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EDUCATION AND TRAINING

01/09/1973 – 30/04/1979 Kamianets-Podilskyi, Ukraine

AGRONOMIST SCIENTIST Kamianets-Podilskyi Agricultural Institute

and social context

WORK EXPERIENCE

EARTH SCIENCE LECTURER – HIGHER EDUCATIONAL INSTITUTION «PODILLIA STATE UNIVERSITY» – KAMIANETS-PODILSKYI, UKRAINE

SKILLS

Microsoft Word | Microsoft Excel | Zoom | Microsoft Powerpoint | Microsoft Office | Organizational and planning skills | Good listener and communicator

PUBLICATIONS

2024

[The dependence of the duration of the germination phase of spring barley on the temperature regime of the soil](#)

The article draws attention to a particularly sensitive period of spring barley development, which directly relates to the germination phase. On the basis of the obtained data, it was established that the germination phase of spring barley during the studied sowing dates is 10.03; 20.03; 30.03; 9.04. 19.04 is characterized by a decrease in the duration of the period from sowing to seedlings for each subsequent sowing period. It was established that soil temperature is an important factor influencing the duration of spring barley germination. Correlation coefficient $r = -0.97$ was established accordingly. The dependence of the onset of the tillering phase in spring barley plants on the sowing dates was revealed. Accordingly, the barley plants of the first sowing period entered the tillering phase earlier by 13-15 days compared to the third sowing period and by 22-25 days compared to the April 9 sowing period. This is a rather important advantage, since the duration of the tillering phase will be the longest in barley plants of the first sowing period, which will contribute to the implementation of the first and second elements of the grain yield structure

Klymyshena, R., Horash, O. The dependence of the duration of the germination phase of spring barley on the temperature regime of the soil. *AgroLife Scientific Journal*. 2024. Vol. 13, No. 2. P. 134-146.

Authors: Rita Klymyshena, Oleksandr Horash | **Journal Name:** *AgroLife Scientific Journal* | **Volume, Issue and Pages:** Vol. 13, No. 2. P. 134-146.

2025

[Evaluation of growth and development of barley plants of phenotype with three formed shoots at the end of the tillering phenophase at different sowing dates](#)

The purpose of this study was to substantiate the optimal combination of agroecological resources of the Western Forest-Steppe of Ukraine and the biological potential of spring barley productivity in cultivation technology. The organised research was aimed at analysing the state of growth and development of spring barley plants on the example of the phenotype with three formed shoots at the end of the tillering phenophase, depending on the influence of environmental conditions at different sowing dates. To describe and summarise the experimental data, the study employed the method of establishing the significance of the difference in sample means by the t-criterion (difference analysis) was used. As a result of the study of barley growth and development, on the example of the analysis of the phenotype of plants with three formed shoots at the end of the tillering process, a pattern of gradual decrease in the realisation of the biological potential of shoots was obtained when the sowing dates were shifted by 10 days starting from the first sowing date – March 10. The maximum values of the growth and development of shoots of

plants of this phenotype were obtained as a result of ensuring the sowing process on March 10 at the earliest. According to the order of the biological sequence of formation of the first, second, and third shoots, the indicators were for crude biomass – 4.2 g, 3.2 g, 2.2 g; dry matter content – 0.77 g, 0.58 g, 0.43 g, leaf surface area – 37.9 cm², 34.8 cm², and 30.9 cm². According to the analysis of the factual material obtained as a result of an organised experiment of growing plants in abiotic conditions at different sowing dates, the process of modifying the influence on the morphogenesis of barley shoots was established. The best results of intensification of spring barley tillering according to the parameters of the established data of shoot development on the example of the indicated plant phenotype were obtained under environmental conditions at early sowing dates. From a practical standpoint, the use of favourable environmental resources at early sowing dates in ensuring consistently high grain yields of spring barley crops continues to be an underutilised reserve in cultivation technology

Horash, O., & Klymyshena, R. Evaluation of growth and development of barley plants of phenotype with three formed shoots at the end of the tillering phenophase at different sowing dates. Scientific Horizons.2025. 28(7), 9-21.

Authors: Oleksandr Horash, Rita Klymyshena | **Journal Name:** Scientific Horizons | **Volume, Issue and Pages:** Tom 28, №7. P. 9-21.