

the more effective construction of an advertising message that affects the viewer, without damaging his feelings and without causing harm.

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ECONOMIC EFFICIENCY OF FERTILIZER APPLICATION IN PRODUCTION TECHNOLOGIES OF UKRAINE

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The means of regulation of nutrient content in soils, nutrient intake by plants with different ratio is a system of nutrition regime. It has a radical impact on the level of supplying plants with mineral elements. But practice shows that mineral fertilizers do not solve all the problems related with the optimization of nutrition regime. During their growing season plants are under stress for quite a long time, their nutrition under such environmental conditions becomes less efficient (Jaspers and Kangasjärvi 2010). The task of a farmer is to provide suitable conditions for plants to overcome stress as fast as possible (Rady 2012, Hanserud et al 2018). There is a number of factors causing stress-reactions of plant organisms during the growing season. By the nature of impact they are divided into chemical (salts, gases, xenobiotics); biological (negative impact of pests, pathogenic agents, competition with other plants) and physical (excess or deficiency of moisture, temperature regime, light and radioactivity) (Whipps 1997, Goswami and Deka 2020)[3,pp.40-61]. Under these conditions it is necessary to apply complex multi functional fertilizers, containing mixtures of organic, humic and fulvic acids, a number of micro-elements in a chelated form in their formulation causing their fungicide action and activating microorganisms. It ultimately leads to stimulation of growth processes and contributes to the overcoming stress phenomena of plant organisms (Kumar et al 2015, Domaratskiy et al 2018, Domaratskiy et al 2019) [1]. The scientific research conducted in North America establishes that plant growth regulators applied in low concentrations are able to affect the division and growth of cells, their structure and functioning (Small and Degenhardt 2018). Direct application of such natural hormones and their synthetic analogs to plant stems, leaves and flowers, increases their resistance to biotic and abiotic environmental factors, improves drought-resistance of crops and water-use efficiency [4, pp.818-827]. The studies show that such fertilizers are capable of increasing nitrogen use efficiency, contribute to an

increase in root weight and also stimulate the growth and development of lateral roots, assist in enhancing photosynthesis. These substances are usually applied in agriculture, viticulture and horticulture to increase yields under conditions of low agricultural background, moisture deficit and other unfavorable environmental factors (Siddiqi and Husen 2017, Adnan et al 2019).

Ukraine is one of the leaders in the world export of the products of sunflower processing. The world market expects to receive 5.1 million tons of Ukrainian sunflower oil this season that is by 16% more than the rate of the previous year. An increase in sunflower concentration in the structure of sown areas to 35% will have a negative impact on productivity that will decrease in all biological and economic groups. The gross yield of grains will fall from 27.0 to 20.9 million tons, and there will be an increase in that of sunflower seeds - from 4.5 to 5.8 million tons. Under such conditions the total cost of gross production of grain and oil crops will fall by \$ 0.25 billion (from \$ 3.04 to \$2.79 billion). At first sight the scheme of maximum use of sunflower in crop rotation is not threatening, but this approach is certainly insecure in terms of, increasing effect of droughts and spread of specific diseases and pests (Moklyachuk et al 2019). Crop yield stability in agricultural production aimed at meeting demands of a continuously increasing population of the planet is possible only under conditions of applying fertilizers containing basic nutrients for plants. However, the use of such chemical substances has a negative impact on the environment and human health. Therefore, application of micro fertilizers of biological origin is considered to be the best substitute for chemical fertilizers as an environmentally friendly method of growing crops and increasing soil fertility. These preparations intensify growth processes of plant organisms by means of different direct and indirect mechanisms of plant growth stimulation such as biological nitrogen fixation, production of various plant growth hormones, different hydrolytic ferments etc. Application of biological preparations increases the potential of vital nutrients supply in appropriate amounts to boost crop yields without damaging the environment [2, pp.1-11]. The purpose of the study is to substantiate an economic component of using environmentally friendly preparations in technological schemes of sunflower production.

The main indicator of economic suitability of this or that measure is a net profit. Neither cost price, nor profitability, but a net profit determines the real difference between the product cost and the level of production costs. For three years of the field research this indicator reached the absolute maximum in the hybrid LG 5580 when the bio fungicide Fitotsyd r and the stimulator Ahrostymulin were applied at the stage of budding, and it made \$ 1081. In this case the cost price was the least, \$141.6, and the level of profitability was the highest – 196%. The variant with the combination of Fitotsyd r /Ahrostymulin also provided a positive result in the hybrid Tunca, but it yielded a bit to the combination of the preparations Fitosporyn /Ahrostymulin, and the net profit was \$579.7, the cost price - \$203.4 and the profitability, 106%. On the whole this analysis makes it possible to receive evidence that additional costs related to purchasing and, applying fertilizers are compensated by an increase in the , yields.

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«GREEN» PROCUREMENT A TOOL FOR SUSTAINABLE DEVELOPMENT

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Reformation of the system of public relations has led to the recognition of the need to change the paradigm of public procurement. Harmonization of legislation and normative base with European standards requires the generation of new approaches and forms of interaction between government customers and business as a participant in procurement processes. Reforming the public procurement system has pushed for a revision of the concept of doing business, on the one hand, and, on the other hand, changing the attitude of government customers towards the procurement process in general, and recognizing the need to save on budget funds and, in particular, on tendering.

In addition, the implementation of the concept of sustainable development in the main regulatory documents that shape Ukraine's future course of change provides grounds for consolidating these principles in the procurement activities of government customers.

Eco-procurement are designed to make consumption more environmentally friendly and, consequently, more qualitative, and to encourage the business to produce products that meet these criteria.

The concept of public eco-procurement is defined in the Communication from the European Commission (COM (2008) 400) as «public procurement for environmental improvement» and «the process by which budget spending units seek to procure goods, products and services with better environmental performance throughout their lives cycle compared to products of similar functional purpose». Eco-procurement is a voluntary mechanism, so each state and state authorities can determine the extent to which it is used to integrate environmental policy and