

Yield and Fodder Quality of some Annual Plants Cultivated for Fresh Matter

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SUMMARY

In the selection of fodder plants (annual and perennial) which compose a structure of fodder crops, besides their biological and technological characteristics and the yield potential, farmer should also know the quality of the fodder that they can provide. The quality of fodder depends on the ratio of some constituents (hemi cellulose, cellulose and lignin) in the cell walls, the ratio in the cell content of fodder and its chemical composition (Moore *et al.*, 2007). High cell content and a low lignin content of fodder provide it a high digestibility. A valuable chemical composition of fodder provided by as high as possible content in crude protein associated with a high digestibility determines a proper nutritive value of fodder. In order to response to such kind of problems, in the frame of Didactic Station Cojocna, an experiment with annual crops for fresh matter (oat and pea as control; triticale and pea; rape; millet; sorghum x Sudan grass hybrid) was organized. Mixed crops of oat and pea and of triticale and pea yielded the best harvests both from the quantitative (15.65 t·ha⁻¹ and 17.35 t·ha⁻¹ dry matter–DM) and from the qualitative (18.58% and 16.32% crude protein, respectively 55.07% and 51.79% cell content) point of view. An important role in the obtaining of these yields had some technological particularities such as the ratio of species in the seed mixtures at sowing (31% in oat and 69% in pea, respectively 33% in triticale and 67% in pea) and the quantity of seeds per hectare. At harvesting in the mixture with oat the ratio of the two species was 5% in oat and 95% in pea and in the mixture with triticale the ratio was 72% in pea and 28% in triticale. The differences in yield of the other species in comparison with control were not significantly and as quality the fodder had a lower content in crude protein (11.27% in millet and 12.89% in rape) and a lower content in lignin (3.49% in millet and 3.90% in rape). A particular interest presents sorghum x Sudan grass hybrid. This hybrid can provide a second cycle of harvest and therefore a better distribution of fresh matter yield (Ist cycle–9.71 t·ha⁻¹ DM and IInd cycle–4.58 t·ha⁻¹ DM).

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