Survey of public attitudes towards precision breeding

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Introduction (FSA/FSS comment)

The Genetic Technology (Precision Breeding) Bill is currently going through Parliament. Although this bill is 'England only' and food and feed safety and hygiene is a devolved issue, the Food Standards Agency (FSA) will introduce a separate regulatory framework for precision bred organisms (PBOs), should the Bill become law. The FSA will also work with stakeholders in Scotland, Wales and Northern Ireland to ensure consumers' interests are protected in relation to PBOs.

The FSA / Food Standard Scotland (FSS) is science and evidence led. In August 2022, the FSA and FSS commissioned Ipsos UK to conduct a two-phase social research project on precision breeding.

Phase One, now complete, involved a survey of 4,177 UK residents with robust samples in each UK nation to allow comparisons between and within nations. Phase Two, scheduled to start in September 2022 and report in early 2023, will comprise a series of Citizens' Forums in England, Wales and Northern Ireland (footnote 1).

The overall aims of this project are to:

- explore consumer attitudes towards precision breeding
- gather consumer views on the FSA's proposed regulatory framework
- understand consumer information needs
- inform how to communicate with consumers about precision breeding.

This document presents interim findings for this project, reporting descriptive data from Phase One. Phase One's core aims were to provide a snapshot of consumers' awareness and self-assessed knowledge of precision breeding, its perceived acceptability, risks and benefits, and consumer appetite for information about this production method.

These data show that awareness of precision breeding is very low, something which should be borne in mind when considering these findings. While these data reveal that there is a general openness to trying precision bred foods across the UK, with more people anticipating benefits than disbenefits from the use of precision breeding, there is a large degree of uncertainty about what impact precision bred foods may have on the different parts of the food system. This is reflected in the relatively large proportions of people taking a neutral stance or indicating they do not know enough to answer survey questions and in the strong appetite expressed for information about precision breeding to be provided.

The next phase of this project will be essential for the FSA's ability to interpret these findings' implications, and to understand what is informing consumers' views. The purpose of Phase One has always been to let the FSA know 'what' consumers think about precision breeding; Phase Two's purpose is to build our understanding 'why' they think it. This will allow the FSA to develop a more nuanced understanding of consumers' needs and incorporate this into the design of the future regulatory framework and any engagement with consumers on precision breeding. FSS will be carrying out further research in Scotland.

Background and methodology

The Genetic Technology (Precision Breeding) Bill is currently going through Parliament (only with effect in England). Should the bill become law, the Food Standards Agency (FSA) will introduce a separate regulatory framework for precision bred organisms (PBOs). Precision bred foods could soon impact consumers and the choice of food products available in the UK. In Scotland, Food Standards Scotland (FSS) has responsibility for certain food and animal feed products which require authorisation before sale.

In August 2022, the FSA and FSS commissioned Ipsos UK to conduct an online survey to explore consumer awareness and attitudes towards precision breeding. The key research questions were:

- What is the level of awareness and knowledge of precision breeding? Have consumers heard of the terminology 'precision breeding'? Do consumers understand what it is?
- What are consumer views of acceptability of precision breeding?
- What do consumers perceive to be the risks and benefits of precision breeding?
- What information about precision bred food is important to consumers?
- In England, Scotland, Wales, Northern Ireland what are consumer views on precision bred food and how do they differ between nations?

A key requirement for the FSA and FSS was to understand how views varied across the UK, and it was therefore important to have robust samples in each UK nation for comparison. Ipsos UK surveyed a representative sample of UK adults aged 16-75 interviewed online through an Ipsos i:Omnibus survey. After data cleaning, the overall sample was 4,177, with 1,900 in England, 1,016 in Wales, 1,005 in Scotland and 256 in Northern Ireland. Fieldwork ran from 29th July to 1st August 2022.

Quotas for the overall sample were set on age, gender and working status. These samples were weighted to be individually representative of each nation by age, gender, working status and social grade. When they were combined into an overall set UK data set, each nation was then weighted to its relative proportion.

The survey included a split sample where respondents were made aware of the FSA's regulatory involvement with precision breeding at different stages of the survey. Whilst this had little impact on consumer attitudes, this report highlights where these differences in question wording occurred.

All the differences which have been commented on within this report are statistically significant, unless otherwise stated. The significance tests used are two tailed and are based on a 95% confidence interval. This means that should the samples be drawn 100 times, in 95% of those cases we would find a difference between the two numbers being compared. While statistical theory assumes that samples are drawn using purely random methods, it is standard practice to conduct significance testing on non-probability quota samples and we have employed this here. The statistical test used accounts for overlapping samples. No correction has been applied for multiple testing.

This report provides findings at the UK level, commenting on differences between nations only when they are significant. For more detailed findings from each UK nation see the nation summaries in the appendix to this report.

Note on interpreting the data

Results should be interpreted with care. All surveys are subject to a range of potential sources of error including sample imbalances which are not easily identified and corrected through weighting and errors in respondents' interpretation of survey questions and response options. The data reported within this report relies on respondents' self-reported behaviours. Errors could occur due to imperfect recollection, or respondents' tendency to overreport behaviours which are perceived as being desirable and underreport undesirable behaviours. As with all survey research, correlation does not imply causation and we have not commented about causality in this report.

Executive Summary

Awareness of precision breeding and support for availability

Claimed awareness of precision breeding is low. Three quarters (75%) have not heard of precision breeding, whilst just one in twelve (8%) have and know what it is, and 16% have heard of it but are unfamiliar. Awareness is slightly higher among men (12% saying they know what it is), younger respondents (16-34 year olds; 15%) and those living with children (15%).

Half (50%) think that precision bred foods products should be available for sale in the UK, compared to fewer than three in ten (29%) saying they should not be. However, views are not generally strong, with 14% saying these products should definitely be available and 36% thinking that they probably should. The strongest advocates are men (60%).Those who dislike unfamiliar foods (35%) and women (34%) are more likely to say they should not be available.

Perceived safety and acceptability of precision bred foods

Half (50%) think that precision bred food products are safe to eat, whilst 22% think they are unsafe. Again, attitudes are soft with just 13% thinking they would be "very safe", reflecting the lack of familiarity with precision breeding. People in Northern Ireland are less certain they would be safe (42% saying so). Those most likely to think they would be safe include men (58%) and people who like unfamiliar foods (57%).

A large majority (82%) of respondents are confident the food they currently buy in the UK is safe to eat. They are less confident that if precision bred food became available to buy in the UK that it would be safe to eat (57%), but majorities are confident in each nation. Those most likely to think it would be safe include men (65%), those who trust food manufacturers (68%), those in higher socio-economic groups AB (61%) and people who like unfamiliar food (64%).
A majority (54%) think it would be acceptable to use the precision breeding of plants in food production, whilst just 16% say it would be unacceptable.

However, respondents are more divided over whether precision breeding of animals is acceptable (35% acceptable, 33% unacceptable). Men are twice as likely as women to say precision breeding of animals is acceptable (46% vs. 23%).

Potential impacts of precision breeding

Overall, respondents expect that if precision bred products became available for sale in the UK then they would be more likely to have a positive than negative impact on the affordability of food (38% vs. 19% respectively), on the environment (36% vs. 18%), how nutritious precision bred food products are (34% vs. 18%), and on the health of people eating precision bred food products (29% vs. 20%). Views are more divided when it comes to the impact these products being available would have on how precision bred food tastes (23% vs. 18%). Across all aspects asked, large shares of respondents said precision bred food would have neither a positive nor negative impact (between one in six and one in three respondents), or that they didn't know what impact if would have (between one in seven and one in four respondents), which may reflect high levels of unfamiliarity with precision breeding and its potential impacts.

On the other hand, respondents think precision bred food could have a slightly more negative than positive impact on the welfare of animals bred using precision breeding techniques (32% negative vs. 25% positive) – and half (50%) think introducing these products will have a negative impact on small scale farmers if they cannot access precision breeding.

Buying precision bred food products in the future

Nearing four in five (77%) respondents say it would be important to know if a food item they were buying had been precision bred. Those who claimed to be aware of precision breeding and to know what it was were more likely than those who were not aware of it to say it would be important to know if a food item was precision bred (86% vs 76% of those who had not heard of it).

Similarly, around eight in ten consistently say it would be important to have a range of information about precision bred food (across all the information types tested), particularly about allergies, pregnancy and other health conditions (which 84% say would be important). Vegetarians and people who are concerned about the impact the food they eat has on the environment or concerned about animal welfare are consistently more likely to say each of the different types of information tested would be important.

A majority of UK adults would be willing to eat precision bred cereals, grains or flour (59%), fruit or vegetables (59%), processed foods (56%) and dairy products (52%). However, they are more divided over precision bred meat (44% say yes, 39% say no). These findings were consistent across nations. Men, younger people aged 16-34-years-old and those in higher socio-economic groups AB say they are more willing to eat each precision bred food product.

Over three in five consistently say they would eat a precision bred product if it had health benefits (65%), was better for the environment (64%), improved animal welfare (64%), was safer for people with allergies (64%), tasted better (62%), was cheaper (61%) or more resilient to changing climates (60%). People in Wales and Scotland are particularly open to these potential benefits.

Awareness of precision breeding and initial reactions

Claimed awareness of precision breeding is low. Three quarters (75%) say they have not heard of precision breeding before, against one in twelve (8%) who have and know what it is, and one in six (16%) who have heard it but are unfamiliar. People in England (9%) are more likely to say they know what is compared to people in Scotland (6%).

On average, those most likely to claim knowledge of precision breeding include those with children living in their household (15%), men (12%) and young people aged 16-34-years-old (15%). Other groups of people who claim slightly more knowledge are graduates (12%), people who avoid certain foods for any reason (12%) and those who like to try unfamiliar foods (12%).

Figure 1 Awareness of precision breeding

Question: Have you heard of precision breeding before?

Base: All UK respondents (4,177), and in England (1,900), Wales (1,016), Scotland (1,005) and Northern Ireland (256).

Figure 1

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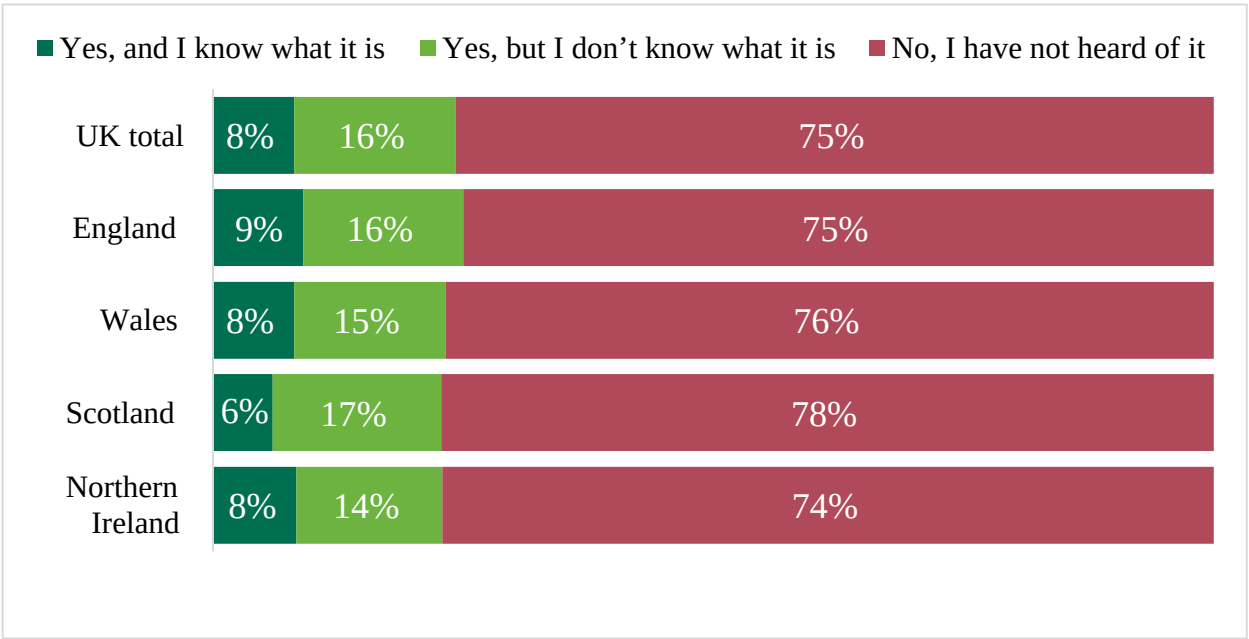

Region	Yes, and I know what it is	Yes, but I don?t know what it is	No, I have not heard of it
UK total	8%	16%	75%
England	9%	16%	75%
Wales	8%	15%	76%
Scotland	6%	17%	78%
Northern			
Ireland"	8%	14%	74%

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Half (50%) think that precision bred food products should be available for sale in the UK in the future, compared to fewer than three in ten (29%) who say they should not be. However, support is not particularly strong, with one in seven (14%) saying they definitely should be available, compared to just over a third thinking probably (36%). People in Wales are slightly less likely to

think these products should be available for sale (47%).

Figure 2 Support for the availability of precision bred foods

Question: Do you think that precision bred food products should, or should not, be available for sale in the UK in the future?

Base: All UK respondents (4,177), and in England (1,900), Wales (1,016), Scotland (1,005) and Northern Ireland (256).

Figure 2

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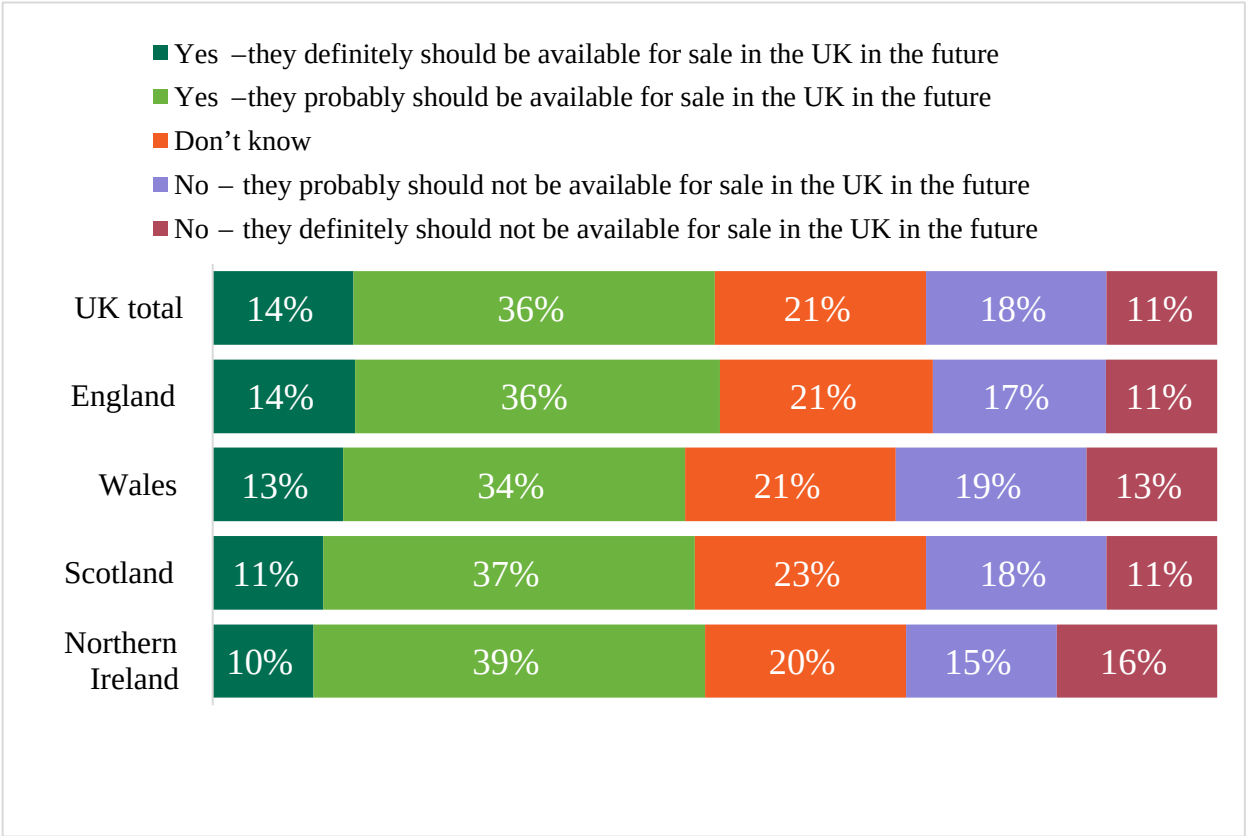

Region	Yes ?they definitely should be available for sale in the UK in the future	Yes ?they probably should be available for sale in the UK in the future	Don?t know	No ? they probably should not be available for sale in the UK in the future	No ? they definitely should not be available for sale in the UK in the future
UK total	14%	36%	21%	18%	11%
England	14%	36%	21%	17%	11%
Wales	13%	34%	21%	19%	13%
Scotland	11%	37%	23%	18%	11%
Northern					
Ireland"	10%	39%	20%	15%	16%

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The strongest advocates for precision bred food products being available for sale include men (60%), higher socio-economic groups AB (57%) and those who like to try unfamiliar foods (56%). Support is also slightly higher among those with children in their household (55%), graduates (55%) and people who trust scientists advising the UK government on food (56%), regulators and food manufacturers (55%).

People more likely to say precision bred foods should not be available for sale are those who dislike unfamiliar foods (35%), women (34%) and people living in rural areas (34%). However, in each case more still think these products should be available than not (45% of those who dislike unfamiliar foods, 40% of women, 48% of people living in rural areas).

The sample was split into two groups and given different information before being asked about their support for making precision bred food products available. All respondents were given a definition of what precision breeding is, but at this stage only half the sample were told about the Food Standards Agency's / Food Standard Scotland's role in regulating precision bred food.

Everyone was told: "Precision breeding means a range of a scientific techniques that make changes to a plant or animal that could have happened naturally through crossbreeding but can now be made to happen more quickly or more predictably. This might be for many reasons but some examples of why this is done might be to make things more resistant to disease, need less water to grow, or to increase the nutritional content."

Half the sample were also told: "Precision Bred foods would only be allowed to be sold in the UK after being independently scientifically assessed by the Food Standards Agency (FSA) and other UK government bodies to make sure that they are safe to eat. In Scotland, Food Standards Scotland has the responsibility for assessing certain food and animal feed products which require authorisation before sale."

The extra explanation about the FSA/FSS's role had little impact on views about making precision bred food products available. Around half (52%) of those not given this information thought precision bred food products should be available, which is a similar proportion to those who were told about the role of the FSA/FSS at this stage (48%). While the difference is statistically significant, it is relatively small given that the information was provided immediately before this question was asked, indicating a very small impact.

Perceived safety of precision bred foods

Half (50%) think precision bred food products are safe to eat, with one in five saying they would be unsafe (22%). Again, opinion is fairly soft with one in six (13%) saying they think these products are very safe, compared to more than a third (36%) thinking fairly safe. People in Northern Ireland are less positive, with nearer two in five (42%) saying safe and three in ten (28%) unsafe.

Figure 3 Perceived safety of precision bred food products

Question: To what extent do you think that precision bred food products are safe, or not safe, to eat?

Base: All UK respondents (4,177), and in England (1,900), Wales (1,016), Scotland (1,005) and Northern Ireland (256).

Figure 3

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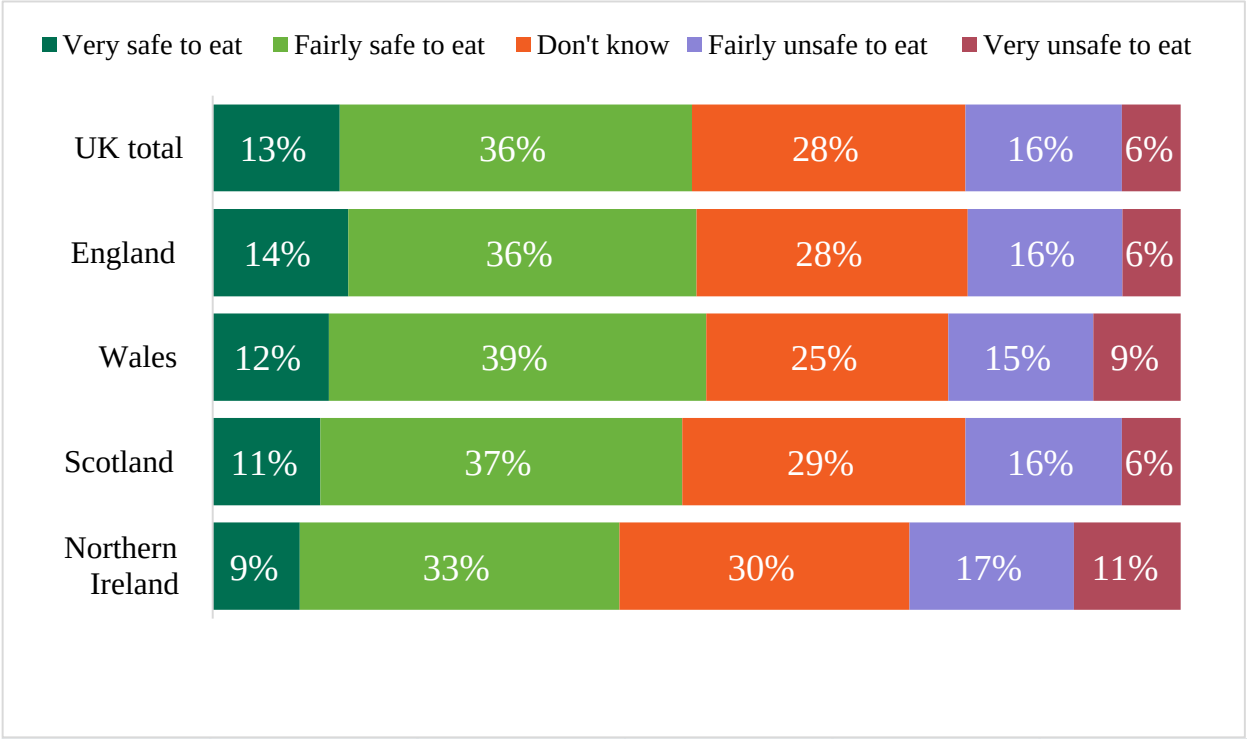

Region	Very safe to eat	Fairly safe to eat	Don't know	Fairly unsafe to eat	Very unsafe to eat
UK total	13%	36%	28%	16%	6%
England	14%	36%	28%	16%	6%
Wales	12%	39%	25%	15%	9%
Scotland	11%	37%	29%	16%	6%
Northern Ireland"	9%	33%	30%	17%	11%

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Demographic differences follow a similar pattern to previous questions. Those most likely to think precision bred food products would be safe to eat are men (58%), those who like unfamiliar foods (57%), young people aged 16-34-years-old (56%), those with children in their household (55%), people who trust scientists advising the UK government on food (56%), those who trust regulators (55%) and graduates (54%).

A large majority of over eight in ten (83%) are confident that the food they currently buy in the UK is safe to eat, whilst just a small minority (12%) say the opposite. People in Northern Ireland are slightly less confident about current food safety (77% say confident, 17% say not confident).

Respondents are less confident that precision bred food would be safe to eat if it became available to buy in the UK, with over half (56%) thinking it would be, against three in ten (28%) saying the opposite. That said, majorities in each nation still think precision bred food products would be safe.

Figure 4 Confidence in precision bred food being safe to eat if it became available to buy in the UK

Question: Knowing this, how confident are you that...?/Given what you know about how food is regulated in the UK, how confident are you that?... if precision bred food became available to buy in the UK, it would be safe to eat.

Base: All UK respondents (4,177), and in England (1,900), Wales (1,016), Scotland (1,005) and Northern Ireland (256).

Figure 4

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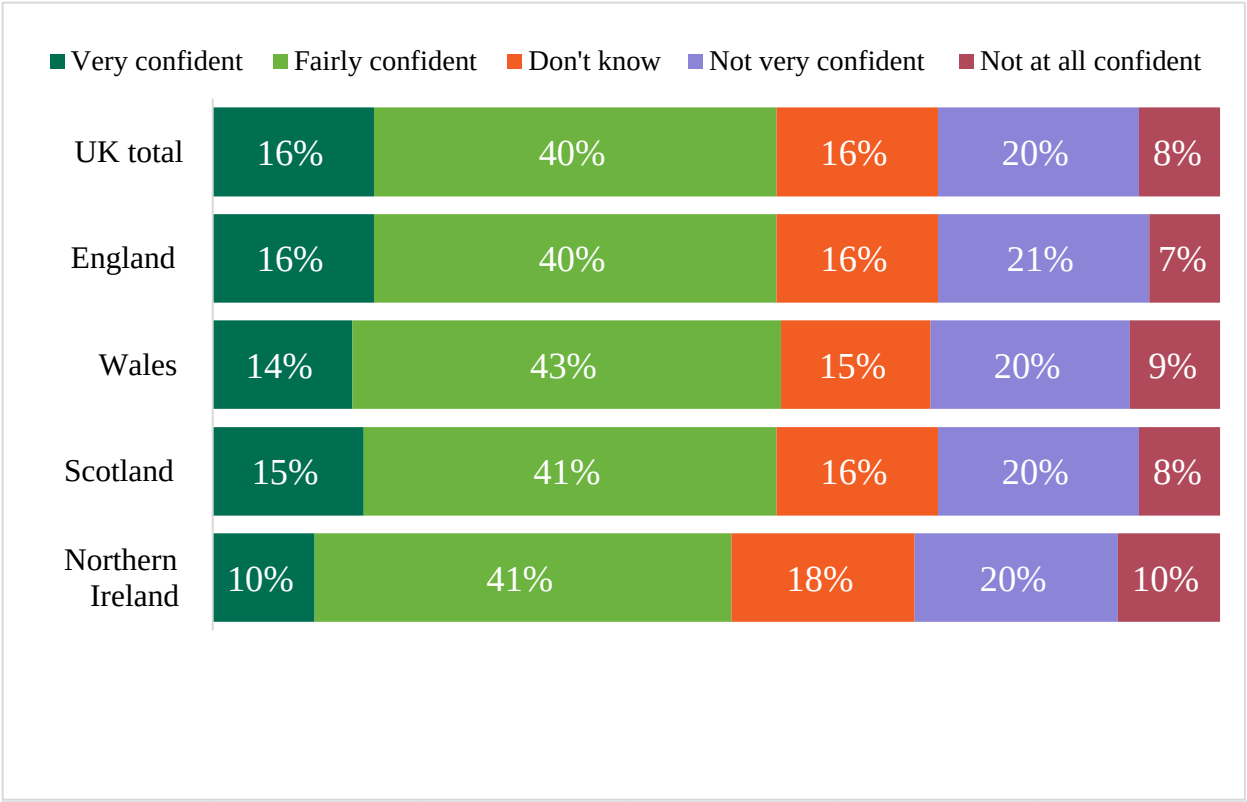

Column1	Very confident	Fairly confident	Don't know	Not very confident	Not at all confident
UK total	16%	40%	16%	20%	8%
England	16%	40%	16%	21%	7%
Wales	14%	43%	15%	20%	9%
Scotland	15%	41%	16%	20%	8%
Northern					
Ireland"	10%	41%	18%	20%	10%

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Those most likely to say they are confident that precision bred food would be safe to eat include men (64%), those who trust food manufacturers (64%), those in socio-economic groups AB (62%), those who trust food manufacturers (62%), those who like unfamiliar foods (64%) and graduates (60%).

People slightly more likely to express a lack of confidence that these products would be safe to eat include those who dislike unfamiliar foods (36%), women (34%) and those living in rural areas (33%).

The other half of the sample were now also told about the FSA/FSS's regulatory involvement. Again, this had little impact on views, with similar proportions of those who were told at this stage in the survey saying they are confident precision bred food would be safe to eat (57%), as those who had been given this information earlier on (54%).

The acceptability of precision breeding in food production

Just over half (54%) of respondents think the precision breeding of plants in food production would be acceptable, while just one in six (16%) say it would be unacceptable. People in Northern Ireland are slightly less likely to think it would be acceptable (46%).

Figure 5 Acceptability of the precision breeding of plants

Question: How acceptable or unacceptable, do you think it is to use the following in food production? Precision breeding of plants.

Base: All UK respondents (4,177), and in England (1,900), Wales (1,016), Scotland (1,005) and Northern Ireland (256).

Figure 5

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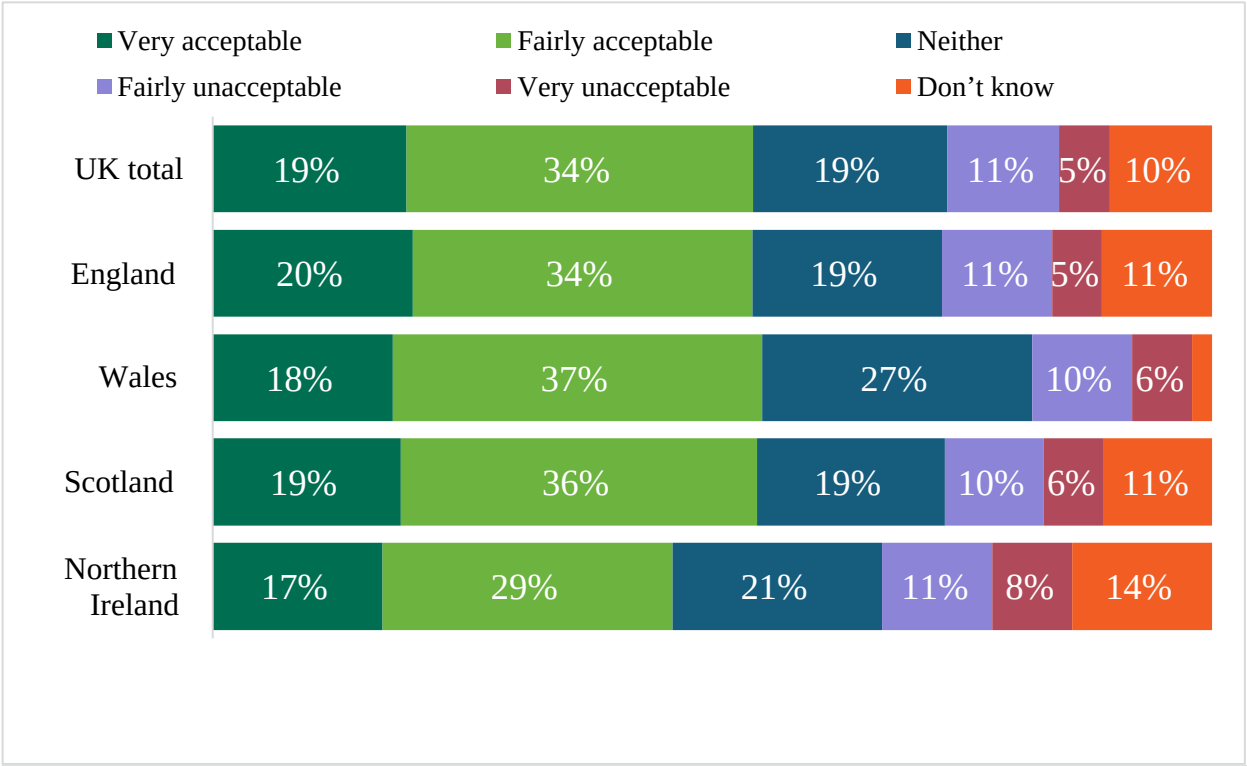

Region	Very acceptable	Fairly acceptable	Neither	Fairly unacceptable	Very unacceptable	Don?t know

UK total	19%	34%	19%	11%	5%	10%
England	20%	34%	19%	11%	5%	11%
Wales	18%	37%	27%	10%	6%	2%
Scotland	19%	36%	19%	10%	6%	11%
Northern Ireland"	17%	29%	21%	11%	8%	14%

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The groups most likely to say the precision breeding of plants would be acceptable include men (60%), people who trust scientists advising the UK government on food (63%), those who trust food manufacturers (62%), regulators (61%), or scientists advising the UK government (62%), higher socio-economic groups AB (60%) and graduates (58%). No demographic groups are notably more likely to think it is unacceptable.

In comparison, the public are more split on the precision breeding of animals in food production (see Figure 6), with one in three (35%) saying it is acceptable and another third saying unacceptable (33%). People in Wales and Northern Ireland are more likely than average to say that it is unacceptable (37% in both nations, though due to the base size, only the difference in Wales is statistically significant).

Figure 6 Acceptability of the precision breeding of animals

Question: How acceptable or unacceptable, do you think it is to use the following in food production? Precision breeding of animals.

Base: All UK respondents (4,177), and in England (1,900), Wales (1,016), Scotland (1,005) and Northern Ireland (256).

Figure 6

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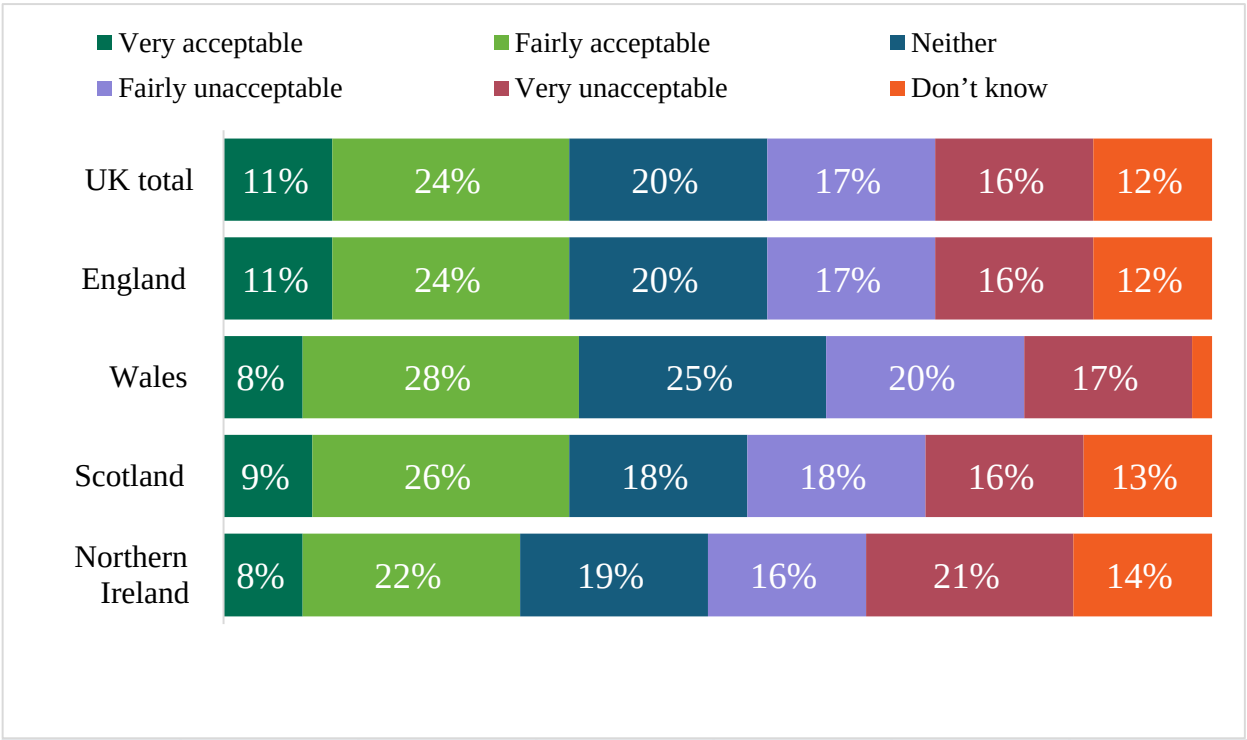

Region	Very acceptable	Fairly acceptable	Neither	Fairly unacceptable	Very unacceptable	Don?t know
UK total	11%	24%	20%	17%	16%	12%
England	11%	24%	20%	17%	16%	12%
Wales	8%	28%	25%	20%	17%	2%
Scotland	9%	26%	18%	18%	16%	13%
Northern Ireland"	8%	22%	19%	16%	21%	14%

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Whilst some demographic groups are more likely to say the precision breeding of animals is acceptable, this is not a majority in any case. For example, amongst men (46%), socio-economic groups AB (42%), graduates (40%), those with children present in their household (41%), people who trust food manufacturers (42%), who trust scientists advising the UK government on food (40%), who trust regulators (40%) and those who like unfamiliar foods (40%).

People more likely to say the precision breeding of animals is unacceptable include those who avoid certain food groups for any reasons (39%) and those who avoid certain production methods (38%), those who dislike unfamiliar foods (41%), women (42%) and those living in rural areas (41%).

Potential impacts of precision breeding

Respondents think that if precision bred products became available for sale in the UK, then they would be more likely to have a positive than negative impact on the affordability of food (38% vs. 19% respectively), the environment (36% vs. 18%), how nutritious precision bred food products are (34% vs. 18%) and the health of people eating precision bred food products (29% vs. 20%). Views are more divided over the impact it would have on how precision bred food tastes (23% vs. 18%). But a large share of respondents expect neither a positive nor a negative impact (25% on the affordability of food, 26% on the environment, 27% on how nutritious products are, 31% on the health of people eating precision bred food, 34% on how it tastes). Similarly, large proportions

say they don’t know what the impact would be (18% on the affordability of food, 20% on the environment, 21% on how nutritious products are, 20% on the health of people eating precision bred food, 25% on how it tastes). This likely reflects low levels of awareness and unfamiliarity with precision breeding.

The public think precision bred food could have a slightly more negative than positive impact on the welfare of animals bred using precision breeding techniques (32% negative vs. 25% positive), but a quarter expect neither a positive nor a negative impact (25%) and 18% say they don’t know.

Respondents are most concerned about small scale farmers who cannot access precision breeding technology. Half (50%) saying this could have a negative impact, compared to only 18% who think it will impact positively. Those most likely to say it could have negative impact include people living in rural areas (61%), those aged 55-75-years-old (58%) and women (55%). Approximately one in six (18%) said it will have neither a positive nor a negative impact, and 14% said they don’t know.

Figure 7 Potential impacts of precision bred foods

Question: If precision bred food products became available for sale in the UK, what do you think the impact might be on the following...?

Base: All UK respondents (4,177), and in England (1,900), Wales (1,016), Scotland (1,005) and Northern Ireland (256).

Figure 7

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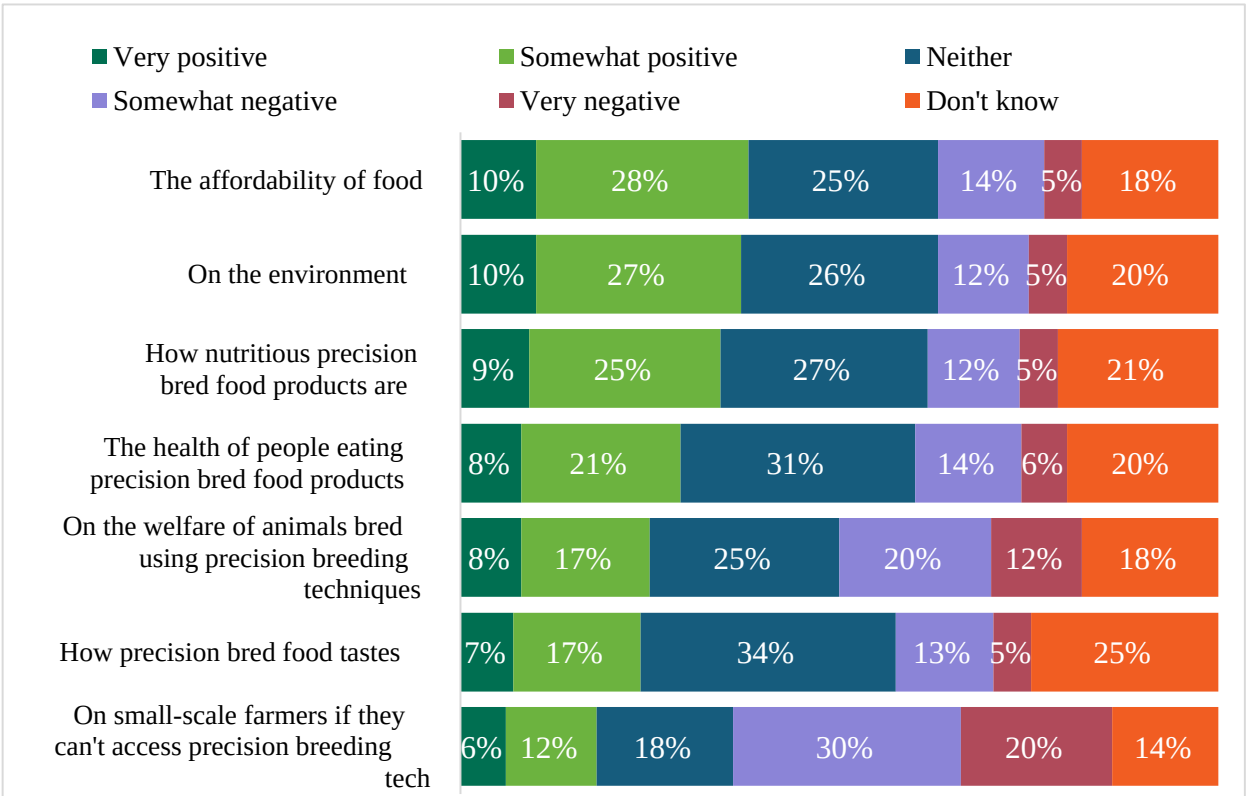

Category	Very positive	Somewhat positive	Neither	Somewhat negative	Very negative	Don't know
The affordability of food	10%	28%	25%	14%	5%	18%
On the environment	10%	27%	26%	12%	5%	20%
How nutritious precision bred food products are"	9%	25%	27%	12%	5%	21%
The health of people eating precision bred food products"	8%	21%	31%	14%	6%	20%
On the welfare of animals bred using precision breeding techniques"	8%	17%	25%	20%	12%	18%
How precision bred food tastes	7%	17%	34%	13%	5%	25%
On small-scale farmers if they can't access precision breeding tech"	6%	12%	18%	30%	20%	14%

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Respondents were then asked to rank these issues in order of importance, where a score of 6 means it is the most important issue and 1 means the least important.

People think the impact precision bred food could have on animal welfare is the most important issue with a mean score of 4.10, followed by health and nutrition (3.99), affordability (3.52), taste

(3.35) and the environment (3.35). They were less likely to prioritise the impact it could have on small scale farmers (2.69).

Buying precision bred products in the future

Nearly four in five (77%) say it would be important when buying a food item to know if it had been precision bred, with nearly half (45%) saying it would be very important. Only one in six (15%) say knowing this would not be important. People in Scotland are slightly less likely to say it would be important (75%).

Figure 8 Importance of knowing whether food is precision bred

Question: How important, if at all, would it be for you to know if you were buying a food item that had been precision bred, or contains precision bred ingredients, before you buy it?

Base: All UK respondents (4,177), and in England (1,900), Wales (1,016), Scotland (1,005) and Northern Ireland (256).

Figure 8

Change to table and accessible view

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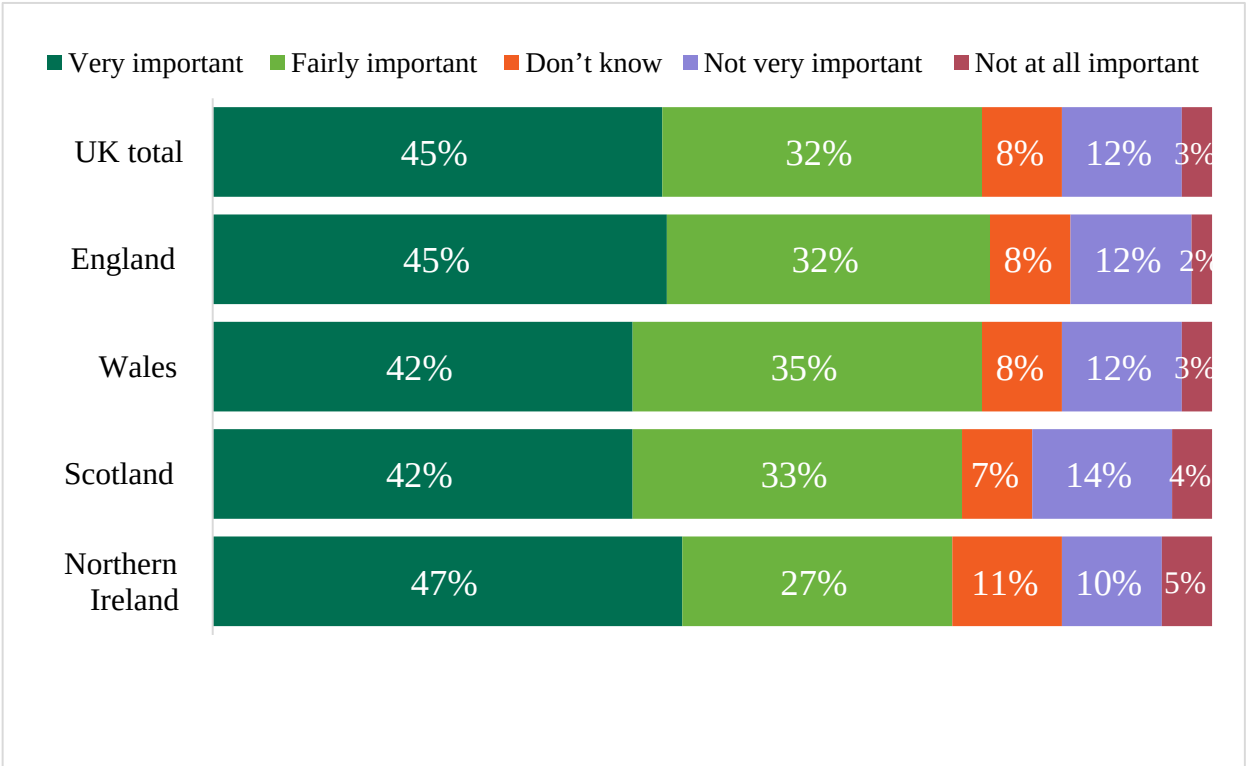

Region	Very important	Fairly important	Don?t know	Not very important	Not at all important
UK total	45%	32%	8%	12%	3%
England	45%	32%	8%	12%	2%
Wales	42%	35%	8%	12%	3%

Region	Very important	Fairly important	Don?t know	Not very important	Not at all important
Scotland	42%	33%	7%	14%	4%
Northern Ireland"	47%	27%	11%	10%	5%

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Groups which are slightly more likely than average to say it is important for them to know if a food has been precision bred are female (79%), higher socio-economic groups AB (79%), graduates (80%), people who avoid certain food groups for any reasons (84%) or avoid certain production methods (85%) and people who like unfamiliar foods (82%).

The public think a range of information about precision bred food would be important when shopping (Figure 8). Around four in five say it would be important to have any information relevant to people with allergies, who are pregnant or have other health conditions (84%), any changes in nutritional content (82%), the reasons why the food was precision bred (78%) and which specific ingredients in the food are precision bred (77%). Slightly less important, but still mentioned by seven in ten (71%), is saying whether a food product contains something precision bred, but not detailing which specific ingredients.

Vegetarians are consistently more likely on average to say each piece of information is important. Similarly, so are those who say they concerned about the impact the food they eat has on the environment and those concerned about animal welfare.

Figure 9 Importance of knowing whether food is precision bred

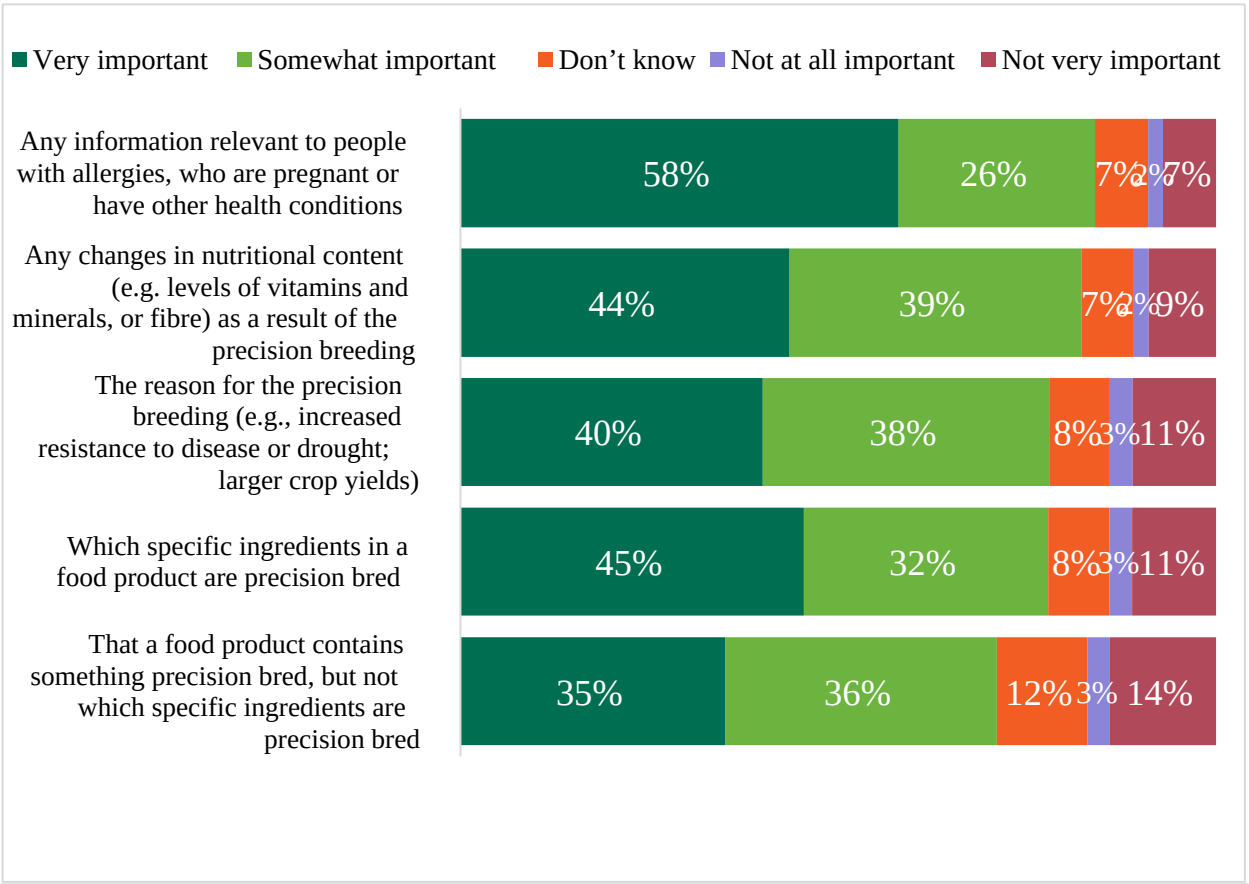
Question: When shopping for food, how important would it be to you, to have the following information about precision bred foods?

Base: All UK respondents (4,177).

Figure 9

Change to table and accessible view

Change to chart view



Category	Very important	Somewhat important	Don?t know	Not at all important	Not very important
Any information relevant to people with allergies, who are pregnant or have other health conditions	58%	26%	7%	2%	7%
Any changes in nutritional content (e.g. levels of vitamins and minerals, or fibre) as a result of the precision breeding	44%	39%	7%	2%	9%
The reason for the precision breeding (e.g., increased resistance to disease or drought; larger crop yields)	40%	38%	8%	3%	11%
Which specific ingredients in a food product are precision bred	45%	32%	8%	3%	11%
That a food product contains something precision bred, but not which specific ingredients are precision bred	35%	36%	12%	3%	14%
				Don?t know	

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If they became available for sale in the UK, then around three in five say they would be willing to eat precision bred cereals, grains or flour (59%), precision bred fruit or vegetables (59%) and processed foods that have been precision bred (56%). In each case only around one in four (26%-28%) say they would not be willing.

There is slightly less willingness to eat precision bred dairy products but still a majority say they would (52%), against three in ten (31%) who would not. People are more split on whether they

would eat precision bred meat (44% would, 39% would not).

Figure 10 Willingness to eat precision bred food

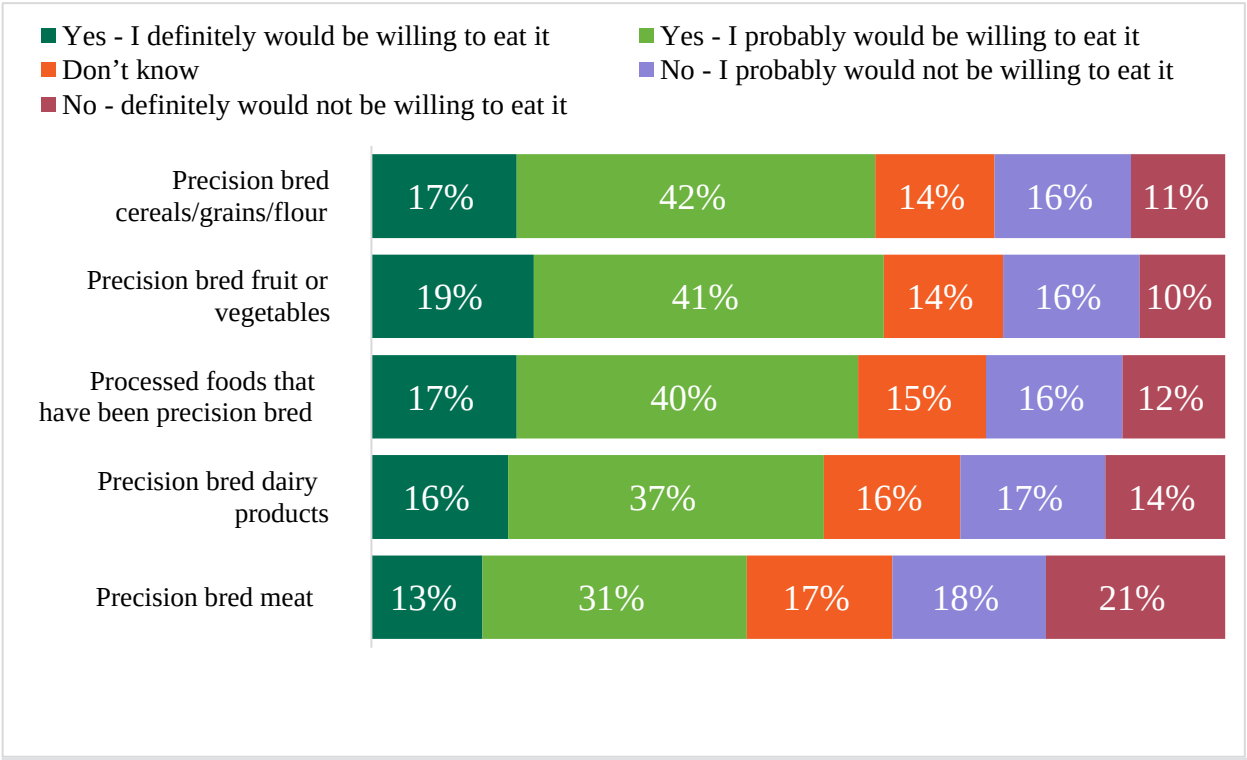
Question: If precision bred food products became available for sale in the UK, would you or would you not be willing to eat...?

Base: All UK respondents (4,177)

Figure 10

Change to table and accessible view

Change to chart view



Category	Yes - I definitely would be willing to eat it	Yes - I probably would be willing to eat it	Don?t know	No - I probably would not be willing to eat it	No - definitely would not be willing to eat it
Precision bred cereals/grains/flour	17%	42%	14%	16%	11%
Precision bred fruit or vegetables	19%	41%	14%	16%	10%
Processed foods that					
have been precision bred"	17%	40%	15%	16%	12%
Precision bred dairy products	16%	37%	16%	17%	14%
Precision bred meat	13%	31%	17%	18%	21%

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Demographics more willing to try all precision bred foods include men, younger people aged 18-34-years-old, socio-economic groups AB and those who trust food manufacturers.

Women are slightly more likely to say they would be unwilling to try each precision bred product, and in particular precision bred meats.

Around three in five consistently say they would eat a precision bred product if it had health benefits (65%), was better for the environment (64%), improved animal welfare (64%), was safer for people with allergies (64%), tasted better (62%), was cheaper (61%) or more resilient to changing climates (60%). In each case around one in five say they would not eat it if they knew these things. People in Wales and Scotland are particularly open to these arguments.

Figure 11 Potential benefits to precision bred products

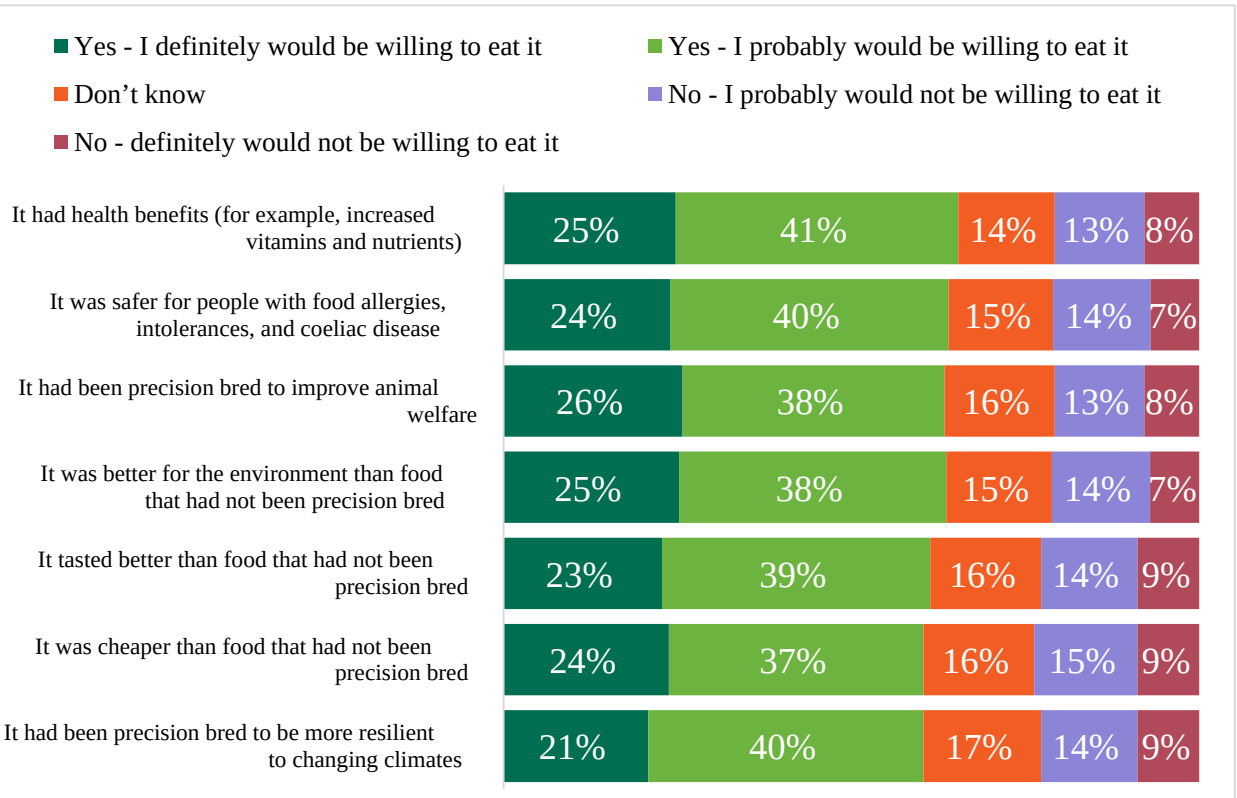
Question: If precision bred food products became available for sale in the UK, would eat a product if you knew...?

Base: All UK respondents (4,177)

Figure 11

Change to table and accessible view

Change to chart view



Category	Yes - I definitely would be willing to eat it	Yes - I probably would be willing to eat it	Don?t know	No - I probably would not be willing to eat it	No - definitely would not be willing to eat it
It had health benefits (for example, increased vitamins and nutrients)	25%	41%	14%	13%	8%

Category	Yes - I definitely would be willing to eat it	Yes - I probably wouldbe willing to eat it	Don?t know	No - I probably wouldnot be willing to eat it	No - definitely would not be willing to eat it
It was safer for people with food allergies, intolerances, and coeliac disease	24%	40%	15%	14%	7%
It had been precision bred to improve animal welfare	26%	38%	16%	13%	8%
It was better for the environment than food that had not been precision bred	25%	38%	15%	14%	7%
It tasted better than food that had not been precision bred	23%	39%	16%	14%	9%
It was cheaper than food that had not been precision bred	24%	37%	16%	15%	9%
It had been precision bred to be more resilient to changing climates	21%	40%	17%	14%	9%

Download this chart

Image .csv

Appendix: Nation summaries

Executive Summary: England

Awareness of precision breeding and support for availability

Claimed awareness of precision breeding is low. Three quarters (75%) have not heard of precision breeding, whilst fewer than one in ten (9%) have and know what it is, and 16% have heard of it but are unfamiliar. Awareness is much higher in London (19% saying they know what it is), and slightly higher among those living with a child (16%), 16–34-year-olds (15%) and higher socio-economic groups AB (12%).

The majority (51%) of people in England think that precision bred foods products should be available for sale in the UK, compared to fewer than three in ten (28%) saying they should not be. However, views are not generally strong, with 14% saying these products should definitely be available and 36% thinking they probably should. The strongest advocates are Londoners (64%), 16–34-year-olds (57%), those in higher socio-economic groups (57%), graduates (55%), those with children (56%) and men (61%). Those more likely on average to say they should not be available include those who dislike unfamiliar foods (35%), women (34%) and those who concerned about issues related to animal welfare (31%).

Perceived safety and acceptability of precision bred foods

Half (50%) think that precision bred food products are safe to eat, whilst one in five (22%) say they are unsafe. Again, attitudes are soft with just 16% presuming it would be “very safe”, reflecting the lack of familiarity with precision breeding. Those most likely to think they would be safe include Londoners (63%), men (58%), 16–34-year-olds (56%), households with children (56%), higher socio-economic groups AB (55%), graduates (54%), and people who like unfamiliar foods (60%).

A large majority (83%) of respondents are confident the food they currently buy in the UK is safe to eat. They are less confident that if precision bred food became available to buy in the UK that it

would be safe to eat (56%), but still a majority. Those most likely to think it would be safe include Londoners (67%), men (64%), those who trust food manufacturers (64%), socio economic groups AB (62%) and people who like unfamiliar food (62%).

A majority (54%) think it would be acceptable to use the precision breeding of plants in food production, whilst just 16% say it would be unacceptable. However, respondents are more divided over whether the precision breeding of animals is acceptable (35% acceptable, 33% unacceptable). Men are twice as likely as women to say it is acceptable (46% vs. 24%).

Potential impacts of precision breeding

Overall, respondents expect that if precision bred products became available for sale in the UK then they would be more likely to have a positive than negative impact on the affordability of food (38% vs. 19% respectively), on the environment (36% vs. 18%), how nutritious precision bred food products are (35% vs. 18%) and the health of people eating precision bred food products (30% vs. 20%). Views are more divided when it comes to the impact these products would have on how precision bred food tastes (24% vs. 17%).

On the other hand, respondents think precision bred food could have a slightly more negative than positive impact on the welfare of animals bred using precision breeding techniques (31% negative vs. 25% positive) – and nearly half (49%) think it will have a negative impact on small scale farmers if they cannot access precision breeding.

Buying precision bred food products in the future

Nearing four in five (78%) say it is important to know if a food item they were buying had been precision bred. Similarly, around eight in ten consistently say it would be important to have a range of information about precision breed food (on everything tested), particularly about allergies, pregnancy and other health conditions (which 84% say would be important).

The majority of people in England would be willing to eat precision bred cereals, grains or flour (59%), fruit or vegetables (59%), processed foods (56%) and dairy products (52%). However, they are more divided over precision bred meat (44% say yes, 39% say no).

Around three in five consistently say they would eat a precision bred product if it had health benefits (65%), was better for the environment (63%), improved animal welfare (63%), was safer for people with allergies (63%), tasted better (62%), was cheaper (60%) or more resilient to changing climates (60%).

Executive Summary: Wales

Awareness of precision breeding and support for availability

Claimed awareness of precision breeding is low. Three in four respondents (76%) have not heard of precision breeding, whilst just one in twelve (8%) have and know what it is, and 15% have heard of it but are unfamiliar. Awareness is slightly higher among 16-34-year-olds (15% saying they know what it is).

Around half (47%) of people in Wales think that precision bred foods products should be available for sale in the UK, compared to just over three in ten (32%) saying they should not be. However, views are not generally strong, with 13% saying these products should definitely be available and 34% thinking they probably should. The strongest advocates are men (57%), higher socio-economic groups AB (53%) and graduates (55%). Those more likely on average to say they should not be available include those who dislike unfamiliar foods (42%), socio economic groups DE (40%) and those without a degree (37%).

Perceived safety and acceptability of precision bred foods

Half (52%) think that precision bred food products are safe to eat, whilst around a quarter (24%) say they are unsafe. Again, attitudes are soft with just 12% presuming it would be “very safe”, reflecting the lack of familiarity with precision breeding. Those most likely to think they would be safe include men (61%), socio economic groups AB (56%) and graduates (60%).

A large majority (84%) of respondents are confident the food they currently buy in the UK is safe to eat. They are less confident that if precision bred food became available to buy in the UK that it would be safe to eat (56%) but still a majority. Those most likely to think it would be safe include men (65%), graduates (60%), those who trust scientists advising the UK government on food (65%) or regulators (64%) and like unfamiliar foods (63%).

A majority (55%) think it would be acceptable to use the precision breeding of plants in food production, whilst just 15% say it would be unacceptable. However, respondents are more divided over whether the precision breeding of animals is acceptable (35% acceptable, 37% unacceptable). Men are nearly twice as likely as women to say it is acceptable (46% vs. 27%).

Potential impacts of precision breeding

Overall, respondents expect that if precision bred products became available for sale in the UK then they would be more likely to have a positive than negative impact on the affordability of food (38% vs. 18% respectively), on the environment (39% vs. 16%), how nutritious precision bred food products are (32% vs. 17%) and the health of people eating precision bred food products (28% vs. 19%). Views are more divided when it comes to the impact these products have on how precision bred food tastes (22% vs. 17%).

On the other hand, respondents think precision bred food could have a slightly more negative than positive impact on the welfare of animals bred using precision breeding techniques (36% negative vs. 23% positive) – and the majority (54%) think it will have a negative impact on small scale farmers if they cannot access precision breeding.

Buying precision bred food products in the future

Over three in four (77%) say it is important to know if a food item they were buying had been precision bred. Similarly, around eight in ten consistently say it would be important to have a range of information about precision bred food (on everything tested), particularly about allergies, pregnancy and other health conditions and any changes to the nutritional content (which 84% say would be important).

The majority of people in Wales would be willing to eat precision bred fruit or vegetables (61%), cereals, grains or flour (60%), processed foods (59%) and dairy products (52%). However, they are more divided over precision bred meat (45% say yes, 40% say no).

Around two in three consistently say they would eat a precision bred product if it had health benefits (69%), was better for the environment (67%), improved animal welfare (70%), was safer for people with allergies (67%), tasted better (63%), was cheaper (64%) or more resilient to changing climates (65%).

Executive Summary: Scotland

Awareness of precision breeding and support for availability

Claimed awareness of precision breeding is low. Three in four respondents (76%) have not heard of precision breeding, whilst just one in twenty (6%) have and know what it is, and 17% have

heard of it but are unfamiliar. Awareness is significantly higher among people who avoid certain food groups for any reason (11% saying they know what it is).

Around half (48%) of people in Scotland think that precision bred foods products should be available for sale in the UK, compared to fewer than three in ten (29%) saying they should not be. However, views are not generally strong, with 11% saying these products should definitely be available and 37% thinking they probably should. The strongest advocates are men (60%), 16–34-year-olds, and socio-economic groups AB (57%). Those more likely on average to say they should not be available include those who dislike unfamiliar foods (35%) and women (34%).

Perceived safety and acceptability of precision bred foods

Around half (48%) think that precision bred food products are safe to eat, whilst around one in five (22%) say they are unsafe. Again, attitudes are soft with just 11% presuming it would be “very safe”, reflecting the lack of familiarity with precision breeding. Those most likely to think they would be safe include men (56%), higher socio-economic groups AB (56%), graduates (54%), those like unfamiliar foods (54%).

A large majority (82%) of respondents are confident the food they currently buy in the UK is safe to eat. They are less confident that if precision bred food became available to buy in the UK that it would be safe to eat (57%) but still a majority. Those most likely to think it would be safe include those who trust food manufacturers (67%), men (66%), higher socio-economic groups AB (64%) and graduates (62%).

A majority (54%) think it would be acceptable to use the precision breeding of plants in food production, whilst just 16% say it would be unacceptable. However, respondents are more divided over whether the precision breeding of animals is acceptable (35% acceptable, 34% unacceptable). Men are nearly twice as likely as women to say it is acceptable (47% vs. 24%).

Potential impacts of precision breeding

Overall, respondents expect that if precision bred products became available for sale in the UK then they would be more likely to have a positive than negative impact on the affordability of food (37% vs. 20% respectively), on the environment (36% vs. 19%), how nutritious precision bred food products are (31% vs. 17%) and the health of people eating precision bred food products (28% vs. 18%). Views are more divided when it comes to the impact it would have on how precision bred food tastes (20% vs. 17%).

On the other hand, respondents think precision bred food could have a slightly more negative than positive impact on the welfare of animals bred using precision breeding techniques (36% negative vs. 22% positive) – and the majority (55%) think it will have a negative impact on small scale farmers if they cannot access precision breeding.

Buying precision bred food products in the future

Three quarters (75%) say it is important to know if a food item they were buying had been precision bred. Similarly, around eight in ten consistently say it would be important to have a range of information about precision breed food (on everything tested), particularly about allergies, pregnancy and other health conditions (which 86% say would be important)

The majority of people in Scotland would be willing to eat precision bred cereals, grains or flour (61%), fruit or vegetables (59%), processed foods (56%) and dairy products (52%). However, they are more divided over precision bred meat (44% say yes, 38% say no).

Around two in three consistently say they would eat a precision bred product if it had health benefits (68%), was better for the environment (66%), improved animal welfare (67%), was safer

for people with allergies (66%), tasted better (62%), was cheaper (63%) or more resilient to changing climates (63%).

Executive Summary: Northern Ireland

Note: As fewer interviews were conducted in Northern Ireland (256), this means we are unable to comment on significant differences by demographics.

Awareness of precision breeding and support for availability.

Claimed awareness of precision breeding is low. Nearly four in five respondents (78%) have not heard of precision breeding, whilst just one in ten (8%) have and know what it is, and 14% have heard of it but are unfamiliar.

Around half (49%) think that precision bred foods products should be available for sale in the UK, compared to fewer than three in ten (31%) saying they should not be. However, views are not generally strong, with 10% saying these products should definitely be available and 39% thinking they probably should.

Perceived safety and acceptability of precision bred foods

Around two in five (42%) people in Northern Ireland think precision bred food products are safe to eat, whilst around three in ten (28%) say they are unsafe. Again, attitudes are soft with just 9% presuming it would be “very safe”, reflecting the lack of familiarity with precision breeding.

A large majority (77%) of respondents are confident the food they currently buy in the UK is safe to eat. They are less confident that if precision bred food became available to buy in the UK that it would be safe (51%), but still a majority.

Slightly fewer than half (46%) think it would be acceptable to use the precision breeding of plants in food production, whilst one in five (20%) say it would be unacceptable. However, respondents are more divided over whether the precision breeding of animals is acceptable (30% acceptable, 37% unacceptable).

Potential impacts of precision breeding

Overall, respondents are divided over whether precision bred products would have a positive or negative impact on the affordability of food (34% vs. 23% respectively), on the environment (34% vs. 18%), how nutritious precision bred food products are (25% vs. 23%), on the health of people eating precision bred food products (19% vs. 22%), and how precision bred food tastes (18% vs. 26%).

The public think precision bred food could have a slightly more negative than positive impact on the welfare of animals bred using precision breeding techniques (37% negative vs. 19% positive) – and the majority (55%) think it will have a negative impact on small scale farmers if they cannot access precision breeding.

Buying precision bred food products in the future

Three quarters (74%) say it is important to know if a food item they were buying had been precision bred. Similarly, around eight in ten consistently say it would be important to have a range of information about precision breed food (on everything tested), particularly about allergies, pregnancy and other health conditions (which 85% say would be important)

Around half of people in Northern Ireland would be willing to eat precision bred cereals, grains or flour (54%), fruit or vegetables (52%), processed foods (53%) and dairy products (49%). However, they are more divided over precision bred meat (41% say yes, 39% say no).

Around three in five consistently say they would eat a precision bred product if it had health benefits (63%), was better for the environment (61%), improved animal welfare (62%), was safer for people with allergies (63%), tasted better (58%), was cheaper (57%) or more resilient to changing climates (56%).

1. “Citizens’ Forums” is a research method which bring together a fairly large cohort of citizens, selected to be broadly representative of the demographics of the population, to deliberate on significant public policy issues. Citizen Forums combine a range of research techniques, are typically spread across multiple sessions and often have three phases within them: a dedicated learning phase where participants learn about the issue under discussion in an unbiased, balanced way; a discursive phase where participants engage with one another and facilitators on the issues under discussion; and, finally, a deliberative phase where participants come to a conclusion on the issues being discussed.