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Comparison of commercial diets for the European hedgehog (*Erinaceus europaeus*) with their natural diet

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Introduction. The feeding of wildlife is a world-wide phenomenon, the most widespread and socially accepted example being backyard bird feeding [1]. Commercial feeds for several wildlife species, including hedgehogs (*Erinaceus europaeus*), are widely available in Switzerland. The “Stiftung Wildstation Landshut” is a non-profit wildlife rehabilitation center in Switzerland and often receives these commercial hedgehog diets as donations. The goal of this study was to compare the different commercially available hedgehog diets in Switzerland with the natural diet of the European hedgehog (beetles and other insects, earthworms, snails, eggs and carrion, plant material [2]) and thus evaluate whether these diets are appropriate for hedgehogs.

Animals, material and methods. Three different brands selling commercial hedgehog diets were available in Switzerland. Two brands offered a wet and a dry diet; therefore, a total of 5 products were examined in this study. The ingredients of these products as well as the nutrient composition (as taken from the label) were compared to the natural hedgehog diet [2]. For the dry diets, a dry matter content of 90% was assumed.

Results and discussion. Of the five examined diets, three were labeled as complete feeds and two as compound feeds. In the dry diets, the ingredient occurring the most was cereals (38.8% to 50%), followed by meat and meat by-products or fish and fish by-products (22% to 24%). In the wet diets, the most common ingredient was meat and meat by-products. Only one product (Brand 1 wet) had a crude protein (CP) content comparable to that of the natural diet (Table 1). Overall, the wet products were more similar to the natural diet than the dry products, especially regarding CP and nitrogen-free extract (NfE) content.

The European hedgehog is an insectivore, consuming a diet rich in protein and energy and low in carbohydrates [3]. The use of commercial diets containing high inclusion of cereals is not natural.

Table 1. Declared crude Ash (CA), crude protein (CP), crude fiber (CF), ether extract (EE) and nitrogen-free extracts (NfE) of 5 different commercially available hedgehog diets compared to the natural diet of the European hedgehog. (All dry matter basis)

	Natural diet [2]	Brand 1 dry	Brand 2 dry	Brand 3 dry	Brand 1 wet	Brand 3 wet
CA [%]	5 – 16	7.7	11	8.3	11.1	10
CP [%]	55 – 62	31.1	15.1	33.3	52.8	42.5
CF/Chitin [%]	7 – 12	3.3	4.7	3.3	2.8	3
EE [%]	12 – 20	21.1	27.9	20	30.6	25
NfE [%]	2 – 11	36.8	41.3	35	2.7	19.5

Conclusion. We do not recommend feeding the examined dry diets to European hedgehogs because of their nutritional inadequacy regarding ingredients and analytical constituents. If wet diets are fed, they should be supplemented with a fiber source. The public should be educated about the inappropriateness of commercially available dry hedgehog diets and the feeding thereof to wild hedgehogs.

References: [1] Dubois and Fraser (2013) *Animals*. 3(4): 978-994; [2] Struck and Meyer (1998) *The diet of hedgehogs, basis and practice. (Die Ernährung des Igels, Grundlagen und Praxis.)* Schlütersche GmbH und Co. KG, Hannover; [3] Corriveau (2016) *Hedgehog Medicine*.