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THE EFFECT OF COTTON YIELD WHEN PLANTED AS A COMPATIBLE AND RECIPROCATING CROPS WITH CANNON AND SOY CROPS

Sh.N.Nurmatov
q/x.f.d., prof., PSUEAITI, Tashkent
J.Q.Shadmanov
q/x.f.n., kat.i.x., PSUEAITI, Tashkent
B.O'.Begimqulov
PhD, kat.i.x., ITPITI, Termiz
X.T.Bekmurodov
PhD, kat.i.x., ITPITI, Termiz

Abstract: In this article, information on the growth, development and impact of cotton crops as a repeated crop in the light gray soils of the Syrdarya region, which are being grazed, has been developed.

Key words: **S**aline soils, partner crops, cotton, mung bean, soybean, irrigation regimes, crop growth and development.

Enter. Today, in agriculture around the world, special attention is being paid to the wide introduction of new resource-saving technologies that preserve soil fertility, to meet the population's demand for food products, and to reduce the cost of production by saving fuel and lubricants and other costs in growing high-quality crops. In order to regularly provide the population with food products, innovative technologies that maintain soil fertility and increase crop yield are 19.3 million in the USA, 17.4 million in Brazil, 14.8 million in India, 12.3 million in China, 10 million in Mexico. ., 3.5 million in Australia, 3.7 million in Pakistan. hectares, a total of 80 million around the world. is being implemented in areas of more than one hectare.

In the countries of the world where cotton is grown, including India, cotton is grown in combination with corn, white sorghum, sesame, pepper, coriander, as well as leguminous crops, in China, cotton is grown in cooperation with wheat, rice or rapeseed crops, in Brazil and Peru, cotton is grown with corn, intercropping with beans and rice, and intercropping of cotton with corn in the Arab Republic of Egypt have been found to be effective. From this point of view, it is urgent to carry out research on the cultivation of cotton and additional legumes, vegetables and other crops in the same field by interspersing cotton with other crops, without reducing the areas where cotton is planted.

Of the 6.5 billion people living on earth, 1.1 billion live in water scarcity. According to V. Danilov-Danilyani, director of the Water Problems Research Institute of the Russian Academy of Sciences, by 2025, the number of people living in water shortages is expected to exceed 3 billion and make up 40 percent of the population.

Currently, the rapid growth of the population and the increasing demand for food products put before the scientists of agrarian science urgent issues, such as the development of agrotechnologies for the cultivation of crop varieties capable of producing high-yielding, fast-growing, ecologically clean products.

Special attention is paid to the use of organic and mineral fertilizers, NPK ratios, their application periods, crop irrigation, salt washing, use of mineralized seepage water for crop irrigation, main soil, pre-planting and inter-row work during the growing season when creating crop rotation systems in our republic. As a result, the creation of a short rotation farming system is achieved. It is demanded to carry out scientific researches on the cultivation of additional crops due to the more effective use of mineral fertilizers, water and other natural resources given to cotton, without reducing the cotton cultivation areas, planting root-fruit,

vegetable and leguminous-cereal crops between cotton rows.
Until now, the amount of NPK given to cotton is not used enough by the plant, the plant absorbs a maximum of 35-40 percent of the given nitrogen fertilizers, 18-20 percent of phosphorus, and some of the remaining nitrogen passes into the molecular state of nitrite and flies into the air, and another part is washed away with irrigation water.
For full use of valuable mineral fertilizers in irrigated farming, the use of co-crops with cotton in the same field is proven in experiments that the full use of fertilizers brings more income from cultivated crops per hectare, and therefore it is proven that environmental pollution with agrochemicals is greatly eliminated [1,2,3, 4].
The task in the field is to apply the optimal options obtained in the experiments in the conditions of production in the farm fields, to show the cooperative farming to the farmers, and to introduce this farming widely in the farm fields.
M.Muhammadjonov, Q.Mirzajonov, Z.Tursunkho'jaev, M.Yusufjonov, B.Kholikov, O.Rustamov, S.Sulaymonov, I.Hoshimov, F. on partner planting of various crops and creation of short rotation rotation systems. Ismailov, P. Husaynov, P. Bodrov, M. Sorokin, Kh. Romanov, A. Rakhimov, P. Makarov, J. Ikromov, N. Andreev and others, and abroad A. A. Hoshy, H. M. Mahammad, S. B. Patil, M. N. Sheelaavanter, Siegel , Gupta Sudhir, Ter-Avanesyan, M.H. Johnson, V. N. Aiyer, Balasubrahmanyan, Christidis, Garrison, L. Dolozal, F. N. Lisyatsky, I. Belyuchenko, A. A. Stashov and other scientists have conducted a number of scientific studies.
In the following years, a number of positive things were done in the agricultural life of our Republic. An example of this is the increase in the number of crops in the structure of crops, the rapid introduction of grain cultivation, and the fact that two grain harvests are achieved in one year by using irrigated land efficiently throughout the year, which is a part of our agricultural achievements.
Based on this, in the conditions of light gray soils of the Syrdarya region, which are being grazed, each crop area was determined to be 3000 m2 and field experiments were conducted. The experiment was carried out in four repetitions, and the area of each plot was 120 m2. In the experiment, 8 options were studied, and the object of research was winter wheat and repeated crop mash. In the experiment, 70% of phosphoric fertilizers, 100% of potash fertilizers, and 100% of local fertilizers were applied under autumn driving. According to the data obtained from the experiment, soil samples were taken and analyzed in the 0-30 cm and 30-50 cm layers in order to determine the amount of mobile nutrients in the soil of the experimental field. In the 0-30 cm layer, it was determined that nitrate nitrogen is 1.212 mg/kg, mobile phosphorus is 17.2 mg/kg, and exchangeable potassium is 230 mg/kg. It was 0.506 mg/kg, 14.8 mg/kg and 190 mg/kg in the 30-50 cm layer. These data indicate that high levels of nitrogen and phosphorus and moderate levels of potassium are required to grow high quality cotton. The amount of humus in the soil was also found to be very low. At the same time, according to the results of the analyzes of the soil volume mass at the beginning of the application period on April 20, it was 1.27 g/cm3 in the 0-30 cm layer, 1.34 g/cm3 in the 0-50 cm layer, and -1.38 g/cm in the 0-100 cm layer. cm3, by the end of the application period, in the cotton field, in accordance with the above, 1.31; 1.33 and 1.39 g/cm3 or 0.01-0.04 g/cm3 compared to the beginning of the period of operation, 1.32 in the field planted with companion crops; 1.35; 1.40 g/cm3 or 0.01-0.02 g/cm3 density compared to the beginning of the period of operation was observed, Table 1.
Table 1.
Density of soil in cotton cultivation, g/cm3

Soil layer, cm	At the beginning of the application period, in the spring, 20.04.2013	At the end of the validity period, in autumn, 23.09.2013	
		Cotton	Companion crops (chickpeas, soybeans, peanuts)
0-30	1,27	1,31	1,32
0-50	1,34	1,33	1,35
0-100	1,38	1,39	1,40

At the beginning of the application period, the water permeability of the soil in the cotton field was 424

m3/ha in the first hour, and 268 in the following hours; 205; 115; 81 and 42 m3/ha, and 1135 m3/ha in 6 hours, by the end of the period, this figure decreased significantly and reached 1038 m3/ha, in the partner crop field it was 360 m3/ha in the first hour, and in the following hours 202; 175; 96; 67 and 35 m3/ha and 935 m3/ha in 6 hours and 780 m3/ha at the end of the period of operation. Thus, by the end of the season during the observation, it was 1038 m3/ha in the cotton field and 780 m3/ha in the partner crop field. According to S.V. Nesterev, it was noted that the water permeability of the soil in the observed areas belongs to the class of soils with weak water permeability.

In the experiment, the studied mineral fertilizers N-200, R-140, K-100 kg/ha did not have a negative effect on cotton flowering and bud opening dynamics. In particular, in the field of Andijan-37 cotton variety planted with a companion crop, the flowering phase was observed in 54.8% of the plants by June 26, while in the An-Boyovut-2 variety planted without a companion crop, this indicator was 52.3%, 3.13.1- the table shows the data. Also, in the last observation period on August 24, in the field planted with a partner crop, 82.6% of the plants had open buds, while in the An-Boyovut-2 variety, it was 80.2%.

The partner crops planted in the experimental field, mung bean, soybean and pea germinated fully on May 20, the first leaf of mung bean, soybean and pea appeared on May 24, the first flower of mung bean, soybean and pea appeared on June 27, and 50% of mung bean, soybean and pea flowered on July 15. Phenological observations were made on June 1 when mung bean, soybean and peanut were in peak flowering.

There was no significant difference between the rates of N-200, R-140, K-100 kg/ha of mineral fertilizers applied to cotton and the growth and development of cotton and related crops, soybean, peanut. In particular, when mineral fertilizers are applied in the amount of N-200, R-140, K-100 kg per hectare, the height of mash is 40.6 cm, the number of pods is 12.7 pieces, the height of soybean is 42.1 cm, the number of pods is 14.4 pieces, the height of peanut is 41.1 cm, the number of dukas was 13.6 pieces.

From the data, it can be seen that the effect of mung bean, soybean and groundnut plants planted as partner crops on productivity indicators is presented in Table 3.17.1. Also, the number of pods in 1 plant is 24.8 pieces, the number of grains is 34.3 pieces, the weight of grain is 7.5 grams, and the weight of 1000 pieces of grain is 52.5 grams. 36.2; 8.9; 145.2 and 22.1 in peanut; 28.4; 6.4; It consisted of 167.7 grams. 16.4 t/ha of soybean, 11.8 t/ha of soybean and 6.7 t/ha of groundnut were achieved.

Summary. So, in the conditions of light-colored gray soils that are being grazed in the Syrdarya region, in the field prone to salinity, the An-Boyovut-2 variety of cotton and the Andijan-37 variety of control and companion crops (peanuts, soybeans, peanuts) were treated with mineral fertilizers N-200, R-140, When using K-100 kg as a co-crop with cotton, 16.4 t/ha of soybean, 11.8 t/ha of soybean and 6.7 t/ha of peanut were obtained, and it was observed that the soil fertility increased due to the residual residues of mash and soybean.

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