The Relationship Between Colletotrichum gloeosporioides Distribution Area on the Skin and the Flesh of Nam Dok Mai Mangos

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Anthracnose, a disease mostly found in various mangos, is caused by a fungus, Colletotrichum gloeosporioides. The infected mangos are usually discarded by farmers. This project studied the relationship between the fungal distribution area on the mango skin against the volume of infected flesh and generated equations to predict the volume of healthy flesh versus infected flesh. The images of infected mangos were taken and converted to greyscale, then the fungal distribution area was approximated by using SketchAndCalc. The relationship was divided into two phases, the fungal distribution areas on the skin which are < 7 cm^2 and ≥ 7 cm^2 The relationship between the fungal distribution area on the skin that < 7 cm^2 and the distribution area on the flesh is y = 0.00080+0.84000x, while the relationship between the fungal distribution area on the skin that ≥ 7 cm^2 and the distribution area on the flesh is y = 10.20000+0.74000x, where y and x represent the fungal distribution surface area on the flesh and on the skin, respectively. Moreover, the fungal distribution area on the skin is related to the depth of the infected flesh when the fungal distribution area on the skin is ≥ 7 cm^2 ; i.e., n = 0.65000+0.00842x where n represents the depth of the infected flesh. The fungal distribution area on the flesh is related to the depth of the infected flesh when the fungal distribution area on the flesh is ≥ 7 cm^2 ; i.e., n = 0.58000 + 0.01000y and the fungal distribution area on the flesh is also related to the weight of the infected flesh ; i.e., m = 0.33000 + 0.27000y where m represents the weight of the infected flesh.