

## Tatar buckwheat in the conditions of the Western Forest-Steppe

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**Purpose.** To evaluate buckwheat of the Tatar variety 'Kalyna' according to morphological, productive and quality indicators in the conditions of the Western Forest-Steppe. **Methodology** The studies were carried out in the field crop rotation of the Research Center "Podillia" of the State Agrarian and Engineering University in Podilia (PDATU) in 2015–2019. The soil of the experimental field is overwhelmingly represented by low-humus, weakly silt-black earth. Bookmarks of experiments, material evaluation, analysis of plants, yield and grain quality were carried out in accordance with the generally accepted methods of state variety testing. An assessment of the buckwheat variety of the Tatar 'Kalyna' was carried out in comparison with the edible variety of buckwheat 'Victoriia'. **Results.** The growing season duration of buckwheat of the Tatar variety 'Kalyna' is 87 days (38 days vegetative and 49 days generative). In the studied variety, a larger number of the 1<sup>st</sup> order branches up to 5.5 pcs was

observed. The number of leaves on the plant was 22–28 pcs./plants. The analysis of the population of the variety under study indicates that 50% of the grains and more are located on the branches of the first order in edible buckwheat, this indicator is only 30%. Productivity is 2.28 t/ha, high grafting of inflorescences of 4.4 grains, edible buckwheat 0.72 t/ha, and 2.2 grains/inflorescence, respectively. The reaction of buckwheat of the Tatar variety 'Kalyna' to the effect of biotic and abiotic factors has been determined. The Ukrainian Institute for the Examination of Plant Varieties of Ukraine presents indicators of Tatar buckwheat (*Fagopyrum tartaricum* (L.) Gaerth.) varieties of 'Kalyna' of grain direction for use to obtain a patent for the variety. **Conclusions.** According to morphological, productive and quality indicators, resistance to biotic and abiotic factors, the buckwheat variety of the Tatar buckwheat 'Kalyna' is predominantly edible 'Victoriia' buckwheat in the conditions of the Western Forest-Steppe. To use the variety 'Kalyna' in breeding programs of the Scientific Research Institute of Cereal Crops named after A. Alekseeva PDATU and to obtain a patent.

**Key words:** growing season duration; morphological indicators; productivity and quality indicators.

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## Plant protection and nutrient supply studies of fenugreek (*Trigonella foenum-graecum* L.)

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**Purpose.** The aim of our experiment was to determine the changes of fenugreek (*Trigonella foenum-graecum*) nutrient content and biomass in the two years under study as a result of nutrient

supply, plant protection and irrigation. Fenugreek is an annual herbaceous plant belonging to the legumes (*Fabaceae*) family. It is a multifunctional crop for use in domestic and farm animal feeds, wild fodder, herbs and spices. **Methods.** The experiment was carried out in open field on 100 m<sup>2</sup> plots in Kecskemét. Novatec premium fertilizer (15 N - 3 P<sub>2</sub>O<sub>5</sub> - 20 K<sub>2</sub>O - 2 MgO) was used in the research. The herbicide Pantera 40 EC (active ingredient content: 40 g / l quizalofop-P-tefuryl) was used for weed control. **Results.** In both years, after the crop emerged fenugreek seeds within a week. In 2018, the average height of plants was 30 cm for the start of harvest. On a plot of 100 m<sup>2</sup>, the dry weight mean of mowed fenugreek is 13.15

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