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EFFECT OF NITROGEN FERTILIZERS ON THE GROWTH, DEVELOPMENT AND YIELD OF THE MEDICINAL MEXICAN BANGIDEVONA (DATURA INNOXIA MILL)

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Abstract: This article gives information about studying the influence of the time of sowing dope Mexican (*Datura innoxia* Mill) for the growing, developing and medicinal features and was studied that the seeds must be sowed during 10-25th april on the typical virgin soil and fertilizer that used in the norm NPK kg/ha using nitrogen as ammonium sulphate gives opportunity for growing and developing the plant and gives harvest 11,2-12,8 c/ha that can meet the requirement of the pharmacy.

Introduction.

Due to the fact that the territory of the Republic of Uzbekistan consists of different soil and climatic zones, its flora is very rich. It has more than 4,000 plant species, of which about 600 are medicinal plants. However, not all of them are yet fully used in medical practice to treat diseases. Only about 250 species of medicinal plants are used in medical practice, and the rest in folk medicine and the pharmaceutical industry. One of the priorities in the development of the local pharmaceutical industry is the organization of the production of modern medicines from raw materials of medicinal plants [5; 12-s., 8; 29-s.]. in the general medicines consumed by the world's population, the growth rate of the proportion of medicines made from natural plants is increasing. Currently, the share of such drugs in the pharmaceutical market of developed countries has exceeded 50-60% [7; 62-s.].

As mentioned above, about 250 plant products are used in medicine today. 48% of these medicinal plant products are from wild

plants, 30% is cultivated from the fields-plantations of various farms, which grow medicinal plants. The remaining 22% is a "mixed" group, and this group of medicinal plants is harvested from both wild and plantation plants. Today, the share of medicinal products made from "mixed" group medicinal plants is expected to increase year by year in the total amount of medicinal products collected [1; 578-s.].

One of the most important tasks facing specialists is to preserve and enrich the existing stock of medicinal plants in the flora of Uzbekistan at the expense of introducers. In recent years, the pharmaceutical industry in the country is developing rapidly and the demand for medicinal plants is growing day by day. This necessitates the cultivation of wild-growing medicinal plants. Therefore, it is important to introduce medicinal plants that occur in nature and belong to foreign flora, to study their bioecological properties, methods of

reproduction and development of agro-technologies for cultivation [6; 12-s.].

One such introductory species is the Mexican bangidevona (*Datura innoxia* Mill), one of the most widely used medicinal plants in medicine. Drugs derived from the leaves, seeds, and seeds of the Mexican bangidevona have long been used in folk medicine as a painkiller, sedative, and sedative in neuroses, psychoses, and neurology. The whole part of the plant is poisonous, from which giostsiamine, atropine, scopolamine and various alkaloids are derived. Its leaves contain 0.041% ether, up to 0.1% carotene, up to 1.7% additives, seeds contain up to 25% non-drying oil, the leaf is widely used in shortness of breath, severe cough and other diseases [8; 30-s.].

Therefore, one of the urgent issues is the cultivation of Mexican bangidevona, the improvement of its medicinal properties and the development of agro-technologies for the cultivation of medicinal plants needed for the pharmaceutical industry of the republic.

The purpose of the study: Cultivation of medicinal Mexican bangidevona (*Datura innoxia* Mill) in the conditions of typical gray soils of Tashkent region consists in development of agrotechnologies of its cultivation for enhancement of medicinal properties.

The purpose of the study: To achieve the above goal, the stock of Mexican bangidevona seeds, sowing time and germination of seeds, growth, development, number of fruits, types of nitrogen fertilizers and medicinal properties (chemical composition) are determined.

Research materials and methods: The object of scientific research were the typical gray soils of Tashkent region, Mexican bangidevona (*Datura innoxia* Mill),

the timing of sowing seeds, various forms and standards of nitrogen fertilizers.

The research was conducted at the Tashkent State Agrarian University in 2015-2018 in the conditions of typical gray soils. According to the typical granulometric composition of these typical gray soils, the average sandy, groundwater level is located at a depth of 9-12 m, the amount of humus in the plowed (0-30 cm) layer of the soil is 0.98-1.05%, total nitrogen 0.118-0.125, phosphorus 0.131 -0.143, potassium 1.95-2.21% and the amount of their mobile forms respectively 12.3-13.7; 29.5-30.8 and 190-230 mg / kg in the soil. These soils were considered to be low in nitrate nitrogen, moderate in mobile phosphorus, and low in exchangeable potassium. In the experiment, the forms of nitrogen fertilizers with ammonium nitrate, ammonium sulfate, urea and their norms of 60, 90, 120, 150 kg / ha were studied on the background of RK.

All phenological observations, beometric measurements, crop accounting, agrochemical analysis of soils and plants in the experimental field were carried out on the basis of generally accepted methodological guidelines and recommendations in the Republic [2; 145-s., 3; 240-s., 4; 460-s.].

Research results: It has been more than half a century since the Mexican drug addict entered Uzbekistan. Mexican bangidevona - *Datura innoxia* Mill, lichens - an annual herb belonging to the family Solanaceae, reaching 60-150 cm in height.

Scopolamine is obtained from the fruits and seeds of the Mexican bangidevona. Scopolamine has a calming effect on the central nervous system (unlike atropine). Therefore, scopolamine hydrobromide is sometimes injected subcutaneously to calm the central nervous

system before surgery. It is also used in the treatment of neurological diseases, as well as as a sedative, sedative (in the composition of aeron) in seasickness.

The drug is scopolamine hydrobromide.

Fertilization of the Mexican bangidevona is applied throughout its growing period, especially during periods of high nutrient demand: during the mowing and flowering phases to ensure adequate supply of nutrients. Given the soil-climatic conditions of the area where the plant is planted, the main fertilization is carried out more in the fall, and in some cases in the spring.

In our field experiments, it was found that the growth and development of the plant, the greater accumulation of biologically active substances in the raw material, depends on the form and norms of nitrogen fertilizers used in its care. The first feeding of the plant is carried out before watering the plant, with 60 kg of nitrogen, 30 kg of phosphorus, when it appears 5–7 leaves (in terms of pure substance).

The results of the observation showed that the growth rate of the seeds of Mexican bangidevona from germination to maturity changed significantly under the influence of the form and norms of nitrogen fertilizers applied. For example, at the stage of mowing of the plant its height was not applied fertilizer - in the control variant the average was 49.5-51.3 cm per year. (without fertilizer) relative 19.8-20.6; 16.6-18.3; It was taken into account that it is 14.3-15.7 cm high. Against the background of the specified phosphorus and potassium ($R_{90}K_{90}$ kg / ha), the height of plants in the variants used in excess of the nitrogen norm (N_{120} kg / ha) was 24.6-26.2, respectively, relative to the control; 20.4-21.5; It was found to be

18.8-20.1 cm high. It should be noted that with the increase in the standards of nitrogen fertilizers used in the cultivation of Mexican bangidevona, the plant's shelf life was extended by 4-6 days.

According to research, the critical period for nitrogen and phosphorus in the plant of Mexican bangidevona is observed 12-15 days after germination. In the first days of development, even in potassium deficiency, the yield of the plant decreases sharply. The critical period for nitrogen and phosphorus is usually more pronounced in early spring, when the activity of soil microorganisms is weak.

In our studies, phenological observations in August showed rapid growth of Mexican bangidevona and the highest in terms of effect of nitrogen fertilizers applied form and norms (1.09), plant height was 63.8-64.6 cm in the fertilizer-controlled variant, only phosphorus and potassium ($R_{90}K_{60}$ kg / ha) in the applied (FON) variant this figure was 75.4-77.2 cm. Under these conditions, the height of plants during this period was 124.2-126.5, respectively, in the variants used in the form of 120 kg / ha of nitrogen in the form of ammonium sulfate, urea and ammonium nitrate on the background of the specified ($R_{90}K_{90}$ kg / ha); 108.6–110.3 and 103.4–105.7 cm, respectively. In this case, the differences between the variants of plant height occurred under the influence of applied forms of nitrogen fertilizers, and a similar situation was observed in the number of leaves per bush, and the highest leaf yield (11.2-12.8 ts / ha dry) $R_{90}K_{90}$ kg / was collected from plants in the form of N 120 kg / ha applied in the form of ammonium sulfate. Hence, the timing and nutrition of Mexican bangidevona can be managed

taking into account the biological characteristics of the plant.

Conclusion: In the cultivation of medicinal Mexican bangidevona (*Datura innoxia* Mill) in typical gray soil conditions, the seeds are sown at a depth of 3-4 cm, soil temperature 14-16 °C, row spacing 70 cm on April 10-25, when feeding it application of mineral fertilizers in the amount of N₁₂₀P₉₀K₉₀ kg / ha, nitrogen in the form of ammonium sulfate fertilizer, creating the most favorable conditions for its growth and development, 11.2-12.8 ts / ha of dry leaves, seeds and seeds with high medicinal properties that meet the requirements of the pharmaceutical industry ensures that the shell is removed.

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