

EFFECT ON PRODUCTS FROM VARIETY FERTILIZATION AND TRITICALE (TRITICOSECALE WITTMACK) IN THE EXPERIMENTAL FIELD FROM RĂCĂȘDIA CARAS-SEVERIN COUNTY

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Abstract: Cereals (wheat, triticale, rye, barley, oats, corn, sorghum, millet, rice, etc.) represents the group of plants growing importance to human existence and activity. They are irreplaceable in human food and animal feed due to the chemical composition of grains containing: carbohydrates (60%), protein substances (10-16%), minerals, fats, vitamins. Grain foods can be consumed daily is appropriate and appreciated the human body needs both in terms of taste and nutrition of their value. Cereals are widely used in many industry goods food: bread and pasta (wheat, triticale, rye, etc.) Invented the manufacture of sugar and vegetable oil (corn) preparation of juices and sweet substances (sorghum) production meal, millet flakes and barley (millet, barley, oats, etc.) Manufacture of starches (wheat, rice, corn, etc.) canning (rice) production of glucose, dextrin (wheat, corn, etc.). Cereal grains is the raw material and for other industries such as alcoholic beverages industry (manufacture of spirits and beer from maize, triticale, barley, rice, etc.), pharmaceuticals (the manufacture of sclerotic antihemoragice substances obtained from the rye fungus *Cleviceps purpurea* of some medicines rice, etc.). Straw (stems) are used in cereals straw pulp and paper industry, in small industry (knitting) and other manufacturing activities. Cereals are the main raw material for production of meat, milk and eggs. No concentrate feed intake can not be deprived of corn, oats, barley, etc. triticalei The most effective succulent forage is obtained from corn, even feed fibers are made up of a cereal mash. As work, cultivation of cereals (especially straw) technology is simple, requires no special systems for cars, is mechanized and efficient (lower cost cernđ). Cereals are important in terms of plant growing: there are good and very good preceding crops, enrich the soil by stimulating processes of nitrification (by harvesting early grain straw) protects the land against soil erosion in hilly areas if sowing be made on contour direction, recover the land on which other cultures are not productive (triticale). As a general rule, triticale combines the high potential of wheat production and quality with disease resistance and tolerance to environmental factors stepchildren (including soil) from rye. Due to advances in genetic improvement of triticale varieties have been developed commercially viable (the production potential and high stability) competitive with other cereals and even corn, especially for hilly areas with infertile soils and low pH. New varieties of triticale are equal or superior to other cultures for grain yield, forage and biomass production for human food, animal feed or industrial applications. As important as forage crop triticale is used mainly in feed concentrate monogastric food (pigs and poultry) due to its higher that of other cereals in protein, lysine and tryptophan and high carbohydrate digestibility and protein substances. Recent research shows that protein energy ratio is generally higher when obtained from forage triticale forage than the traditional focus. Triticale protein has higher value as that of wheat, being rich in potassium, phosphorus, sodium, magnesium and zinc. From this conclusion it is necessary and an adaptation of the milling and bakery industry is noted for processing triticale that all techniques used to date have been made for wheat. Triticale grains have a composition that allows their use in the production of malt for brewing beans. Triticale calitate. From extract alcohol can be done in the average 400 l / t grain. Experience has been located in specific climatic conditions Răcășdia 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. Biological material has been used varieties: Cascade, Haiduc, TITAN, style, Gorun. Mineral fertilizers applied to crop

triticales, increased grain production. Variation in grain production in triticale (Triticosecale Wittmack) vary depending on variety and the influence of fertilization. The results of this study are part of a doctoral program, with as theme: "Research on crop production potential of triticale (Triticosecale Wittmack)" funded by the Ministry of Education and Sports Research Tinertului by IOD U.S.A.M.V.B. Timisoara under the distinguished university professor Valeriu Tabara.

Keywords: triticale, variety, fertilization.

INTRODUCTION

Although triticale species had a short development being created by a man recently became an important cereal in the world occupying about 4 million ha, of which over 70% in Europe. New varieties of triticale are equal or superior to other cultures for grain yield, forage and biomass production for human food, animal feed or industrial applications. Cereal grains for feeding humanity provides 55-60% of total calories consumed, 60% protein, 15% from fat and 70% from carbohydrates. In human nutrition it provides over 90% of calories from 30 species of cultivated plants. Products food grains can be consumed daily is appropriate and appreciated the human body needs both in terms of taste and nutrition of their value. Cereal grains is the raw material for other industries such as alcoholic beverages industry (manufacture of spirits and beer from maize, triticale, barley, rice, etc.), pharmaceuticals (the manufacture of sclerotic antihemoragice substances produced by the fungus *Cleviceps purpurea* rye, rice, etc. of drugs). Straw (stems) are used in cereals straw pulp and paper industry, in small industry (knitting) and other manufacturing activities.

Cereals are the main raw material for production of meat, milk and eggs. No concentrate feed intake can not be deprived of corn, oats, barley, etc. triticales. The most effective succulent forage is obtained from corn, even feed fibers are made up of a cereal mash. Among cereals are good honey plants (corn). Debris from the manufacture cereals (bran, borhots, etc.) is an excellent feed and not least the secondary production of cereals (straw, stems) is used as bedding or even feeding. Recently gaining worldwide cultivation of cereals in the energy (sorghum as energy fitomasses), and the cultivation of grain for biofuels production (triticale, corn, etc.). Cereals are a rich source of trade. Physical and chemical characteristics of grains allow their transport over long distances and keeping them without much difficulty. You can eat in the harvest or after several years without spoiling or significantly change their nutritional qualities. Interaction strongly influences fertilization variety production.

MATERIAL AND METHOD

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. Varieties: Cascade, Haiduc, TITAN, style, experience Gorun were used, and following fertilization systems.

Factor A - varieties of triticale used for zoning and their influence on grain production.

A1-CASCADE

A2-Haiduc

A3-TITAN

A4-STYLE

A5-Gorun

Factor B - influence fertilization system

B1-unfertilized (N0P0K0)

B2-N80P60K60

RESULTS AND DISCUSSIONS

Production results achieved under the influence of the triticale variety in experimental 2010 are presented in Table and Figure 1.

Table 1.

Influence on the production of triticale variety in experimental 2010

Variety	Production kg/ha	%	Difference Kg/ha	Semnif.
CASCADOR	4492	100	-	
HAIIDUC	4785	107	293	
TITAN	5045	112	553	x
STIL	5302	118	810	xx
GORUN	4529	101	37	

DI 5% = 324 kg/ha; DI 1% = 592 kg/ha; DI 0,1% = 873kg/ha;

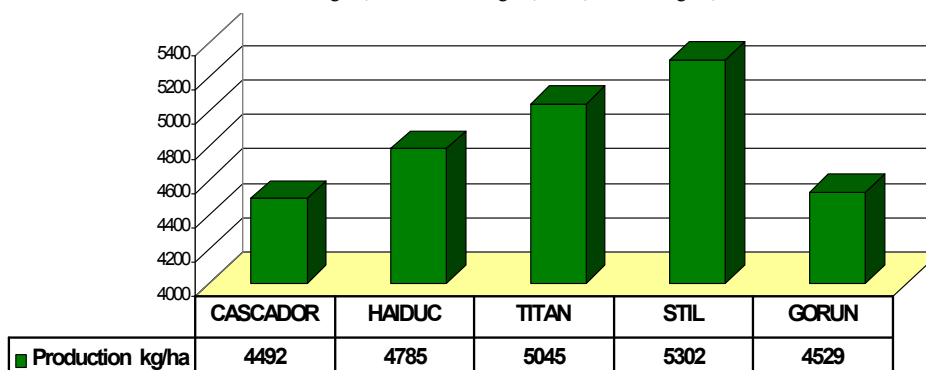


Figure 1. Average production triticale variety under the influence in 2010

The table and figure 1. sunt harvest the results obtained from triticale varieties grown under the influence of the experimental field from Răcășdia.

Average production values range from 4492kg/ha the triticale variety to variety 5302kg/ha Stunt and Style.

Variety style recorded the highest production 5302kg/ha production with an increase 810kg/ha being provided statistically significantly distinct.

Variety Titan has a positive production increase of 553kg/ha and is provided statistically significant.

Of the four species studied to witness the production of only two in the analysis, the other two (Haiduc and Gorun) are not statistically.

Table and Figure 2 are the average yields of triticale under the influence of fertilization in 2010.

Influence the degree of fertilization on the triticale grain production in 2010

Fertilisation	Production kg/ha	%	Difference Kg/ha	Semnif.
N0P0K0	3803	100	-	
N80P60K60	4919	129	1116	xxx
N160P06K60	5495	145	1696	xxx

DI 5% = 191 kg/ha; DI 1% = 402kg/ha; DI 0,1% = 611kg/ha

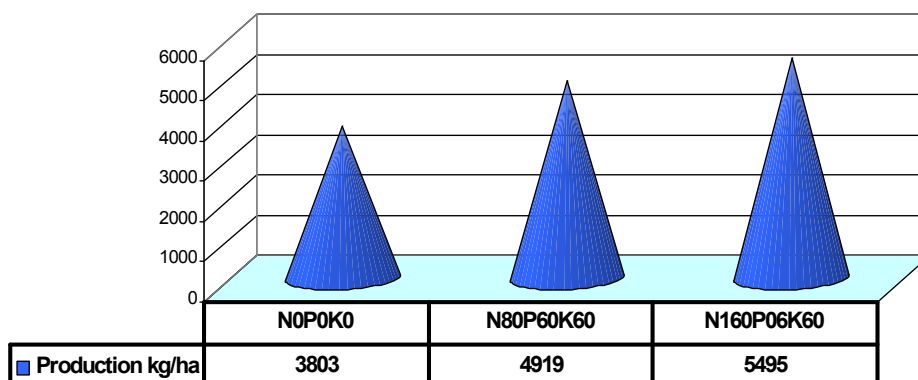


Figure 2. Average production in triticale under the influence of the degree of fertilization in 2010 at Răcășdia

Both the table and in Figure 2 shows that the production of triticale is positively influenced by 160kg/haN who achieve the highest yield of grain and the largest production increase.

The dose of 80kg/ha nitrogen production 4919kg/ha reach and made to increase production yields from the fertilized variant (N0P0K0) is 3803 kg / ha provided statistically very significant.

It is noteworthy that production increases achieved on variants of 1116kg/ha N80P60K60, N160P860K60 and 1696kg/ha that are statistically as very significant.

CONCLUSIONS

In the experimental field of Caras-Severin Răcășdia there were good results in the production of triticale grains.

Climatic conditions during sowing and harvest were largely favorable influence on the level of grain yield in triticale.

The soil that was placed for nutritional support experience ensure good plant growth and development of triticale.

Triticale grain production to vary the influence of factors under study (variety and fertilization). Interaction strongly influences fertilization variety production.

Under the influence of the best varieties for grain production was achieved in Romanian variety Style - 5302kg/ha.

The variants were sown under the influence of fertilization achieved the best production at higher doses version 150 kg nitrogen / ha with an average production 5497kg/ha.

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