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DIETS FOR PREGNANT SOWS BASED ON ROUGHAGE – APPARENT DIGESTIBILITY AND NUTRITIVE VALUE OF WHOLE PLANT SILAGES OF WHEAT AND MAIZE

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Introduction

In modern piggeries roughages have lost their relevance. Recently, advanced liquid feeding systems facilitate to use whole plant silage (WPS) as the basis for pregnant sows. Thus the question was whether the digestibility rate of these silages can be predicted by using the equation based on crude fibre content.

Materials & Methods

Four non-pregnant sows were fed diets on maintenance level, calculated on the metabolic body weight. A basis ration was fed; in the following trials a share of basis ration was substituted by whole plant maize silage (WPMS) resp. whole plant wheat silage (WPWS). After adaptation (14 days) to the silage rations followed the collecting of all residues (7 days). The apparent digestibility (aD) was calculated using the difference method.

Results

The aD of the two WPS was strongly correlated to the XF content. The calculated values of aD of the organic matter (WPWS 52.7%/ WPMS 64.5%) confirmed the expected values (WPWS 52.7%/ WPMS 64.6%), predicted with the regression formula. The other determined nutrients were digestible as follows (WPMS/ WPWS, %): XP (58.5/ 51.0), XL (81.0/ 64.8), XF (24.9/ 27.7), NfE (73.9/ 62.4). The WPMS contained 11.0 MJ ME/ kg DM and the WPWS 8.28 MJ ME/ kg DM.

Discussion & Conclusions

In the ration of WPMS were 57% and of WPWS 40% of total dry matter intake contributed by the WPS. Considering that the feed intake of WPS had to be higher for equal energy intake; diets with high crude fibre contents prolong the feed intake, gut fill and feeling of satiety and therefore might improve the well-being.

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