

Special Issue

Plant-Parasitic Nematodes in Horticultural Plants

Message from the Guest Editors

Approximately 4100 species of all known nematodes are plant-parasitic nematodes (PPNs) that affect the quality and the quantity of numerous agricultural crops, representing a significant constraint on global food security. When PPNS attack their host, they disrupt its development, which leads to underdeveloped plants, causing a reduction in crop yield. Damage caused by these nematodes has been estimated at USD 80 billion/year. However, this value is likely to be underestimated, as PPNS are small-plant/soil-borne pathogens, and the symptoms that they cause are unspecific, and most of the cultivators are often unaware of their presence. Current approaches to control PPNS include the use of nematicides and/or unselective pesticides, but many of synthetic chemical nematicides pose serious concerns for human health and environment. To cope with such threat, accurate diagnostic methods for nematode detection and deep understanding about nematode infection processes and their intricate relationships with the host plants are crucial for the development of effective integrated nematode management programs.

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