

## POSSIBILITIES TO IMPROVE THE PERMANENT GRASSLANDS OF *Dichanthium ischaemum* (L.) Roberty FROM THE MOLDAVIAN FOREST STEPPE

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### Abstract

The enhancement of permanent meadows involves conducting complex research, in order to know the limiting factors in the optimal development of vegetation, specific improvement measures to be taken to increase production capacity, feed quality and grazing capacity. The quantity and quality of the vegetation of the permanent meadows are largely conditioned by the characters of the seasonal conditions, to which are added the anthropogenic influences through the exploitation system. The objectives of this study were to highlight the influence of harvesting phenophase and fertilization with mineral or organic fertilizers on the productivity and quality of the forage, with important implications for obtaining high quality forage, depending on the type of fertilizer and the size of application doses. The experience field was organized on a permanent grassland of *Dichanthium ischaemum* (L.) Roberty, in Andrieșeni locality, Iași county, framed between the parallels 47°30'45.2"N and 27°15'42.0" E. The experimental factors were represented by the harvesting phenophase, with three graduations: a<sub>1</sub>-harvesting at plants height of 15-18 cm, a<sub>2</sub>-harvesting at the ear formation (control), a<sub>3</sub>-harvesting to full flowering and fertilization with seven graduations: b<sub>1</sub>- unfertilized (control), b<sub>2</sub>- N<sub>50</sub>P<sub>50</sub> kg/ha<sup>-1</sup> annually, b<sub>3</sub>- N<sub>75</sub>P<sub>75</sub> kg/ha<sup>-1</sup> annually, b<sub>4</sub>- N<sub>100</sub>P<sub>100</sub> kg/ha<sup>-1</sup> annually, b<sub>5</sub>-10 t/ha<sup>-1</sup> sheep manure annually, b<sub>6</sub>-20 t/ha<sup>-1</sup> annually and b<sub>7</sub>-30 t/ha<sup>-1</sup> annually sheep manure applied at two years. From the results obtained on the *Dichanthium ischaemum* meadow, it was found that its productivity is very low, and the level of dry matter production can increase considerably depending on the harvesting phenophase and the fertilization used. The harvesting phenophase and the applied fertilization had a marked influence on the quality of the fodder obtained from this type derived from meadows, materialized by changes in the chemical composition with implications on the value of use

**Key words:** permanent grasslands, harvesting phenophase, organic and mineral fertilization, forage quality, productivity