

INFLUENCE OF BLACK SEED (NIGELLA SATIVA L) ON SOWING TIME AND NORMS, GROWTH, DEVELOPMENT AND GRAIN YIELD

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Abstract: The article describes the timing and norms of planting a black seed (*Nigella sativa* L) on light gray soils of the Andijan region, the growth, development and yield of grain. talked about the blow.

Key words: black seed, planting time, norms, black seed biology, agrotechnics, black seed growth, development, and impact on grain yield: planting time and norms, study of agrotechnical measures. determine the cost-effectiveness.

Introduction. The classification of medicinal plants, which exist naturally and culturally in the country, are widely used in the pharmaceutical industry and is widely used in the pharmaceutical industry, their distribution in nature, introduction, morphobiology, bioecology, thorough, continuous and integrated study. At the same time, the study of modern technologies of cultivation of medicinal plants aimed at the preparation of raw materials and improving its quality, knowledge of the indicators of the use of medicinal plants in medicine, forestry specializing in the cultivation of medicinal plants operating in the country. It is planned to form theoretical and practical knowledge on the study of the activities of farmers, pharmaceutical industry. At present, a number of decrees and resolutions are being issued by our government for the development of this area. Law of the Republic of Uzbekistan No. PP-4670 of April 10, 2020 "On measures for the protection, cultivation, processing and rational use of available resources of

medicinal plants growing in the wild" In recent years, consistent reforms have been carried out in the field of protection of medicinal plants, rational use of natural resources, establishment of plantations for the cultivation of medicinal plants and their processing.

Literature review. Ten centuries ago, our ancestor Abu Ali Ibn Sino, in his immortal works, described the secrets of the effective use of medicinal plants, put them into practice and was recognized by scientists and scholars around the world. The order and rules of use of medicinal herbs left in his works, methods and techniques are still used today by pharmacists, specialists in folk medicine and scientists around the world. This decision created a favorable environment for the further development of medicinal plants and processing, increased the export potential of the industry, as well as the integration of educational, scientific and industrial processes.

The flora of our heavenly country is very rich. Of the more than 4,300 plants belonging to the local flora of our nature, 750 species are medicinal, of which 112 species are registered for use in scientific medicine, of which 70 species are actively used in the pharmaceutical industry.

Research Methodology. Medicinal plants are grown in all regions of the country, in the forest fund and on agricultural lands. However, medicinal plant growers have not always found buyers for their products, and medicinal plant processors have experienced a shortage of raw materials for natural medicines.

The resolution stipulates that the pharmaceutical industry annually submits requirements for the types and sizes of medicinal plants to the Ministry of Agriculture, the State Committee for Forestry and the Ministry of Innovative Development. This ensures a guaranteed purchase of raw materials from suppliers. This is a great opportunity for farmers and other medicinal plants and confidence in the future. Now medicinal plant growers have the opportunity to supply not only domestic but also foreign markets with quality products.

It should be noted that the clusters of medicinal plants to be established here have a great opportunity and a number of benefits. A favorable business

environment has now been created for the clusters to grow, process and export medicinal plants.

Decree of the President of the Republic of Uzbekistan dated November 26, 2020 "On measures to expand the scope of scientific research on the cultivation and processing of medicinal plants, the development of their seed production" To a certain extent, the research work on this topic contributes to the implementation of the tasks set out in the Decree No. PK-4901, as well as in the regulatory legal acts related to this activity.

Analysis and results. In autumn, on November 27, 2020, the experimental area will be adapted to the black sedan plant and will be plowed to a depth of 25-30 cm, giving 20-30 tons of local fertilizer and phosphorus fertilizer per hectare at 70% of the annual norm. 'year. On March 15, 2021, the experimental field was cleared of weeds for the second time. On March 17, it was cultivated. (Table 3.2.1). On March 28, the rows were spaced 60 cm apart. Option 1 was planted on April 6 in a black sedan in a 60x20-1 scheme. Irrigation was carried out after sowing the seeds. The seeds germinated 98% in 7-8 days. Option 2 planted a black sedan plant in a 60x20-1 scheme on April 16th. It was found that 85% of the seeds sown on April 23 had sprouted. On April 28, the seed yield reached 90%. Option 3 On April 19, black sedan seeds were sown and irrigated in a 60x20-2 scheme.



Black sedan seeds and oil	a) Black sedan flowers and seeds a)
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Currently, the following types of pharmacological effects of black sedan are known: antispasmodic and analgesic, antibacterial and antifungal, anti-ulcer and

hepatoprotective (liver protection) antioxidant and anti-allergic, antiviral (interferon inducer) anti-diabetic (natural regulator of insulin sensitivity) and has hypotonic, bronchodilator and renoprotective (kidney protection), anti-tumor and immune-boosting, blood pressure lowering properties. In addition to its general strengthening effect, black sedan oil has expectorant, antipyretic, Linolenic acid is required 5-10 times less. The most common problem is an excess of linoleic acid (omega-6), which is found in large amounts in many vegetable oils and other products. Linolenic acid (Omega-3) is less common.

Conclusions and Recommendations

1. Agrophysical and agrochemical properties of light gray soils of Andijan region have a negative impact on the growth and development of the black sedan. According to the results of the analysis of soil samples at the end of the operation period, 1,2,3, - soil density in the drive (0-30 cm) layer of the variants was 1.35, respectively; 1.34; 1.36; 1.37 g / cm³, which is 0.06-0.09 g / cm³ more than at the beginning of the operation period.

2. In terms of 0-50 cm of soil layer, these values are 1.40; 1.41 and 1.43 g / cm³, respectively, increasing soil compaction.

3. The porosity of the soil in the experimental field, on the other hand, changed in all variants in direct proportion to the weight of the soil volume. In other words, the porosity improves when the soil density decreases, and the porosity decreases when the soil density increases.

4. The 6-hour water permeability index at the beginning of the operation period is 676.1 in option 1; 687.7 in variant 2; 3-variant 701.4; In option 4, it was 691.5 m³ / ha. Based on the results of 6 hours of observation and analysis to determine the permeability at the end of the operation period, the permeability of the soil in options 1,2 and 4 is 536.1, respectively; 559.0; 541.4 m³ / ha, compared to the beginning of the period 151.6; 142.4; Decreased to 150.1 m³ / ha.

5. In the observations on June 1, the height of the black sedan in variants 2-3 was 35.2 cm. The height of the black sedan in variants 1-2 is 39.0-39.3 cm, which is 4.1-4.2 cm higher than the height of the black sedan in variants 2-3.

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