

Companion Animal Feeding Working Group (CAFWG):

Meeting 2 – Nutritional requirements for cats and dogs in health (including lifestage) and disease

Monday 24 April 11am

Attendees

- Sally Everitt (Chair)
- Anna Judson (BVA Junior Vice President)
- Marge Chandler (BSAVA)/Speaker
- Alex Taylor (BVNA representative)
- Andrew Prentiss (Vet Sustain)
- Dan Makin (Veterinary Surgeon and Practice Owner, Vets4Pets)
- Mike Jessop (VPHA)
- Alison Ramsay (BVA Head of Policy and Public Affairs)
- Vera Cottrell (BVA Policy & Public Affairs Manager)

Apologies

- Calum McIntyre (Policy Committee representative)
- Megan Cooper (EWAP representative)
- Georgia Woods-Lee (Weight Management Clinic Nurse at the University of Liverpool)
- Taranjit Dhansay (FSA)

1. Welcome, introductions and apologies for absence

The chair welcomed members to the second meeting and noted apologies from J Shotton, C McIntyre, G Woods-Lee and M Cooper.

It was confirmed that a page will be set up on the BVA website where information about the work of the group will be made available including the membership of the group and it was confirmed that all attendees were happy with their names being made public.

2. Minutes from previous meeting

The group approved the minutes as an accurate record of the previous meeting. It was noted that shorter minutes would be produced going forward and that a themes document would be produced.

3. Overview of dietary requirements

M. Chandler delivered a presentation to provide an overview of dietary requirements of cats and dogs. The following summarises the key points raised:

Recognised nutritional lifestages in cats and dogs:

- Reproduction (gestation and lactation), there are hardly any products specifically marketed for this stage
- Growth for puppy and kitten stage but also used for reproduction stage
- Adult

- Senior or geriatric **is a** recognised lifestage by ISFM but not **as** a nutritional lifestage. Nutritional requirements of older animals tend to be more individual than those of adults. It was agreed that senior was a marketing term used by the pet food industry with no clearly defined clinical meaning but that geriatric was different and tended to involve different dietary requirements.
- Obesity and conditions requiring therapeutic diets are also not considered as lifestages.
- It was agreed that the document should also consider health stages and risk factors which would include neutered as well as individual conditions and senior age.

Official Nutritional Guidelines

- The underlying guidelines are the **FEDIAF** nutritional guidelines for complete and complementary pet food for cats and dogs:
<https://europeanpetfood.org/wp-content/uploads/2022/03/Updated-Nutritional-Guidelines.pdf>. The guidelines are open access and updated regularly.
- FEDIAF nutrient tables set out minimum recommended allowances **not** minimum requirements or optimal intake levels which would vary between different individuals.
- The recommendations are based on the requirements of healthy pets. The US based National Research Council (NRC) sets absolute minimum levels for nutrients which are based on purified diets. FEDIAF recommended allowances include a safety margin above the minimum NRC levels. This is done to take account of changes due to processing, nutrient interaction, variability in ingredients which result in altered nutrient levels as pets are not fed purified diets.
- Specific guidelines for complementary food are not included as those do not need to meet nutritional requirements.
- **AAFCO** (Association of American Feed Control Officials) guidelines are used widely in the Americas and other parts of the world. They are updated less frequently.
- It is recommended that companies choose the guidelines to comply with based on the territories they wish to trade in.
- Products should be validated by chemical nutrient analysis but this cannot be mandated. Recommendations are based on assumptions:
 - 15kg dog
 - 4kg cat
- FEDIAF guidance contains a mandatory legal maximum for some nutrients which apply to all life-stages and all animals based on the highest level that is not harmful. That level will have been determined by testing carried out in at least two controlled studies. The legal basis for this is the Community Register for feed additives pursuant to Regulation 1831/2003/EC (<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32003R1831>)

Commented [VC1]: Checking for accuracy.

Formulating or evaluating diets for adequacy

- Formulation is carried out by computer analysis, followed by chemical analysis to confirm that the actual product conforms to the **formula**.
- AAFCO sets out feeding protocols for testing diets (FEDIAF does not) with a required timeframe of 6-months for adult diets. It was raised whether a 6-months trial is long enough.
- Longer term trials, including lifetime trials, are conducted by larger pet food companies if they have their own cat or dog colonies.

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Testing pet foods

- Larger companies have their own research and testing facilities, the service is also provided by private research companies. FEDIAF does not carry out testing. The AAFCO testing protocol trials require:
 - Full veterinary exam
 - Some blood tests
- Subjects of food trials are fit, healthy, colonised kennel dogs under the age of 5 and exercised to recognized welfare standards. They are usually neutered but trials can be carried out on intact animals.
- Assessment criteria for the trials: the animal cannot lose weight if fed at the recommended feeding level. It was noted that this can be a contributing factor to obesity as the feeding recommendations focus on the requirement of the average pet without adjusting for size.
- The adequacy of food trials was raised both in terms of the number of animals involved and the length of time.
- The topic of owner reported diet studies was discussed and the following issues were raised:
 - Selective recruitment
 - Self-selection of owners
 - Participant bias (using specific fora to collect feedback)
 - Desirability bias (people say what they think is the desired answer)
 - Recall bias
- The misnaming of diets was raised so they did not fulfill the criteria of the study ie the food was not actually vegan.

Therapeutic diets (the group will use the term PARNUTS to describe therapeutic diets)

- Larger companies will carry out longer tests as well as research trials on their therapeutic diets. They will often be tested against control diets or an already marketed version. Initial testing takes place either in-house or is outsourced. It can then be rolled out to owner participation to test acceptance in the wider pet population. University studies can also form part of the testing process and are carried out on a randomised, blinded, placebo-controlled basis. Results will be published irrespective of results. The requirement for a therapeutic diet is the most common reason why the advice of a clinical nutritionist is sought.
- The use of terminology around therapeutic and prescription to describe diets was discussed and it was noted that there is a risk that owners think of them as more of a medical treatment than they actually are.
- It was noted that there are regulations in place making it illegal for manufacturers to claim that the diet can diagnose treat or prevent disease. The term therapeutic is not used on packaging but is used by vets to describe such diets.
- It was agreed that the term 'food for particular nutritional purposes' would be used by the working group to describe such diets. Add references Regulation 767/2009 establishes also the rules for the marketing of "dietetic" feed (feed for particular nutritional purposes). The list with the authorised intended uses for dietetic feed for pets and farmed animals can be found in [Regulation \(EU\) 2020/354](#)

TYPES of pet food

- Commercial complete

- Cooked
 - Dry
 - Wet
 - Moist
 - Raw
 - Vegetarian/Vegan
 - Commercial complementary
 - Treats
 - Mixers (not common anymore, required the addition of meat)
 - Home made
 - Cooked
 - Raw
 - Vegetarian vegan
- It was noted that there has been an increased interest in food labelled 'natural' and 'organic' food due to pet owners' concerns about additives, preservatives and contaminants in commercial 'processed' food. The following issues with the usage of the terms were discussed:
- i. Natural: The use of the term is not regulated so it can be used on any pet food, however members of the UK industry body UK Pet Food should to comply with the FEDIAF definition:
"The term "natural" should be used only to describe pet food components (derived from plant, animal, micro-organism or minerals) to which nothing has been added and which have been subjected only to such physical processing as to make them suitable for pet food production and maintaining the natural composition."
 - ii. Organic: the legal definition of organic varies between countries.
- It was noted that the way human and pet food is processed is not the same but concerns about the negative impact of processed food on human health is applied to pet food.
- It was discussed that the increase in sales of vegan and vegetarian diets is driven by a number of factors including desire to mirror own lifestyle and make pet food more sustainable.

HOME MADE DIETS

- It was noted that home-made diets carry a risk of deficiencies as well as excesses, based on analysis of recipes published online or in books. Calcium deficiency was highlighted as an area of particular concern. A website is available providing guidance on how to create a balanced diets: <https://balance.it/>
- There was a risk of increased incidences of salmonella, campylobacter, TB, e-coli, Toxoplasma in raw diets.
- The inclusion of bones posed a risk to teeth and injury to the gastrointestinal tract.
- It was noted that there is no evidence that chewing bones prevents periodontal disease. The cleaning off of tartar or calculus as a result of chewing bones does not decrease the risk of periodontitis. However, they do have a visual effect on the teeth making them look cleaner and leaving owners with the incorrect impression that their dog does not have teeth issues.

RAW DIETS

- Raw diets consist of bones and raw food. Risks posed by homemade raw diets consist of nutritional deficiencies, excesses, imbalances and incompleteness similar to cooked homemade diets but the issues are usually exacerbated. Product testing of commercially available foods has

shown that they very often do not fulfill what they say they are in a computer analysis. There are few, if any results of appropriate feeding trials available.

- Additional risks associated with raw feeding include increased incidence of salmonella, campylobacter, listeria and other food poisoning.
- It was noted that there is a general misconception that freezing kills most bacteria. Freezing is a common form of storage for bacteria used in research in microbiology labs.
- The following resources for advice on raw feeding were highlighted:
 - https://wsava.org/wp-content/uploads/2021/04/Raw-Meat-Based-Diets-for-Pets_WSAVA-Global-Nutrition-Toolkit.pdf
 - <https://www.ukpetfood.org/resource/raw-feeding-factsheet.html>
 - https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/786038/Raw_pet_food_safety_poster.pdf
- Challenges around the safe removal of bacteria from preparation area and implements used for feeding dogs were discussed and the following information on removing bacteria from bowls made of different types of materials and the effect of different types of cleaning methods was highlighted:
 - <https://www.wormsandgermsblog.com/files/2008/04/M2-Raw-Meat-Owner1.pdf>
 - <https://www.wormsandgermsblog.com/2022/07/articles/animals/dogs/raw-diets-and-shedding-of-antimicrobial-resistant-bacteria-in-dogs/>

VEGAN/VEGETARIAN DIETS

- It was discussed that it is possible to formulate a vegan/vegetarian diet for dogs but that nutrient interaction is more challenging to work out.
- It was noted that it is currently not possible to formulate a complete vegan/vegetarian diet for cats and that a knowledge gap remains with regard to the effect of nutrient interaction

HYDROLYSED/NOVEL PROTEIN/LIMITED INGREDIENT DIETS

- Those types of diets are used for suspected dietary sensitivities. It was noted that the use of the term hypoallergenic is not regulated. The idea of hypoallergenic is a single protein and carbohydrate source which have not been previously fed.
- Factories need to be cleaned between production runs otherwise there is a risk of cross-contamination
- Lack of experience in using some less traditional meats in pet food makes it more difficult to assess whether the diet is meeting nutrient requirements of the animal.
- For correct assessment of food sensitivities a good diet history is required including snacks and treats as well as medication and the format they are fed in eg gelatine capsules
- Animals can stay on the diets long-term, they are complete and balanced.
- It was noted that only limited research is available on insect protein and that FEDIAF is preparing white paper on insect protein. The following review paper was noted as a potential source of information:
 - <https://www.wageningenacademic.com/doi/epdf/10.3920/JIFF2020.0084?role=tab>
 -

GRAIN FREE DIETS

- It was confirmed that dogs can digest cooked grain and that gluten intolerance is uncommon in dogs and cats. The diets are not carbohydrate free as other sources will be used in form of pulses and potatoes.
- Grain free diets have been linked to incidences of canine dilated cardiomyopathy (DCM) which may be associated with high levels of lentil and peas in the diet.
- Many dogs on grain free diet have also confirmed low blood taurine levels.
- low carbohydrate diets are high in fat or protein and that high fat diets in particular can cause health issues.

FOODS FOR PARTICULAR NUTRITIONAL PURPOSE (PARNUTS)

- They can satisfy a particular nutritional purpose by:
 - Particular composition
 - Particular method of production, and
 - Are easily distinguishable from ordinary feed or medicated feed
- Can only be marketed as such if its intended use is included in the list of intended uses and if it meets the essential nutritional characteristics for the respective particular nutritional purpose set forth in that list.
- Some Parnuts foods are restricted in nutrients and do not comply with FEDIAF nutritional guidelines for a complete food.
- There is no regulatory requirement to have the diet prescribed by a vet.

SUSTAINABILITY

- It was noted that protein content in pet food has increased over time and that reducing meat in mainstream diets offered an opportunity to improve sustainability. It was agreed that most animals do not require an extremely high protein diet but that there were some clinical reasons for feeding diets with increased protein content.
- It was noted that meat used in pet food production was mainly a by-product from unused products from the human food industry and that the alternative was to incinerate the product or send it to landfill. Some of it will be used in fertilizer production.
- The issue of mis-selling of high protein food for working dog was raised. It was noted that this was driven by the applied VAT exemption.
- The role of breeders in influencing diet choice was discussed.
- The role of overfeeding in terms of cost was raised and it was highlighted that feeding the right amount of food saved money both in terms of the cost of pet food as well as potential future veterinary treatment resulting from the effects of overfeeding.

CONCLUSIONS AND NEXT STEPS

- It was discussed that the groups should give consideration to the benefits of setting up a UK pet food reporting system for adverse events related to pet food.
- The benefits of compulsory calorie labelling for all dog and cat food were discussed and it was noted that this requirement currently only applied to weight loss diets.
- The issue of the best sources of evidence was discussed and it was highlighted that even some nutritional deficiencies could take a significant amount of time before they became apparent. The issue of lack of meta-analysis and repeat studies in veterinary studies was raised.

- The lack of recorded diet histories was identified as a problem and the benefits of a standardised way of recording diet information provided by pet owners were discussed. It was acknowledged that owners often don't know what they were feeding.
- It was agreed that a key focus for the group was the production of myth-busting documents aimed at owners as well as a document with resources aimed at veterinary staff and it was agreed that a separate thread should be created on glasscubes.
- It was raised that the report should also contain a section on malnutrition and starvation. The lack of science in this area was raised and that obesity science was used in court cases dealing with starvation and neglect. It was agreed that the profession should be encouraged to systematically record weight as well as body condition scores.
- It was agreed that behavioural needs of pets needed to be covered in the group's report.
- It was discussed that the group would consider the relationship between the pet food industry and vets and also the role that the pet food industry plays in providing nutritional CPD and information to the profession.
- It was noted that small animal nutrition teaching is currently not covered in sufficient depth on veterinary school curriculums. It was acknowledged that this had resulted in a gap in information provision which the industry was filling.
- It was agreed that the information and training provided by pet food companies had an important role to play in informing the profession and expanding its knowledge on nutrition.
- The issue of Vet nurses and training and relationship with food companies was raised and it was noted that training provided in college was independent but that additional CPD was sponsored by pet food companies.
- Concern about the availability of research regarding the efficacy of some 'therapeutic' diets was raised. It was also raised that clients were aware of the interconnection between pet food manufacturers and the veterinary profession and raised it when specific diets were being recommended to them.
- It was clarified that all the BVA divisions that had expressed interest in the working group were represented on the working group and that therefore there was no need circulate the scoping document to other divisions to seek their input.
- The sale of pet food by vet practices was debated and it was agreed that the group will highlight the benefits but will also lay out the potential downsides and risks that need to be mitigated.
- It was raised whether nutraceuticals should be discussed by the group. It was agreed that the group's report should include some broad principles but not in-depth analysis due to the complexity of the issue. It was agreed that it was important to clearly define what was food, supplements and nutraceuticals.
- It was noted that Pets at Homes would be approached by the secretariat to discuss whether they would be able to share data with the group.
- It was suggested that the group should consider contacting the major employers group (MAG) to ask for their members' policies on recommending specific pet foods.
- It was agreed that the need for creating a questionnaire to be circulated to pet food manufacturers should only be assessed after the next meeting.
- It was agreed that the group would take a principles-based approach and focus on providing information on the regulation of the products in general rather than individual products.

Actions: Secretariat to

- **contact FSA about regulation of nutraceuticals**
- **create thread on myth-busting on glasscubes**
- **contact Pets at Homes regarding data sharing**

Future Meetings

- It was agreed that Andrew Knight would be invited to speak at the next meeting and to speak on opportunities for decreasing meat content in traditional diets.
- It was agreed that Pet Food UK would be invited to speak at the next meeting about the UK Pet Food market.
- It was agreed that Nick Thompson would be invited to the following meeting.

Action: Secretariat to invite Andrew Knight, UK Pet Food and Nick Thompson.