



## SELECTION OF BARLEY VARIETIES AND LINES BY BIOMETRIC INDICATORS

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Article history:	Abstract:
<b>Received:</b> 6 <sup>th</sup> August 2024 <b>Accepted:</b> 4 <sup>th</sup> September 2024	Regular weather changes in the southern region of our republic, especially in the Kashkadarya region, natural and climatic difficulties in some farming years are testing the will of grain growers. Even in such climatic conditions, growing barley, obtaining abundant harvest from barley, taking care of germinated barley crop without losses, early sowing and preparing for the desired harvest are burdening our farmers with great responsibility.
<b>Keywords:</b> Barley, variety, ridge, southern region, plant height, biometric measurement, air temperature	

**INTRODUCTION:** As a result of the dry and hot temperature of sowing seeds of barley varieties in our republic, as a result of the high amount of photosynthetic radiation, the demand for the creation of heat and drought resistant varieties is increasing day by day.

In order to create varieties resistant to diseases and adverse external conditions with high quality and high productivity, first of all, identifying the primary sources that fully meet these requirements and creating new breeding varieties based on them is one of the urgent tasks facing breeding scientists [1].

The purpose of the research is to create new varieties and initial materials of intensive type and early barley that are resistant to drought, heat, heat, and dormancy, and give alternative crops for years, for irrigated and semi-arid areas of Kashkadarya region.

**RESEARCH METHODS:** Phenological observation, field and laboratory analysis "Method of the All-Russian Research Institute of Plant Science" (1984), biometric analysis "Method of the State Commission for Variety Testing of Agricultural Crops" Statistical analysis of data "Metodokiya polevogo opyta" by B.A. Dosphehov (1985) , Microsoft Excel –Analysis dannyx (2010) method was used.

**RESEARCH RESULTS:** The grain growers of our country are working hard to increase the gross grain weight. The conducted scientific researches, the experiences of advanced farms show that there are possibilities to increase the productivity in irrigated fields by 50-60 t/ha, and in dry areas by 25-30 t/ha and even more. However, in the following years, it was found that the average yield of barley in most irrigated lands does not exceed 30-35 t/ha per hectare, and 10-15 t/ha in dry areas. Taking into account the above problems, scientific research was carried out by planting 20 varieties and rows of barley for the harvest of 2023 in the irrigated experimental field of the Southern Agricultural Scientific Research Institute in 30 m<sup>2</sup> using a selection seeder for an area of 30 m<sup>2</sup>.

According to the results of the conducted research, the plant height of barley varieties and ridges was on average from 98.1 cm to 120 cm by year, while the height of "Voxa" variety was 103.4 cm, "Kizilkurgan" variety was 100.8 cm and "Ikhtiyar" and it was found that it was 102.2 cm in the variety as a result of biometric measurements. The number of ridges with the highest plant height from the sample varieties was 6, and the height of these ridges was from 112.1 cm to 120 cm according to the average returns in the year of the study.

One of the main parameters determining the resistance of plants to drought is represented by the length of the last joint in the plant [2].

When the length of the last joint of barley varieties and ridges was analyzed according to the returns, it was found that the sample was 35.3 cm in the "Voxa" variety, 37 cm in the "Kizilkurgan" variety, and 39.2 cm in the "Ikhtyor" variety. The number of ridges with longer last joint length than the model varieties was 6. 45.4 cm on the KR19\_SEL50-26 ridge, 42.2 cm on the KR17BRaqYT-P-29 (Asia) ridge, 47.9 cm on the KR18\_IBYT-1 ridge, 47.3 cm on the KR18\_IBYT-3 ridge, 49.1 cm on the KR19\_SEL50-23 ridge and Kr\_Arpa\_2016 It was determined as a result of biometric measurements that it was 48.4 cm in the ridge of -4\_(Sultan) and was 3-11.9 cm higher than the model varieties by year (Table 1).

M. Sheraliev and P. Boboev (2012) stated that, according to the biological characteristics of the barley plant, some barley varieties have a tall but weak stem, and the ear is heavy. In this case, even under the influence of a weak wind, they can lie down [3]. During the research, when the number of spikes in the ear of the varieties and lines of

barley was analyzed by year, it was found that there were 26 spikes in the model Voxa variety, 34 in the "Kizilkurgan" variety and 28 in the "Ikhtyor" variety as a result of biometric analysis. the number of ridges with a higher number of spikelets in the ear than the model varieties of barley was 6.

Table 1

**The length of the last syllable and the length of the ear of barley varieties and ridges, cm (Karshi 2023).**

Plots	Name and origin	Plant height, cm	The length of the last joint, cm	Spike length, cm	Number of spikes, pcs
1	<b>Воха (андоза)</b>	103,4	35,3	9,9	26
2	KR18_BYT_Naz-17	100,6	34,7	9,3	26
3	KR18_IBYT-2	103,6	30,3	6,4	38
4	KR19_SEL50-26	116,3	45,4	9,4	30
5	Kr_Arpa_2016-4_(Султон)	112,1	48,4	7,4	39
6	KR18_BYT_Naz-19	102,2	32,9	9,8	28
7	KR18_IBYT-3	115,4	47,3	7,7	46
8	KR19_SEL50-27	104,0	31,4	9,3	26
9	<b>Қизилқурғон (андоза)</b>	100,8	37,0	6,8	34
10	KR18_BYT_Naz-7	98,9	30,9	9,9	28
11	KR19_SEL50-13	103,0	27,4	9,9	26
12	KR19_SEL50-40	98,1	37,7	9,7	28
13	<b>Ихтиёр (андоза)</b>	102,2	39,2	10,1	28
14	KR18_BYT_-14	99,6	32,2	6,7	43
15	KR19_SEL50-22	101,4	31,3	9,7	29
16	KR19_SEL50-41	105,7	30,7	10,0	26
17	KR17BRaqYT-P-29 (Осиё)	114,0	42,2	11,7	32
18	KR18_IBYT-1	118,3	47,9	12,4	30
19	KR19_SEL50-23	120,0	49,1	11,2	32
20	KR19_SEL50-42	104,4	32,8	10,1	25
<b>Average indicator</b>		<b>106,2</b>	<b>37,2</b>	<b>9,4</b>	<b>31</b>
<b>The highest rate</b>		<b>120,0</b>	<b>49,1</b>	<b>12,4</b>	<b>46</b>
<b>The lowest rate</b>		<b>98,1</b>	<b>27,4</b>	<b>6,4</b>	<b>25</b>

**CONCLUSIONS AND SUGGESTIONS:** In conclusion, it can be said that according to the results of the conducted research, the biometric indicators are higher than those of the model varieties. KR19\_SEL50-26, KR17BRaqYT-P-29 (Asia), KR18\_IBYT-1, KR18\_IBYT-3, KR19\_SEL50-23 and Kr\_Arpa\_2016-4\_(Sultan) lines were selected and transferred to the next stage of selection. In order to obtain abundant and high-quality grains from barley, it is an important task to create basic materials with high biometric indicators, resistant to drought and heat.

**LIST OF REFERENCES USED**

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