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THE EFFECT OF BACTERIAL PREPARATIONS AND PLANT GROWTH REGULATORS ON PHOTOSYNTHETIC APPARATUS OF *LUPINUS ALBUS* L.

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The influence of presowing treatment of *Lupinus albus* L. seeds by ryzobophytum based on *Bradyrhizobium* sp. 367a's strain, 5500/4a's strains and plant growth regulators "Stimpo", "Rehoplant" and their compositions on the photosynthetic apparatus of "Dieta" and "Serpnevyi" varieties has been researched. The common use of the plant growth regulators with ryzobophitum proved to be highly efficient and significantly contributed to the increase of the area of leaf surface and pigment content.

The assimilation surface of both lupin white varieties has been formed at 2.7–41.2 thousand m^2 /ha, depending on the variety, variant and development phase. The leaf surface was being grown upon to the phase of green bean. The highest values of indexes in this phase have been found using ryzobophytum composition, 367a + PPP Rehoplant's strain; having exceeded the control in 34.6 % ("Dieta" variety) and 51.1 % ("Serpnevyi" variety).

The increase of total chlorophyll contents in the leaves of plants was mainly due to chlorophyll a. The highest level of pigments has been observed in the phase of flowering of plants of both varieties. The amount of chlorophyll in the leaves of "Dieta" variety was the highest in the variant with Stimpo (2.26±0.08 mg/g), and in the "Serpnevyi" variety after monoprocessing of seeds by Rehoplant and after complex processing by ryzobophytum, 367a + PPP Stimpo's strain, were 2.98±0.12 mg/g and 2.99±0.08 mg/g respectively.

The content of carotenoids in the leaves of plants was ranged between 0.45±0.01 mg/g (control) and 0.74±0.03 mg/g (Stimpo) in a "Dieta" variety and was ranged between 0.39±0.01 mg/g (control) and 0.84±0,03 mg/g (Rehoplant) in "Serpnevyi" variety. The most significant impact on their accumulation in the plants'

leaves had monoprocessing of seeds by Rehoplant and Stimpo, the complex processing of ryzobophytum and 367a with Stimpo.