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ANIMAL SCIENCE:

Challenges in Production and Sustainability

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ANIMAL SCIENCE:
CHALLENGES IN PRODUCTION AND SUSTAINABILITY

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Letter from the Chair

Dear Participants

The Brazilian Society of Animal Science (SBZ) started in 1951 a mission to develop livestock in Brazil through new information and exchange of experiences among professionals in the area. In these 70 years, SBZ has done a great job in publishing the results of technical-scientific observations carried out in universities and research centers in Brazil.

Many advances in animal production were registered with the SBZ meetings and publications, and it is known that many were and will be the challenges faced by the Agricultural Sciences area in the coming years. Thus, the theme of the 56th Meeting is "Animal Science: the challenges of production and the sustainability of the planet", and intends to provide an environment for scientific and technical discussions and boost animal productivity in Brazil and, thus, meet increasingly demanding markets.

We also partnered with two other important events: Formuleite and the Symposium on Biometeorology, Ambience, and Animal Behavior and Welfare. Our target audience includes, besides researchers and academics, technical professionals and companies in the area.

In this material, you'll see all the abstracts submitted and approved by our team of collaborators, with the highlights of each research area.

I would like to send a big THANK YOU to the entire team of collaborators and also to all the participants. We are aware of everyone's difficulties in this difficult period that the world is facing. We had to make changes; our event could not take place in the beautiful Ilha da Magia (Florianópolis – SC), but we brought the best in a virtual platform.

Last but not least, I want to express my gratitude to all the sponsors and supporters who contributed to making this meeting a reality.

We now have a lot of work in the hope of better days.

Yours sincerely,

Sandra Carvalho
Chairman of the 56thAnnual Meeting of the Brazilian Society of Animal Science

Methodologies for measuring the dry matter content in samples of different purpose sorghum silages

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In order to guarantee the production of feed for ruminant animals, the dry matter (DM) content determination is very common in laboratories routine. For silage samples, part of the fermentation products can be lost by volatilization, therefore, the correction of the DM content is necessary to obtain the appropriate water content. In Europe, the formula determinated by Weissbach and Strubelt (2008) is widely used to correct this variable in corn and grass silage, since it follows a specific drying method, which is described by these authors, however, in Brazil the main methodology used to determine the content of feed DM is the described by Dettman et al. (2014). Despite this, there are few studies comparing these assessment methods to see whether in Brazil, this methodology can or cannot be used to correct the content of DM in silages. Thus, the goal was to assess whether there is a difference in obtaining the DM content with these two methodologies in sorghum silages samples. The field experiment was developed at Embrapa Agrossilvipastoril, while the analyzes were carried out at the Forragiculture Laboratory of the Federal University of Mato Grosso, Campus Sinop-MT. The design used was a 4x2 factorial, with four types of sorghum (Grain - BRS 373; Forage - BRS 658, Biomass - BRS 716; Sweet - experimental access) and two drying methodologies [Dettman et al. (2014): pre-drying in a forced ventilation oven at 55ºC, for 72 h, to determine the DM content of air-dried sample (ASA) and in an oven at 105ºC, for 16 h, to determine the DM content of the oven dried sample (ASE); Weissbach and Strubelt (2008) where the drying is done in a forced ventilation oven at 60ºC, for 18 h (ASA), and in an oven at 105ºC, for 3 h (ASE)]. The definitive DM content was determined by the multiplication of ASA by ASE for both methodologies. The data obtained were subjected to analysis of variance and the means compared by the LSD test, adopting a probability level of 5%. Regarding ASE, an interaction effect between methodology and type of sorghum was observed. However, for ASA and the definitive DM content, only the effect of sorghum purpose was observed, with higher value for grain sorghum, with 37.78 and 35.64% respectively, and lower for biomass sorghum, with 18.72 and 17.49%, respectively. Forage and sweet sorghum had a definitive DM content of 28.90 and 28.55%, respectively. There was no effect of the methodology on the definitive DM value content for all sorghums. We conclude that we can use the methodology of Dettman et al. (2014) for drying silage samples in Brazil and apply the formula for correcting the DM content for volatile compounds used by Weissbach and Strubelt (2008).

Keywords: Chemical analysis, ensiling, *Sorghum bicolor*

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