

Europeans' attitudes towards animal cloning

Summary

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This document does not represent the point of view of the European Commission. The interpretations and opinions contained in it are solely those of the authors.

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Conducted by
The Gallup Organization, Hungary
upon the request of
Directorate General Health and Consumers



Survey coordinated by
Directorate General Communication

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THE GALLUP ORGANIZATION

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Introduction

Animal cloning is the creation of a genetically identical copy of an existing or previously existing animal. This Flash Eurobarometer survey asked citizens of the EU to clarify their attitudes towards animal cloning, and its perceived effects on a number of areas including food safety, ethical and animal welfare concerns.

The survey's fieldwork was carried out between 3 and 7 July 2008. Over 25,000 randomly selected citizens aged 15 years and above were interviewed in the 27 EU Member States. Interviews were predominantly carried out via fixed telephone, approximately 1,000 in each country (in Cyprus, Luxembourg and Malta the targeted size was 500). Part of the interviews in Finland and Austria were carried out over mobile telephones. Due to the relatively low fixed telephone coverage in the Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland and Slovakia, 300 individuals were sampled and interviewed face to face as well.

To correct for sampling disparities, a post-stratification weighting of the results was implemented, based on important socio-demographic variables. More details on survey methodology are included in the Annex of this report.

Main findings

- A large majority of EU citizens (81%) said they **knew the term animal cloning**, and answered correctly that “*cloning is making an identical copy of an existing animal*” (80%). Only 7% of the interviewees said they had never heard of animal cloning.
- Faced with several statements regarding the **ethics of animal cloning**, the vast majority of EU citizens agreed that:
 - the long-term effects of animal cloning on nature were unknown (84%)
 - animal cloning might lead to human cloning (77%)
 - animal cloning was morally wrong (61%)
 - cloning might decrease the genetic diversity within livestock populations (63%).

EU citizens were split in their opinions whether animal cloning would cause animals unnecessary pain, suffering and distress: 41% agreed with the statement, while 42% disagreed.

- A quarter of EU citizens (23%) answered that animal cloning to preserve endangered animals would be justifiable without constraints, while 44% were willing to accept such cloning under certain circumstances. Similar proportions accepted animal cloning – with or without constraints – to improve robustness of animals against diseases (16% and 41%, respectively).

EU citizens were significantly **less willing to accept animal cloning for food production purposes**: 58% said that such cloning should never be justified.

Three-quarters of interviewees also agreed that there could be ethical grounds for rejecting animal cloning, and 69% agreed that animal cloning would risk treating animals as commodities rather than creatures with feelings.

- 38% of the respondents answered that none of the potential benefits presented to them (health or economic) would justify breeding cloned animals for food production.

Respondents who agreed that such benefits exist, chose the fact that **animal cloning might help to solve the worldwide food problems** as the single most **important benefit to justify cloning** (31%). Only half as many respondents (14%) chose nutrition and health benefits and 9% selected price and economic benefits in the first place.

- The **food industry emerged as the sector that would ultimately benefit** if animal cloning for food production purposes was allowed: 86% of respondents answered that the food industry would benefit. Respondents were more in doubt about the fact that farmers and consumers would benefit from breeding cloned animals for food production.

Only three out of 10 respondents agreed that using cloning for food production would be much more efficient in the long run and lower the cost of food products for consumers, and 16% thought that animal cloning for food production would be necessary for the European food industry to be competitive.

- EU citizens rated **information provided by scientists** about the safety of cloned animals meant for human consumption as the **most trustworthy**: 25% of the interviewees selected scientists as the most trusted source for information.
- A majority of EU citizens said that it was **unlikely that they would buy meat or milk from cloned animals**, even if a trusted source stated that such products were safe to eat: 20% said it was *somewhat unlikely* and 43% answered it was *not at all likely*.
- Eight out of 10 EU citizens (83%) said that **special labelling should be required** if food products from the offspring of cloned animals become available in the shops.

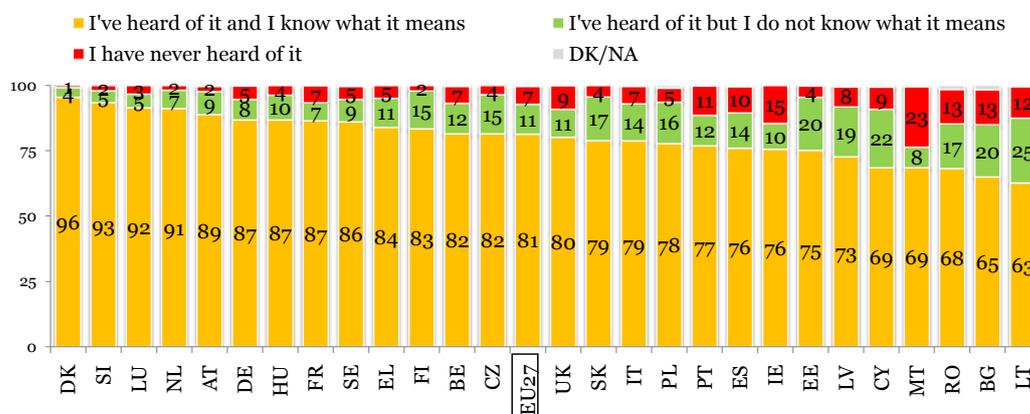
1. What is animal cloning?

1.1 Awareness of the term “animal cloning”

A large majority of EU citizens said they knew the meaning of the term *animal cloning* (81%). Only one in 10 interviewees (11%) said they had heard of the term but did not know its meaning and 7% claimed they had never heard of it¹.

The awareness levels were the highest in Denmark, followed by Slovenia, Luxembourg and the Netherlands; between 91% and 96% of respondents in these countries had heard of the term *animal cloning* and knew what it meant – virtually no respondents were unaware of the term. The concept of *animal cloning* was less known to Lithuanian citizens, but the awareness level was still relatively high; 63% of Lithuanians knew the meaning of the term compared to a quarter who had heard of the term but did not know its meaning and 12% who had never heard of it.

Awareness of the term “animal cloning”



Q1. Are you aware of the term “animal cloning”?
Base: all respondents
% by country

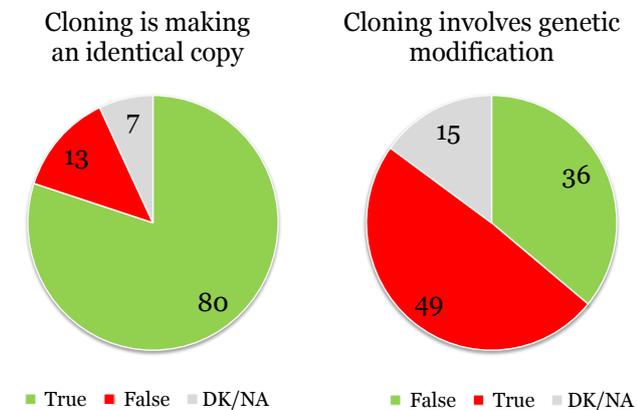
¹ Please note that percentages on graphs and tables do not always add up to the total, due to rounding.

1.2 Animal cloning: replicating the genetic make-up vs. genetic modification

A large majority of EU citizens not only said they knew the term *animal cloning*, but also answered correctly that “*cloning is making an identical copy of an existing animal*” (80%). Only 13% of respondents thought that this statement was wrong, and 7% did not know if the statement was true or not or had no opinion on this issue.

Many respondents, however, did not distinguish cloning – which replicates the genetic make-up – from *genetic modification* – which alters the characteristics of animals by directly changing the DNA sequence. Half of the interviewees (49%) thought, incorrectly, that the statement “*animal cloning involves genetic modification*” was right.

True or false?



Q2. Please tell me if the following statements are true or false:
 a) Cloned animals are an identical replica or copy of the animal used as a source for such cloning
 b) Animal cloning involves genetic modification
 Base: all respondents
 % by country

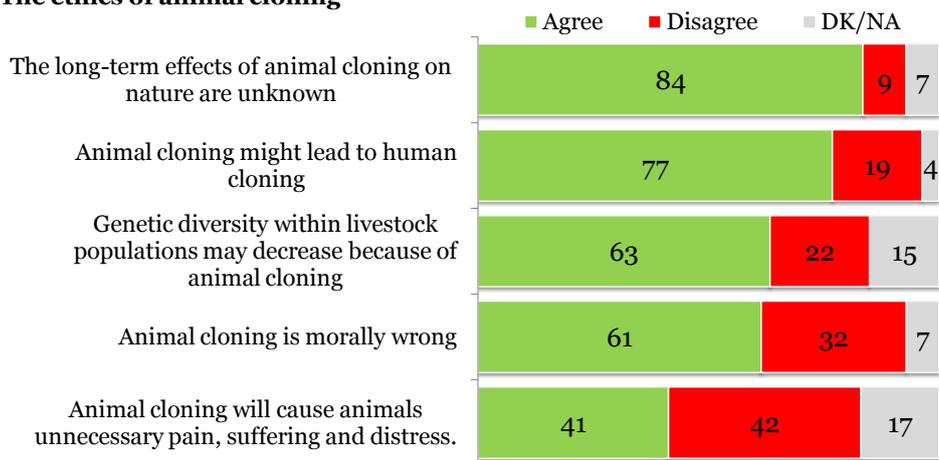
1.3 The ethics of animal cloning

Faced with several statements regarding the ethics of animal cloning, the vast majority of EU citizens (84%) agreed that the *long-term effects of animal cloning on nature were unknown*, and only one in 10 respondents (9%) disagreed with this proposition.

A large majority (77%) also agreed that *animal cloning might lead to human cloning* and 61% agreed that *animal cloning was morally wrong*. One-fifth (19%) and one-third (32%) of respondents, respectively, disagreed with these statements.

Slightly more than six out of 10 interviewees (63%) thought that *animal cloning might decrease the genetic diversity within livestock populations*, while 22% disagreed with them. Furthermore, a significant number of respondents found it difficult to assess the impact of animal cloning on livestock genetic diversity: 15% gave a “don’t know” answer.

Finally, EU citizens were split in their opinions whether *animal cloning would cause animals unnecessary pain, suffering and distress*: 41% agreed with the statement, while 42% disagreed. Seventeen percent had no opinion on this matter.

The ethics of animal cloning

Q3. Do you tend to agree or disagree with the following statements?
 Base: all respondents
 % EU27

A large majority of respondents in all Member States agreed that *the long-term effects of animal cloning on nature were unknown*. The level of agreement ranged from 68% in Bulgaria to 94% in Finland – Bulgaria was the only country where less than seven out of 10 respondents agreed with this proposition. The individual country results for the statement that *animal cloning might lead to human cloning* showed even less variation: the level of agreement ranged from 69% in Romania to 88% in Luxembourg.

The individual country results for the statement that *genetic diversity within the livestock populations may decrease because of animal cloning* showed that Finland somewhat stood out from all other Member States. Almost nine out of 10 Finns (87%) agreed that livestock genetic diversity would suffer from animal cloning, and only 6% disagreed. In the other countries, the level of agreement was considerably lower (ranging from 48% in Romania to 77% in Slovenia).

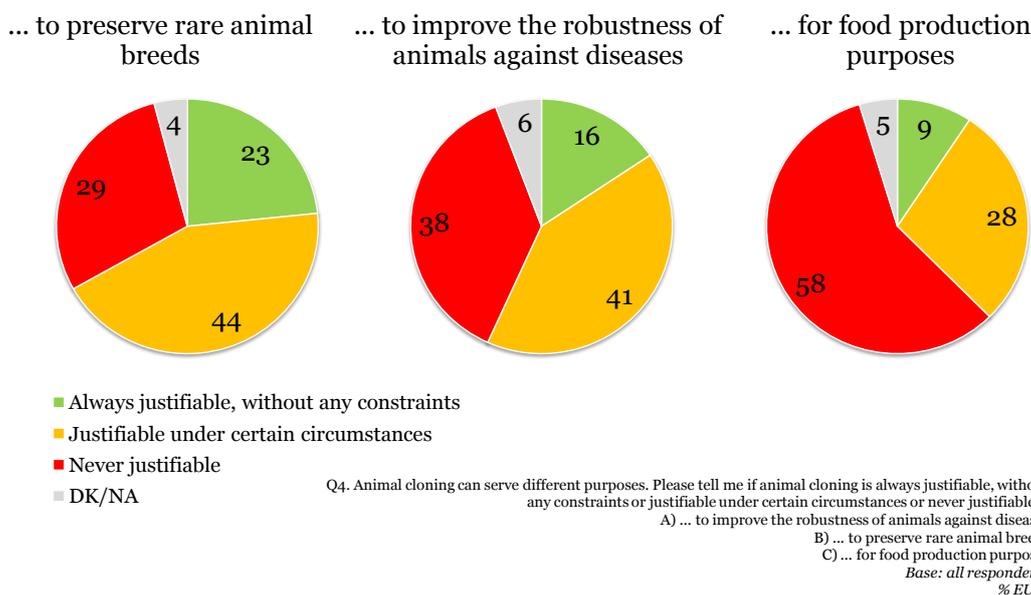
Similar to the results obtained for the EU27 overall, respondents in almost all of the Member States were less inclined to agree with the statement that *animal cloning would cause animals unnecessary pain, suffering and distress* than with the other statements about the ethics of animal cloning.

2. Animal cloning for different purposes

A quarter of EU citizens (23%) answered that animal cloning to *preserve rare animal breeds* should be justified without constraints, while 44% were willing to accept such cloning under certain circumstances. Although the proportion who said that animal cloning should be justified, without any constraints, to *improve the robustness of animals against diseases* was lower (16%), a similar proportion (41%) were willing to accept such cloning under certain circumstances.

EU citizens were significantly less willing to accept animal cloning for *food production purposes*: a majority of interviewees (58%) said that such cloning should never be justified. A quarter of respondents (28%) would accept animal cloning for food production purposes under certain circumstances, and only one in 10 respondents (9%) said it should always be justified.

Animal cloning might be justified ...



Based on their answers to the question about the willingness to accept animal cloning for certain purposes (i.e. to preserve rare animals, to improve animals' robustness against diseases, for food production purposes), respondents were classified into three segments (those who did not provide meaningful answers to the above three questions were classified into a fourth, "don't know" category, consisted only 4.5% of the total population):

- *those fundamentally opposed to cloning*: respondents in this group answered that animal cloning would never be justified, independent of its purpose – *this segment represented one-fifth of EU citizens*
- *those offering a mixed response*: respondents in this group were willing to accept one or more reasons for animal cloning, under certain circumstances – *the majority of EU citizens belonged to this segment (59%)*
- *those accepting cloning*: respondents who belonged to this group were the most liable to agree with the concept; they accepted at least one reason for animal cloning without constraints and avoided saying any of the various purposes of animal cloning were "never justifiable" – *the "acceptance" segment represented 17% of EU citizens²*.

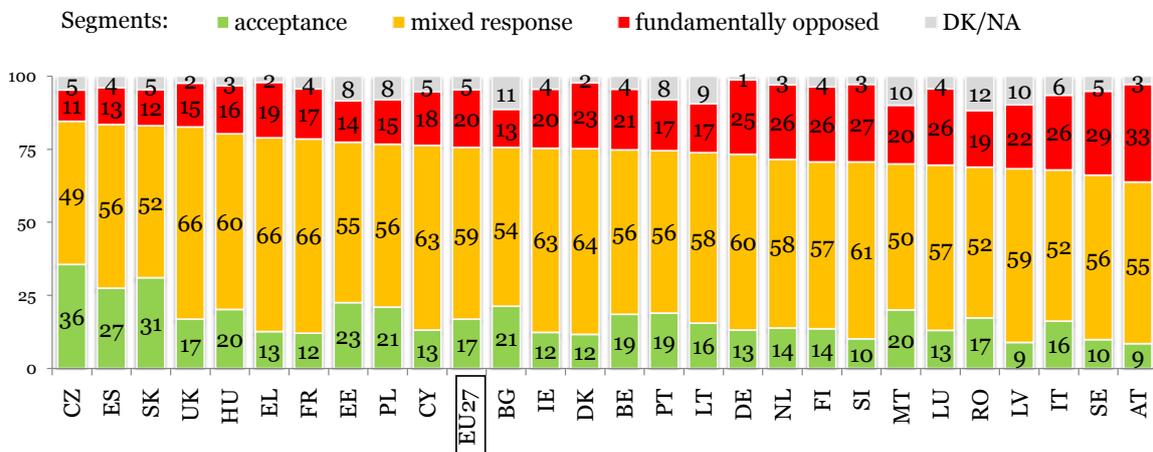
² Respondents who gave two (or three) "don't know" answers were not classified, but given a separate code as non-responding units.

The results for the individual Member States showed that the “fundamentally opposed” segment was the largest in Austria and Sweden (33% and 29%, respectively). In Slovenia, Italy, Luxembourg, Finland, the Netherlands and Germany, at least a quarter of respondents were classified in this segment.

In the Czech Republic, Slovakia and Spain, on the other hand, just slightly more than a tenth of respondents said that animal cloning should never be justified, independent of its purpose. In these countries, approximately three out of 10 respondents belonged to the “acceptance” segment (36%, 31% and 27%, respectively).

Finally, the “mixed response” segment represented the largest group of respondents in all of the Member States, ranging from 49% in the Czech Republic to 66% in the UK, Greece and France.

The acceptance of animal cloning



Segmentation based on Q4 A), B), C), see explanatory note in the text
 Base: all respondents
 % by country

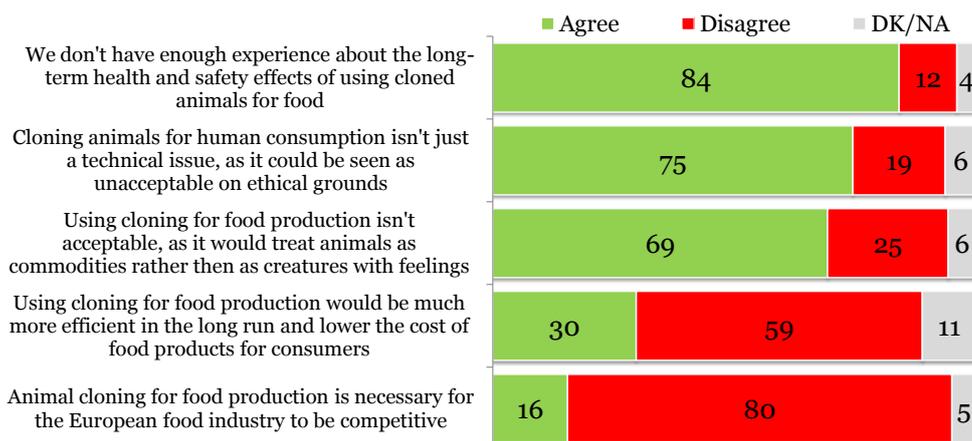
3. Concerns about animal cloning for food production purposes

EU citizens were most concerned that *Europe did not know enough about the long-term health and safety effects of using cloned animals for food* – 84% agreed with this proposition and 12% disagreed.

Three-quarters of the interviewees agreed that *cloning for human consumption could not be seen just as a technical issue, since there could be ethical grounds for rejecting such cloning*, and only one-fifth of respondents (19%) disagreed with this proposition. Likewise, seven out of 10 respondents (69%) agreed, and a quarter disagreed, that *using cloning for food production purposes would be unacceptable because it would mean that animals were treated as commodities rather than creatures with feelings*.

The situation was opposite for the statements about lower costs for food products and the competitiveness of the European food industry. Six out of 10 respondents (59%) disagreed that *using cloning for food production would be much more efficient in the long run and lower the cost of food products for consumers*, while only three out of 10 respondents thought this might indeed be true. An even larger proportion – 80% – disagreed that *animal cloning for food production would be necessary for the European food industry to be competitive*, and a minority of 16% recognised that animal cloning would be necessary for the competitiveness of the European food industry.

Concerns about animal cloning for food production



Q3. Do you tend to agree or disagree with the following statements?
Base: all respondents
% EU27

Little variation was observed between Member States in the level of agreement that there was *insufficient knowledge about the long-term health and safety effects of using cloned animals for food*. The level of agreement ranged from 74% in Romania to 93% in Finland.

A majority of interviewees in all Member States also agreed that *there could be ethical grounds for rejecting animal cloning*, and that *animal cloning would risk treating animals as commodities rather than creatures with feelings*. The level of agreement for the former ranged from 63% in Malta to 88% in Finland, and for the latter from 62% in the UK to 84% in Austria.

Bulgarian, Czech and Spanish respondents appeared to be the least concerned about the ethical grounds for rejecting animal cloning for food production purposes and they were more liable to agree that *using cloning for food production would lower the cost of food products for consumers*, and that *animal cloning for food production would be necessary for the European food industry to be competitive*.

The Danish (49%), Maltese (43%) and Portuguese (42%) respondents, however, were the ones who most often thought that cloning for food production would lower the costs of food products for consumers, while the Belgians (28%), Portuguese and Slovaks (both 26%) most frequently agreed that breeding cloned animals for food production would be unavoidable if the European food industry were to remain competitive.

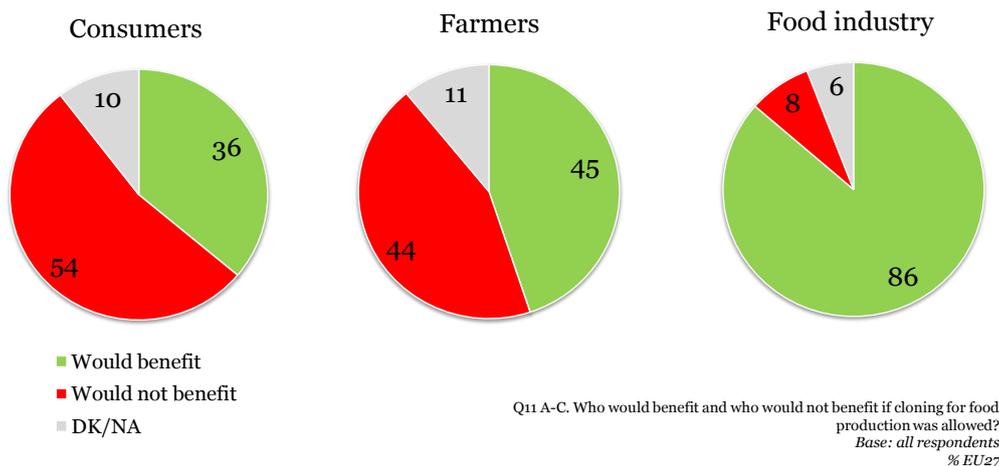
4. Benefits of breeding cloned animals for food production

4.1 Who would benefit from animal cloning for food production?

The food industry emerged as the sector that would ultimately benefit if animal cloning for food production purposes was allowed: 86% of respondents answered that the food industry would benefit and only 8% took an opposite view.

Respondents were more in doubt about the fact that farmers and consumers would benefit from breeding cloned animals for food production. Equal proportions of respondents said that farmers would benefit (45%) or rather not benefit (44%). For consumers, a slim majority (54%) thought that this group would not benefit, while 36% answered that consumers would ultimately benefit if animal cloning for food production was allowed.

Who would ultimately benefit from animal cloning?

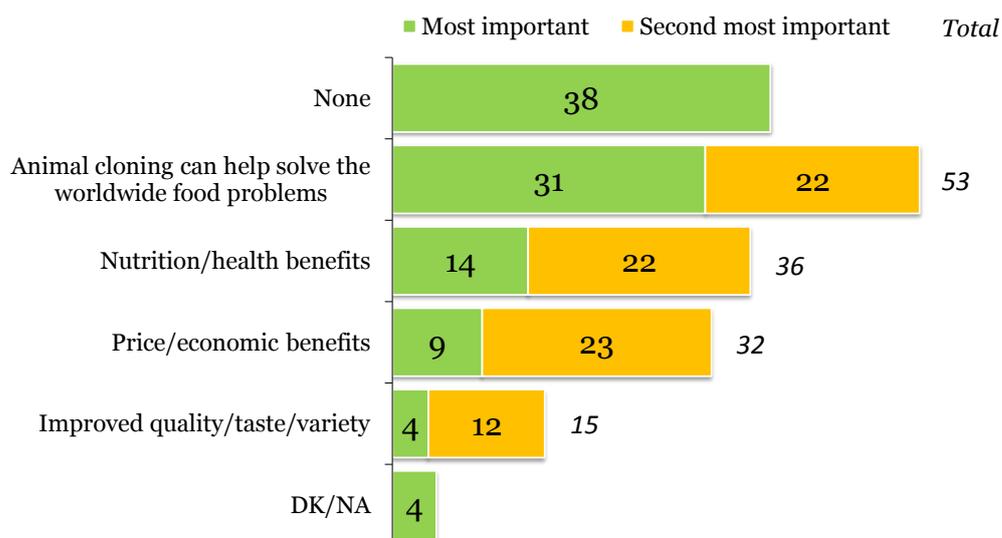


Respondents in all of the Member States were most apt to say that the food industry would benefit from breeding cloned animals for food production. The proportions who thought that the farmers and consumers would benefit from this development were significantly lower in every Member State.

4.2 Benefits that would justify animal cloning for food production

EU citizens responding to the survey were presented with a list of the potential benefits of breeding cloned animals for food production and asked to choose the benefits they considered to be important to justify animal cloning for food production. Almost four out of 10 respondents (38%), however, answered that none of the listed benefits (health or economic) would justify breeding cloned animals for food production³.

The potential benefits for consumers of breeding cloned animals for food production



Q6. What benefits would justify, for you as a consumer, the breeding of cloned animals for food production: What is the most important benefit to justify? And the second most important?
Base: all respondents
% EU27

Consistent with the finding that it was Austrian citizens who most frequently thought that animal cloning could never be justified, they were also the ones most likely to say that none of the listed benefits (health or economic) could justify breeding cloned animals for food production (63%). More than half of the Hungarians (53%) shared this opinion, while only slightly more than a fifth (22%) of British and Danish respondents did so.

Adding up the percentages of the benefits selected either as *first* or *second* most important, a majority (53%) said that breeding cloned animals for food production would be justified if it could help solve the worldwide food problems. This benefit was followed by the potential nutrition and health benefits (36% of respondents selected this as the *most* or *second most* important benefit) and price and economic benefits (32%). Finally, only 15% of respondents accepted improved quality, taste and variety as an important benefit that would justify bringing food products of cloned animals on the market.

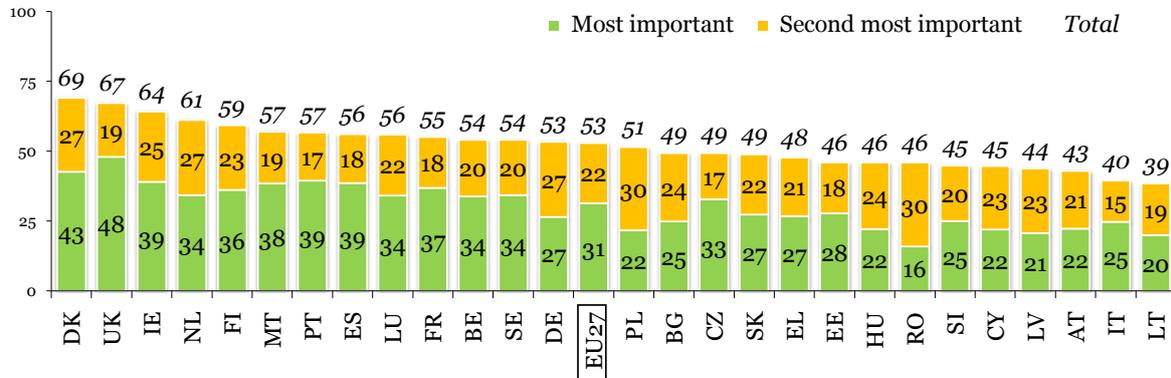
The proposition that **animal cloning might help to solve the worldwide food problems** was selected as being an important benefit to justify such cloning by a clear majority of the Danes (69%), British (67%) and Irish (64%). Lithuanian respondents, on the other hand, were the least likely to identify this fact as an important benefit that could justify animal cloning: only 39% of them selected this potential

³ Please note that we normally provide information on the combined – most and second most important – figure for the various benefits. In those instances where only one benefit was mentioned, and *none* or *don't know* responses were given for the second most important benefit (which should be interpreted as “nothing else” and “not sure what else”, respectively) these were not combined with the *none* or *don't know* responses received in the first place, as these are clearly different. Detailed results are provided in Tables 20 and 21 in the Annex of the full report.

benefit. Other countries where lower proportions of respondents said that *helping to solve the worldwide food problems* was among the two most important benefits that would justify animal cloning were Italy (40%) and Austria (43%).

Benefits that would justify animal cloning for food production

Animal cloning can help solve the worldwide food problems



Q6. What benefits would justify, for you as a consumer, the breeding of cloned animals for food production: What is the most important benefit to justify? And the second most important?
Base: all respondents
% by country

Slightly over half of respondents in Denmark (53%), Netherlands, Ireland and UK (all 51%) answered that increases in the **nutritional value of food products** linked to cloned animals compared to other food products would be an important benefit that could justify animal cloning. In comparison, only about one fifth of Latvia (21%), Romanian and Estonian (both 23%) accepted nutrition and health benefits to justify animal cloning for food production.

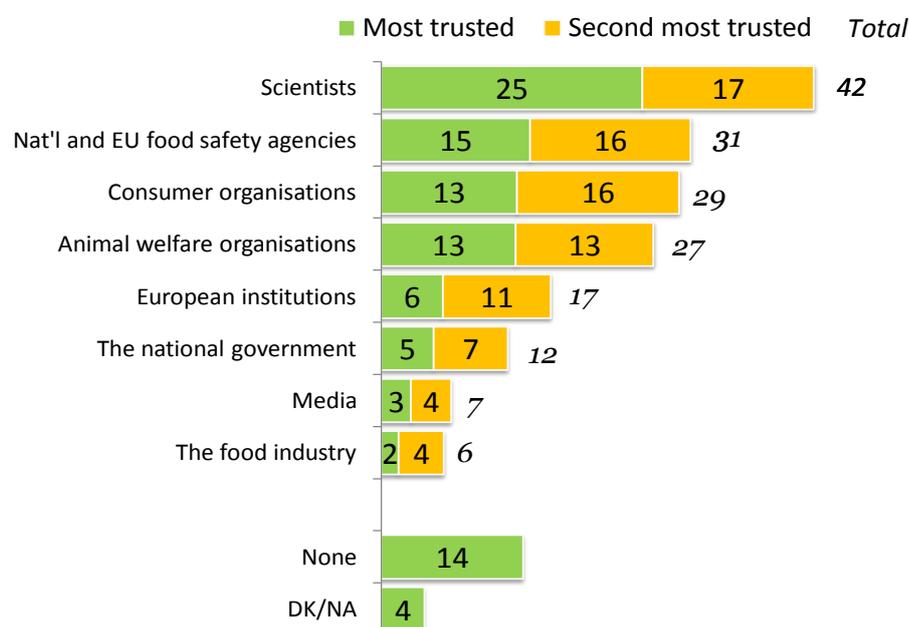
Respondents in the last-mentioned countries were more likely to mention a **better price and economic benefits** as reasons to justify animal cloning for food production compared with nutrition and health benefits. Still, the survey found no member state where economic benefits were regarded as proper justification: the most people sharing this opinion was found in Bulgaria (43%), Estonia and France (both 41%). Such reasoning has least supporters in the Netherlands (19%), Finland (20%) and Denmark (21%).

5. Trusted sources for information about the safety of cloned animals meant for human consumption

EU citizens were presented with a list of the potential sources for information about the safety of cloned animals meant for human consumption and asked to choose the sources they would trust. Fourteen percent of respondents could not select any of the listed sources as the one they trusted the most or would trust none of the listed information sources⁴.

Respondents rated information provided by **scientists** about the safety of cloned animals meant for human consumption as the most trustworthy; 25% of interviewees chose this information source as the one they would trust the *most* from the different information sources presented.

The most trusted sources for information about the safety of cloned animals meant for human consumption



Q7. Which one you would trust the most to inform you about how safe cloned animals or their offspring were for human consumption? And which one would be the second most trusted source for you?
 Base: all respondents
 % EU27

Fifteen percent selected **national and European agencies responsible for food safety** (e.g. the European Food Safety Authority) as the source they would trust the most to inform them about the safety of cloned animals for human consumption, and a similar proportion chose **consumer organisations** and **animal welfare organisations** (both 13%). All other sources for information were chosen by less than 10% of interviewees as the most trusted source.

EU citizens were very unlikely to trust information provided by the **media** and the **food industry** about the safety of cloned animals meant for food production. Adding up the percentages of the *first* and *second* selections, it was noted that less than 10% of EU citizens selected the media or the food industry as a trusted source for information.

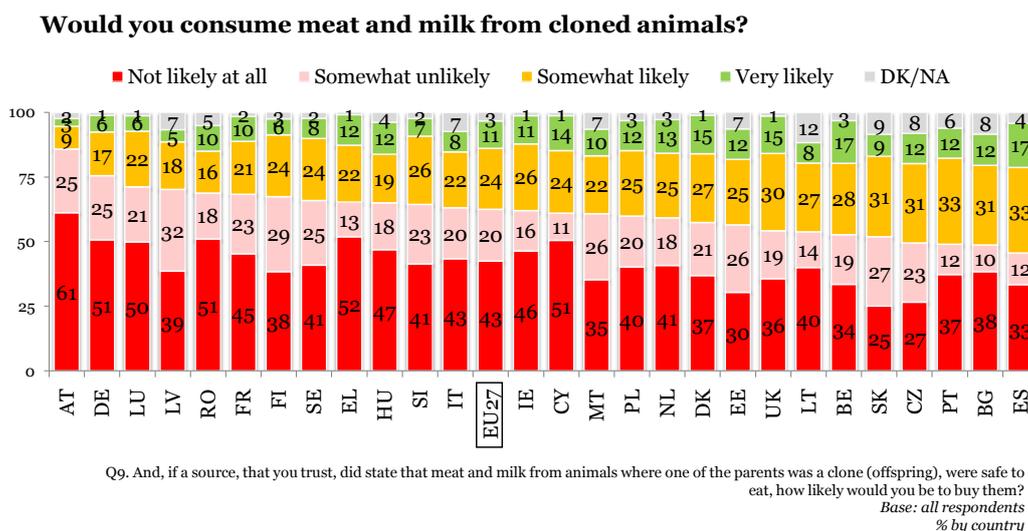
⁴ Please note that in the following analysis, we also provide information on the combined – most and second most important – figure for the various sources. In those instances where only one source was mentioned as trustworthy, and *none* or *don't know* responses were given for the second most trusted (which should be interpreted as “nobody else” and “not sure who else”, respectively) these were not combined with the *none* or *don't know* responses received in the first place, as these are clearly different. The detailed results are presented in Tables 22 and 23, annexed to the full report.

In every Member State, **scientists** appeared among the three most popular sources for trustworthy information about the safety of cloned animals meant for human consumption. Furthermore, scientists were the most frequently mentioned source in 19 Member States. In Greece, for example, information provided by scientists clearly stood out as the most trustworthy, selected by 60% of respondents. The second and third most-mentioned sources, the “national and EU food safety agencies” and consumer organisations, were selected by 29% and 22%, respectively, of Greek respondents.

6. Consuming food products from cloned animals and their offspring

6.1 Buying food products linked to cloned animals

A majority of EU citizens said that it was unlikely that they would buy meat or milk from cloned animals, even if a trusted source stated that such products were safe to eat: 20% said it was *somewhat* unlikely and 43% answered it was *not at all* likely. A quarter of interviewees would consider buying meat and milk from cloned animals if a trusted source informed them this would be safe (24% selected the “somewhat likely” category). Only one-tenth of respondents (11%) considered it *very* likely that they would consume food products of cloned animals. Respondents did not distinguish between buying food products of cloned animals or, alternatively, of animals where one of the parents was a clone.

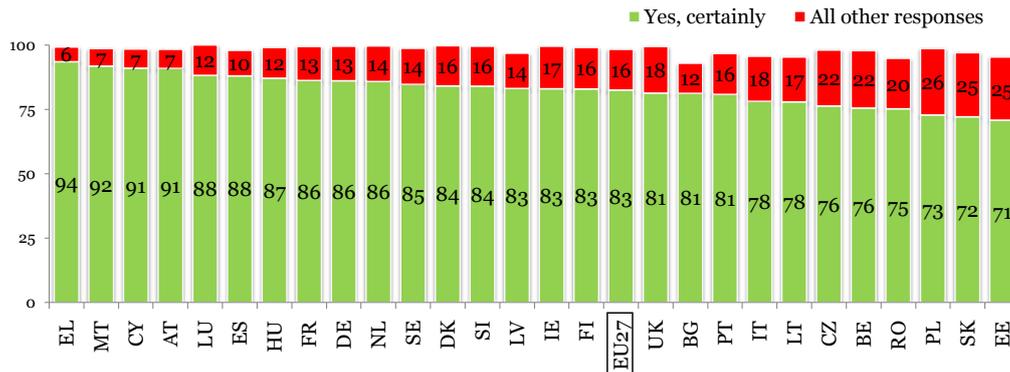


In all Member States, less than one-sixth of respondents considered it *very* likely that they would consume food products of cloned animals or their offspring even if a trusted source informed them this would be safe. Looking at the total number of respondents who would consider buying meat and milk that came from cloned animals or their offspring (the sum of *somewhat* and *very* likely), it was noted that the Spanish respondents were the most likely to buy such food products, followed by respondents in Portugal, the UK, Bulgaria, the Czech Republic and Belgium – in these countries between 43% and 50% of respondents considered it likely that they would buy meat and milk that came from cloned animals or their offspring.

6.2 Views on labelling of food products linked to cloned animals

Citizens in all Member States shared the opinion that special labelling should be required if food products from the offspring of cloned animals become available in the shops. The proportion of interviewees who said it was essential that food products obtained from the offspring of a cloned animal were labelled accordingly ranged from 71% in Estonia to 94% in Estonia to 94% in Greece. In almost all Member States less than a quarter of respondents doubted about the importance of such labelling. The exceptions were Estonia, Slovakia and Poland, where a quarter of respondents said that special labelling would be less important or not important at all.

Is the special labelling of food products from cloned animals important?



Q10. If products from offspring of cloned animals would be available, would you consider it to be important to have special labelling indicating that the food was obtained from the offspring of a cloned animal?
 Base: all respondents
 % by country, DK/NA not shown