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Research Article

ECONOMIC EFFICIENCY OF PEAS GROWING BASED ON DIFFERENT PLANTING TECHNOLOGIES IN ARRIVAL AREAS

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ABSTRACT

The article describes the results of scientific research on the economic efficiency of growing chickpeas, which is a leguminous crop, based on different sowing technologies in rainfed lands.

KEYWORDS

Rainfed soil, climatic conditions, chickpeas, various sowing technologies, organic and mineral fertilizers, productivity, economic efficiency, cost, net profit, profitability level.

INTRODUCTION

Peas, considered one of the leguminous grain crops in dry areas of Uzbekistan, are grown mainly in plains-hills and foothills with low rainfall. Currently, its area is approximately 35-40 thousand hectares. Depending on whether the agricultural year is wet or dry, the cultivated area of peas may be more or less than indicated. Peas grown in these areas are characterized by their richness in protein, amino acids, enzymes, vitamins, macro and microelements, ease of digestion and taste, and are completely different from peas grown in other regions.

The demand for peas grown in the specific arid soil-climate conditions of the available dry land in the republic is increasing year by year as a natural clean product not only in the republic, in the food and confectionery industry, but also in the world markets.

In recent years, the demand for peas grown in dry areas of Uzbekistan is increasing year by year not only in the internal market of the republic, but also in the foreign market. However, the following are the main factors that are seriously hindering the increase of the area and productivity of peas in dry areas of our republic. Currently, 75-80% of the agrotechnological

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measures for planting peas, from tilling and planting with plows, discs, harrows and heavy trowels to its care and harvesting, are mainly done by hand.

Chickpea is a universal predecessor for grain crops in the crop rotation system in dry regions of Uzbekistan.

One of the leguminous crops, the grain of the pea crop is nutritious and contains up to 30% protein, up to 4% starch, as well as fat, sugar, cellulose, minerals and vitamins [1; pp. 5-8], [6; pp. 37-38].

Some of the main factors limiting the productivity of the pea plant in dry areas of the republic at the present time are the relative lack of atmospheric precipitation over the years and the lack of mineral nutrients in the soil, on the one hand, and on the other hand, the low level of farming culture and several other factors. mentioned in the comments.

Determining the economic efficiency of growing peas in dry areas is always one of the most important issues, especially in the current market economy.

The economic efficiency of the pea crop is determined by the size and quality of the grown product and the amount of expenses spent on its production [5; 22–p.].

Finding the level of profitability (profitability) in the cultivation of pea varieties in agriculture represents the effectiveness of crop cultivation [2; 115–p.].

It is known from experiments that the protein content of the seeds of leguminous crops is two to three times higher than that of grain crops. One of such legumes is peas [3; 24-p], [4; 320–p].

Research conditions

Field experiments in the central experimental farm of the Lalmicor Agricultural Research Institute, the Lalmicor soils are semi-sufficient with rainfall (280-350 mm) in the plain-hill-hill region at an altitude of 485 m above sea level, and the soil consists of typical Lalmicor gray soils. The soils of the experimental field are moderately sandy, moderately affected by water and air erosion, and in their plow layer (0-20 cm) there is 0.55-0.88% humus, 0.08-0.12% total nitrogen, 0.12-0, Contains 15% total phosphorus and 1.20-1.160% total potassium. Groundwater seepage is located below 10 m and has almost no influence on soil formation processes.

In the conducted researches, planting works were carried out according to experimental schemes based on different planting technologies. Experiments were carried out in 6 variants and 3 repetitions according to the above 3 technologies. In the studies, the area of delyankas was 100 m2. A new regionalized variety "Guliston" was selected for planting in fertile areas of chickpeas.

Experimental result

In the experiments carried out during the research years, the economic efficiency of growing peas on the basis of different technologies was determined.

1-Table

Determining the economic efficiency of planting peas and using mineral fertilizers according to different planting technologies in dry areas (Gallaorol 2022-2023 year.)

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№	Indicators	Planting technologies		
		Traditional technology (pattern) (Russia)	"O" technology (No till, Brazil)	SZS 2.1 cultivator seeder (Kazakhstan)
1	Implementation area, ga	100	100	100
2	Productivity, ts/ha	8,1	6,2	8,2
3	Gross pea yield, t	81,0	62,0	82,0
4	Realization price of gross peas (according to the market price), thousand soums	1944000,0	1488000,0	1968000,0
5	Total production costs, thousand soums	528398,7	484892,7	504650,0
6	Sh.j. fuel and lubricant products, thousand soums	61845,0	12065,0	13965,0
7	Net profit, thousand soums	1415602,0	1003107,3	1463350,0
8	Net profit, ± thousand soums (compared to the standard)	-	-412494,7	+47748,0
9	The cost of 1 t of peas is one thousand soums	6523,4	7820,8	6154,3
10	Rate of return, %	267,9	206,9	280,0

As can be seen from the data presented in the table, the total net profit of the traditional technology was 1415602.0 thousand soums, the rate of profitability was 267.9%. Also, the total net profit obtained in the directly sown "O" technology option of the experiment was 1,003,107.3 thousand soums, the profitability rate was 206.9%, and the total in the experimental options planted with the third planting technology, i.e. SZS 2.1 (Kazakhstan) cultivator seeder net profit was 1,463,350.0 thousand soums, the rate of profitability was 280.0% (Table 1).

CONCLUSION

According to the results of the conducted field experiments, it was found that the results obtained in the variants planted with peas using one of the different planting technologies SZS-2.1 cultivator seeder are superior.

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