

PERIODS AND IRRIGATION DATES BETWEEN IRRIGATIONS OF SOYBEAN AS A REPEATING CROP

Mahmatmurod Norboyevich Chuliyev

Senior Lecturer of the Karshi Institute of Irrigation and Agrotechnologies

ABSTRACT

This article presents the scientific results of studying the irrigation periods and inter-irrigation periods of soybean crops sown as a second crop based on different irrigation methods and regimes. The research findings are important for determining the pre-irrigation soil moisture status, the number and duration of irrigation. During the experiments, optimal irrigation times for soybean plants, irrigation regimes relative to field capacity, and favorable conditions for yield were determined. The conclusions have practical significance in saving water and resources, preserving soil fertility, and improving innovative approaches in agriculture.

Keywords: Soybean cultivation, irrigation methods, repeated sowing, soil moisture, soil moisture, water-saving technology, yield.

TAKRORIY EKIN SIFATIDA EKILGAN SOYANING SUG'ORISHLAR ORALIG'IDAGI DAVRLAR VA SUG'ORISH MUDDATLARI

Maxmatmurod Norboyevich Chuliev

Qarshi irrigatsiya va agrotexnologiyalar instituti katta o'qituvchisi

ANNOTATSIYA

Mazkur maqolada takroriy ekilgan soya ekinlarini turli sug'orish usul va tartiblari asosida sug'orish muddatlari hamda sug'orishlar orasidagi davrlarni o'rganishga oid ilmiy natijalar bayon etilgan. Tadqiqot natijalari tuproq namligining sug'orishdan oldingi holatini, sug'orishlarning soni va davomiyligini aniqlashda muhim ahamiyatga ega. Tajribalar davomida soya o'simligining optimal sug'orish muddatlari, ChDNSga nisbatan sug'orish tartiblari va hosildorlik uchun qulay sharoitlar belgilandi. Xulosalar suv va resurslarni tejash, tuproq unumdorligini saqlash hamda qishloq xo'jaligida innovatsion yondashuvlarni takomillashtirishda amaliy ahamiyatga eg

Kalit so'zlar: soya ekini, sug'orish usullari, takroriy ekish, tuproq namligi, ChDNS, suvtejamkor texnologiya, hosildorlik.

INTRODUCTION

Leading soybean-producing countries around the world are actively conducting scientific research on improving soybean cultivation agrotechnology, including the development of water and resource-saving technologies. In this regard, it is important to conduct research on the effective use of soil moisture in conditions of global water scarcity, study the water demand of soybean varieties, determine irrigation norms, number, and timing when cultivating soybean varieties, and reduce water consumption for the harvested crop.

Our republic is implementing large-scale measures to further develop agriculture by saving water and energy resources, fully meeting the population's demand for high-quality food and other agricultural products. One of the pressing issues is the improvement of soybean cultivation as a second crop on fields freed from grain crops, the preservation and enhancement of soil fertility, and the development of water-saving irrigation methods and procedures.

The results of the study. When determining the irrigation dates of soybean varieties on the experimental plot and the days between irrigations, the soil moisture before irrigation and the depth of root propagation of soybean varieties were taken into account, adopted according to the experimental scheme. According to the data obtained, the first irrigation period in the years of the experiment was formed as a result of atmospheric precipitation in the active soil layer (100 cm), irrigation of the main crops, and moisture-charging irrigation. Initial irrigation was determined depending on the soil moisture level and soil moisture relative to the field water capacity before irrigation, and this indicator averaged 60-70-60 relative to the field water capacity on June 10, 60-70-70 relative to the field water capacity on June 12, 70-75-75 relative to the field water capacity on June 10, 70-80-80 relative to the field water capacity on June 8. Irrigation scheduling for soybeans sown after winter grain crops was carried out in accordance with the adopted moisture content for the experimental variants.

Table-1 Irrigation periods and days between

Irrigation method	Irrigation procedure (ChDNS)	Watering time	Irrigations								
			1	2	3	4	5	6	7	8	
Egatlab irrigation (standard)	60-70-60	the date	19.07	07.08	27.08	18.09					
		day	-	19	20	22					
	60-70-70	the date	12.07	05.08	30.08	18.09					
		day	-	24	25	19					
	70-75-75	the date	10.07	27.07	14.08	02.09	20.09				
		day	-	17	18	19	18				
	70-80-80	the date	08.07	22.07	06.08	22.08	06.09	22.09			
		day	-	14	15	16	15	16			
Intermittent watering	60-70-60	the date	19.07	07.08	27.08	18.09					
		day	-	19	20	22					
	60-70-70	the date	12.07	28.07	15.08	01.09	20.09				
		day	-	16	18	17	19				
	70-75-75	the date	10.07	24.07	08.08	22.08	04.09	18.09			
		day	-	14	15	14	13	14			
	70-80-80	the date	08.07	19.07	31.07	13.08	25.08	07.09	21.09		
		day	-	11	12	13	12	13	14		
Watering by laying a film between the rows	60-70-60	the date	19.07	11.08	30.08	21.09					
		day	-	22	19	21					
	60-70-70	the date	12.07	07.08	30.08	19.09					
		day	-	25	23	20					
	70-75-75	the date	10.07	02.08	26.08	17.09					
		day	-	23	24	22					
	70-80-80	the date	08.07	27.07	14.08	30.08	14.09				
		day	-	19	18	16	15				
Drip irrigation	60-70-60	the date	19.07	06.08	25.08	11.09	27.09				
		day	-	18	19	17	16				

Mulch watering	60-70-70	the date	12.07	26.07	10.08	24.08	08.09	21.09			
		day	-	14	15	14	15	13			
	70-75-75	the date	10.07	23.07	06.08	18.08	29.08	11.09	21.09		
		day	-	13	14	12	11	13	10		
	70-80-80	the date	08.07	18.07	29.07	10.08	21.08	02.09	13.09	23.09	
		day	-	10	11	12	11	12	11	10	
	60-70-60	the date	19.07	07.08	27.08	18.09					
		day	-	19	20	22					
	60-70-70	the date	12.07	05.08	29.08	20.09					
		day	-	23	24	21					
	70-75-75	the date	10.07	02.08	26.08	17.09					
		day	-	23	24	22					
70-80-80	the date	08.07	27.07	14.08	30.08	14.09					
	day	-	19	18	16	15					

The control furrow irrigation method was implemented with 4-fold irrigation in the 60-70-60 variant, with 22-24 days between each irrigation, with 4-fold irrigation in the variant with pre-irrigation soil moisture of 60-70-70%, with an irrigation interval of 19-25 days, with 5-fold irrigation in the variant with pre-irrigation soil moisture of 70-75-75%, with an irrigation interval of 17-19 days, with 6-fold irrigation in the variant with pre-irrigation soil moisture of 70-80

With furrow irrigation, 4 irrigations were carried out in the variant with pre-irrigation soil moisture of 60-70-60% of FC, with 19-22 days between each irrigation, 5 irrigations in the variant with pre-irrigation soil moisture of 60-70-70% of FC, with an interval of 16-19 days, 6 irrigations in the variant with pre-irrigation soil moisture of 70-75-75% of FC, with an interval of 13-15 days, 7 irrigations in the variant with pre-irrigation soil moist

In the method of irrigation with film spreading between rows, 4 irrigations were carried out in the variant with pre-irrigation soil moisture of 60-70-60% of FC, with 38 days between each irrigation, 4 irrigations in the variant with pre-irrigation soil moisture of 60-70-70% of FC, with an irrigation interval of 28-32 days, 4 irrigations in the variant with pre-irrigation soil moisture of 70-75-75% of FC, with an irrigation interval of 22-24 days, 5 ir

In the drip irrigation method, 5 irrigations were conducted in the variant with pre-irrigation soil moisture of 60-70-60% of FC, with 16-19 days between each irrigation, 6 irrigations in the variant with pre-irrigation soil moisture of 60-70-70% of FC, with an irrigation interval of 13-15 days, 7 irrigations in the variant with pre-irrigation soil moisture of 70-75-75% of FC, with an irrigation interval of 10-14 days, 8 irrigations in the variant with pre

Mulch irrigation was carried out in the variant with pre-irrigation soil moisture of 60-70-60% of FC with 4 irrigations, with 22 days between each irrigation, in the variant with pre-irrigation soil moisture of 60-70-70% of FC with 4 irrigations, with an interval of 28-32 days, in the variant with pre-irrigation soil moisture of 70-75-75% of FC with 4 irrigations, with an interval of 22-24 days, in the variant with pre-irrigation soil moisture of 70-

CONCLUSION

Based on the scientific results obtained during the study of irrigation periods and inter-irrigation periods for soybeans sown as a second crop in different irrigation methods and regimes, it can be concluded that for soybean sown as a second crop during the entire growing

season, with 4 irrigations, it is 22-24 days, with 5 irrigations - 16-19 days, with 6 irrigations - 14-16 days, with 7 irrigations - 12-14 days, and with 8 irrigations - 10-12 days.

REFERENCES

1. Баранов В.Ф., Кочегура А.В. Соя биология и технология возделывания. Краснодар.: Советская Кубань, 2005. 433 с.
2. Лукомец В.И. Культура сои. Краснодар.: 2014.-136 с.
3. Тильба В.А. К вопросу определения численности клубеньковых бактерий сои в почве. Микробиол. и биохим. исследования почв. Киев.: Урожай, 1984. с.51-55
4. Давыденко О.Г., Голоенко Д.В., Розенцвейг В.Е. Перспективы селекции сои в ООО “Соя север К”, Минск, Беларусь//Селекция и агротехнология сортов сои северного экотипа: Сб.науч.практ.конф. Воронеж, ФГОУ ВПО “Воронежский ГАУ” им. К.Д.Глинки, 2006.с. 74-78.
5. Кадыров С.Б. Влияние норм высева и способа посева сои на полевою всхожесть семян // Селекция и агротехнология сортов сои северного экотипа: Сб.науч.практ.конф. Воронеж, ФГОУ ВПО “Воронежский ГАУ им.К.Д.Глинки”, 2006. С. 17-22.
6. Льгов М.Н Технология возделывания СОИ назерно при орошении. Автореферат. М 2002.