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Research Article

INFLUENCE OF SOWING SCHEMES ON BIOMETRIC INDICATORS OF RICE VARIETIES

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ABSTRACT

In the article, data was given on effect of planting of schemes on rice growth, development and biometric indicators. According to it, Iskandar and Ilgor varieties of rice in the scheme 30x10x1 when planted, rice biometric indicators was observed well.

KEYWORDS

Biometric indicators, sowing scheme, rice, cultivars, spike length, grain number, grain weight, thousand grain weight.

INTRODUCTION

Rice is one of the oldest staple foods in many countries around the world. Rice is a valuable cereal crop and is the second most important food crop in the world after wheat. Rice is nutritious and digestible quickly. Rice contains 75.2% carbohydrates (mainly starch), 7.18% protein, 0.26% oil, 2.2% fiber, 0.5 % ash and 14 % water and various vitamins. Rice decoction is widely used for medicinal purposes. Diet with rice is used for high blood pressure [2; 25-26 p].

Rice is distinguished by its high quality and fast digestibility for the human body. It contains nutrients necessary for the human body: protein, phosphorus compounds and vitamins [6; 11-18 p] . Food made from rice cooks very quickly, it is digested and completely absorbed by the human body faster than other cereals. The absorption coefficient of rice is the highest - 96%, caloric content is 3594, and that of wheat is 6310 [1; 407 p].

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Rice is a very demanding plant for warm temperatures, its seeds begin to germinate at a temperature of 10-14°C, its germination accelerates at a temperature of 14-15°C, 22-25°C is the most favorable temperature for seed germination [5; 19-20 p]. A temperature of 20-30° C is considered the most favorable during the growth of lawns. But sudden changes in temperature, especially during the flowering period, have a negative effect on rice plants [4; 3-31 p], -0.5°C cold is dangerous for rice plants, the total amount of heat required for rice to grow and get a high yield should be from 22000C to 32000C and changes at this temperature [3; 3-31 p].

METHODS AND MATERIALS

The agrotechnical activities in the experimental area were carried out based on RRI's "Recommendations on the technology of growing rice by seedling method in the conditions of Uzbekistan" (2010).

In research, phenological observations were carried out in the method of "Field experiment methods" to determine biometric indicators in all returns and variants of field experiments.

The experiments were carried out in 6 options, 4 repetitions, each option is 100 m2 in a total area of 24 00 m 2, total protection area and corridors are 260 0 m2, options and returns are placed in an orderly manner.

The experimental plots were planted by hand and were prepared according to the recommended technology, in which the field was covered with water in a layer of 1-3 cm before planting.

Determining the economic efficiency of the experimental options, the costs spent on crop cultivation, the obtained net profit and other economic indicators with the average value of 2022-2023 in the V.N.Polojiy method, the statistical analysis of the results obtained from the experiments were calculated based on the B.A.Dospehov method using the Microsoft Excel program. In this case, based on the expenses incurred and the income received according to the options, the average standard prices accepted by Tashkent Region Cereal Products JSC were used.

RESULTS AND DISCUSSION

J.Uddin, S.Ahmed, O.R.Harun, M.Hasan, Asaduzzaman in 2011 planted the rice plant in three different planting schemes and studied some of its biometric characteristics that form the basis of the crop, including the effect of furrow length on productivity. have learned As a result, it was observed that the furrow length was 26.8 cm in seedlings planted in a 20x20 cm planting pattern. It was determined that 26.4 cm was found in the seedlings planted in the 25x20 cm planting scheme and 22.4 cm in the seedlings planted in the 20x10 cm planting scheme.

It is known from Matsumoto's experiments in 2017 that as the thickness of the seedling increases, the length of the furrows becomes shorter and the number and weight of whole grains in the furrow decreases.

Like Bhuneshwar Verma, L.K.Ramteke, M.Shahid In 2019, scientists planted rice seedlings in 15x10, 15x20 planting schemes and conducted scientific research. As a result, in the 15x10 planting scheme, compared to the 15x20 planting scheme, the elements of the crop, that is, the number of productive stems is 4-5 pieces, the length of the furrow is 2-3 cm, the number of grains in the furrow is 5-7 pieces, and they noted that the weight of 1000 pieces of grain was up to 0.7-1.3 grams.

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that determine the productivity of a rice plant is its biometric indicators. Because, he stated that productivity is determined by parameters such as the length of the furrow, the number of whole grains in the furrow, the weight of 9990 grains. (2002) Z.N.Djumanov, S.Sh.Makhmudova and A.Egamnazarov.

In the laboratory experiments conducted by A.P.Egamnazarov and others in Khorezm in 2002, in the rice plants grown directly from seeds as the main crop, during the growing season, 208 fruitful stalks and 208 fertile stalks were produced in 1 m2 of the area, the level of establishment was 1 o in the plant was equal to 2.08, and the number of fruitful stems in 1 m2 of the plant planted as seedlings was 260 such stems and buds, that is, the level of germination in 1 plant 2.60 equal to more than 52 panicles were received.

In 1962, Ch.Mamedov planted 3, 6, 9 seedlings in each nest in the soil and climate conditions of Azerbaijan in 10x10 cm, 20x20 cm and 30x30 cm images, and as a result of his research, when he planted 6 seedlings in each nest in the 10x10 cm image achieved the highest yield. Because in his opinion, when rice seedlings are planted thickly, the number of whole grains in the furrow decreases to 6-7 pieces, but as a result of the increase in the number of plants per unit area, the total productivity increases by 15-22 s/ emphasized.

Table 1

Yield elements of rice varieties and the effect of different planting schemes on biometric indicators

No	Planting scheme	Total number of stems, piece / m^2	Product number of stems, pcs / m^2	Panicle length, cm	Number of grains in panicle, pcs	Weight of one panicle, g	Full grains, g	Hollow grains, g	Weight of 1000 grains, g
ISKANDAR NAVI									
1	30x10x1	218.3	198.5	18.7	147	4 , 2	115.9	3 3.4	32, 9
2	30x10x2	239.9	218.1	18.5	145	3, 9	115.3	3 1,2	32.5
3	30x10x3	245.3	223.0	17.8	139	3, 7	108.4	3 2, 7	32.1
ILGOR VARIETY									
4	30x10x1	213.1	193.7	18.8	1 4 0	3 , 9	106.6	3 1.1	31.9
5	30x10x2	235.3	213.9	17.5	1 38	3, 7	105.8	2 9.7	31.5
6	30x10x3	243.2	221.1	17.2	1 3 3	3, 5	99.3	3 0.6	31.2

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In the experiment, samples were taken to analyze the biometric indicators of the rice plant, the biometric indicators of the yield elements of the rice varieties were determined, and the following results were obtained:

30 days seedlings of the "Iskander" variety in the third decade of May, 333 thousand pieces/ha, i.e., in the first option planted as seedlings in the 30x10x1 scheme, during the ripening period, the total number of stems per 1 m2 was 218.3 pieces, the productive stems were 198.5 pieces reached, the length of one pod was 18.7 cm, the number of grains in the pod is 140, the weight of one pod was 3.9 grams, the number of whole grains was 106.6, the number of empty grains was 33.4 it was observed that the weight of 1000 grains was 32.9 grams.

CONCLUSION

Summary by doing that's it to say maybe rice Iskandar and Ilgor varieties in the scheme 30x10x1 when planted that biometric indicator of rice was observed well.

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