

Does digestion rate affect diet selection? A study in *Octodon degus*, a generalist herbivorous rodent

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Dietary chemistry and an animal digestive physiology should be considered in any explanation of behavioral patterns of food use, as both influence dietary preference. In the degu *Octodon degus* (Molina, 1782), a generalist herbivorous rodent inhabiting central Chile, we determine the profitability of natural food-plant items by measuring digestive characteristics, such as retention time and assimilation rate while also considering the effects of food chemistry. Under our experimental conditions, degus seem to select food based on at least two complementary factors, plant nutritional value (water content and the nitrogen: fiber ratio) and digestive function. We found that dry-matter intake was negatively and significantly correlated with mean retention time, that is *O. degus* ate more food when mean retention time was shorter and vice versa. A higher food intake concomitant with a shorter mean retention time, allow degus to process more food per unit time resulting in a higher assimilation