PHOTOSYNTHETIC PRODUCTIVITY OF WINTER RAPS PLANTS DEPENDING ON SOWING NORMS AND APPLICATION OF VERMIODIS GROWTH REGULATOR

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Photosynthesis is the most important biochemical process of plant life, as a result of which they absorb the energy of solar radiation and with its help synthesize organic matter from inorganic substances. The purpose of the research is to establish the influence of the growth regulator "Vermiyodis" and seeding rates on the photosynthetic productivity of winter oilseed rape plants and the Mercedes hybrid in the conditions of the Western Forest-Steppe.

The study was performed during 2017-2020 in the research field of the Precarpathian State Agricultural Research Station of the Institute of Agriculture of the Carpathian region of NAAS on sod podzolic soils. The results of researches of photosynthetic productivity of winter oil seed rape plants and Cheremos hybrid at different sowing rates and application of growth regulator "Vermiyodis" are highlighted.

It was found that pre-sowing treatment of rapeseed of winter variety Cheremosh with growth regulator Vermiyodis (5 l / t) and single or double spraying during the growing season with the same drug at seeding rates of 0.6; 0.8; 1.0 million / ha of similar seeds during the entire growing season had a significant impact on the formation of the assimilation surface. The area of leaves increased depending on the phase of plant development. At the beginning of the growing season, it grew slowly, reached its maximum during the budding-flowering period and began to decrease.

In the variant of pre-sowing treatment of winter rapeseed Cheremosh with growth regulator "Vermiyodis" at a dose of 5 l / ha on average over the years of

research at sowing rates of 0.8 million / ha of similar seeds in the stalk phase, the increase in leaf area to control was 3.5 thousand m2 / ha, in the budding phase - 6.3 thousand m2 / ha, in the flowering phase - 9.4 thousand m2 / ha.

Determination of the leaf area of rapeseed plants of the winter hybrid Mercedes showed that all methods of application of the growth regulator Vermiyodis in all phases of growth and development of plants depending on seeding rates provided an increase in the leaf surface of plants of winter rapeseed. The largest leaf surface was observed in the stalk phase of 14.1 thousand m2 / ha or 2.3 thousand m2 / ha more control, in the budding phase 22.5 thousand m2 / ha or 5.9 thousand m2 / ha more control and in the flowering phase 43.7 thousand m2 / ha or 7.0 thousand m2 / ha more control was on the option, which carried out pre-sowing treatment of seeds with growth regulator "Vermiyodis" at a dose of 5 l / t and double spraying of rapeseed plants winter hybrid Mercedes growth regulator "Vermiyodis" at 4 l / ha at sowing rates of 0.6 million / ha of similar seeds.

Studies have shown that in the variants where pre-sowing treatment of seeds with Vermiyodis growth regulator (5 l / t) and double spraying of winter oilseed rape plants during the growing season was used, the photosynthetic potential in the germination-wax ripening phase was 2 million million in winter rapeseed.6 million67. days / ha, which is 0.407 million m2 days / ha more than the sowing rate 0.8 million / ha, the Mercedes hybrid - 2.612 million m2 days / ha, which is 0.364 million m2 days / ha more than the sowing rate 0.6 million / ha of similar seeds.

It was found that the highest net productivity of winter oil seed rape plants was 8.68 g / m2 per day or 1.46 g / m2 per day more than the control over sowing rates of 0.8 million / ha of similar seeds and 8.58 g / m2 per day in the hybrid Mercedes, which is 1.44 g / m2 per day at the sowing rate of 0.6 million / ha of similar seeds was on the option, which carried out pre-sowing treatment of seeds (5 l / t) and double spraying with growth regulator "Vermiyodis" at a dose 4l / ha during the growing season.

It was found that the largest accumulation of dry matter in winter rapeseed crops Cheremosh in the budding phase is 2.98 t / ha or 0.38 t / ha more control, in the

flowering phase 4.67 t / ha or 0.77 t / ha more control, in the phase of wax ripeness 8.22 t / ha or 1.36 t / ha more control, was on the option, which carried out pre-sowing treatment of seeds with growth regulator "Vermiyodis" (5 l / t) and carried out double spraying of rapeseed plants winter during the growing season growth regulator "Vermiyodis" - 4l / ha from sowing rate of 0.8 million / ha.

Keywords: photosynthesis, leaf surface, net productivity of photosynthesis, photosynthetic potential.