THE EFFECT OF DIFFERENT SPECTRAL COMPOSITION LIGHT AND HARVESTING DATES ON PRODUCTIVITY AND BIOCHEMICAL COMPOSITION OF NEW *RAPHANUS SATIVUS* L. FORMS GROWN UNDER CONDITIONS OF INTENSIVE LIGHT CULTURE

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Under controlled conditions of intensive light culture, the influence of the spectral composition of irradiation sources on the productivity and components of the biochemical composition of three new breeding accessions of radish (*Raphanus sativus* L.), obtained on the basis of the accelerated breeding methodology and intended for cultivation under light culture conditions, was studied. It has been shown that when using AFI-5000 LED lamps with the highest content of blue light in the spectrum, the yield and quality indicators of all the studied accessions were not inferior to those of control plants grown under high-pressure sodium lamps DNaZ-250, and the chlorophyll content in radish leaves under LED lamps exceeded that in the control. A clearly expressed pattern of yield growth depending on color temperature values was revealed: in the treatment with AFI-5000 lamps, it was higher for the radish cultivars Peterburgskiy fioletovyy and Pernot, as well as the Viola × Peterburgskiy line compared to the variants AFI-3000 and AFI-4000 by 47% and 82%, 52% and 18%, 19% and 21%, respectively. It was shown that the Pernot radish cultivar, which was used as a parent cultivar in the selection of the Peterburgskiy fioletovyy radish, in all the treatments of the experiment was characterized by both a lower mass of root crop and the crop lower marketability compared to the accessions that were created. Apparently, the reason for the lower yield of Pernot radish was that it was created for open ground conditions and was not able to fully use its productivity potential under light culture conditions. It was revealed that the Viola × Peterburgskiy line was characterized by a time-extended period for root harvesting (28–40 days from sowing), while the roots retain their commercial qualities; and the Oktava × Peterburgskiy line was ripening even later – the recommended period for harvesting roots is 40 days or more from sowing. Thus, a group of new accessions of *Raphanus sativus* L. has been created, adapted for cultivation in light culture, with an extended harvest period (25–40 days), which can significantly increase the yield of radish per square meter (up to 7–10 kg m^{-2} for 40 days of a growing season) while maintaining the commercial qualities of roots.

Key words: accelerated breeding methodology, new breeding samples of *Raphanus sativus* L., light culture, LED lamps, spectral composition, productivity, biochemical composition, harvesting time.