Annotation

Hospodarenko G.N., Novak Y.V., Rassadina I.Y.

Removing of main fertilizer elements by the false flax depending on fertilizers

Calculations of the removal of main fertilizer elements by the false flax depending on types, forms, dosage, timing and methods of application of mineral fertilizers in podzolized chernozem on average in three years of studies are given. 41.1 kg of nitrogen, 18.2 kg of P_2O_5 and 44.0 kg of K_2O were used to have the yield of one ton of seeds with an appropriate amount of straw in a variant without fertilizers of the false flax. When applying $P_{60}K_{60}$ the increase in number of used nitrogen, phosphorus and potassium was observed, respectively, 2.1, 0.8 and 3.2 kg/ ton of seeds and the corresponding mass of straw compared to the variant without fertilizers. Applying nitrogen fertilizers also contributed to the increase in the removal of main fertilizer elements. When there was local applying of fertilizers in the dose of $N_{40}P_{40}K_{40}$, the relative removal of nitrogen amounted to 48.1 kg, P_2O_5 – 19.3 and K_2O – 48.6 kg.

Indicators of economic removal of main fertilizer elements show that the least nitrogen removal by the false flax was in the variant without fertilizers – 50.9 kg/ ha. It increased to 71.7-102.6 kg/ ha in the variants with applying nitrogen fertilizers. In the variant $P_{60}K_{60} + N_{30}$ the total nitrogen removal increased by 23.4 kg/ ha, P_2O_5 – 8.9 and K_2O – 23.9 kg/ ha compared with the check variant. When applying $P_{60}K_{60} + N_{60}$ it increased by 35.9 kg/ ha, 12.3 and 33.6 kg/ ha and after applying 90-120 kg/ ha nitrogen fertilizers it was more by 46.4-51.7 kg/ ha, P_2O_5 – 15.5-16.4, K_2O – by 36.5-38.8 kg/ ha.

Key words: *false flax, removal of fertilizer elements, mineral fertilizers, nitrogen, phosphorus, potassium.*