# DIGESTIBILITY OF A ROMANIAN SORGHUM HYBRID USED AS ENSILAGE FOR RUMINANTS

**A.E. Cişmileanu[1*], S. Toma[1]**

*[1]National Research Development Institute for Animal Biology and Nutrition Balotesti, Romania*
**e-mail: ana_cismileanu@yahoo.com*

**Abstract**

*Forage sorghum hybrid F.135 – ST (Sorghum bicolor (Linn.) Moench) is a Romanian hybrid established in 2017. In this study, samples of forage were harvested at four different growing stages (panicle emergence stage ($GS_1$), milky stage ($GS_2$), dough stage ($GS_3$) and hard grain stage ($GS_4$)), respectively at 6, 12, 15 and 17 weeks-old. The effect of advancing maturity on chemical composition, and in vitro digestibility and degradability was investigated. The dry matter DM and lignin content increased from 237.97 to 403.67 g $kg^{-1}$, and respectively, from 3.15 to 3.71 g $kg^{-1}$DM between first and last growth stage. In contrast, the CP content decreased from 52.30 to 45.32 g $kg^{-1}$DM, and also the crude fiber content decreased from 328.23 to 256.87 g $kg^{-1}$DM over the same period. The NDF content started at 694.7 g $kg^{-1}$DM, and decreased to 563.5 g $kg^{-1}$DM at the last growing stage while ADF increased from 3.15 to 3.71 g $kg^{-1}$DM. The OM digestibility declined with advancing age of the plant, and also, the CP rumen degradability. At the dough stage, the suitable harvesting time for a good ensiling quality, the OM digestibility was 57.58% and the CP rumen degradability was 68.91%.*

**Key words:** sorghum whole-plant, ensiling, digestibility, protein degradability