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OIL CONTENT IN THE SEEDS OF SPRING RAPE DEPENDING ON DIFFERENT FORMS OF NITROGEN FERTILIZERS

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The prospects of oilseeds in Ukraine are due to the further growth of seeds croppage and products of its processing. The main purpose of rape growing is oil producing, the average content of which in the seeds is about 44% from the total mass. Rape seeds are an important source of cheap vegetable oil, high-quality cattle cake. It seeds contains 35-45% of quick-drying oil (iodine number 101), 20-26% of protein, up to 17-18% of carbohydrates. Spring rape oil has excellent nutritional qualities and also widely used in various fields of the national economy complex. Cattle cake (varieties with low level of erucidic acid) is a good feed for animals, and the cattle cake from the new "00" varieties - also a high-protein ingredient for food production.

In order to ensure the yield of spring rape seeds with high oil content, it is necessary to observe the optimal ratio of intensification of cultivation elements, including the application different forms of nitrogen fertilizers.

The main factors, which have an influence on oil content in rapeseed, are the soil-climatic conditions of a certain region and the influence of elements of cultivation technology, including fertilizing.

Regarding influence of nitrogen fertilizers on the quality of rapeseed, there are various data in the scientific literature. Thus, N.A.Inshin [2] asserts that quality of rapeseed seeds is very dependent from application of fertilizers in general and nitrogen in particular. According to A.I. Egorin and N.I. Maltsev [1], this was accompanied by decrease in oil content in seeds on 1-1.5%, although at the expense of higher yields on the nitrogen background, croppage of oil from did not decrease. According to publications V.I. Nechyporenko [6] application of nitrogen has a positive effect at the seeds oil content only on poor for nutrients soils. In studies Y.K. Novoselov, T.V. Prologova and N.A. Sleptsov [7] application of nitrogen fertilizers at the phosphorus-potassium background led to increase in the mass of 1000 seeds from 3.23-3.31 g to 3.44 g, but the seed oil content decreased from 44.6% to 43.6%.

Reduction of oil content in the seeds D. Lavrentovich [4] motivates by the fact that a significant amount of nitrogen in the plants increases synthesis of protein, in while synthesis of carbohydrates and fats decreases.

The purpose of study was to determine application of various forms nitrogen fertilizers at oil content in varieties and hybrids of spring rape in conditions of the Right Bank Forest-steppe of Ukraine.

For solving issued challenges during 2015-2017, we conducted field research in the field of stationary field crop rotation of Plant Frowing Department at the PE NULES "Agronomic Experimental Station" (Vasylkivsky District, Kyiv Region, Pshenichne Village).

Research was conducted with varieties - Sirius (control), Sriblyastyi; hybrids - Jerry, Jerome. Mineral fertilizers were applied under tillage, sowing and fertilizing according to the research scheme: 1 - background (P_{60} K_{90}) - control; 2 - background + N_{90} (N_{60} + N_{30}) ammonium nitrate NH_4 NO_3; 3 - background + N_{90} (N_{60} + N_{30}) carbamide ($(NH_2)CO$); 4 - background + N_{90} (N_{60} + N_{30}) ammonium sulfate ((NH_4) SO_4). The total area of counting lot – is 25 m^2. Repetition of the experiment is quadruple.

The results of our research showed, that application of mineral fertilizers had a significant influence on the oil content in the seeds of studied varieties and hybrids of spring rape. Also, own influence has meteorological conditions of growing season during research years.

Thus, after analyzing dynamics of oil content accumulation in spring rapeseeds of the studied varieties and hybrids, it should be noted that there was a clear dependence on oil accumulation depending from application different forms of nitrogen fertilizerswith sowing and in extranutrition. The highest increase in oil content was on background $P_{60}K_{90}$ when ammonium sulfate was introduced due to the positive action of the sulfur element in ammonium sulfate and the potassium element in the main fertilizer was observed. The highest oil content in the seeds was formed by hybrids with advantage of hybrid Jerom (46.88%) compare to varieties and advantage among them was formed by Sriblyastyi (44.34%).