

# Algorithm of differentiation of sweet cherries male and female gametophyte

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Differentiation of generative organs and tissues, as well as the order and dynamics of their development, are the basis of biological control of growth and development in order to ensure adequate application of agro and pomotechnics and programming yield fruit. This process is shown in the form of algorithm of the constitution of male and female gametophytes in four varieties of sweet cherries: Burlat, Stella, Drozan's Yellow and Čarna.

The samples for histological analysis were taken successively in accordance with the dynamics of the principal organs and tissues in the micro and macrosporogenesis, starting from primordial tissue over the parietal and sporogenic tissue tracking endomitosis in tapetum tissue, meiotic division and finally microgametogenesis as well differentiation of the ovary, ovules, integuments and nucelar tissue, then the female gametophyte and the constitution of the egg apparatus to embryogenesis.

The differentiation of tissues and cells in these processes was put in dynamic relationship with the output stage formed by the male gametophyte (pollen) and embryo development as the basis of viability of the fruits.

