

Annotation

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Yield and agrocnosis productivity elements of spring false flax depending on its density

Until now, issues of the growth, development and formation of high-quality yield at different density of agrocnosis of this crop in the regional conditions of the southern part of the Right Bank Forest-Steppe of Ukraine remain unexplored. The analysis of publications of domestic and foreign sources regarding determination of optimal seeding rates for false flax indicates a significant divergence in the recommendations regarding the optimal level of this indicator. Depending on the region of research, it can vary from 0.8 to 8.0 million of similar seeds per hectare of sowing. The research purpose is to study the influence of technological methods of cultivation on the yield and quality of false flax seeds under the conditions of Right Bank Forest-Steppe in Ukraine. The research objective is to improve the technology of growing false flax under the conditions of Right Bank Forest-Steppe. By the amount of precipitation, the region of conducting research is characterized by periodic droughts and refers to the subzone of unstable moisture. The predominant types of soils are chernozems and grey podzolized soils. The experimental design included four norms of false flax seeding: 3; 4; 5 (check variant) and 6 million seeds/ha. Records, analyzes and observations were conducted in accordance with generally accepted methods. There is a tendency towards self-liquation of false flax agrocnosis with an increase in the seeding rate from 3.0 to 6.0 million similar seeds/ha. The duration of the vegetation period of false flax plants depends on both the conditions of the vegetation year and seed rates. Reducing the seed rate from 6.0 to 3.0 million causes acceleration of both some interphase periods and the whole vegetation period. False flax yield is more dependent on the optimal density of its agrocnosis. An essential advantage of the variant with a seed rate of 4.0 million similar seeds/ha is, on average, 0.21 t/ha. The weather conditions of the year of yield formation have a significantly less impact on the productivity of false flax agrocnosis (0.08 t/ha) which can indicate a high ecological plasticity of the crop. Exceeding recommended in the region (5 million similar seeds/ha) quantitative seed rate for 1 million similar seeds/ha is the least useful for the formation of the productivity elements of false flax plants in comparison with its decrease for the same amount.

Keywords: false flax, sowing rate, agrocnosis density, interphase period, yield, elements of the harvest structure.