QUALITY AND PRODUCTION OF WHEAT VARIETIES UNDER THE INFLUENCE OF FERTILIZATION

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Abstract: Cereals represent the plant plant group with the largest area of spreading in all the world's cultural areas. implicitly in Romania. The beans (fruits) of these field plants, rich in unattached extractive substances (about 2/3 of their content) and other compounds (proteins, fats, vitamins, etc.), have extensive uses in human food bread, pasta etc.) and animals, or as raw materials for different industries. They are among the oldest plants in culture in the Mediterranean Basin, Caucasus and Central Asia, etc., having a history of about ten thousand years. Cereal grains are used as a raw material for a number of industries such as alcohol, alcohol, beer, dextrin, glucose, etc., and straw are used as raw material in the pulp and paper industry. Autumn wheat reacts positively to nitrogen and phosphorus fertilizers administered together on all soil types in Romania. The N: P ratio is in favor of nitrogen, especially on poor soils in nitrogen, wetlands, rainy years, or precursor plants that consume a large amount of nitrogen (corn, sugar beet, potato, etc.). Grain is a very important food plant grown in over 50 countries, wheat feeds 35-40% of the world's population. Grain is mostly used in the manufacture of bread and products made from flour. The wheat originates from Jarmo settlement in the East of Iraq, and in our country the wheat crop is known from the Upper Palaeolithic and the Bronze Age. Wheat bran are of three kinds: spring varieties, autumn varieties and walking varieties. Autumn varieties hold 70% of the world's surface, and in our country the wheat variety owns 98-99% of the total wheat fields because this variety is more productive for the temperate climate of our countries. In many countries wheat is also used for animal feed, and has the following advantages over corn: - is much richer in terms of proteins with a better nutritional value than corn;
- wheat has a higher content of vitamins - wheat production is similar to corn - the price of wheat is lower than maize, wheat is completely mechanizable - after grain, a second crop can be obtained, in good irrigation conditions, - wheat is harvested earlier and is a good precursor for other crops.

Key words: *wheat, fertilization, quality, protein.*

INTRODUCTION

Wheat is undoubtedly the most widely grown cereal grown on all continents in more than 50 countries and nourishes hundreds of millions of people on Earth. Wheat and oats have been grains grown since ancient times; the writings that remain on the pages of the Holy Scriptures in Genesis and Exodus, as well as the writings of great historians, are relevant. As we have outlined above, the goose is a highly appreciated cereal globally because wheat grains contain almost all nutrients indispensable for human existence, lacking vitamin A, vitamin C and B12 (like all plant products).

MATERIAL AND METHOD:

Establishing the production and quality potential of wheat under the influence of varieties and fertilization studied in the pedoclimatic conditions in the Iecea area.

Research aims to improve cultivation technology to increase wheat production.

Establishment of an optimal fertilizer system for wheat to increase the production and quality of grain seeds.

FACTOR A - fertilization
A1 - N0P70K70
A2 - N60P70K70
A3 - N120P70K70
FACTOR B - Wheat variety.
B1 - Alex
B2 - Pobeda
B3 – Apache

RESULTS AND DISCUSSION

The production capacity of the wheat varieties studied under the influence of fertilization in the experimental field in Iecea, Timis county, in the two experimental years are presented below.

Table 1

Synthesis of harvesting results obtained at Iecea under the influence of fertilization

Factorul A fertilization	Factorul B variety			Factor averages A			
				Kg/ha	%	Diference	Signification
	Alex	Pobeda	Apache				
N0P70K70	5572	5966	5137	558	100	-	
N60P70K70	6234	6561	5732	6176	111	618	XXX
N120P70K70	7351	6850	6225	6809	123	1251	XXX

DL5%= 158 kg/ha
DL1%= 256 kg/ha
DL0,1%= 478 kg/ha

Factor averages B

Factorul B	**Alex**	**Pobeda**	**Apache**
Kg/ha	6386	6459	5698
%	100	101	89
Diference	-	73	-688
Signification			000

DL5%= 157 kg/ha DL1%= 206 kg/ha DL0,1%= 264 kg/ha

It is noted that the applied fertilizers, in the mentioned doses, strongly influenced the harvest of the 3 varieties experienced. By fertilizing with N60 on the background of P70K70,

the average harvest of the three varieties increased by 11%, with a crop yield difference of 618 kg / ha.

Doubling the nitrogen dose at N120 increased the crop yield to 23%, yielding a harvest difference compared to the control variant (NO) of 1251 kg / ha.

The average yields on the three agrofonds were 6386 kg / ha for the Alex variety, 6459 kg / ha for the Pandur variety and 5698 kg / ha for the Apache variety. The varieties taken into the study are resistant to frost and drought, and they are well traversed by periods of moisture deficiency that may occur during the growing season. The results lead to the conclusion that the Pobeda and Alex varieties can be recommended in the area. The synthesis of the crude protein content results in experimental cycle 2015-2016 is presented in Figure 1. The synthesis data presented below shows that at the level of fertilization studied, the highest value of the protein content was recorded in the Alex variety in the variant N120P70K70 of 15.8, and the lowest value was registered in the Apache 13 variety in the variant N0P70K70 . The Pobeda variety has an intermediate position on the fertilization levels.

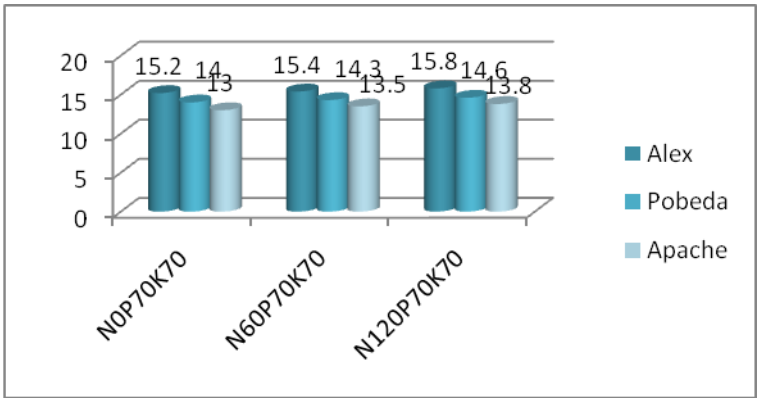

Fig. 1 Synthesis of results on crude protein content in experimental cycle 2015 - 2016

Synthesis of starch content

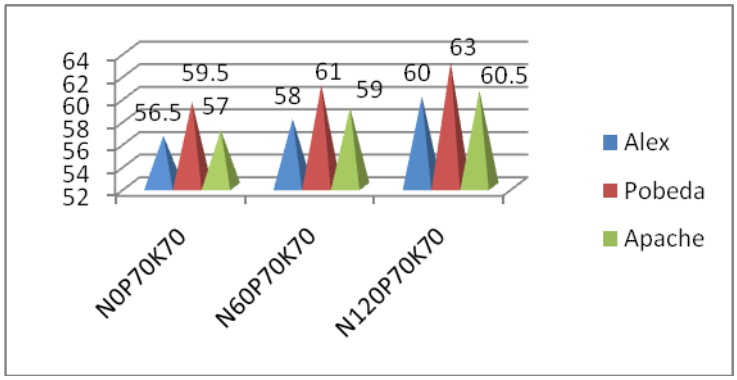

Fig.2. Synthesis of starch content in experimental cycle 2015-2016

Synthesis of results on wet gluten content

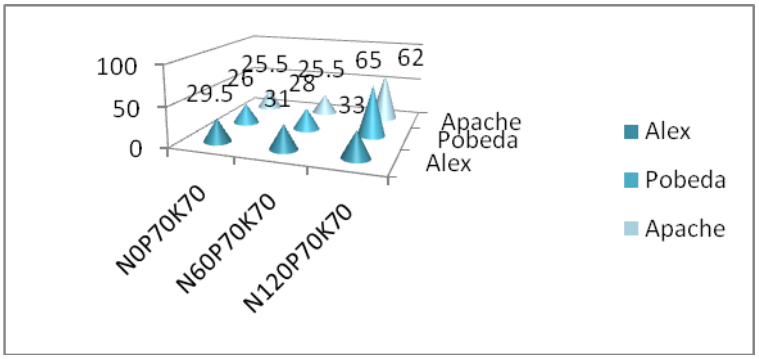

Fig3. Synthesis of results on wet gluten content

The result of the synthesis of the wet gluten content, obtained from the grain result from three varieties under the influence of fertilization, ranges from 25.5% to 33%. The highest wet gluten content was recorded in the Pobeda variety in the fertilized variant with N120P70K70, and the lowest content enrolled in the Apache variety in the N0P70K70 variant.

CONCLUSION

The climatic conditions of the experimental years influence production. At the same time, it can be stated that they were in line with the wheat requirements for a good scroll of all the vegetation phases.

The soil on which experiments were placed provides the nutritional support for a good growth and development of wheat plants in the years 2015-2016.

Interaction of variety / fertilization strongly influences production. The analysis of the results obtained during the two experimental years shows that there is a strong interaction between the fertilization and the production characteristics of the varieties.

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