

Action B6: Products' Customer Survey, Technical Scale Up, Economical and Environmental Evaluation and Replicability and Transferability of the F4F Process
Deliverable B6.1 Customer survey regarding pet food (industry and owners)



LIFE Project Number
LIFE15 ENV/GR/000257

LIFE PROJECT NAME or Acronym
LIFE-F4F (Food for Feed)



Data

Action:	B6: Products' Customer Survey, Technical Scale Up, Economical and Environmental Evaluation and Replicability and Transferability of the F4F Process
Partner:	FUB
Deliverable:	B6.1 Customer survey regarding pet food (industry and owners)

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1. Abstract

Questionnaires were distributed to veterinary students, veterinarians, pet owners and representatives of the pet food industry in Germany. Overall, the results could demonstrate a deep interest in the potential use of food residues for pet food, but especially the representatives of the pet food industry also pointed out challenges, e.g. with regard to the hygiene and nutritional composition of food residues. These aspects have to be acknowledged when considering dried food residues as a potential ingredient for pet food in the future.

2. Introduction

A comprehensive questionnaire was distributed among veterinary students, veterinarians and pet owners. The questionnaire was distributed during

- a lecture for **veterinary students** (n=15)
- a meeting for **veterinarians** (n=4) and **veterinary assistants** (n=5)
- a seminar for **veterinarians** (n=24)
- the "open day" of the Department of Veterinary Medicine, FUB (n=41; **citizens** of Berlin and the surrounding area)

The evaluation of the questionnaire was carried out for

- **all returns** (n=89)
- **each group** (veterinary students / veterinarians / veterinary assistants / citizens)
 - The answers (%) were related to the total amount of questionnaires per group (not to the total answers of all groups)

In addition, a modified questionnaire was sent to the chief executive officer of the Industrial Association of Pet Care Producers' (German: Industrieverband Heimtierbedarf, IVH) in July 2020 in order to provide a basis for selected interviews with representatives of the petfood industry in Germany. Due to COVID-19, however, no face-to-face interviews could be realized, but representatives of pet food companies sent their answers by email.

3. Results

As it is expected that the results of the survey will be published in a national or international journal, the data presented in this deliverable are only for internal use, but are not allowed to be published without the permission of Prof. Jürgen Zentek and Prof. Nadine Paßlack to avoid forbidden dual publication.

The results of the customer survey regarding pet food (veterinary students, veterinarians, veterinary assistants, citizens) are presented in Figures 1-12.

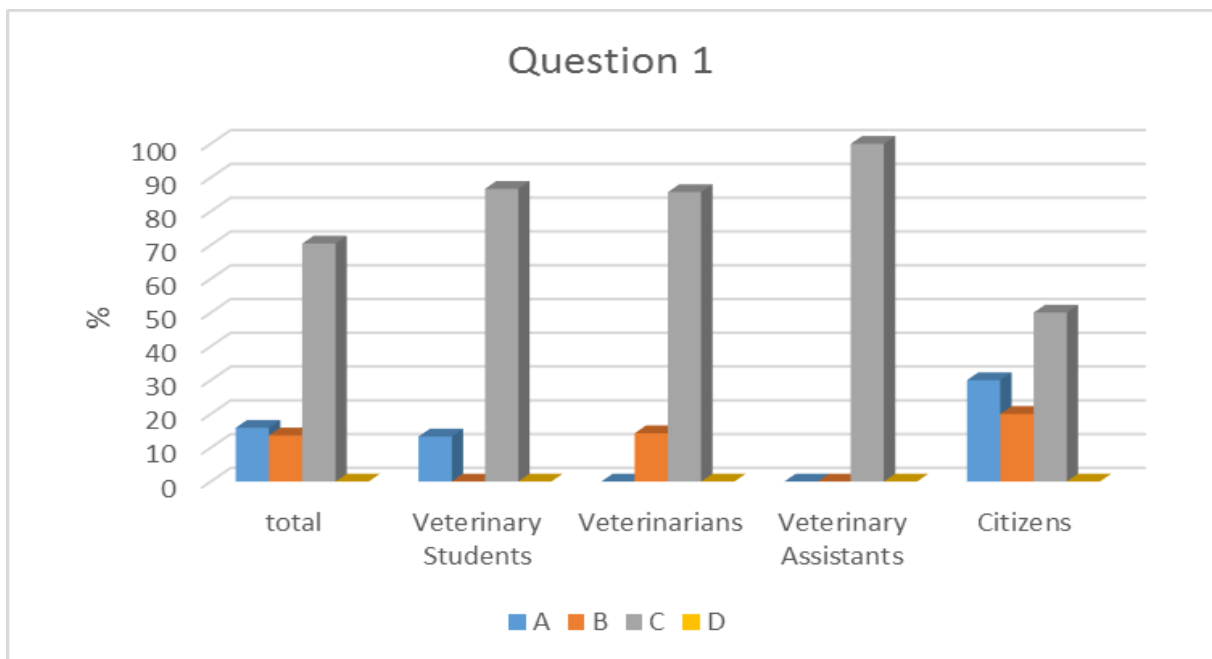


Figure 1: Question1: How do you rate the use of food residues in animal nutrition? A: without problems, B: risky, C: there are pros and cons, D: I don't know

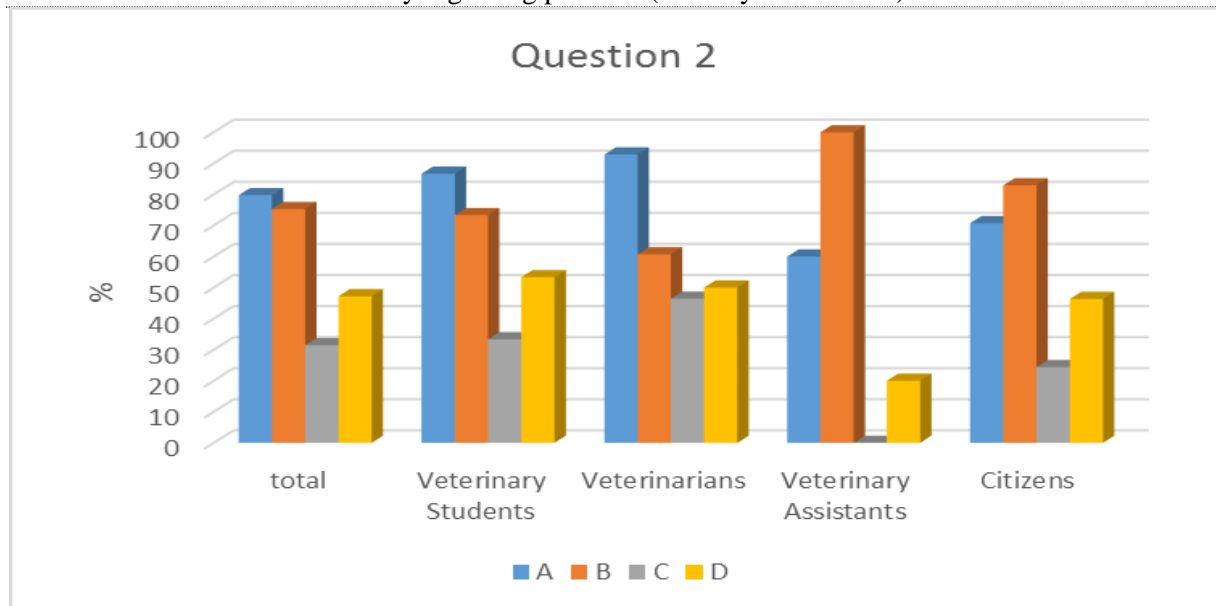


Figure 2: Question 2: Which animal species could you imagine to receive food residues as a component for animal feed? You can tick several answers. A: dogs and cats, B: pigs, C: fur-bearing animals, D: poultry

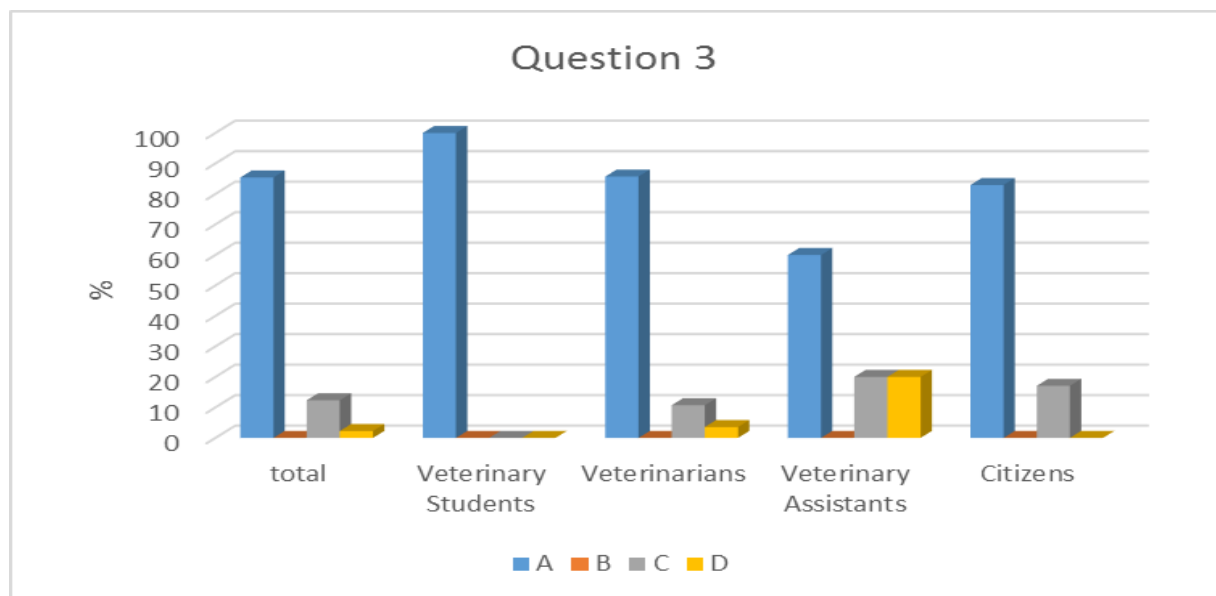


Figure 3: Question 3: How do you rate the use of food residues as a component for animal feed in the context of environmental protection? A: important, B: irrelevant, C: moderate, D: I don't know

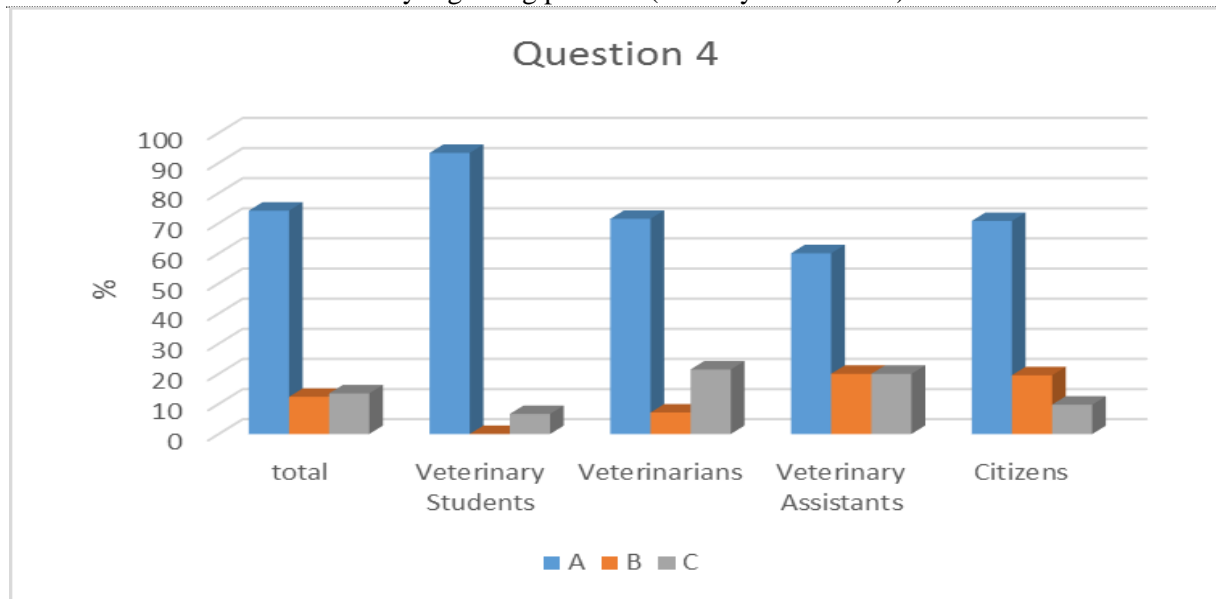


Figure 4: Question 4: Would you buy a commercial petfood, which includes food residues, for your dog/cat? A: yes, B: no, C: I don't know

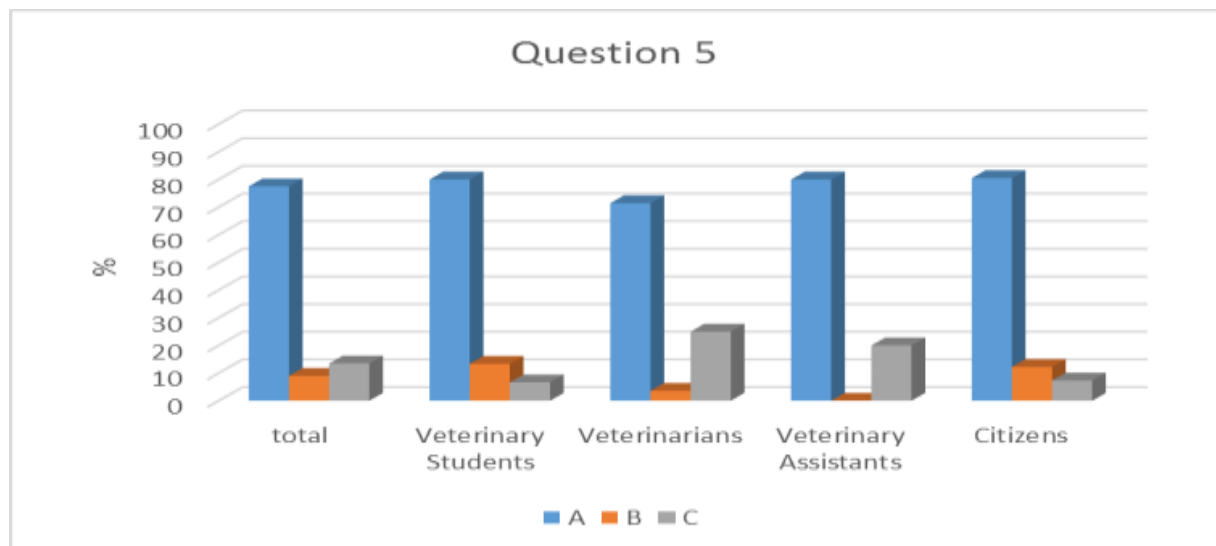


Figure 5: Question 5: Would you buy meat or other products (e.g. eggs, milk products) from farm animals, which received food residues as a component of animal feed? A: yes, B: no, C: I don't know

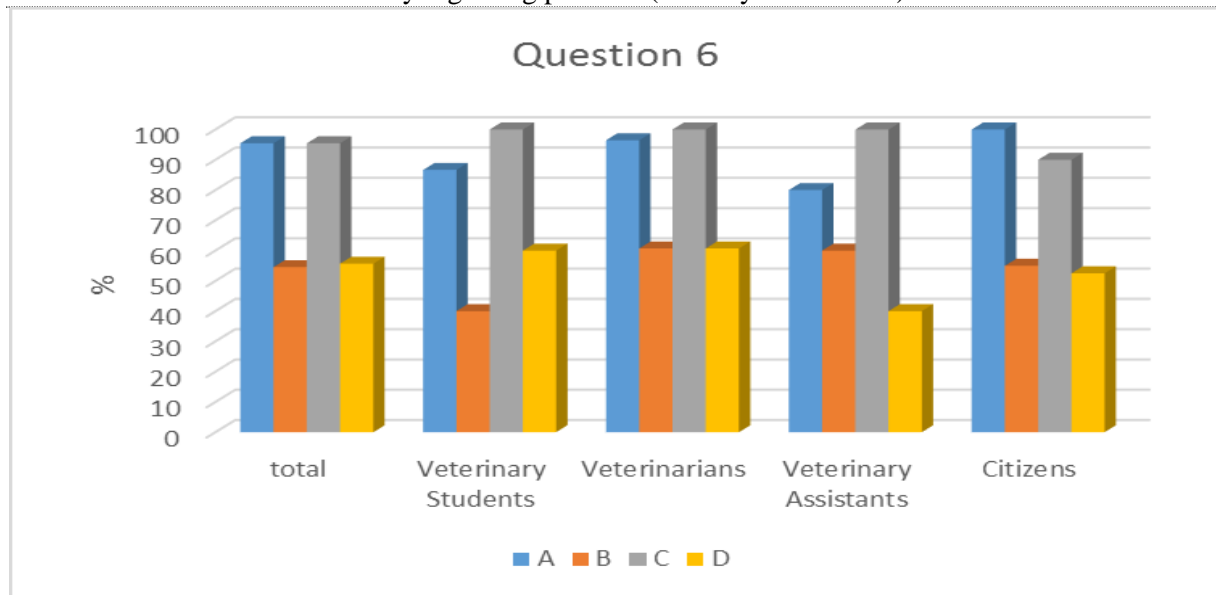


Figure 6: Question 6: Which type of food residues could you imagine to be a component of animal feed? You could tick several answers. A: fruits/vegetables, B: meat, C: noodles/potatoes/rice, D: baked goods

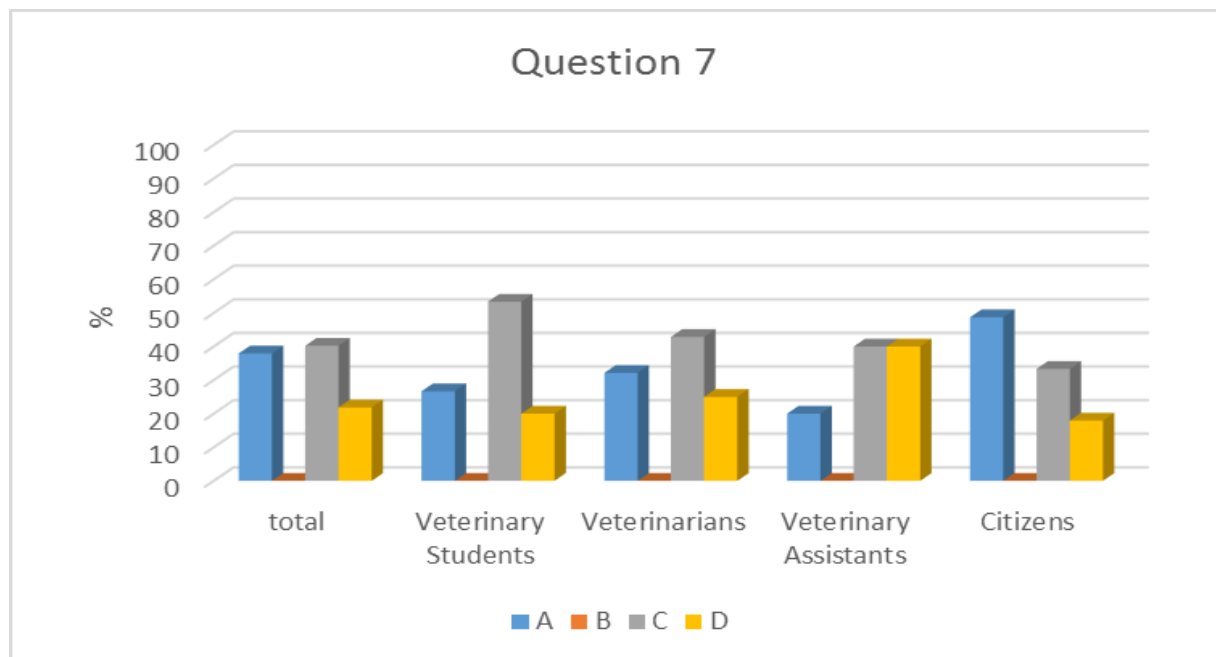


Figure 7: Question 7: How do you rate the hygiene of animal feed, which includes food residues? A: good, B: bad, C: risky, D: I don't know

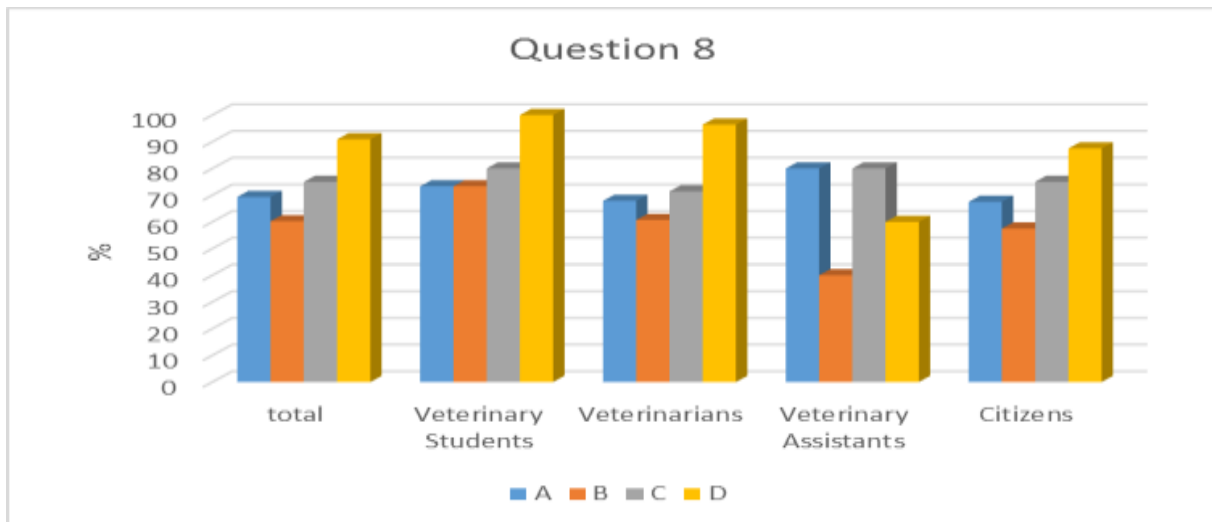


Figure 8: Question 8: At the moment, the food residues are exclusively collected in hotels. Could you imagine also other sources of supply? You could tick several answers. A: restaurant/café, B: bakery, C: weekly market, D: supermarket

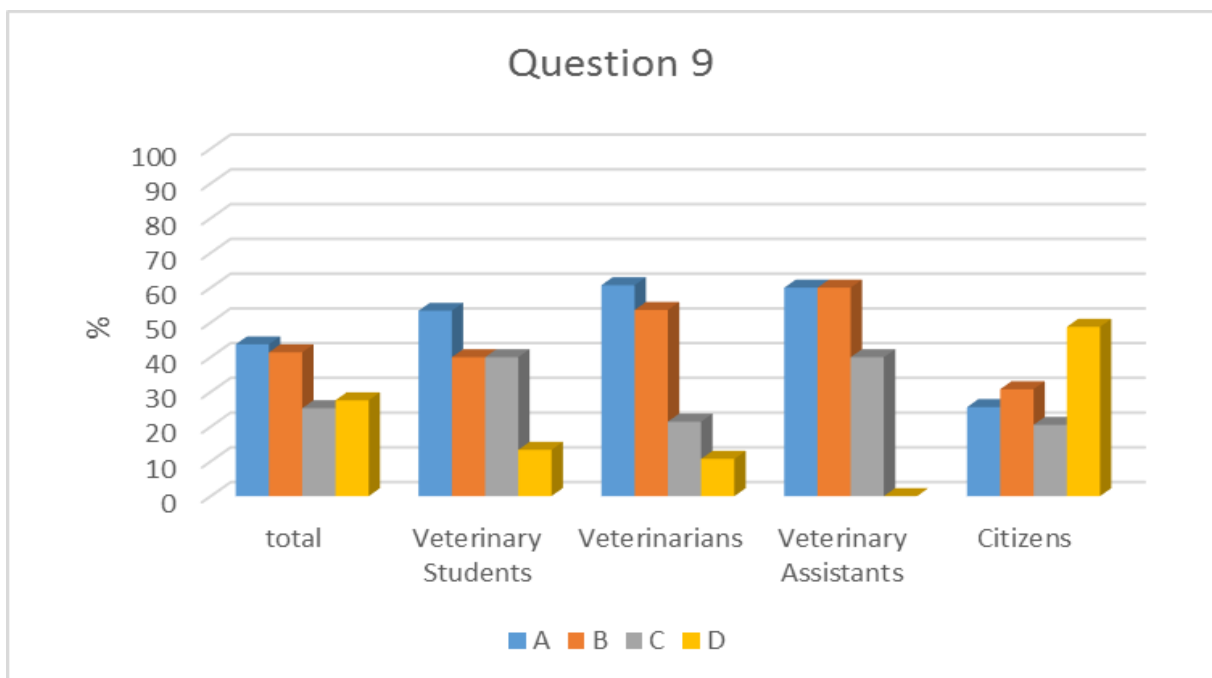


Figure 9: Question 9: Do you have a pet? You could tick several answers. A: dog, B: cat, C: others, D: no

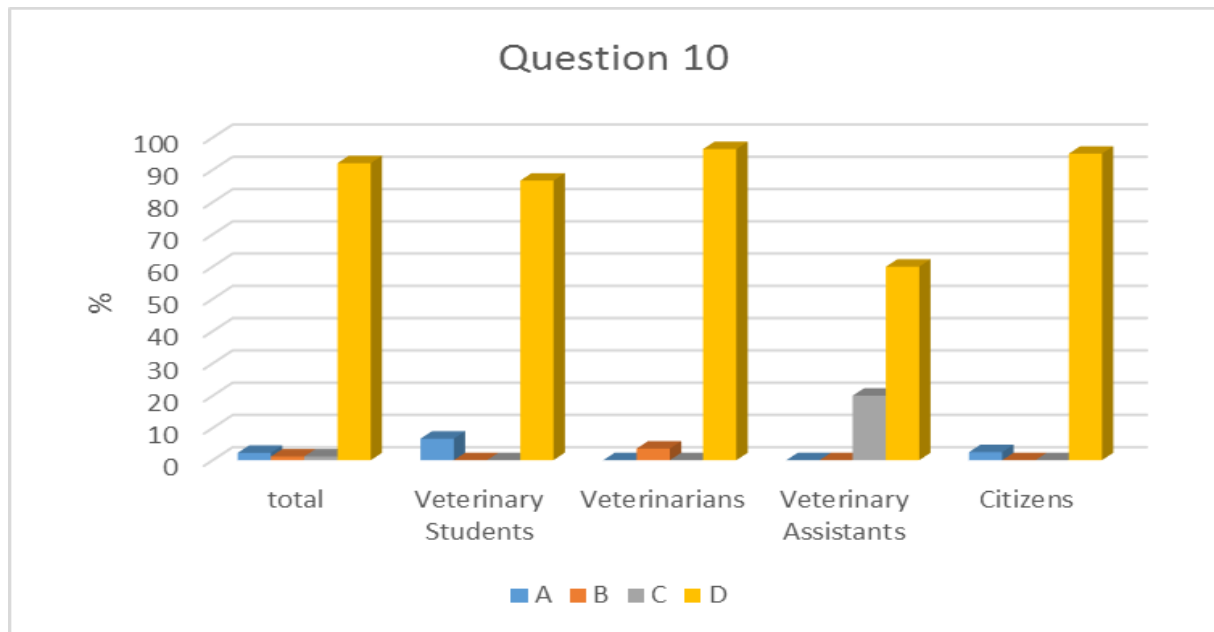


Figure 10: Question 10: Do you have or does your family have a farm with farm animals? You could tick several answers. A: poultry, B: pigs, C: fur-bearing animals, D: no. *remark: "Cattle" was added to the questionnaire by 1 vet-student, 1 vet-assistant and 1 citizen

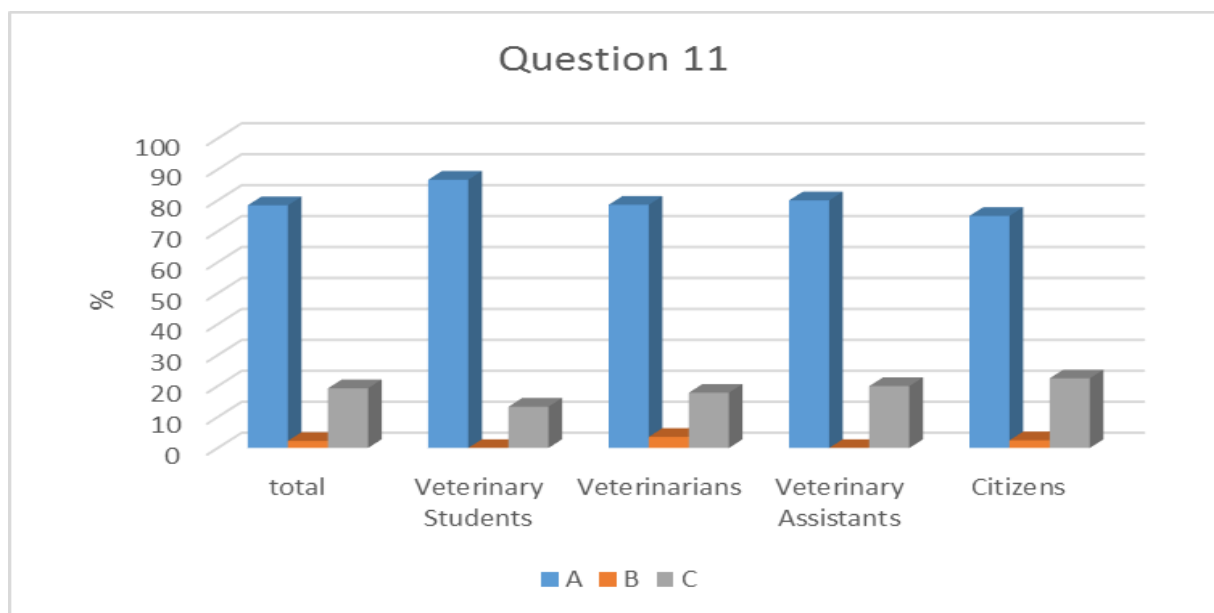


Figure 11: Question 11: Do you eat meat or other animal-derived products (e.g. eggs, milk products)? A: yes, B: no (vegan), C: partly (vegetarian)

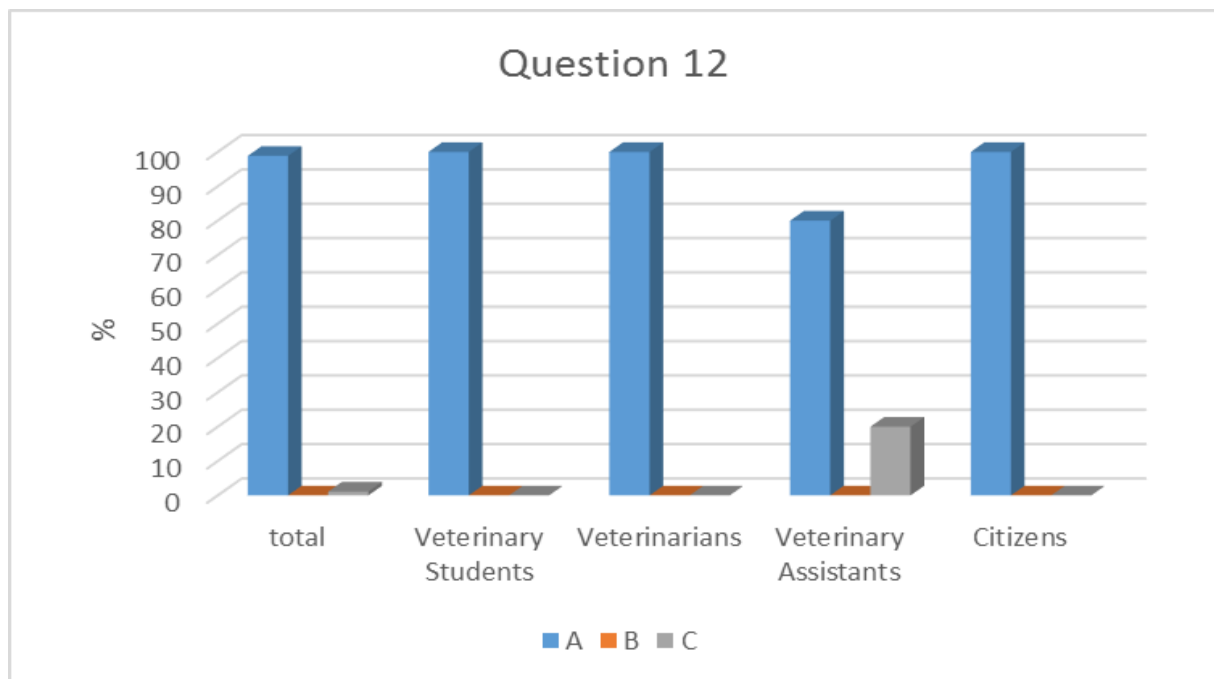


Figure 12: Question 12: Do you think that we waste too much food? A: yes, B: no, C: I don't know

The translation of the first interview with a pet food representative is provided as follows:

Translation Interview 1

1) How do you assess the use of food residues in pet nutrition (benefits, risks, etc.)?

Answer: In view of the high demand for traceability on the one hand and the desired precision in mixture production on the other, I do not consider this approach to be expedient. Especially with regard to additives, spices, marinades, dyes, etc., the use is more than doubtful, both with regard to the declarations to be made and with regard to compatibility and acceptance by the animal. Especially with the latter point, manufacturers use a high degree of time and costs to ensure the optimum acceptance of a feed formulation. In some target animal species, this involves a highly precise adjustment of acceptance and attractive factors such as (including) smell, taste and texture. I don't see this accuracy with food leftovers.

The importance of the pet as a life partner is underlined and promoted in many ways by marketing measures on the part of the manufacturers. The use of leftovers does not fit in with this either, as it would be understood by the consumer as a devaluation. In contrast, we see that people are more likely to put their own needs aside in order to provide their life partner dog/cat with the best possible nutrition.

- 2) From an ecological point of view or from an economic point of view, would you be in favour of allowing the use of defined and controlled food residues in the diet of dogs and cats in the future?**

Answer: No, because it would significantly increase the effort required to create defined products.

- 3) If so, what kind of leftovers do you think could be used as a component of pet food?**

Answer: See above.

- 4) How do you assess the willingness of dog and cat owners to buy and feed food that contains leftovers?**

Answer: On the one hand, I refer to what I have said above. Furthermore, we have been seeing the trend towards premium and super premium products for several years, which would not be compatible with. In addition, it should be noted that the above-mentioned positioning is often associated with the insertion of specific product functions, the guarantee of which would be difficult to reconcile with the use of separation stents.

- 5) Do you have any further comments?**

Answer: The only possibility – but with great restrictions – to use food residues, I see with ration supplements in the field of raw feed feeding – BARFEN -.

The translation of the second interview with a pet food representative is provided as follows:

Translation Interview 2

- 1) How do you assess the use of food residues in pet nutrition (benefits, risks, etc.)?**

Answer: Advantage: Reduction of the amount of food waste that must be destroyed, sustainability

Risk: fluctuating nutrient levels, leftovers may contain ingredients which are not permitted for pets, possibly other limit values for contamination with pesticides, etc., microbiological risk, how can an ingredient that is changeable in composition be declared? Added weight proportions may have to be flexibly adjusted depending on nutrient content - > declaration? secure availability? Durability? Approval of the food residue - supplier as a feed manufacturer? How can traceability be ensured?

- 2) From an ecological point of view or from an economic point of view, would you be in favour of allowing the use of defined and controlled food residues in the diet of dogs and cats in the future?**

Answer: Yes, if the above-called questions could be clarified and the processing could be handled by feed manufacturers.

- 3) If so, what kind of leftovers do you think could be used as a component of pet food?**

Answer: If possible, ingredients in the sense of "feed materials", microbiologically safe, e.g. boiled meat, vegetables, cereals, pasta, potatoes, ...

- 4) How do you assess the willingness of dog and cat owners to buy and feed food that contains leftovers?**

Answer: Although table waste is often fed as a "treat", the term "food leftovers" does not sound positive and supports the reservations of some animal owners towards the industry as a "waste recycler". The understanding of the positive aspect for the environment would first have to be built.

- 5) Do you have any further comments?**

Answer: -

4. Conclusions

The customer survey demonstrated that the respondents (veterinary students, veterinarians, veterinary assistants, citizens) were very interested in the project "Food for Feed" and the potential use of food residues for pet food.

Concerns on the potential use of food residues for pet food were especially mentioned by representatives of the pet food industry in Germany, which should be acknowledged when dried food residues are considered as a potential ingredient for pet food in the future.

An

Industrieverband Heintierbedarf
Zu Händen Frau Dr. K. Langner

Per e-mail

Ihre Zeichen	Ihre Nachricht vom	Unsere Zeichen	Durchwahl	Datum 29.01.2021
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Sehr geehrte Frau Dr. Langner, wie besprochen sende ich Ihnen hiermit die Beantwortung der Fragen aus der Umfrage Food 4 Feed.

Mit den besten Grüßen

i.V. Dr. Gerd Großheider

Interviewfragen für Industrievertreter*innen/den Industrieverband Heintierbedarf (IVH)

- 1) *Wie schätzen Sie die Nutzung von Speiseresten in der Heintierernährung ein (Vorteile, Risiken etc.)?*
In Hinblick auf den hohen Anspruch an Rückverfolgbarkeit einerseits und die gewünschte Präzision in der Mischungsherstellung andererseits halte ich diesen Angang nicht für zielführend. Insbesondere in Hinblick auf Zusatzstoffe, Gewürze, Marinaden, Farbstoffe etc. ist die Verwendung mehr als zweifelhaft und zwar sowohl mit Blick auf die dann zu erstellenden Deklarationen als auch in Bezug auf Verträglichkeit und Akzeptanz beim Tier. Gerade beim letztgenannten Punkt verwenden Hersteller ein hohes Maß an Zeit und Kosten um das Optimum an Akzeptanz einer Futterformulierung sicherzustellen. Bei einigen Zieltierarten geht es dabei um eine höchst präzise Einstellung von akzeptanz- und attraktanzgebenden Faktoren wie (u.a.) Geruch, Geschmack und Textur. Diese Genauigkeit sehe ich bei Speiseresten nicht.
Die Bedeutung des Heintiers als Lebenspartner wird in vielfältiger Weise durch Marketingmaßnahmen seitens der Hersteller unterstrichen und gefördert. Auch dazu passt eine Verwendung von Speiseresten nicht, da sie vom Verbraucher als Abwertung verstanden würde. Im Gegensatz dazu sehen wir, dass Menschen eher ihre eigenen Bedürfnisse zurückstellen, um ihrem Lebenspartner Hund/Katze die vermutlich bestmögliche Ernährung zu ermöglichen
- 2) *Würden Sie es aus ökologischer Sicht oder auch aus ökonomischer Sicht befürworten, dass künftig der Einsatz von definierten und kontrollierten Speiseresten in der Ernährung von Hunden und Katzen zugelassen wird?*

Nein, da es den Aufwand definierte Produkte zu erzeugen, deutlich erhöhen würde.

3) Falls ja, welche Art von Speiseresten könnte Ihrer Meinung nach als Komponente von Heimtierfutter genutzt werden? S.o.

4) Wie schätzen Sie die Bereitschaft von Hunde- und Katzenbesitzern ein, ein Futter, das Speisereste enthält, zu kaufen und zu verfüttern?

Zum einen verweise ich auf meine Ausführungen oben. Des Weiteren sehen wir seit etlichen Jahren den Trend zu Premium- und Superpremiumprodukten womit dies nicht vereinbar wäre. Ergänzend ist festzuhalten, dass mit der vorstehend genannten Positionierung auch häufig die Einfügung von spezifischen Produktfunktionen verbunden ist, deren Gewährleistung mit dem Verwenden von Speiseresten nur schwer vereinbar wäre.

5) Haben Sie weitere Anmerkungen?

Die einzige Möglichkeit – allerdings mit großen Einschränkungen – Speisereste einzusetzen, sehe ich bei Rationsergänzungen im Bereich Rohfuttermittelfütterung – BARFEN -.

Mit freundlichen Grüßen



i.V. Dr. Gerd Großheider



Im Rahmen eines aktuellen EU-Projekts wird untersucht, ob Speisereste aus Hotelanlagen als Komponente (z. B. 5-15 %) von Tierfutter eingesetzt werden können (<https://life-f4f.gr/en/food-for-feed/>).

Aktuelle Gesetzeslage:

Verordnung (EG) Nr. 1069/2009, Artikel 11:

„Folgende Verwendungszwecke tierischer Nebenprodukte und ihrer Folgeprodukte sind verboten:

(...)

b) die Fütterung von Nutztieren, außer Pelztieren, mit Küchen- und Speiseabfällen oder Futtermittel-Ausgangserzeugnissen, die Küchen- und Speiseabfälle enthalten oder daraus hergestellt wurden;“

Verordnung (EU) Nr. 142/2011, Anhang XIII, Kapitel II:

„2. Rohmaterial für verarbeitetes Heimtierfutter und für Kauspielzeug

Betreiber dürfen verarbeitetes Heimtierfutter Kauspielzeug ausschließlich aus folgendem Material herstellen:

a) Material der Kategorie 3, ausgenommen Material gemäß Artikel 10 Buchstaben n, o und p der Verordnung (EG) Nr. 1069/2009“

-> In Artikel 10 (p) der Verordnung (EG) Nr. 1069/2009 werden die Speisereste genannt

Folglich dürfen Speisereste nach aktueller Gesetzeslage nicht in verarbeitetem Heimtierfutter eingesetzt werden.



Interviewfragen für Industrievertreter*innen/den Industrieverband Heimtierbedarf (IVH)

1) Wie schätzen Sie die Nutzung von Speiseresten in der Heimtierernährung ein (Vorteile, Risiken etc.)?

Vorteil: Reduktion der Menge an Speiseabfällen, die vernichtet werden müssen, Nachhaltigkeit

Risiko: schwankende Nährstoffgehalte, Speisereste können Zutaten enthalten, die für Heimtiere nicht zugelassen sind, ggf. andere Grenzwerte für Kontaminationen mit Pestiziden etc, mikrobiologisches Risiko, wie kann eine in der Zusammensetzung wechselhafte Zutat deklariert werden? Zugesetzte Gewichtsanteile müssten ggf. flexibel angepasst werden je nach Nährstoffgehalten -> Deklaration? Sichere Verfügbarkeit? Haltbarkeit? Zulassung der Speiserest - Anbieter als Futtermittelhersteller? Wie kann die Rückverfolgbarkeit gewährleistet werden?

2) Würden Sie es aus ökologischer Sicht oder auch aus ökonomischer Sicht befürworten, dass künftig der Einsatz von definierten und kontrollierten Speiseresten in der Ernährung von Hunden und Katzen zugelassen wird?

Ja, wenn die o.g. Fragestellungen geklärt werden könnten und die Abwicklung für Futtermittelhersteller handelbar wäre

3) Falls ja, welche Art von Speiseresten könnte Ihrer Meinung nach als Komponente von Heimtierfutter genutzt werden?

Möglichst Zutaten im Sinne von "Einzelfuttermittel" bzw. "Futtermittelausgangserzeugnissen", mikrobiologisch sicher, z.B. gekochtes Fleisch, Gemüse, Getreide, Nudeln, Kartoffeln, ...

4) Wie schätzen Sie die Bereitschaft von Hunde- und Katzenbesitzern ein, ein Futter, das Speisereste enthält, zu kaufen und zu verfüttern?

Ob wohl Tischabfälle sicher häufig als "Leckerli" gefüttert werden, klingt die Bezeichnung "Speisereste" nicht positiv und unterstützt die Vorbehalte einiger Tierhalter gegenüber der Industrie als "Abfallverwerter". Das Verständnis für den positiven Aspekt für die Umwelt müsste erst aufgebaut werden.

5) Haben Sie weitere Anmerkungen?

Translation Interview 1

1) How do you assess the use of food residues in pet nutrition (benefits, risks, etc.)?

Answer: In view of the high demand for traceability on the one hand and the desired precision in mixture production on the other, I do not consider this approach to be expedient. Especially with regard to additives, spices, marinades, dyes, etc., the use is more than doubtful, both with regard to the declarations to be made and with regard to compatibility and acceptance by the animal. Especially with the latter point, manufacturers use a high degree of time and costs to ensure the optimum acceptance of a feed formulation. In some target animal species, this involves a highly precise adjustment of acceptance and attractive factors such as (including) smell, taste and texture. I don't see this accuracy with food leftovers.

The importance of the pet as a life partner is underlined and promoted in many ways by marketing measures on the part of the manufacturers. The use of leftovers does not fit in with this either, as it would be understood by the consumer as a devaluation. In contrast, we see that people are more likely to put their own needs aside in order to provide their life partner dog/cat with the best possible nutrition.

2) From an ecological point of view or from an economic point of view, would you be in favour of allowing the use of defined and controlled food residues in the diet of dogs and cats in the future?

Answer: No, because it would significantly increase the effort required to create defined products.

3) If so, what kind of leftovers do you think could be used as a component of pet food?

Answer: See above.

4) How do you assess the willingness of dog and cat owners to buy and feed food that contains leftovers?

Answer: On the one hand, I refer to what I have said above. Furthermore, we have been seeing the trend towards premium and super premium products for several years, which would not be compatible with. In addition, it should be noted that the above-mentioned positioning is often associated with the insertion of specific product functions, the guarantee of which would be difficult to reconcile with the use of separation stents.

5) Do you have any further comments?

Answer: The only possibility – but with great restrictions – to use food residues, I see with ration supplements in the field of raw feed feeding – BARFEN -.

Translation Interview 2

1) How do you assess the use of food residues in pet nutrition (benefits, risks, etc.)?

Answer: Advantage: Reduction of the amount of food waste that must be destroyed, sustainability

Risk: fluctuating nutrient levels, leftovers may contain ingredients which are not permitted for pets, possibly other limit values for contamination with pesticides, etc., microbiological risk, how can an ingredient that is changeable in composition be declared? Added weight proportions may have to be flexibly adjusted depending on nutrient content - > declaration? secure availability? Durability?

Approval of the food residue - supplier as a feed manufacturer? How can traceability be ensured?

2) From an ecological point of view or from an economic point of view, would you be in favour of allowing the use of defined and controlled food residues in the diet of dogs and cats in the future?

Answer: Yes, if the above-called questions could be clarified and the processing could be handled by feed manufacturers.

3) If so, what kind of leftovers do you think could be used as a component of pet food?

Answer: If possible, ingredients in the sense of "feed materials", microbiologically safe, e.g. boiled meat, vegetables, cereals, pasta, potatoes, ...

4) How do you assess the willingness of dog and cat owners to buy and feed food that contains leftovers?

Answer: Although table waste is often fed as a "treat", the term "food leftovers" does not sound positive and supports the reservations of some animal owners towards the industry as a "waste recycler". The understanding of the positive aspect for the environment would first have to be built.

5) Do you have any further comments?

Answer: -

Action B6. Products' Customer Survey, Technical Scale Up, Economic and Environmental Evaluation and Replicability and Transferability of the F4F Process Deliverable

B6.1. Customer survey regarding pet food



LIFE Project Number
LIFE15 ENV/GR/000257

LIFE PROJECT NAME or Acronym
LIFE-F4F (Food for Feed)



Action:	B6. Products' Customer Survey, Technical Scale Up, Economic and Environmental Evaluation and Replicability and Transferability of the F4F Process
Partner:	Harokopio University of Athens (HUA)
Deliverable:	B6.1 Customer survey regarding pet food (customers)

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1 CUSTOMERS' SURVEY

1.1 OVERVIEW

Survey will help to record and understand the objections and the positive approaches of animal owners towards the product and the process. By recording them we will be able a) to turn the interest of our campaign to tackle them and b) to provide information for a full-scale unit.

The questionnaire was prepared in the framework of the European LIFE program: "Food for Feed: An Innovative Process for Transforming Hotels' Food Wastes into Animal Feed". (Innovative Process for the Conversion of Hotel Food Waste into Animal Feed, LIFE-F4F), LIFE15 ENV / GR / 000257.

Regarding consumers, a questionnaire including 11 closed-ended questions (Table 1) was developed and distributed to potential consumers, aiming at exploring their views and opinions regarding the product of the F4F process. The questionnaire was distributed and completed electronically, and it was also completed with physical presence in supermarkets.

Table 1. The questions asked to consumers regarding the production and use of the produced animal feed

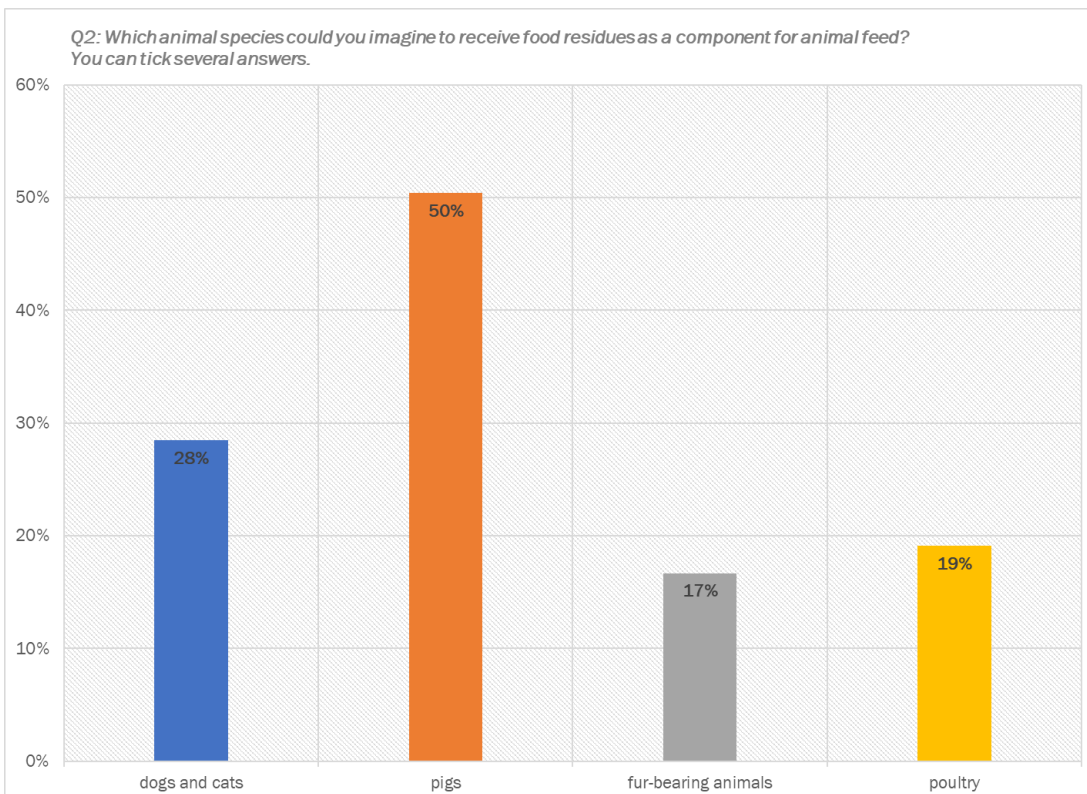
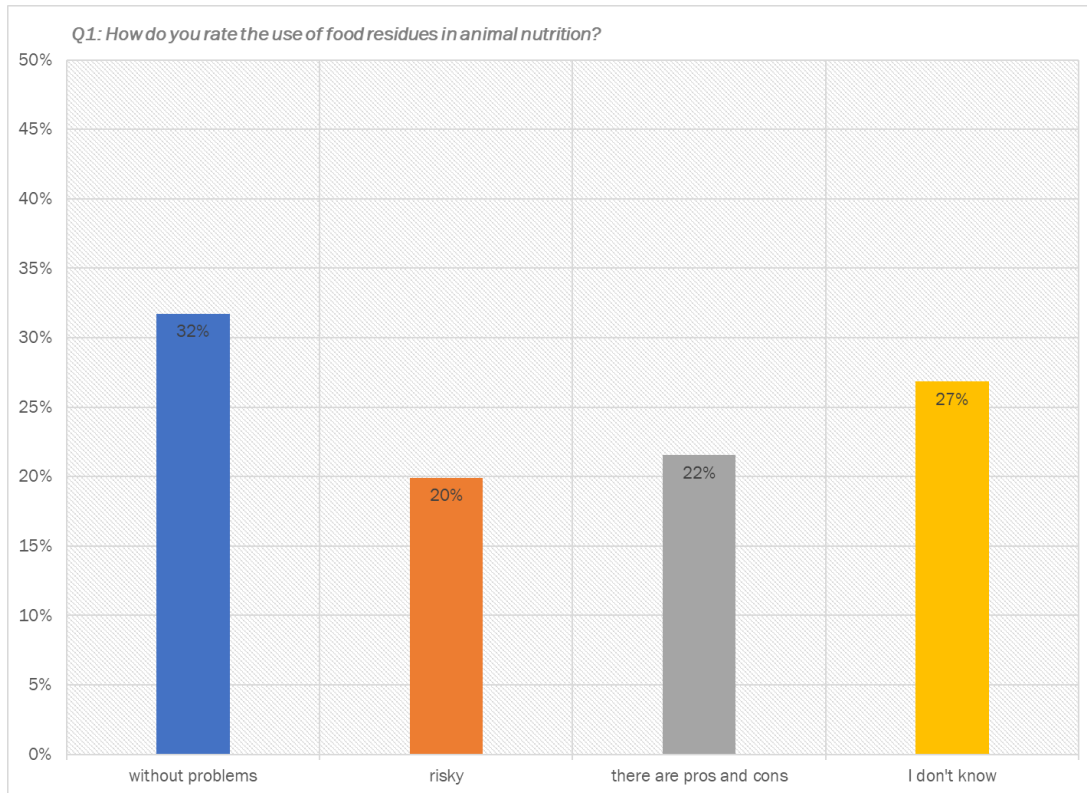
Number	Question
1	How do you rate the use of food residues in animal nutrition?
2	Which animal species could you imagine receiving food residues as a component of animal feed?
3	How do you rate the use of food residues as a component of animal feed in the context of environmental protection?
4	Would you buy a commercial petfood, which includes food residues, for your dog/cat?
5	Would you buy meat or other products (e.g., eggs, milk products) from farms animals, which receive food residues as a component of animal feed?
6	Which type of food residues could you imagine to be a component of animal feed?
7	How do you rate the hygiene of animal feed which includes food residues?
8	At the moment, the food residues are exclusively collected in hotels. Could you imagine also other sources of supply?
9	Do you have a pet?
10	Do you eat meat or other animal- derived products?
11	Do you think that we waste too much food?

The questionnaire was completed by 246 consumers in total, from which the 16% owns a dog, the 15% a cat, while the majority (64%) does not own a pet. Also, almost all the participants (98%) follow a non-vegetarian/ non-vegan diet, meaning that they do consume meat and animal products such as milk and eggs.

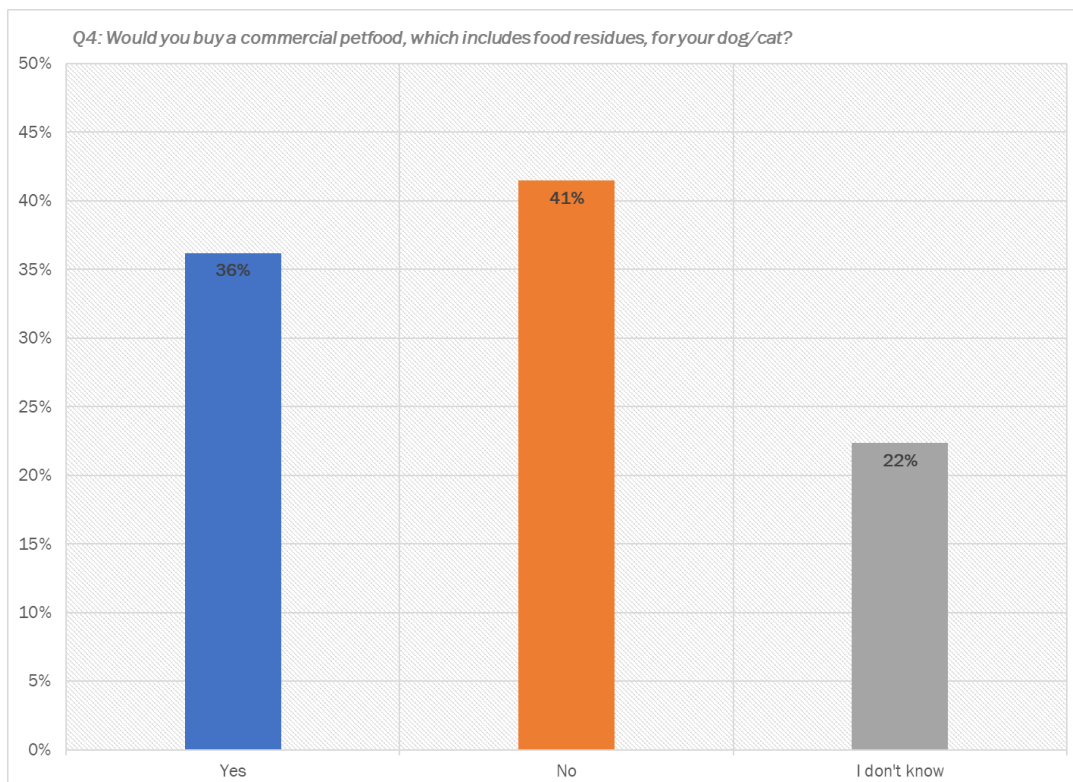
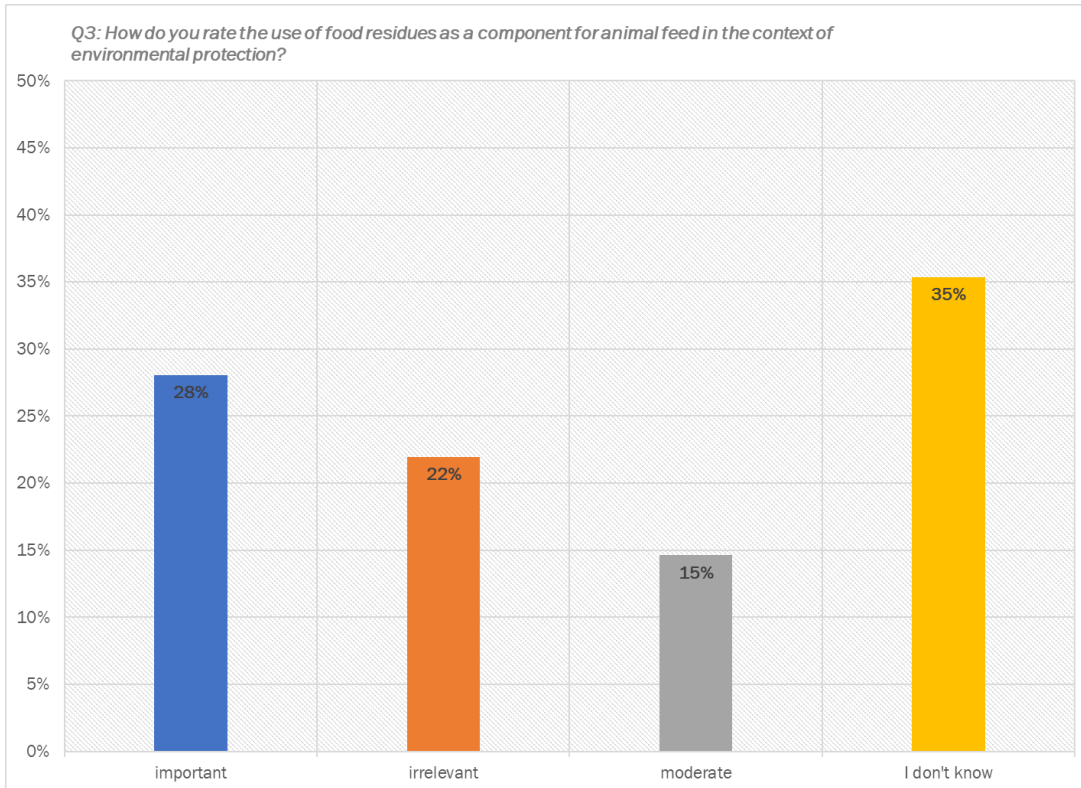
1.2 CALCULATIONS

The evaluation of the questionnaire was carried out for all returns (n=246) and the answers (%) were related to the total amount of questionnaires

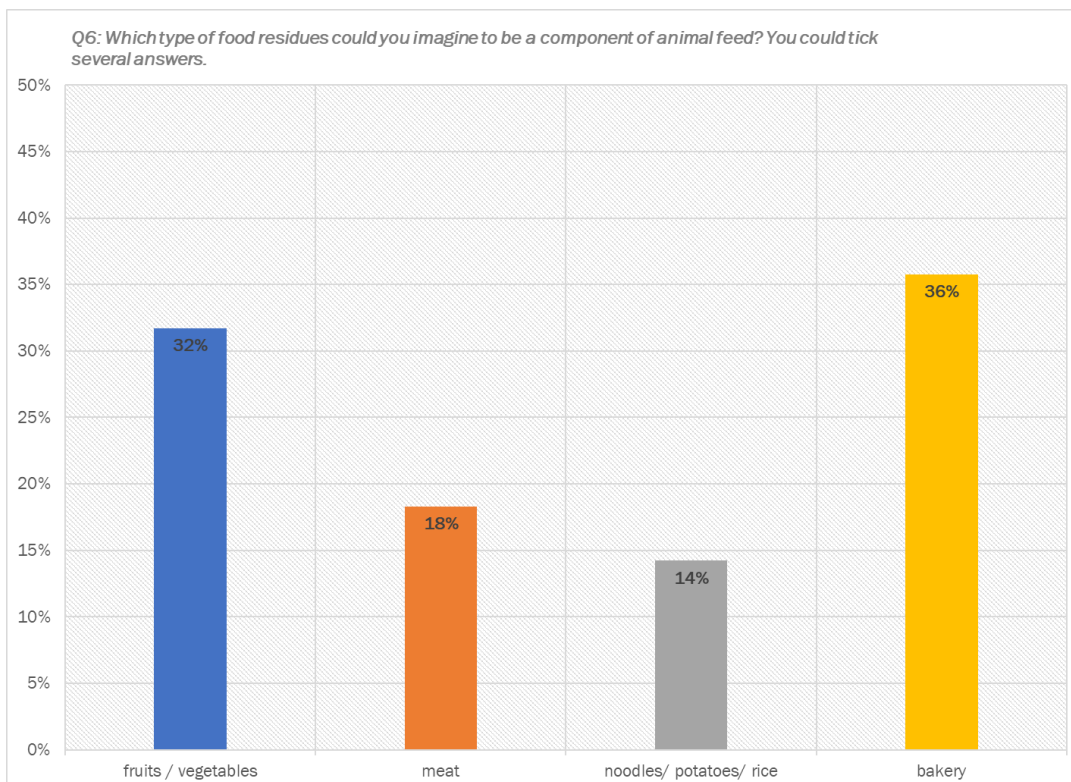
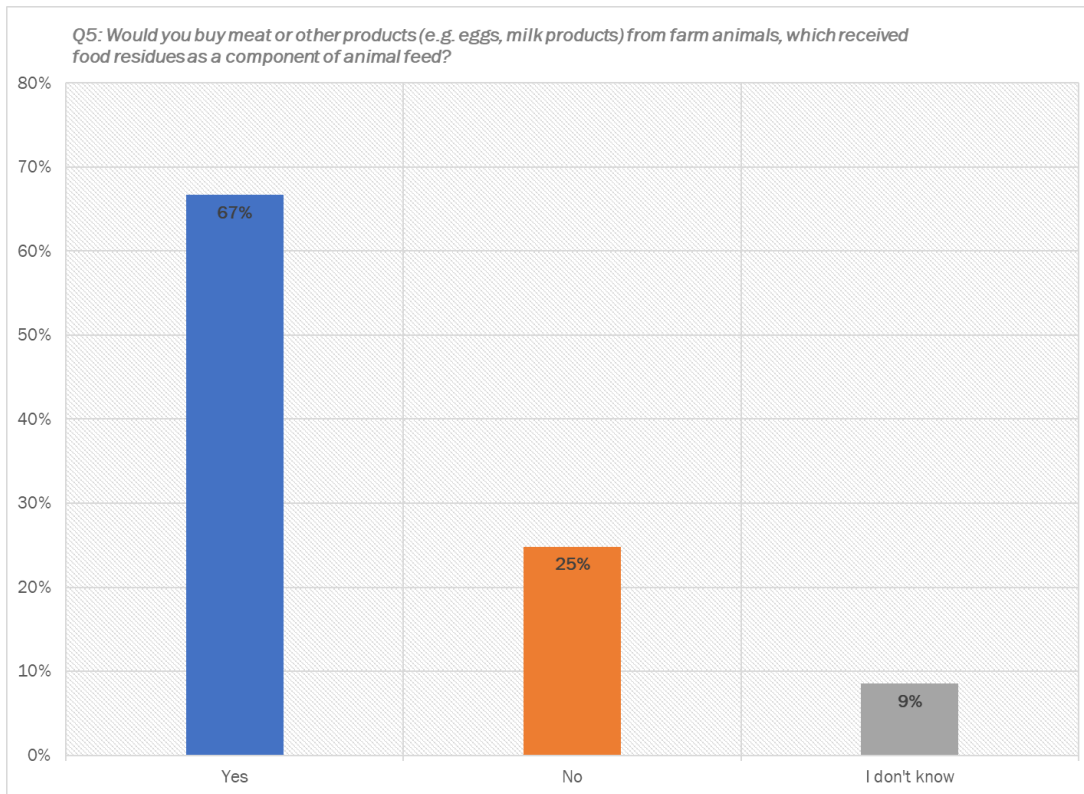
2 RESULTS



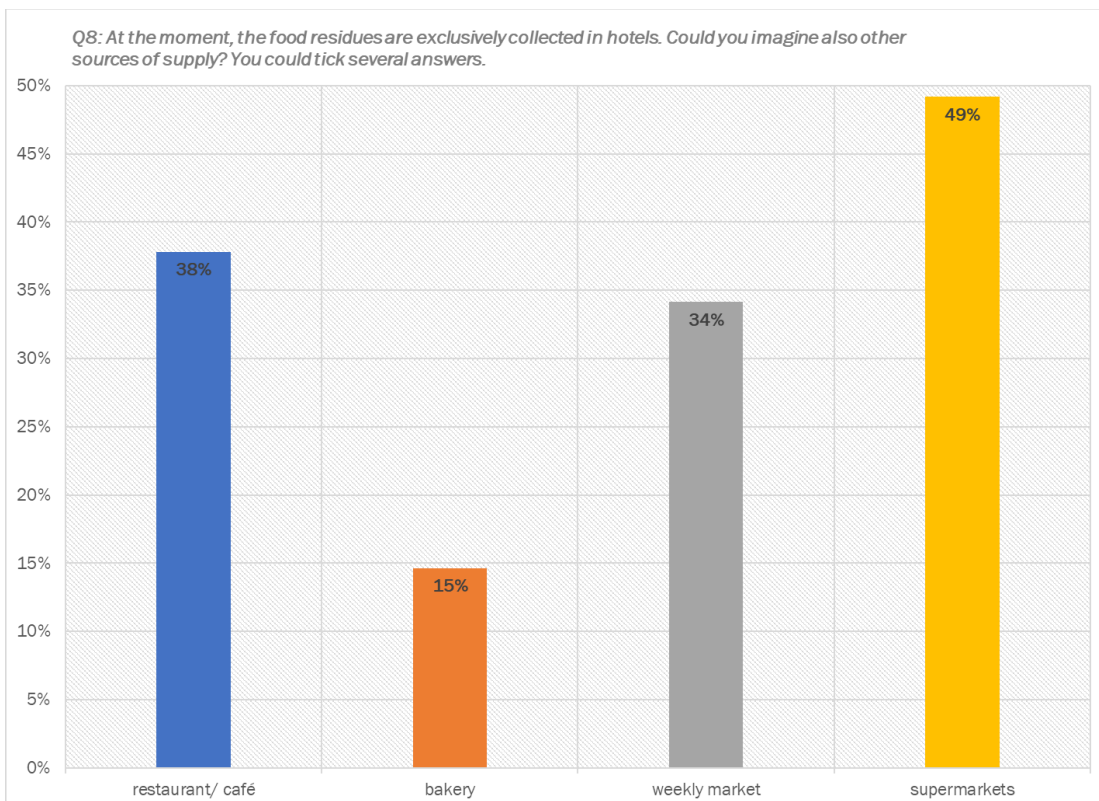
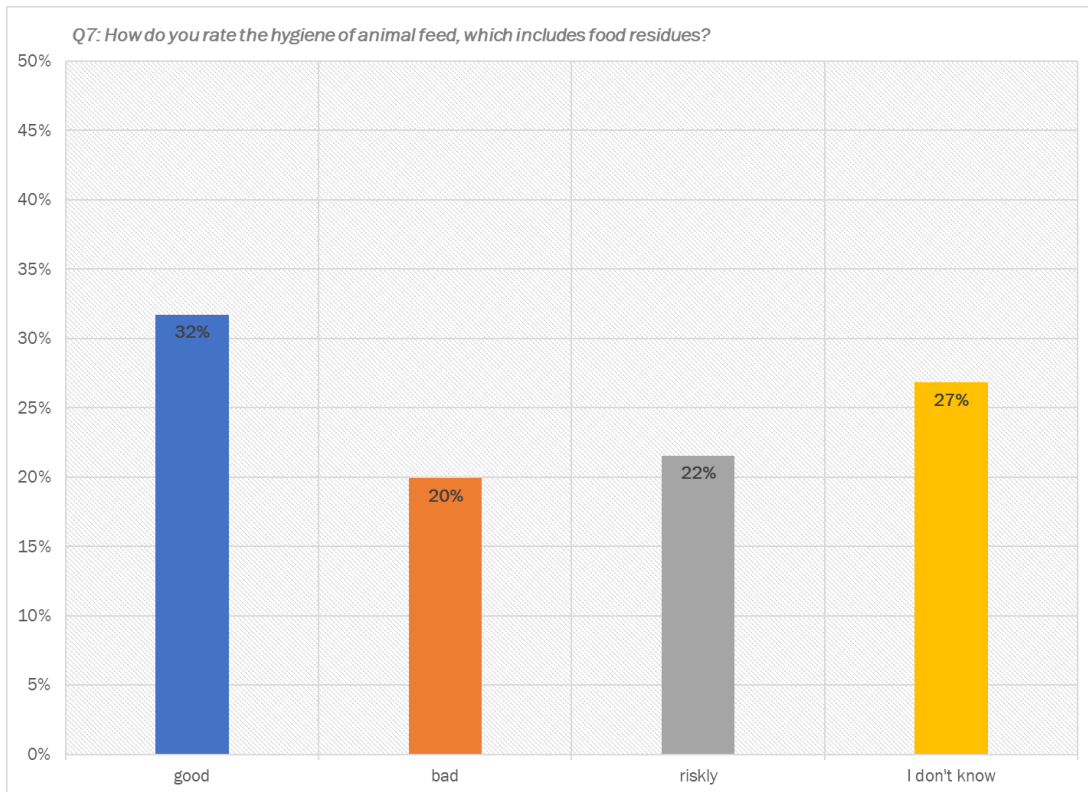
B6.1. Customer survey regarding pet food



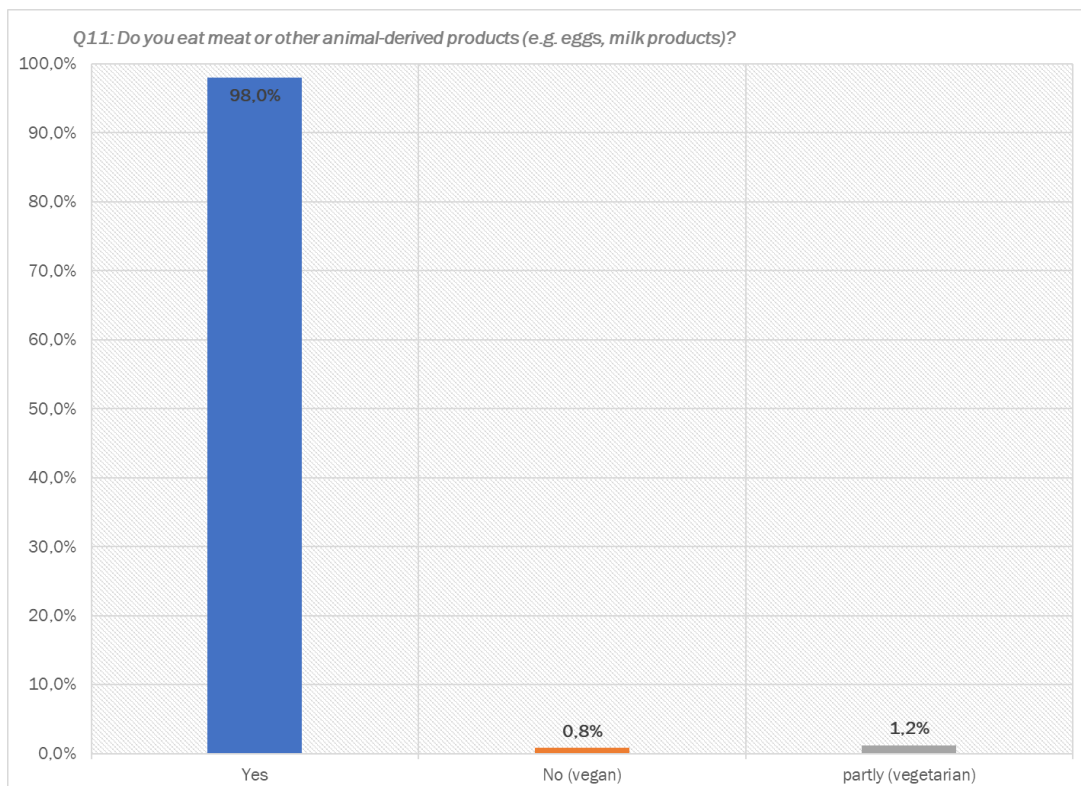
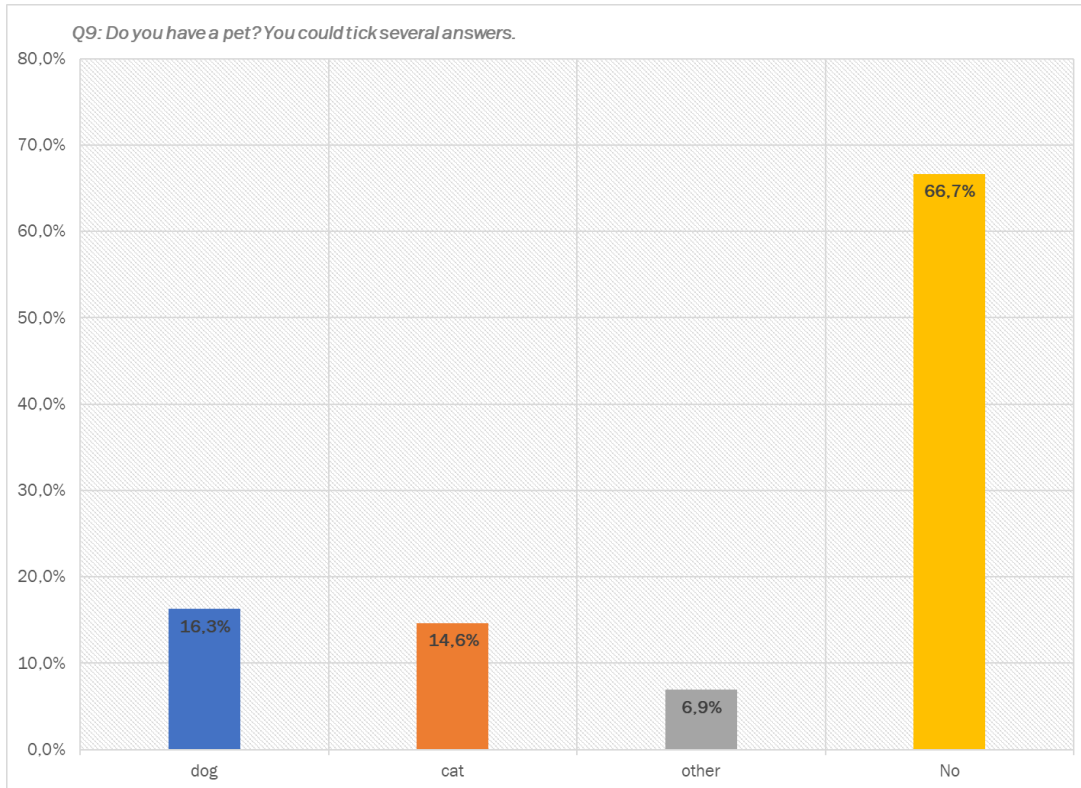
B6.1. Customer survey regarding pet food



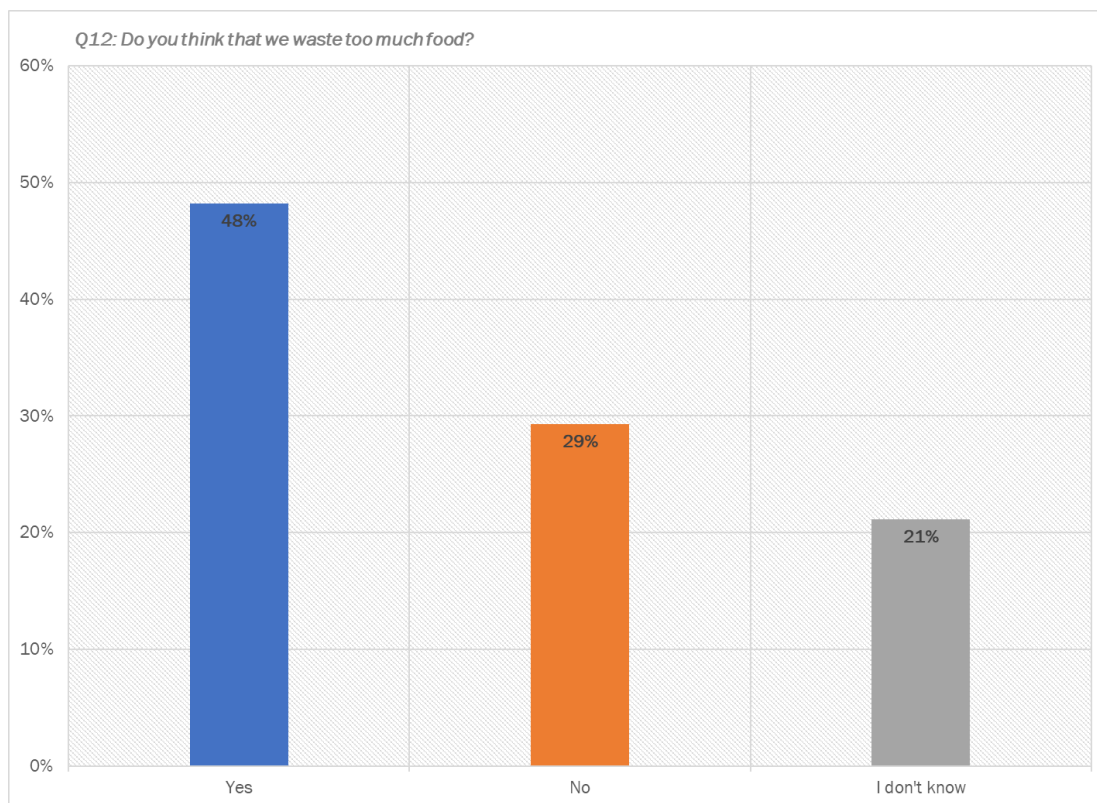
B6.1. Customer survey regarding pet food



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3 INTERPRETATION AND DISCUSSION

A significant number of respondents, 42% are sceptical towards the use of food residues in animal nutrition as they consider it either “risky” or “with pros and cons”. Only a 32% is positive, characterising it as “without problems”. There is also a relatively high percentage (27%) that expressed their ignorance about the issue, choosing the answer “I don’t know”.

Nevertheless, the majority (50%) believes that the most adequate animal to receive such a feed product is the pig, while 28% referred to cats and dogs, 19% to poultry and 17% to fur-bearing animals (Question 1). Fur-bearing animals and the pets, amount for 45%.

Regardless of this, 41% would not buy such a petfood for their dog or cat, yet there is an indecisive 22%. Hence, only the 36% would for sure buy this product for their pets (Question 4).

The answer to this question can be interpreted with the view people have on the hygiene of the feed that includes food waste; more specifically, 42% of the participants claim that the hygiene of the product seems “bad” or “risky” (question 7), meaning that they do not find appropriate for use, or they just do not trust the safety of the product. Again, only the 32% considers it good, while the 27% answered “I don’t know”.

However, when asked if they would buy meat or other products from farm animals that receive food residues as a component of animal feed, the larger part of the participants (67%) answered “yes”, which indicates that they would buy products produced by animals that consume such feed.

The 31% of the respondents, are own at least one pet (dog or cat). Only the 28% of these actual pet owners would buy a commercial pet food, which includes food residues (Figure 1), which corresponds to the 8,5% of all the respondents.

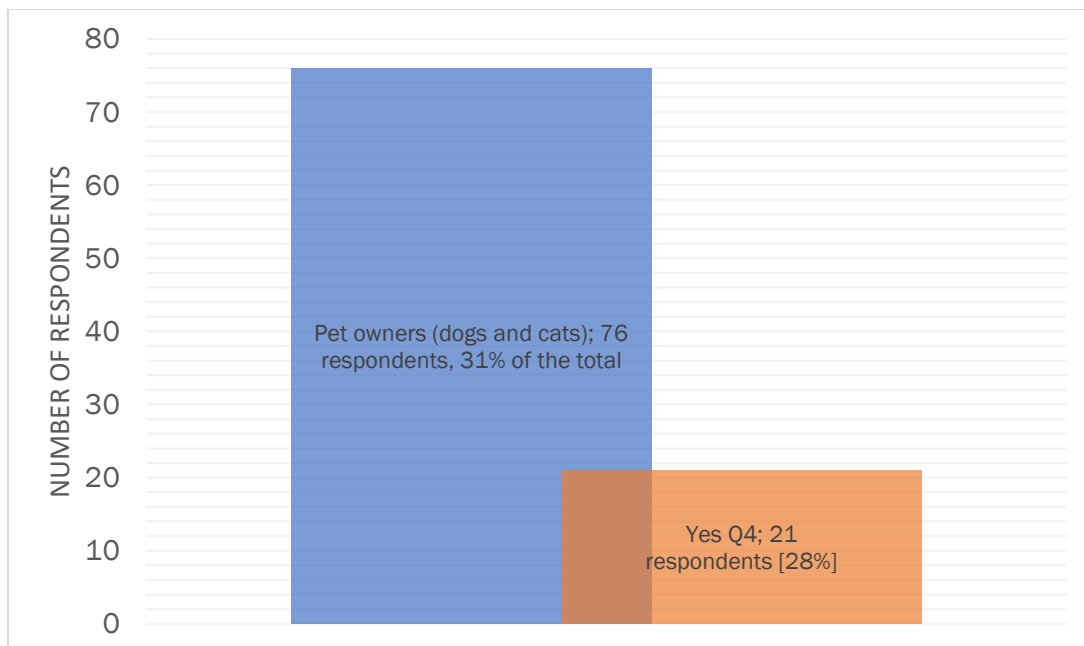


Figure 1. The percentage of actual pet owners (dog and cats) that would you buy a commercial petfood, which includes food residues.

Regarding the food waste that is used as a component for the animal feed, most participants 36% suggest the bakery products, followed by fruits and vegetables, 32%, who believe are primarily used. Additionally,

18% chose the option "meat" and 14% thinks that the components are products such as noodles, rice, and potatoes.

When asked about the source of the food waste provided for the feed production, the participants think that supermarkets should also be a source (36%), followed by restaurants and cafes (28%), weekly vegetable and fruit market (25%) and bakeries (11%).

Finally, at the question related to the amount of generated food waste, 48% of the respondents agreed that too much food is wasted, the 29% disagreed by answering "No", while the 21% expressed their ignorance about this issue. However, it did not appear that the answer in this question poses any relevance to the rest of views of the participants in relation to the answers to the questionnaire.

APPENDIX I: DIAGNOSTIC SURVEY QUESTIONNAIRE



ΕΡΩΤΗΜΑΤΟΛΟΓΙΟ ΔΙΑΓΝΩΣΤΙΚΗΣ ΕΡΕΥΝΑΣ

LIFE15 ENV/GR/000257
LIFE-F4F (Food for Feed)

Το ερωτηματολόγιο που ακολουθεί, εκπονήθηκε στο πλαίσιο του ευρωπαϊκού προγράμματος LIFE: «Food for Feed: An Innovative Process for Transforming Hotels' Food Wastes into Animal Feed». (Καινοτόμος Διεργασία για τη Μετατροπή των Ξενοδοχειακών Αποβλήτων Τροφών σε Ζωοτροφή, LIFE-F4F).

Στο πρόγραμμα αυτό συμμετέχουν ο Ενιαίος Σύνδεσμος Διαχείρισης Απορριμμάτων Κρήτης (Ε.Σ.Δ.Α.Κ.), το Γεωπονικό Πανεπιστήμιο Αθηνών, το Χαροκόπειο Πανεπιστήμιο, το Freie Universität Berlin (Ελεύθερο Πανεπιστήμιο του Βερολίνου) και το Τεχνολογικό Εκπαιδευτικό Ίδρυμα (ΤΕΙ) Κρήτης (σήμερα, Ελληνικό Μεσογειακό Πανεπιστήμιο).

Το έργο (project) **Food4feed**, που χρηματοδοτείται από την Ευρωπαϊκή Ένωση (LIFE15 ENV/GR/000257), έχει ως κύριο στόχο την αξιοποίηση υπολειμμάτων τροφίμων από καταστήματα μαζικής εστίασης (ξενοδοχεία, εστιατόρια) για παραγωγή ζωοτροφής που προορίζεται για διατροφή ζώων συντροφιάς (σκύλοι, γάτες), γουνοφόρων και ενδεχομένως παραγωγικών μονογαστρικών (χοίροι, πτηνά) στο μέλλον.

Το έργο υλοποιείται στην Κρήτη, όπου συλλέγονται τα υπολείμματα τροφίμων (λαχανικά, φρούτα, ζυμαρικά, ψωμιά, γλυκά, τυριά, λίπη, έλαια, κρέατα) από κάποιες μεγάλες ξενοδοχειακές μονάδες και μεταφέρονται στις εγκαταστάσεις του έργου για διαλογή, έλεγχο (ως προς τη σύνθεση, χημική σύσταση, μικροβιακό φορτίο, μυκοτοξίνες, αντιδραστικούς παράγοντες κ.ά.) και ξήρανση σε ειδική κατασκευή με αξιοποίηση της ηλιακής ενέργειας (φωτοβολταϊκά).

Το υλικό (προϊόν) που προκύπτει είναι πλούσιο σε πρωτεΐνες και λιπαρές ουσίες (περί το 22% και 24% σε ξηρή βάση αντίστοιχα) και είναι απόλυτα ασφαλές για διατροφή συγκεκριμένων ειδών ζώων σύμφωνα με την ισχύουσα νομοθεσία.

Γενικότερα, τα υπολείμματα αυτά ανέρχονται σε χιλιάδες τόνους και αποτελούν άριστη πηγή ενέργειας, πρωτεϊνών και λοιπών θρεπτικών συστατικών για διατροφή των ζώων. Με το έργο αυτό, στα πλαίσια της κυκλικής οικονομίας, θα αξιοποιηθούν με ασφάλεια και θα περιοριστεί η επιβάρυνση του περιβάλλοντος που γίνεται με την απόρριψή τους.

Στο πλαίσιο ολοκλήρωσης του έργου θα ενδιαφερόμασταν για την γνώμη των πολιτών (καταναλωτών, σχετικών επαγγελματιών και επιχειρηματιών κ.ά.) όσον αφορά στην ιδέα και στον στόχο του έργου. Παρακαλούμε λοιπόν όπως διαθέσετε λίγο από τον χρόνο σας για τη συμπλήρωση του ακόλουθου ερωτηματολογίου.

Η ερευνητική ομάδα του **Food4feed**

1) Πως βαθμολογείτε τη χρησιμοποίηση των υπολειμμάτων τροφών στη διατροφή των ζώων?

χωρίς προβλήματα επικίνδυνη έχει θετικά και αρνητικά δε γνωρίζω

2) Ποια είδη ζώων φαντάζεστε ότι θα μπορούσαν να καταναλώσουν τροφή στην οποία έχουν χρησιμοποιηθεί υπολείμματα τροφών από ξενοδοχεία; (Μπορείτε να δώσετε περισσότερες της μίας απαντήσεις)

Μπορείτε να δώσετε περισσότερες της μίας απαντήσεις

γάτες και σκύλοι χοίροι γουνοφόρα ζώα πτηνά

3) Πως βαθμολογείτε τη χρησιμοποίηση των υπολειμμάτων τροφών των ξενοδοχείων στα σιτηρέσια των ζώων λαμβάνοντας υπόψη την προστασία του περιβάλλοντος;

σημαντική άσχετη μέτρια δεν γνωρίζω

4) Θα αγοράζατε μια εμπορική τροφή για κατοικίδια συντροφιάς (γάτες- σκύλους) που περιέχει υπολείμματα τροφών για το κατοικίδιο σας;

ναι όχι δεν γνωρίζω

5) Θα αγοράζατε προϊόντα ζωικής προέλευσης (π.χ. κρέας, αυγά, γαλακτοκομικά) από μια κτηνοτροφική μονάδα στην οποία τα ζώα διατρέφονται με σιτηρέσιο στο οποίο συμμετέχουν υπολείμματα τροφών ξενοδοχείων;

ναι όχι δεν γνωρίζω

6) Ποιο είδος υπολειμμάτων φαντάζεστε ότι θα μπορούσε να χρησιμοποιηθεί στα σιτηρέσια των ζώων; (Μπορείτε να δώσετε περισσότερες της μίας απαντήσεις)

φρούτα και λαχανικά κρέας ζυμαρικά, πατάτες, ρύζι ψωμιά, μπισκότα

7) Πως βαθμολογείτε την υγιεινή των ζωοτροφών που περιέχουν υπολείμματα τροφών ξενοδοχείων;

καλή κακή επικίνδυνη δεν γνωρίζω

8) Προς το παρόν συλλέγονται υπολείμματα τροφών αποκλειστικά μόνο από ξενοδοχεία. Μπορείτε να φανταστείτε και άλλες πηγές τέτοιων υπολειμμάτων; (Μπορείτε να δώσετε περισσότερες της μίας απαντήσεις)

εστιατόρια, ταβέρνες, καφέ φούρνοι λαϊκές αγορές supermarkets

9) Έχετε κατοικίδια ζώα; (Μπορείτε να δώσετε περισσότερες της μίας απαντήσεις)

σκύλο γάτα άλλα όχι

10) Έχετε εσείς ή η οικογένεια σας κτηνοτροφική μονάδα; (Μπορείτε να δώσετε περισσότερες της μίας απαντήσεις)

πτηνά χοίρους γουνοφόρα ζώα όχι

11) Καταναλώνετε ζωικής προέλευσης κτηνοτροφικά προϊόντα (κρέας, αυγά, γαλακτοκομικά);

ναι όχι (vegan) μερικά (vegetarian)

12) Πιστεύεται ότι σπαταλάμε πολλά τρόφιμα;

B6.1. Customer survey regarding pet food

ναι όχι δεν γνωρίζω

13) Θα αποφασίζατε να χρησιμοποιήσετε τα υπολείμματα τροφής των ξενοδοχείων ως συστατικό τροφής για κατοικίδια ζώα (γάτες-σκύλους); (Μόνο για βιομηχανίες παραγωγής pet food).

ναι όχι δεν γνωρίζω

14) Θα αποφασίζατε να χρησιμοποιήσετε τα υπολείμματα τροφής των ξενοδοχείων ως συστατικό ζωοτροφών για παραγωγικά ζώα (π.χ. χοίρους -πτηνά); (μόνο για βιομηχανίες ζωοτροφών).

ναι όχι δεν γνωρίζω