



MORPHOSTRUCTURAL CHARACTERIZATION OF RICE GRAIN (*ORYZA SATIVA* L.) VARIETY MORELOS A-98 DURING FILLING STAGES.

ABSTRACT

The morphostructure of grain rice Morelos A-98 was characterized in five stages of physiological maturation, in order to generate morphometric information during the filling process. Micrographic images from optical and scanning electron microscopy coupled to a digital capture system were used. Images were digitally processed to measure different descriptors such as shape, fractal dimension, and surface texture. Results showed that, two weeks after anthesis, an accelerated grain filling was observed, particularly on those grains positioned in the distal panicle zone, compared to those located in the base of this one. As deposition of assimilates in the grain increased, the area and perimeter of the transversal cut of the grains also increased ($p < 0.05$), meanwhile, the rounded shape factor tended to increase as well ($p < 0.05$); while the elliptic shape factor decreased. As the dehydrated endosperm passed from “milky” to “doughy” stages, values of fractal dimension area and endosperm perimeter as well as surface texture values showed that grain borders tended to become smoother and that there was a greater structured endosperm area ($p < 0.05$).

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