INFLUENCE OF CULTURE ON TECHNOLOGY GRAIN SORGHUM (Sorghum B.var. Eurosorghum) IN THE EXPERIMENTAL FIELD FROM RĂCĂŞDIA

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Abstract: *History shows that cereals have always maintained their significance, along the development of human society and to this day. In addition, however, one can see a close link between grain production and progress of civilization. Sorghum is a very old culture, known in India for over 2000 years, cultivated for: beans, brooms, rich in sugar syrup, animal feed or fodder crop as green. Climate Change to heating and unproductive during 2001-2050 in the Balkans, which is located and Romania, requires a reconsideration of sorghum as: cereal food (beans composite flour used in the formula for baking gluten and gluten-free, fresh juice, extracted of strains used in the manufacture of syrup, vinegar and other food), fodder (as green mass, hay storage, feed pellets) and crops (sorghum and sorghum mature mellitus for the production of raw materials for energy (liquid, solid, gas, electricity, heat), chemical (stationery and textile pulp, plastics), building materials and craft industry (of household and industrial brushes, brooms, blended. Sorghum is the second cereal after maize commercially exploiting the heterosis effect in the agricultural farm, which increased the average production per hectare. is the first grain sorghum that has been fully sequenced genome (2006), which will give rhythms in November progress in improving the species in the coming years. sorghum grains used directly in the form of flour feeding people in some parts of Africa, India, China, Middle East and Egypt. In industry is used in the manufacture of starch, alcohol and beer, mixed with grains of barley. The sweet sorghum juice is extracted a sweet, rich and varied sucrose vegetable substances energy use. In many parts of the world sorghum was traditionally used in various foods such as porridge , unleavened bread, cookies, cakes, couscous and various soft drinks and alcoholic. Sorghum has unique properties that make it very suitable for food use. Some varieties of sorghum are rich in antioxidants and all varieties of sorghum are without gluten, an alternative attractive for those suffering from wheat allergy. Modern science in food and nutrition, attaches great importance to the role of nutrition in prevention of onset. Special attention is given to the development of food products for people with increased sensitivity to certain foods. The culture of sorghum, using far fewer pesticides than other crops (wheat and corn). It also should not neglect the fact that sorghum, sorghum particularly diabetes, contribute significantly to reduce air pollution ¬ bad. In different literature, shows that one hectare of sweet sorghum absorbs from the atmosphere each year between 40 and 55 tones of carbon dioxide (CO2), while other crops, eg cereals, only 3 to 10 tons per year CO2/ha . It should be noted that the sorghum plant is not lost anything after processing. Experience has been located in specific climatic conditions Răcasdia commune, Caras Severin, on a brown ground, I-mezogleizat moderate slope deposits formed from decomposition and alteration of basic metamorphic rocks. Experience is bifactorial type, so that the annual Repeat the cycle terminates the experimental field we have experience in first year, second year and third year. The biological matherial used were hybrids F32 and Arakan. F32 hybrid obtained from INCDA Fundulea, the seed being certificate, and hybrid Arakan French provenance. Mineral fertilizers applied to grain sorghum crop, increased grain production. Variation in grain production in grain sorghum grain (Sorghum b. var. Eurosorghum) varys depending on hybrid and the influence of fertilization. The results of this study are part of a doctoral program, with as theme: "Research on the potential production potential in sorghum mellitus (Sorghum b. var. Saccharatum) and grain (Sorghum b. var. Eurosorghum)" funded by the Ministry of Education Tineretului and Sports research, the IOD U.S.A.M.V.B. Timisoara under the distinguished university professor Valeriu Tabara.*

Key words: *grain sorghum, grain production, fertilization, hybrids.*

INTRODUCTION

Grain sorghum is a very important cereal for human food and animal feed. In China and Africa, the flower and leaf sheaths to obtain a dye used to dye fabrics, wool and hides. In many parts of the world, sorghum has been used traditionally for various foodstuffs, such as porridge, unleavened bread, cookies, cakes, couscous and various soft drinks and alcoholic. Traditional cooking of sorghum is plentiful, cooked sorghum grain is one of the simplest products. Whole grains can be presented as ground flour or shelled before grinding, which then are used in different traditional foods. The cuisine of the southern United States sorghum syrup is used as a sweet spice, usually biscuits, corn bread, pancakes, cereals or beans. The sweet sorghum juice fertilization seeks to quality, which is why it is recommended for food purposes, growing on fertile soils. Favorable moisture conditions, sorghum react favorable to nitrogen fertilization both in terms of the yield and protein content in dry areas, have positive effect and phosphorus. Doses practiced today in the world varies, depending on experimental conditions. Grain yield of sorghum grain is very influenced by the technology applied (particularly fertilizer) that determines the quality and increase production.

MATERIAL AND METHODS

Experience has been placed in specific climatic conditions Caras Severin Răcasdia village. Experimental field was located on a brown soil type, I-mezogleizat moderate slope deposits formed from decomposition and alteration of basic metamorphic rocks. Experience is bifactorial type, with annual repetition. F32 and Arakan hybrids were used in experience.

FACTOR A: variety (hybrid)
A1: F32 Fundulea
A2: Arakan

Factor B = B, fertilization system
B1 = unfertilized (N0P0K0)
B2 = N80P80K80,
B3 = N160P80K80,
B4 = N240P80K80,
B5 = N 160 P 160 160K

RESULTS AND DISCUSSIONS

Production results obtained from the interaction of the two experimental factors (hybrid - A and fertilization - B) study in 2011 are presented in Table 1 and highlight some key elements.

The analysis of results shows that yields are strongly influenced interaction of hybrid fertilization.

As in 2010 the best results are obtained and fertilized hybrid F32 N240P80K80 - 5523kg/ha.

Good yields are obtained and fertilization conditions N160P160K160 hybrid F32 - 5635kg/ha.

Analysis of the production potential of the 4 variants compared with the production version control (N0P0K0) shows that all variants are considered superior to that witness.

Production increases made by the four variants that are statistically very significant.

Table 1

Grain yields obtained under the influence of fertilization and sowing hybrid to grain sorghum in 2011

Factor A Hybrid	Factor B- Fertilization					A Factorial averages			
	N0P0K0	N80P80K80	N160P80K80	N240P80K80	N160P160K160	Production (kg/ha)	%	Diference (kg/ha)	Signifi cance
ARAKAN	3634	4098	4806	6724	5405	4933	100	-	
FUNDULEA F32	4016	5262	5654	6816	5865	5523	112	590	xxx

DL5%- 178kg/ha; DL1%- 247kg/ha; DL0,1%-315kg/ha;

B Factorial averages

Production (t/ha)	3825	4680	5230	6770	5635
%	100	122	137	177	147
Diference (t/ha)	-	855	1405	2945	1810
Significance		xxx	xxx	xxx	xxx

DL5%- 82kg/ha; DL1%- 96kg/ha; DL0,1%- 131 kg/ha;

CONCLUSIONS

Results of research conducted on grain sorghum in 2011 in terms of experimental Răcăşdia Caras Severin allow us to draw some conclusions about the influence of hybrids and fertilization on grain yield.

In the experimental field of Caras-Severin Răcăşdia occurred yields good results obtained in experimental grain sorghum in 2011.

Climatic conditions during sowing and harvest were largely favorable influence on the level of grain sorghum yields.

Soil where they were located experiences provide nutritional support for good plant growth and grain sorghum. Grain yield in sorghum grain varies by influence factors taken into study (hybrids, fertilization).

Hybrid interaction, fertilization, strongly influence experimental productions in 2011 in sorghum grain.

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