CULTIVATION OF SPRING BARLEY IS AN URGENT PROBLEM

М.С.Мусаев
Associate Professor of Karshi Engineering-Economics Institute, (PhD)
М.Б.Равшанов
Kashkadarya regional agrochemical analysis center, head of soil and mineral fertilizer analysis laboratory

Annotatsiya. Arpaning Bolg'ali va Qizilqo'rg'on navlari urug'lari fraktsiyalarining hosildorligi va donlari texnologik sifat ko'rsatkichlariga ta'siri o'rganilmoqda. Buning uchun arpa navlari urug'lari dastlab teshigi 1,7 mm elaklarda elanib, keyin 2,5, 2,0 va 1,7 mm fraktsiyalarga ajratilib, erta bahorda ekiladi.
Kalit so'zlar: arpa, Bolg'ali, Qizilqo'rg'on, don, elak, fraktsiya, sifat, hosildorlik.
Аннотация. Изучается последействия фракции семена сортов ячменя Болгали и Кизилкурган на урожайность и технологические качество зерно. Для этого семена сортов ячменя сначала просачиваются по сетах с отверстия 1,7 мм, затем отделяются по фракциям 2,5, 2,0, 1,7 мм и высеваются в ранне весенней период.
Ключевая слова: Ячмень, Болгали, Кизилкурган, Зерно, Сито, Фракция, Качество, Урожайность.
Abstract. The effects of the seed fraction in the Bolgali and Kizilkurgan barley cultivars on grain yield and technological quality are being investigated. To do this, barley seeds are first filtered through sets with 1.7 mm holes, then divided into fractions of 2.5, 2.0, and 1.7 mm and sowed in early spring.
Key words: Barley, Bolgali, Kizilkurgan, Grain, sieve, Fraction, Quality, Productivity.

Introduction. In our country, the majority of grain crops are grown in the fall, and the cultivationof spring grain crops on irrigated areas is rapidly declining.

Simultaneously, in the system of alternating cultivation of cotton and sorghum crops on irrigated fields, the cotton harvesting process is delayed, delaying the planting season for autumn sorghum crops.In such instances, it is critical to cultivate grain crops in the early spring. Spring barley cultivars can be utilized to effectively address such issues.

Theoretical basis of research. Barley, yachmen, and hordeum are essential food, fodder, and technical crops, and because they are sensitive to winter frosts, they are best planted in the spring in our country's southern regions. Spring barley produces a high yield even when the air temperature is +40 °C or more when the grain forms. Because spring barley is drought-resistant, the transpiration coefficient drops to 400. Because barley absorbs the majority of nutrients during its early growth stage, the majority of the fertilizer should be applied at the same time it is planted. Barley has a high water need during the tuber phase. Spring barley grows well when the pH is between 6.8 and 7.5 [2]

Barley is a particularly drought-resistant grain crop, and when it is well nutrient-dense, it improves water conservation and tolerance to drought and the harmful effects of high temperatures [8]. If barley is phosphorus-saturated in dry conditions, its drought tolerance rises due to an increase in chlorophyll granules in its leaves [11]. When barley is cultivated under drought conditions and supplied with nitrogen fertilizers in moderation, grain production and quality increase due to improved physiological processes caused by the creation of healthy pollinators [13].

In drought situations, barley roots penetrate the soil's lower layers, effectively utilizing the moisture and nutrients therein, and the lateral roots are also highly developed [17]. When barley is fed late, the ability to generate dietary porridge from grains declines dramatically.

Because in this instance, the protein content increases [1]. If barley seeds are treated in various salt solutions prior to planting, grain yield and quality improve [3].
Barley should be fertilized with nitrogen from a young age. When nitrogen mineral fertilizers are employed in conjunction with the sowing of barley seeds, grain production and quality improve due to improved phosphorus absorption [4].
Grain yield and quality improve when barley seeds are warmed with trace element solutions prior to planting [5]. Before sowing, barley seeds are steeped in solutions containing various nutrients and physiologically active chemicals, which increases grain yield and quality by activating physiological and biochemical processes [6]. When barley seeds are treated with a molybdate ammonium solution prior to sowing, grain production and quality improve dramatically [7].
According to the findings of I.M. Kodanov's research [9], applying nitrogen fertilizers at a rate of 40-60 kg/ha boosted barley grain output by up to 9.0 tons/ha in the Gorky region of Russia. If there is a deficiency of phosphorus in the 24-27th days of the barley growing period, as a result of a dramatic fall in organic and inorganic phosphate, the crop's weight and quality are significantly reduced [10].
Potassium exists in the form of ions in barley cells and is very mobile. Potassium promotes tolerance to negative circumstances, mostly because it regulates sugar production. When barley lacks potassium, the toxin nutrescin is produced [12, 15, 16]. The pH of the soil solution influences barley's potassium uptake. If the pH of the soil solution is less than 6, potassium absorption drops significantly. If the pH of the soil solution is 4.5 or lower, potassium is not absorbed by barley at all [14].
Research methodology. Taking into account the foregoing and other factors, the viable seed grains of duvarak (both fall and spring), Bolgaly, and Kizilkurgan barley types are 1.7 mm sieve 2.5. We are investigating the effect of seed grain fractions on the technological parameters that govern the production and quality of barley grain after planting it in early spring on the farm "Soipov Shahboz" in Koson district. The fractions are 2.0 and 1.7 mm.
Given that the study of the additional influence of the quality indicators of barley seed grains is a major concern in our research, we explain the quality indicators of the seed grains used for planting. The Bolgali variety was created at the Gallaorol branch of the Scientific Research Institute of Grains and Legumes on irrigated lands by individual selection from hybrids of the local K-21 and K-24713 varieties created in the Krasnodar Territory.
The Bolgali variety belongs to the Nutans species and has a double biological type (both spring and autumn). The spike is two-rowed, orange, the grain is densely packed, the flower shell turns into a spike after ripening, and the spike is long, toothed, and well located on the spike. The grain is medium-elliptic in shape, the color of the grain is white-yellow, and the base of the grain is short and tufted. The variety is medium-growing, and the growing period is 190–194 days when planted in the fall, and this indicator decreases sharply when planted in the spring. The variety is resistant to lodging, 91–96 cm tall, and resistant to shedding, heat, winter frosts, and diseases.
In Odessa, the international variety yielded 84 t/ha. In the conditions of Uzbekistan, when planted at the end of April, it gave a yield of 42-54 t/ha. In the conditions of Uzbekistan, it gave a grain yield of 75 t/ha in autumn irrigated lands and 48 t/ha in dry land. This variety was included in the state register in 1996 for cultivation in irrigated lands of Uzbekistan.
Experimental part. Since the main task of our research is to determine the rate of planting, this indicator is also determined in the course of our research in the conditions of the experimental region. The Kizilkurgan variety was also created by individual selection from the hybrids of Pallidum 1078 and Zyklon varieties created in the Krasnador region of the Scientific-Research Institute of Grain and Leguminous Plants on irrigated lands.

The biological life style of the Kizilkurgan variety is twofold, and it is a variety of Panallelum. The head is six-rowed, cylindrical, light yellow, densely axillary; the axil is 2.0–2.5 times longer than the head and toothed, pale yellow. The grain is ellipse in medium size. Table 1.

The results of technological analyzes of barley seed grains selected as an experimental object

№	Indicators of grain fractions	When the grain is not divided into fractions (St)	Grain fractions, mm		
			1,7	2,0	2,5
BY BOLGALI TYPE					
1	Distribution of 1 kg of grain by fractions, g	1000	140	720	140
2	Weight of 1000 grains, g	36	25	37	47
3	Natural weight, g/l	635	593	652	650
BY KIZILKURGAN TYPE					
1	Distribution of 1 kg of grain by fractions, g	1000	110	575	315
2	Weight of 1000 grains, g	35	23	34	45
3	Natural weight, g/l	615	512	586	601

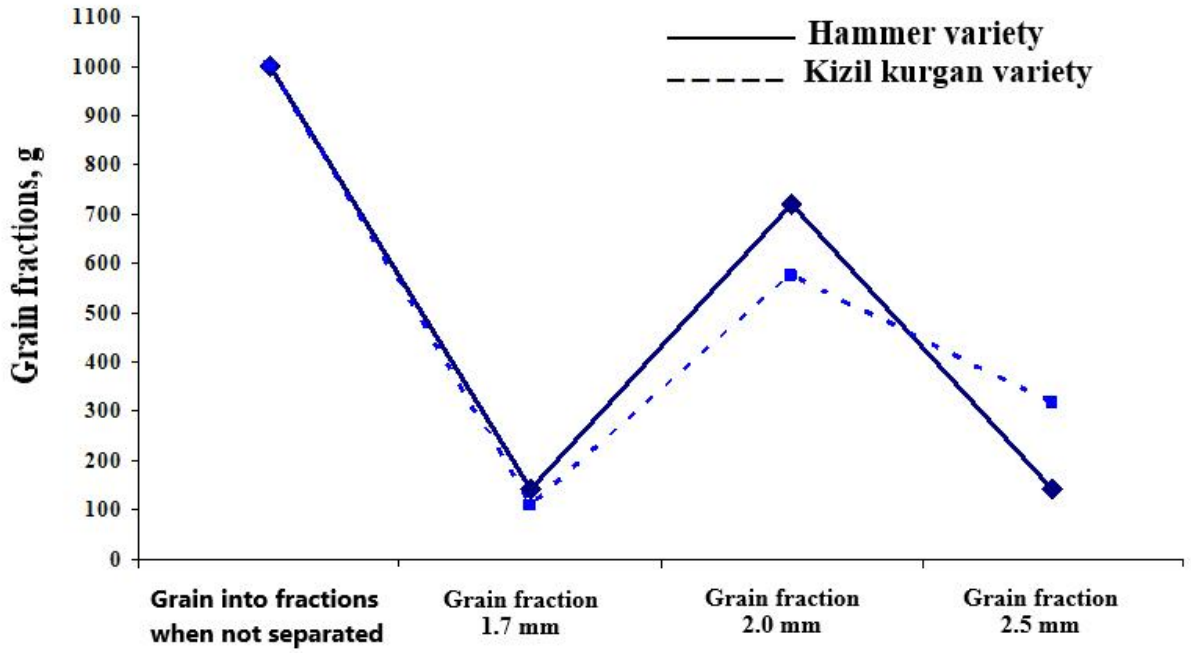


Figure. Fractional composition of grain barley seeds

According to its agrobiological characteristics, the Kizilkurgan variety is distinguished by its resistance to lodging, shedding, and wintering.

From the Kizilkurgan variety in the Kasbi variety testing station (58.8 t/ha), the Katta Kurgon variety testing station (67.04 t/ha), the Vobkent variety testing station (49.04 t/ha), and the Navbahor variety testing station (49.04 t/ha), a grain yield of 46.04 t/ha was obtained in the Gallaorol variety testing station. In Beshariq district of the Fergana region, 114 t/ha grain

yield was achieved on 10 hectares of barley field. As mentioned, the planting rate of this barley variety was determined in the course of our research.
In 2002, the Kizilkurgan variety was included in the state register for cultivation on irrigated lands in Uzbekistan. Samples were taken from seeds of both varieties according to GOST 135 86.3 and sieved according to GOST 33-10-1-2002, 2.5 and 2.0 were separated into 1.7 mm fractions. The weight of 1000 grains according to grain fractions was determined by the Contador apparatus according to GOST-10849-89. The bulk weight of seed grain fractions was determined by spraying according to GOST-10840-64. The results of the technological analyses are given in the table and in the figure.
According to grain fractions, 1.7 mm fraction grains in 1 kg of Bolgaly variety are 140 g, or 14%; 2.0 mm fraction grains are 720 g, or 72%; and 2.5 mm fraction grains are 140 g, or 14%. However, in terms of grain fractions, there was a sharp difference between the Kyzilkurgan variety and the Bolgali variety. Because 1.7 mm fraction grains in 1 kg of seed grain in the Kyzilkurgon variety are 11%; 57.5% with the 2.0 mm fraction amounting to 575 g in seed grains; and it was observed that fractions of grains with 2.5 mm seeds were 315 g and 31.5%.
Since barley and other grain crops have different weights depending on the location of the seed grains in the ear rows, determining the 1000 grain weight before planting plays an important role in determining the crop standards of seed grains. According to our technological analysis, the weight of the Bolgali variety, which is not divided into fractions, is 36 g per 1000 grains, while this indicator is 25 g in 1.7 mm fraction grains, 37 g in 2.0 mm fraction grains, and 47 g in 2.5 mm fraction grains. The same pattern was repeated for the Kyzyl Kurgon variety with a weight of 1000 grains. In this case, before planting barley and other seed grains, it is important to determine the planting standards based on the weight of 1000 grains.
However, it was observed that the parameters of the seed grains of barley varieties are not proportional to the weight of 1000 grains. For this reason, attention to the weight of 1000 grains along with more grain fractions should be a priority when determining the sowing standards of barley and other grain crops. However, do heavy grains form when heavy seeds are planted? The answer to the question has taken a wide place in the research.
CONCLUSION. Since the Bolgali and Kyzilkurgan barley types differ significantly in terms of seed grain fractions and 1000 grain weight, it is a priority challenge to separate such seeds into fractions before sowing and establish the planting rate per 1000 grains.
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