this in a long-term perspective. It takes several years to build up good soil.	It is a challenge to raise it to a higher level. It is not up to the consumer alone	EU as the driving force for Norwegian agriculture and change
We as humans leave traces in the soil so that we utilise and disturb the soil life. We are disturbing – we should be caring	We become actors in society and get to participate in the process. It is health-promoting	
We need to preserve the soil and prevent erosion - cover crops	If we care as consumers, the authorities must also care.	
Good soil, good food, good health – connections?		

The nutrients we have in the soil have a lot to say for what we eat - it is a fine-tuned interaction	Contact with nature when digging in the soil	A soil that is built up to store nutrients, carbon and water is one of the most efficient things we can do for carbon sequestration
Plants grown in different soil and fertilisers have different nutritional qualities	Good soil gives better yields	Expertise, we need closeness not more alienation
Is it what we eat that provides good health or is it participation in social life?	Health-promoting local communities: helping to even out inequalities in health. Via social mechanisms	Belonging
Directly related to the type of soil in which the food is grown	This is a topic that is useful and sensible that more people should know more about	Topsoil is being reduced. Many reasons why we are constantly building on our topsoil. For example, development of roads and housing estates

In some areas it seemed that the discussion changed during the session. When discussing the factsheet and the article the participants referred to the previous presentations. Initially, the participants associated 'good soil' and differences in the quality of soil with nutrient content, while in the final discussions, to a larger extent, they referred to the micro-life in the soil and how human actions may affect soil life and thus the quality of the soil. The connections between soil and human health were also highlighted.

Session 4: Implementation

Aims for the fourth session:

- To discuss what participants understood by sustainability in food production, seen in relation to how sustainability is evaluated within the Organic-PLUS project.
- To present different intervention scenarios in order to discuss what are the most effective measures to strengthen Organic food in the future.
- To investigate whether participants had changed their perceptions and knowledge about Organic food over the course of the four HF sessions

In order to discuss how to assess sustainability in food production we invited Adrian Evans, Centre for Agroecology, Water and Resilience (CAWR) Coventry University to give a presentation of the RISE model that is used within Organic-PLUS as a tool to evaluate the sustainability of alternatives to contentious inputs in organic production.

Sustainability on a farm

For this exercise, the HF participants were asked: 'What do you want to emphasise when assessing whether a farm produces food in a sustainable way?' The whole group was given five minutes to brainstorm answers to the question. The results are shown in figure 5.9 (with farmers answering on green notes and consumers on yellow) and table 5.7.

Figure 5.9. Miro board. Brainstorming session «Sustainability on a farm.

Most of the notes concerned environmental sustainability, such as biodiversity (attract insects), animal welfare, ecological principles (adapt to the resources on the farm, plant trees), soil health, food miles (local food) etc. Some also mentioned the importance of diversity and one of the consumers elaborated further on this.

> *"I wrote it. Diversity of plant crops. I imagined that monocultures are not so sustainable. It requires more pesticides and follow-up. Therefore, I think the opposite is more sustainable.*

> *That it requires a kind of joint use. I think holistically. It is suitable for planting trees that can protect other plants and provide shade. It is as a holistic use then, that it can take care of each plant better. They can contribute to each other's survival and well-being. And then I immediately think that then maybe there will be less fertilisation, less need for pesticides and stuff, which I think can be negative on the sustainability perspective then."* (consumer, F4)

Also, a range of social sustainability aspects were mentioned including more small-scale farms, more people involved in agriculture, fair wages, food security, long-term production and social equality. One of the consumers also mentioned profitability from increased production as an economic sustainability issue.

There was some overlap between farmers and consumers, however the farmers were perhaps more concerned with the social aspects such as increasing the number of people involved in agriculture and fair wages. While some of the consumers were especially focusing on issues connected to soil health. Maybe this engagement with soil health came out of the lessons and discussions in the previous session on fertilisers and soil health?

Table 5.7: Sustainability on a farm. Comparing farmers' and consumers' responses.

Sustainability on a farm.	
Farmers	**Consumers**
Organic production	Animal welfare
Production according to Organic principles	Diversity of crops
Measures that attract insects	Focus on diversity
Production adapted to the resources on the farm	Crop rotations
We must adapt production to the possibilities available at the farm	Plant trees that may protect other plans and provide shade
Engaged farmer	Take care of the environment. No-harm principle
Each farm must provide for its own ecosystem	Without harmful additives (pesticides etc.)
More small-scale farms	Get better knowledge to avoid degrading the soil and to improve the soil quality
More people involved in agriculture	Self sufficiency
More people on each farm	Least possible ploughing
Paid for work (fair wages). Social sustainability	Healthy soil
Interaction between several ecosystems simultaneously	Organic with documented effect on carbon sequestration in the soil
	Right fertilisation at the right time
	Grow in a fashion that takes care of the soil
	Good soil – good health? A lot of things in the soil might be good for our health
	Utilise the land in a way that secures food for all globally
	Long-term production
	Increase in the production of food grains, vegetables, fruit and berries demand better profitability
	Local food
	Grow vegetables etc. that are suitable for the actual place

	Grow species that are adapted to the local soil conditions – good to try new species
	Concerned with the local community
	Consider more ecosystems simultaneously
	Social ecosystems
	Social equality/universal participation in volunteer work (dugnad)

After the presentation from Adrian Evans there was a discussion about the RISE model and sustainability on the farm. The moderator summarised that many of the aspects that the participants had emphasised in the brainstorming were also central to the RISE model. However, one of the consumers noted that she/he had not considered the water issue:

> *"One thing I noticed he had in the model that we did not think about was water consumption. Amount of water. I saw that he had as a point. We did not think about that at all. We probably thought more about the type of run-off to water like that in terms of discharges and pesticides and pollution. But exactly the amount of water consumption I did not think about before his presentation. And this is sustainability too. Not to waste water."* (Consumer 4).

One of the farmers then commented that lack of water is a vulnerability at the farm both regarding vegetable production, but also earlier on when they had milking cows, they had to carry a lot of water in tankers or take the cows down to the river and it was incredibly far to walk. Another farmer added that he/she liked the RISE model and that he/she especially was concerned about the social indicators. More people have to be engaged in farming. Small scale agriculture is positive for instance in Africa, and it could be the same also in Norway. One of the consumers then added to the social dimension that the farm also is an important part of the local community. This was then seen in relation with the CSA that many participants were part of. They felt that the CSA contributed a lot to the local community on various social aspects.

Intervention scenarios

The next session was called "How to improve organic agriculture". The participants were provided with a link to a google docs form where they could do the voting on seven different intervention scenarios. The participants were asked to state to what degree they thought the scenarios were achievable and effective on a scale from 1 (not achievable/no effect) to 10 (highly achievable/very effective). The scenarios were the same as in the UK HF. The voting was followed by a short discussion about the results of the different scenarios.

Education campaign

The participants were positive about the achievability of information campaigns but a little more sceptical towards their effectiveness.

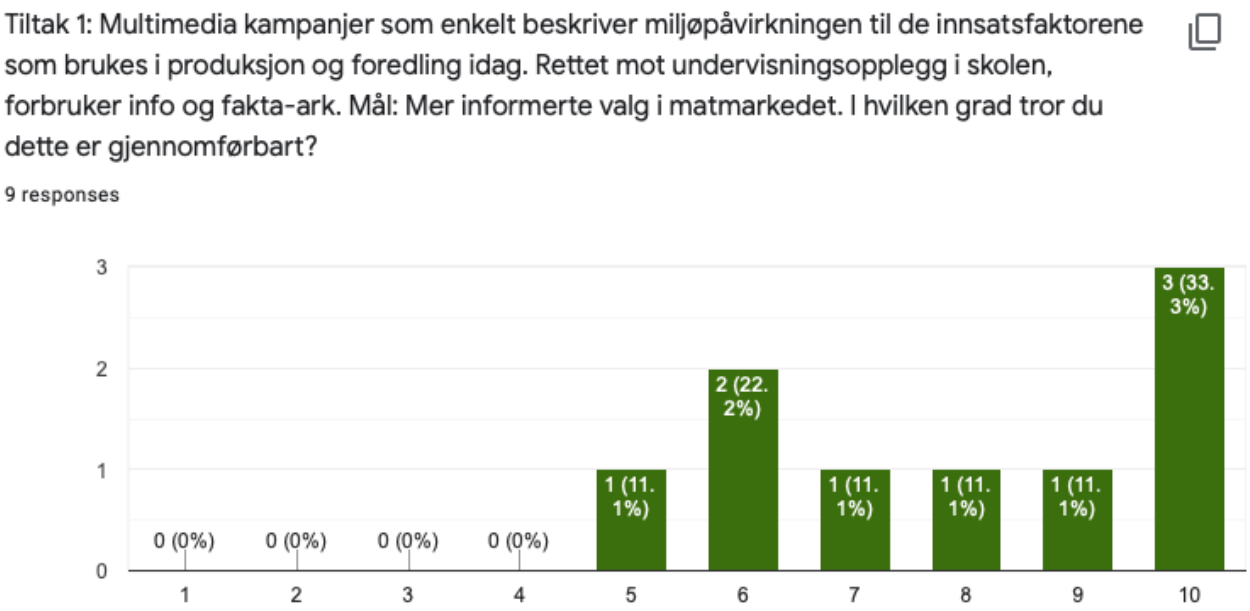

Figure 5.10: Education campaign. Achievability

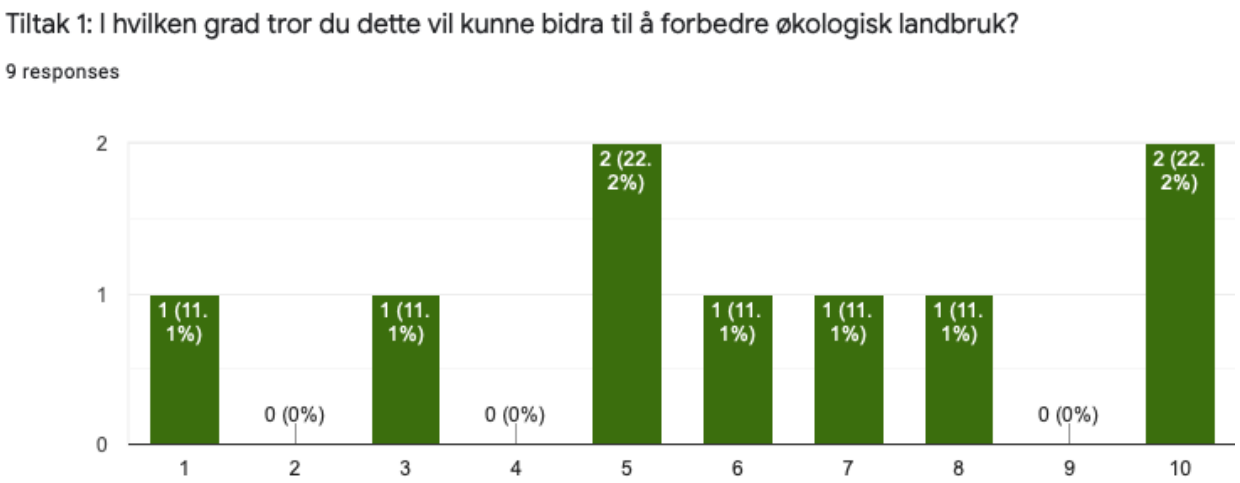

Figure 5.11: Education campaign. Effectiveness

Labelling I

The result of the voting showed that most participants were positive about a stronger standard for the Organic label. However, the discussion afterwards revealed an ambivalence towards stricter regulations from the farmers. One of the farmers mentioned that stricter rules will prevent more farmers from converting to Organic, as also was discussed in a previous session. However, another farmer felt that stricter regulations could motivate the serious farmers and leave out the not so serious ones. Some of the consumers were also sceptic about the effectiveness of including more aspects in the labelling scheme:

> *"I also think that stricter standards for labelling schemes will not necessarily mean that there is more support among consumers, because then you also need more knowledge and information. And then the question is whether (the information about) what lies behind the labeling scheme reaches the consumers*." (Consumer, F3)

"I think it's a bit dangerous to think that an eco-label should embrace all aspects of sustainability. We live with the fact that it is more than difficult to communicate the content that is in the Organic label today. We have not done well enough at all. Much remains to be done to gain a general understanding in society of what lies behind the Debio label. So, I probably tend in the direction that a further development of the eco-label should concentrate on the ecological part of sustainability. The quality. While the social and economic factors must come into play in other ways. For example, today, fair trade is one of the most recognised branding schemes for social sustainability. When we buy coffee, we prefer the eco-label because it guarantees an Organic production quality. And if that coffee also has fair trade, then we take it because then we know that there is a social quality associated with it as well. That's how I think it must be. Consumers have more than enough labels to deal with today. (…) That's why I've responded a little soberly to this" (Consumer, FA2)

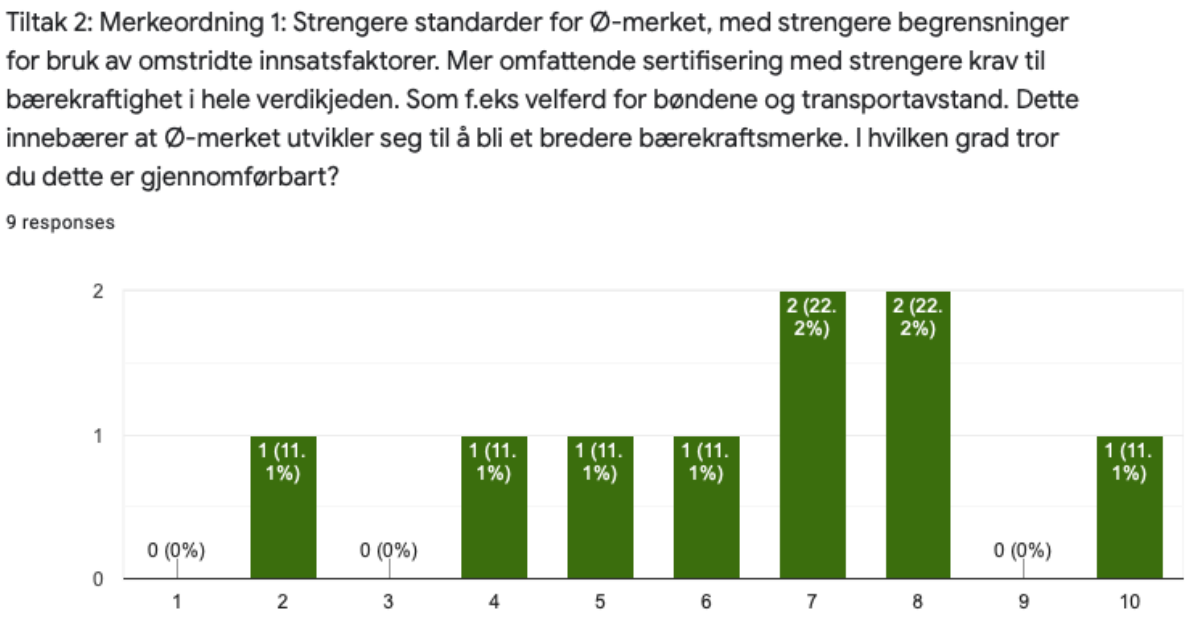

Figure 5.12: Incorporating more sustainability factors into an 'Organic' label - achievability

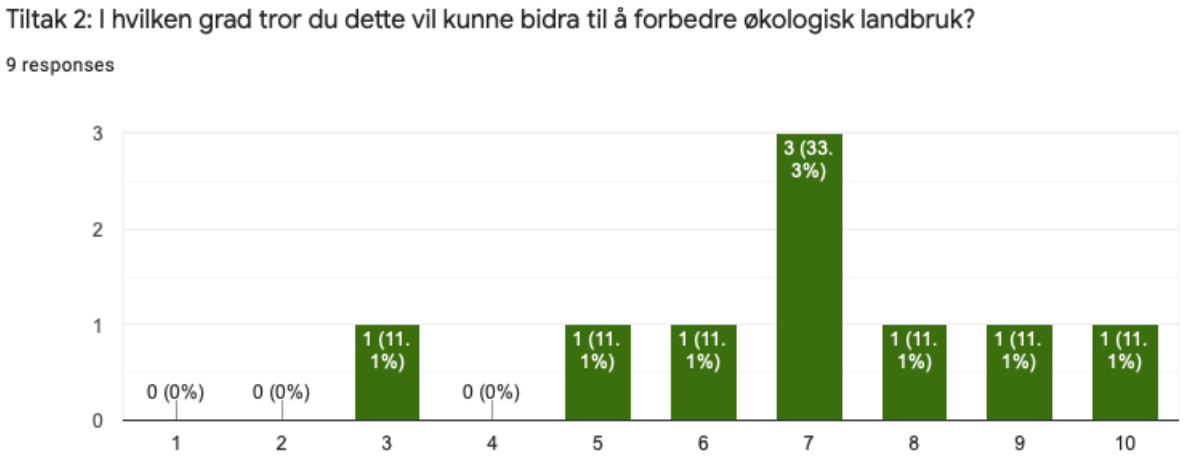

Figure 5.13: Incorporating more sustainability factors into an 'Organic' label - effectiveness

Labelling II

The discussion then went on to the second labelling scenario about a more differentiated standard for those farmers who want to go further on some issues, such as "climate-friendly organic", "peat-free organic", "vegan-organic" etc. The discussion reflected the spread of the voting results from negative to positive, which was broad on this scenario. Some were negative to more labels, while others felt that more specific labels could provide clearer information to consumers:

> *"No if I was looking for something very special and what I actually knew what was behind these labels then it might have been tempting. I probably know a little more than average about what lies behind these labels. And I register that there is a great deal of ignorance about this. Our main problem is not to introduce more labels. It is to clarify and promote those we already have."* (Consumer, FA2)

> *"I really appreciate different labelling schemes. Especially on fish products, they have the blue labels. Because you do not get so much Ø-labeled fish. And most of what is Ø-labeled is farmed. And now I only use fish as an example. But the fact that fish actually is labelled I really appreciate, because it is a jungle! I'm unsure of this with even more labels, but you actually sometimes get both the Organic AND fair-trade labels. And I appreciate that, right? And Demeter. So, I'm probably one of those people who appreciates having more labels, as long as I know what they mean." (Farmer, B1)*

> *"I agree a bit with you. In the examples, there were very concrete things such as "climate-friendly". That it is very clear. But I completely agree that one must understand what is behind it, but for my part if it is labelled with several things, it is not necessarily a negative thing. Rather the opposite! You can rather look for the things you are interested in and choose to prioritise. For example, I am very concerned about animal welfare, so I would have really appreciated if you could get it as a label in addition to Organic so that you can get information about other aspects of the label also. And climate friendly too, really ... "Peat-free" ... You have to a certain extent labelling schemes for peat-free already, but yes … It is very questionable. You have to understand it, I completely agree with that*. (Consumer, F4)

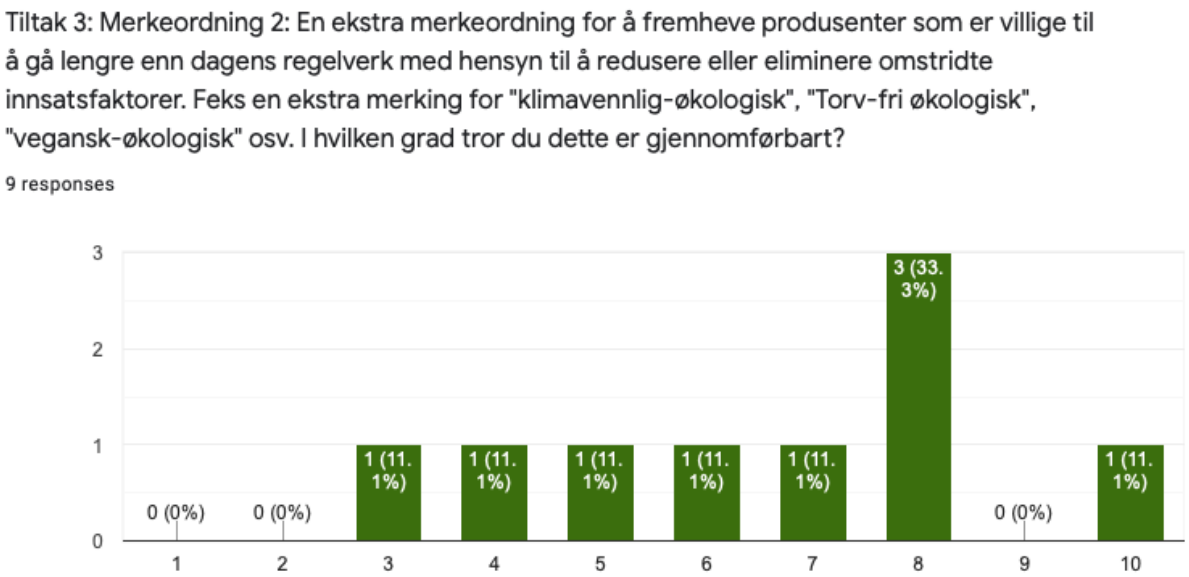

Figure 5.14: Range of labels for different types of Organic – achievability

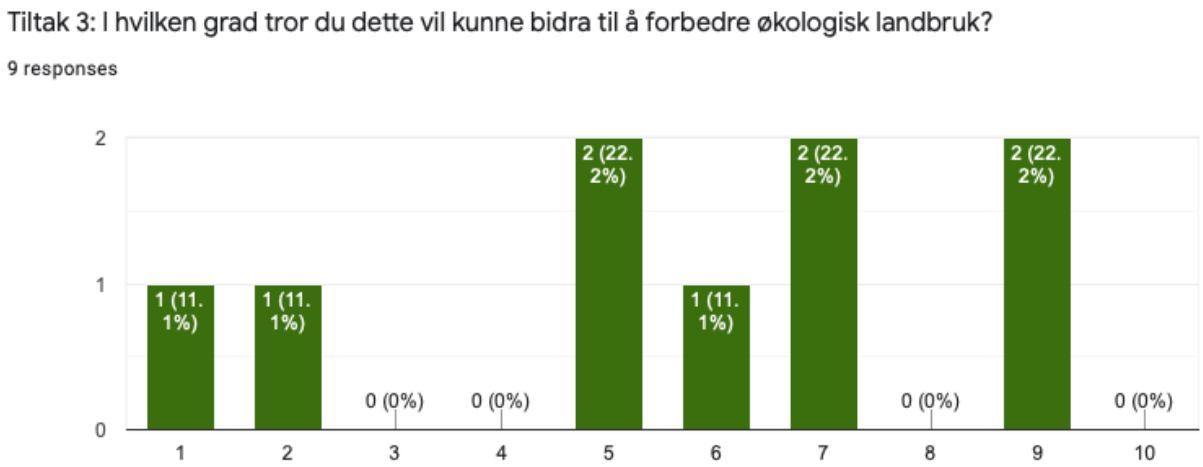

Figure 5.15: Range of labels for different types of Organic - effectiveness

Government regulation I

This measure was evaluated on the positive side by the participants, and they thought it was quite feasible and effective for improving organic farming.

> *"If there is a lot of confusion among consumers and manufacturers and too many labels, it is difficult to relate and follow what each label means. So, if there is a good minimum standard as a basis that many countries agree on, then I think it is the right way to go."* (Consumer F1)

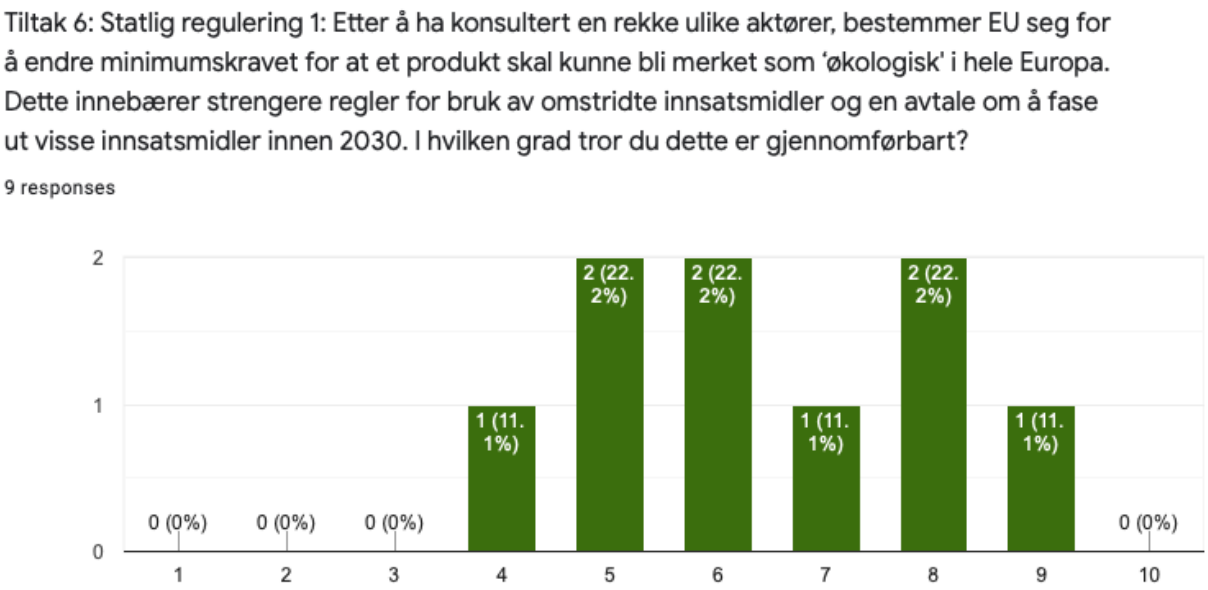

Figure 5.16: Tighter regulations on Organic, including banning some inputs - achievability

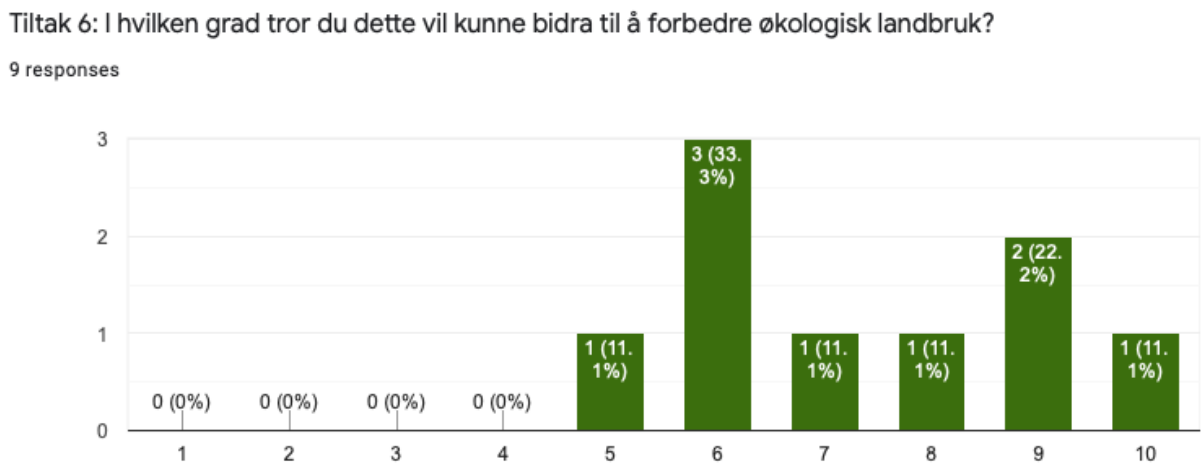

Figure 5.17: Tighter regulations on Organic, including banning some inputs - effectiveness

Government regulation II

This scenario was also regarded as quite positive in relation to its effectiveness. However, some of the participants voted in the middle regarding whether more differentiated regulations on a national level is achievable:

> *"I think maybe I have answered a little in the middle based on which politicians we have. How likely is it that they will implement it? If we had politicians who would implement it, it would not have been difficult."* (Consumer, F2)

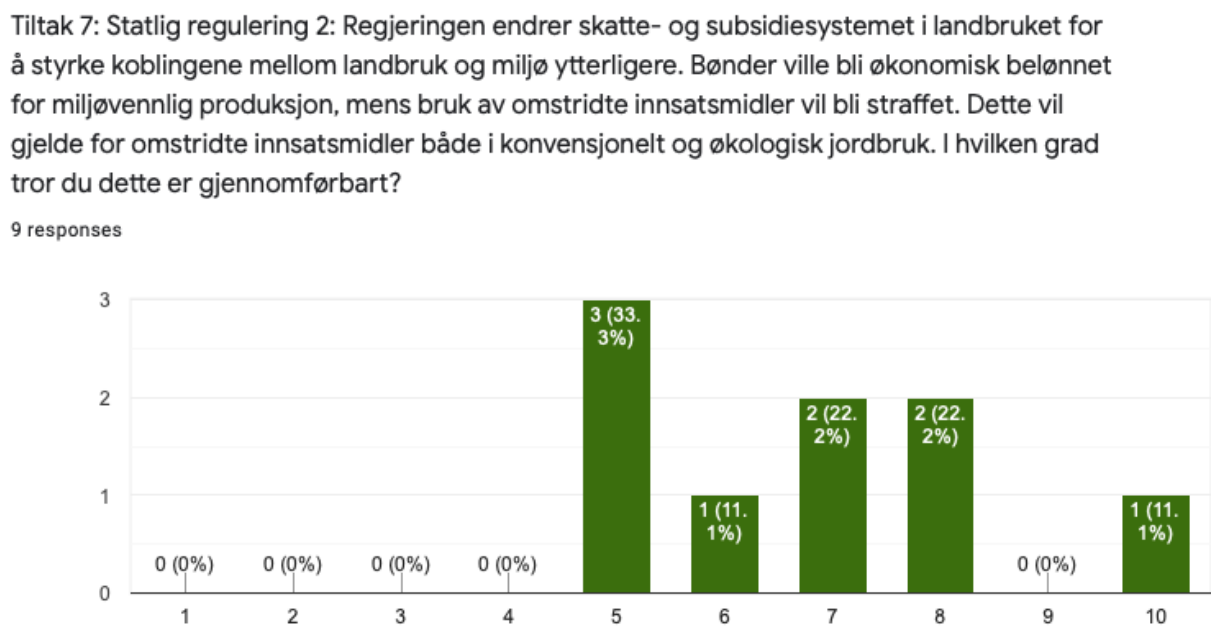

Figure 5.18: Changes to taxes and subsidies to support more environmentally friendly farming (conventional and Organic) - achievability

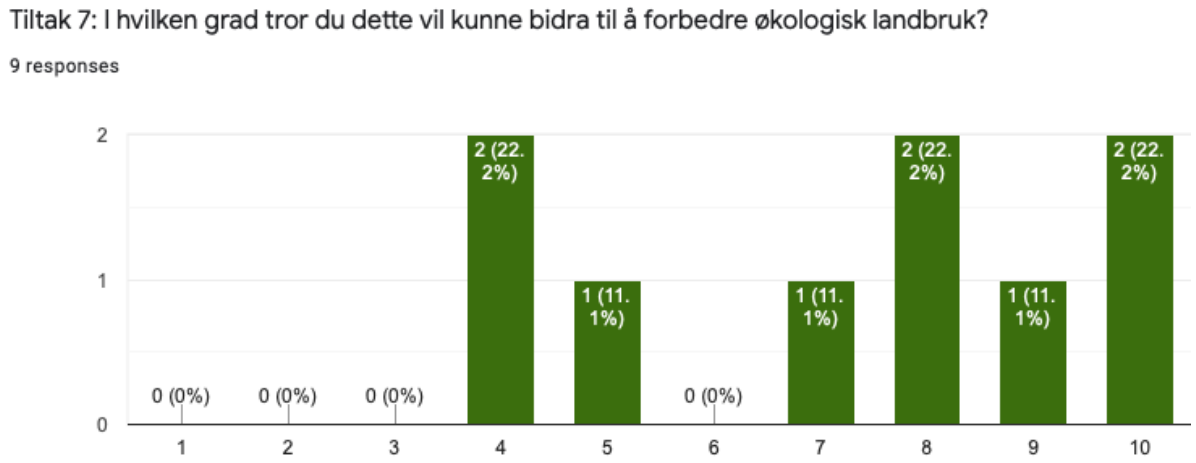

Figure 5.19: Changes to taxes and subsidies to support more environmentally friendly farming (conventional and Organic) – effectiveness.

Facilitating improvements at the farm level

This scenario received high scores especially regarding its effectiveness, while the votes were a bit more dispersed regarding whether it is achievable or not. This result may be viewed in line with the scenario about regulation above. It may be a rather costly measure for which it is difficult to gain political support.

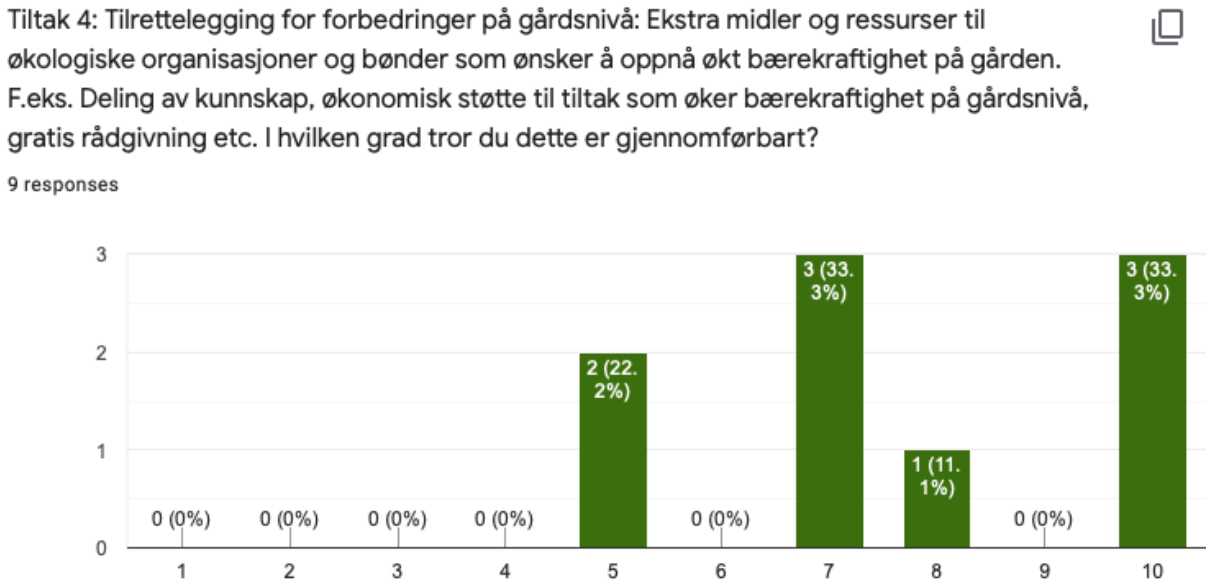

Figure 5.20: facilitating environmental improvements on-farm - achievability

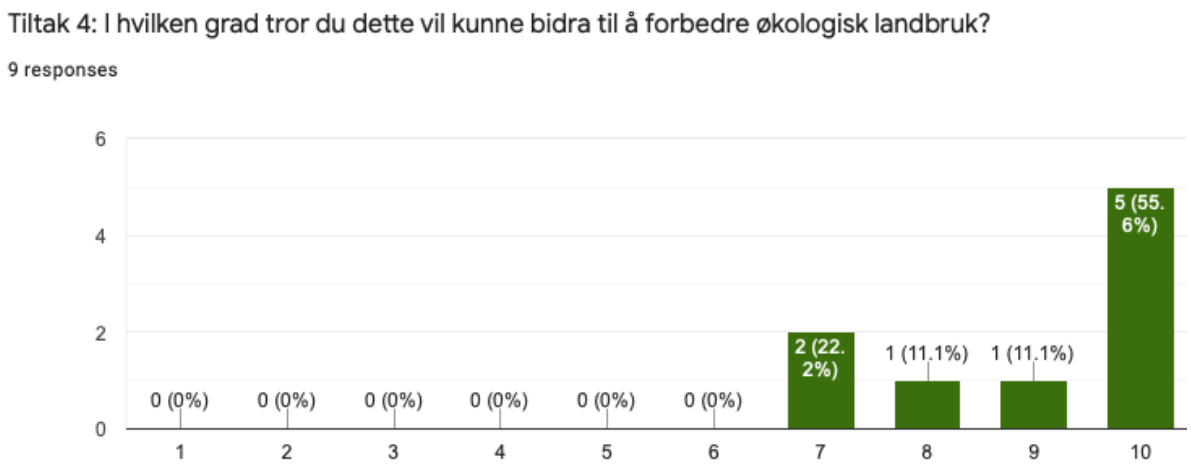

Figure 5.21: Facilitating environmental improvements on-farm - effectiveness

Retailer-led improvement

HF participants had mixed feelings about this scenario, especially in relation to how effective it might be. Some participants gave very low scores to this scenario, on the other hand, one participant gave this scenario the highest score. Furthermore, one of the farmers believed that the retailers today already have too much power as it is:

> *"What I think is that in agriculture we struggle a bit with the fact that the chains have too much power as it is. And that they are able to control production on certain terms that farmers cannot vouch for. They push prices, etc. We farmers get a little squeezed. That's why I answered at the very bottom of the scale. But it may be wrong of me to answer that based on my personal opinion about the chains and whether they should interfere in what we are going to produce. Or how we should produce. So, it might be a little coloured by that." (Farmer, B2)*

> *"I agree … In the ultimate consequence supermarket chains could own the land and the production and I think that's really dangerous!"* (Farmer, B1)

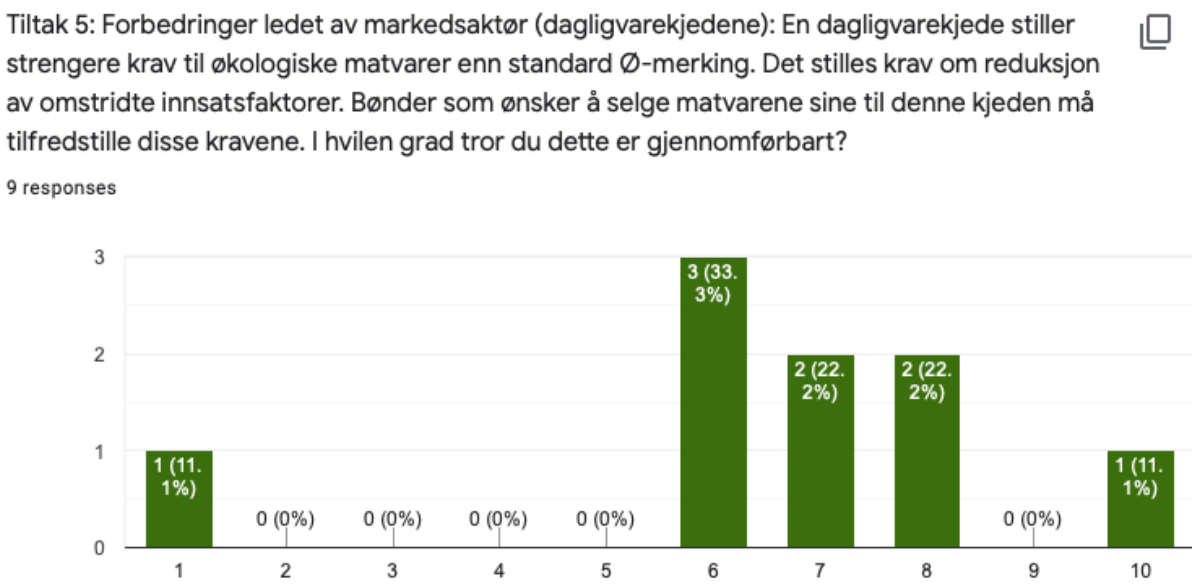

Figure 5.22: Retailer-led reduction of contentious inputs in Organic agriculture - achievability

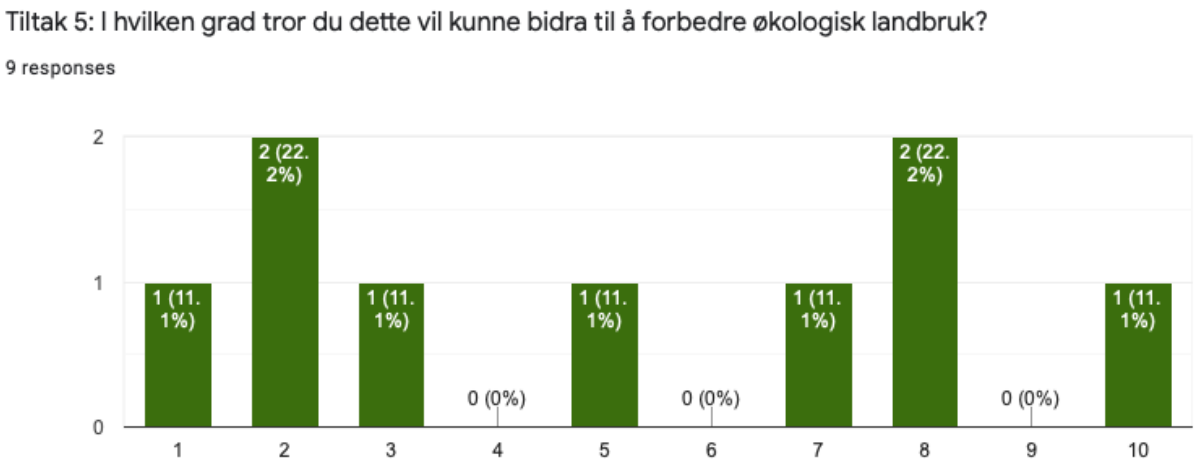

Figure 5.23: Retailer-led reduction of contentious inputs in Organic agriculture - effectiveness

Repeat of session 2 exercises

Change in associations with Organic Food

There were few changes in consumers' and farmers' associations with Organic food between session 2 and 4 (see tables 5.12 and 5.13). Even though several of the consumers expressed that they had learnt a lot about Organic food during the meetings, they already had strong associations with Organic food from before. That might be an explanation to why associations with Organic food did not change much between the meetings.

Table 5.12: Change in consumer associations with organic food

Consumers session 2	***Consumers session 4***
Long shelf-life (keeping quality)	
	Free of dangerous substances/pesticides (several)
Healthy, contribute to a healthy diet	More health-enhancing (several)
Pure food	Pure food
The quality of the production is tied to soil and animal health. Little or no pollution and in accordance with IFOAM's basic principles	Production quality related to Organic, animal welfare etc.
Food produced and certified according to Organic agricultural regulation	
Ethical	Animal welfare (several)
More local products	'Short-travelled' (several)
More and more of the Organic products are being imported	
	Production with a more long-term perspective
Lifecycle-based *(kretsløpsbasert)*	
Good for nature and the environment	Environmentally-friendly
Sustainable	Sustainable (several)
Gives opportunities for greater diversity (products and producers)	Diverse food
Diversity, take care of diversity	
Seasonal food	Seasonal food
May return to old food traditions and food history. Strengthened identity	Cultural/historical – identity formation

Table 5.13: Change in farmer associations with Organic food

Farmers session 2	*Farmers session 4*
Good food	Good food
Specialty products	Good taste
Good for health	Safety
Pure food produced on natural terms	Healthy
Holistic mindset	Circularity mindset
Sustainable	Sustainable (several)
Maintain smallholdings/Keep smaller farms alive	
Good for the soil	Takes care of the soil, good for the world/soil
Engaged producers	Engaged farmers/producers
Diverse production	
Healthy plants	
Happy animals	Animal welfare
Laborious	
Utilisation of grazing resources	

Change in challenges with Organic Food

The consumers emphasised the need for more knowledge and information about Organic agriculture as a challenge to a greater extent in session 4 than in session 2. This might reflect the fact that the consumers themselves said that they had learned a lot about Organic food and farm from participating in the hybrid forums.

Potential conflict between land use and organic farming

The issue of 'feeding the world', appeared as an underlying theme throughout the process rather than changing over the session. It emerged as a basic aim and value in agriculture.

> *"My impression is that it may be difficult to get enough food for all if everyone were to eat Organically. Then we may have a challenge to feed everyone, at least in a global perspective. With regard to the use of land area. To the extent that it demands more land area, it would not be solely positive. We don't have indefinite agricultural land in Norway either, more on the contrary, and we are under pressure to take care of these areas."* (F4)

This potentially problematic issue was raised directly and indirectly throughout the HFs and seemed to reflect an ethic of solidarity and care that agriculture should to the largest extent possible feed people.

A specific aim with the CSA was to produce a large variety of foods and to cover as much of the food needs of members throughout the year, e.g., by including root vegetables suitable for storage.

A view that the principles and practices of organic agriculture are well-suited for supplying balanced food for human consumption was also expressed, e.g., by one participant reflecting on her experiences from a 9-10 month stay at a biodynamic farm in Pennsylvania during her early studies:

> "*It [the farm] was 10-15 times larger than the average in Vestfold County [where she grew up], and there was a great balance between plants and animals, and I learned a lot about good Organic cultivation of the soil. (…) This farm provided significantly more food for human consumption than what I was used to and that was very nice to see and resulted in an absolute certainty that the Organic methods I was learning were working."* (FA2)

Issues including, valuing good food from Organic agriculture, reducing waste, and ensuring good storage were also discussed. The high cost of Organic production was also indirectly raised in relation to the increased need for labour in Organic farms. The importance of waste reduction in Organic food and farming was also discussed.

Moderator: "*Were you thinking that there could be more waste in Organic than conventional?*"

Consumer-participant: "*No, but I think in general that we ought to reduce waste. And when we already have used a lot of capital on producing food, I think it is important not to let it go to waste."*

Table 5.14: Change in consumer challenges with Organic food

Consumers session 2	***Consumers session 4***
More expensive for consumers	Good storage facilities/Storage
(Poor) situation for Norwegian Organically grown food	Knowledge – spread information (several)
Long distance	Develop and spread knowledge to farmers and society at large
There needs to be more visibility of good examples of Organic food products	Information and knowledge reaching out to the consumer
Do we have enough food for all if we only grow Organic food?	Need, motivation and interest among consumers
How may we increase the production of Norwegian food - in the broader picture?	Willingness to pay more
Use of local (conventionally) resources may be in conflict with the regulation	Costs
Risk of idealisation	Market situation
Local, non-Organic animal feed vs long distance Organic	Ethical processing
Volume production increases the probability of mono-cultures	Use of land area
Weeds	Enough production
Laborious	Produce enough for everyone
	Create larger diversity – try out more locally adapted plant species which are optimised to Organic production

Table 5.15: Change in farmer challenges with Organic food

Farmers session 2	***Farmers session 4***
Quality of food products that are selected for retail sale	Farmers economy/Economy
Are all Organic farmers conscious enough about quality?	Fertilisation
Not all farms have soil (land) that is suitable for Organic.	Space for animals
Lonely	Laborious
Laborious	Weeds

Learnings over the sessions

Both farmers and consumers expressed that they had learned something during the HF, and that it had been valuable for them. Farmers expressed that they had found it valuable to get more insights into the minds of the consumers, and also nice to address issues they are concerned about in a mixed group including consumers. One farmer commented on finding it difficult to meet and engage with consumers in everyday life – despite several types of efforts he had initiated. Consumers

reported that they had learned more factual knowledge, but also gained an increased understanding of farmers' situations.

Dilemmas, challenges and how to balance seemingly opposing needs and values were discussed. The summing up on Day 4 reflected an understanding that many of the issues raised are complex, with no 'simple' answers. A consumer-participant summed it up in the following way: *"The scope is broader"*. He was very content with having participated and expressed that it had been very meaningful to him and that he had learned a lot. His learning was not so much in the sense that he had been introduced to topics that were entirely new and unfamiliar to him, but in the sense that he had gained a deeper, more nuanced knowledge into central topics in Organic agriculture (which he already had a particular interest in, as a member of the CSA). He expressed that he had appreciated the dialogues and exchanges, with the other participants as well as the experts. He said he had found it stimulating – in light of the corona-situation, with a lot of isolation, it had been a positive experience.

During Day 4 of the hybrid forum, the dialogue circled around complex interrelations, and reflected not only systems thinking, but 'systems within systems'. Even though complex issues were addressed from the start (Day 1), there seems to have been a progression towards higher awareness about the inter-woven and co-dependent nature of food systems. This is exemplified in the following dialogue, which took place after the session about how to increase the sustainability of farms:

> Farmer (B3): "*We find it important that each farm should make sure to have an eco-system as far as possible"*
>
> Moderator*: "I wanted to ask about the note "thinking about several eco-systems simultaneously" (…) anyone who feels like commenting on that?"*
>
> Consumer (F2): "*I wrote that. I was thinking more of social eco-systems as well. That there are several cultures piling on top of each other. I am not so clever with insects and bacteria and that sorts. But it is about being able to have all the thoughts in your head at the same time. B3 is very knowledgeable about everything with water, and so is B2. But having all the eco-systems in the head at the same time."*
>
> Moderator: "*were you thinking of the interplay between the farm and the local community?"*
>
> Consumer (F2): "*Yes, I did. And I wrote something about it, (…) that it is like permaculture – several layers. And that people should have payment for the job that they do is very important – that is one of the eco-systems we must bring in. (…) Can I bring in one more thing? In my mind, it is about multiple eco-systems so that the farm is part of the local community, and that that is an eco-system that one is aware of – when one aims at being sustainable. The farm is not a system that is isolated from the village, nor from the other systems around."*
>
> Moderator: "*Is this something you have worked with in the CSA?"*
>
> Consumer (F2): "*Well, it is something that I am thinking a lot about. We talk about it when we facilitate communal work-sessions ['dugnadsarbeid'] – that there should be room for*

everyone. And we make an effort to signal that we do not wish to exclude anyone. We do chores that also people with health challenges can participate in, and things like that."

Another example of understanding specific issues as being related to each other emerged in a dialogue about health on Day 4:

"In my view, I think that what is produced in a proper way also will be good for us to 'put into our bodies'. A sustainable, holistic mindset on how to produce food – related to inputs and hopefully human benefits as well, and animal welfare." (B1)

Another example of thinking about the whole system, came up in the discussion about the exercise on challenges in Organic agriculture. A consumer-participant explained her note on 'Ethical processing', making the point that the same values should be applied throughout the food system – not only at the level of farming practices:

"What I meant was the issue of e.g., home-slaughtering. My concern is that – is there really any point in buying Organic and short-travelled strawberries, if we are in need of pickers from the Philippines?" (F2)

The need to carefully seek to balance between different values and needs was part of the dialogue throughout the sessions, and particularly in the later sessions. It seemed that these kinds of reflections were enhanced as a result of the HF dialogues.

One such complex topic, was the need to steward and maintain the integrity of Organic food and farming (hence the need for sound, strict, and uniform regulations of certification), and on the other hand, the need for flexibility in order to find the best possible solutions, in terms of all aspects of sustainability, when producing Organic food in the context of each particular place, community, and farm/household. One worry was that farmers who were already struggling to continue with certified Organic production would give up if the rules and regulations were to become even stricter, and there was a broad agreement about the wish for a larger part of the overall food production in Norway to become organic.

6. Italy Results

Fernando Pellegrini, Elisa Lorenzetti

Session 1: 'Good' Food

Participants were asked to display images to explain their perception of "good food" and give some words of description (figure 6.1). Overall, they referred to three main aspects of "good food": the quality of the ingredients, the effect on health and the importance of taste (table 6.1).

Figure 6.1: Good food collage

Table 6.1: Good food collage labels

Raw material quality	Health	Taste
Fresh, seasonal, vegetables	We are well if we eat well	Ethnic at home
Organic-Mediterranean	Health starts at the table	Sins of gluttony
Mediterranean diet	Good food = healthy food	Real taste
Fresh fish	Beneficial food for our health	Tradition
Not processed food	Spices/wellbeing	Taste and health
Fresh fruit	Health benefits	
Go veg!	Contrasts in the tastes, beneficial properties for health	Tasty, abundant and I hope also quite healthy
Game meat, healthy, grown with the food that animals themselves chose to eat		Taste, richness, elaboration of the dishes on the basis of nowadays needs
Nourishing, safe, fresh, importance of seasonality		

Main discussion topics

Taste (and full belly)

"Taste, richness and… adaptation! The tastes of the past should be maintained but the nutritional values should reflect nowadays needs: most of us mainly live a sedentary life."
"Good food is abundant and not very processed, such as sushi or ham and cheese."
"Good food is also pleasant: the act of eating and drinking is most of all an act of pleasure."
"Discovery of new tastes"

Health

"Good food is healthy food: nutritious, tasty, fresh."
"Good food is seasonal: local cultivars and wild vegetables can provide contrasting tastes and have beneficial effects."
"Fresh vegetables and fruits are good food for humans: they should make up 50% of our caloric needs!"
"Food is our fuel: when I became a mum, I learnt that eating properly is essential. Sometimes good food, such as Organic, is more expensive, but then you can save at the doctor!"

Ecosystem

"Good food is not only linked to health, but also to locations: we have lost the holistic vision that allows us to see the connections between things in favour of a specialised vision."
"Game meat is considered by many a very good food as the animal was able to choose what to eat and therefore has properly developed."

Who should ensure good food?

Farmers and consumers were divided into two separate groups and asked to share their opinions on the responsibility of different actors (government, retailers, farmers and consumers) in ensuring the provision of good food. The boards created by each group are shown in figures 6.2 and 6.3, and the responses of farmers and consumers are contrasted in table 6.2.

The two groups agreed that it was the duty of consumers to get informed and act accordingly but had different visions of farmers' responsibilities: the farmers themselves stressed the need to collaborate and involve the rest of society in the valorisation of their production, while consumers mainly suggested agronomic and ethical considerations.

Government was unanimously seen as responsible for supporting Organic and sustainable production financially, especially from small scale farms, and making inspections of certified farms more rigorous.

Finally, retailers were challenged by farmers to dare to make ethical choices and develop communication skills for their valorisation and by consumers to properly select their products so unethical/'bad' products were not offered to them as options.

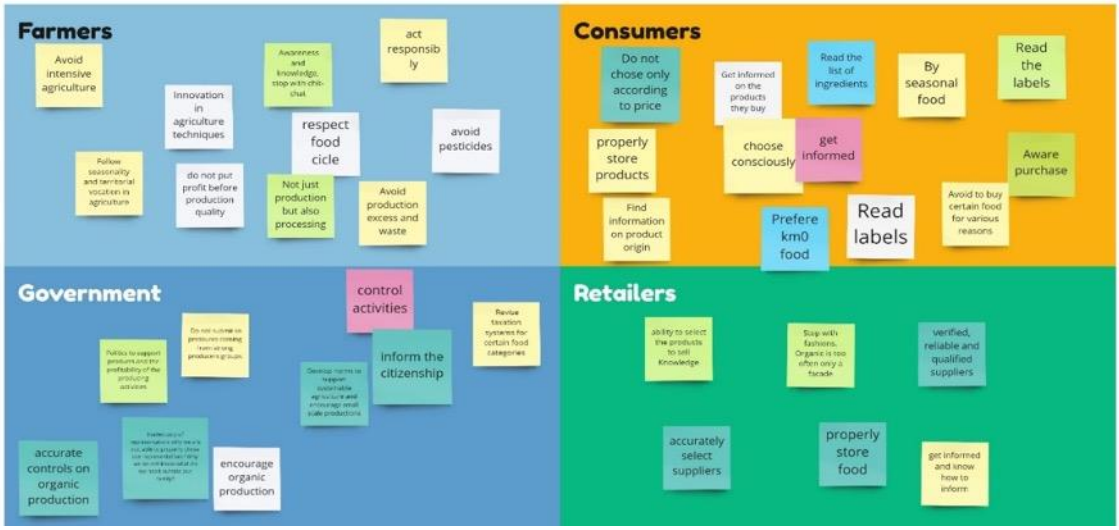

Figure 6.2: Responsibilities for good food - consumer group

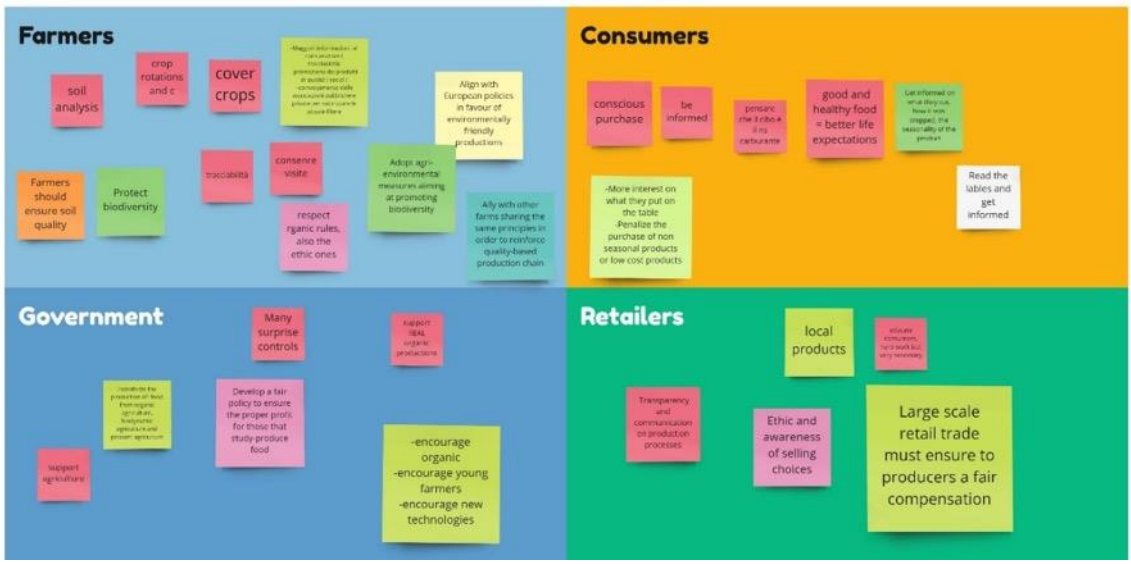

Figure 6.3: Responsibilities for good food - farmer group

Table 6.2: Responsibilities for good food – comparison of farmer and consumer responses

Farmer responsibilities		Consumer responsibilities	
Farmers	**Consumers**	**Farmers**	**Consumers**
Soil analysis	Avoid intensive agriculture	Conscious purchasing	Find information on product origin
More information for the consumers (traceability)	Follow seasonality and territorial vocation in agriculture	Penalise the purchase of non-seasonal products or low-cost products	Do not chose only according to price
Farmers should ensure soil quality	Innovation in agricultural techniques	More interest in what they put on the table	Properly store products
Crop rotation	Do not put profit before production quality	Be informed	Get informed on the products they buy
Involvement of public and private associations for the valorisation of local supply chain	Not just production but also processing	Read the labels and get informed	Choose consciously
Promotion of quality products (social)	Respect food cycle	Remember that food is our fuel	Prefer 0 km food

Adopt agri-environmental measures aimed at promoting biodiversity	Awareness and knowledge, stop with chit-chat	Good and healthy food = better life expectations	Read the list of ingredients
Align with European policies in favour of environmentally friendly production	Act responsibly	Get informed on what they eat, how it was cropped, the seasonality of the product	Get informed
Protect biodiversity	Avoid pesticides		Buy seasonal food
Ally with other farms sharing the same principles to reinforce a quality-based production chain	Avoid excess production and waste		Avoid buying certain food for various reasons
Allow farm visits			Be aware about your purchases
Respect Organic rules, also the ethical ones			Read the labels x2
Traceability			
Cover crops			
Government responsibilities		**Retailer responsibilities**	
Farmers	**Consumers**	**Farmers**	**Consumers**
Encourage Organic	Rigorous inspection of organic production x2	Local products	Properly select suppliers
Incentivise the production of food from Organic agriculture, biodynamic agriculture and peasant agriculture	Inadequacy of representation: why aren't we able to properly chose our representatives? Why do we not pursue needs beyond our family?	Transparency and communication about production processes	Stop with fashions. Organic is too often only a façade.
Encourage new technologies	Revise taxation systems for certain food categories	Ethics and awareness of selling choices	Properly store food
Support agriculture	Not to submit to pressures coming from strong producer groups	Educate consumers, hard work but very necessary	Ability to select the products to sell - Knowledge
Support REAL organic production	Develop norms to support sustainable agriculture and encourage small scale production	Large scale retail trade must ensure fair compensation to producers	Verified, reliable and qualified suppliers
Many surprise farm inspections	Encourage Organic production		Get informed and know how to inform
Develop a fair policy to ensure proper profit for those that study-produce food	Politics to support products and the profitability of producing activities		
Encourage young farmers	inform the citizenship		

Main discussion topics

Consumer responsibility: to buy food which is healthy and produced ethically

"Consumers today are more informed and more engaged than in the past."

"We often tend to choose what to buy on the basis of price, but we should prioritise quality: labels, seasonality, local and direct selling. Sometimes it can be more expensive, but the gain is in health and wellbeing."

"Boycott unfair enterprises: not only health impacts are important but also impacts on the whole world."

Farmers' responsibility: adopting appropriate technologies, valorising their products, complying with Organic certification

"Get up to date with new technologies and discoveries in order to avoid the uncritical repetition of past errors."

"Farmers are not protected enough: consequently, they should engage in the valorisation of their product to guide consumer choice. Marketing and communication are very important in countering the ambivalent attitudes of large-scale retail."

"Political representatives are not chosen wisely and therefore not adequate."

"Sometimes farmers refuse to comply to the Organic certification system and doing so they often end up being disqualified from Organic."

Retailers' responsibility: storing food well and establishing/communicating trust with producers

"Properly store food: often consumers spend much time in choosing the best products but then they can be harmed by the invisible effect of bad storage."

"Retailers should build a trust network with their providers and communicate it to the consumers."

Government responsibility: protect farmers' income, keeping prices low, enforcing controls, supporting farmers to process their produce

"Farmers' income is not protected enough: farmers effort is not only directed to production, which can get lost sometimes due to uncertainties, but also to study, sustainability, biodiversity, ethical development and this should be recognised and supported."

"Government should encourage Organic production and its sale by ensuring a lower price for consumers."

"Prices can be supported when communities of farmers are created: this can help in providing an end product directly to consumers at a proper price, without the interference of the market."

"Consumers' trust should be reinforced with a very strong control system."

"The real duty of government is to enable farmers to process their raw material, to promote their products without increasing production but rather the price until a balance is found. This is an endless job that requires long-term policies and a strong community."

Session 2: Focusing on Organic food

What do we associate with Organic food? And what are the main problems connected with it?
The participants added virtual sticky notes containing associations with Organic food to a Miro virtual whiteboard. Farmers contributions were in yellow and consumers were blue (figure 6.4).

Figure 6.4: Associations with Organic food

The main issues related to Organic food were health, environmental protection, and sustainability.

> *"Organic is linked with the territory, with the season, so the link with the environment is quite clear" (consumer)*

A participant stressed the important link between organic food and the future of next generations:

> *"These issues should be discussed in public schools, in front of kids, who are tomorrow's consumers" (consumer)*

The same exercise was repeated, asking the participants to write onto virtual sticky notes what they regard as problems linked to Organic food (figure 6.5).

Figure 6.5: Problems with Organic

The problem mostly associated with Organic food was its high price. The participants started a long and animated discussion about the role of price in organic food:

> *"Organic food is still elite food, for its price. People might read the label and understand it, but when they get to the price, they don't buy it" (consumer)*

Nonetheless, a farmer stressed that consumers and farmers are the most penalised by this system, due to high profits made by retailers along the value chain:

> *"In 1996, when we started farming Organically, we sold red potatoes at L1100, while they were sold in Milan at a price of L3300" (farmer)*

The group also stated that Organic food is often associated with frauds and counterfeits, and that it is hard to know if that specific product was actually cultivated Organically, or if the farmer circumvented the rules. Another issue was the fact that most Organic food is sold through big retailers, and that often there's not enough supply, specifically for certain products:

> *"Where do we mostly buy certified Organic food? In supermarkets, where supply is not enough. For fruits and veggies for example, you just find a couple of things. Supermarkets should increase the supply of Organic foods" (consumer)*

Another issue that was discussed at length was the central role of education in scaling up Organic food:

> *"If we expect families to push for Organic, it'll always be elitist. Schools make society develop, so if Organic relies only on family choices, it'll grow less"*

What does Organic food certification mean?

Participants were given a brief presentation by veterinarian Dr Sara Burbi on the difference between Organic and conventional production in potatoes/apples, milk/milk derivates and chickens. She also briefly presented the contentious inputs in Organic production, which the Organic-PLUS project is focusing on. These presentations were followed by group discussions, during which the participants asked for clarifications and explained their viewpoints.

One issue that was brought up by one farmer was the use of non-organic seeds in Organic production, and another farmer explained to the group about the issue of Carnaroli seed use:

> *"When the label says Carnaroli rice, it comprises eight different rice varieties that are not just Carnaroli. They forced us to use certified seeds, and they banned the sowing of your own seeds." (farmer)*

Participants were then asked to prioritise the contentious inputs. Contentions were prioritised through voting on Miro. Participants were given 3 votes each and also invited to add any contentious issue that might come to their mind to be included in the voting. Only the reuse of Organic certified seeds on farm was added. The results of this exercise are shown in figure 6.6.

Figure 6.6: Prioritisation of contentious issues

The top two topics were plastic and the use of Organic seeds. Regarding plastic, most of them said it's becoming a very important issue, which goes beyond Organic food:

> *"Plastic is overwhelming us, it's a more general issue, not only linked with Organic agriculture. (…) It's nonsense, especially in Organic agriculture, as you work to preserve soil quality, and then you use polluting materials. Moreover, Organic veggies wrapped in plastic don't last as long" (consumer)*

Regarding the use of seeds in Organic agriculture, a consumer said:

> *"If a farmer can't use his/her own seeds, everything becomes flat, and you deny the work of the farmers" (consumer)*

Session 3: Focusing on antibiotics

Initial thoughts about antibiotics

Consumers first were invited to discuss their thoughts on the use of antibiotics in agriculture and they focused their attention on their health effects, both at the public and private level.

> *"What is their effect on our health?" (consumer)*

> *"I heard the overuse in animal breeding might cause resistance to antibiotics in humans" (consumer)*

They all agreed on the fact that antibiotics are useful and they do not deny that, in case of emergency, they should be used for animal welfare, but they highlighted the excessive use in conventional breeding.

> *"The use of antibiotics hides the bad conditions in which animals are bred, their economic exploitation. If something unexpected happens, it's ok to use them, but let's be careful about what we buy" (consumer)*

Farmers confirmed that, in rare cases, they also applied antibiotics, but that when you use traditional breeds, you get less of these problems:

> *"When calves can't suck colostrum they are more exposed to diseases and pneumonia, so, in that case, we use antibiotics. But it depends a lot on the breed used. Ours is a traditional breed, very rustic, and adults almost never get sick." (farmer)*

Post-presentation discussion about antibiotics in organic farming

Livestock scientist Dr Carmen Manuelian gave a brief presentation on the use of antibiotics in agriculture, and the group discussed topics related to that. In particular, the conversation focused on the role that vets play in the use of alternative practices:

> *"I've never used herbal medicine nor homeopathy. I call the vet, and I give them what he suggests to me. If the vet knew something about alternative medicines, I'd use them" (farmer)*

Moreover, alternative practices are not widespread among farmers because there's no solid scientific evidence of their positive effects.

In general, most consumers were afraid of antibiotic residues in meat, and stated they pay a lot of attention to food labels to choose the product which contains less traces of antibiotics:

> *"I have a very conflicted relationship with antibiotics in meat, my son developed at the age of 7, due to oestrogens in food. I'd love to know what was used to grow the animal" (consumer)*

Although they pay attention to labels when buying meat in supermarkets, consumers agreed that it is not enough, and most of the time they feel labels are not convincing enough.

> *"I can trust the label, but I want to read the analyses that were carried out." (consumer)*

Alternatively, they buy meat in grocery shops, where they feel they can have a stronger relationship with the shop owner and therefore they feel it is safer than supermarkets.

Creating a farmer-facing factsheet & a consumer-facing newspaper article

Participants were divided into two mixed groups containing both farmers and consumers. Working on templates on Miro, each group brainstormed content for either a factsheet for farmers (figure 6.7) or a newspaper article aimed at consumers (figure 6.8). After 20 minutes the groups swapped over and added to the other topic for 10 minutes.

In the farmer-facing factsheet group, there were some discussions around the effectiveness of alternative medicines, especially homeopathy. One person regarded them as useless and he saw no point in using them as alternatives to antibiotics. The limitations of alternatives were mostly linked to vets being unprepared on the topic, slower effectiveness, and the fact that they can be only used as preventive measures.

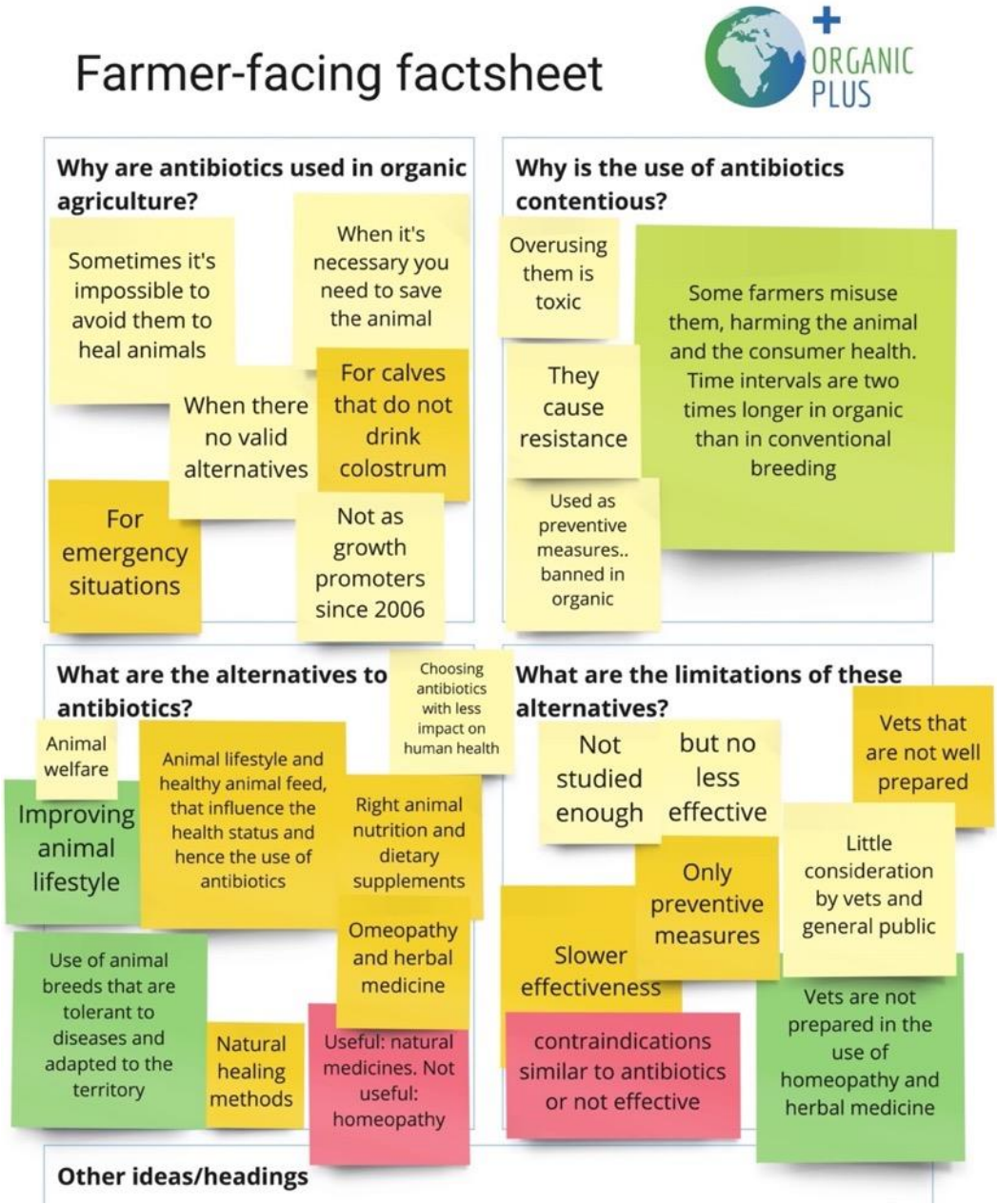

Figure 6.7: Farmer-facing antibiotics factsheet (responses translated)

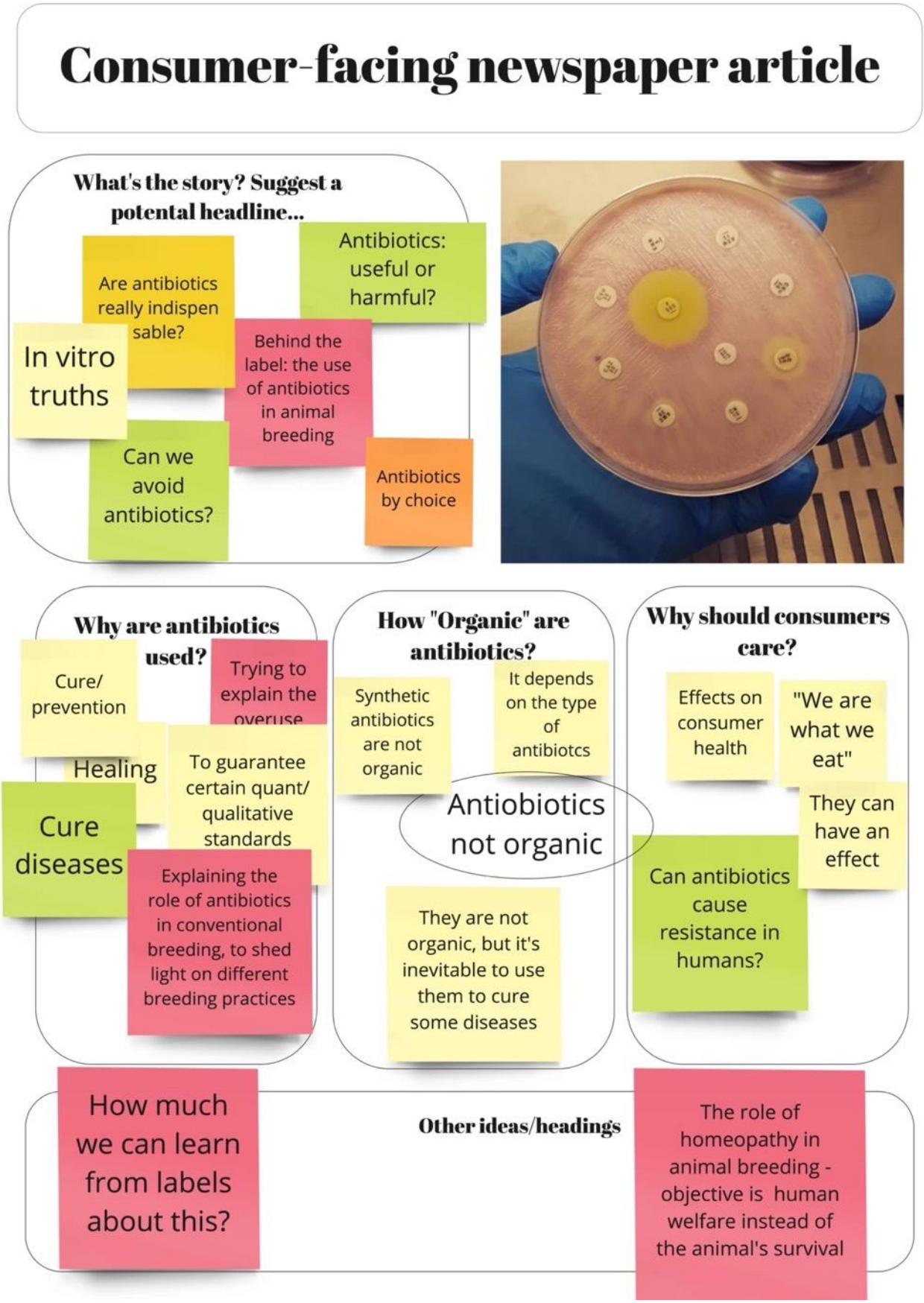

Figure 6.8: Consumer-facing antibiotics newspaper article (responses translated)

Discussing the use of seeds in organic farms

In the last part of the session, the group discussed the use of Organic seeds, and the farmers' own saved seeds, in Organic farming. The issue was brought up by one of the farmers, who, due to a legal controversy, was not allowed to use her own Organic rice seeds on her farm. The discussion triggered more general considerations on the use of certified seeds in Organic farming.

Although all of the participants recognised the important role of Organic certified seeds, some of them realised that it should be considered important to breed your own seeds in Organic farming, as Organic production is closely connected to the surrounding environment:

> *"For me it'd be better to use your own seeds in Organic farms, rather than buying them from outside. This is because often certified seeds are not as good as the ones you select on your farm. Yet, when you have a farm, and you have to sell a labelled product, you can't rely only on your own seeds. This is okay for small vegetable gardens." (farmer)*

Session 4: Sustainability modelling and potential interventions

Sustainability on a farm

The participants were asked to state key elements they thought should be monitored to assess on-farm sustainability (figure 6.9).

The main categories emerging from this exercise were 1) the relationship between the farm and the environment, 2) water management, 3) input quality and quantity from biological control to seed variety, 4) animal wellness, 5) agronomic techniques and 6) polluting activities/materials. Farmers and consumers evenly contributed to the cited categories except from that of animal wellness, uniquely addressed by consumers, and of agronomic techniques, mentioned just by farmers (table 6.3).

Figure 6.9: What would you monitor on a farm to check it is producing food sustainably?

Topics	**Consumers**	**Farmers**	*Topics*	**Consumers**	**Farmers**
FARM AND ENVIRONMENT	Coherent management between Organic farms, especially in Italy where farms are small	Environmental and landscape protection. Bees and biodiversity.	**ANIMAL WELLNESS**	Animal health	
	Analysis of environmental risk	Analysis of borders with conventional farmers		Animal welfare respecting their ethology	
	Environmental protection			Animal healthy lifestyle	
	Biodiversity protection			Animal welfare	
	Farming setting		**AGRONOMY**		Rotation and intercropping
WATER	For plant food: water use and waste production	Water analysis and agroecosystem analysis			Agronomic and weed management techniques
	Sensible use of resources (water or other inputs)	Avoiding wasting resources			Soil fertility
	Irrigation water quality				Soil analysis and product analysis
INPUTS	Use of animals that fight parasites (ladybirds, robins)	Monitoring inputs and final products			Checking the agronomic practices: rotation, certified seeds, biological control
	Knowledge of the production process: use of antibiotics and chemical inputs	Use of internal and external inputs	**POLLUTION**	Pollution decrease	Energy
	Seed origin, farming practices, plant and soil treatments, farm features, animal origin	Type of fertilisers and seeds		Plastic packaging reduction	Avoiding wasting resources
	Pesticide use reduction	Fertilisers used		Local food sale	
	Quality of seeds			Food origin	
	Using a QR code on the label				

Table 6.3: Main categories of on-farm sustainability monitoring - comparison farmer and consumer contributions

Main discussion topics

Animal welfare and ethics

"Animal welfare is important because if animals are well then they don't need to be treated"

"Organic is a lifestyle and a job style: you should be into the philosophy, not just into the paperwork"

The importance of solidarity and collaboration

"Cooperation is crucial for sustainability because when a farmer decides to align with sustainable policies, she can be further stimulated to take more and more radical choices if surrounded by other people sharing the same path. Otherwise, collaboration between farms can help with closing cycles in a certain territory (local supply of products or product transformation) with positive impacts on production continuity and on the environment"

"Bio-districts are needed to overcome the personal differences of the multitude of small farms typical of the Italian landscape and create a unified front"

The need for adequate monitoring and planning

"Soil fertility should be monitored together with the farmer so that he can understand the effect of his agricultural practices and adjust them for better results"

"Cost-benefit analyses should be carried out as in any other enterprise: they are crucial to ensure product security. With a proper plan there is less likely to be the need to contravene organic regulations (for example due to product deficiency)"

RISE model feedback

After a short presentation about the RISE methodology being used as part of the Organic-PLUS project and the criteria they use to measure on-farm sustainability the main points of feedback from the group were:

- a parameter is lacking: animal happiness. The model seems to be about farmer and consumer happiness only.
- Biodiversity was considered to be the most important parameter in the model
- a clear indicator of pollution is lacking
- a radar chart on sustainability could be a useful tool for consumers. One participant was concerned that most consumers would not understand it, but everything can be learnt, also nutritional values charts were also unclear when they first appeared on food labels
- the radar chart could be converted to a simpler system, such as a bar chart, but generally speaking a holistic view such as that presented by the radar chart is more desirable
- lobbies would not appreciate such a label because it would show up the products of multinationals as not very good

Potential interventions

During this exercise the participants were asked to state their position concerning the achievability and effectiveness of several scenarios for improving Organic food production (figures 6.10 to 6.15). Scenarios 4, 5 & 6 were discussed following this positioning and these discussions are summarised after the relevant figure.

Farmers tended to have more confidence in the feasibility and effectiveness of the scenarios than consumers.

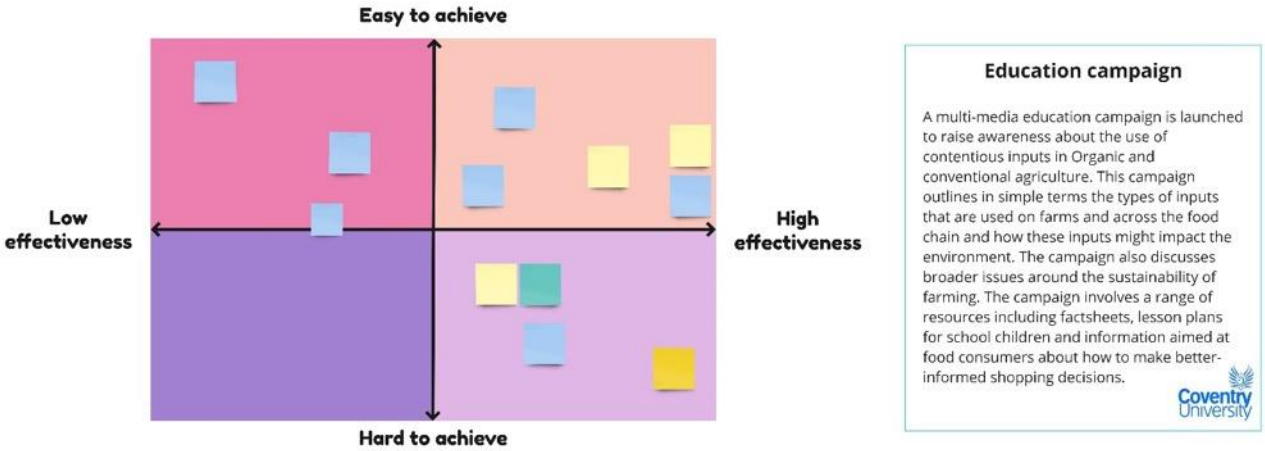

Figure 6.10: Education campaign scenario

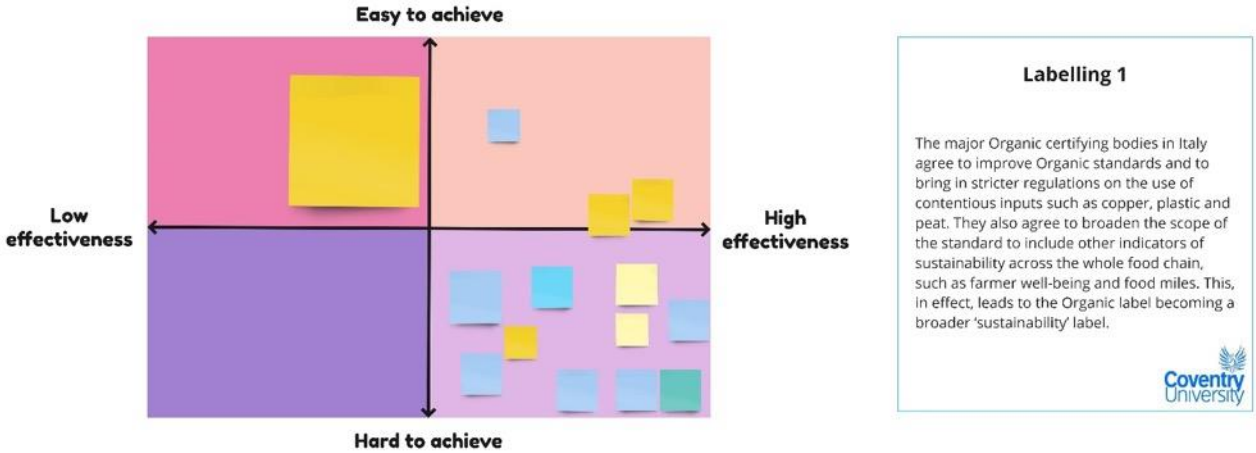

Figure 6.11: Incorporation of more sustainability factors into the 'Organic' label

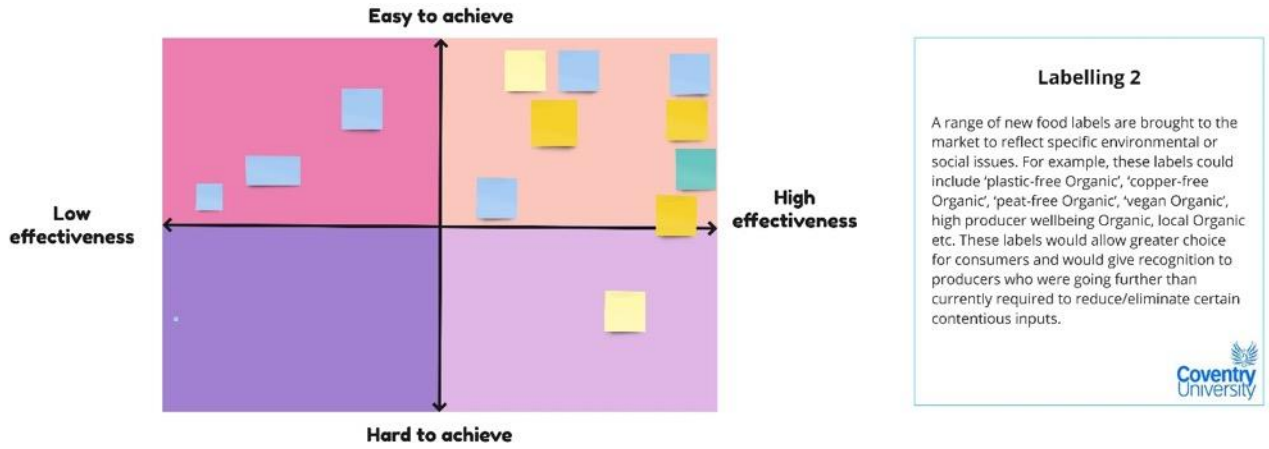

Figure 6.12: Developing a range of labels for different types of Organic

Government regulation

"The scenario is interesting, but its feasibility is different according to the methods applied: inspections or self-declaration? Today organic inspections in Italy are not enough and inappropriate, the situation would get worse if the need for inspections increased."

"How can we ensure that the effect of such taxes would not be offloaded onto consumers also, indirectly?"

"A better regulation would support farmers when they really need it: for example, if they have to treat and thus remove their product from the Organic market, they should be compensated for the economic loss. Only in this way farmers will be happy to declare their actions. Financial aids should not be generalised but rather meant to ensure product quality"

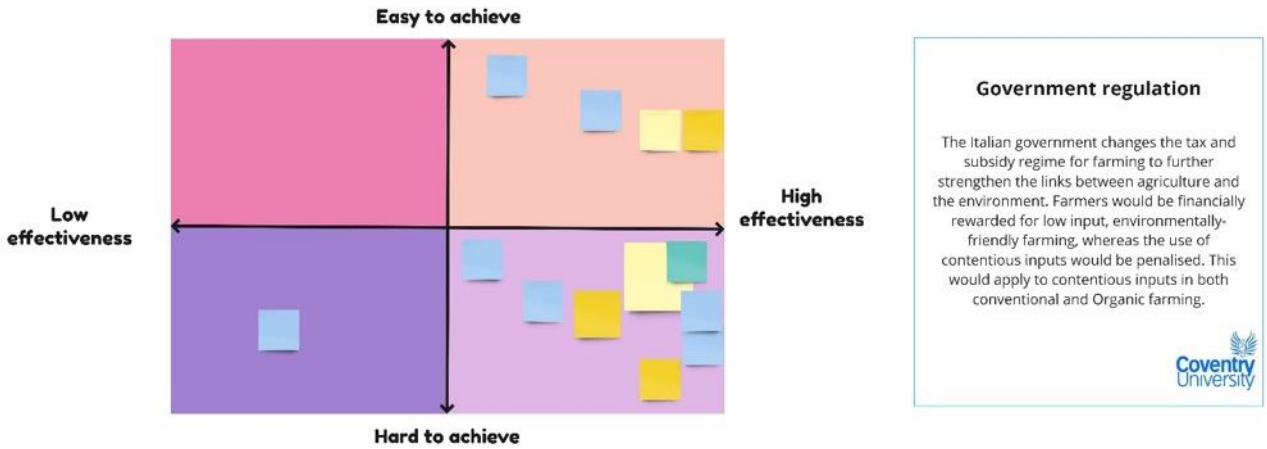

Figure 6.13: Changes to taxes/subsidies to support more environmentally friendly farming (conventional and Organic)

Facilitating improvements at the farm level

"Organic farmers' organisations would steal all the money they should reallocate!!"

"In order to ensure farmers' compliance with the rules, they should be helped with a specific support in case of production loss."

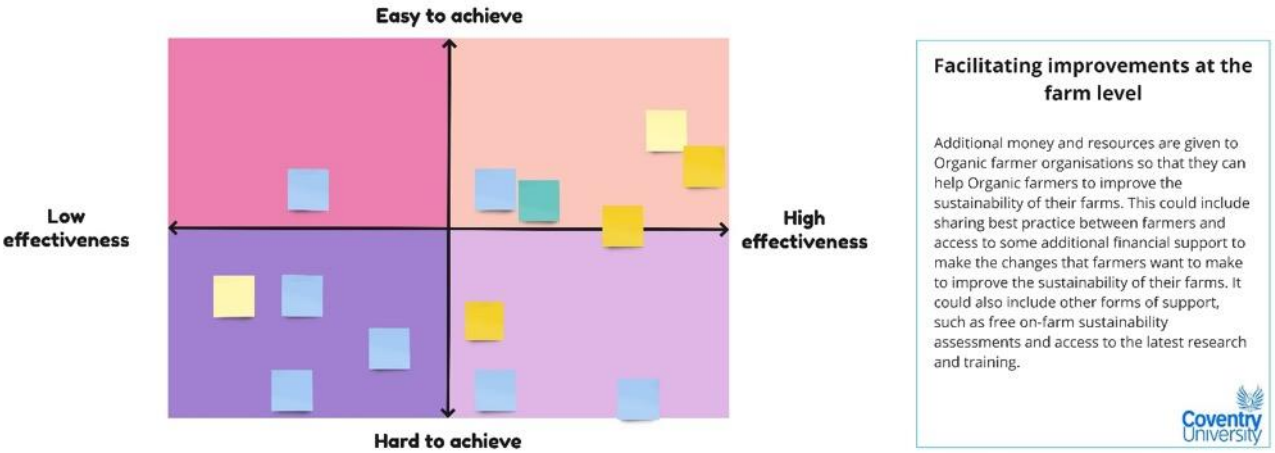

Figure 6.14: Facilitating environmental improvements on-farm

Retailer-led improvement

"The supermarket would create a cartel."

"It would be easy to achieve for the supermarket, but it would be to the detriment of farmers, as supermarkets often gain at the expense of their suppliers."

"One of the most important aspects in supporting Organic production is the shortening of the supply chain and this scenario follows the opposite path."

"As a consumer I would feel more protected in such a scenario."

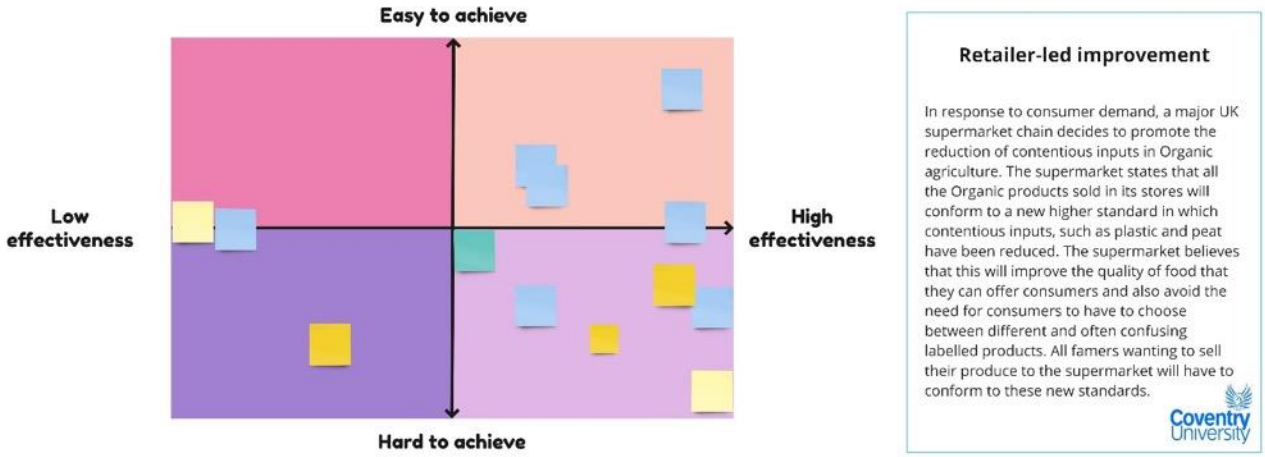

Figure 6.15: Retailer-led improvements to Organic

Repeating session 2 exercises

Change in associations and problems with Organic

The exercises around associations and problems with Organic, first performed in session 2, were repeated at the end of this final session (tables 6.4 & 6.5).

Concerning the "associations" with Organic, there was not any substantial difference compared to the first performance of the exercise. "Problems" around costs and mistrust remained unchanged, but we noticed more comments from consumers about agronomic topics as well as the emergence of new concerns around lack of proper communication and inadequate policies. Scarce availability and aesthetics were no longer mentioned as problems.

Table 6.4: Associations with Organic repeat

Topics	Farmers	Consumers
Health	Food without chemical inputs	Food quality x2
	Healthy and nourishing	Wellbeing
	Healthy food	Health
	Quality	More health for the consumer
		Natural and healthy food
		Health and nutrition
Environment	How it is produced, in a healthy and sustainable way that respects the environment	Small-scale production that respects nature, biological cycles, do not use pesticides, antibiotics or other chemical products
	A sustainable food	Sustainability x2
	Respected environment	Environmental sustainability x2
	Respect for the nature	Environment and territory
		Biodiversity
		Food produced with attention for the environment
		Respect for the environment and animal wellness
		Respect for animals
Ethics	Produced in a way that respects labour ethics	Sustainability, authenticity, salubrity, short supply chain, 0km, traceability
	From biodynamic and regenerative agriculture	Ethical themes that too often become ideological themes
Problems		Troubles for small farmers
		Prices

Table 6.5: Problems with Organic repeat

Topics	Farmers	Consumers
Costs	It's not always properly reworded	Costs x4
	Production costs	Certification costs
		Higher prices
		Sometimes costs are not justified
		Smaller markets due to high production costs
Mistrust	Uncertain certifications	Enigmatic regulations
	Fake Organics that destroy the market both for conventional and organic competitors	Actual compliance with rules
	Too much bureaucracy and not enough controls on fields	Trust farmers
		Certifications
Agronomy		Objective limits in production when chemical aid is not used
		Difficulty for producers
		Lower yields compared to conventional agriculture
Communication	Capacity of knowledge transfer and communication	Lack of information on the nature of products and productive processes
		Vague knowledge of consumers
		Inadequate communication and information channels
Holistic view	Lack of a real assessment on sustainability and fertility	Necessity to rethink the whole agricultural system
Environment	External pollution sources	Antibiotics
	Biodiversity, health, transparency, environment protection, limitation of climate change	Environmental impact is not overcome
Policy	Lack of policies supporting Organic methods	

Change in the priority of contentious inputs

The exercise prioritising contentious inputs was also repeated. The results for most contentions were similar, but there were sizable differences concerning peat (+ 3 votes), imported feed (+ 4 votes), seasonality (- 3 votes) and reuse of Organic certified seeds on farm (- 6 votes). Antibiotics also increased in importance slightly (+ 2 votes).

Both peat and the reuse of Organic certified seeds on farm were discussed in some depth after the first completion of the exercise in session 2 and this seems to have had strong effects on the perceived importance of both, but in opposite directions.

Table 6.6: Changes in priority of contentious inputs

	Votes session 2	Votes session 6
Reuse of certified seeds on farm	7	1
Plastic food packaging	7	6
Antibiotics and wormers	6	8
Plastic mulches	4	4
Copper fungicides	4	3
Seasonal	4	1
Synthetic vitamins	3	1
Non-organic animal manure	2	1
Food miles/local production	2	2
Non-organic bedding	1	0
Mineral oils and sulphur	1	2
Imported feed	1	5
Peat	0	3

7. Inter-country comparison of the importance of specific contentious inputs

This section provides an overview of the relative importance given to different contentious inputs in Organic agriculture by survey respondents and HF participants in the UK, Norway, and Italy. Section 7.1 combines data from the Organic-Plus consumer survey and from the HFs conducted in the UK, Norway and Italy to show the importance ascribed to different contentious inputs in different country contexts. Sections 7.2-7.4 focus on the specific contentious inputs that were discussed in detail in dedicated sessions within each country, namely: antibiotics (Italy), plastic mulches (UK) and soil health (Norway).

7.1. Overview of contentious inputs

The top seven contentious inputs from each country are shown in table 7.1. Plastic packaging and antibiotics were consistently among the most important contentions across the three countries, although this was clearer in the national consumer survey data than the hybrid forum data – perhaps because these also included farmers, or because they allowed more space for informed discussion and understanding of the issues involved.

Table 7.1: Country comparison of the highest-ranking Organic contentions in the preceding Organic PLUS national survey, the initial hybrid forum vote and the concluding hybrid forum vote. Antibiotics and plastic packaging are highlighted as ranking consistently highly across countries and ranking occasions. The topics each country discussed in some depth are also highlighted to show how this focus affected opinions of importance for the latter vote.

	UK			Norway		Italy		
	National Survey (Vittersø et al., 2019)	Initial vote (votes)	Final vote (votes)	National Survey (Vittersø et al., 2019)	Initial vote (votes)	National Survey (Vittersø et al., 2019)	Initial vote (votes)	Final vote (votes)
1st	Plastic packaging	Plastic packaging (6)	Farmer wellbeing (7)	Antibiotics	Antibiotics;	Antibiotics	Reuse of seeds (7)	Antibiotics (8)
2nd	Antibiotics	Food miles / local production (5)	Food miles / local production (6)	Plastic packaging	Transportation;	Seasonal	Plastic food packaging (7)	Plastic food packaging (6)
3rd	Fossil fuels	Farmer wellbeing (4)	Antibiotics (6)	Copper	Fossil fuels;	Plastic packaging	Antibiotics (6)	Imported feed (5)
4th	Copper	Antibiotics (3)	Plastic packaging (5)	Mineral oils	Scale (not industrial) (3)	Synthetic vitamins	Plastic mulches;	Plastic mulches (4)
5th	Synthetic vitamins	Peat (3)	Plastic mulches (5)	Transport-ation	Plastic packaging;	Fossil fuels	Copper fungicides;	Copper fungicides;
6th	Mineral oils	Plastic mulches;	Peat (3)	Plastic (production)	plastic mulches;	Transport-ation	Seasonal (4)	Peat (3)
7th	Seasonal	Damaging tilling; imported feed; seasonal(2)	Financial support for farmers (3)	Synthetic vitamins	Peat; Seasonal (2)	Mineral oils	Synthetic vitamins (3)	Mineral oils; Food miles / local production (2)

The Italian participants were very interested in the theme of peat. Most of them had never even heard the word, while others did not know it was considered contentious. This fits with the distribution of peat bogs in Europe and in the quality of Italian peat: climatic conditions didn't favour

the formation of peat bogs in Southern Europe, including Italy, and whenever they are present the contained peat does not have a good agronomic value, therefore the sites were destined to nature conservation. The problems related to the depletion of peat reservoirs therefore do not directly affect Italy: nevertheless, participants were very curious about the topic and after finding out more their concern grew markedly, putting it among the most important contentions.

The UK group added rock phosphate as a contentious input which they thought should have been included in Organic PLUS. One farmer in particular was very keen about this and raised serious concerns about the use of imported rock phosphate in Organic fertilisers:

> *"Organic farming is about biological cycles, it's about fairness… and low carbon… Mining rock phosphate from Morocco using slave labour and bunging it on a ship - how in any way does that fit with the principles? … [it] can come across as best as inconsistency and at worst as hypocrisy."*

In the Norwegian group a common consideration among the participants was how little knowledge they had about the different contentious issues overall, and several expressed that lack of knowledge had made it difficult to have an opinion and to do the voting:

> *"if we're talking about synthetic vitamins and stuff, I know far too little about it… to be able to say anything about it and weigh it up in relation to each other" (Farmer, session 2).*

7.2. Antibiotics

As illustrated in table 7.1 above, the use of antibiotics on Organic farms was ranked among the most important contentions by all three national HFs, in line with the results of the previous European survey. While all thought antibiotics were a crucial issue, their use was focused on in more depth as part of the Italian group discussions.

The Italian group mainly agreed that the sporadic use of antibiotics, including on Organic farms, does not constitute an issue per se. The main problem is related to the systematic application of antibiotics on certain conventional farms, where the input is used as a preventive measure to avoid the spread of epidemics, and, most of all, a way to make more profits. Within the group, two out of the five farmers raised animals and they stated that they have used antibiotics on their farms but just in case of emergency: e.g., to save an animal's life, as in the case of calves that are not capable of drinking colostrum, making them more susceptible to pneumonia or other diseases. For some participants, the right use of antibiotics might indeed save an animal's life, therefore being a practice that is good for animal welfare. Moreover, the issue was framed around a more general context of variety/breed choice in Organic farming, as one farmer said - when you raise a local/traditional breed on your farm, the number of times you must use antibiotics decreases dramatically.

In Italy they thought that the use of alternatives (e.g., herbal medicine or homeopathy) is currently hindered by the fact that most veterinarians do not have enough knowledge about them, and this is caused by a lack of solid scientific evidence of their effects. Moreover, there was no consensus among the group on the effectiveness of alternative practices. While some members were totally against them, associating them with pure magic, others were more in favour, and they seemed surprised that the use of homeopathy in humans is not considered in the cure of animal diseases.

The main concern for the Italian group was the effects of antibiotics on human health, and they discussed two main patterns: a direct effect brought about by traces of antibiotics in meat, and, secondly, the emergence of resistance to antibiotics in human-attacking bacteria, induced by the over-use of antibiotics on animal farms. The way consumers try to avoid the negative effects of antibiotics is by paying attention to what is written on the product label and buying meat

accordingly. Yet what is currently written regarding antibiotics is not satisfactory from a consumer's point of view, and more information is needed in order to make the label more transparent. Some consumers stated that, in order to make more informed choices, they buy meat directly from small butcher shops, where they feel they can have a closer relation to the person who's selling. After this discussion the group found antibiotics a slightly more important contention, with over half the group considering it among their top three priorities.

Perhaps more divided than the Italian group, in the UK there was a split among participants between those who focused on the welfare of the animals being treated and those focusing on the health of consumers – with each thinking the current permitted usage was contentious and should be altered in opposite directions. Some thought that more frequent usage of antibiotics shouldn't exclude animals from Organic certification if it was necessary for the animal's health. They believed this limitation was unjustified from a sustainability perspective and "really unfair… [if] they have to keep giving antibiotics and medicines to the cows… to keep them healthy and alive… and that completely invalidates their Organic milk - that's a little bit off to me" (consumer, UK). On the other hand, another consumer thought antibiotics should be totally excluded for health reasons: "I was quite shocked… I didn't think that Organic meat… can still be treated with antibiotics… as a as a mom to two kids, you want your kids to have the best food… and antibiotics, I don't think… are that good… if we eat this animal, it can have some effect on us?" After even minimal discussion in the UK, twice as many participants considered antibiotics among their top three contentions by the final session.

There was little discussion about the use of antibiotics within the Norwegian group, however, it was pointed out that the use of antibiotics is a more general problem and dealing with it should not be left to the Organic sector alone.

7.3. Plastic Mulches

Although not specifically discussed in Italy or Norway, participants from both countries found the use of plastic in any part of the Organic supply chain as highly contentious. The Italian HF participants in particular did not want to see plastic in mulches as a separate issue from plastic in packaging, with some of the participants regarding the use of plastic in Organic farming as a nonsense, neutralising the efforts of Organic agriculture by introducing a very polluting material on the environment: *"Plastic is overwhelming us… It's nonsense, especially in organic agriculture, as you work to preserve soil quality, and then you use polluting materials."* (Consumer, Italy)

Plastic mulches were most discussed in the UK where they were the focus of a whole session. At the start of this session most of the consumers had very little awareness about them, mentioning having used them on their allotments or seen them in the fields "I assumed… they would be used again" (consumer, UK). There were some worries about microplastics but the general presumption was that plastic mulch would probably be a necessary compromise where it was used and that it probably wasn't "*much of an issue in comparison to all the packaging we've got*" (consumer, UK). The farmers were all too aware of the problems of plastic mulches and were actively trying to reduce their usage but found the cost of alternatives and the slug burden of loose mulches prohibitive.

After the presentation about plastic mulches and the alternatives being trialled as part of Organic PLUS, the farmers raised a wide range of questions and concerns. They were sceptical about what the alternatives to plastic would be made of and their ability to source loose mulches which met Organic standards, as well as wondering about the full impact of their supply chains and even their aesthetic impacts: bioplastic mulches look equally "*horrible… doesn't have a good look for agriculture in my mind" (*farmer, UK). One farmer wondered how using plastic or alternative mulches compares to the environmental impact of conventional methods for controlling weeds – are Organic methods necessarily better in this regard? Another farmer had found grass clippings a promising

loose mulch, having increased yields in trials he had run due to the nitrogen released from breaking down grass feeding the crops and the slug burden being lower than expected.

The consumers indicated that knowing more increased their acceptance of the use of plastic in agriculture: "*I can appreciate the difficulties. There's no easy solution*" (consumer, UK). Greater awareness gave them more appreciation of the complexity of the problem and the range of solutions which might be required if plastics are to be replaced: "*I didn't realise… that there's all these different alternatives, there's all this research going on"* (consumer, UK). They too expressed precautionary concern over switching to alternatives with less known supply chain and disposal impacts than plastics. How high is their carbon footprint? Could you get "*micro-sized bioplastics*" (consumer, UK)? The discussion increased confidence in Organic due to the *"high level of honesty about the fact that every option has its limitations and also its benefits"* (consumer, UK) and how thorough and far 'down' the supply chain the Organic considerations went, but the lack of a clear solution also raised concern: "*you have your basic framework, and then as you dig deeper you realise that it just doesn't apply. It's incredibly complex and… there's no easy answers and it sucks and you're in this really confusing grey area where every decision has a trade-off, and basically, no one's going to be happy"* (consumer, UK).

Despite this complexity, the attention given plastic mulches over the sessions appeared to increase their perceived importance: by the vote in the final UK session plastic mulches had gained 3 votes and drawn equal with plastic food packaging as one of the top 5 most important Organic contentions (see table 7.1 above).

7.4. Soil health

Soil health was a particular focus of the Norwegian HF, but it was also touched on in the other countries. In the UK sessions on agricultural sustainability models soil health was unsurprisingly regarded as one of the most important aspects of sustainability, and this was supported by the discussion in Italy where one of the farmers argued that a practice of soil monitoring should be '*made mandatory'* to help farmers understand whether their farming methods actually achieve the results they are aiming for. However, there was also some scepticism of how well Organic certification in itself ensures soil health: "*there's so much more that can be done to regenerate land and take care of soil… which isn't encompassed by the Soil Association standards… you have large field scale operations that are certified Organic that don't necessarily build soil"* (farmer, UK).

In the Norwegian group, the idea that Organic agriculture is good for soil health was mentioned by a farmer during the second session about associations with Organic, and one of the consumers wanted to know from an expert if it is possible to incorporate carbon sequestration in the EU-regulation. It was also mentioned that it was a misconception that fertilisers are not used in Organic agriculture and that this leads to lower yields which is negative from a food security perspective. Thus, more knowledge is needed about the different fertilisers available within Organic agriculture.

The farmers were critical about phasing out the use of conventional manure and straw. As one of the farmers expressed: *"we use both conventional livestock manure and conventional straw, and if we had not been able to use it, our production would have suffered"* (farmer, Norway).

One issue discussed in the third Norwegian session which focused specifically on soil health was the differing views about the role of fertilisers in food production. A common view is that fertilisers feed the plants with nutrients, while in Organic and regenerative farming fertilisers are seen to go beyond this to nurturing the soil and the micro-life in the soil. The soil is seen as having a lot more functions than only as a growing media for the plants, such as the circulation of nutrients and water, as well as carbon storage.

8. Conclusions – beyond contentious inputs

The HFs were not only designed to provide feedback from key stakeholders on work already being conducted in the Organic-PLUS project (around natural scientists' views of contentious inputs), but they were also intended to generate new insights into the concerns and hopes of different stakeholders and to identify new issues that could be central to improving Organic agriculture in the future. The sessions provided insights about what farmers and consumers thought about broader ongoing questions concerning the role of Organic labelling, furthermore they enabled us to examine the impact learning more about contentious inputs in Organic agriculture had on their thinking and purchasing intentions. Beyond this, they also raised wider issues of crucial relevance to the broader project of improving and extending Organic agriculture: focusing on the sustainability of the whole system beyond the substitution of particular inputs, the adequacy of Organic as a means of product valorisation and the deep-seated need to improve the economics of Organic food.

8.1. The role of Organic labelling

The labelling of products is a key issue for policy makers and one of the favoured policy tools of the EU, working with the market in a light-touch way and allowing innovation rather than introducing blanket regulations. The feedback from HF participants about their perceptions of the value of labelling differed from country to country. In the UK overall trust in the Organic label ensuring better environmental standards seemed high among consumers – but there were doubts over the effectiveness of labelling as a strategy for behaviour change: *"When you're going shopping, you don't have time to read War and Peace on everything you look at"* (consumer, UK).

There was also a high level of trust in Organic in Norway, even though many consumers were not aware what or who was behind the Debio-label. This can perhaps be explained as part of a generally high level of trust in society in Norway compared to other European countries (also confirmed in the Organic-PLUS survey - Vittersø et al., 2019). Although, even in Norway, there was scepticism towards putting too much faith in labelling: "*Consumers have more than enough labels to deal with today… That's why I've responded a little soberly to this"* (Consumer, Norway). The Italian group by contrast showed a generally quite low level of trust in Organic labelled food – with participants often associating buying Organic labelled food with more of an act of faith than a rational trust in a well-functioning certification system. Some 'hard-core' Organic farmers, weary of the flaws of the Italian certification system, decided to give up the labelling and reach out directly to their community through farmers' markets and C.S.A. groups (e.g., the Genuino Clandestino movement).

In terms of the question of making a separate Organic 'PLUS' label(s) or sticking to one, participants in all three countries regarded having multiple labels as less effective than improving the baseline standards for one Organic label, although participants in the UK and Italy did see introducing additional labels might be easier to achieve*. "Our main problem is not to introduce more labels. It is to clarify and promote those we already have"* (consumer, Norway).

8.2. Impacts of increasing transparency about contentious aspects of Organic food

We need increased transparency across all types of farming to help drive improvements – but increased transparency carries risk. What do the changes in participants' views and perceptions over these sessions suggest about the impact of opening-up some of the contentious details of Organic farming to broader public scrutiny?

Perhaps predictably, perceptions of the contentions which were a substantial focus of the sessions tended to have increased in importance by the final prioritisation exercise - indicating that knowing

more about contentions increases perceptions of the importance of addressing them. One notable exception to this was the reuse of Organic certified seeds on farms in Italy, where only one participant voted it as one of their 3 most important contentions following discussion - down from an initial table-topping 7 votes. But beyond the specific contentions discussed, what impact did increased knowledge of contentious aspects of Organic agriculture have on participant's overall opinions about Organic food and their Organic purchasing intentions?

In the UK the main impact on participants' opinions about Organic food was a heightened sense of the complexity involved: *"as you dig deeper, you realise that… it's just incredibly complex and… you're in this really confusing grey area"* (consumer, UK). Associating Organic with '*more expensive*' became '*more expensive, but due to incredibly strict regulations which invariably increases price.*' By the end of the final session Organic had become associated with *'[being a] contentious topic from all sides'*; '*never ending research - not black and white - a lot to consider*' and '*mis-understood*.' For some this enhanced awareness increased their trust in the integrity of Organic and how much was being done to improve the system, but at least one consumer reported his confidence in Organic being shaken by learning about the breadth of contentions. The Norwegian group also commented that learning more had increased their perceptions of the complexity of Organic agriculture and had given them a more holistic view of Organic production, but this had not to a large degree changed their views on the value of Organic food or Organic agriculture (perhaps linked to a majority of the participants already being part of a partly Organic CSA). In Italy the main changes in opinion were to do with price awareness: many consumers commented that after the debate with farmers they deeply understood the difficulties and the importance of 'peasant' organic production and therefore the reason for the higher prices.

In terms of whether participants would change their purchasing practices in light of what they had learnt in the sessions, in all countries the majority of participants who responded to the reflective survey/interviews commented that they intended to make some change. Most often this was in terms of either buying more Organic or buying more from local/small-scale farmers (perhaps as an effect of sharing the group with farmers of mostly this type).

In the UK learning more about the contentions with Organic food and the way they were being addressed increased consumption in 5 of the 9 consumers over the course of the sessions. Changes ranged from large increases in consumption "*I did my shop today and it's all expensive, because I did find loads of organic stuff… you've converted our family!"*, to small increases in "*cheaper vegetables that we can afford, like carrots*", to buying more Organic from farmers markets rather than supermarkets as "*by the time the supermarket's put their money on it as well, it makes it a less affordable option"*. Of those who didn't report increases in Organic consumption, one said they were focusing on buying more local food, another said they were going to buy less cheap Organic from supermarkets because of what they had learnt about large scale Organic from the farmers "*I'll be thinking, well, there's a reason why they're so bloody cheap, you know?"* (Consumer, UK) and one previous Organic enthusiast said he would probably buy less Organic now as he felt less sure of the assurances the label could offer him.

Behaviour changes among the UK farmers were much more limited – perhaps because they were already familiar with the contentions in Organic agriculture, so their awareness had changed less on this front: *"I wouldn't say it's changed a hell of a lot… [but] because of my job… I had a fairly good grasp of it anyway"*. Beyond consumption habits, one farmer said that his learnings from the sessions had influenced how he wanted to farm in future: *"I think I would be more open to more kind of ideas sharing and communication… this has really brought up how important communication is between other farmers, other growers and consumers… I think that's changed my behaviour"*.

In Italy 7 of the 12 participants who completed the questionnaire promised a new approach in choosing their food through the careful observation of the labels, according to the new awareness gained concerning the role and the troubles of smallholder farmers. "*I will be even more careful in reading the labels and I will try to buy directly from the small farmers to help them in reaching the common goal: our wellbeing and that of the food we eat*" (Consumer, Italy).

In Norway 4 of the 6 participants who completed the questionnaire mentioned that they actually want to change some of their practices as a result of the HF: to shop more often for Organic; to choose more Organic products; to start practicing some of what I have learnt in their Organic farming system; to try to grow something in my kitchen garden (kjøkkenhage).

8.3. Wider problems impeding the improvement and expansion of Organic agriculture

Whole system sustainability

> *"we are paying for the past choice of focusing on specialists, losing the holistic view and the connections between things. Organic is not just a prohibition, a ban, it is rather the awareness that certain behaviours are harmful for the planet, for life, etc. We have to get back to… the holistic view." (farmer, Italy)*

When asked what they thought the problems were around Organic agriculture, the participants were focused much more on the whole picture of production rather than on isolated individual inputs.

For example, they highlighted the origin of seeds and animal feeds: with proximity to the farm generally regarded as more important than Organic certification. For instance, in Norway the fact that much of the Organic feed stuff is imported came up as problematic. Participants felt that Organic regulation sometimes hinder the utilisation of local resources outside the farm which are not certified Organic, even though in some instances utilising them may be more sustainable (e.g., manure from a neighbouring farm, or using local low-grade fruit and vegetables as a supplementary feed).

Participants also considered the people growing the food: Organic farming was seen to be a hard job and farmers' welfare should be protected for them to stay in the business. In the UK, 'farmer wellbeing' was added to the list of contentious issues at the end of the second session by a female farmer because "*for example, lots of small scale Organic farms might have farmers working 70 hour weeks in order to be able to produce and compete."* It was chosen by participants as one of the two most important contentious issues in Organic farming because of perceptions of long working hours, limited financial support and economic precarity: "*it's still touch and go if you're going to start a family whether you can get by*" (farmer, UK).

Consumers especially considered how the food was packaged: plastic packaging was one of the most voted for contentious issues with Organic food in all three countries. In the UK, plastic packaging came up often in the discussions, mainly raised by consumers: "*plastic has just become a buzzword for bad*" (consumer, UK). One gave it as key to her definition of sustainability: "*when I think of sustainability, I only really think about recycling, to be honest… [and] more use of cardboard as opposed to plastic packaging*" (consumer, UK). Organic food being wrapped in at least as much plastic as conventional was seen as somewhat contradictory, as impeding the shelf-life of vegetables and as overlooking preferable bio-degradable alternatives.

HF participants also considered where the food came from and went to: supporting local production was often as important as Organic certification. As one UK consumer pointed out *"You associate it with local and… community… I'd imagine Organic at a farm shop… as a consumer… you imagine one thing, but the reality is quite different."* Although the Soil Association's presentation pointed out that transport emissions were only around 6% of the total emissions associated with foods, this didn't persuade some participants: "*you've put all this effort into the growing… all these extra restrictions and guidelines and then it comes down to, 'Oh…the carbon from the food miles, it doesn't matter' Seems… not even remotely in line with your overall mission"* (consumer, UK). Indeed, by the end of the UK sessions local production had risen slightly in importance as an Organic contention. The Italian group were also in agreement that it is important for Organic to shorten the supply chain.

The prioritisation of localisation was probably largely attributable to benefits beyond sustainability. Participants also thought that localising food production would bring other important benefits: greater food security, more connection/empathy between grower and consumer, keeping money in the local economy, avoiding stripping scarce resources from other countries (e.g., importing tomatoes from dry regions), reducing the distance to abattoirs for animals and easier to ensure good working conditions and compliance with Organic certification locally than abroad. The UK group identified five major barriers to local Organic food production: prohibitive start-up costs; local not being a good fit with supermarket dominance of the market; availability of infrastructure at the right scale (abattoirs, farm machinery, processing facilities, etc.); small scale producers having to be experts at every aspect of growing, packaging and selling; and a perceived mismatch between consumer habits/expectations and the way local produce is available.

Valorising Organic production

Improving awareness among consumers was a substantial focus of discussion in all the HF groups, with participants from every country independently advocating that greater attention should be given to sustainable agriculture as part of formal schooling. In Italy improving awareness was framed in terms of the 'valorisation' of produce by farmers and retailers: taking steps to communicate the *proper* value of a product to consumers. An Organic label is one way to valorise that your produce is grown sustainably, but this could also be achieved by only selling locally and building trust with your customers, or by selling through small stores or the type of markets which only sell food which is produced well, etc. This emphasis may have been particularly relevant in the Italian context where many of the group regarded Organic food as associated with frauds and counterfeits, seeding doubts about whether specific products had been cultivated Organically or if the farmer had circumvented the rules. Faced with such deep distrust in the Organic label, farmers valorising their products directly through a stronger connection with their territory was seen as a more promising route (tying into other points about localisation made above).

Improving the economics of Organic food

The affordability of Organic produce was raised as a key barrier to growing the Organic market in the UK, much more so than in the other national HFs. This is in line with the previous international survey conducted as part of Organic PLUS, which found a strong correlation between income and Organic consumption in the UK (spearman's rank; $r = 0.318$, $p < 0.001$) where there was no correlation in either Italy ($r = 0.017$, $p = 0.470$) or Norway ($r = 0.031$, $p = 0.260$).[2]

What all the HFs were united on was the economic precarity for sustainable producers, particularly those who were smaller scale, and that any improvements in Organic standards which make

[2] This calculation was made for this report using data from the previous survey, reported in Vittersø et al., 2019

compliance harder for farmers must also be coupled with measures to increase their financial stability.

In the UK HF farmers were particularly focused on the costs and practical difficulties of certification for small sustainable producers. The group highlighted several potential avenues for improving the economics of Organic farming: challenging supermarkets' ability to push down food prices, increasing direct sales from farmers to consumers, legal protection of farmer's pay, increased co-operation between small-scale farmers to increase their market influence, and making certification cheaper and easier. Specifically in terms of addressing contentious inputs, there was substantial agreement among participants that tighter regulations on Organic would likely be hard to achieve, and that changes to the tax and subsidy system would likely be effective as a means of support.

Among Italian participants the government was unanimously seen as responsible for supporting Organic and sustainable production, and as in the UK they thought this should be focused especially on small-scale farms whose income is very uncertain due to the high level of external factors involved in agricultural production. Often during the discussions attention was focused on a common dissatisfaction regarding the functioning of subsidies and fines in the Organic sector. Farmers find themselves constantly facing a strong uncertainty that prevents them from making proper business plans and this requires a targeted assistance: *"if I have to violate the rules, I am happy to declare it and sell my production as conventional, but the State should refund my income loss… the State should aim at ensuring product quality through specific support"* (farmer, Italy). In addition, much of the work of farming sustainably is not directly related to production, but it rather concerns improving understanding and maintenance of the agroecosystem. These activities which indirectly support food production are often neglected when designing income supports. As other entrepreneurs, Organic farmers wished to be assisted in these projects that enrich their business and to be better targeted by proper support schemes and market policies. Additionally, as "*…the real gain in food production is for the processors*" they advocated that farmers should be supported in becoming processors themselves, or to create short transformational circuits of exchange.

Other contentions

Beyond these three themes, a frequently raised issue in the UK HF was the monolithic and undifferentiated nature of Organic certification. As it covers a wide range of farmers it is not able to recognise those going beyond the minimum requirements, making large-scale producers who also produce conventionally appear equally good despite the fact that *"[they are] still farming at the same scale with the same mechanisms and not necessarily investing in the land as a smaller-scale producer might… I find that problematic"* (farmer, UK).

Other contentions with Organic raised by participants included: damaging tilling techniques (UK); animal welfare (particularly in connection with antibiotic usage constraints, UK); lack of consideration of GHG emissions (UK); having inadequate measures to fight against invasive species (Italy); lack of trust in the certification system: imported foods falsely claiming to be Organic and perceptions that on-farm inspections are often inadequate (Italy); yield - would Organic be capable of providing enough food on a global scale? (Norway); and the rigidity of Organic certification (Norway).

8.4. Feedback on the OPLUS sustainability models

Overall, participants expressed agreement with most of the categories that were being monitored, with one participant in the UK commenting that the RISE categories were *"actually remarkably close to the issues that we've just raised, considering that we came up with that list without any reference to the model. I think it's amazingly close actually" (farmer, UK).* Additionally, in Italy participants

commented that they liked the way that the radar chart the RISE model generated was capable of presenting a more holistic view than simpler measurements.

However, participants also flagged additional measures of sustainability, which they would have liked to see better covered by the models. In the UK consumers raised the amount of the food product wasted by those who buy it and how necessary buying it was in the first place as important sustainability considerations. Additionally, they wanted worker rights/wellbeing and economic sustainability to be measured as part of sustainable food production. Beyond the pre-selected measurements from existing models, UK participants added 'cost', 'environmental costs of manufacture' and 'efficiency/efficacy' as important measures of sustainability.

In Italy, biodiversity was considered to be the most important parameter overall. Participants also thought two key parameters were missing from the RISE model: a clear indicator of pollution and a measure of animal happiness, as the model seemed to be focused only on farmer and consumer happiness.

Appendix: Hybrid Forum Session Protocols

UK protocols

1 .	**Starting broadly: about good food more generally**
18:00	**Intro and talk through practicalities:** 'improving organic' website, consent forms, payment, etc.

	- Intro to include:
	  o Welcome
	  o Introduction about the project; Group includes farmers and consumers to get at both knowledges
	  o Discussion protocol

18:15	**Short paired ice-breaker:** one nice thing about your day. Informal chance to connect with humanity of one person & increase comfort/confidence
18:20	**Introduction go-round**: introduce yourself and one sentence about the food you've brought
18:35	**Exercise: good food in pictures** What does good food mean to you? Make a picture collage on Miro

18:55	- introduction / explanation: brainstorming exercise about what 'good' food means to you. On Miro: add pictures as we did in the test and add text labels (if you have any problems uploading pictures write ideas in the Zoom chat and we'll add them for you)
	- 10 mins making them
	BREAK (5 mins?)
	- 15 mins facilitated discussion (Adrian): what were the important things for you about what makes food good?
	  o *Why did you choose your pictures? health, sustainable/local, family/community, enjoyment*
	  o *Where does Organic fit in?*

19:15	**Exercise: Who should ensure good food?**

	What are the roles/responsibilities of consumers, farmers, retailers, & government in ensuring we have good food?
	- 15 mins: in 3(2) break-out groups (1 farmer group, 2 consumer groups)
	  o 5 mins writing post its individually: who should ensure good food? First things to come up for you, don't think about too deeply (post ideas in chat again if tech difficulties).
	  o 10 mins discussing: why wrote them, what think about others, etc. (facilitator can add post-its of anything new raised)
	- 20 mins: bring back together for discussion
	  o *Anything which came out in your discussion which you would like to share with the other groups? (facilitators as a back-up)*
	  o *prompts: are there any other groups we've missed out? how could these groups work together? Farmers/consumers?*

19:55	Check out: go round with a few words about how you're feeling now - someone first and model the type/length of answer we're looking for
OUTPUT: picture collages and compiled post-its from the exercise posted on website	
2 .	**All about Organic**
18:00	**Welcome and short paired ice-breaker**
	- Welcome: recap of last session, overview of this session & introduce ice-breaker - 5 min ice-breaker "share what you remember/found interesting from the last session with your partner"
18:10	**Exercise: associations with Organic** associations written on post it notes, then added to collective board on Miro
	- what comes to mind / the types of things they associate with organic

	- 5 mins adding sticky notes on shared miro board (different colours for farmers & consumers). Rosa to mention again where sticky note is, and to use right colour. Adrian to mention grouping with similar ideas. - 10mins discussing: why these associations? Where did you get your information from about what organic is? Are there areas you'd like to know more about Organic? - 5 mins adding sticky notes on problems with Organic - 10 mins discussing: problems from the consumption side? problems from the production side?
18:40	**Presentation: what does Organic food certification mean?**
	- intro to Organic certification - key features in terms of what's allowed and not - differences with conventional - one slide regarding different types of organic farming standards: EU, soil association, biodynamic – some stricter than others.
18:55	**Questions (10 mins)** - Ask people to type in comments box during & after presentation so can start as soon as it's finished - Prompts in case nothing: was there anything that surprised you? Anything which you thought would be stricter?
19:05	BREAK (5 mins)
19:10	**Presentation: what's contentious about Organic food?** contentious inputs & focus group additions
	- 10 mins: outlining the contentious inputs in organic agriculture – from OPLUS natural science research - 3 mins: focus group contentions – listing other concerns raised by consumers in the focus groups - 5 mins burning questions
19:30	**Exercise: Prioritising contentions** (both inputs and other contentions)
	- Collaborative board on Miro, contentious categories, plus a couple of blank categories in table - 5 mins: any other problems which should be added? - 5 mins: voting for what is the most important to address in Organic farming - discussing **why** votes fell how they did: look at top 1 or 2, and the bottom one or two, and really explore why they're important or not (15 mins) - 5 mins: use this discussion and distribution of post-it notes to guide choice of deep dive topic for session 4
Anything anyone wants to say about how they found the session?	
OUTPUT: Miro boards with post-its of initial assumptions about organic & ranking of contentions added to website	

3 .	**Focus on a specific input** soil health (Norway); plastic (UK); antibiotics/mineral oils/synthetic vitamins (Italy)
18:00	**Welcome and short paired ice-breaker**
	- Welcome: quick recap of last week, this week going to focus on plastic mulches - Ice-breaker: share something nice about your week / day, something you've enjoyed
18:10	**15 min Discussion about selected input(s):** plastic mulches used to suppress weeds

	- Very brief intro: jog memory about plastic mulches as a contentious issue – show Judith's slide on mulches from last week's presentation and plastics in packaging also came up. - **CONSUMERS** o What are consumers first thoughts on this? Why do you think they might be useful? o We've also sent you a letter with some samples in the post – quick description / encourage to handle – take comments - **FARMERS:** have any farmers used them before?
18:25	**30 mins Video & presentation about plastic mulch trials in OPLUS**
	Francis pre-recorded video & presentation: introducing why you use plastic mulches, why contentious, showing Ryton trials and put into broader context of weed management strategies/alternative mulch options. https://www.youtube.com/watch?v=Wk9-dhzMrEQ&feature=youtu.be - *Remind participants to use the chat to add questions for after the presentation* Followed by Live Q&A with participants.
18:55	**5 min BREAK**
19.00	**15 min Group discussion about mulches**
	- Presentation reflection – what do you think about plastic mulches now? - Farmers experiences o prompts: do any of the farmers use plastic sheeting? Experiences? Benefits? Considered using alternatives? - Consumer reflections o prompts: where do consumers get their knowledge from? Any questions for the farmers? do the same issues apply to mulches as plastic packaging?
19:15	**Exercise: brainstorming farmer factsheet & consumer-facing newspaper article**
	- **5 min explanation** of exercise from Adrian. - Divide into two groups – mixed farmers/consumers – each with 'expert' to answer questions but not lead. Participants working together with 'experts' on hand to ask questions of. o Group 1 – Farmer factsheet first o Group 2 – consumer article first - **19:20 Each group brainstorms content** for either a factsheet for farmers (group 1) or a newspaper article aimed at consumers (group 2) (20 mins) o *5-10 mins: Put some ideas on post-its – encourage not to duplicate but to add to what other people have added* o *10-15 mins: discussion* ▪ *Prompts: encourage to talk about sections with not very much written in them; to elaborate on/clarify what they've written and why* ▪ *Try to write up and add points raised in discussion to the Miro board (or get the participants to).* - **19:40 Participants swap over** and add to what other group have produced – facilitators stay with the same board (10mins)

	○ *10 mins: facilitators summarise sections – anything you want to add/comment on?*
19:50	**Discussion:** reflections about plastic mulches and how the relate to plastic packaging – which is more important now they know a bit more? Why?
OUTPUT: factsheet & article put on website – participants can add comments / additions if they have any	

4 .	**Focus on contentious issue chosen by participants** (decided at end of session 2)
18:00	**Welcome and short paired ice-breaker**
	- Welcome: recap last week and a few sentences about this week's session - Ice breaker: general 'what was your favourite meal from last week? What did you like about it?'
18:10	**Recap why participants chose this issue/key points from session 2**
	- Quotes from last time (from website): ○ Local: organic traveling a long way devalues, small and local might not have money to certify ○ Farmer welfare: Long working hours; finance; support/derogations in times of crisis
18:15	**Presentation by Soil Association:** info on and organic
	- 15 min presentation covering: ○ Intro to Soil Association ○ Local and Organic ○ Farmer wellbeing and Organic **18:30: Group questioning of presenters** *Discussion prompts:* - *Farmer welfare – particularly an issue for Organic? What's different from conventional? More vulnerability to natural shocks?* - *Local – what makes it non-Organic being non-local?* - *What are the limits of Organic? Should it be expected to be the catch-all for everything 'ethical'? Should it cover the whole food-chain, farmer wellbeing, health of the food, etc.?*
18:45	**Farmer-consumer break out groups on local and farmer wellbeing**
	○ 3 groups: 2 consumer groups and 1 farmer group *Prompts:* ***1: any comments/questions?*** ***2: local*** *what are the main issues for you about local food? How related/specific to 'Organic' are they? As big an issue within conventional?* ***3: farmer welfare*** *what are the main issues for you about farmer welfare? How related/specific to 'Organic' are they? As big an issue within conventional?*
19:05	**BREAK**
19:10	**Making posters about local and farmer wellbeing in Organic: What would they like to do about these issues?** How could it be integrated into Organic?
	- Split into two groups with an expert each - as long as at least 5 in each, participants can choose which issue they want to focus on - Break out group facilitators explain the exercise: ○ 10 mins: Post-it notes in the first boxes

	○ 20 mins: Collaborate in answering the last two questions – group discussion and write in ideas which come out of it. ▪ 5 mins deciding things that would need to change ▪ 15 mins addressing the barriers/changes one by one
19:40	**Rejoin group plenary – should these issues be part of Organic PLUS? Or are they best dealt with outside an Organic certification system?**
	Discussion prompts: 1. *Are these still some of the most important issues within Organic now you've heard about/discussed them more? e.g. compared with inputs like peat and antibiotic use? Or even plastic packaging?* 2. *What is the best way of dealing with them? Should they be part of an Organic PLUS certification or dealt with outside Organic certification?*
OUTPUT: Posters about what participants would like to do – shared on website & twitter	

5 .	**Modelling**
18:00	**Welcome and short paired ice-breaker**
	Welcome: recap of previous session(s) and introduction of session and Organic PLUS colleagues who are joining this week. Ice-breaker (5 mins in paired breakout groups): Something nice you're planning for Christmas
18:10	**20 mins: Sustainability of food products**
	What factors do you think are important in determining the sustainability of a food product? What types of issues would you like to know about to assess how sustainable a food product is? *Split into 2 Breakout groups – consumers and famers* 10 mins Sticky note brainstorm on Miro and brief discussion 10 mins whole group Discussion Potential prompts (depending on time): ○ *any questions/comments* ○ *similarities and differences between farmer and consumer miro boards* ○ *are some factors more important than others?* ○ *Are there missing issues – especially in relation to the scope of issues considered across the food chain* ○ *Are you able to get all this information about food products – what's missing?* ○ *Would you like to know different factors for different products?*
18:30	**40 mins: Sustainability on a farm – what issues are important?**
	5 mins: sticky notes – Thinking about sustainability specifically on a farm - what would you like to monitor to check if the farm is producing food sustainably? Farmers yellow notes; Consumers blue notes 10 mins: Choose 8 headings we could measure ○ What would you like to put on the list? 5 mins: vote for which are the most important in the list. ○ Participants given 8 votes – can allocate as they think – 8 to one, or one each or something in between 10 mins discussion: ○ How did you allocate votes and why? ○ Focus on those which came out highly: do people think it's worth weighting these? 10 mins: Show the group the RISE assessment criteria (broad categories in the polygon in a few slides (5 mins) ○ Opportunity for questions (5 mins)

19:10	**BREAK**
19:15	**45 mins: Comparing specific inputs: plastic & bioplastic mulches**
	What factors should we consider when deciding whether to replace a plastic mulch with a biodegradable mulch? 5 mins: going through the list of 20 criteria 15 mins: round-robin – spend a couple of minutes thinking about one issue which is particularly important or relevant to you. You can choose one from the list or add something else. Then I will go round in turn and everyone will have the opportunity to say briefly what they chose and why. 5 mins: Voting: 15 votes for around 20 options (they might add some) 5 mins: Discussion about how/why they voted - *Do some things need more weight?* - *If we used these criteria what type of mulch do you think would be assessed as better?* - *Is it feasible to measure all these criteria, or are some easier to measure than others?* 7 mins: Presentation about the 3 different ways researchers in OPLUS are trying to understand these issues - RISE, Feasibility and LCA. 8 mins Questions (for Erica, Frank, Dennis and Adrian) about the OPLUS models. Concluding remarks.
OUTPUT: Miro boards and associated discussions and voting Dissemination of OPLUS approach to modelling – to group participants and to wider public via the website. Differences and similarities between farmers' and consumers' framing of sustainability at whole food chain and farm level. Input to LCA – especially regarding public views on the importance of categories such as biodiversity and plastic pollution – as well as the balance of priorities between – social and environmental impacts and the relative importance of different issues. Part of a broader science-society dialogue about modelling, valuation and assessment.	

6 .	**Implementation:** what types of intervention would you like to see to improve Organic?
18:00	**Welcome and short paired ice-breaker**
	- Recap of last week; what we're going to do this week - Paired exercise: something nice about your week / best ever [xmas] present (given or received)
18:10	**Exercise: intervention scenarios**
	- present a range of scenarios one by one: Read scenario => participants plot themselves => quick discussion why where => next scenario. - 18:10 Awareness-raising education campaign 18:15 Labelling – place themselves on both then discuss together - 1: Incorporate improvements into the Organic label. Organic effectively becomes a whole food chain 'sustainability' label - 2: Several new 'more sustainable' labels (Organic PLUS/separate to Organic improvement labels e.g. plastic-free Organic, copper-free Organic, etc. 18:23 Govt regulation - 1: EU changes the legal minimum requirements for Organic farming across Europe - 2: Change tax/subsidy regime so farmers get paid for addressing the contentious inputs 18:30 Facilitating improvements in Organic at farm level

	18:35 Retailer-led improvement 18:40 whole group discussion: - *anything missing? Would the changes be applicable to all?* - *Would they be more effective combined?*
18:50	**BREAK**
18:55	**Exercise: implementation/achieving change**
	15mins to design an intervention strategy for how you would improve either: wellbeing of farmers, use of plastic mulch or local food in Organic farming 3 break out groups: - facilitators there to record but we'll leave - choose who's going to report back and who's going to write notes on Miro (if you want to use it). - How might you adapt, combine or add to the interventions from the previous exercise to address this specific issue? 15 mins feedback and group discussion: - Feedback - How do different interventions work together? - How specific is the intervention strategy you've designed for the issue you were addressing?
19:30	**Repeat session 2 sticky note exercises: associations & problems with Organic**
	- All on one Miro board (under each-other again) - 5 mins: what comes to mind / the types of things they associate with organic? adding sticky notes on shared miro board (different colours for farmers & consumers). - 5 mins adding sticky notes on problems with Organic (different colours for farmers & consumers). - 2 mins re-vote on contentious inputs 16mins final concluding discussion about change over time etc. - Try to make sure everyone says something 2 mins: closing messages
OUTPUT: policy recommendations from a consumer/farmer perspective	

Italian Protocols (April-May 2021)

1 .	Starting broadly: about good food more generally
18:00	**Intro and talk through practicalities:** 'improving organic' website, consent forms, payment, etc.
	Intro to include: - Welcome participants and introduce facilitators - explaining a bit about the project; including farmers and consumers to get at both knowledges - Discussion protocol
18:15	**Short paired ice-breaker:** one nice thing about your day. Informal chance to connect with humanity of one person & increase comfort/confidence
	- Divide into pairs in zoom breakout rooms
18:20	**Introduction go-round**: introduce yourself and one sentence about the food you've brought
	- Get participants to hold foods up to the camera and show them to everyone - Try to limit to only 1 sentence/minute per person
18:40	**Exercise: good food in pictures** What does good food mean to you? Make a picture collage on Miro
	Introduction / explanation (10 mins) Making good food collages (10 mins) **19:00: BREAK (5 mins)** Facilitated discussion (15 mins): what were the important things for you about what makes food good? - *Why did you choose your pictures? health, sustainable/local, family/community, enjoyment* - *Where does Organic fit in?*
19:20	**Exercise: Who should ensure good food?**
	Task explanation: What are the roles/responsibilities of consumers, farmers, retailers, & government in ensuring we have good food? - divide into two groups on zoom: farmers and consumers - each with a different bit of the Miro board to add sticky notes to. Doing task in break-out groups (15 mins) - 5 mins writing post its individually: *who should ensure good food? First things to come up for you, don't think about too deeply (post ideas in chat again if tech difficulties).* - 10 mins discussing: *why wrote them, what think about others, etc. (facilitator adds post-its of anything new which comes up)* Whole group discussion (20 mins) - *Anything which came out in your discussion which you would like to share with the other groups? (facilitators as a back-up)* - *are there any other groups we've missed out? how could these groups work together? Do they talk to each other enough? Do they understand each other? Particularly farmers and consumers?*
OUTPUT: picture collages and compiled post-its from the exercise posted on website	

2 .	All about Organic
18:00	**Welcome and short paired ice-breaker**
	- Welcome: recap of last session, overview of this session & introduce ice-breaker - 5 min paired ice-breaker "share what you remember/found interesting from the last session with your partner"
18:10	**Exercise: associations & problems with Organic** associations written on post it notes, then added to collective board on Miro
	What comes to mind / types of things they associate with organic (15 mins) - Individually adding sticky notes to a group miro board (5 mins) - Disussion (10mins): *why these associations? Where did you get your information from about what organic is? Are there areas you'd like to know more about Organic?* 18:25: what problems do you think of around Organic? (15 mins) - adding sticky notes on problems with Organic (5 mins)

	- Discussion (10 mins): *some problems from the consumption side? Some problems from the production side?*
18:40	**Presentation: what does Organic food certification mean?**
	What does Organic food certification mean? (15 mins) - intro to Organic certification - key features in terms of what's allowed and not - differences with conventional Questions (10 mins) - Ask people to type in comments box during & after presentation so can start as soon as it's finished - Prompts in case: *was there anything that surprised you? Anything which you thought would be stricter?*
19:05	**BREAK (5 mins)**
19:10	**Presentation (continued): what's contentious about Organic food?**
	- Outlining the contentious inputs in organic agriculture – from OPLUS natural science research & focus group contentions – listing other concerns raised by consumers in the OPLUS focus groups (15 mins) - questions (5 mins)
19:30	**Exercise: Prioritising contentions** (both inputs and other contentions)
	Collaborative board on Miro, contentious categories, plus a couple of blank categories in table - any other problems which should be added? (5 mins) facilitator adds every suggestion as an additional option. - voting for what is the most important to address in Organic farming (5 mins) - Discussing why votes fell how they did (15 mins). Look at those that came out at the top and those that came bottom in votes, and explore why they're important or not - *inherently important? needs further study? Solvability? potential impact?* - Choice of discussion topic for end of session 3 (5 mins). Which of these would you like to discuss in more detail at the end of the next session? Use this discussion and the distribution of post-it notes to guide choice of topic to discuss further at end of session 3.
OUTPUT: Miro boards with post-its of initial assumptions about organic, problems with Organic & ranking of contentions added to website	

3 .	**Focus on antibiotics**
18:00	**Welcome and short paired ice-breaker**
	- Welcome: quick recap of last week, this week going to focus on antibiotics - Ice-breaker: share something nice about your week / day, something you've enjoyed
18:10	**Discussion about antibiotics (15 mins):**

	- Question consumers first (10 mins):
	  o *What are consumers first thoughts on this? What do they think the key issues are?*
	- Then farmers (5 mins):
	  o *have any farmers used them before? What do they think the key issues are?*

18:25	**Presentation about trials on antibiotics in OPLUS (30 mins)**
	Presentation – Dr Carmen Manuelian (20 mins) - introducing why antibiotics are currently used - why they are contentious - showing the OPLUS trials - putting them into the broader context of available alternatives/ways of replacing the function of antibiotics - *Remind participants to use the chat to add questions for after the presentation*

	Live Q&A with participants (10 mins)
18:55	**BREAK (5 mins)**
19.00	**Group discussion about antibiotics (15 mins)**

	- Presentation reflection – what do you think about the input now?
	- Farmers experiences
	  o *prompts: Experiences of using? Benefits? Considered using alternatives?*
	- Consumer reflections
	  o *prompts: where do consumers get their knowledge from? Any questions for the farmers?*

19:15	**Exercise: brainstorming farmer factsheet & consumer-facing newspaper article (25 mins)**

	Explanation of exercise (5 mins)
	- Divide into two groups on zoom – mixed farmers/consumers. Participants working together with 'experts' on hand to ask questions of. Allocate each group an expert and a facilitator.
	
	Each group brainstorms content for either a factsheet for farmers (group 1) or a newspaper article aimed at consumers (group 2) (20 mins)
	- Everyone adds some ideas on post-its (5-10 mins): encourage not to duplicate but to add to what other people have added
	- *Discussion (10-15mins)*
	  o *Prompts: encourage to talk about sections with not very much written in them; to elaborate on/clarify what they've written and why*
	  o Facilitator to try to write up and add points raised in discussion to the Miro board (or get participants to)

19:40	**Discussion about chosen contention(s) from end of session 2 (20mins)**
	Prompts: - *Why do they think it's so important?* - *Is it a particular issue for Organic farming or a more general farming issue?* - *What do they think could be done to improve it?* - *do you still think that they are some of the most important issues within Organic - e.g. compared with inputs like the one above?*
OUTPUT: factsheet & article put on website – participants can add comments / additions if they have any	

4 .	Measurements and Interventions
18:00	**Welcome and short paired ice-breaker**
	Welcome: recap previous session and introduce the session today Ice-breaker (5 mins in paired breakout groups): something you're looking forward to this summer
18:10	**Sustainability on a farm – what issues are important? (30 mins)**
	Sticky notes (8 mins): Thinking about sustainability on a farm - what would you like to monitor to check if the farm is producing food sustainably? Farmers use yellow notes; Consumers use blue notes Discussion (10 mins): - *why did you add what you added?* - *are some more important than others?* Present the RISE assessment criteria (7 mins) - a few slides on the broad categories in the RISE polygon - Opportunity for questions (5 mins)
18:40	**Exercise: intervention scenarios (30 mins)**

	Present a range of scenarios one by one. Read scenario => participants plot themselves on miro board => quick discussion why where => next scenario. - *pick on people at fringes/who have contributed less – why have you put yourself here?* 18:40 Awareness-raising education campaign 18:50 Labelling – place themselves on both then discuss together - 1: Incorporate improvements into the Organic label. Organic effectively becomes a whole food chain 'sustainability' label - 2: Several new 'more sustainable' labels (Organic PLUS/separate to Organic improvement labels e.g. plastic-free Organic, copper-free Organic, etc. 19:00Govt regulation: Change tax/subsidy regime so farmers get paid for addressing the contentious inputs (like the 'public goods' farming subsidy changes UK govt introducing to replace the CAP after Brexit)
19:10	**BREAK**
19:15	**Intervention scenarios – discussion (15 mins)**
	19:15 Facilitating improvements in Organic at farm level: Provide better support and information to farmers about improving sustainability e.g. RISE for free and follow-up farm specific advice about best practice to improve on areas they're weak on => farmer driven change. 19:22 Retailer-led improvement
19:30	**Repeat session 2 exercises: associations & problems with Organic**
	Repeat exercises (12 mins total). On one Miro board, underneath each-other. - 5 mins: what comes to mind / the types of things they associate with organic? adding sticky notes on shared miro board (different colours for farmers & consumers). - 5 mins adding sticky notes on problems with Organic (different colours for farmers & consumers). - 2 mins re-vote on contentious inputs **Final concluding discussion about change over the sessions** etc. **(16 mins)** - Try pick on people to make sure everyone says *something* - *Prompts: how have you found the sessions? Have you taken anything from them? Do you think what you've learnt will change what you do/buy?* **Closing messages (2 mins)** - Thank everyone - Mention will get an email containing short feedback questionnaire & their final payment after completing this. - We'll send them an electronic copy of final written report (in English)
OUTPUTs: Sustainability on farm: Miro board & associated discussion on website. Differences and similarities between farmers' and consumers' framing of sustainability at farm level Intervention scenario responses on website – enabling comparison of farmers and consumers as well as Italy/UK Repeat exercises on website allowing comparison with responses before discussed/heard about Organic, contentions and improvements in the sessions.	