

COMPARATIVE STUDY OF SORGHUM HYBRIDS IN THE CENTRAL AREA OF OLTENIA, IN THE CONDITIONS OF YEAR 2021

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ABSTRACT

Most annual fodder crops, of which sorghum is a part, fall into the group of energy crops.

The researches carried out on the luvisol from SCDA Șimnic Craiova, with sorghum hybrids at the level of year 2021, showed that they behaved well, considering the rather harsh ecological conditions during the vegetation period. The obtained results highlighted the superiority of sorghum hybrids ES ALIZE (7.9 t/ha dry substance grain and 8.8 t/ha dry substance stems + leaves) respectively ES FOEHN (7.2 t/ha dry substance grain and 7.9 t/ha dry substance stems + leaves).

INTRODUCTION

Annual fodder crops are indispensable in a rational zootechnical sector, containing the basis of ruminant feeding (Moga, I. 1974).

As it is known, the nutritional value of a fodder depends mainly on two factors, namely: its intrinsic nutritional value and its consumability (Cotigă, C. 2003; Cotigă, C. 2012).

The nutritional value is given by the chemical structure of the fodder (contained in energy elements, nitrogenous substances, vitamins and mineral salts), its evaluation criterion being the availability coefficient of organic matter. (Puia, I., Bărbulescu, C., Pavel, C., Ionel A., 1984).

The consumption of the fodder is in turn expressed by dry matter ingested by an animal per day when the fodder is offered at its discretion. (Miloș, M., Drînceanu, D., 1984).

MATERIAL AND METHOD

The experience with sorghum hybrids for fodder was placed on the luvisol from SCDA Șimnic - Craiova in the spring of 2021. The method of placement was that of the blocks randomized in four repetitions.

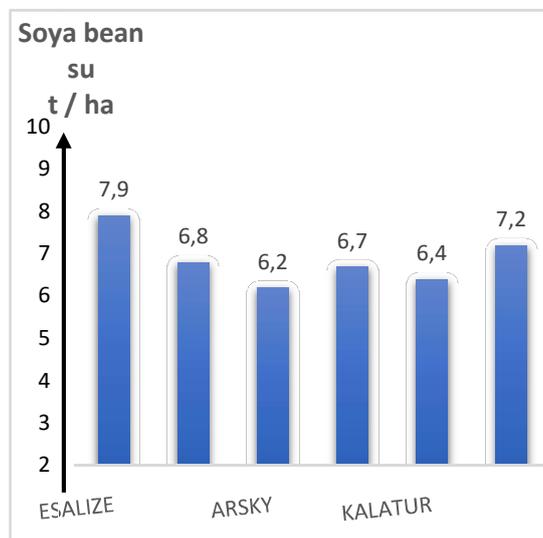
The fertilization system adopted was P₅₀K₅₀ with the application of phosphorus under the sorghum work (autumn ploughing/ and nitrogen under the last work for the preparation of the seedbed.

Sowing was performed mechanically with SPC-6 at a distance of 70 cm between rows.

Harvesting was done at full maturity of the grains, separately cleaning the grains (after threshing) and the rest of the plant (stems and leaves).

RESULTS AND DISCUSSIONS

If we analyze the results obtained and presented in Fig. 1 regarding the grain production of some sorghum hybrids cultivated for fodder, in 2021, we can find the following:



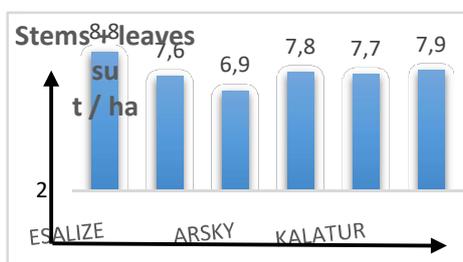
Sorghum hybrids for fodder

Fig. 1 Grain production for sorghum hybrids grown for fodder, in the central area of Oltenia (2021)

- depending on the sorghum hybrid studied, the grain production had values between 6.2 t/ha dry substance grain (for the ARSKY sorghum hybrid) and 7.9 t/ha dry substance grain (for the ES ALIZE sorghum hybrid);

- a harvest level close to the maximum, of 7.2 t/ha dry substance grain, was obtained in the case of the sorghum hybrid ES FOEHN.

Regarding the production of stems + leaves in sorghum hybrids considered (Fig. 2), the following are found:



Sorghum hybrids for fodder Fig. 2. Production of stems + leaves in sorghum hybrids for fodder, in the central area of Oltenia (2021)

- the harvest of stems + leaves, ranged depending on the sorghum hybrids between 6.9 t/ha dry substance the ARSKY sorghum hybrid, respectively 8.8 t/ha dry substance in the ES ALIZE sorghum hybrid;

- a production very close to the maximum was obtained for the sorghum hybrid ES FOEHN, namely 7.9 t/ha dry substance

If we refer to the total production (grain + stems + leaves) of the sorghum hybrids studied (Fig. 3), we find the following:

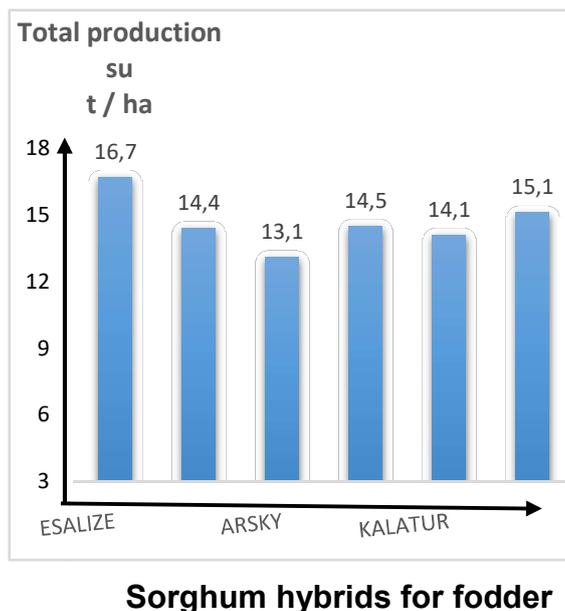


Fig. 3 Total production (grain + stems + leaves) for sorghum hybrids for feed, in the central area of Oltenia (2021)

- the total production ranged between 13.1 t/ha dry substance in the case of the ARSKY hybrid and 16.7 t/ha dry substance in the case of the sorghum hybrid ES ALIZE ;
- compared to the sorghum hybrid ES ALIZE and considered as a control, all other hybrids recorded negative values in production.

CONCLUSIONS

1. The sorghum hybrids cultivated for fodder and taken under study, on the luvisol from SCDA Șimnic - Craiova, have adapted quite well to the existing ecological conditions.

2. Among the sorghum hybrids tested, the hybrid ES ALIZE (with a grain production of 7.9 t/ha dry substance and 8.8 t/ha of stems + leaves) and the hybrid ES FOEHN (with a production of grains of 7.2 t/ha dry substance and 7.9 t/ha stems + leaves).

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