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Identification of Durum Wheat Ranges with High Grain Quality in Southern Regions

Bolkiev Zakhid Toshtemirovich,
q.x.f.f.d., Senior Teacher, Termiz Institute of Agrotechnologies and Innovative Development

Boyborieva O'giloy Hasan's quzi
Student, Termiz Institute of Agrotechnologies and Innovative Development

Shobirova Komila Mahmud's quzi,
Student, Termiz Institute of Agrotechnologies and Innovative Development

Changes in the weather and climatic conditions in the republic, in the period when water shortages are beginning to be felt, require the breeding of scientifically based, experimentally tested varieties that are resistant to drought, various pests and diseases, regionalized in all regions, high-yielding and, most importantly, high-quality grains.

Keywords: southern region, durum wheat, grain quality indicators, air temperature, Karshi, Sherabad

Relevance and Necessity of the Topic

Scientifically based durum wheat cultivation in our republic will help strengthen our economy and supply quality products to our people. In the production of abundant, high-quality grains and seeds from durum wheat, taking into account the specific biological and ecological characteristics, there should be no species mixture (soft wheat) (farms producing reproduction seeds and commercial grain should be specialized in the cultivation of durum wheat) and it should be based on high agrophone in regions belonging to the southern warm region. should be cultivated.

The Level of Study of The Problem

Currently, scientific organizations (ICARDA, CIMMYT) and higher education institutions are developing wheat selection, seed production and biological characteristics of varieties by experts (Pomeroy M., Seaman WL, ButkerG., Bonn. PC, Hoekstra G., Reynolds MR, Acevedo E., Ageeb OA, Ahmed S., Balota M., Carvallo LB, Fisher RA, Ghanem E., Hanchinal RR, Mann CE, Okuyama L., Olugbeni LB, G. Ortiz Ferra, Bazzaque MA, Tandom R).

A.K. Uchuatkin , G. Kurbanov, O. Amanov, P. Bobomirzaev, K. Ravshanov, G. Gaybullaev, N.M. Turdieva studied some elements of durum wheat selection and seed production and

agrotechnology in our republic, but according to the regions of the Republic In the conditions of the soil and climate of Kashkadarya region, which produces the most grain, issues such as early ripening of durum wheat, selection of durum wheat in the conditions of irrigated lands in order to increase the grain yield and quality have not been comprehensively studied.

The purpose of the research is to create new varieties and samples of durum wheat that produce early-ripening, high-quality grain in the conditions of the southern regions.

Research Methods

During the experiment, phenological observation, calculations and analyzes (All-Union Plant Science Institute, VIR, 1984) and biometric analyzes were carried out according to the style of the State New Testing Commission of Agricultural Crops (1985, 1989), mathematical analyzes B.A. Based on the method developed by Dospekhov (1985), the testing of varieties was carried out according to the State new testing methodology (1981, 1986, 1989), and the quality indicators of the grain harvest were carried out according to TU Uz 8-115-97.

INTRODUCTION

One of the problems that occupies a large place in the Action Strategy on the five priority directions of our country's development and needs to be solved immediately is to improve the quality of grain and other products along with the weight of food products.

Today, 1.5 billion hectares of agricultural crops are planted all over the planet. According to the received data, every year in the world 6-7 million hectares of land fall into disrepair. Almost 40% of the world's irrigated land has varying degrees of salinity. Another environmental problem is the increasing desertification of land, now 36-40% of the continents have become deserts. Taking into account that 3/2 of the world's population lives in poverty and hunger, and if we consider that now the arable land per inhabitant of our planet is more than 10-20 years ago, increasing soil fertility, increasing the yield of agricultural crops by 2-3 times in the nearest future it is evident that it should remain the main task.

Research Results

Taking into account the above problems, 20 varieties and rows of durum wheat were planted in 3 rows at the Central Experimental Field of the Southern Agricultural Scientific Research Institute and at the "Mulla Begimkul" farm in Sherabad district of Surkhandarya region. The effect of air temperature on grain quality was studied mainly during the research.

The weather condition wheat cereal contained protein and to the amount of gluten effect is enough Grain quality in formation temperature and humidity plant growth during the period , mainly grain filling phase big important have _ This at the time enough high temperature with together of carpentry less to be in grain high good quality protein quantity to increase take comes [2].

Climatic conditions have a serious effect on the amount of protein in grain and its quality in general. The temperature and humidity of the plant during the growing season and especially during the grain collection period are most important for grain quality. A decrease in the protein content of wheat and other cereal grains was observed in cases of high yield [1].

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Table 1. Protein content of durum wheat varieties and ridges,%
(Karshi, Sherabad 2019-2021)

Entry	Name	Opposite				Sherabad			
		2019	2020	2021	Average	2019	2020	2021	Average
1	Krupinka (Size)	12.6	15.8	14.4	**14.3**	13.6	14.1	13.3	**13.7**
2	40th-IFWDON-Plot-34	14.4	14.5	14.5	**14.4**	14.0	14.2	13.3	**13.8**
3	KR17-F6-DW-29 (Clear)	17.1	16.6	16.6	**16.8**	15.4	15.5	15.2	**15.4**
4	KR18-IDYT-14	15.1	15.2	14.3	**14.9**	13.8	14.4	13.4	**13.9**
5	Height (Size)	15.5	15.0	15.0	**15.2**	13.8	14.2	14.0	**14.0**
6	40th-IFWDON-Plot-37	15.5	15.8	14.0	**15.1**	14.2	13.5	13.5	**13.8**
7	KR17-F6-DW-67	14.8	14.7	14.9	**14.8**	13.9	13.5	13.4	**13.6**
8	KR18-IDYT-22	14.2	15.7	14.1	**14.7**	13.3	14.5	13.7	**13.8**
9	Zilal (Size)	15,9	15,8	14,7	**15,5**	14,2	13,6	13,7	**13,8**
10	40th-IFWDON-Plot-45	16,4	16,3	16,2	**16,3**	15,2	15,3	15,3	**15,3**
11	KR17-F6-DW-72	14,4	14,6	14,2	**14,4**	13,6	14,2	13,7	**13,8**
12	KR18-IDYT-23	14,8	14,4	14.1	**14.5**	14.1	14.1	13.4	**13.8**
13	Elegant (Size)	14.2	14.2	14.2	**14.2**	13.9	13.4	13.9	**13.7**
14	KR17-F6-DW-8	16.5	16.3	16.3	**16.4**	15.5	15.5	15.3	**15.4**
15	KR18-IDYT-3	14.4	14.7	14.2	**14.4**	14.0	14.5	13.4	**14.0**
16	KR18-F6-DW-9	16.7	16.3	16.0	**16.3**	15.7	14.2	15.4	**15.1**
17	KR17-F6-DW-3	16.5	16.8	16.8	**16.7**	15.5	15.3	15.7	**15.5**
18	KR17-F6-DW-23	15.0	15.8	14.6	**15.1**	13.8	14.2	13.8	**13.9**
19	KR18-IDYT-7	14.7	15.5	14.8	**15.0**	13.9	14.1	13.7	**13.9**
20	KR18-F6-DW-12	16.1	16.4	16.1	**16.2**	15.1	15.6	15.2	**15.3**
On average indicator					***15.2***				***14.3***
The highest rate					***16.8***				***15.5***
The lowest rate					***14.2***				***13.6***
S_x					***0.18***				***0.21***
With $_d$					***0.21***				***0.30***
NSR $_{05}$					***0.62***				***0.60***
NSR $_{05\ \%}$					***4.05***				***4.21***
S					***0.27***				***0.37***
Sv %					***2,5***				***2,6***

According to the results of the research carried out in the period of 2019-2021, when analyzing the effect of air temperature on grain quality indicators of durum wheat varieties and ridges grown in the conditions of Karshi and Sherabad districts, it was found that the protein content in the conditions of Karshi district was on average 14.2-16.8%. KR17-F6-DW-, which has a higher protein content than the model varieties, is 14.3% in the model variety "Krupinka", 15.2% in the variety "Nasaf", 15.5% in the variety "Zilol" and 14.2% in the variety "Nafis" . 29 (Musaffo), 40th-IFWDON-Plot-45, KR17-F6-DW-8, KR18-F6-DW-9, KR17-F6-DW-3, KR18-F6-DW-12 on ridges 16,2-16 As a result of laboratory analysis, it was determined that there is a protein content of up to 8%

One of the important signs that determine the quality of grain is the amount of protein in it. High or low protein content is influenced by the biological characteristics of the variety, cultivation method and climatic conditions [3].

When analyzing the protein content of durum wheat varieties and ridges grown in the conditions of Sherabad district, it is 13.6-15.5% on average for the years 2019-2021, 13.7% in "Krupinka" and "Nafis" varieties, 14% in "Nasaf" variety. %, 13.8% in the "Zilol" variety, with a higher protein content than the model varieties KR17-F6-DW-29 (Musaffo), 40th-IFWDON-Plot-45, KR17-F6-DW-8, KR18-F6-DW -9, KR17-F6-DW-3, KR18-F6-DW-12 ranges were found to be 15.1-15.5%.

The protein content of durum wheat varieties and lines grown in the conditions of Karshi district is on average 0.6-1.3% higher than the protein content of the varieties and lines grown in the conditions of Sherabad district in $^{2019-2021}$. can be explained by the decrease in quality indicators (Table 1). The protein content of the varieties and lines, when determined in the quality laboratory of the institute, was on average 14.2-16.7%. It was found that the model varieties were 14.2% in "Nafis" variety, 15.0% in "Nasaf" variety, and 16.1% in "Zilol" and "Krupinka" varieties. It was found in the research results that the protein content of the model varieties 40th-IFWDON-Plot-34, 40th-IFWDON-Plot-37, 40th-IFWDON-Plot-45, KR17-F6-DW-29, KR18-F6-DW-9 is high.

List of Used Literature

1. O.A. Amanov "Grain quality indicators of donor varieties" Andijan-2019 pp. 92-95
2. Z. Ziyodullaev, A. Fayzullaev, E. Ziyodullaev "Creation of new productive varieties of soft wheat for irrigated areas" Agro science 1/2019 pp. 15-16
3. G.V. Udovenka "Diagnostika ustoichivosti rastenii k stressovym vozdeystviyam" Metododicheskoy rukovodsto. VIR. Leningrad 1988. 226 p.