

EFFECTS OF IRRIGATION PROCEDURES AND METHODS ON THE OIL AND PROTEIN QUALITY OF SHADE VARIETIES

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ABSTRACT

In this article are given the scientific data obtained on the protein and fat content of soybean varieties sown in different methods and procedures in the conditions of meadow gray soils of Jizzakh region. %, in variant 9, the protein content of soybeans is 32.4% and the fat content is 19.37%. In variant 9, irrigation was carried out on mulched fields. . Brazil, the United States, Argentina and other countries are major exporters of soybeans, while China, Korea and other Asian countries are major importers. It was found that the protein content of soybean grain of the plant increased by 2.4% and its fat content decreased by 1.08% compared to other options of irrigation (from each field and between fields).

KEYWORDS: *Irrigation, Procedure, Method, Shade, Amount Of Oil And Protein.*

INTRODUCTION

Because of the world's population is growing, the demand for food is also accelerating equally . There are 122.1 million hectare plantation of Soybean on earth is cultivated as a main and secondary crop per, with an annual gross grain yield of 220.6 million tons. Brazil, the United States, Argentina and other countries are major exporters of soybeans, while China, Korea and other Asian countries are major importers. There are 162 million tons of soybeans worldwide by 2020, which is expected to reach 371 million by 2030. Tons [1-5]

Object of research: Experimental fields of Pakhtakor branch of the Scientific Research Institute of Cotton Breeding, Seed Production and Cultivation Agrotechnologies, “Orzu” and “Nafis” varieties of soybeans, soil moisture 70-70-60%, 75-75-65% regimes were obtained.

The purpose of the research. The development of optimal irrigation methods and procedures for high yields of “Nafis” and “Orzu” varieties of soybeans grown as a secondary crop after winter wheat in the meadow gray soils of Jizzakh region.

The objectives of the study are:

To determine the impact of cultivation of soybean varieties on different irrigation methods and procedures on the agrochemical, water-physical and agrophysical properties of the soil;

determination of water consumption for the cultivation of one quintal of soybean grain in different irrigation methods and procedures;

to determine the effect of different irrigation methods and procedures on the growth, development and accumulation elements of replanted soybean varieties;

to determine the cost-effectiveness of the use of different methods and procedures of irrigation of soybean varieties planted as a secondary crop.

The subject of the study is to determine the agrochemical, agrophysical properties of soils, methods and procedures for irrigation of soybean varieties, water consumption, plant growth and grain yield.

Research methods. The research was carried out on the basis of biometric measurements of plants, laboratory analysis of soil and plant samples, phenological observations on the methodology “Methods of field experiments” and mathematical and statistical analysis of BA Dospekhov’s method “Field experience”.

Results

Today, the amount of protein and oil obtained from soybeans which were planted in the fields of winter wheat in our country as a secondary crop serves to ensure food security for the population of our country. The grain content of these varieties was studied in the laboratory. [6-8]

In the study of soil moisture in the care of the “Nafis” variety of soybeans in the order of 70-70-60% relative to the Limited Field Moist Capacity (LFMC) in the 1st variant of each grain irrigated protein content of 31.6%, fat content 20.47%, in the 2nd variant irrigated intermittently these indicators are respectively 32.3; 19.82%, and in variant 3, where the row spacing was mulched with film, 33.7; 19.46%. It was found that the protein content decreased by 2.1%, but the fat content increased by 1.01% in the variants using other methods of irrigation (from each field and between the fields) compared to the option of irrigation in mulched fields. [9,10]

In the 4th variant of soybean irrigation, irrigated in the traditional way (from each field), the protein content of soybeans is 34.5%, fat content is 20.61% (soil moisture is in the order of 75-75-65% relative to LFMC), in variant 5, irrigated intermittently, these values are 35.0, respectively; 20.49%, in variant 6, where the row spacing is mulched with film 36,1 and 19.39%. Irrigation in mulched fields showed a 1.6% increase in protein content compared to other (each row and inter-row) irrigation options, but a decrease of 1.22% (Table 5.10). [11,12]

In the care of the Orzu variety of soybean, in the 7th variant irrigated from each field, the protein content of soybean grain is 30.0%, fat content is 20.40% (soil moisture is in the order of 75-75-65% relative to LFMC), In the 8th variant, irrigated intermittently, the protein content of soybeans is 30.6%, fat content is 20.45%, In variant 9, the protein content of soybeans is 32.4% and the fat content is 19.37%. In variant 9, irrigation was carried out on mulched fields. It was found that the protein content of soybean grain of the plant increased by 2.4% and its fat content decreased by 1.08% compared to other options of irrigation (from each field and between fields).

In the 10th variant,(soil moisture is in the order of 75-75-65% relative to LFMC) irrigated by the traditional method (from each branch) in the care of the Orzu variety of soybean, the protein content of the soybean grain of the plant is 31.3%, the fat content is 20.44%, in variant 11, irrigated intermittently, these figures are 32.5, respectively; 20.70 5%, in the 12th variant, where the row spacing is mulched with film, 34.2; Was equal to 19.80%. [13]

In the care of the Orzu variety of soybean, (soil moisture is in the order of 75-75-65% relative to LFMC)the protein content of the plant's grain increased by 2.9% compared to the variant used in the traditional methods of irrigation (10-11 variants from each field and between the fields). while a decrease of 0.64% was found (Table 5.10). [14]

CONCLUSION

In conclusion, it should be noted that when the soil moisture is 70-70-60% and 75-75-65% relative to the LFMC, in the variants of irrigation (variants 3, 6, 9, 12), where the interval between rows was irrigated with film-mulched branches, in the care of Nafis and Orzu varieties of soybean with irrigation from each row and between rows, an increase in the protein content of the grain of the plant by 1.2-2.9%, as well as a decrease in the fat content of 0.64-1.22% .

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