SECTION X.
AGRICULTURAL SCIENCES AND FOODSTUFFS

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AGROBIOLOGICAL FEATURES AND USE OF CORNFLOWER (*CENTAUREA CYANUS* L.)

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Cornflower (*Centaurea cyanus L*.) is widely used in folk medicine as a sedative, anti-inflammatory, diuretic, used in hepatitis, allergic dermatitis, boils. Due to the limited cultivation of cornflowers, it is necessary to study the agrobiological characteristics and ontogenesis of the culture.

Cornflower is a perennial herbaceous plant up to 100 cm tall. The stem is rough, straight ribbed, the leaves are lanceolate, notched-cut, the stem is sessile, all the leaves are pubescent. Flower baskets are solitary, large, the outer wrappers of the baskets are ovoid with a brown membranous fringed edge. Marginal flowers in baskets are bright blue, obliquely funnel-shaped, barren, internal - blue-violet, tubular, bisexual; rarely all flowers are white. Fruits - achenes with almost equal in length reddish tufts. The root is thin, rod-shaped [3].

It is found almost everywhere in Europe as a segetal plant, mainly in winter breads, on sandy and loamy soils, propagated by seeds, along with cereals, with insufficient cleaning, and enters the soil with straw and manure. Methods of control are high-quality cleaning of seed, harrowing seedlings of agricultural crops and the use of chemical control measures [2].

In spring, seedlings appear in March and May. The seeds begin to germinate at a minimum temperature of +3 - 5 ° C, the optimal value is +15 - 20 ° C. Flowering occurs from June to September, the fruits ripen from July to October. Possible re-germination of seeds from August. Plants formed in autumn successfully overwinter. One plant can form up to seven thousand achenes. In the dry state, germination lasts up to ten years, in the soil - up to three years. Immature and fresh seeds do not have a dormant phase and can germinate from a depth of 4 - 7 cm [4,5].

Cornflower is a light-loving plant, not picky about the soil, but loves more fertile. The first shoots usually appear in 7-10 days. Ornamental varieties are recommended to grow seedlings, then transplanted into the ground. The distance between the seedlings should be 30-40 cm. Flower propagation is carried out by seed, after flowering cornflowers form a seed box [1].

Cornflower is used in folk and scientific medicine of many countries, making tea. Marginal funnel flowers are used as medicinal raw materials. At their preparation from

flowering baskets pluck marginal and partially tubular flowers, dry quickly and necessarily in the shade. Store in a dry place. Shelf life of raw materials - 1 year.

In scientific medicine, cornflower is used in diuretic fees, especially in edema of renal and cardiac origin, as an anti-inflammatory agent, as well as antispasmodic in liver disease. Flowers in the form of infusions, teas and extracts are used in nephritis, nephrozonephritis, cystitis, urethritis as a mild diuretic and in diseases of the liver and biliary tract as a choleretic [1].

In folk medicine, decoctions of flowers are used for inflammatory eye diseases, visual fatigue. Lotions with decoction are used for furunculosis, eczema, trophic ulcers, uterine bleeding [1].

References:

[1] Shokhina N. K., Dolgikh A.P. (2006) Peculiarities of growth, productivity and economic efficiency of Centaurea cyanus L. Plant resources. 26. 3. 297-313.

[2] Karomatov I. D., Ruzikulov F. H., Boltaev O. B., Rustamova Z. A. (2021) Medicinal plant cornflower blue. Biology and integrative medicine. 173-183.

[3] Hanina M. A., Rodin A. P. , Podolina E. A. , Hanina M. G. et al. (2018) Elements of the aboveground part of Centaurea cyanus L. Bulletin of Voronezh State University. Series: Chemistry. Biology. Pharmacy 3. 30-36.

[4] Gordeev D. K. (2004) Methods of elite seed production of blue cornflower (Centaurea cyanus L.). Author's ref. diss…. Candidate of Agricultural Sciences 22 p.

[5] Pospelov S. V., Zagorulko S. P., Klimenko O. V., Nikolaenko V. V. (2012) Germination of seeds of blue cornflower (Centaurea cyanus L.) depending on temperature. Current environmental and agrobiological problems of the Middle Dnieper in the context of sustainable development. Proceedings of the scientific-practical conference. 63-65.

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