

STAGE CONCERNING THE INFLUENCE OF SOWING TECHNOLOGY ON THE *CICER ARIETINUM* L. YIELD

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Abstract: *Small Chickpea seeds have been found in archaeological sites dating back to 7500 BC suggesting that people at this time were harvesting them in the wild or growing undomesticated plants. The earliest evidence of domestication is larger seeds found in Jericho dating back to 6500 BC. Importance of chick beans, both green, but mostly reached maturity, the high content of protein substances. Chickpea flour is used in baking, stirring rate of 10-15%, with wheat flour, which are used in bread, which thereby becomes even more nutritious and tasty. Chickpeas, with a very high resistance to drought, give good yields of grain in dry areas with good resistance to water stress and heat, so aridizare climate trends in this area requires special attention to this plant acordom. The chickpea is a leguminous plant, which improves the soil, leaving biologically fixed nitrogen in the soil, very accessible for the rotation plants, especially for cereal grains. Because it is a leguminous plant, improves the soil, leaving biologically fixed nitrogen in the soil, plants that*

are very affordable for the rotation, especially for cereal grains. It thus prevents environmental pollution by nitrates and hydrocarbons consumption for manufacturing fertilizers. Research in this area have been conducted within the perimeter of the Teaching Station of University of Agricultural Sciences and Veterinary Medicine of Banat, Timisoara, located in the Plain Banato-Crisan, Plain subunit Berecsău Bega-Timiș interfluve. In the experimental field of the Teaching Station of University of Agricultural Sciences and Veterinary Medicine of Banat, experiments were conducted on a chernozem soil type, low gleyed, low decarbonated, formed on loess powder, clay-clay. Increasing the distance between rows from 30 cm to 50 cm, the average yield increased by 14% for all varieties. The biggest harvest was obtained in variant sown at 50 cm distance between rows and between varieties noted a variety Cicero, followed by variety Burnas. The lowest yields were recorded in variety Rodin.

Key words: *chickpea, the distance between rows.*

INTRODUCTION

Importance of chick beans, both green, but mostly reached maturity, the high content of protein substances. Chickpea flour is used in baking, stirring rate of 10-15%, with wheat flour, which are used in bread, which thereby becomes even more nutritious and tasty.

Chickpeas, with a very high resistance to drought, give good yields of grain in dry areas with good resistance to water stress and heat, so aridizare climate trends in this area requires special attention to this plant acordom.

The chickpea is a leguminous plant, which improves the soil, leaving biologically fixed nitrogen in the soil, very accessible for the rotation plants, especially for cereal grains.

In this study are offered data on behavior of variety Cicero, Burnas and Rodin, under the influence of distance between rows, bringing the number of branch / plant, number of pods / plant, number of grains / plant and grain yield .

The area in which research was conducted, chickpeas receive favorable climatic conditions, so that the varieties studied have the plenary opportunity of manifestating their productive capacity.

The results of this study are part of a PhD program, having as theme: "Research on extending the culture of lentils and chickpeas through adequacy of technology in the area of

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MATERIAL AND METHOD

The study was conducted within the perimeter of the University Teaching Station of Agricultural Sciences and Veterinary Medicine of Banat, Timisoara, on a chernozem soil type, low gleyed, low decarbonated, formed on the loess powder, clay-loam.

Bifactorial experiments were organized according to the method subdivided parcels with three repetitions, in which **factor A** was the variety, with three graduations (**a₁** - a Cicero, **a₂** - Burnas, **a₃** - Rodin), and **factor B** was the distance between the lines, two graduations (**b₁** - 30 cm, **b₂** - 50 cm).

Mention that the density of sowing, the graduations of both factor B, was 60 germinabile seeds /mp.

Sowing was done in the favorable period, when the temperature was stabilized at 4°C, which corresponded to the calendar end of March.

The preemgent plant was winter wheat. The technology used was specific culture for the culture.

Harvest results calculation was done at 13% humidity, according to the method of organization of the field experiences and results of biometric measurements were performed by statistical analysis of the sequence variations.

RESULTS AND DISCUSSIONS

In the area studied, the results ranged between 2114 kg / ha and 3131 kg / ha. The smallest crop was recorded in the version sown at 30 cm between rows, the variety of Rodin, and the largest crop, sown in 50 cm version, from a variety Cicero.

The average planting densities, increasing planting distance between rows from 30 cm to 50 cm increased the yield by 16% compared with the variety a variety Burnas, Cicero and 29% higher than Rodin variety.

Table 1

Chickpea yield obtained by variety and distance between rows

Variety	Factorul B Distance between the rows		Factor A average			
	30 cm	50 cm	Yield kg/ha	%	Difference Kg/ha	Semnification
Cicero 1	3033	3131	3082	100	-	
Burnas	2434	2848	2641	86	441	xxx
Rodin	2114	2265	2190	71	892	xxx

DL5% =54 kg/ha, DL1% = 89 kg/ha, DL0,1% = 168 kg/ha

Factor B averages

Specification	30 cm	50 cm
Yield kg/ha	2460	2815
%	100	114
Difference Kg/ha	-	355
Semnification		xxx

DL5% = 21 kg/ha, DL1% = 32 kg/ha, DL0,1% = 51 kg/ha

CONCLUSIONS

Research conducted on Timis fields on Timisoara's territory on a cambic chernozem soil type, lead to the following conclusions:

1. Chickpea (*Cicer arietinum* L.), found in the studied area, very favorable climatic conditions, which results from the more than 3000 kg / ha yield achieved.
2. The variety with the best results in an area that is Cicero, which yield is higher with 16% then Burnas yield and 29% more then Rodin yield.
3. Increasing the distance between rows from 30 cm to 50 cm is motivated, increasing the harvest, average over the three varieties being 14% returning a very significant difference of more than 350 kg / ha.

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