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Área do trabalho: Nutrição e produção de ruminantes

Does water shortage affect or not the weight of organs and blood of goats?

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Access or not to desedentation water is a serious problem in livestock breeding, not understanding what effects of water shortage on goat breeding can undermine the productive efficiency of the activity. Thirty-five castrated male goats, without a defined breed pattern, with an average initial weight of 18.6 + 1.44 kg and 8 months of age were used. The goats were randomly distributed into 5 treatments, consisting of 2 levels of spineless cactus (25% or 55%), each level with or without access to desedentation water, plus a control treatment (cactus-free diet and with access to water). The experiment lasted 90 days. On the day of the slaughter, the animals were weighed, bleed, exfoliated and subsequently eviscerated, all organs and components of the gastrointestinal tract (GIT) being weighed individually. Each constituent of the GIT, was weighed full, immediately after, empty, washed and weighed, obtaining, by difference, the content of GIT. Then the empty body weight (EBW) was obtained and weighing of the organs (lungs, heart, pancreas, spleen, kidneys and liver) and blood was carried out. The variables were subjected to statistical analysis according to entirely random delineation in a 2 x 2 + 1 factor scheme using the SAS 9.1 PROC MIXED. For all assessments the 5% probability level for type I error was considered. There was no interaction between spineless cactus level and whether or not access to water for any of the non-carcass components described above. There was no influence on the weight of lungs, heart, spleen, kidneys and blood for none of the tested treatments with an average of 0.16 kg; 0.08 kg; 0.03 kg; 0.06 kg and 0.73 kg, respectively. The pancreas was heavier in water restricted animals (0.05 kg) compared to those receiving water (0.04 kg). Higher liver weight was observed in goats who received spineless cactus in the diet (0.30 kg) compared to those who did not (0.23 kg). This result can be justified by the high content of non-fibrous carbohydrates in spineless cactus (647.6 g/kg DM), which increases the availability of energy and stimulates greater development of organs directly involved with the metabolism of nutrients, such as the liver. The restriction of water did not influence the blood volume of the animals, interesting result, proving that theyined their blood volume stable even under conditions of absence of desedentation water. It is concluded that water intake influences the weight of the pancreas and liver of goats.

Keywords: non-carcass components, water restriction, semi-arid.

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