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The Influence of Humidity and Temperature on the Period of Grazing Wheat Grain, Widespread in the

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Abstract: A short or medium growing season will give good results for the climatic conditions of Uzbekistan. From scientific sources we know that regardless of any type of crop, in order for the seeds to germinate on time, the soil must have enough moisture, temperature, light and other external factors, and the quality of the seeds must be high, as it is good. The difference between the varieties of spring and autumn wheat in terms of the duration of the growing season is great. The duration of the growing season for spring wheat varieties is 70-80 days, for some varieties - 120-130 days, for autumn wheat varieties it can be 180-220 days or more, taking into account the winter dormancy period. This indicator also depends on the biological characteristics of the variety and the influence of external environmental factors.

Keywords: factors, seed quality, durability, varieties, characteristics, external environmental factors.

INTRODUCTION

Regardless of any type of crop, sufficient exposure to moisture, temperature, light, and other external factors must be present in the soil in order for the seeds to germinate in time, evenly, as well as the quality of the seed.

For example, in order for the grain of autumn wheat to germinate, it must be able to absorb 45-47% water compared to its own weight. This process is especially important for wheat planted in the fall. Because, as a result of the rapid change in the weather in the fall, moisture in the soil can also change, as a result, affecting the germinating seed. Wheat seeds have the ability to absorb moisture in the soil at temperatures as high as ice can melt. For example, at this temperature, for 15 hours, when the soil moisture is 90%, the seed absorbs moisture in an amount of 11% relative to its mass. The duration of the growing season of autumn wheat varieties, not counting the period of winter hardening of wheat, is 145-190 days. Autumn wheat does not stop full of growth during the winter season. Growth continues as the air temperature rises, stopping from growing as the air temperature drops. Does not grow well in sour and saline soil. The planting method is planted in rows (12-15 cm between the rows) or in narrow rows (7-8 cm between the rows). The planting rate is 70-110 kg per hectare in fertile lands, 170-200 kg in irrigated regions, the planting depth is 4-6 CM; autumn is planted deeper, the planting rate is taken more than 10-15%, the seeds are sorted and dorified before sowing. In the irrigated conditions of Uzbekistan, it is recommended to apply 10-15 t of manure, 40-80 kg of phosphorus, 40-100 kg of nitrogen, potassium per hectare of land before planting wheat in cultivated land. During the growing

season, the crop is also fertilized, in the waterlands the crop is watered 2-3 times during the growing season.

LITERATURE ANALYSIS

Wheat grain contains 11-20% protein, 63-74% starch, about 2% fat, and the same amount of fiber and ash [1]. The most important indicators that characterize the quality of wheat are protein and gluten in cereals [2]. The average amount of substances in wheat should be as follows:

- Water-12 %
- Carbohydrate-70 %
- Protein-12 %
- Fats-2 %
- Cellulose-2.2 %
- Ash - 1.8% [3]

The presence of the above substances in the required limits affects the quality of wheat and the product to be obtained. However, lipids, cellulose, vitamins and enzymes are other chemical properties that are analyzed in wheat [4]. Complete proteins include all important amino acids arginine, valine (norvaline), histidine, leucine (isoleucine), lysine, methionine, tryptophan, tronone, phenylalanine [5]. Cereals include non-protein nitrogenous substances (amino acids, amines, alkaloids) [6]. Their high content means an unfinished ripening process or grain spoilage [7].

"CHILLAKI" VARIETY

Origin: created by a single selection of hybrids from F2 and F4 generations, derived from the combination of crossbreeding of Genrumil and Yuktina varieties.

General description: the variety ripens very early, is low-growing (85-95 CM), resistant to laying. The erythrospermum species is native to Chile. Frost resistance is moderate, drought-resistant, below average, can be infected with yellow rust and Spike fuzariosis. Resistant to dust and severe karakuya diseases. Since the variety is very early, diseases cannot have a specific negative effect on the yield of the variety.

Yield: in high agrotechnical conditions, the average yield per hectare is 65-70 centners.

Planting dates: it is recommended to plant in all regions of the Republic, the optimal period for each region is considered.

Planting norm: 4.5-5.0 million. pieces are marked at the expense of unsweetened seeds. The norm for sowing seeds when planted between a number of spikes is 15-20%

"TANYA" VARIETY

Vegetation period: 217-289 days when grown in areas around the Mediterranean Sea. The weight of 1000 seeds was 43-45 g.

Plant height: Semi-dwarf wheat, plant height 57-88 cm. Productivity of the variety: This is a high-yielding variety. The average yield of the variety is 45 s/ha, 4.6 s/ha higher than the average.

Frost tolerance: High to moderate drought tolerance.

Fertilization level: 4-5 million per hectare.

Productivity: The productivity of the Tanya variety was 79.4 centners per hectare, which is 10.7 centners higher than the standard variety.

ANALYSIS AND RESULTS

Chillaki and Tanya varieties of winter wheat were planted in the field experiment. The field experiment consisted of two options and was conducted in four repetitions. The area occupied by each variant of the experiment is 108 m2 (3.6 m x 30 m), of which the calculation area is 54 m2 (1.8 m x 30 m). In the experiment, the seeds of wheat varieties were sown on November 20, 2023. When evaluating wheat varieties, it is important to determine their productivity indicators. Wheat productivity parameters include yield rate, stem height, ear length, number of grains per ear, and 1000-grain weight. In the experiment, we determined the productivity indicators of wheat varieties before harvesting. As can be seen from the data, the Chillaki variety showed superiority in terms of the number of productive stalks formed per square meter before harvesting. In terms of the height of the stem, the Chillaki variety was superior to the other tested varieties, that is, the height of the stem of the Chillaki variety was 102.8 cm. Spike length was 8.4 cm in Chillaki variety, 9.3 cm in Chillaki variety and 9.5 cm in Tanya variety. The number of grains formed in one spike is 41.2 grains in the Chillaki variety. The Chillaki variety showed its superiority in terms of productivity indicators of the varieties tested in the experiment.

Summary. Thus, if we take into account that the Chillaki variety matures 12-14 days earlier than the Tanya variety as a result of the conducted research, it is recommended to plant this variety. Because, if the field where the Chillaki variety is planted is harvested early and repeated crops are planted in its place, it will be possible to easily ripen their harvest. After harvesting the Chillaki variety of winter wheat, the vacant land can be planted with corn, mung beans, soybeans, beans or late potatoes. In this case, it is possible to harvest twice a year from one field. It was found that the vegetation period in the desert zone of the Republic of Uzbekistan is significantly dependent on weather and climate conditions. The amount of precipitation and favorable temperature conditions play an important role during the formation and ripening of grain.

LIST OF LITERATURE USED

1. Казаков Й.Д.,Зерновидение с основами растениеводства., М., 1983;.
2. Качество продукции растениеводства и приёмы его повышения. - Уфа: Башкирский ГАУ, 1998. -С. 3-7.
3. Udachin R. A., Shaxmedov I. Sh., Pshenitsa v Sredney Azii, T., 1984;
4. Молодой учёный №18 (98) сентябрь-2 2015 г. — Омельченко А. В., Юркова И. Н. Влияние
5. Зерновые культуры (Выращивание, уборка, доработка и использование) / под общ. ред. Д. Шпаара. - М.: ИД ООО «DLV АГРОДЕЛО», 2008. - С. 7-62.
6. Актуальные проблемы селекции мягко пшеницы (TRITICUM AESTIVUM L.) на качество Гасанова Г.М.К // European science review. - 2014. - С. 124-127.
7. Macas B., Muacho C., Quality of durum wheat breeding lines: Genetic and environmental effects // Durum wheat improvement in the Mediterranean redion: New ^allenges. Zaragoza: CIHEAM Options Mediterraneennes: Serie A. Seminaires Mediterraneens. Eds. Royo C., Nachit M