HARVEST COMPONENTS AND PRODUCTIVITY OF COMMON WHEAT VARIETIES GROWN IN THE CENTRAL REGION

Makhammatova M. U.
Tashkent State Agrarian University Associate Professor

Kholmurodova G. R.
Tashkent State Agrarian University professor

ABSTRACT

The article presents data on yield elements and productivity of soft wheat varieties grown in the central region. According to the observations made during the years in the conditions of the central region during the research, according to the indicator of the number of productive stems per 1 m2 of the autumn soft wheat varieties, the newly created Yuksak variety and Yaksart varieties, 1 ear length Yuksak, Yaksart, Krasnodar-99 and Hazrati, who participated as a model variety Bashir varieties, the number of grains in one spike Chillaki, Asr, Yuksak and Yaksart varieties, Gozgon, Yuksak, Yaksart, Asr and Krasnodar-99 varieties according to the weight of grains in 1 spike, Yuksak, Krasnodar-99, Zamin-1 varieties according to the weight of 1000 grains, the superiority of Yuksak, Asr, Yaksart, Gozgon, Vassa and Krasnodar-99 varieties in increasing productivity was noted, and the advantage of using them in genetic-selection studies was mentioned.

Keywords: winter soft wheat, variety, central region, yield, number of productive stems per 1 m2 of land area, length of 1 ear, number of grains in one ear, weight of 1000 grains, genetic selection studies.

INTRODUCTION

In recent years, global climate change has been observed around the world, which has a significant impact on the productivity of agricultural crops. In order to provide 7.4 billion people on the globe with grain and flour products, as well as in connection with the global changes in climatic conditions observed in the next years, it is urgent to create wheat varieties resistant to abiotic and biotic factors and productive for each region in the cultivation of large quantities of grain and grain products in agriculture.

It is important to create new varieties for different soil-climatic regions of Uzbekistan, to correctly select and place varieties resistant to abiotic factors, and to create and introduce into production new varieties of wheat that give a stable yield and have high grain quality indicators on a scientific basis in the cultivation of high yield and high-quality grain in different regions. is important. In the conditions of Uzbekistan, wheat occupies the main place among grain crops and currently it is grown on 1 million 38 thousand hectares of irrigated areas.

D. Jo'raev, S. Jo'raev, M. Makhammatova (2015) The main productivity of wheat varieties changes under the influence of productivity indicators and biotic and abiotic factors of the external environment.

According to D.Kulmamatova, S.Boboev, A.Allaberganova, Yu.A.Matyakubova (2013), the spike length and the number of grains in the spike, which are quantitative traits that ensure productivity in wheat, were observed in different heredity situations in the first generation. , i.e., a dominant blinking of signs was observed.

Z. Kholmurdova (2008) stated that when winter wheat is grown at the specified rate according to the weight of 1,000 seeds, grain yield increases proportionally to the weight of seed grains, and efficiency is also increased.

In the experiments of M. Makhammatova, N. Turdieva (2001), it is mentioned that the influence of agro-ecological and agro-technical conditions in the cultivation of abundant and high-quality grain is significant, it is important to choose the right variety for each region, to plant high-quality seeds and to use scientifically based agrotechnics.

The object of the study Autumn soft wheat varieties belonging to the type of wheat T.aistivum L. created at the Scientific Research Institute of Uzbekistan and Krasnodar were used as model varieties, Hazrati Bashir varieties for the central region.

Research methods. Scientific research was carried out on the basis of the methodical guide "Methods of conducting field experiments" (2007) adopted at the former UzPITI, mathematical and statistical analyzes were carried out on the basis of B.A. Dospehov's "Metodokiya polevogo opyta" (1985), phenological observations, field and laboratory analyses.

Research results. . It is known that in order to obtain a high yield from winter wheat in each region, along with the creation of new varieties suitable for the soil-climatic conditions of the region, good formation of its yield elements ensures a high yield. In the selection of soft wheat, three different traits are considered in the evaluation of productivity, large spike plant, productive stand and grain size.

Productive clustering, the number of grains in a spike, grain weight, 1000 grain weight interacts with the external environment and plays a major role in increasing productivity.

Winter soft wheat is planted at its optimal time and rate in each region, the better it sets, the more productive stalks are formed.

In our research, in turn, 20 varieties of soft wheat in the central region were studied according to economic characteristics (see table). The results of the analysis of the number of productive stems per 1 m2 area showed that while the sample variety Hazrati Bashir was 288 pieces, among the local varieties Bunyodkor variety had a relatively high rate, i.e. 282 pieces, and the results of other varieties ranged from 245 (Yonbosh) pieces to 279 (Babur) pieces. Among the Krasnodar varieties, the highest rate was observed in the Krasnodar-99 variety, which was 290 pieces. It was shown that the remaining varieties of Krasnodar ITI varieties had an index of 200 (Grom) pieces to 280 (Sila) pieces. The number of productive stems per 1 m2 of plant genetic resources ITI variety samples showed high values compared to all studied varieties and model Hazrati Bashir variety. In the high variety, 390 units were observed, and 102 units were superior to model Hazrati Bashir variety (288 units). In the rest of the variety, it was shown that the indicator was from 310 (Asr) to 354 (Yaksart) pieces, and the number of productive stems was 22 and 66 more than the model variety, respectively. This indicates that,

in the conditions of the central region, plants genetic resources ITI variety samples are superior in terms of the number of productive stems on 1m2.

Among the crop elements, the spike length and the number of spikes are important in the formation of the crop structure. Spike length is a characteristic of the variety and can change under the influence of external environmental conditions. Spike length is a characteristic that is formed in early spring when the temperature and humidity regime is optimal for maximum emergence of the variety.

Table **Economic characteristics of soft wheat varieties in the central region (Plant genetic resources ITI, 2016-2018)**

№	Varietal name	The number of productive stems on 1m2, pcs	1 spike length, cm	1 the number of grains in the ear, pcs	Weight of grains in 1 spike, g	Weight of 1000 grains, g	Productivity, ts/ha
1	Xazrati bashir (st)	288	11	48	2.3	46	47
2	Bunyodkor	282	10	48	2.1	46	44
3	Bobur	279	8	40	1.8	44	42
4	Zamin-1	250	9	47	2.1	50	47
5	Durdona	265	9	46	1.9	40	32
6	Termiz-5	278	9	40	1.9	43	40
7	Chillaki	250	8	52	2.2	45	40
8	Yonbosh	245	8	40	1.8	38	36
9	G'arazsizlik	240	9	44	2.1	42	45
10	Krasnodar-99	290	10	44	2.3	51	50
11	Grom	200	9	42	1.4	36	38
12	Esaul	210	10	43	2.0	43	39
13	Zinitsa	250	9	44	2.0	42	38
14	Zvezda	245	8	36	1.7	42	30
15	Sila	280	9	35	1.8	43	37
16	Yaksart	354	10	50	2.2	47	56
17	G'ozgon	325	11	48	2.0	46	57
18	Asr	310	10	52	2.2	43	58
19	Vassa	328	10	45	1.9	45	56
20	Yuksak	390	12	50	2.4	47	57

When studying the length of one spike, it was shown that the standard variety was 11 cm in Hazrati Bashir variety, and in local varieties it was from 8 cm (Babur, Chillaki, Yonbosh) to 10 cm (Bunyodkor) (see table). Among the varieties belonging to the Krasnodar selection, it

was found that the indicator according to the sign was from 8 cm (Zvezda) to 10 cm (Krasnodar-99, Esaul). Among the studied varieties, only the Uk-335/2018-22 variety sample from the Institute of Plant Genetic Resources showed superiority over the standard Hazrati Bashir variety and the result was equal to 12 cm. It was found that the length of one spike in the Gozgon variety was at the level of the standard variety and was 11 cm, and in the remaining Yaksart and Vassa varieties, the indicator according to the sign was 10 cm.

The number of grains in one spike is also considered as one of the main elements that ensure productivity, and when we focused on this sign, the following results were shown. When analyzed in terms of the number of grains in one spike studied in our experiment, among the local varieties, the Chillaki variety has 52 grains, showing an advantage of 4 grains over the standard Hazrati Bashir variety (48 grains), while the Bunyodkor variety has a sign

The indicator was at the standard variety level and made 48 units. It was noted that the remaining local varieties ranged from 40 (Babur, Garazsizlik, Yonbosh) to 47 (Zamin-1). Among the varieties belonging to the Krasnodar selection, the indicator of the character was lower, from 35 (Sila) to 44 (Krasnodar-99, Zimnitsa) pieces. The number of grains in one ear of the varieties of the Scientific Research Institute of Genetic Resources of Plants showed higher results than the standard variety. Asr variety was equal to 52 pieces, Yuksak variety was equal to 50 pieces, 6 pieces and 4 pieces were superior to the model variety, respectively. The Gozgon variety made 48 pieces, and the sample was at the level of the variety. A slightly lower result was observed only in the Vassa variety, which amounted to 45 pieces.

Weight of grains in one ear. The grain weight in the ear is considered an important indicator in determining the wheat yield, and this indicator depends on the biology of the plant, climatic conditions, and the genetic characteristics of the soil and climate of each region. According to the results of the experiment, the number of grains in one spike and the weight of grains varied over the years in each region depending on the soil climate and weather conditions.

According to the results of the experiment, the weight of grains in one ear of autumn soft wheat varieties and samples in the years of research was 2.3 g in Hazrat Bashir variety, 1.8 g in local varieties (Babur, Yonbosh) and 2. It ranged up to 2 g (Chillaki). In varieties belonging to the Krasnodar selection, it was shown that it was from 1.4 g (Grom) to 2.3 g (Krasnodar-99). Among the varieties of the Scientific Research Institute of Plant Genetic Resources, the next yield indicator was 2.4 g, which was superior to the model Hazrat Bashir and other varieties in terms of grain weight per ear. In other varieties of the institute, this indicator was 1.9 g (Vassa) to 2.2 g (Asr). Therefore, the highest result in terms of grain weight in one spike was observed in the Yuksak variety created at the Institute of Plant Genetic Resources.

The weight of 1000 grains is an indicator of grain size and completeness. This productivity is a sign and directly depends on the air temperature during the grain filling period. High air temperature leads to the loss of grain and low weight of 1000 grains. In addition, lack of moisture in the soil, high temperature, damage by fungal diseases cause a sharp drop in the weight of 1000 seeds.

According to our experience, the weight of 1000 grains of the studied varieties and samples in the central region is from 38 g (Yonbosh) to 50 g (Zamin-1) among local varieties, and the standard indicator of Hazrati Bashir variety is 46 g. , and the result of Zamin variety was 4 g higher than that of the standard variety.

It was noted that the weight of 1000 seeds in varieties belonging to the Krasnodar selection ranged from 36 g (Grom) to 51 g (Krasnodar-99). The weight of 1000 grains of the Institute of Plant Genetic Resources varieties was 47 g, 1 g higher than the model Hazrat Bashir variety in the Yuksak and Yaksart varieties. It is equal to 46 g in the Gozgon variety, and the sample is at the level of the variety. Relatively lower results were observed only in Asr and Vassa varieties, which were equal to 43 and 45 g, respectively.

Therefore, it is appropriate to use Krasnodar-99, Zamin-1, Yuksak, Yaksar varieties to increase the weight of 1000 grains.

During the grain filling period of soft wheat, high rainfall and high relative humidity caused the grain filling period to lengthen and grain size. The optimal temperature for the period of grain filling is +200C, and the increase in air temperature and decrease in relative humidity causes rapid ripening of grain.

Productivity of winter wheat varieties. Currently, the scientists of our country have the task of creating new local varieties of winter soft wheat for irrigated lands that are resistant to the effects of the external environment and preserve the valuable characteristics of the local varieties of soft wheat, which are well adapted to each region.

Productivity is considered to be the most important among the valuable economic signs, and it determines the future harvest, the number of productive stalks, the length of the spike, the number and weight of grains in the spike, and the weight of 1000 grains.

It was noted that the yield element of the model variety Hazrati Bashir is equal to 47 t/ha, and among the local varieties, the Zamin-1 variety was at the level of the model variety. In the remaining local varieties, it was observed that it was equal to 32 ts/ha (Durdona) to 45 (Gharazsizlik) ts/ha.

Among the varieties belonging to the Krasnodar selection, only the Krasnodar-99 variety made 50 ts/ha, and the result was 3 ts/ha higher than the model variety. It was shown that in the remaining varieties of this block it was from 30 ts/ha (Zvezda) to 39 ts/ha (Esaul).

The results of all local varieties were higher than the sample variety from 9 ts/ha (Vassa) to 11 ts/ha (Asr). The result of 57 ts/ha, which is 10 ts/ha higher than the model variety, was also determined in the newly created Yuksak variety.

Therefore, it is appropriate to use local Yaksart, Ghazgon, Asr, Vassa and Yuksak varieties to increase productivity.

CONCLUSIONS

According to the observations made over the years in the conditions of the Central region, according to the indicator of the number of productive stems per 1 m2 of the winter soft wheat varieties, the newly created Yuksak and Yaksart varieties, 1 spike length Yuksak, Yaksart, Krasnodar-99 and Hazrati Bashir varieties, number of grains in one ear Chillaki, Asr, Yuksak and Yaksart varieties participated as sample varieties, Gozgon, Yuksak, Yaksart, Asr and Krasnodar-99 varieties according to the weight of grains in 1 ear, weight isf 1000 grains according to Yuksak, Krasnodar-99, Zamin-1 varieties, the superiority of Yuksak, Asr, Yaksart, Gozgon, Vassa and Krasnodar-99 varieties in increasing productivity was noted, and their use in genetic-selection research is effective.

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