

# EMERGING TRENDS IN PLANT PROTECTION FOR TROPICAL FRUIT PRODUCTION

**A. Sivapragasam**

CABI-SEA, Building A19, Glasshouse Complex, MARDI 43400 Serdang, Selangor, Malaysia

\*Corresponding author: [a.siva@cabi.org](mailto:a.siva@cabi.org)

Increasing global population places heavy pressure on agriculture to intensify production against the rapidly diminishing natural resources of land, labor, and water. The current operating framework, i.e. the globalization of the world economy, rapid increase in tourism, travel, transport and trade (the 4T's); technological progress (e.g., genetically modified organisms or GMO); health (biosafety) and environmental concerns (against bio-invasions) and climate change have also added impetus. Against this backdrop, tropical fruit production is today confronted with various challenges in a changing and unpredictable environment. Management of pests and diseases still remain amongst the key challenges for markets with consumers requiring quality fruits and growers seeking to increase and sustain production, at the expense of reduced costs and using labor-saving technologies. Invariably, the industry needs to respond effectively and efficiently to the ever increasing emergence of new invasive pests in new geographical regions, unpredictable pests outbreaks due to adverse climatic conditions, transboundary movements (pests without borders) that impact upon highly stressed developing economies; market restrictions due to high pesticide residues, increasing use of antibiotics against diseases and escalating post-harvest losses. This paper broadly examines some of the emerging trends in plant protection in the tropical fruit production ecosystem. These include: (i) Biosecurity plans; (ii) Use of precision technologies; (iii) Climate change and its impact; (iv) Information delivery and communication; and (v) Plant health systems and non-chemical options.

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