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RESEARCHES AND CONTRIBUTIONS TO PLANT SORGHUM CROP IN THE CONDITIONS OF CLIMATE CHANGES

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Abstract. *Dobrogea is the most drought area of Romania (average 1961-2016 :464 mm rainfall precipitation). Climate change in recent years has accentuated this phenomenon .For farmers from this area sorghum crop is a solution. At Sport Agra in Amzacea, in the last few years there have been experimented new sorghum crop technologies designed to face the current climate changes. These technologies include the following elements: changing the planting epoch with one month before the usual period recommended by classical technologies; (beginning of April in order to benefit from the soil's humidity la 4-5 cm depth boosting the germination process); choosing early hybrids in order to avoid the drought season which starts in June; applying adequate crop protection treatments, with pre-emergent and post-emergent herbicides and last generation insecticides. The agricultural crops in this area are not irrigated, so the authors proposed a new technology, planting the crops earlier. In this way the plants will benefit from the moisture of the soil accumulated in the winter. The obtained production from sorghum crop was over 10t/ha for most of the hybrids tested.*

Keywords: Sorghum, climate changes, technologies

1. Introduction

The history of sorghum it is written that it has been appeared in the 9th century in Zanzibar. From Asia it has been transported by a brush American citizen Franklin. In the 13th century, it was cultivated in Italy (Filipescu, 1943) [5]. At the level of 1943, Italian sorghum was produced in Romania for export.

At the level of 1986 there were cultivated 90,000 ha with an average production of 1,860 kg ha (Statistical Yearbook 1990) [12]. At the level of 2003, in Romania there were cultivated 11,092 ha in 8,765 farms (Muntean et al, 2008) [9].

Sorghum is a plant with rooted fascicle that grows in the soil reaching up to 1.25 meters, thus ensuring the water needed during the vegetation period (drought tolerance).

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