

FEEDER VERTEBRATES - NUTRITIONAL COMPARISONS

(all values on an “as is” basis)

	Moisture ¹	Protein ²	Fat ³	Vitamin A ⁴ (IU/kg)	Vitamin D3 ⁵ (IU/kg)	Vitamin E ⁶ (IU/kg)	Calcium ⁷	Phosphorous ⁸	Metabolizable Energy ⁹ (kcal/g)
Domestic Mouse (neonatal, < 3g)	80.9	12.3	3.2	6,787	NA	10	0.22	NA	0.78
Domestic Mouse (juvenile, 3-10g)	81.8	8.8	5.5	5,622	NA	32	0.27	NA	0.85
Domestic Mouse (adult, >10g)	67.3	18.2	7.7	189,095	NA	33	0.97	0.56	1.42
Chicken (one day old)	74.4	16.6	5.7	9,113	NA	13	0.43	0.31	1.18
Hamster (juvenile)	69.7	15.1	10.5	NA	NA	NA	0.76	0.62	1.55
Guinea Pig (neonatal)	70.9	14.9	12.7	NA	NA	NA	NA	NA	1.74
Guinea Pig (adult, male)	68.7	16.1	14.4	5,166	NA	8	0.94	NA	1.94
Domestic Rabbit (neonatal)	84.6	11.1	2.0	NA	NA	NA	NA	NA	0.62
Domestic Rabbit (adult, dressed carcass)	73.8	17.1	4.1	1,624	NA	NA	1.55	0.90	1.05
Rat (neonatal, <10g)	79.2	12.0	4.9	4,437	NA	98	0.38	NA	0.92
Rat (juvenile, 10-50g)	70.0	16.8	8.3	NA	NA	NA	0.62	NA	1.42
Rat (adult, >50g)	66.1	20.9	11.1	51,321	NA	47	0.89	0.50	1.83

1 - Since all animals need water, the moisture in food is an important source of water. Older feeder animals generally contain less moisture than younger feeder animals.

2 - Proteins are the building blocks of muscle and other tissues. Proteins (and carbohydrates) each contain about 4.0 kcal/g of Metabolizable Energy.

3 - Dietary fat helps in the absorption of vitamins A, D and E, and is a concentrated source of energy (about 9.0 kcal/g of Metabolizable Energy). Animals metabolize fat at a much higher rate than do humans.

4 - Vitamin A is a fat soluble vitamin that is required for healthy skin, mucous membranes, the retina of the eye, muscles, teeth and other tissues. Vitamin A deficiency is probably the second most common contributor to premature reptile and amphibian death.

5 - Reptiles need Vitamin D₃ in order to metabolize calcium. Vitamin D₃ is acquired through the sun's rays, through proper UVB lighting and/or through supplementation. It is interesting to note that chameleons that are fed crickets gut-loaded with this vitamin will spend less time basking.

6 - This fat soluble vitamin is an important anti-oxidant and is essential for proper cell function. As with the other vitamins, there is no scientifically-supported recommended level for this vitamin in the diet of reptiles and amphibians. At this point, it is educated guess-work taken from other species.

7 - Proper Calcium levels are important for bone and tooth growth, heart health and proper metabolic functioning. Calcium deficiency is one of the leading causes of Metabolic Bone Disease and probably the leading cause of premature reptile and amphibian death.

8 - Phosphorous is a chemical element that, combined with Calcium, forms the majority of bone in the body and it is used in nearly all the body's metabolic processes. Too much phosphorous can inhibit the absorption of calcium. Generally speaking, reptiles need a calcium to phosphorous ratio of between 1:1 and 2:1.

9 - Metabolizable Energy (ME) is a combination of the gross energy of the feeder animal + how digestible it is + a factor for metabolizing the nutrients it contains. To illustrate the importance of ME, a 450 gram bearded dragon will need approximately 10.8 kcal/g of energy per day, and a 1200 gram ball python will need approximately 25.8 kcal/g of energy per day.

NA = Not Available/Not Analyzed

Data Sources

Dierenfeld, Alcorn and Jacobsen, 2002. Nutrient Composition of Whole Vertebrate Prey (Excluding Fish) Fed in Zoos. AZA, Nutrition Advisory Group Handbook, 14. Finke, 2002. Energetics of Free-Ranging Mammals, Reptiles and Birds. Annual Review of Nutrition 19:247-278.