A method for assessing sunflower by quantitative characteristics of an anthodium thereof comprises calculating the parameters of the anthodium. In field conditions in the maturation period an image of a data selection of anthodia is taken superimposing a stencil of a 36° triangle with linear scales, analysis of the image is carried out by means of calculating the amount of genetic (n_1) and counter (n_2) helices, crossing a sector of the perimeter of the anthodium circumscribed by the sides of the stencil with the further calculation of the number of flowers in a single anthodium, and said method is applied in any time convenient for an experimentator.