Abstract
The paper presents the characteristics of the germination process in *Lotus corniculatus* L. and *Coronilla varia* L. pollen. We made estimates on the length of pollinic tubes in the dynamics of germination (after 1, 2, 24, 48 and 72 hours since the inoculation on medium), according to the glucidic concentration of the nutritive mediums used in this experiment. We pointed out the maximum lengths of the pollinic tubes, correlated to the lengths of flower stiles from the two taxons. Achieving a certain length of the pollinic tubes is very important, because the fertilization of ovules is thus ensured and, implicitly, the fructification of the respective taxons. We also referred to the way of the emergence of pollinic tubes from the two taxons. The bicellular pollen-type of the two *Fabaceae* is shown by pointing out the generative cell in the pollinic cell, which, after the mitotic division, produces two spermatic cells having the value of immobile male gametes. We have also shown the type of anomalies of the pollinic tubes and the frequency of these anomalies during the process of pollen germination at the two taxons from the *Fabaceae* family. The obtained results were correlated to pollen germinating potential of the two taxons, to geographic spreading area, and to native resistance of the two taxons to various abiotic factors. Although the phylogenetic connection between the two investigated taxons is very tight, there are distinctive traits of the germinating process, which have a diagnosis value and may represent valuable genetic and physiological indicators.

Key words: pollen tube, generative cell, vegetative cell, anomalies of pollen tubes