JOURNAL OF MULTIDISCIPLINARY SCIENCES AND INNOVATIONS
GERMAN INTERNATIONAL JOURNALS COMPANY
ISSN: 2751-4390
IMPACT FACTOR (RESEARCH BIB) : 9,08. Academic research index

THE INFLUENCE OF SOWING DATES ON PRODUCTIVITY AND TECHNOLOGICAL QUALITY INDICATORS OF SOFT SPRING WHEAT VARIETIES

Berdinazar Khudoynazarovich Jananov
Karshi State Technical University

Annotation: The article describes the scientific basis for the selection of drought-resistant wheat varieties based on the study of the processes taking place in the southern region of Karakalpakprovince.
Kalit so‘zlar: maxsuldor genlar, geografik, duragay organizm, qurg‘oqchilik, xudud, chidamli navlar, biotik, abiotik streslar,seleksiya jarayoni, immunitet.
Annotatsiya: Maqolada bahorgi bugdoy navlarini yaratishning seleksion ilmiy asoslari shimoliy mintaqa Qoraqalpog`iston viloyati sharoitida kechadigan jarayonlarni o'rganish asosida yoritilgan.
Annotatsiya: В статье описаны научные основы выбора весенних сортов пшеницы на основе изучения процессов, происходящих в регионе Каракальпакской области.
Ключевые слова: продуктивные гены, географические, гибридный организм, засуха, территория, устойчивые сорта, биотические, абиотические стрессы, селекционный процесс, иммунитет.
Keywords:productive genes,geographical,hybrid organism, drought, territory, resistant varieties, biotic, abiotic stresses, selection process, immunity.

Under the conditions of the Republic of Karakalpakstan, experiments were conducted to study the valuable agronomic traits of spring soft wheat. The research was carried out in the competitive variety testing nursery by sowing spring soft wheat varieties at early spring dates. According to the results, the shortest pre-heading period was observed in the varieties Kr-SpR2014-6, Kr-Sp/2010/59, and Kr-SpR2014-9, which were found to be 2–4 days shorter than the standard variety Sanzar-4.

The "heading-to-maturity" period for spring soft wheat ranged from 31 to 39 days. In our study, the varieties Kr-SpR2014-6, KrT-SpR2014, Kr-SpR2014-22, and Kr-SpR2014-4 had the shortest grain-filling periods, lasting 31–32 days, which was shorter compared to the standard Sanzar-4 variety. The total vegetation period for the spring wheat varieties ranged from 103 to 110 days. The earliest-maturing varieties — Kr-Sp/2010/59, Janub Gavhari, and Kr-SpR2014-10 — were identified as early-maturing and selected for further consideration.

Growing season of varieties in the competitive spring wheat variety testing nursery

№	Variety name	Pre-heading	Heading-ripening	Vegetation period, days
1	SANZAR-4	77,0	33,0	110,0
2	HAZRATI BESHIR	75,0	34,0	109,0
3	JANUB GAVHARI	70,7	34,0	104,7

4	Kr-Sp/2010/59	69,3	33,7	103,0
5	ATTILLA-7	76,0	34,0	110,0
6	Kr-SpR2014-2	72,0	38,0	110,0
7	Kr-SpR2014-3	74,0	33,0	107,0
8	Kr-SpR2014-4	76,0	32,0	108,0
9	Kr-SpR2014-6	76,0	31,0	107,0
10	KrT-SpR2014	74,7	31,3	106,0
11	Kr-SpR2014-8	72,0	33,3	105,3
12	Kr-SpR2014-9	75,0	33,3	108,3
13	Kr-SpR2014-10	70,3	33,3	103,7
14	Kr-SpR2014-13	68,0	37,0	105,0
15	KrJ-SpR2014	77,0	33,0	110,0
16	Kr-SpR2014-15	70,0	35,0	105,0
17	Kr-SpR2014-19	72,0	37,0	109,0
18	Kr-SpR2014-20	68,0	39,0	107,0
19	Kr-SpR2014-21	76,0	33,3	109,3
20	Kr-SpR2014-22	74,3	32,0	106,3
2017	Min	**68,0**	**31,0**	**103,0**
	Mak	**77,0**	**39,0**	**110,0**
	Sred	**73,2**	**34,0**	**107,2**

When analyzing the grain quality indicators from the competitive variety testing nursery, the standard variety Sanzar-4 showed the following average results: protein content in the grain was 14.5%, gluten content was 29.2%, the weight of 1000 grains was 36.6 grams, and the grain test weight was 791.5 grams per liter.

Technological quality indicators of grain

№	Variety name	protei n	gluten	glassiness	IDK	moistur e	1000 grain weigh t	Grain nature, gr/l
1	SANZAR-4	14,5	29,2	62,5	94,3	7,7	36,3	791,5
2	HAZRATI BESHIR	14,4	28,8	64,3	84,5	9,4	33,8	813,7
3	JANUB GAVHARI	14,6	29,2	61,0	94,2	9,7	36,2	751,0
4	Kr-Sp/2010/59	14,6	28,7	58,8	90,9	9,4	40,7	796,3
5	ATTILLA-7	14,2	29,1	60,3	86,0	8,0	34,7	787,4
6	Kr-SpR2014-2	14,4	28,2	61,7	95,1	8,0	38,4	792,8

7	Kr-SpR2014-3	14,3	28,1	55,3	97,7	8,3	37,5	794,4
8	Kr-SpR2014-4	14,7	27,9	71,6	102,8	8,7	35,0	798,8
9	Kr-SpR2014-6	14,6	28,0	52,3	96,0	8,5	38,0	769,0
10	KrT-SpR2014	14,5	27,5	66,7	95,2	9,7	33,5	751,0
11	Kr-SpR2014-8	14,6	28,6	46,7	91,6	9,7	34,4	783,7
12	Kr-SpR2014-9	14,3	28,7	53,5	93,1	9,3	35,1	727,7
13	Kr-SpR2014-10	14,5	27,7	63,5	86,0	9,3	35,4	783,7
14	Kr-SpR2014-13	14,2	27,8	48,7	99,5	8,5	36,9	776,2
15	KrJ-SpR2014	14,5	27,7	62,5	89,2	9,6	33,7	802,3
16	Kr-SpR2014-15	14,4	27,8	56,6	105,0	7,9	35,6	774,9
17	Kr-SpR2014-19	13,8	28,2	55,4	95,7	8,4	38,8	776,6
18	Kr-SpR2014-20	14,1	28,7	46,7	108,3	8,3	35,5	777,5
19	Kr-SpR2014-21	14,5	28,8	56,3	91,9	9,5	30,5	741,0
20	Kr-SpR2014-22	14,5	28,6	60,5	91,7	8,8	38,7	735,0
2017	min	**13,8**	**27,5**	**46,7**	**84,5**	**7,7**	**30,5**	**727,7**
	mak	**14,7**	**29,2**	**71,6**	**108,3**	**9,7**	**40,7**	**813,7**
	sred	**14,4**	**28,4**	**58,2**	**94,4**	**8,8**	**35,9**	**776,2**

Based on the grain test weight data from the experimental plots, the following values were recorded for the highest-yielding spring soft wheat varieties: 741.0 g/l for Kr-SpR2014-21, 751.0 g/l for Janub Gavhari, 776.2 g/l for Kr-SpR2014-13, 802.3 g/l for KrJ-SpR2014, 794.4 g/l for Kr-SpR2014-3, and 798.8 g/l for Kr-SpR2014-4.

The above-mentioned varieties are recommended for use in future breeding programs aimed at developing high-quality spring soft wheat varieties. In addition, under the conditions of the Republic of Karakalpakstan, the variety **KIA-3816** (selection line **Kr-SpR2014-19**), which possesses highly valuable agronomic traits, was selected and submitted to the State Variety Testing Commission.

References:

1. Boriev H, Amanov A. Achievements in wheat production in Uzbekistan during the years of independence. The first national conference on wheat selection, seed production and cultivation technology in Uzbekistan. Tashkent 2004.
2. Volkova T.A. Norms of sowing of regionalized spring wheat varieties in the Selinograd region. Reports of VASKHNIIL, 1977. No. 8,
3. Vorobev V.F., Karataeva A.P. New in spring wheat selection, Complex measures to increase the yield of grain crops in the grain zone of Kazakhstan. Selinograd 1982.
4, Khaitov R.A. et al. Assessment and control of the quality of grain and grain products, Training manual. - T.: Uzbekicton, 2000-256 p.
5. Mirkhalikov T.T., Aykhodzhaeva N.K. Grain and grain products save, Tutorial. - T.: Labor, 2004-308 p.
6. SHirokov E.P., Polegaev V.I. Technology khranenia i pererabotki Produktsii rastenievodstva s osnovami standardizatsii, Uchebnik. - M.: Agropromizdat, 2000-360 p.