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STUDIES OF VEGETABLE SEEDS HETEROGENEITY WITH USE OF COMPUTER IMAGE ANALYSIS

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The study of ecological and matrical heterogeneity of vegetable seeds (haricot bean, fennel, parsnip and chives) has been carried out using the analysis of the seeds digital scanned images. Automatic measurements of morphometric parameters of seeds – projected area (cm^2), length (cm), width (cm), average size (cm), roundness (relative units), elongation (relative units), color component values according to the RGB model (brightness units) and hue (relative units) – have been taken using the image analysis software "Argus-Bio". It was established that ecogeographic (a growing area) and climatic (crop year) conditions had a statistically significant impact on the size and form of the studied haricot seeds. Matrical heterogeneity of the chives seeds, selected separately in the order of branching of umbel, was found in distinctions in the seeds sizes, and the analyzed bulb onion seeds selected from different tiers of inflorescences – in various intensity of coloring without changing the ratio of color component values according to the RGB model. The applied method of computer analysis of seeds scanned images can be used as an effective tool for studying the ecological and matrical heterogeneity of vegetable seeds.
***Key words**:* vegetable seeds, seeds heterogeneity, digital images of seeds, image analysis.