SURFACE MICROFLORA OF AVOCADO FRUIT AND THEIR INFLUENCE ON THE FUNGUS CAUSING ANTHRACNOSE

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Surface microflora of young, unripe and ripe avocado fruit were studied and among the organisms isolated were ten species of fungi and elevent species of bacteria. Total microbial population was lower on the young and unripe fruit surface when compared to the ripe fruit surface. Unripe fruit surface had more plant pathogenic fungi whereas the ripe fruit surface contained more saprophytes. Germination and appressoria formation by conidia of colletotrichum gloeosporioides, the fungus causing avocado anthracnose, were tested in water drops incorporated with each of the above bacteria separately on glass slides. One bacterium (Gram-ve Bacillus sp.) stimulated both germination and appressoria formation of C. gloeosporioides while three others (one Gram-ve rod and two Bacilli) suppressed germination significantly. The bacterium that was stimulatory was suspended in water and left for 5 hours and when the cell free filtrate was tested found to produce the same stimulatory effect. Also the bacterium, when grown in low nutrient media, produced much higher stimulatory effect. A concentrated filtrate was chromatographed on TLC plates and the stimulatory factor was partially separated. This extracellular substance/s appears to have iron chelating properties.

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