

Studying the Impact of the Geographic Factor on the Indicators of Wheat Grain

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Wheat is the most important food crop cultivated in various geographical regions of Uzbekistan [1-3].

Wheat kind is characterized by a complex of morphological, biological, and economic characteristics and properties, including yield, frost resistance, resistance to diseases and pests, requirements for the soil and its composition, requirements for moisture, light, temperature, early maturation, non-falling, resistance to lodging, size, shape and color of the grain, the characteristic features of the chemical composition, storage stability, technological properties and so on. The new assortment of wheat has a great value; it combines important biological, economic and technological properties.

The valuable properties inherent in this kind of wheat can be seen only under certain growing conditions, on an agricultural background that provides the widest possible disclosure of the potential of the kind.

The yield and quality of grain is determined by the ratio and combination of external and internal factors depending on the geography of the region. The external factors include climate, soil composition, and a set of agro-technical measures; internal factors are the natural features of the cereal plants that constitute their biological essence and their hereditary characteristics.

The relationship with the environment is a prerequisite for the existence of cereal plants. Environment means a combination of factors, wind, as well as impact of animals, plants and humans. Climate and soil are the main natural conditions in which the grass plant grows and develops. Wheat can germinate at a temperature of 1 - 2°C.

The geographical factor affects the maturation of the grain of different crops cultivated in the same climatic zone. So, wheat reaches wax ripeness in Kashkadarya and Surkhandarya regions of Uzbekistan.

Figure 1 shows glutagrams of wheat kinds grown in different geographical conditions of Uzbekistan.

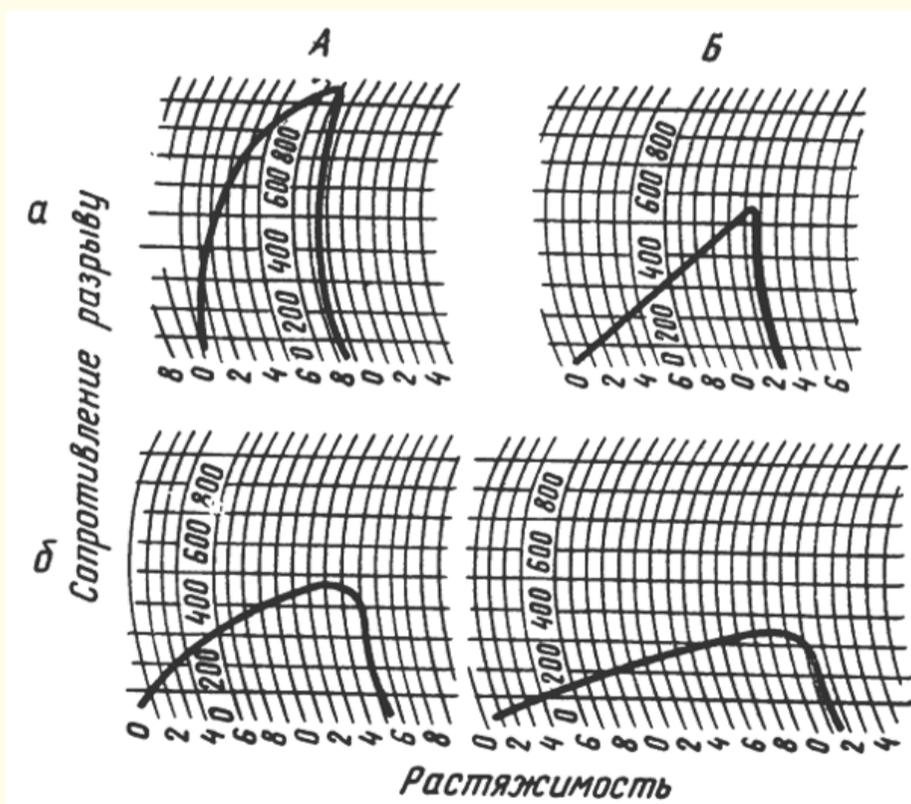


Figure 1: Glutagrams of wheat kinds grown in different conditions.

a: Wheat grown in a hot, dry climate; б: Wheat grown at a moderate temperature in a sufficiently moist soil.

High technological advantage of wheat grain is also closely related to the geographical location of its crops. In the study of a large number of samples, wheat grain grown in the conditions of the Fergana Valley has high strength of the dough to batching and high mixing value. On the northern geographical conditions of Uzbekistan in favorable weather conditions, wheat grain does not meet the requirements for strong wheat. The chemical composition of grain, its biochemical and technological properties largely depend on climatic and soil conditions (the number of sunny days and precipitation during the growing season, the composition of fertilizers, etc).

Thus, it was established that geographical factors determine the quality and technological properties of grains cultivated under local conditions.

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