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ТАКРОРИЙ МУДДАТДАГИ СОЯ НАВЛАРИ ПАРВАРИШИГА ТУПРОҚ НАМЛИГИНИНГ ТАЪСИРИ

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Аннотатция

Ушбу маколада соянинг “Нафис” ва “Орзу” навларини ўтлоқи бўз тупроқлар шароитида ўсув даври давомида турли усул ва тартибларда суғоришнинг тупроқдаги намлик миқдори етарли даражада бўлиши унинг ўсиши, ривожланиши ва ҳосил тўплашидаги аҳамияти бўйича илмий тадқиқот натижалари баён қилинган.

Калит сўзлар

Соянинг, Нафис, Орзу навлари, тупроқ, намлик, ҳосилдорлик.

ВЛИЯНИЕ ВЛАЖНОСТИ ПОЧВЫ НА ВЫРАЩИВАНИЕ ПОВТОРЯЮЩИХСЯ ТЕНЕВЫХ СОРТОВ

Тухтамишев Мансур Акрам угли

Аннотатция

В данной статье описаны результаты научных исследований о значении орошения сортов «Нафис» и «Орзу» в условиях лугово-серых почв для достаточного роста влажности почвы в течение вегетационного периода разными способами и приемами.

Ключевые слова

Сорта Тень, Элегант, Мечта, почва, влажность, урожайность.

EFFECT OF SOIL MOISTURE ON CARE OF REPEATED SHADOW VARIETIES

Tuxtamishev Mansur Akram ugli

Annotation

This article describes the results of scientific research on the importance of irrigation “Nafis” and “Orzu” varieties in the conditions of meadow-gray soils for

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sufficient growth of soil moisture during the growing season in different methods and procedures.

Keywords

Shade, Elegant, Dream varieties, soil, moisture, yield.

INTRODUCTION

Today, in the agricultural sector of the world, taking into account the problem of water shortage in crop production, and the increasing population, it is necessary to correctly determine the methods and procedures for irrigation in order to increase the yield and improve the quality of grain produced. Currently, in order to meet the demand of the world's population for vegetable oil, to ensure food security, it is urgent to develop methods and procedures for optimal irrigation of soybean varieties planted as a secondary crop after winter cereal crops, and to conduct research to determine the water consumption of plants.

This dissertation research will serve to a certain extent in implementing the tasks set out in the Decrees of the President of the Republic of Uzbekistan No. PF-5303 dated January 16, 2018 “On measures to further ensure the country's food security”, No.PF-6024 dated July 10, 2020 “On approval of the Concept of water management development in the Republic of Uzbekistan for 2020-2030” and Resolution No. PQ-2832 dated March 14, 2017 “On measures to increase soybean planting and soybean grain production in the republic in 2017-2021” and other regulatory and legal documents related to this activity.

Purpose of the study. The aim of the project is to develop optimal irrigation methods and procedures to obtain high yields from soybean varieties “Nafis” and “Orzu” grown as a repeat crop after winter wheat in the conditions of the pasture gray soils of the Jizzakh region.

Research results: In order to maintain the soil moisture before irrigation at 70-70-60 percent compared to the limited field moisture capacity, Nafis (var. 1, 2, 3) and Orzu (var. 7, 8, 9) soybean varieties were irrigated 1 time during the operation period, and to maintain the soil moisture before irrigation at 75-75-65 percent compared to the limited field moisture capacity, soybean varieties were required to be irrigated twice.

Irrigation timing and rates: In all soybean varieties irrigated from the ridge (variants 1, 4, 7, 10), irrigation was carried out depending on the amount of soil moisture in the 0-50 cm layer before flowering, 0-70 cm during pod formation, and 0-50 cm during ripening. In the variants irrigated between ridges (variants 2, 5, 8, 11), irrigation was carried out depending on the amount of soil moisture in the 0-50 cm layer before flowering, 0-50 cm during pod formation, and 0-50 cm during

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ripening. In the variants irrigated by laying a film between rows (variants 3, 6, 9, 12), irrigation was carried out depending on the amount of soil moisture in the 0-30 cm layer before flowering, 0-50 cm during pod formation, and 0-30 cm during ripening.

In the studies conducted in 2019, in the area with a 70-70-60% ratio of the NWO, in the 1st variant (before the 1st irrigation) where the Nafis soybean variety was cultivated using the traditional method and irrigated, the moisture content in the 0-50 cm layer of the soil was 13.1% and 13.9% in the 0-70 cm layer, in the 2nd variant with inter-row irrigation, these indicators were 12.2; 13.3; respectively, and in the 3rd variant with inter-row irrigation with film, the moisture content was 13.9% and 14.8%, respectively. When inter-row mulching was used, the moisture content in the layers was 0.8; 0.9% higher than that in the case of irrigated without mulching.

70-70-60% pre-irrigation soil moisture compared to NWO, in the 7th option (before 1st irrigation), irrigated Orzu soybean variety in the traditional way in the specified area, 12.9% in the 0-50 cm layer, 13.8% in the 0-70 cm layer, in the 8th variant, which is irrigated with egat, these indicators are 13.2, respectively; 14.5%, and 13.8% and 15.0% in the 9th option, which was watered with a film between the rows, which is 0.9 across the layers compared to watering without mulching when using the method of mulching between the rows; It was found that there was a lot of moisture reserve up to 1.2%.

In conclusion, it should be noted that when the soil moisture is 70-70-60% compared to NWO, after harvesting the grains and straw of winter wheat, as a repeated crop, in the cultivation of Soybean variety Orzu, when the mulching method with the help of a film is used in irrigation, in comparison with other irrigation methods, 0.9% in the 0-50 cm layer, 0.9% in the 0-70 cm layer It was found that the moisture reserve of the soil before irrigation was high, up to 1.2%.

In the studies conducted in 2019, in the area with a 70-70-60% ratio of the NWO to the NWO, in the 1st variant, which was traditionally irrigated and cultivated with the Nafis soybean variety, the soil moisture content was 16.5% in the 0-50 cm layer of soil and 17.2% in the 0-70 cm layer, in the 2nd variant, which was irrigated with the help of a furrow, these indicators were 15.7%; 16.9%, respectively, and in the 3rd variant, which was irrigated with a film between the rows, it was 15.8% and 16.6%.

70-70-60% pre-irrigation pre-irrigation soil moisture compared to NWO in the 70-70-60% pre-irrigation soil moisture in the specified area, in the 7th option (after the 1st irrigation), irrigated the Orzu variety of soybean in the traditional way, 17.1% in the 0-50 cm layer of the soil, 17.6% in the 0-70 cm layer, in the 8th option,

irrigated with egat, these indicators are 16.5, respectively; 16.8%, and 15.9% in the 9th option, which is watered with a film between the rows; It was found to be 17.0%.

In conclusion, it should be noted that when the soil moisture content is 70-70-60% relative to the NWO, when the method of inter-row mulching of the fields with a film is used for irrigation in the cultivation of soybean varieties Nafis and Orzu as a repeated crop, the moisture content of the soil after irrigation is reduced by up to 0.7-1.2% in the 0-50 cm layer and up to 0.6-0.6% in the 0-70 cm layer, compared to other irrigation methods, which can be explained by the low water consumption during irrigation.

In our studies, when the soil moisture content was 70-70-60% relative to the NDMS, it was observed that the soil moisture content after irrigation compared to the soil moisture content before irrigation varied by 3.4-4.2; 3.3-3.8% in the layers brought by irrigation from each plot, and by 1.9-2.1; 1.8-2.0% in the variants where inter-plot irrigation was carried out, mulching was carried out and irrigation was carried out. When mulching the plots with film and irrigating them in rows, it was observed that the moisture content along the layers was 1.5-2.1; 1.5-1.8% less than when other irrigation methods were used. Similar results were obtained in the remaining years of the study (see Appendices 18, 19, 20, 21, 22, 23, 24). In the studies conducted, in the area with a 75-75-65% ratio of the NWO to the NWO, the Nafis soybean variety was irrigated and cultivated in the traditional way (before the 1st irrigation) in variant 4, 13.6% in the 0-50 cm layer of soil, 14.6% in the 0-70 cm layer, and in variant 5, irrigated with inter-row mulching, these indicators were 14.4; 15.3%, and in variant 6, where the film was laid between the rows, it was 15.0; 15.7%, which means that the soil moisture reserve along the layers was 0.6-1.4; 0.4-1.1% higher when the film was mulched between the rows than when it was irrigated without mulching.

In the 10th option (before the 1st irrigation) in which the Orzu variety of soybean was irrigated in the traditional way in the specified area with respect to NWO of 75-75-65%, 13.5% in the 0-50 cm layer of the soil, 14.3% in the 0-70 cm layer, in the 11th variant, which is irrigated with egat, these indicators are 14.0, corresponding to the layers; 15.3 percent, and 15.3 percent in the 12th variant, which is watered with a film between the rows; It is 16.0%, when using the inter-row mulching method, it is 1.3-1.8 in layers compared to watered without mulching; It was found that there was a lot of moisture reserve up to 0.7-1.7%.

It should be noted that when the soil moisture is 75-75-65% compared to NWO, the above law is preserved, and it was found that when the method of mulching the egates with the help of a film is used in the cultivation of Soybean

variety, the moisture reserve of the soil is 1.8% in the 0-50 cm layer, and up to 1.7% in the 0-70 cm layer, compared to the other irrigation methods.

In the conducted studies, it was found that in the area with a 75-75-65% ratio of the NWO, the Nafis soybean variety was irrigated and cultivated in the traditional way (after the 1st irrigation) in variant 4, the moisture content in the 0-50 cm layer of the soil was 15.6%, in the 0-70 cm layer in variant 5, which was irrigated with a furrow, these indicators were 16.0; 17.0%, respectively, and in variant 6, which was irrigated with a film between the rows, it was 15.4; 16.4%, which is due to the fact that the moisture reserve of the soil along the layers was reduced by 0.2-0.6; 0.3-0.6% compared to the case of irrigated without mulching.

In the 10th option (after the 1st irrigation), in the 75-75-65% order of the soil according to ChDNS, the Orzu variety of soybean was watered in the traditional way, 15.9% in the 0-50 cm layer of the soil, 16.1% in the 0-70 cm layer, in the 11th option, irrigated with egate, these indicators are 15.9 according to the layers; 16.2%, 15.4 in the 12th option, where a film is laid between the rows and watered; It is 16.6% and 0.5 in layers when using the inter-row mulching method compared to the irrigation without mulching; It was found that the moisture reserve was less than 0.5%. It should be noted that when the soil moisture content was 75-75-65% relative to the NWO, the soil moisture content after irrigation in soybean varieties Nafis and Orzu compared to the soil moisture content before irrigation varied by 2.0-2.4; 2.1-1.8% in the layers brought by irrigation from each plot, by 1.6-1.9; 1.7-0.9% in the variant where inter-plot irrigation was carried out, and by 0.4-0.1; 0.7-0.6% in the variants where inter-plot mulching with film was carried out and irrigated.

When irrigating the plots with film mulching between rows, it was observed that water consumption along the layers was reduced and moisture content was reduced by 1.6-2.3; 1.4-1.2% compared to other irrigation methods.

CONCLUSIONS

In the conducted research, irrigation of soybean varieties was carried out according to the options of pre-irrigation soil moisture of 70-70-60% and 75-75-65% relative to the limited field moisture capacity, with a moisture content of about +-2%.

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