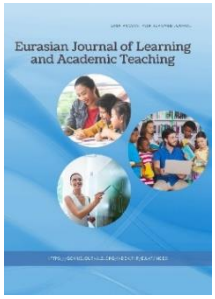

The Effect of Irrigation Rate and Period on the Growth and Height of the "Uzbekistan 601 ESV" Hybrid of Corn

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ABSTRACT

This article highlights the influence of norms and terms of irrigation on the growth and height of the corn hybrid "Uzbekistan 601 ECB" on irrigated lands in the southern region of the republic. It was found that the height of the plants was the highest (281.3 cm) in the variant with a large number and number of irrigations, and low (198.0 cm) in the variant with the least irrigation.

Keywords: Corn, Uzbekistan 601 ERUs, variety, water, irrigation, plant height.

Level of learning.
Maize has a clear critical period during which sufficient moisture must be provided in the soil. It starts 10 days before ovulation and lasts about a month. During this period, 2-3 parts of the total water consumption is spent on crop formation [3].Plant development is influenced by various factors - variety characteristics, soil and weather conditions, cultivation technology.Mukhina, M.T. (2015) stated that plant growth and development are inextricably linked with physiological and biochemical processes. Various factors affect the morphological characteristics of the plant and the structure of the crop [1].

The purpose of the study.
Studying the growth and development of hybrid corn "Uzbekistan 601 ESV" in the irrigated lands of the southern region of the republic, studying the influence of irrigation norms and periods on the growing season, developing an agrotechnology of cultivation that ensures abundant and high-quality crops, 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, plants and grains, mass of 1000 grains was 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 mikrobilochicheskikh issledovaniy v polivnyx khlopkovyx 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).

Research results.

Field germination of seeds is a complex indicator that depends not only on the quality of sowing seeds, but also on ecological, agrotechnical and other factors. In the desert (Karshi) region of Kashkadarya region, before planting spring crops, in order to maintain soil moisture, wet water (pushta water) is given, and the soil is cultivated with a light hanging harrow.

In our research, the influence of irrigation criteria and periods on the height of corn plants was studied. On June 1, the highest indicator was observed in the option of irrigation (LFWC 80-80-70%), the height of the corn plant was determined to be 142.3 cm. Plant height was 124.0 cm in the irrigation (LFWC 75-80-70%) option, and 81.3 cm in the irrigation (LFWC 70-75-65%) option. The lowest rate of irrigation (LFWC65-70-65%) was observed with a plant height of 50.0 cm (Table 1).

When the height of the corn plant was studied on July 1, the highest indicator was determined in the irrigation (LFWC 80-80-70%) option of 261.7 cm. It was determined that the plant height was 225.3 cm in the irrigation (LFWC 75-80-70%) option, while it was 207.0 cm in the irrigation (LFWC 70-75-65%) option. The lowest indicator was observed in the option of irrigation (LFWC 65-70-65%) plant height of 162.3 cm

Table 1
The effect of watering rates and periods on the height of the variety "Uzbekistan 601 ESV"

Options	Plant height			
	01.june	01.jule	01.avg	01.sen
LFWC 80-80-70%	142,3	261,7	281,3	281,3
LFWC75-80-70%	124,0	225,3	250,3	250,3
LFWC70-75-65%	81,3	207,0	237,3	237,3
LFWC65-70-65%	50,0	162,3	198,0	198,0

Variants In the phenological observations conducted on August 1, the plant height of corn in the irrigation (LFWC 65-70-65%) variant was 198.0 cm, and in the irrigation (LFWC 70-75-65%) variant, the plant height was 237.3 cm. The height of a plant in the same irrigation (LFWC75-80-70%) option is 250.3 cm or the height of a plant in the irrigation (LFWC 65-70-65%) option is 52.3 cm, from a plant in the irrigation (ChDNS 70-75-65%) option and it was found to be 13 cm higher. The highest result of watering LFWC 80-80-70% was 281.3 cm plant height.

Phenological observations conducted on September 1 (the end of the growing season of the variety) revealed that there was no change in the height of the corn crop, and that there was no growth in corn after the initial ripening period.

In conclusion, it can be said that the height of the hybrid "Uzbekistan 601 ESV" in the conditions of irrigated light gray soils of the southern region of the Republic was determined under the influence of irrigation. It was found that the plant height was the highest (281.3 cm) in the irrigated option when the soil moisture before irrigation was 80-80-70% compared to LFWC, and on the contrary, it was lower (198.0 cm) in the LFWC 65-70-65% option.

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