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**FIELD GERMINATION OF LENTIL GENOTYPES***Senior researcher (PhD), Dilmurodov Sherzod Dilmurodovich**Email: [s.dilmurodov@mail.ru](mailto:s.dilmurodov@mail.ru), tel: +998 97 229 26 62,**Southern Research Institute of Agriculture,**180100, Karshi city, Kashkadarya region, Uzbekistan*

**Abstract:** In this article, the field germination of 36 varieties and ridges of lentil (*Lens culinaris*) planted in the nursery of a collection variety planted in dry land was studied in comparison with the model variety.

**Key words:** lentil, variety, ridge, selection, collection nursery, field fertility, southern region, dry area.

The long-term strategy for the development of agriculture of the Republic of Uzbekistan for the period of 2020-2030 was approved by the Decree of the head of our state No. PF-5853 dated October 23, 2019. This Strategy defines 9 main directions for the development of agriculture. Including ensuring the safety of food products and improving the consumption ration, development and implementation of the state policy of food safety, which provides for the production of the required amount of food products - one of the main issues in this Strategy is qualitatively defined.

Lentils are one of the oldest and most nutritious food crops. Due to the amount of protein in its grain, lentil is one of the main crops among grain-leguminous plants. Therefore, it is of great importance in the national economy. Since it contains protein, it is important not only as food, but also as fodder. Lentils are equal to meat in terms of nutrients and calories. Lentils contain 23-32% protein, 0.6-2.1% oil, 47-70% nitrogen-free extractives, 2.3-4.4% ash, 2.4-4.9% fiber and B group vitamins. there is. Lentils are eaten whole, as porridge or flour. It is the best additive in the sausage industry because it contains a lot of protein. The reason lentil seeds are used as food is that they ripen quickly. No other leguminous plant is as mushy as lentils. The stem contains 6-14% protein. Lentils increase soil fertility.

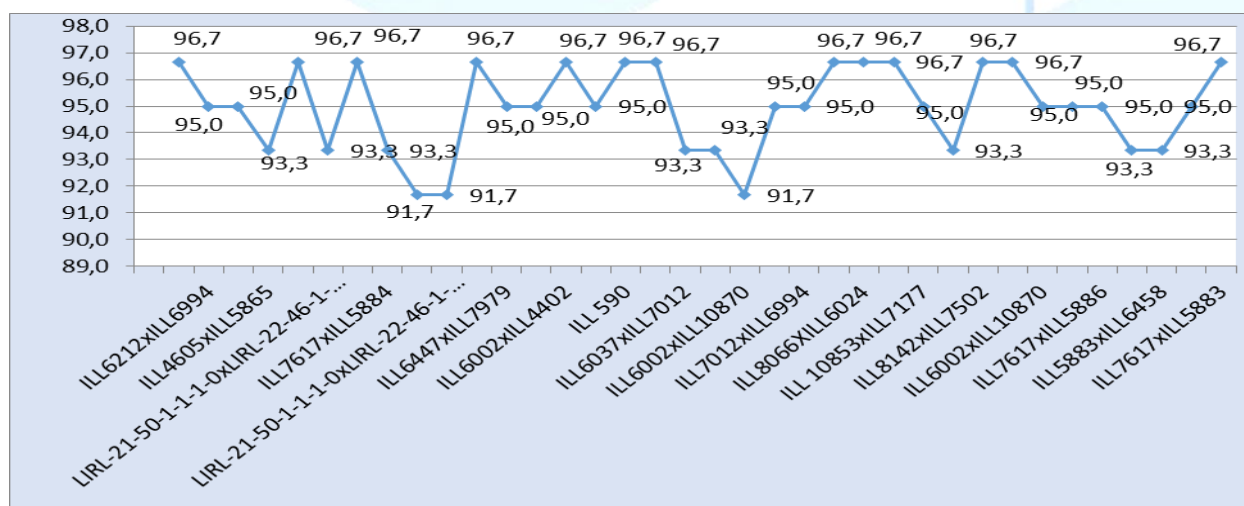
There are 2 stages of lentil development, divided into vernalization and light stages. The vernalization stage is short, it lasts 10-12 days from seed germination at a temperature of 5-8°C. Grass grows in 6-7 days at a temperature of 12-15 °C, in 8-9 days at a temperature of 9-11 °C. Grass is cold-resistant to -5-6 °C. A decrease in air temperature also leads to its extension [1, 2].

Today, breeding scientists in Uzbekistan who contributed to the creation of local varieties and samples of lentils in the course of their research are: M. Mannopova, I.

Egamov, Z. Yaqubov, Sh. Sattarova, A. Sarker, S. Ashitoslar conducted several scientific researches [3].

However, in the soil and climate conditions of the southern regions of our republic, especially in the Kashkadarya region, no scientific research has been conducted on the creation of lentil starter materials and varieties that are resistant to adverse factors, fertile, and with high protein content.

Taking into account the above problems, the seeds of lentil varieties and ridges brought from the International ICARDA organization (Lentil International Elite Nursery - Global 2022) were brought to the dry experimental field of the Southern Agricultural Research Institute in Qamashi district on February 16 to the collection nursery of Lentils LIEN-GLO-22 36 varieties and rows were planted. As a model variety, the Golden grain variety included in the state register was taken.



**Figure 1: Field fertility of lentil varieties and lines, % (Qamashi-2022)**

According to the results of the phenological observation carried out in the experimental area of Lalmikor, it was found that among the 36 varieties and ridges in the LIEN-GLO-22 nursery, the field fertility was 91.7-96.7%.

The field fertility of the model variety was 95%, and compared to the ridges higher than the template Golden grain variety, 13 ridges had higher fertility, and the field fertility was 96.7%. Also, the field productivity of 10 ridges was 91.7-93.3%, and the field productivity was lower than the model Golden grain variety.

Therefore, early and uniform germination of seeds in dry conditions of lentil varieties and ridges ensures high productivity, as well as strong development of the plant, resistance to water shortage and heat.

## REFERENCES

1. H.N. Atabayeva, J.B. Khudoykulov "Plant Science" // Tashkent 2018. Page 211
2. D. Yormatova, H. Khushvaktova, H. Ergasheva Study guide for Vocational Colleges "Plant Science" Tashkent 2016. Page 155.
3. M.E. Amanova, J.B. Khudaykulov "Cultivation of Green Peas and Lentils" "Agrobank" ATB 100 Book Collection Book 28 Tashkent 2021y
4. <https://uz.wikipedia.org/wiki/Yasmiq>
5. <https://www.atlasbig.com/en-gb/countries-by-lentil-production>
6. <https://lex.uz/docs/-4567334>