PRODUCTIVITY OF SOYBEAN VARIETIES IN THE CONDITIONS OF PODILLIA

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Based on the analysis of literary sources and publications, the features of soybean varieties for cultivation in Podillia were studied. The key directions of increasing the productivity of soybean varieties are considered. Advantages are given and substantiated, and the main disadvantages and problems of growing soybean varieties in Podillia conditions are indicated The features of soybean varieties, the influence of the inoculation process and the efficiency of micronutrient fertilization have been investigated, which made it possible to develop methods of growing technology taking into account plant biology on changes in climatic conditions. The growth processes and development of soybean varieties have been investigated: Maxus, Cordoba, Saska, depending on the treatment of seeds with an insecticidal-fungicidal preparation Standak Top, inoculant Hai Kot Super Hai Kot Super Extender and seed treatment with micronutrient fertilizer Como 15, as well as foliar dressing with micronutrient fertilizers Vuksal Boron and Bospholiar during the growing season of plants.

The variety realizes its yielding potential only when the cultivation technology fully meets its biological requirements. Considering that soybean varieties react differently to agrotechnical measures, then for each variety it is necessary to determine the optimal terms and methods of sowing, seeding rates, doses of

fertilizers, and the like. Without this, it is impossible to realize the genetic potential of the variety [2 times Babych]. Due to the fuller realization of the potential of new varieties, it is possible to significantly increase the crop yield level.

Having carried out research on various groups of ripeness from such varieties of soybeans as Maxus, Cordoba, Saska, positive results were obtained on the yield from the introduction of micronutrient fertilizers, inoculants, treatment of the inoculum of soybean seeds with an inoculant and a microelement, the preparation Vuxal Como 15. And also from the treatment of seeds with the preparation Standak Top 1 l / t, which in turn prevents the development of such diseases as fusarium, anthracnose, seed mold, promotes rooting of plants in the soil due to the accelerated development of the root system, an increase in the assimilation surface of the leaf apparatus, promotes the activation of nitroreductase, which in turn activates the work processes of photosynthesis, manifested in the so-called AgCelence effect [17], plants have an intensely saturated dark green color, control of soil pests.

The modern agriculture intensification leads to a reduction in both the number of crops and to a crop rotation violation. Soy is a fairly sensitive crop to such violations. Even two years of soybean growing on soybeans leads to an increase in plant diseases. Therefore, the use of an innovative preparation that combines fungicidal and insecticidal action, Standak Top for disinfection of seed is of great importance.

Global climate changes in today's conditions require significant changes in the technological process of growing soybeans. To minimize the effect of a moisture lack, it is recommended to use adapted varieties for specific soil and climatic growing conditions, and to sow in a sufficiently moist soil.

The basis of soybean cultivation technology is seed inoculation using highly effective inoculants based on the bacteria Bradyrhizobium japonicum; it is a cost-effective and environmentally friendly way of supplying plants with nitrogen. To realize the genetic potential of soybean varieties, seed treatment with an inoculant with a high content of nitrogen-fixing bacteria, which, in turn, provides high yields with better payback and a high level of profitability.

The needs of agricultural production require a reduction in production costs in soybean growing technology. The root system of soybeans is able to fix atmospheric nitrogen and thereby increase productivity, while reducing the cost of growing 1 ton of products. In addition, with the help of inoculants, agriculture will significantly improve the ecological state of soils by reducing the use of nitrogen mineral fertilizers. 1% d. P. N as fertilizer costs several times more than N fixed from the air, which is available to soybean plants in the early stages of plant growth and development. Plants, in turn, due to the available N, become physiologically strong and more hardy in the field.

Rational use of chelated microfertilizers is another step in increasing the yield of soybeans, namely: improving the macro-fertilizers balance with the addition of nutrients necessary for the nodule bacteria formation, converting N from the air into accessible forms for the soybean plant. A balanced diet with available microelements has a positive effect on the processes of photosynthesis, an increase in the leaf apparatus area, and this, in turn, reduces the moisture consumption from the soil surface, which is important in conditions of insufficient and uneven moisture.

The trace elements use in cultivation technology is quite significant, they affect important physiological processes of plants: growth, development, reproduction, resistance to adverse conditions. When using microelements, it should be borne in mind that their effect on plants is manifested in conditions of full provision of soybean plants with macroelements. Micronutrient deficiencies can reduce yields, promote disease damage to plants, and degrade grain quality.

In the study results, new technological aspects are presented, in which the processes of analysis and hardening of micro-manure and infectious-fungicidal preparation in the technological development and quality improvement of the production process are revealed. It should also take into account the relative humidity and reserves of productive soil moisture.

The research results are aimed at solving urgent problems in the technology of growing leguminous crops, namely: developing a version of the technology for

growing soybeans for the selection of varieties adapted to a given climatic zone, the use of inoculants and micronutrients in the conditions of climate change in Podillia.