THE ACCUMULATION OF ALKALOIDS IN *Ungernia ferganica*

A. Abdusamatov, Kh. A. Kadyrov,
S. A. Khamidkhodzhaev, and S. Yu. Yunusov

UDC 547/945

To expand the raw materials basis and to determine the maximum content of lycorine we have studied the dynamics of the accumulation of alkaloids in the vegetation period of *Ungernia ferganica* Vved. [1-3] collected in 1974 mainly in the basin of the River Kugarta, Suzak region, Osh oblast, KirgSSR (Table 1).

The total area of the *U. ferganica* plantation is about 112.3 ha, from which it is possible to harvest about 25 tons of leaves (in the dry form) each year.

The alkaloids were isolated from the leaves by the usual chloroform extraction. When the combined bases were treated with acetone, lycorine precipitated.

As can be seen from Table 1, the amount of lycorine in the bulbs is greater than in the leaves, but the use of the bulbs leads to the destruction of the plant. The optimum time of gathering the leaves is end of March—beginning of April.

TABLE 1

Date of gathering (1974)	Plant organ				
	leaves			bulbs	
	size, cm	total alkaloids	lycorine	total alkaloids	lycorine
20. III	3—4	0,96	0,25	0,58	0,30
30. III	15—20	0,86	0,14	0,73	0,35
5. IV	25—26	0,37	0,10	0,98	0,36
26. IV	35—45	0,11	0,02	1,25	0,37
22. V	35—46	0,04	—	1,27	0,40

LITERATURE CITED

1. Flora of the KirgSSR [in Russian], Vol. III, Frunze (1961), p. 120.
2. S. Yu. Yunusov, Izv. AN UzSSR, No. 4, 11 (1948).
3. I. Israilov, Kh. A. Abduazimov, and S. Yu. Yunusov, Dokl. Akad. Nauk UzSSR, No. 3, 18 (1965).

Institute of the Chemistry of Plant Substances, Academy of Sciences of the Uzbek SSR. Tashkent Agricultural Institute. Translated from Khimiya Prirodnykh Soedinenii, No. 5, p. 663, September-October, 1975. Original article submitted April 7, 1975.