

Systematisation of collection specimens of blackthorn (*Prunus spinosa* L.) using the method of hierarchical variance analysis

Natalia N. Kovalenko

*Krymsk Experiment Breeding Station, Branch of Federal State Budgetary Scientific Institution
“Federal Research Center the N.I. Vavilov All-Russian Institute of Plant, Genetic Resources”,
353384, Krymsk, Krasnodar region, str. Vavilova, 12,
email: kross67@mail.ru*

The results of the studies of the structure of variability of the lamina and petiole of specimens of blackthorn (*Prunus spinosa* L.) are presented. The research was done on collection samples from different regions: Russia (Krasnodar region, Rostov region, Dagestan, Kabardino-Balkar Republic, Chechen Republic, Republic of Ingushetia, Republic of North Ossetia-Alania), Ukraine (northern, western), Moldova and Azerbaijan. Since C. Linnaeus determined the species rank of blackthorn (*Prunus spinosa*), the latter became an object of more systematic research. This helped to reveal morphological heterogeneity based on the features of the blossom, leaf, fruit and shoot of the specimens from different places. The aim of this work was to assess the level of genotypic diversity of the collection specimens and to determine the boundaries between the populations of blackthorn.

It was necessary to solve the following problem to do this: to compare the genetic and paratypic components of the phenotypic manifestation of quantitative attributes of the leaf. The method of multivariate hierarchical variance analysis was used to process the material obtained. It was considered as a classification method for blackthorn for all the four analysed attributes of the leaf. The share of influence of factor D (genotype) turned out to be bigger than that of factor B (region). The influence of factor E (diversity in the clone) was not established. It was established that the level for singling out populations in the species is region.

Keywords: analysis of variance, cultivars, collection, plum species, population, the hierarchy