POTENTIAL PRODUCTION OF LEAVES AND PANICLES STEMS FROM SEVERAL VARIETIES AND HYBRIDS OF SORGHUM (SORGHUM SACCHARATUM) UNDER THE INFLUENCE OF FERTILIZATION

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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 arid 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 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 should be noted that the sorghum plant is not lost anything after processing. Experience has been located in specific 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 material used Roza and Carmen were hybrid and variety. Analysis of the proportions involved parts of plants (stems, leaves and panicles) in total production from sweet sorghum green table shows that are strongly influenced by weather conditions and phyto measures applied.*

Keywords: *sweet sorghum, green mass, hybrid, variety, fertilization.*

INTRODUCTION

The sorghum crop is sorghum diabetes category, considered to be most productive in terms of ind obtain juice and spirits food biomass for biofuels. From sweet sorghum juice is extracted a sweet, rich and varied uses sucrose phytomass energy. 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 vary, depending on experimental conditions. Mass production of raw juice green sorghum stalks, is very influenced by the technology used (especially fertilizer) that determines the quality and increase production.

MATERIAL AND METHOD

Experience has been placed in specific climatic conditions for *Sorghum sacharatum*. Experimental field was located on a brown soil type, moderate gleyed on slope deposits formed from decomposition and alteration of basic metamorphic rocks. Experience is bifactorial type, with annual repetition. Roza and Carmen hybrids and variety were used in the experience.

FACTOR A: (hybrid), variety

A1: Roza

A2: Carmen

Factor B = B, fertilization system

B1 = unfertilized (N0P0K0)

B2 = N80P80K80,

B3 = N160P80K80,

B4 = N240P80K80,

B5 = N 160 P 160 160K

RESULTS AND DISCUSSION

Analysis of the results of production of plant parts (stems, leaves and panicles) and their share in total production of green mass are presented in table 1 and allow us to conclude the following.

Table 1.

Production results obtained under the influence of fertilization on sweet sorghum

Factor A Hibrids/Variety		Factor B Fertilization					Means factor A	
		N0P0K0	N80P80K80	N160P80K80	N240P80K80	N160P160K160	Prod t/ha	%
Roza	Stems	2,25	3,25	3,32	6,6	6,11	2,24	-
	Leaves	0,17	1,97	2,79	1,78	1,8		
	Panicles	1,05	0,81	0,46	0,71	0,54		
Carmen	Stems	4,36	5,31	7,22	9,83	8,12	3,82	171
	Leaves	0,42	3,38	4,05	3,44	2,75		
	Panicles	1,70	1,85	1,87	1,07	2		

Fertilization	N0P0K0	N80P80K80	N160P80K80	N240P80K80	N160P160K160
Prod.t/ha	1,65	2,76	3,28	3,9	3,55
%	100	167	199	236	215

Climatic conditions strongly influence experimental production year. Thus the highest production yield variety Carmen 3.82 t / ha. Referring to agrofond, the highest yield is obtained solution with nitrogen in an amount of 240 kg DM (3.9 q / ha).

CONCLUSIONS

Climatic conditions during the survey period were largely influence the level of the sorghum harvest sugar yields of green mass, the total components, is largely determined by the specific climatic conditions of cultivation.

The soil on which were placed the experiences they provide nutritional support for proper growth and development of plants sorghum sugar. Agro the entirety of special importance in achieving high levels of production of green mass. The highest average yields, so green mass and grain are obtained by agro N240P80K80. In agrofond reports between NPK fertilizing elements play a decisive role as a major production (total green mass) and green production components (stems , leaves and panicles). The most spectacular production increases both sweet sorghum and grain are obtained at the higher doses of nitrogen on a constant background to 80kg/ha phosphorus and potassium.

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