

THE AMOUNT OF ALKALOIDS CONTAINED IN THE VEGETATIVE AND GENERATIVE ORGANS OF THE DATURA INNOXIA MILL PLANT

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Abstract

Due to the increasing demand for natural medicines in the world medicine, the introduction and development of agro-technologies for the cultivation of wild medicinal plants in irrigated farming areas, which are carried out to increase the yield and improve the quality of the products obtained from them special attention is paid to research. It is especially important to carry out research on the correct definition of feeding with mineral fertilizers, especially nitrogen fertilizers, and the development of feeding standards in the cultivation of the *Datura innoxia* Mill plant.

Keywords: Medicinal, *datura*, herbal, vegetative, generative, alkaloids, cultivation.

Introduction

The use of mineral fertilizers in the process of planting and caring for Mexican bangide vault seeds at an optimal time does not remain without having an effect on changes in its chemical composition. In particular, it is noted that the leaf may contain between 0.26-0.46% alkaloids. The main alkaloid is scopolamine. The amount of scopolamine in the leaf ranges from 0.19-0.36%. It is used in pharmaceuticals due to the presence of a calming feature of scopolamine. This is different from the atropine contained in alkaloids.

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In studies, ammonium nitrate (NH_4NO_3 - 34.2) is used against the amount of alkaloids contained in the vegetative and generative organs of the Mexican bangidevona (*Datura innoxia* Mill) 6% N), ammonium sulphate [$(\text{NH}_4)_2\text{SO}_4$ - 20.5% N] and urea ($\text{CO}(\text{NH}_2)_2$ - 46% N) of nitrogen fertilizers 60, 90, 120, The effect of norms of 150 kg/h was also determined.

According to researches, in 2016, ammonium sulphate $(\text{NH}_4)_2\text{SO}_4$ - 20.5% N) was used against P90K90 kg/h of phosphorus and potassium boys, Applications at norms of 90, 120, 150 kg/h contain 0.31-0.38%, foundation 0.19-0.24%, The presence of alkaloids in the leaf was found to contain 0.35-0.41%, flowers 0.63-0.74%, fruit 0.82-0.94%, and seed 0.85-0.97%. It shows that the norms and forms of mineral fertilizers used in the care process of Mexican bangidevone have also found their conscience that its vegetative and generative organs should not have an effect on the amount of alkaloids contained in them.



In the variants used by the ammonium sulphate fertilizer, the highest indicators are observed in the variant used normally at N120P90K90 kg/h of mineral fertilizers, The plant's roots were found to contain 0.38%, base 0.24%, leaf 0.41%, flower 0.74%, fruit 0.94%, and seed 0.97%. Phosphorus and potassium fertilizers were found to contain 0.27% of the roots of the plant, 0.17%, 0.32% in the leaf, 0.58% in flowers, 0.76% in fruit, 0.78% in the seeds, and 0.78% in the seeds.

Against the background of phosphorus and potassium fertilizers used normally at P90K90 kg/h, urea (CO(NH₂)₂- 46% N) was 60, Applications at norms of 90, 120, 150 kg/h contain 0.30-0.36%, foundation 0.19-0.23%, The presence of alkaloids in the leaf was found to contain 0.34-0.40%, flower 0.61-0.73%, fruit 0.80-0.92%, and seed 0.81-0.95%.

Table 1 The effects of nitrogen fertilizers on the amount of alkaloids contained in the vegetative and generative organs of the Mexican Bangidevonasi (*Datura innoxia* Mill) are at %

№	Types of Nitrogen Fertilizer Applied	Mineral fertilizer norms	Root	Footwear	Leaf	Lie	fruit	urug'i
1	Without a fertilizer (control)		0,27	0,17	0,31	0,55	0,76	0,78
2	P90 K90 (bottom)		0,29	0,19	0,33	0,60	0,78	0,81
3	(NH ₄) ₂ SO ₄ (Ammonium sulphate)	N60 P90 K90	0,33	0,22	0,37	0,65	0,84	0,87
4		N90 P90 K90	0,35	0,23	0,39	0,69	0,87	0,89
5		N120 P90 K90	0,39	0,26	0,42	0,77	0,96	0,99
6		N150 P90 K90	0,37	0,24	0,41	0,75	0,93	0,96
7	CO(NH ₂) ₂ (Karbamid)	N60 P90 K90	0,32	0,21	0,35	0,64	0,82	0,83
8		N90 P90 K90	0,34	0,22	0,37	0,68	0,86	0,88
9		N120 P90 K90	0,37	0,25	0,42	0,75	0,95	0,97
10		N150 P90 K90	0,36	0,23	0,40	0,72	0,91	0,94
11	NH ₄ NO ₃ (Ammonium nitrate)	N60 P90 K90	0,31	0,20	0,34	0,63	0,79	0,83
12		N90 P90 K90	0,33	0,21	0,38	0,68	0,85	0,89
13		N120 P90 K90	0,36	0,24	0,40	0,74	0,93	0,95
14		N150 P90 K90	0,35	0,23	0,39	0,71	0,88	0,93

Even in the variants used by the urea fertilizer, the highest proportions are observed in the N120P90K90 kg/h of mineral boys, The plant's roots were found to contain 0.36%, base 0.23%, leaf 0.40%, flower 0.73%, fruit 0.92%, and seed 0.95%. The son-free control variant found that the plant's roots contained 0.23%, the foundation contained 0.15%, the leaf was 0.29%, the flower was 0.52%, the fruit was 0.73%, and the seed was 0.76%.

The normal use of ammonium nitrate (NH₄NO₃) from nitrogen fertilizers to 60, 90, 120, 150 kg/h of nitrogen fertilizers is 0.29-0.35% in the plant root, It was found to contain 0.18-0.22%, leaf 0.33-0.39%, flower 0.60-0.73%, fruit 0.78-0.91%, and 0.80-0.93% alkaloid in



the seeds. In the variants used by the ammonium nitrate fertilizer, the highest rates are observed in the variant, which is normally applied to N120P90K90 kg/h of mineral fertilizers, The plant's roots were found to contain 0.35%, base 0.22%, leaf 0.39%, flower 0.73%, fruit 0.91%, and seed 0.93%.

The full data was provided in Table 1.

Based on the aforementioned information, it can be concluded that in order for the Mexican bangidevonasi (*Datura innoxia* Mill) tumor organs to contain high amounts of alkaloids, the use of ammonium sulphate fertilizer per hectare of P90K90 kg/h yields effective results.

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