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WATER-FERTILIZER (NPK) STANDARD IRRIGATION REGIMES OF "BUKHARA-102" AND "PORLOQ-1" COTTON VARIETIES

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Abstract:. The main task of today's cotton farming is to create, place and put into practice cotton varieties suitable for the climate and soil conditions of our country. Fast ripening, productive, cotton fiber that can meet market requirements, resistant to diseases and pests, suitable for different salinity soils, water, drought, temperature, haremsel, specialists and breeders are conducting research and making great progress especially on resistance to relative air humidity

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ВОДНО-УДОБРИТЕЛЬНЫЕ (NPK) СТАНДАРТНЫЕ РЕЖИМЫ ОРОШЕНИЯ ХЛОПЧАТНИКА СОРТОВ "БУХАРА-102" И "ПОРЛОК-1".

"БУХОРО-102" ВА "ПОРЛОҚ-1" ҒЎЗА НАВИНИНГ СУВ-ЎҒИТ (NPK) МЕЪЁРИ СУҒОРИШ ТАРТИБЛАРИ

Every year, the production of promising cotton varieties is introduced, and it is ensured that they are planted on large areas of land, on the example of regions, regions, and districts. Taking into account the above, field experiments were conducted in 2016 in the conditions of weakly saline, light-colored gray soils with an underground water level of 0.5-2.0 meters at the "Bektepa MERSAJ" farm in Bandikhon district, Surkhondarya region. The research was conducted based on the methodology of the Cotton Research Institute of Uzbekistan (1).

Experiment 8 options were placed in one tier in 3 replications. Each plot is 7.2 m wide, 40 m long, and has an area of 288 m2.

The yield of the Porloq-1 cotton variety compared to the zoned medium fiber Bukhara-102 (control) cotton variety was determined at two different fertilizer rates: N-180, P-120, K-90 kg/ha; and N–230, P–160, K–115 kg/ha; studied at 65-65-60 %, 70-70-65 % compared to ChDNS in two irrigation regimes. The experimental system is presented in Table 1 (2).

Experience system

Variant	Pre-irrigation soil moisture relative to	Varieties of cotton	Rate of mineral fertilizers, kg/ha		
			N	P	K

	ChDNS, in %				
1	65-65-60	Bukhara-102	220	150	110
2	65-65-60	Porloq-1	230	160	115
3			180	120	90
4	70-70-65	Porloq-1	230	160	115
5			180	120	90

One of the main factors determining soil fertility is its agrophysical properties, namely: limited moisture capacity (ChDNS), water permeability, volume weight, soil density, porosity, granularity and their dependence on microbiological activity, location of plant root networks, and growth development. The interrelationship of plant water-nutrition regimes with agrophysical properties of the soil was studied based on experiments, and it was proved in obtaining a high yield of the studied cotton variety.

It was observed that plant growth and development, harvesting and ripening, of course, are directly dependent on water and nutrient standards in their care.

In the season of this year, the effect of watering and feeding on the growth development of the Porloq-1 cotton variety compared to the Bukhara-102 (control) cotton variety was evident from the beginning of the season. This became more apparent towards the end of the period of action. According to the phenological observation data obtained at the beginning of August, the average height of the main stem in these varieties was 1.23 cm in the Bukhara-102 cotton variety and 1.12 cm in the Porloq-1 cotton variety.

It was clear that the bolls of the Porloq-1 cotton variety were slightly higher than the bolls of the Bukhara-102 cotton variety.

According to the data obtained from the phenological observation on August 20 before harvesting, the Bukhara-102 cotton variety had 9 bolls, including opened bolls, and the Porlok-1 cotton variety had 12.5 bolls, including 10.8 bolls.

But in cotton varieties, 70-70-65% of irrigation standards, from 65-65-60% of NPK 230-160-115 kg/ha N-180; P-120: A reduction of K-90kg/ha resulted in smaller pods opening.

Based on the results of the research, it was determined that Porloq-1 cotton variety compared to Bukhara-102 variety compared to Bukhara-102 cotton variety in the conditions of light gray, low salinity water level of 0.5-2.0 meters of Surakhdarya region showed positive indicators. In the researches, soil moisture before irrigation in Bukhara-102 and Porloq-1 cotton varieties is 65-65-60% compared to ChDNS, the rate of fertilizers is N-230; P-160; When K-115 kg/ha was applied, 26.9 t/ha of Bukhara-102 cotton variety and 30.2 t/ha of Porloq-1 cotton variety were provided.

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