12.83 to 28.47 mg/100 g. The highest content of AA was noted in the fruits of the samples Alhambra F_1, Classic F_1, Tolstoy F_1, varieties Rio Fuego, Atolls, Kmitsits and SH-3 (more than 20). Plants of the varieties Nasko 2000, Gospodar, Mikolka F_1 and Peto 86 formed AA in the fruits within the range of 15 mg/100 g. The remaining samples contain AA in the range of 16–20 mg/100 g.

Dispersion analysis of the influence of varietal characteristics and weather conditions of cultivation found that the formation of ascorbic acid to a greater extent depends on weather conditions (38%), varietal characteristics (33%), the interaction of factors (24%) and other factors.

The conducted studies made it possible for the first time to analyze 15 samples of mid-early ripening tomato grown in Ukraine for the average content of ascorbic acid. The most valuable specimens have been identified: Rio Fuego, Alhambra F_1, Atol, Classic F_1 and Tolstoy F_1. In further studies, it is necessary to deepen the processing of the obtained data and identify the influence of active temperatures, moisture availability, HTC and other factors. The data obtained should be taken into account when planning and selecting an assortment of mid-early tomato varieties and hybrids for growing products for fresh consumption and the production of processed products of increased biological value.

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Voitsekhivskyi V. [1], Ph. D., associate professor
Rak O., Poshkrebnov V. [1], students
Shysh A. [1], Ph. D., associate professor
Balitska L. M. [2], reasecher
Tkachuk V. [3], Ph. D., associate professor,
[1]National University of Life and Environmental Sciences of Ukraine, Kiev
[2]Ukrainian Institute for Plant Varieties Examination
[3]Kamianets-Podilskyi Ivan Ohiienko National University, Ukraine
E-mail: vinodel@i.ua

PRODUCTIVITY AND ECONOMIC EFFICIENCY OF CULTIVATION CORN FOR GRAIN UNDER THE CONDITIONS OF A GROUP OF COMPANIES «LNZ GROUP»

The problem of providing humanity with the main high-quality products is increasingly becoming one of the most important challenges of modern times and requires careful state regulation and attention. The solution to the issue of food supply requires the solution of all modern problems of the agro-industrial complex and its basis – agriculture. To ensure food security, modern innovative technologies are used more and more, they are undoubtedly a modulator of innovative development, growth of productive forces. It depends on many factors: the level of development of the agricultural sector, including private farms; development of the food industry; the level of export-import operations; the level of purchasing power and culture of the population; possibilities of using innovative technologies; financial capabilities of enterprises; material and technical support and investment attractiveness of agribusiness enterprises; state support, benefits granted to agro-industrial complex enterprises, effective fiscal policy.

Obtaining high-tech and high-quality food and fodder corn solves important economic and social problems. Corn grain contains up to 87% dry matter, 70% of which is starch, 9–12% protein, 4–7% fat, suitable for the production of high-quality flour, groats, oil, corn flakes, starch, glucose, alcohol, molasses, etc. It is worth noting that the soil and climatic conditions of the Forest Steppe of Ukraine satisfy the bioecological requirements of corn.

It is known that in certain soil and climatic conditions it is possible to obtain a high yield of corn when using hybrids of different maturity groups to create a harvesting conveyor for the purpose of efficient harvesting and the formation of homogeneous batches of high-quality grain.

The selection of an assortment of hybrids capable of providing high grain productivity of corn to increase the volume of cereal production is of primary importance in the efficiency of the functioning of agricultural enterprises. When choosing hybrids for growing corn for grain, it is advisable to give preference to those that, during the formation of the crop, make the most full use of the soil and climatic conditions of the growing season. The key indicators are the ripeness group, resistance to lodging and major pests and diseases, the ability to form a stable grain yield despite extreme factors.

Important aspects of innovative methods of managing the production of corn grain are the strengthening of concentration and intensification of production, which is a good basis for the introduction of the latest resource-saving technologies for the production of grain and other products, such as the development of precision agriculture; satellite monitoring of crops; field and yield mapping; management of equipment, etc.

The purpose of the research was to conduct a comparative assessment of the grain productivity of corn hybrids to substantiate the choice of the most efficient ones grown in the conditions of the Cherkasy region and to determine the factors that affect the economic indicators of the farm.

LNZ Group is a Ukrainian vertically-integrated agro-industrial holding specializing in the trade of seed material and plant protection products, the cultivation of grain and industrial crops, animal husbandry and grain trading activities. Created on the basis of the plant for the production of sowing seeds in the village of Lebedyn. The most valuable hybrids were selected for research. The work uses general economic indicators of the enterprise. Statistical data processing was carried out according to generally accepted methods.

Cultivated hybrids are medium-ripened. Comparing biological features, we can say that these are hybrids of the intensive type and they have minor differences. The average yield of the studied hybrids over the past 3 years is more than 9.6 t/ha, which is a good result. In favorable years, a result of 15 t/ha was achieved in the hybrid DKS 3441 Max Yield. Noted. That the coefficient of variation in more productive hybrids is greater, which indicates a rather volatile indicator and lower stability.

The analysis of the level of profitability showed that, on average, for the studied years, this indicator was not lower than 65%, and in a favorable year, the average for varieties exceeded 88%. The coefficient of variation of this indicator is 22.8% and differed slightly between hybrids.

Having conducted a dispersion analysis of the influence of weather conditions and biological characteristics of the hybrid on the formation of productivity, it was found that the prevailing factor contributing to the formation of high productivity is the characteristics of the hybrid (more than 40%). Growing weather conditions exert an influence on 29%, and the interaction of the above factors – 27% under the conditions of the forest-steppe zone and for the studied hybrids.

Thus, it can be concluded that the productivity of intensive-type corn hybrids in the forest-steppe zone of Ukraine has a significant share of unrealized genetic potential. All hybrids in some years are able to form a yield of more than 12 tons/ha. In favorable years, an average increase in productivity by 20–25% was noted. The level of profitability of growing on average for the studied hybrids is more than 65%, in favorable years – more than 88%. The coefficient of variation of the productivity indicator indicates average stability. As a result of statistical processing, it was found that the primary role in the formation of high productivity is played by the hybrid and favorable weather conditions of vegetation. The obtained data should be taken into account when selecting hybrids in order to intensify the growing technology and obtain the maximum economic effect.

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Воробей А. М.[1], здобувачка ОС «магістр»
Пирог Т. П.[1,2], проф., д.б.н., пров. наук. співробітник, викладач
Шевчук Т. А.[2], пров. інженер
[1]Національний університет харчових технологій
[2]Інститут мікробіології і вірусології ім. Д. К. Заболотного НАН України
E-mail: vorobei.anna.biotech@gmail.com

ВПЛИВ ЕКЗОГЕННОГО ЕРИТРИТОЛУ НА БІОЛОГІЧНУ АКТИВНІСТЬ ПОВЕРХНЕВО-АКТИВНИХ РЕЧОВИН *ACINETOBACTER CALCOACETICUS* ІМВ В-7241

Новим напрямом біотехнології, що інтенсивно розвивається останніми роками, є створення так званих інтегрованих біотехнологій, в яких одночасно з цільовим продуктом синтезуються інші практично цінні супутні метаболіти. Такі технології дозволяють провести один процес замість кількох, що однозначно є економічно вигідним.

У попередніх дослідженнях було встановлено здатність ізольованого нами штаму *Acinetobater calcoaceticus* ІМВ В-7241 до одночасного синтезу біологічно активних гіберелінів ($ГК_3$ та $ГК_4$) і поверхнево-активних речовин (ПАР) з антимікробною щодо фітопатогенних бактерій активністю. Реалізація такої інтегрованої біотехнології дає змогу отримати комплексний мікробний препарат для подальшого його використання у рослинництві як рістстимулювальний і антимікробний засіб. Раніше було показано можливість підвищення ефективності інтегрованої технології в результаті збільшення концентрації гіберелінів, синтезованих *A. calcoaceticus* ІМВ В-7241 у комплексі з поверхнево-активними речовинами за рахунок внесення у середовище культивування продуцента еритритолу - попередника біосинтезу цих фітогормонів. Разом з тим біологічна активність поверхнево-активних речовин, як і інших вторинних метаболітів, може змінюватися у разі зміни умов культивування продуцента. Отже, немає гарантій того, що ПАР, синтезовані в умовах культивування, що забезпечують інтенсифікацію синтезу гіберелінів, будуть характеризуватися необхідною для практичного використання біологічною активністю.

У зв'язку з цим, мета даної роботи – дослідити вплив еритритолу у середовищі культивування *A. calcoaceticus* ІМВ В-7241 на антимікробну щодо фітопатогенних бактерій активність синтезованих поверхнево-активнгих речовин.

Культивування *A. calcoaceticus* ІМВ В-7241 здійснювали у рідкому мінеральному серед-