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PRODUCTIVITY OF RESOURCE-SAVING AGRO TECHNOLOGIES OF GROWING MEDICINAL DATURA INNOXIA MILL

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ABSTRACT:
In this article, the culture of cultivation of Datura innoxia Mill in typical sandy soils of Tashkent region is 70x70, with the temperature of 15-17 0C in the second or third April of a depth of 3-4 sm. Phase -20-1 planting, using nitrogen fertilizers (N120 kg/ha) in the form of P-90, K-90 kg/ha in the form of ammonium sulfate [(NH4)2SO4], creating favorable conditions for plant growth and development. environmentally friendly 11,6-12,0 centners/ha There are data on resource-saving agricultural technology of dry leaves with high narcotic value and 17,4-18,5 kg/ha.

Keywords. Tupical gray soils, Datura innoxia Mill, leaves, stems, nitrogen fertulizers.

Introduction

Many wild and cultural species of medicinal plants grow and develop in Uzbekistan. They can be used to fight a number of diseases. Accordingly, industrial production of medicinal raw materials on the basis of culture of wild medicinal plants growing in different soil-climatic conditions, development of agro-techniques for their cultivation [1; p.198: 8; p.173.].

According to scientific sources [5; p.80: 7; p.33: 11; p .84], there are more than 4,500 species of plants in the Republic of Uzbekistan, including 650 species of medicinal plants, which are of great practical importance in medicine. Today, stocks of medicinal plants that grow naturally are being depleted. In order to compensate for this and meet the needs of the population, it is desirable to increase the number of plants, introducing and cultivating them in different regions, taking into account the soil and climatic conditions of Uzbekistan [6; p.76.].

Medicinal herbs are evaluated by the presence of chemicals in them, which have a positive effect on the human body: alkaloids, flavonoids, glycosins, essential oils, vitamins, etc. [17; p.67.]. The effect of medicinal plants on the body depends on the amount of chemical compounds they contain. These compounds accumulate in the vegetative and generative

organs of plants. The necessary parts of plants for the preparation of medicines are collected at different times. For example, pellets, buds, in early spring; Leaves before or after flowering fruits and seeds are ripe; The root, the rhizome is obtained in spring or late autumn [12; p.86: 13; p.23.].

Nowadays herbal remedies are important in the prevention and treatment of many diseases. Examples include cardiovascular, nervous and nervous diseases, kidneys, liver, gastrointestinal tract, painkillers and more. Currently, more than 30 % of all medicines are derived from medicinal plants, and every one of the three drugs on the farmer's market has herbal origin. However, the cost of herbal remedies is several times cheaper than those made by artificial or synthetic drugs [10; p.12: 15; pp. 368.].

One of the most important tasks faced by specialists is the preservation and enrichment of medicinal plants in the flora of the Republic of Uzbekistan. In recent years, the pharmaceutical industry in our country has been developing rapidly and the demand for medicinal plants is increasing. This requires the cultivation of wild-growing medicinal plants. Therefore, the introduction of medicinal plants of natural and foreign flora, the study of their bioecological features, reproduction methods and the development of agro-technologies are important.

One of the introduced plant species, the Datura innoxia Mill, is a widely used medicinal plant. The main focus of our research is the study of the bio ecological features of this plant and the agricultural technologies of cultivation in the conditions of typical sandy soils of Tashkent region.

The objectives of the study are to identify the wild Datura innoxia Mill in typical desert soils of Tashkent region, determine the timing of seed sowing, rates, norms and forms of nitrogen fertilizers used in nutrition, and the impact of crop techniques on plant growth, development, productivity and medicinal properties.

Methods and Materials of Research

The main material used in our research was typical wilderness soils in the Tashkent region, the Datura Innoxia Mill and different patterns and forms of nitrogen fertilizers.

Ecologically pure for cultivation and cultivation of medicinal herbs widely used in scientific medicine for the prevention and treatment of various diseases on the basis of culturing wild medicinal plants growing in different regions of Uzbekistan, scientific development of agricultural techniques for their cultivation. creation of their plantations in the regions. One of these medicinal plants is the Datura innoxia Mill.

The medicinal Datura innoxia Mill is a perennial herb family of solanaceae (60–150 sm in height). The stem grows upright, with a green or reddish-purple, sturdy, iris. The leaf is simple band, gray-green, oval or elongated, oval, with sharp pointed, straight edges or slightly carved on the stem and has a pleasant odor that turns the head. Flowers are large, white, only one side.

The rosette is stout, five-pointed, swollen and long tubular, with the base of the fruit, with a tube-shaped funnel-shaped, five-pointed, with the tips of the tip, the top of the mother's node. The fruit is multicolored, spherical, gray-green or brownish and spiky. Datura innoxia

Mill bouquet blooms in july-october, the fruit ripening in august. All parts of the plant are toxic [2; p.164: 16; p.340.].

The homeland of the Datura innoxia Mill Central and South America. It is widely used in Europe, Africa, Iran, Russia, Ukraine, Moldavia and Central Asia, with two known species in the world. It grows wild.

Drugs from the leaves of Datura innoxia Mill have long been used in folk medicine as neuroscience, psychosis, and neuroscience as pain relievers, sleepers, and soothing agents. The whole plant is toxic, derived from giostsiamin, atropine, scopolamine and various alkaloids. Its leaves contain 0,041 % of ether, carotene up to 0,1 %, substances containing up to 1,7 %, oil that does not dry up to 25 % and its leaves are used for respiratory distress, severe cough and other diseases.

For 2015-2018, we will work on the development and implementation of the technology for the cultivation of Datura innoxia Mill in the natural environment, which can be used for the medicine of Uzbekistan, which contains alcohol, neuroses in the pharmaceutical industry, painkillers, sedatives and sedatives. We have conducted field experiments on the typical gray soils of the TSAU. According to the mechanical composition of these soils, the average sandy soil, ground water depth is 9-12 meters, humus 0,98-1,05 % in the plowed soil 90-30 sm, total nitrogen 0,111-0,125, phosphorus 0,131-0,143, potassium. 1,98-2,26 % and their mobile forms were found to be in proportion to the above 12,3-13,7, 28,6-30,5 and 194-236 mg/kg soil.

The total area of each delta in the experimental field was 140 m^2 (50 m wide, 4 rows x 0,7 = 2,8 m), with a total of 70 m2, with 8 variants, four experiments with 4 repetitions. - The table was placed schematically in one race. Nitrogen fertilizers: ammonium nitrate (NH4NO3-34,6 % N), ammonium sulfate [(NH4)2SO4 – 20,5 % N], urea (CO(NH2)2 – 46 % N) and their 90, 120, 150 kg/ha was studied in the background of P90K90 kg/ha.

In field experiments 60 % of annual phosphorus fertilizers and 50 % potassium were submerged. The remaining 40 and 50 % of phosphorus and potassium fertilizers were fed with KNP – 2,4 cultivators at the first feeding (4-6 leaves) and the second feeding (during the plant shading) to a depth of 10-12 and 16-18 sm, respectively.

Results and Discussions

The study showed that the growth, development, the accumulation of biologically active substances in the leaves and seeds of Datura innoxia M|ill in typical gray soils depends on the norms and forms of nitrogen fertilizers used in its maintenance.

The first plant feeding was carried out with 4–6 leaves at the rate of P30-60kg/ha before plant irrigation. According to the results of the experiment, the rate of growth of the Mexican ganglion seeds from germination to maturity has changed significantly, depending on the form and norms of nitrogen fertilizers applied. For example, plant height was not applied during fertilization - the control sample had an average of 50,8-54,2 sm in three years, and these figures were 65,4-68,6 sm, only P90K90 kg/ha used (P90K90)) Nitrogen fertilizer (N90 kg/ha) against the background – 80,3; 84,7; It was recorded 86,2 sm. Plant

height in nitrogen (N120-150 kg/ha) against phosphorus and potassium (P90K90 kg/ha), as shown in our studies, is 89,5-93,6; It was found to be 95,4-102,3 sm.

In september, our studies found that the rapid growth and yield of Datura Innoxia Mill in the phenological observations, with the highest effect on the effect of nitrogen fertilizers and forms, was 62,5-64,3 sm in height without the fertilizer - control variant, with only phosphorus and potassium (P90K90 kg/ha) applied, these figures were 74,8-76,4 sm. Under these conditions and maturity, the plant height is in the form of ammonium nitrate (NH4NO3), urea (CO(NH2)2) and ammonium sulfate (NH4)2SO4, 107,6 in the variants used; 101,4 and 118,3 sm, respectively. At the same time, the differences in plant height variants were influenced by the forms of nitrogen fertilizers applied, and the same was observed in the number of leaves per plant, with the highest leaf content (11,6–12,0 c/d dry) and phosphorus. potassium (P90K90 kg/ha) was extracted from plants in the nitrogen fertilizer (N120 kg/ha) in the form of ammonium sulfate. It should be noted that the results of the study revealed that when the application of nitrogen fertilizers in these conditions increased from 120 kg/ha to 150 kg/ha and applied P90K90 kg/ha, there was no significant effect on the height and the number of leaves in the plant.

As you know, in all parts of Datura innoxia Mill (leaf) Alcohol is 0,23-0,39 %, straw is 0,15-0,24 %, root is 0,21-0,46 %, fruit is 0,76-0,83 % and seeds are 0,83 %. The main alcoholic is scopolamine, containing 0,38-0,55 % of the fruit and scopolamine in the seeds of 0,31-0,77 %, in addition to the fruit extracts of gothiamine, nororgiostiamin and others [15; pp. 368.]. The aim of our research is to develop a scientific basis for the cultivation of Datura innoxia Mill that does not have a detrimental effect on its medicinal properties and its environment.

It was noted that the yield (number of fruits and their mass) of the Datura Innoxia Mill cultivated in the field varied depending on the size and shape of the nitrogen fertilizers used. For example, variants used in the form of ammonium nitrate (NH4NO3) in the form of nitrogen fertilizers (NH4NO3) at 90, 120, 150 kg/ha are based on nitrogen fertilizer 16; 19; 24 pcs and 33,9; 45,8; 52,6 g, these are respectively 18 in the variants used in the form of urea (CO(NH2)2); 25; 22 pcs and 37,3; 54,2; 51,6 g, in the form of ammonium sulfate ((NH4)2SO4) 20 in plants of the above-mentioned nitrogen-containing variants; 28; 26 pieces and 42,2; 60,8; It was found to be 55,5 g.

It should be noted that, regardless of the form of nitrogen fertilizers, there was an increase in the number of fruits and their mass in the plants as they increased. At the same time, the optimum conditions for plant growth, development, accumulation and mass were taken into account in variants used in the form of ammonium sulfate against N90 kg/ha against P90K90 kg/ha. Under these conditions, the number of fruits per plant grown without fertilizer - control variants were 9–11 grains and weighed 19,3–2,4 g.

Thus, the application of nitrogen fertilizers (N120 kg/ha) in the form of ammonium sulfate (NH4)2SO4 for P90K90 kg/ha Datura innoxia Mill culture in typical wilderness conditions of the Tashkent region and enhancing the medicinal properties of the pharmaceutical industry. The feasibility study was based on the results of the study.

It should be noted that the leaves of the Datura Innoxia Mill are harvested three times in August and the fruit will begin to ripen this month. Once they have been harvested, they will need to be harvested and burned around the field, given that the whole plant is toxic.

Conclusion

1. Given the fact that Uzbekistan focuses on the development of natural medicinal plants based on the protection, culture and processing of native flora, we also explore the medicinal properties of Mexican herbivores, cultivate this natural herb, and expand its cultivation and cultivation techniques.
2. Cultivation of medicinal Datura innoxia Mill in typical sandy soils of Tashkent region, with the aim of developing natural medicinal herbs to 3-4 sm depth, soil temperature 0-10 sm at the second or third decade of April 15-17 In the case of ^{0}C, planting between rows 70x70-20-1, using nitrogen fertilizers (N_{120}kg/ha) in the form of ammonium sulfate $(NH_4)_2SO_4$ against normal $P_{90}K_{90}$ kg/ha, create favorable conditions for growth and development of the pharmaceutical industry. request 11,6-12,0 c/ha corresponding a high dry leaves and 17,4-18,5 centner/ha of fruit and seed production resource farming developed.

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