

Joint International Conference on
**Agriculture and Horticulture
&
Food Science and Aquaculture**
July 28-29 , 2022 / Avani Atrium Bangkok Hotel



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The insect pests and diseases of mango (*Mangifera indica* L.) Plants and Fruits: Importance and management Strategies

The mango (*Mangifera indica* L.) is a national fruit tree of Bangladesh that is a very important and popular fruit in the world. It promises to ameliorate fruit nutritional food demand and has an excellent possibility to develop the world market. But the production is hampered due to infection of several diseases in plants and fruits. This study was undertaken based on secondary data from existing literature from Bangladesh and other parts of the world. So far, much research works were done on this issue but it was not available to the policymakers, extension workers, and the public in a systematic manner to date. It is known as the ‘king of all fruits’ in the world and it contains some special characteristics viz pleasant aroma, eye-catching color, and wonderful taste with typical nutritive values, and these qualities make this fruit one of the unique items in the world market. Despite the importance, several insect pests and diseases attack mango plants and fruit. The major insects are thrips (*Frankliniella occidentalis* Pergande), fruit borer (*Citripestis eutraphera* Meyrick), stone weevil (*Sternonchetus mangiferae* Fab.), scale insects (*Aspidiotus destructor* Signoret), fruit fly (*Bactrocera invadens* Drew, Tsuruta and White), mealybug (*Drosicha mangiferae*), leaf webbers (*Orthaga euadrusalis* Walker), gall midges (*Erosomyia indica* Grover), mango shoot gall psylla (*Apsylla cistellata* Buckton), mite (*Eriophyes mangiferae* Sayed) and so on. The major diseases are anthracnose (*Colletotrichum gloeosporioides*), stem end rot (*Botryodiplodia theobromae*), die back, gummosis (*Lasiodiplodia theobromae*), powdery mildew (*Oidium mangiferae*), bacterial canker (*Xanthomonas mangiferae*), malformation (*Fusarium mangiferae*), phoma blight (*Phoma glomerata*), sooty mould (*Meliola mangiferae*), red rust (*Cephaleuros virescens*), fruit cracking, black tip of mango and so on. Every year about 20-50% yield loss occurs due to these insects and diseases. The study focused on the pests of mango fruit based on biological and chemical approaches. It presents limited information on specific technologies in different agroecological zones. This study identified research gaps between Bangladesh and other countries. It also provides information to combat mango pests to the economic threshold level for ensuring sustainable fruit and wood yield.

Keywords: Mango, *Mangifera indica*, Insect, Pest, Disease, Manage, Fruit, Plant

Biography

He obtained his Bachelor of Science in Agriculture (Honours) from Sylhet Agricultural University, Sylhet in 2016. He received his Master of Science in Entomology from Sylhet Agricultural University, Sylhet, Bangladesh in 2018. Mr. Khan started his professional career in 2018 as a Research Assistant in the Department of Entomology, Sylhet Agricultural University. He has published twenty-four (26) peer-reviewed scientific papers in national journals and international journals. Mr. Khan has presented six (8) oral presentations at home and abroad conferences. He served as a reviewer of eleven (13) scientific papers in peer-reviewed journals at home and abroad. At present, he has been working on COVID-19, medicinal plants, and environmental factors that affect human life.