

At JustFoodForDogs, we are vet-centric, and we pride ourselves on being the most research-focused fresh pet food company. We know that our commitment to nutrition research will advance the industry, and the learnings will translate into better health for your patients and pets across the globe.

THE JOURNAL:

Journal of Animal Science

THE UNIVERSITY:

University of Illinois at Urbana-Champaign
College of Agricultural, Consumer and Environmental Sciences
Department of Animal Sciences and Division of Nutritional Sciences

THE STUDY: Nutrient Digestibility and Fecal Characteristics, Microbiota, and Metabolites in Dogs Fed Human-Grade Foods

THE RESULTS:

The study compared the digestibility of premium dry pet food (Blue Buffalo Chicken and Brown Rice Recipe), fresh feed-grade processed pet food (Freshpet Roasted Meals Tender Chicken Recipe), and human-grade fresh whole food (JustFoodForDogs Chicken & White Rice Recipe and Beef & Russet Potato Recipe). The researchers found that dogs eating human-grade fresh whole food produced 2.0 to 2.9 times (up to 66%) less feces than dogs eating dry pet food. When compared to the feed-grade processed brand, feeding the real whole food resulted in 1.5 to 1.7 times (up to 41%) less feces.

THE ABSTRACT:

Human-grade (HG) pet foods are commercially available, but they have not been well studied. Our objective was to determine the apparent total tract digestibility (ATTD) of HG pet foods and evaluate their effects on fecal characteristics, microbiota, and metabolites, serum metabolites, and hematology of dogs. Twelve dogs (mean age=5.5±1.0; BW=11.6±1.6 kg) were used in a replicated 4×4 Latin square design (n=12/treatment). The diets included: 1) Chicken and Brown Rice Recipe (extruded; Blue Buffalo); 2) Roasted Meals Tender Chicken Recipe (fresh; Freshpet); 3) Beef & Russet Potato Recipe (HG beef; JustFoodForDogs); and 4) Chicken & White Rice Recipe (HG chicken; JustFoodForDogs). Each period consisted of 28 d, with a 6-d diet transition phase, 16 d of consuming 100% of the diet, a 5-d phase for fecal collection, and 1 d for blood collection. All data were analyzed using the Mixed Models procedure of SAS 9.4. Dogs fed the extruded diet required a higher ($P<0.05$) daily food intake (dry matter basis; DMB) to maintain BW. The ATTD of dry matter (DM), organic matter (OM), energy, and acid-hydrolyzed fat (AHF) were greater ($P<0.05$) in dogs fed the HG diets than those fed the fresh diet, and greater ($P<0.05$) in dogs fed the fresh diet than those fed the extruded diet. Crude protein ATTD was lower ($P<0.05$) for dogs fed the extruded diet than those fed all other diets. Dogs fed the extruded diet had

greater ($P < 0.05$) fecal output (as-is; DMB) than dogs fed fresh (1.5-1.7 times greater) or HG foods (2.0-2.9 times greater). There were no differences in fecal pH, scores, and metabolites, but microbiota were affected by diet. Dogs fed HG beef had higher ($P < 0.05$) relative abundance of Bacteroidetes and lower ($P < 0.05$) relative abundance of Firmicutes than dogs fed the fresh or HG chicken diets. The Actinobacteria, Fusobacteria, Proteobacteria, and Spirochaetes phyla were unchanged ($P > 0.05$), but diet modified the relative abundance of nearly 20 bacterial genera. Similar to previous reports, these data demonstrate that the fecal microbiota of dogs fed HG or fresh diets is markedly different than those consuming extruded diets, likely due to ingredient, nutrient, and processing differences. Serum metabolites and hematology was not greatly impacted by diet. In conclusion, the HG pet foods tested resulted in significantly reduced fecal output, were highly digestible, maintained fecal characteristics, serum chemistry, and hematology, and modified the fecal microbiota of dogs.

Link to study: <https://doi.org/10.1093/jas/skab028>