

This article explains that the Lion's Tail plant (*Leonurus turkestanicus* V. Krecz. Et Kuprian.) is an important medicinal and melliferous plant

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Abstract:

The lion's tail is a perennial herb, erect stems, 100-180 cm, branched, covered with feathers. It has important medicinal and honey properties. Each of its flowers blooms for 2-3 days and releases from 0.31 to 0.63 mg of rose hips. The nectar concentration ranges from 34% to 68%, with an average of 51%. The branch of rosemary (nectar) lasts from morning to evening.

Lion's tail is an important and valuable medicinal plant, as well as a good and reliable honey plant, it is advisable to grow it on purpose. The natural resources of this species are an important medicinal agent, as well as an acceptable tool for the further development of beekeeping and medicine when growing in regions.

Key words: *lion's tail, honey, wild rose, nectar, white currant, habitat, biomass, air temperature, ecological factor, culture, beekeeping*

Out of more than 4500 species of tall plants growing in Uzbekistan, more than 100 species belong to the Lamiaceae family. One of them is the Turkestan lion's tail, a perennial plant belonging to the Lamiaceae family. There are two types of lion's tail grow in Uzbekistan. The name of the category in translation from Greek means "leon", the lion "drinks" its tail. It is so named because it resembles a lion's tail.

While global climate change and magnitude are increasing, the plant world is also shrinking due to anthropogenic impact. Their species content decreases. At the same time, their assortment is shrinking. Nevertheless, the demand for raw materials of useful plants is growing. Therefore, given the importance of the problem, special resolutions of the President of the Republic of Uzbekistan were adopted on the need for the development of beekeeping and the protection of medicinal plants, their cultivation, and the rational use of available resources.

Considering the urgency and necessity of the problem, we studied the bioecological conditions of the left-tailed plant (*Leonurus turkestanicus* V. Krecz. Et Kuprian), which is one of the natural representatives of our local flora.

It is known that the plant world, with moderate and effective use, serves as an inexhaustible treasure for the national economy and human life. One of these plants is the lion's tail, the tincture of which is one of the natural herbs that give honey, which is an important food for bees that lowers blood pressure, as well as for heart, stomach, and nervous diseases.

The lion's tail is a perennial herb, erect stems, 100-180 cm, branched, covered with feathers. ((Flora of Uzbekistan, Vol. V. 1971), (Glukhov, 1974), (Kuliev, 1987), (Meliboev et al., 2018), (Gamidov, 1977)). The flowers are not very large. It blooms in July and lasts until October. The duration of each flower is 2 days, the separation of nectar is up to 1–2 mg, the yield of honey is 200–300 kg / ha. This is one of the most valuable melliferous plants. However, the lion's tail is a medicinal plant. The medicinal part, the upper flowering branches and leaves are used as a remedy. Lion's tail preparations are sedatives that lower blood pressure, improve heart function, and normalize the functioning of the gastrointestinal tract. Considering the important medicinal and honey properties of the lion's tail, we

tested it under experimental conditions and made sure that it grows and develops easily. Seed germination in laboratory and field conditions was much higher - 78% and 88%, respectively. Seeds collected on site were plowed and planted in a weed-free area. The sowing period coincided with the end of October and the beginning of November in autumn. Seeds were sown to a depth of 1-7 cm, between agates 60 cm. You can sow 5-6 kg of seeds per hectare.

Germination of the plant in laboratory conditions begins in 5-7 days, and on the experimental plot - March 15-20 and April. The plant can be watered 3-4 times to keep it mesophytic. The buds appear in early June, and flowering occurs in the last decade of June. Flowering lasts much longer, the last flowers last until September, the seeds ripen in October-November. At the end of the growing season, the plant reaches 150-170 cm in height, its roots also reach a depth of 40-60 cm. In the second year, the growing season begins much earlier, in April it grows rapidly. Considering that the plant mass is an important medicinal source, we have determined its fertility. When wet, the first year is 70-73 centners per hectare, the second and third years - 107 and 160 centners.

Table 1

№	Years	Yield in c / ra	
		Wet mass	Dry mass
1.	2018	23	7,8
2.	2019	102	29
3.	2020	160	43

We were able to identify some bioecological properties of the lion's tail. The opening of flowers starts at 7-8 in the morning, and the opening of flowers in the afternoon at 13-14. Each flower blooms for 2-3 days. The separation of nectar lasts from morning to evening. Each flower releases 0.31 to 0.63 mg of nectar. The nectar concentration ranges from 34% to 68%, with an average of 51%.

Below are the phenological phases of the "lion's tail" (table 2), the dynamics of growth (table 3) and the dynamics of the separation of flowers (table 4).

Table 2

The beginning of the growing season	Plant buds	Bloom Start	Incline blossom	Bloom the end	Ripening of seeds
10-March	10-May	28- May	7- June	1-July	10- August
25- March	15- May	5-June	15- June	5-July	15- August
30- March	20- May	15-June	25- June	10- July	20- August
28- March	25- May	20- June	30- June	20- July	25- August

Table 3

Vegetation of the first year		Vegetation of the second year	
Days	Plant growth condition	Days	Plant growth condition
8.05.19	65 cm	5.05.20	70 cm
15.05.19	75 cm	15.05.20	94 cm
20.05.19	100 cm	21.05.20	107 cm
30.05.19	130 cm	30.05.20	128 cm
5.06.19	160 cm	5.06.20	139 cm
5.07.19	165 cm	15.06.20	146 cm
20.07.19	170 cm	20.07.20	150 cm

Table 4

time	27.07.2019			16.07.2020		
	Air temperature (C ⁰)	The amount of nectar per flower is mg.	Concentration of nectar %	Air temperature (C ⁰)	The amount of nectar per flower is mg.	Concentration of nectar %
8	23	0,52	45	22	0,30	49
10	27	0,90	55	27	0,33	70
12	30	1,00	60	28	0,33	75
14	30	1,04	63	30	4,00	74
16	30	0,90	65	29	0,37	74
18	28	0,40	72	24	0,22	67
20	25	0,30	61	22	0,20	63

In conclusion, it should be noted that the lion's tail is an important and valuable medicinal plant, as well as a good and reliable melliferous plant, and it is advisable to specially grow it. The natural resources of this species should serve us and future generations for many years as an important medicine, as well as a honey plant.

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