Eureka Open Access Journals
Open Access | Peer Reviewed | International Journals | Multidisciplinary Areas

Eureka Journal of Agricultural Science & Bio-Innovation (EJASB)

ISSN 2760-4969 (Online) Volume 2, Issue 5, May 2026

https://eurekaoa.com/index.php/7

STUDY OF THE TRAITS AND CHARACTERISTICS OF WINTER WHEAT VARIETY SAMPLES

Turayev G‘ayrat Mamatkulovich
Second-Year Master’s Student in Selection and Seed Production
Tashkent State Agrarian University Phone number: 712604382
E-mail address: tuag_info@edu.uz
Website: http://tdau.agro.uz
Tashkent region, Qibray district, University Street, 2.

Abstract

This article discusses the study of morphologically, biologically, and economically important traits of winter wheat variety samples. During the research, the growth and development phases of winter wheat, yield components, resistance to stress factors, and characteristics important for selection were analyzed. The obtained results are of great importance for the future development of high-yielding varieties resistant to diseases and unfavorable environmental conditions.

Keywords: Winter wheat, variety sample, morphological trait, yield, selection, biological characteristic, genotype, phenotype.

KUZGI BUG‘DOY NAV NAMUNALARINING BELGI VA XUSUSIYATLARINI O‘RGANISH

Turayev G’ayrat Mamatkulovich
(Seleksiya va urug’chilik yo’nalishi 2 -kurs magistranti)
Toshkent Davlat Agrar Unversiteti
Telefon raqam: 712604382 Pochta manzil: tuag_info@edu.uz
Web sayt: http://tdau.agro.uz
Toshkent viloyati, Qibray tumani, Universitet ko'chasi 2-uy.

Eureka Open Access Journals
Open Access | Peer Reviewed | International Journals | Multidisciplinary Areas

Eureka Journal of Agricultural Science & Bio-Innovation (EJASB)

ISSN 2760-4969 (Online) Volume 2, Issue 5, May 2026

https://eurekaoa.com/index.php/7

Annotatsiya

Mazkur maqolada kuzgi bug‘doy nav namunalarining morfologik, biologik va xo‘jalik jihatdan muhim belgilarini o‘rganish masalalari yoritilgan. Tadqiqot davomida kuzgi bug‘doyning o‘sish rivojlanish fazalari, hosildorlik elementlari, stress omillarga chidamliligi va seleksiya uchun muhim bo‘lgan xususiyatlari tahlil qilindi. Olingan natijalar kelajakda yuqori hosilli, kasalliklarga va noqulay sharoitlarga chidamli navlarni yaratishda muhim ahamiyat kasb etadi.

Kalit so‘zlar: kuzgi bug‘doy, nav namunasi, morfologik belgi, hosildorlik, seleksiya, biologik xususiyat, genotip, fenotip.

Introduction

Wheat is considered one of the main food sources for the world’s population. In particular, winter wheat is of special importance due to its high yield, ecological adaptability, and grain quality. In our republic, the creation of high-yielding, disease-resistant, and adaptable varieties is one of the important tasks for providing the population with high-quality grain products, increasing export potential, and ensuring food security. The study of winter wheat variety samples is one of the main stages of breeding work. Determining the morphological, biological, and economically important traits of varieties makes it possible to select breeding materials correctly.

The main purpose of this research work is to study the main traits and characteristics of winter wheat variety samples and to determine their significance in the breeding process.

Winter wheat variety samples of different origins were used as the object of the study. The research was carried out under field conditions. Observations were conducted during the vegetation period.

Eureka Open Access Journals
Open Access | Peer Reviewed | International Journals | Multidisciplinary Areas
Eureka Journal of Agricultural Science & Bio-Innovation (EJASB)
ISSN 2760-4969 (Online) Volume 2, Issue 5, May 2026

https://eurekaoa.com/index.php/7

The following indicators were studied:
Plant height
Spike length
Number of grains per spike
Weight of 1000 grains
Ripening period
Disease resistance
Yield indicators
The observations were carried out on the basis of phenological observation methods. The obtained data were statistically analyzed.
During the study, significant differences were identified in the morphological and biological characteristics of winter wheat variety samples.
Plant height is one of the important agronomic traits. In the studied variety samples, plant height ranged from 85 cm to 115 cm. It was found that varieties with medium height were resistant to lodging.
Spike length is one of the yield components, and in the studied varieties this indicator ranged from 8 cm to 12 cm. It was observed that varieties with longer spikes had a greater number of grains.
The number of grains per spike ranged from 35 to 55 grains. This indicator is considered one of the main factors directly affecting yield.
The weight of 1000 grains ranged from 35 g to 48 g. It was determined that varieties with higher grain weight had higher yield potential.
In addition, the disease resistance of the variety samples was also studied. Some varieties showed high resistance to rust disease. These varieties are considered valuable material for breeding.
Depending on the variety, the duration of the vegetation period lasted from 210 to 230 days. It was found that early-maturing varieties were more resistant to unfavorable climatic conditions.

Eureka Open Access Journals
Open Access | Peer Reviewed | International Journals | Multidisciplinary Areas
Eureka Journal of Agricultural Science & Bio-Innovation (EJASB)
ISSN 2760-4969 (Online) Volume 2, Issue 5, May 2026

https://eurekaoa.com/index.php/7

Discussion

The obtained results showed the genetic diversity of winter wheat variety samples. The differences between the varieties make it possible to conduct breeding work effectively.

It was determined that the main traits affecting yield are as follows:

Number of grains per spike

Grain weight

Plant height

Disease resistance

These traits serve as the main criteria in the breeding process.

In order to create high-yielding, disease-resistant, and adaptable varieties, it is important to select genetically valuable variety samples.

As a result of the study, it was established that there are significant differences in the important morphological and biological traits of winter wheat variety samples.

The following conclusions were made:

1. Differences were observed in plant height, spike length, and number of grains among winter wheat variety samples.
2. Varieties with high grain weight showed high yield potential.
3. Some varieties were found to have high resistance to diseases.
4. The studied variety samples are considered valuable for use as initial material in breeding work.
5. These variety samples can be used in the creation of high-yielding and resistant varieties.

Eureka Open Access Journals
Open Access | Peer Reviewed | International Journals | Multidisciplinary Areas

Eureka Journal of Agricultural Science & Bio-Innovation (EJASB)

ISSN 2760-4969 (Online) Volume 2, Issue 5, May 2026

https://eurekaoa.com/index.php/7

References

1. Atabayeva Kh.N. Plant Growing. Tashkent, 2000.
2. Dospekhov B.A. Methodology of Field Experiments. Moscow, 1985.
3. Zhuchenko A.A. Plant Breeding. Moscow, 2004.
4. Pugachev A.A. Wheat. Moscow, 2007.
5. FAO Wheat Production Manual, 2018.