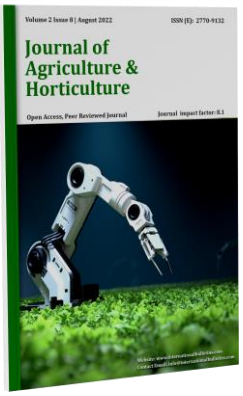

EFFECT OF PLANTING TIMES AND RATE ON FIELD FERTILITY, GROWTH, DEVELOPMENT, PLANT HARDY, LEAF NUMBER OF WINTER CANLAPS

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Abstract. The article describes the results of the preliminary research on determining the optimal planting dates and norms of the Yasna variety of winter rape in the conditions of meadow-gray soils of the Samarkand region. During the research, the results of the dynamics of changes in parameters such as field fertility of autumn rape seeds, plant growth, development, plant height, wintering, and the number of leaves depending on the planting period and standards have been studied, comparative analysis and conclusions have been presented.

Relevance and necessity of the topic . Autumn rapeseed is an annual plant belonging to the family of mustards. Autumn rapeseed is a crop grown in Uzbekistan as an intermediate crop, as well as for sideration purposes. In many countries of the world, winter rapeseed is a plant belonging to the group of oil crops, cultivated for the semi-drying oil in its seeds. There are autumn and spring forms of Rapeseed Brassica napus L., autumn rapeseed is planted more often in the conditions of Uzbekistan. In the regions where the winter is very cold, rapeseed is planted as an oilseed crop in the spring (.2).-

The history of rapeseed cultivation is uncertain and much debated. Although this type of crop is ancient. Compared to other cultivated crops, rapeseed is a unique and historically cultivated plant that has been cultivated by humans since ancient times and has been improved during the evolution of nature and humans. EH Cinskaya is the wild ancestor of cultivated rapeseed **(** **Brassica napus L. ssp. oleifera Metzg.** noted that it is unknown. In some sources, it is stated that sedum, kurtena plants are closely related to rapeseed.

Alfonsa Dekandolya, referring to the work entitled "Origin of Cultivated Plants", states that this crop has been cultivated by people for 4000 years (2.5.6.7) **.**

Rapeseed oil has been used as lamp fuel in Central Europe since the 14th century, Dutch shipbuilders are known to have used rapeseed oil as a paint to prevent shells and molluscs from sticking to the bottoms of ships. Rapeseed seeds contain 40% semi-dry edible oil (2;12).

Rapeseed oil is a vegetable oil that does not change its color when stored. At present, rapeseed is not planted for oil in Uzbekistan. The scientific basis of planting periods and norms, which are considered the main elements of the technology of growing it for oil, have not been studied. Therefore, the study of optimal planting dates and norms of rape seeds in the conditions of Samarkand region is one of the urgent problems in plant science. The food industry plays an important role in satisfying the world's population's need for food products. Therefore, sustainable development of local food and raw material production, delivery of

safe and high-quality food products to the market in the assortment specified in the norms has become one of the main tasks (6.7.8).

A state of being aware of the problem. Autumn rape has been studied by many researchers in different regions. Many scientific results have been obtained in our republic and abroad on rapeseed cultivation technologies, growth, and development. Spring rapeseed yields vary with different planting standards. GNKuznesova (6). In the conditions of the forest-steppe zone of Western Siberia, he studied the norms of sowing seeds from 1 million to 2.5 million per hectare. Areas with a planting rate of 1.9-2.5 million per hectare provided the maximum yield of spring rapeseed. I.Sh.Fatikhov and Ch.M.Salimova (11) studied the planting standards of Galant spring rapeseed cultivation in the conditions of the Middle Urals and considered the planting standard for 1 hectare to be 3.0 million pieces .

Methods and materials of the experiment. The experiments were conducted in the conditions of meadow-gray soils of Samarkand region. The mechanical composition of the soil is medium sand, the water table is located at a depth of 2.5-2.3 meters. n. 8 options are placed in the experimental field. Each option was in 4 repetitions, the area of 1 patch was 56 m ^{2}, and the surface area to be taken into account was 50 m ^{2}. The experiment was placed in 2 tiers.

In the experiment, the "Yasna" variety of autumn rape was taken, and they were 2 planting dates: 25-28.09; On 10-13.10 and 25-28.10, experiments were conducted in 3 planting rates (1.5 per hectare; 2.0; 2.5; million/piece) according to the procedure established in the research program.

Field and laboratory studies, biometric and phenological observations of plants and various analyzes "Methods of conducting field experiments", "Metody agrokhimicheskih analizov pochv i rasteniy", "Metody agrofizicheskih issledovaniy", "Metodycheskie ukazaniya po proveniyu polevyx opytov s kormovymi kulturami" implemented on the basis of such methodological manuals. The statistical analysis of the results obtained in the experiments was performed according to the method of B. A. Dospekhov . "Metodika Gosudarstvennogo sortoisp y taniya selskokhozyaystvennyx kultur " during phenological observations of autumn rape manual was used.

Discussion of the obtained results. According to the data obtained on the influence of the planting period and standards on the germination of autumn rape seeds, the early period for the germination of the autumn rape variety "Yasna" is 10 days after the sowing of the seeds in the options planted in the period of September 25-28. in the amount of 97.6-98.0% after the day has passed, in the mid-term options planted on October 10-13, after 10 days, 96.8-97.1%, in the late period, when planted on October 25-28, 93.4-97 .0% germinated.

According to the data obtained on the effect of seeding rates, although all planted seeds belonged to the same seed generation, with increasing seeding rates, the dynamics of seed germination was observed. The amount of germinated seeds was 97.5% when the sowing rate was 6 kg/ha, 98.1% when sowing at 8 kg/ha, and 98.6% at 12 g/ha . edti, that is, it was observed that the dynamics of germination increased with the increase of seed standards. Autumn rape early. 1.10 fully germinates in 10 days when planted, and fully germinates in 12-14 days when planting is delayed by 15 days.

During the development of rape, the number of plants per unit area decreased during rooting, tillering, leaf formation, wintering, and in general until the end of the vegetation period. In our experiment, when planting at different periods and using different standards,

the lawns of autumn rape "Yasna" variety preserved after the winter were compared with the field fertility. It was observed to be from .0 percent to 93.5 percent.

The number of dead seedlings was 3.1% in the case of planting the autumn rape "Yasna" variety in the early term (1.10) at 1.5 million pieces per hectare, 4.4% when planting 2.0 million pieces per hectare, 2.5 million/ and in the option planted with grains, it was 6.5%. The same pattern (16.10) was observed in the planted variants, and the indicators were found to be 5.1-7.8-8.5%, respectively.

In the researches conducted on the effect of planting standards and periods on the height and number of leaves in autumn rapeseed varieties, it was found that the planting standards and planting periods are interrelated in this plant as well.

In our experiment, a high level of plant height growth and development was observed mainly in the spring months. At the end of the period of operation, the average height of the plant was 93.1-111.8 cm.

According to the data obtained at the end of the plant period (01.06.), the height of the "Yasna" rape variety when 1.5 million viable seeds per hectare were planted in the early period (1.10) was 102.3 cm, the average and in variants 3 and 4, which were planted at a high rate, it was 107.4-110.1 cm, respectively. Or, when rapeseed is planted in mid-term, these indicators are respectively 95.6 according to planting mayors; 98.8; 102.4 cm, and 95.2 when planted in late periods; 98.1; It was 99.1 cm.

According to the data obtained on planting dates, the highest height of the plant was observed in the variants planted in early dates. It was found that the height of plants was 6.6-8.6 cm higher in early-planted variants compared to mid-term planted variants, and 6.9-11.0 cm higher than late-planted variants.

In fall rape, leaf growth and development of leaves began to take place from the moment the plant germinated. According to the phenological data carried out on November 15, the number of leaves on one plant was 3.1 to 9.8 based on the planting standards and dates in both varieties.

It should be noted that the period of development of leaves in autumn rape lasts until April, and after April, the leaves almost stop their activity, and those located on the lower branches turn yellow and fall off.

According to the data obtained on the growth and development of leaves in winter rape, the direct effect of planting rates and timing on the growth and development of leaves was observed. Normal growth and development of leaves in the variety "Yasna" of winter rape was observed when the planting rate was 2.0 million pieces per hectare. According to the data, the average number of leaves per hectare is 36.1 leaves per hectare when 1.5 million pieces of rapeseed are planted in the early planting period, 38.6 pieces when 2. million pieces are planted, and 38 when 2.5 million pieces are planted. ,4 pieces, when planted in the period of 16.10 it was 40.6-41.6 pieces, respectively, according to the planting norms.

It was determined that the number of leaves is 2.5 more when planting 2.0 million pieces per hectare of winter rape than when 1.5 million pieces are planted per hectare, and 2.3 pieces more than when 2.5 million pieces are planted per hectare.

When planting "Yasna" variety in the early term (1.10) at 2.0 million pieces per hectare, the number of leaves in rapeseed is 3.0 to 12.0 pieces more per plant compared to other options. This will serve as a basis for the plant to collect high and quality crops in the future.

conclusion , under the conditions of Samarkand region, the Yasna variety of autumn rapeseed was 2.0 million per hectare on October 10-13. When planted at 8.0 kg/ha, it was found that the field persistence of seeds, wintering of plants, height and the number of leaves per 1 plant were significantly higher than other options, and high yield it was observed that the ground was created for

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