



CHANGES IN THE NUMBER OF BONES AND THE NUMBER OF PODS OF THE "UZBEK-6" VARIETY UNDER THE EFFECT OF IRRIGATION

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Article history:	Abstract:
Received: 6 th October 2022	This article presents the influence of the irrigation regime on the number of branches and the number of beans of the Uzbek-6 soybean variety. In the experiment, the average number of branches per 1 plant was 4.1 pieces in the FFC 65/70/65 variant, 4.6 in the FFC 70/75/65 variant, 5.7 in the FFC 75/80/70 variant and in the variant FFC 80/80/70 was 6.3 pieces. The number of beans per 1 plant in the FFC 65/70/65 variant was 63.8 pieces, in the FFC 70/75/65 variant - 68.1 pcs, in the FFC 75/80/70 variant - 96.2 pcs, in the FFC variant 80/80/70 - 82.5 pieces.
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RELEVANCE OF THE TOPIC. Globally, the year-on-year increase in the demand for soybean (*Glycine max*) important food products requires further expansion of agricultural crop areas and continuous supply of high-quality products. Today, soybeans are cultivated on 122 million hectares of land in the world, and more than 362 million tons of soybeans are harvested per year, including Brazil 37 million, the USA 31 million, Argentina 18 million, India 11 million, China 9 million, and in Uzbekistan 31,000 hectares of soybeans are planted in open fields 32 4,000 tons of soybeans are grown. However, as a result of the daily increase in demand for soy protein and oil, the demand for soybean varieties with higher protein and oil content is increasing.

Today, the growth of soybean production in the world is provided due to the increase of cultivated areas and the increase of productivity, and the average annual growth rate of planted soybean area in the last ten years is 1.7 percent. Soybean yield per hectare increased by 1.0%, and the average yield was 28 centners per hectare.

Level of learning. In the research of R. Siddiqov and others, it was found that in the control (without fertilizer) version of the soybean variety "To'maris Man-60" there were 78 pods in one plant, while in the version given 60 kg/ha of nitrogen fertilizer, there were 84.5 pods or 6.5 pods compared to the control, with nitrogen 87.2 units in the option given fertilizer 90 kg/ha or 9.2 units compared to the control, 92.6 units in the option given nitrogen fertilizer 120 kg/ha or 14.6 units compared to the control, 93.1 in the option given nitrogen fertilizer 150 kg/ha 15.1 more pods were produced compared to the control [3].

According to the experimental results of A. Panjiev, J. Allayarov, F. Jabborov, the influence of irrigation rate on the growth, development and productivity of soybeans is significant. When irrigation increased to a certain standard (2000-3000 m³/ha), the height of the plant, the number of side branches and the weight of a thousand seeds partially increased. When the irrigation rate increased from 2000 m³ to 2500-3000 m³, the height of the plant increased from 110 cm to 121 cm, the number of side branches increased from 3 to 4 units, the number of pods per plant increased from 33 to 41 units, as a result, the yield increased from 24 ts/ha to 27.5 increased to -28.7 ts/ha [2].

According to N.P. Qakhorovani, the ideal irrigation rate for soybeans in the soil and climate conditions of our region is 2500-3000 m³ per hectare. If we determine the rate of each watering from 500 m³, this means watering 5-6 times per season. In this case, productivity (27.5-28.7 ts/ha) and economic efficiency will be high, and he emphasized the creation of a moderate ecological environment in the soil [4].

Based on the results of the experiments conducted by U.Norkulov, O.Sottorov, it was concluded that before irrigating the soybean crop planted as a repeated crop during the season, when the soil moisture is 70-80-60% compared to the marginal moisture yield of the soil, 5 times and the rates of each irrigation are 500-600 m³/ha provided grain yield of 20.2 tons/ha [1].

THE PURPOSE OF THE STUDY. Development of an irrigation regime that ensures abundant and high-quality production of soybeans in the irrigated lands of the southern region of the republic, increasing economic efficiency and profitability.

Research methods. Researches were conducted at the central experimental farm of the Southern Agricultural Research Institute. The amount of total NPK and mobile NPK in soil, plant and grain, protein, type, mass of 1000 grains were determined in the laboratories of the Southern Agricultural Research Institute.

Soil samples for analysis were taken according to the methods of "Metody agrokhimicheskikh, agrofizicheskikh i mikrobiologicheskikh issledovaniy v polivnykh khlopkovykh rayonakh" (1963).

Amount of humus according to the method of I.V. Tyurin (GOST-26213); nitrate nitrogen-ion selective method, GOST-13496-10; total nitrogen, phosphorus and potassium in one sample I.M. Maltseva, L.P. Gritsenko's method; mobile phosphorus in 1% ammonium carbonate solution by the method of B.P. Machigin; by the method of P.V. Protasov in an alternating potassium flame photocalorimeter; water-soluble salts and dry residue were determined by the generally accepted method, GOST-26423-85, using a potentiometer in pH aqueous absorption.

The density of the soil in field conditions is determined by the Kachinsky method using a 500 cm³ cylinder; specific mass by pycnometric method; soil porosity in the calculation method; water permeability of the soil was performed by the Kaczynski method.

Field and laboratory experiments were carried out on the basis of the methodological manual of the All-Russian Research Institute of Plant Science (1985). Phenological observations and biometric analyzes were carried out according to the methodological manual of the State Commission for Testing Agricultural Crops (1989). The study of plant growth and development was carried out by measuring the field fertility of seeds and plant stem thickness: at 1 p/m, in 3 places where continuous observation is carried out at the time of germination and before harvesting.

Research results. In laboratory analysis, the average number of branches per 1 plant was 4.1 in the ChDNS 65/70/65 variant, 4.6 in the ChDNS 70/75/65 variant, ChDNS 75/80/70 It was 5.7 units in the 0 version and 6.3 units in the 80/80/70 variant (Fig. 1).

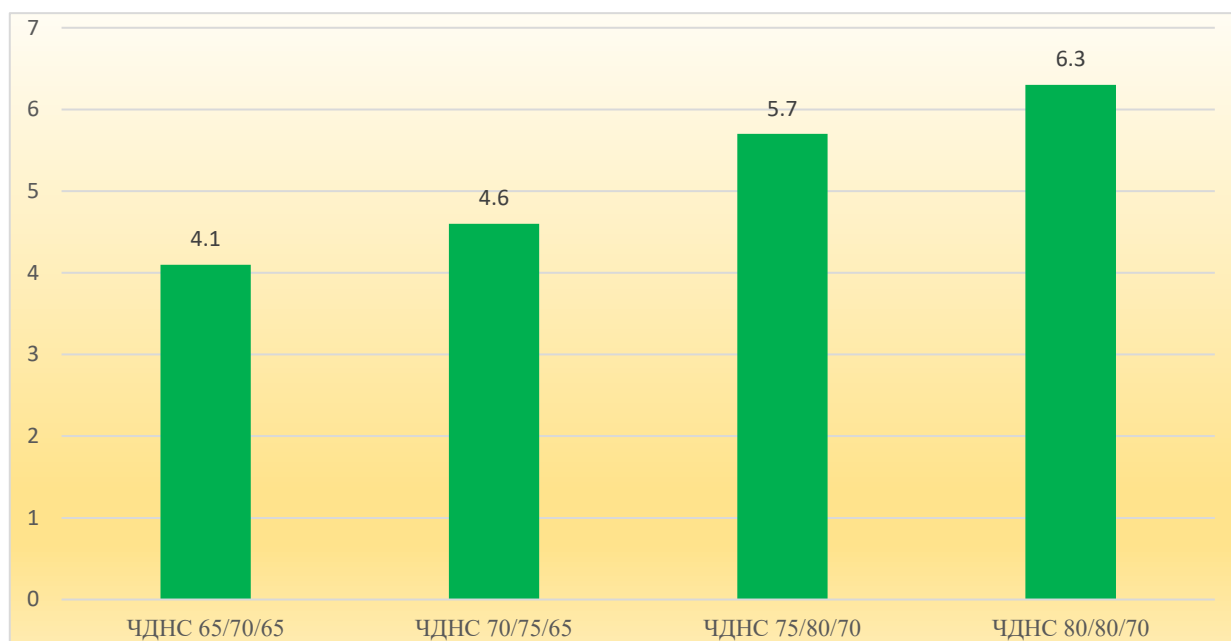


Figure 1. The number of branches in 1 plant, pcs

In the laboratory analysis, the average number of pods per 1 plant was 63.8 in ChDNS 65/70/65, 68.1 in ChDNS 70/75/65, 96.2 in ChDNS 75/80/70, and ChDNS 80/ In the 80/70 option, it was 82.5 units (Fig. 2).

In ChDNS 80/80/70 variant, compared to ChDNS 75/80/70 variant, the decrease in the number of pods per 1 plant on average is explained by the strong development and flowering of the plant under the influence of increasing watering rates and periods.

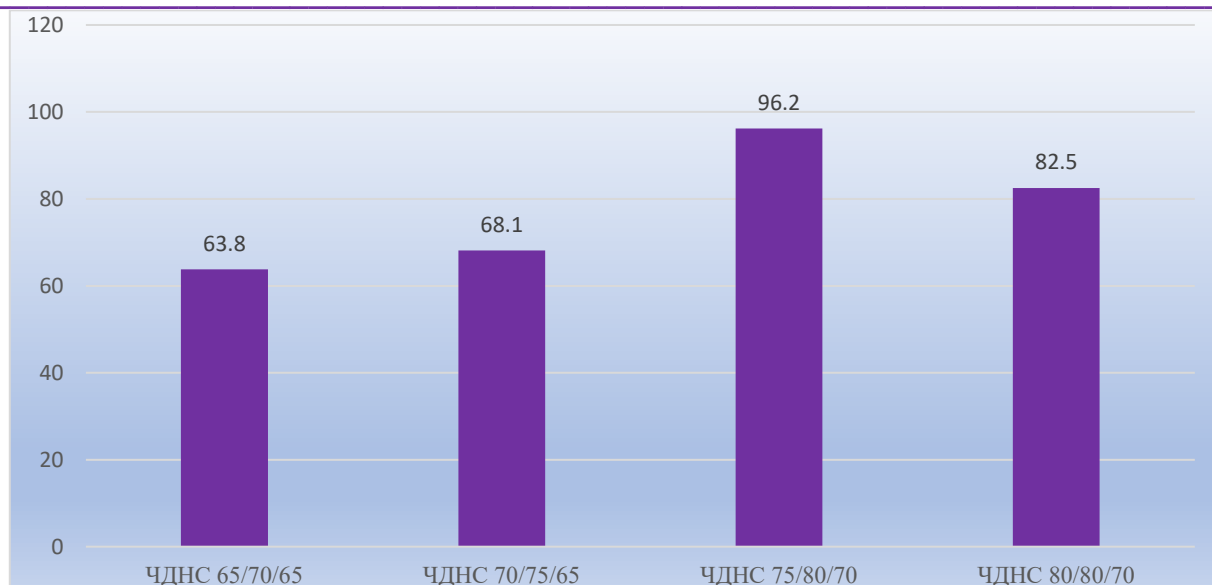


Figure 2. The number of pods in 1 plant, pcs

IN CONCLUSION, it can be said that in the conditions of light gray soils of Kashkadarya region, during cultivation of "Uzbek-6" variety of soybean, when the soil moisture before irrigation is ChDNS 75/80/70, irrigation provides a high yield structure.

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