

Volume 1, Issue 8, November 2023 ISSN (E): 2938-3781

Growth Period and Level of Rust Resistance of Ancient Common Wheat Varieties Studied in The Southern Region

Diyor Turdikulovich Djuraev Doctor of Agricultural Sciences Department of Agrochemistry and Ecology Karshi State University

> Gulzor Kholmurodovna Aminova Researcher Karshi State University

Abstract:

In this article, the duration of the growing season of the ancient soft wheat cultivars planted in irrigated fields was given, and the early ones were selected.

Keywords: Ancient soft wheat, growing season, germination, ripening, yellow rust.

ЖАНУБИЙ МИНТАҚАДА ЎРГАНИЛГАН ҚАДИМИЙ ЮМШОҚ БУҒДОЙ НАВЛАРИНИНГ ЎСУВ ДАВРИ, ВА ЗАНГ КАСАЛИКЛАРГА ЧИДАМЛИКЛИК ДАРАЖАСИ ЖАНУБИЙ ДЕХҚОНЧИЛИК ИЛМИЙ ТАДҚИҚОТ ИНСТИТУТИ

Jo'raev Diyor Turdiqulovich

Qishloq xoʻjaligi fanlari doktori Agrokimyo va ekologiya kafedrasi Qarshi Davlat Universiteti

Aminova Gulzor Xolmurodovna Tadqiqotchi

Аннотация:

Мазкур мақолада суғориладиган майдонларда экиб ўрганилган қадимий юмшоқ буғдой навлар кўчатзори ўсув даври давомийлиги келтириб ўтилган, эртапишар бўлганлари танлаб олинди.

Калит сўзлар:Қадимий юмшоқ буғдой, ўсув даври, униб чиқиш, пишиш, сариқ занг. Wheat (Triticum aestivum L.) is one of the most important grain crops in world agriculture. Every year 704 million tons of grain are grown around the world. Soft wheat occupies 17% of the total cultivated area. In order to grow high-yield and high-quality grains in different regions, it is important to create and plant varieties of grain crops that are suitable for regional conditions, stable yields, and grain quality indicators are not changed, taking into account the soil and climate conditions.

Kovtun V. I. He said that 15-20% of the wheat grain grown in the world meets the demand for strong wheat, while weak wheat makes up 50-55%. This weak wheat can produce good

Volume 1, Issue 8, November 2023 ISSN (E): 2938-3781

quality bread only if 20-40 percent of strong wheat is added to it [1].

According to Sh.D.Dilmurodov, N.B.Boysunov and others (2018), when creating early varieties, it is necessary to take into account that the length of the plant's growth period is genetically complex and consists of the sum of the length of certain phases of the vegetation period. To create early varieties, one of the pairs being crossed must be short in one phase and the other in another phase. In order to determine such forms, it is necessary to carry out phenological observations on all studied varieties and samples, and determine the beginning and end of each growth phase. It is possible to create early varieties by crossing varieties with the same average vegetation period, but some development phases-periods are long and short [2].

The plant growth period in grain crops is usually divided into 2 periods: germination-earing and earing-ripening. The length of the period of germination-heading depends mainly on a large number of biological characteristics of the variety, the climate of the external environment is of minor importance, and during the period of earing-ripening, the climate of the external environment has a significant effect [3].

Epiphytotia of yellow rust was last recorded in the Central Asian region in 2009-2010. In addition, phytosanitary monitoring shows that 30-70%, sometimes up to 90%, of the wheat-infested area in Uzbekistan's grain-growing territory is affected. According to the experiments, the yield of 80-100% infected varieties with yellow rust disease is 18-20 ts/ha, 1000 grain weight is 26.0 g. The average yield of the disease was 30.0 t/ha, and the yield of resistant varieties was 36 t/ha. It should also be noted that flour obtained from wheat grain affected by yellow rust loses its baking quality [4].

Our research was carried out at the Southern Scientific Research Institute of Agriculture, Karshi District, Kashkadarya Region. It was carried out in the experimental field of Amonav. Planting of ancient varieties was carried out on September 30, 2021. Germination of varieties occurred on November 19-20. Among the varieties that germinated early, the varieties of Red wheat and Red ear sprouted on November 19. It was observed that the remaining varieties germinated with a difference of 2-3 days. It was observed that the flowering phase of the varieties coincided with January 5-8. It was found that red wheat, Camel's tooth, Grekum, Gallakor varieties went to maturity on January 5. It was found that the varieties of Red East, Red wheat (Uzun), Red wheat (Boysuk) were late blooming on January 8. In the tuber phase, it is considered as part of the earing in grain crops. The first spike formation develops on the main stem. Then spikes begin to form on additional stems. The tuber phase of wheat varieties coincided with March 19-27. On March 19, it was observed that Bukor Bobo, Kal Bgudoy, Kara Kiltik varieties entered the tuber phase early (Table 1).

Volume 1, Issue 8, November 2023	
ISSN (E): 2938-3781	

1-Table The duration of the growing season of varieties in the nursery of ancient								
varieties (vs. 2022).								
Нав номи	сана	На	ана	ана	II,	кун	(%)	

N		Униб чикиш, с	Туплаш, сана	Найчалаш, са	Бошоқлаш, са	Тўлик пишин сана	ўсув даври, к	Сарик занг (%
1	Қизил буғдой	19.ноя	05.янв	26.мар	23.апр	15.июн	157	R
2	Букор бобо	24.ноя	07.янв	19.мар	18.апр	12.июн	165	R
3	Оқ буғдой 1	22.ноя	06.янв	24.мар	23.апр	18.июн	157	R
4	Оқ буғдой 2	23.ноя	07.янв	24.мар	24.апр	10.июн	166	R
5	Туя тиш	21.ноя	05.янв	26.мар	25.апр	20.июн	154	10MR
6	Сурхак	20.ноя	07.янв	27.мар	24.апр	11.июн	162	R
7	Грекум	20.ноя	05.янв	25.мар	25.апр	17.июн	156	R
8	Кал буғдой	23.ноя	06.янв	19.мар	18.апр	19.июн	157	R
9	Қизил шарк	24.ноя	08.янв	24.мар	24.апр	12.июн	165	R
10	Қора қилтиқ	21.ноя	07.янв	19.мар	23.апр	15.июн	159	15MR
11	Қизил бошоқ	19.ноя	05.янв	26.мар	18.апр	19.июн	153	R
12	Оқ бошоқ	21.ноя	06.янв	27.мар	19.апр	13.июн	161	R
13	Қайроқ тош	20.ноя	07.янв	24.мар	18.апр	14.июн	159	R
14	Қизил буғдой(Узун)	19.ноя	08.янв	27.мар	22.апр	15.июн	157	15MS
15	Қизил буғдой(Бойсук)	21.ноя	08.янв	24.мар	21.апр	09.июн	165	R
16	Ғаллакор	20.ноя	07.янв	26.мар	16.апр	16.июн	157	R
17	Ғаллакор	20.ноя	05.янв	25.мар	16.апр	13.июн	160	R
18	Ғаллакор	20.ноя	07.янв	27.мар	16.апр	14.июн	159	R
	Энг паст кўрсатгич	19 ноя	5 янв	19 мар	16 апр	9 июн	153	0
	Ўртача кўрсатгич	20 ноя	6 янв	24 мар	20 апр	14 июн	159	0
	Энг юқори кўрсатгич	24 ноя	8 янв	27 мар	25 апр	20 июн	166	0

The earing phase is the main feature of the yield indicator in grain crops. Because in this, the high number of productive and fruitful stems shows a positive result. In the ancient varieties, the spike fell on April 16-25. It was observed that full ripening lasted from June 9-20. It was observed that the days from germination to maturity ranged from 153 to 166 days. Among the early ripening varieties, it was observed that the Red Ear variety ripened in 153 days. Resistance to yellow rust, one of the fungal diseases, was observed in 15 varieties, and susceptibility to the disease was observed in the remaining 3 varieties.

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