

***In vitro* evaluation of wheat straw and alfalfa hay supplemented by different zinc sources**

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Two experiments were performed to investigate the effect of zinc sulfate (ZnS), zinc oxide (ZnO) and zinc methionine (ZnM) on degradability of alfalfa hay and wheat straw. To the syringes one of the following treatments were applied: 1) no added zinc (C), 2) 500 ppm of Zn as ZnS; 3) 500 ppm of Zn as ZnO; 4) 500 ppm of Zn as ZnM. The results indicated there were not significant differences between treatments in term of gas production measurements for wheat straw. In case of alfalfa hay, supplementation of rumen fluid with ZnM significantly ($P < 0.05$) increased gas production after 48 h of incubation. At this stage ZnO had a little effect on gas production. Addition of ZnM led to a faster response of microbial fermentation compared to other Zn sources. However, supplementation with the rumen fluid zinc supplements had no effect on gas production during fermentation of wheat straw probably due to low nitrogen content of wheat straw which can not stimulate a normal microbial growth. Therefore, further works are required with other feedstuffs to identify the interaction between Zn sources and feed characteristics.

Owners' constraints and community perception of urban draught horses in the south of Chile

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In the south of Chile urban draught horses are the main sources of household income for many families. These horses are often perceived as being mistreated and kept in poor conditions. The present study used surveys to obtain information about owners' constraints and community perceptions of these horses. This was to allow understanding of the needs of people that work directly with horses, and those who indirectly coexist with them. All owners ($n=50$) keeping horses were male and for half of them draught horses were their only source of income. The main advantages of having a cart were transporting their goods for free (38%) and flexibility of working hours (18%). Many owners did not see disadvantages (46%) in horse ownership and expenses involved in horse care were only mentioned by 14% of them. Owners' constraints included lack of working opportunities (67%) and lack of Municipal assistance (65%). The community ($n=120$) perceived horses as being mistreated (89%) and a hazard for people when left in green areas (82%), although they see carts as part of the Chilean folklore (78%) and a tourist's attraction (51%). Promotion of owners' organisations would facilitate communication with the Municipality improving their profile in the community. Awareness needs to be generated in the community about the advantages of animal power as a renewable source of energy.