

According to educational materials on production automation, automatic control systems help maintain stable operating modes and reduce the influence of the human factor. Automatic driving of agricultural machines ensures accurate movement along a given path, which is especially important during sowing, fertilization and harvesting. Automatic direction control systems reduce overlaps and gaps, which improves resource efficiency and the quality of agricultural operations. Automation increases machine reliability and reduces downtime caused by technical failures.

Smart technologies play an important role in modern agricultural production. They combine the Internet of Things, wireless sensor networks and digital data processing platforms. The Internet of Things in precision agriculture involves the use of sensors to measure soil moisture, temperature, acidity and other parameters of the agro-ecosystem. According to G. V. Antonova, LoRa and LoRaWAN technologies provide energy-efficient data transmission over long distances, which makes them especially suitable for agriculture. Data collected by IoT sensors form the basis for Big Data technologies and analytical systems.

Processing large amounts of information makes it possible to predict crop yields, optimize the timing of agricultural operations and make well-grounded management decisions. Educational materials on precision agriculture emphasize that the combination of GPS technologies, geographic information systems and digital analytics creates an integrated system for agricultural production management. Thus, innovations in the agricultural sector — drones, automatic systems and smart technologies — form a new technological structure of agriculture. Their implementation increases productivity, reduces costs and ensures environmental sustainability. Studying these technologies within courses on mechanization, automation, electronics and information technologies is an important part of professional training for future agro-engineers.

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### COMPARISON OF WHEAT VARIETIES BY THEIR YIELD

*Основна мета дослідження полягала у визначенні впливу сорту пшениці на врожайність за однакових умов вирощування. Дослідження підтвердило важливу роль сорту в досягненні високих врожаїв пшениці. Подальші дослідження в цьому напрямку дозволять розширити знання про біологічні особливості пшениці та розробити більш ефективні технології її вирощування.*

**Ключові слова:** озима пшениця, сорти пшениці, врожайність культур, сільськогосподарська продуктивність, порівняльний аналіз, польовий дослід.

*The primary objective of the study was to determine the impact of wheat variety on yield under identical growing conditions. The research confirmed the crucial role of the variety in achieving high yields. Further studies in this area will expand knowledge of its biological characteristics and help develop more effective cultivation technologies.*

**Keywords:** winter wheat, wheat varieties, crop yield, agricultural productivity, comparative analysis, field experiment.

Winter wheat is one of the most important cereal crops in the world and plays a key role in ensuring global food security. In many countries, including Ukraine, wheat occupies a significant share of agricultural land and represents an essential component of grain production and export potential. Increasing the productivity and stability of wheat cultivation remains one of the primary goals of modern agriculture [1].

The productivity of wheat is influenced by numerous factors such as climatic conditions, soil fertility, cultivation technology, and genetic characteristics of the variety. Among these factors, the genetic potential of a particular variety plays a decisive role. Even under identical environmental and agrotechnical conditions, different varieties can demonstrate different levels of productivity due to their physiological and morphological traits [2].

The aim of this research was to conduct a comparative analysis of several winter wheat varieties and determine their yield potential when grown under identical environmental and agrotechnical conditions. Such comparative studies are important for identifying the most productive and adaptable varieties that can be recommended for agricultural production [3].

Field experiments were conducted under uniform growing conditions. All varieties were cultivated on the same experimental field with identical soil characteristics and fertility level. The soil type of the experimental plot was typical chernozem, which is characterized by high humus content and favorable physical properties for grain crop cultivation [2].

Before sowing, the soil was prepared using standard agricultural practices, including plowing, cultivation, and leveling. Mineral fertilizers were applied in equal quantities to all experimental plots to ensure uniform nutrient supply. The sowing rate, row spacing, irrigation regime, and plant protection measures were identical for each wheat variety. Such experimental conditions made it possible to evaluate the influence of genetic characteristics on yield indicators more objectively [4].

Four winter wheat varieties were selected for the experiment: Podolyanka, Smuglyanka, Antonivka, and Kuyalnik. These varieties are widely cultivated in Ukraine and are known for their adaptability to different soil and climatic conditions [5].

The productivity of each variety was determined after harvesting the crops at full maturity. Grain yield was measured in tons per hectare and calculated based on the mass of grain collected from each experimental plot.

#### **Yield indicators of winter wheat varieties under identical growing conditions**

Varieties of wheat	Yield t/ha
Podolyanka	7.03
Smuglyanka	9.65
Antonivka	11.30
Kuyalnik	8.00

The results obtained during the research showed noticeable differences in the productivity of the studied wheat varieties. The variety **Podolyanka** demonstrated stable yield performance with an average productivity of 7.03 t/ha. This variety is characterized by relatively good drought resistance and stable grain formation under moderate environmental stress conditions [5].

The variety **Smuglyanka** showed significantly higher productivity compared with Podolyanka. The average yield reached 9.65 t/ha. This result can be explained by the variety's resistance to common wheat diseases and its efficient use of soil nutrients and moisture resources [3].

Among all studied varieties, **Antonivka** demonstrated the highest yield potential. The average yield reached 11.3 t/ha. Such high productivity is associated with the strong tillering capacity of the plants, a well-developed root system, and the ability to efficiently utilize available nutrients in the soil [4].

The variety **Kuyalnik** also showed relatively high productivity, with an average yield of about 8.0 t/ha. This variety is known for its winter hardiness and good resistance to unfavorable weather conditions. Although its productivity was slightly lower than that of Smuglyanka and Antonivka, it still demonstrated stable yield performance under identical growing conditions [5].

The comparative analysis confirms that the genetic characteristics of wheat varieties significantly influence yield indicators. Even when environmental factors and agricultural technologies remain constant, different varieties may demonstrate different productivity levels due to their biological features [2].

The results of this research highlight the importance of selecting high-yielding and adaptable wheat varieties for cultivation in specific agro-climatic regions. The use of productive varieties such as Antonivka and Smuglyanka can significantly increase grain production efficiency and improve the economic performance of agricultural enterprises [1].

In addition, continuous scientific research and variety testing are necessary for the development of modern agriculture. New wheat varieties must combine high yield potential with resistance to diseases, pests, and climate variability. Such characteristics allow farmers to maintain stable grain production even under changing environmental conditions [3].

Therefore, comparative evaluation of wheat varieties under identical conditions provides valuable information for farmers, agronomists, and researchers. The results obtained in such studies can be used to improve agricultural technologies and increase the efficiency of crop production systems [4].

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#### A PROPERLY WRITTEN COVER LETTER IN ENGLISH: ADVICE AND REQUIREMENTS

*The article describes and analyzes the most effective advice on how to write a cover letter properly when applying for a job in order to convince the employer that you deserve the job.*

**Keywords:** *a cover letter, resume, applicant, a potential employer, skills, desired position, business communication.*

In English business communication, when applying for a job, it is customary to send not only a resume and portfolio, but also a cover letter. A cover letter is a one-page letter that a candidate sends along with his resume to a potential employer.

A cover letter should complement, but not duplicate, the resume [2]. Its purpose is to provide more detail on the information in the resume and to substantiate the applicant's desire to obtain the position for which they are applying. A properly written cover letter in English will help you prove to the employer that you deserve the job.

Study the job description in detail. Often, the employer specifies clear criteria that must be met in the cover letter for the resume. This can be a story about yourself in any form, examples of work and a portfolio, other specific information. All these requirements must be taken into account when writing the letter, otherwise the employer may refuse to consider your resume if the cover letter does not meet the stated requirements.