One of the methods of haploidy experimental induction in corn is pollination of haploinducing lines plants pollen. Creation of such lines is a long and laborious process, which intensification could be promoted by knowledge of indirect diagnostic features of haploid induction ability. For the purpose to find a such features comparative cytoembryological analysis of pollen quality and male gametophyte structural features of haploinducing lines (ZMS-8, ZMS-P, KMS), F1 hybrids (ZMgl×ZMS-P, ZMgl×ZMS-8, KM×KMS, KM×ZMS-8, ZMS-P×KMS) and the lines unable to haploid induction (KM, ZMgl) was carried out. Significant differences between the studied lines on pollen quality, their morphological and morphometric characteristics are not revealed. The single feature, specific to haploid inductor, is development of slight percent of very small pollen in anthers.