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SELECTION OF EARLY-RIVING SPECIMENS OF BARLEY VARIETIES AND LINES

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ABSTRACT

One of the urgent tasks is to analyze the grain quality of local and newly developed barley varieties and lines currently cultivated in the republic, and to create high-quality barley starting materials based on biofortification technology.

Keywords: Germination, clustering phase, tuberous rooting, and earing early maturity.

INTRODUCTION

In the world, Russia, Canada, Germany, Spain, France, Turkey and Ukraine are the leading countries in barley selection. "Therefore, 23% of the barley produced is used for food, 10% for industrial brewing, and 67% is used as feed for livestock. "This year, the world's barley harvest was 160.9 million tons, but today it has decreased to 145.9 million tons." As a result of the sharp deterioration of climate change in the world, it is possible to observe a significant impact on the productivity and grain quality of cereal crops. In order to prevent these negative characteristics, hybridization, selection, varietalization and planting on large areas using wild species of the plant species as starting material are important tasks.

MATERIALS AND METHODS

Field and laboratory experiments were carried out according to the "Method of the All-Russian Research Institute of Plant Science", "Methods of conducting field experiments", phenological observations on plants were carried out according to the "Method of the State Commission for Testing Agricultural Crop Varieties"

The period from germination to full maturity of 20 barley varieties and lines planted in the field experiment area of Karshi district in 2024 was analyzed and it was determined that the germination date was December 9-10, the transition to the clustering phase was observed on February 10-14, the tuberous phase was determined on March 17-24, the earing date fell on April 4-18, and the full maturity date was determined on May 23-28.

Table 1 Duration of the Usuv period of barley varieties and ridges

Del №	Rows and ridges	Germination date	Collection date	Tubing, date	Harvesting date	Full maturity, date
1	Sulton(st)	10.дек	10.фев	20.мар	05.апр	25.май
2	KR22-IBYT-ASA-13	09.дек	10.фев	19.мар	07.апр	23.май
3	KR22-IBYT-FFM-05	09.дек	13.фев	24.мар	07.апр	24.май
4	KR20_IBON-W-34	09.дек	13.фев	19.мар	05.апр	26.май
5	KR22-IBYT-ASA-10	10.дек	10.фев	23.мар	08.апр	27.май
6	KR22-IBYT-ASA-07	10.дек	14.фев	22.мар	08.апр	28.май
7	KR22-IBYT-FFM-21	09.дек	13.фев	22.мар	04.апр	25.май
8	KR20_IBON-W-35	10.дек	13.фев	20.мар	07.апр	28.май
9	KR22-IBYT-ASA-12	09.дек	14.фев	22.мар	12.апр	26.май
10	KR22-IBYT-FFM-22	09.дек	13.фев	23.мар	08.апр	24.май
11	KR22-IBYT-FFM-09	10.дек	14.фев	23.мар	18.апр	23.май
12	KR20_IBON-W-40	10.дек	13.фев	24.мар	15.апр	25.май
13	KR22-IBYT-ASA-04	09.дек	14.фев	23.мар	08.апр	27.май
14	KR22-IBYT-FFM-08	10.дек	13.фев	24.мар	07.апр	26.май
15	KR20_IBON-W-11	09.дек	14.фев	20.мар	15.апр	25.май
16	KR20_IBON-W-51	10.дек	13.фев	17.мар	06.апр	27.май
17	KR22-IBYT-ASA-08	09.дек	13.фев	20.мар	12.апр	24.май
18	KR22-IBYT-FFM-23	10.дек	10.фев	23.мар	18.апр	25.май
19	KR20_IBON-W-23	09.дек	10.фев	22.мар	12.апр	23.май
20	KR20_IBON-W-62	10.дек	10.фев	20.мар	05.апр	27.май

According to T. Mamatkulov, the reason for the sharp decline in yields in some years is the occurrence of drought and heat, the widespread spread of various epiphytoses of diseases. Therefore, ensuring the uniformity of grain yields on irrigated lands, the creation of barley varieties resistant to the above indicators is one of the urgent tasks of today.[1]

According to the conducted studies, when analyzing the duration of the ripening period of barley varieties and ridges, the research results revealed that the Andoz Sultan (Andoza) variety passed from germination to full ripening on May 25.

The demand for new varieties of winter barley is increasing day by day. Since the current problem of today does not fully meet the indicators of heat, drought, and productivity, it is necessary to create new starting materials and varieties[2].

It was found that the lines KR22-IBYT-ASA-13, KR22-IBYT-FFM-09 and KR20_IBON-W-23, compared to the Andoza Sultan (andoza) variety, entered the full ripening phase 2-3 days earlier and were shown to have early ripening properties and were selected.

Although local barley varieties are valuable starting materials for breeding, they cannot be the only source. Although these local varieties have high ecological adaptability, they do not always have the required indicators for creating new breeding varieties. In order to create varieties that fully meet the requirements of agricultural production, it is necessary to use varieties from foreign countries in breeding work [3]

CONCLUSION

According to the research conducted, when the duration of the ripening period from germination to full ripening of barley varieties and lines from 20 regions was analyzed, the presence of early ripening characteristics in 3 lines compared to the standard Sultan variety was identified and selected.

REFERENCES

1. Маматқулов.Т., Омонов.А., Эшмирзаев.Қ. Ўзбекистонда арпа селекцияси. // Бошоқли дон, дуккакли ва ем-хашак экинлари ҳосилдорлигини ошириш муаммолари. Тошкент, 2015. 41 Б.
2. Ходжақулов.Т. Пивобоп арпа навларнинг дон таркиби. // Ўзбекистон қишлоқ ва сув хўжалиги журнали. 2017 й 4 сони Б-21
3. Ўсаров.З., Маматқулов.Т., Холдоров.А. Суғориладиган тупроқлар шароити учун янги арпа навларини яратиш //Агро илм.4 сони 2019-й Б 27-